



UNIVERSITÀ POLITECNICA DELLE MARCHE  
FACOLTÀ DI ECONOMIA “GIORGIO FUÀ”

---

Corso di Laurea Magistrale o Specialistica in  
International Economics and Commerce  
Business Organization and Strategy (BOS)

A LITERATURE REVIEW ON  
FLEXIBLE WORKING TIME ARRANGEMENT.  
SMART WORKING: AN EXAMPLE OF INNOVATION AND  
FLEXIBILITY

Relatore: Chiar.mo  
Prof. Stefano Staffolani

Tesi di Laurea di: Martina Francolini

Anno Accademico 2021 – 2022

## **INDEX**

### Introduction

### Chapter 1: The evolution of working time in the 20<sup>th</sup> century: Trends in Europe

#### 1.1 Working time regulation across the years

##### 1.1.1 The average working week

#### 1.2 Problems with legal and actual working hours

##### 1.2.1 Excessive working hours

##### 1.2.2 The work-life balance

#### 1.3 Patterns on working time arrangements: Trends toward reduction

##### 1.3.1 Part-time work scheme

##### 1.3.2 The shorter workweek: The worker health, productivity, and unemployment

### Chapter 2: Flexibility in working time

#### 2.1 Flexible working time arrangements

#### 2.2 The linkage between innovation and flexible working time arrangement

##### 2.2.1 TICTM – telework and ICT-based work arrangement

#### 2.3 The worker well-being and flexible working time arrangements: Positive and negative outcomes.

## Chapter 3: Smart working: Between flexibility and innovation

### 3.1 Smart working: A general overview

#### 3.1.1 Positive and negative effect of smart working on employer and employees' satisfaction

### 3.2 Smart working and covid 19 pandemic: The Italian context

#### 3.2.1 Post pandemic consequences

### 3.3 Smart working: Does employees productivity increase?

## Conclusions

## Bibliography

## **INTRODUCTION**

First reflections on the need to come up with new models of organizing the world of work, able to transfer the flexibility offered by digital technologies also within offices and thus breaking down space and time constraints, which have been perceived as obsolete and excessively stringent for decades, date back to the late 1990s.

As a matter of the fact, starting from the 30s the worker well-being become relevant, and a limit on working hours per week was established by regulators. The International Labor Organization reports that 48 weakly hours was implemented, this way avoiding working for longer hours and risking to harm workers.

By the time, a reduction process took place since the legal weakly working hours was fixed at 40 hours of work per week. However, as the wide variety of literature explains, it is clear that today countries in Europe differs within each other on the number of hours worked per week: in fact, according to the Eurostat Data on the average working week, it is possible consider that a reduction process is yet started but it changes according so country's specific factors such as the cultural background. What emerges is that there are countries such as Bulgaria, Romania, Greece, and Poland where people work more than 40 hours per week, while other countries such as Netherlands, Austria and Germany in which people work less than 35 days per week.

In this regard, problems within legal and actual working hours rises, sometimes leading to excessive working hours that may affect both employees' well-being and firms. For this very reason, it was decided to analyze new working time models, which all have in common the working hours reduction per week. It is turned to be a very important matter since it can affect both workers and company success.

Linked to the workweek reduction there are new flexible organizational models that let both employers and employees the opportunity to manage working time and space. By having plain control of their time, workers can meet their own personal and family's needs while working the same number of hours.

Nevertheless, flexibility in working time arrangement would be possible only by implementing ICT – information communication technologies, that allowed employees to work remotely while lowering cost of working arrangements.

In this paper is analyzed smart working as example of flexible working time arrangement and as a tool which is based on the use of technological innovation. However, it took the emergency to overcome cultural blocks and demonstrate that agile working can be a reality for workers. Moreover, also positive, and negative aspect are discussed, as the effect on workers productivity.

## CHAPTER 1: THE EVOLUTION OF WORKING TIME IN THE 20<sup>TH</sup> CENTURY: TRENDS IN EUROPE

The aim of this chapter is to give an overview of the main trends of working time in Europe, by considering principal regulation and working time arrangements.

According to the literature, nowadays working time is a very discussed topic.

In fact, it affects every worker life and for this reason, it has to be regulated. To ensure the psycho-physical well-being of workers, a limit must be placed on the number of working hours per week. As a matter of the fact, starting from the 30s, leisure time achieved importance in the working hours regulation and working time starts to reduce from 48 to 40.

In this respect, the European Union is characterized by wide gaps between member states, and there are still many citizens who work more than 48 hours per week, also due to problems regarding the legal and actual working time that not always coincides.

There are numerous indicators to measure working conditions. The one considered in this chapter is the number of hours spent working each week. Regulation in this regard is considered to be crucial to ensure the health and safety of workers, and imposing limits on the time spent at work was one of the major achievements of the labor movements during the 20<sup>th</sup> century.

Excessive working hours can have a detrimental effect on workers' well-being, and according to the ILO Convention No.1 it is referred to working more than 48 hours

per week. Following the Eurostat dataset on Hours of Work – Annual Statistics (2021), people between 20-64 years old worked 36.4 on average per week. There are four member countries in Europe in which on average people work more than 40 hours per week: first of all Greece, with an average of 40.7 hours, followed by Romania (39.8), Poland (39.7) and the Bulgaria (39.5). While the lowest figures are recorded by the northern European countries. Especially by the Netherlands, where the weekly average in 2021 was 32.2 hours, followed by Austria (33.7 hours) and Germany (34.6 hours). In Italy, the figure stands at 37 hours, slightly below the EU average of 38.1<sup>1</sup>. Map 1 shows the average number of actual working week in the main job in 2021 in Europe.

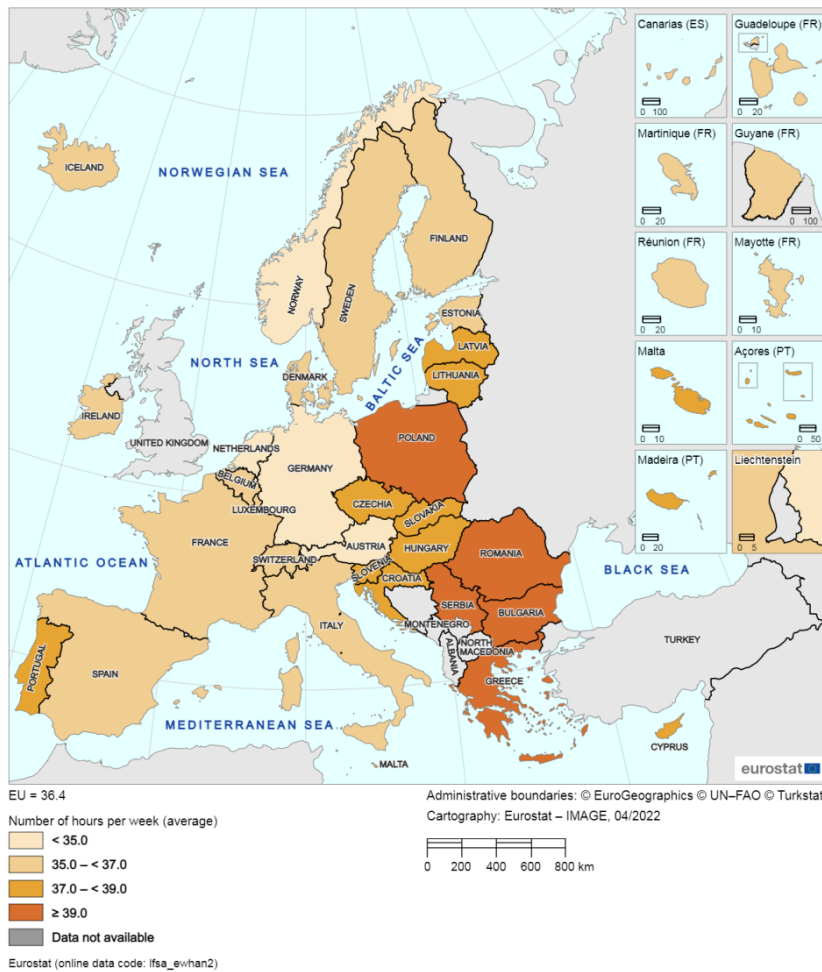
In this regard, the tendency toward reduction of working hours is considered by taking into account both standard and new form of working time arrangement oriented to work less hour per week. Advantages and disadvantages of the shorter workweek are presented as examples of the implementation of it in different countries.

---

<sup>1</sup> Hours of work, Annual statistics, EUROSTAT 2021, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours\\_of\\_work\\_-\\_annual\\_statistics#General\\_overview](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_-_annual_statistics#General_overview)

Map 1: Average Number of Actual Working Week in the main job, 2021 (age group 20-64)

Average number of actual weekly hours of work in the main job, 2021  
(age group 20-64)



Source: Eurostat dataset, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours of work - annual statistics#General overview](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_-_annual_statistics#General_overview)



## 1.1 WORKING TIME REGULATION ACCROSS THE YEARS

Working time has been a very discussed topic since the Industrial Revolution, becoming the object of the first international labor standard convention, the Hours of Work industry Convention, 1919.

According to J.C. Messenger, 2011, nowadays working time is still at the center of the debate, even though working hours have been decreasing over the years.

In particular, Europe seems to be the main area in which this matter is discussed due to the wide literature around the topic. In fact, the European Union refers to the Working Time Directive (93/104/EC), 1993 in which are discussed working time arrangement, excessive working hours, flexible working time organization and the worker well-being in the work life<sup>2</sup>.

*“No matter where we work and what we do, working time is an issue that affects us all”* Jon Messenger, ILO<sup>3</sup>.

When it comes to speak about working time, it is necessary to refer to the ILO, the International Labor Organization. Created in 1919 in the Treaty of Versailles at the end of the First World War, ILO is the organization that first gives importance to the concept of working hours regulation by drafting the first International Labor Standards on Working Time, the Hours of Work Convention (No.1), 1919 in order

---

<sup>2</sup> Jon C. Messenger, *Working time trends and developments in Europe*, Cambridge Journal of Economics 2011, 35, 295–316 doi:10.1093/cje/beq022, Advance Access publication 20 July 2010

<sup>3</sup> [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_728218/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_728218/lang-en/index.htm)

to make limitation on hours of work, involving the principle of eight-hours of work per day<sup>4</sup>.

With reference to the working time regulation trend across the years in the 20<sup>th</sup> century, according to Lee, Mc Cann, Messenger, 2007<sup>5</sup>, after the end of the First World War, the working hour model that was followed by Europe and Latin America was the one of 48 weekly-hours, that was the boundary for safe working hours (more than 50 hours – unhealthy work). Also, according to the ILO, by 1922 the 48 hours workweek was considered the general practice in Europe, Australia, New Zealand and part of Latin America, with working hours reduction in Japan and India<sup>6</sup>.

The reason behind the 48 working hours, can be discovered in the cultural background of that time. According to Lee et al, 2007, during the industrialization *“hours spent outside work were seen simply as lost time, which meant in practice the subordination of workers lives to production demand”* resulting in longer working hours. With Henry Ford was introduced the concept of “economic value of leisure” by expressing his thinking as *“a workman would have little use for an automobile if he had to be in the shops from dawn until dusk”* (Ford, 1926).

---

<sup>4</sup> [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_728218/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_728218/lang-en/index.htm)

<sup>5</sup> Sangheon Lee, Deirdre McCann and Jon C. Messenger, *Working Time Around the World: Trends in working hours, laws and policies in a global comparative perspective*, Published in Switzerland in 2007

<sup>6</sup> [https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS\\_728218/lang-en/index.htm](https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_728218/lang-en/index.htm)

After having noticed the negative consequences that long hour work brought, the importance of leisure and free time started spreading.

As stated by ILO 1967, the step further was to reduce weekly working hours to 40 hours, fueled by the depression of the 30s and used as a measure to cope unemployment. By the time, the 40 hours model steadily starts to be considered the fair working hours in law and it was spread internationally<sup>7</sup>.

However, as reported in the ILO's Database on Working Time Laws, during the 90s there were countries in which 48 working hours limit model still widespread, others that adopted the 40 hours work and further different trends. Table 1.1 gives us an overview of the following.

Also in more recent years, even the tendency towards reduction, there are countries that still limit their working hour at 48 hours per week despite being industrialized, while other countries still use the 40 hours week. Table 1.2 review the trend in early 2000.

According to Lehdorff 2000<sup>8</sup> regulation in Europe plays a very important role, that is not the same in emerging economies.

---

<sup>7</sup> Lee, et al, 2007

<sup>8</sup> Lehdorff, S. 2000. 'Working time reduction in the European Union: a diversity of trends and approaches' in Golden, L. and Figart, D. (eds) *Working Time: International trends, theory and policy perspectives* (London, Routledge).

In this regard, it is useful to consider what stated by Lee, et al, 2007 regarding an analysis of the average working hours within countries. They identified four type of working time regimes within countries<sup>9</sup>:

- TYPE A – strong statutory regulation – refers to countries in which legal working hours covers an important role, that leave no option to part-time and full-time work – that I will discuss later this chapter – while considering only the legal working hour. France can represent an example of it.

- TYPE B – strong role of collective agreement – the workers organization assumes relevance instead of legal working hours agreements. This is the case of Germany and Austria, where a national legal standard is dominant.

- TYPE C – strong statutory regulation with part-time work – where there is a coexistence between legal agreement and part time work such as in Belgium.

- TYPE D – weak statutory regulation with part-time work – as explained by the graph, there is no specific working standard, it represents the situation in which workers are working more than the legal working hours, such as in Japan.

- TYPE E – poor enforcement – refers to developing countries where working hours norms are not always observed such as in Korea.

---

<sup>9</sup> Lee, et al, 2007

Table 1.1: Weekly normal hours limit (1995)

	<i>No universal statutory limit</i>	<i>35–39 hours</i>	<i>40 hours</i>	<i>41–46 hours</i>	<i>48 hours</i>	<i>More than 48 hours</i>
Industrialized countries	Australia, Denmark, Germany, United Kingdom	France	Austria, Belgium, Canada, Finland, Japan, Luxembourg, New Zealand, Norway, Spain, Sweden, United States	Portugal, Switzerland (workers in industrial enterprises, offices, technical posts and sales staff in large commercial enterprises)	Ireland, Italy, Netherlands	Switzerland (all other workers)
Africa	Nigeria, Seychelles		Benin, Burkina Faso, Cameroon, Chad, Congo, Côte d'Ivoire, Djibouti, Gabon, Madagascar, Mali, Mauritania, Niger, Senegal, Togo	Algeria, Angola, Burundi, Cape Verde, Guinea-Bissau, Namibia, Rwanda, South Africa, United Republic of Tanzania	Morocco, Mozambique, Tunisia	Kenya
Asia	India, Pakistan		China, Indonesia	Republic of Korea, Mongolia, Singapore	Cambodia, Lao People's Democratic Republic, Malaysia, Philippines, Thailand (industry), Viet Nam	Thailand (commerce)
Caribbean	Jamaica			Cuba, Dominican Republic	Bahamas, Haiti	
Central and Eastern Europe	Romania		Latvia, Russian Federation	Bulgaria, Czech Republic, Slovenia		
Latin America			Ecuador	Belize, Brazil, El Salvador, Honduras, Uruguay (commerce), Venezuela	Argentina, Bolivia, Chile, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay (industry)	
Middle East					Egypt, Jordan, Lebanon	

Source: ILO Database of Working Time Laws

Table 1.2: Weekly normal hours limit (2005)

	<i>No universal statutory limit</i>	<i>35–39 hours</i>	<i>40 hours</i>	<i>41–46 hours</i>	<i>48 hours</i>	<i>More than 48 hours</i>
Industrialized countries	Australia, Denmark, Germany, Ireland, United Kingdom (48 hour limit on total hours)	Belgium, France	Austria, Canada, Finland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, United States	Switzerland (workers in industrial enterprises, offices, technical posts and sales staff in large commercial enterprises)		Switzerland (all other workers)
Africa	Nigeria, Seychelles	Chad	Algeria, Benin, Burkina Faso, Cameroon, Congo, Côte d'Ivoire, Djibouti, Gabon, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal, Togo	Angola, Burundi, Cape Verde, Democratic Republic of the Congo, Guinea-Bissau, Morocco, Namibia, South Africa, United Republic of Tanzania	Mozambique, Tunisia	Kenya
Asia	India, Pakistan		China, Indonesia, Republic of Korea, Mongolia	Singapore	Cambodia, Lao People's Democratic Republic, Malaysia, Philippines, Thailand, Viet Nam	
Caribbean	Jamaica, Grenada		Bahamas	Cuba, Dominican Republic	Haiti	
Central and Eastern Europe			Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Romania, Russian Federation, Slovakia, Slovenia			
Latin America			Ecuador	Belize, Brazil, Chile, El Salvador, Honduras, Uruguay (commerce), Venezuela	Argentina, Bolivia, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay (industry)	
Middle East			Egypt		Jordan, Lebanon	

Source: ILO Database of Working Time Laws

- Sometimes, the situation above, corresponds to the problem of over employed and under employed worker, as in TYPE F – poor reinforcement and under unemployment – here there are worker that has a high volume of work by working for long hours per day and workers that work for very short hours, that leave no option to lower income.

#### 1.1.1 THE AVERAGE WORKING WEEK

According to J.C. Messenger, 2011, average working hour per week differs across the European countries. As stated by OECD<sup>10</sup>, average annual hours worked is defined as “*the total number of hours actually worked per year divided by the average number of people in employment per year*”.

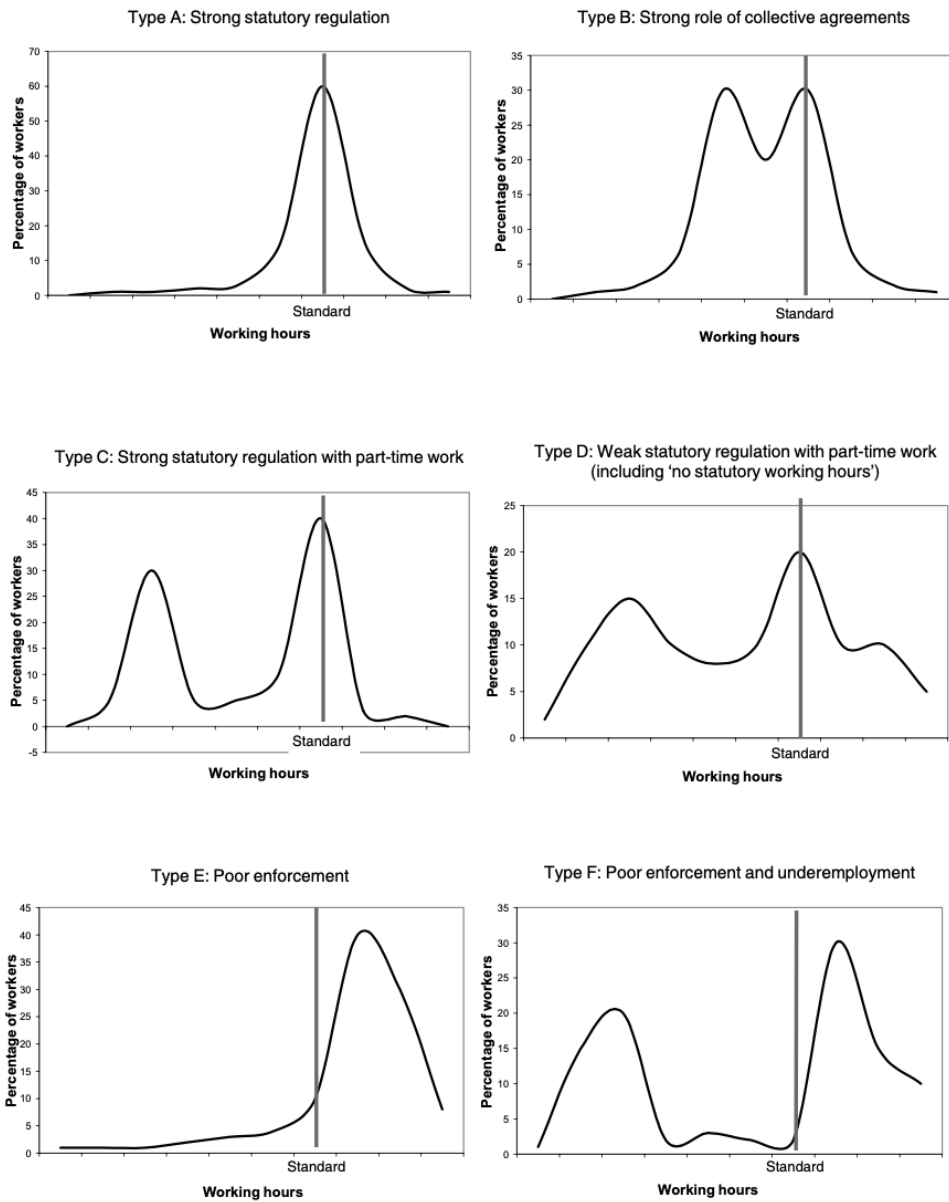
First, it is necessary to specify that ILO extend the European Region including some other countries and dividing the oldest ones – 15 countries – to the newest ones – 12 countries that joined the European region in 2004.

Following the analysis made by J.C. Messenger, the trend in the average working hour in the period between 1995 and 2006, in the European Region, it is toward reduction with some exceptions.

---

<sup>10</sup> <https://data.oecd.org/emp/hours-worked.htm>

Graph 1.1 – different type of working hours distributions: illustrative examples.



By taking into consideration the old 15 European countries – Figure 1.1 – the full-time hours for workers tends to be reduced: for example, Ireland, Portugal, United Kingdom are one of the countries that experience a more drastic reduction between 1995 and 2006; the exceptions refers to countries such as Austria, in which there is an increase in the average weakly working hours. Messenger, 2011, also analyze the gender trend behind the weakly working hours, finding that it affects both woman and men of the old European countries.

Figure 1.1: Average usual weekly hours of work in main job, all workers, old EU-15

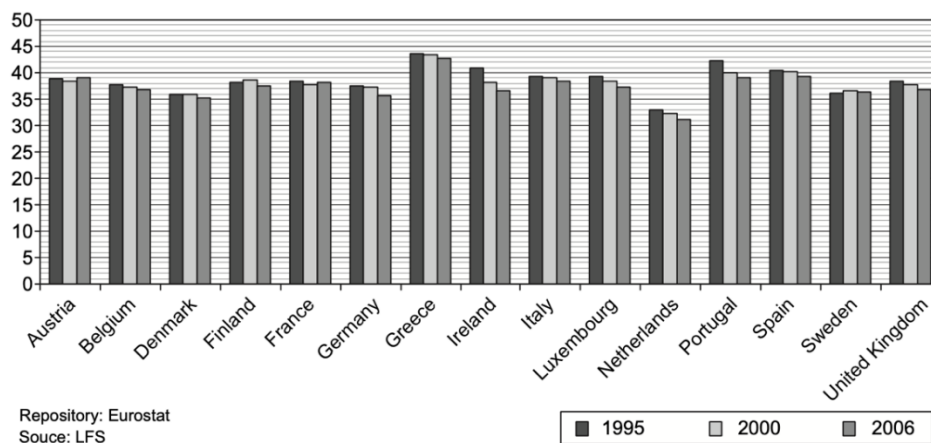


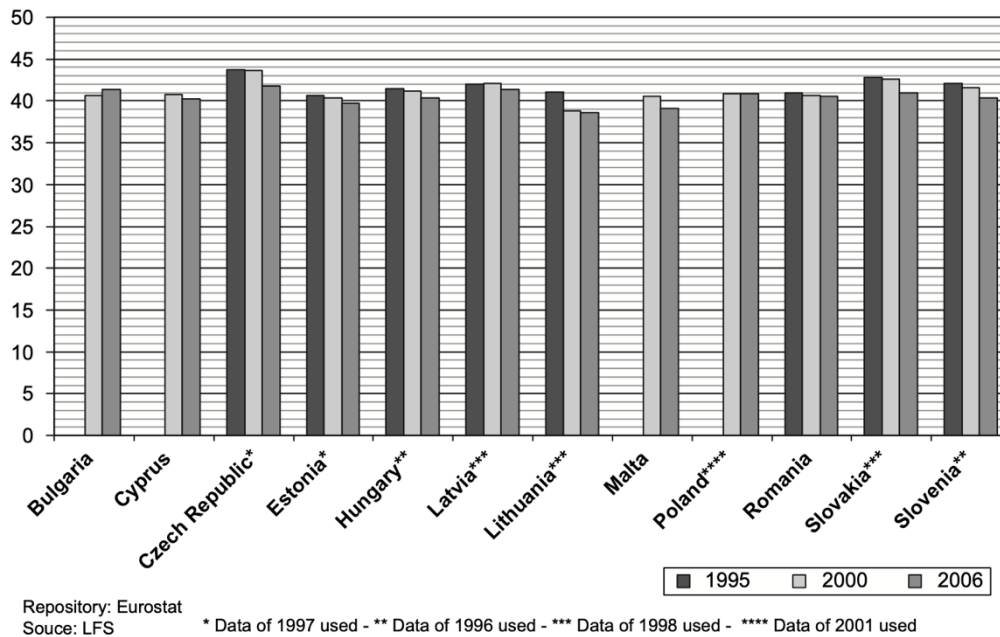
Figure 1.2 refers to the average working hours trend in the new European countries: as stated by Messenger, 2011 also the 12 states show a working hour reduction in full-time work, with the following exceptions: Bulgaria, where working hour increase, Poland and Romania that experience no change in working hours. Finally, referring the non-European states, J.C Messenger, 2011 underline the lack of



sufficient datasets and literature to make statistical analysis on weakly working hour trends, such as the Asian region, eastern Europe<sup>11</sup>.

Figure 1.2: Average usual weekly hours of work in main job, all workers, new EU

- 12



With the extent to make comparison of the trend on average working hour overtime, the World Population Review<sup>12</sup> analyzes the average workweek by country in 2022. As stated in the article, the workweek around countries in the world can differ in length according to the importance a country gives to factors: for instance, culture, leisure time and family needs matters for countries with a short workweek. On the

<sup>11</sup> J.C. Messenger, 2011

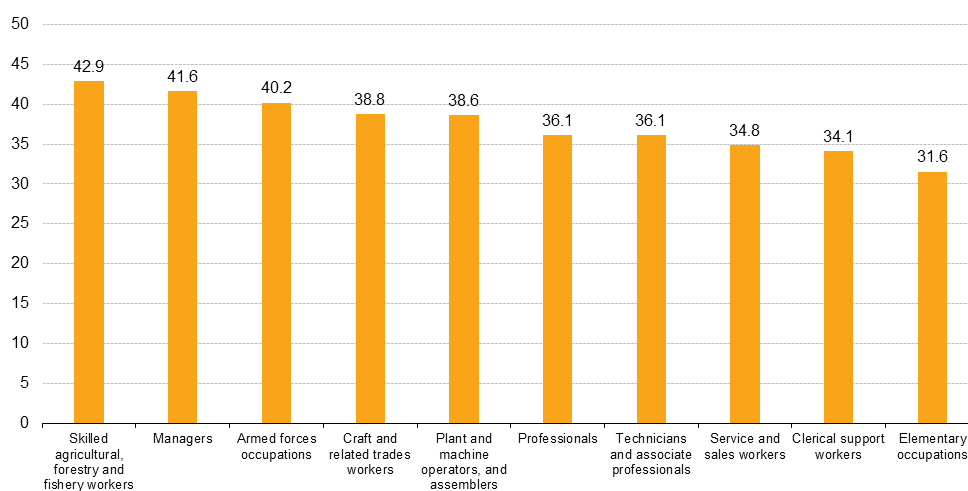
<sup>12</sup> World Population Review, <https://worldpopulationreview.com/country-rankings/average-work-week-by-country>

other hand, countries with a longer workweek gives less importance to the work-life balance – a matter that will be discussed in paragraph 1.4 of this chapter<sup>13</sup>.

With reference to more recent dataset, as stated in the introductory chapter, Eurostat analyzes the average working week in the European countries. What emerges is that there are countries such as Bulgaria, Romania, Greece, and Poland where people work more than 40 hours per week, while other countries such as Netherlands, Austria and Germany in which people work less than 35 days per week<sup>14</sup>.

Figure 1.3: Average number of actual weekly hours of work in the main job by economic activity

**Average number of actual weekly hours of work in the main job by occupation (ISCO-08), EU, 2021**  
(age group 20-64)



Source: Eurostat (online data code: ifsa\_ewhais)



<sup>13</sup> World Population Review, <https://worldpopulationreview.com/country-rankings/average-work-week-by-country>

<sup>14</sup> Eurostat dataset, Hours of work – annual statistics [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours\\_of\\_work\\_-\\_annual\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_-_annual_statistics)

Source: Eurostat dataset, Hours of work – annual statistics  
[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours\\_of\\_work\\_-\\_annual\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_-_annual_statistics)

Furthermore, Eurostat studies refers also to the variation of the actual average working week within countries according to the job. As we can see in figure 1.3, in 2021, the skilled agricultural, forestry and fishing sector have the higher value for hours worked (41.8) while the sector with the elementary occupation has the shortest working week (31.6)<sup>15</sup>.

## 1.2 PROBLEMS WITH LEGAL AND ACTUAL WORKING HOURS

Today, it is possible to state that legal working hours refers mainly to 40 hours per week – that can be considered the criterion, with changes that are country specific (35 or 48 working hours)<sup>16</sup>.

As stated in the previous sections, the trend towards shorter working hours dates back to the last century. One of the main factors influencing the choice in each country is their inclination towards government regulation or collective bargaining. Therefore, by the end of the 1990s it was already possible to divide the European countries that have adopted shorter working hours into 3 groups<sup>17</sup>: as stated J. M.

---

<sup>15</sup> Eurostat dataset, Hours of work – annual statistics [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours\\_of\\_work\\_-\\_annual\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Hours_of_work_-_annual_statistics)

<sup>16</sup> J.C. Messenger, 2011

<sup>17</sup> J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45, 2001

Evans et al, 2001, in countries such as France, Spain and Portugal legislation have a strong influence, whereas in countries as Denmark, Germany, Italy and UK the collective bargaining agreements are more significant. Finally, in Belgium, Greece, Ireland and Netherlands there are a merged organization which blends both legislations and collective agreements<sup>18</sup>.

In light of the above, it is possible to state that legal working hours not always coincides with Actual working hours. According to Lee, et al, 2007 “*what is written in law and what is actually happening at the workplace*” always differs. In fact, working hours vary by considering many factors such as the economic development of a country, individual specific and institutional factors. For example, on the one hand, higher income means higher leisure for people, that are encouraged to work more, reducing the gap between legal and actual working time and rising utility. On the other hand, high income can be ensured only if there is economic stability. Moreover, in the emerging countries, regulation – and so the legal side – seems to be not enforced, so they are unlikely to benefit workers<sup>19</sup>.

In order to benefit from the regulation and to make working hour reduction possible in a country, ILO 1962 developed the Reduction of Hours of Work Recommendation, illustrating these patterns to follow: a country is recommended

---

<sup>18</sup> J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45, 2001

<sup>19</sup> Lee, et al, 2007

to use information and communication technologies instruments in order to reduce working hour without reducing the level of production; working hour have to be reduced according to the worker activity; the country's economic situation must be took into consideration: lower hour of work without reducing the country productivity and so the income of workers<sup>20</sup>.

### 1.2.1 EXCESSIVE WORKING HOURS

The concept of working hours is closely related to the ones of working condition and worker lives. In fact, according to Lee, et al, 2007, bad working conditions have negative influence in worker health and life due to the longer working hour they are required to work.

This can be the case of excessive working hours<sup>21</sup> that negatively impact the work-life balance: excessive long working hours represent a topic that is very discussed in the literature. As stated by Spurgeon et al, 2003 "unsocial working hours" affect both workers families and the company's health.

In the article "*Working time trends and development in Europe, 2011*", J.C. Messenger refers to excessive working hours such as working more than 48 hours per week because:

---

<sup>20</sup> Lee, et al, 2007

<sup>21</sup> J.C. Messenger, 2011

- It is the limitation in terms of weekly working hours established in the ILO Convention No.1 and in the European Union Working Time Directive (93/104/EC);
- Excessive working hours negative affecting the work-life balance when the worker overcome the limit of 48 hours per week.

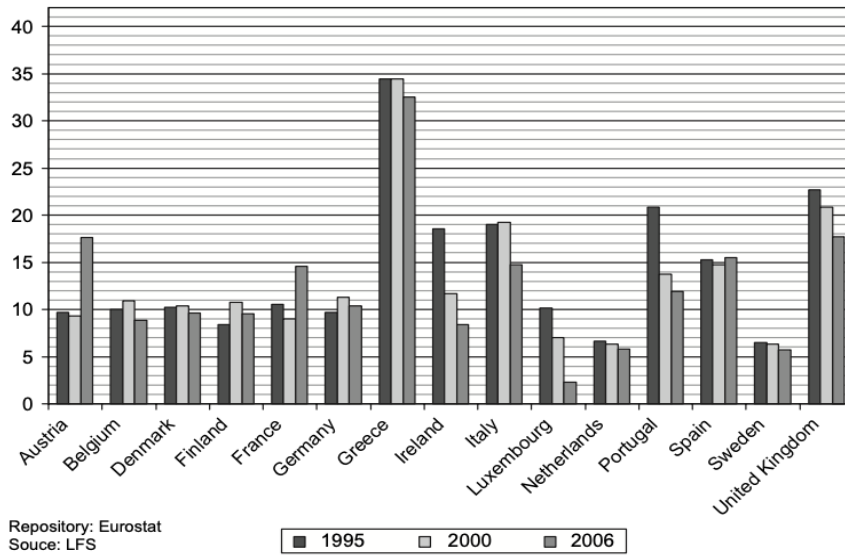
According to J.C. Messenger, 2011 looking at the data on excessive working hours condition in the range between 1995 and 2006, there is a downward trend in Europe related to excessively long working hours. As it is possible to see in Figure 1.3 that refers to the old 15 European countries, excessive hours are mainly referred to countries such as Greece, UK and Austria, where in 2006 the amount of working hours has doubled. Figure 1.4 illustrate the situation referred to the new 12 European countries: here there is a mixed trend, where some countries experience a reduction – Czech Republic, Slovenia for example – and some others show an increase in excessive working hours – Polonia and Bulgaria<sup>22</sup>.

Moreover, the trend can be analyzed by taking into consideration the job-related group: what comes out is that people working over the working hour limitation belongs to the agricultural sector or works as a company's manager.

Figure 1.3: Percentage of all workers with usual weekly hours of 48 or more, old EU – 15

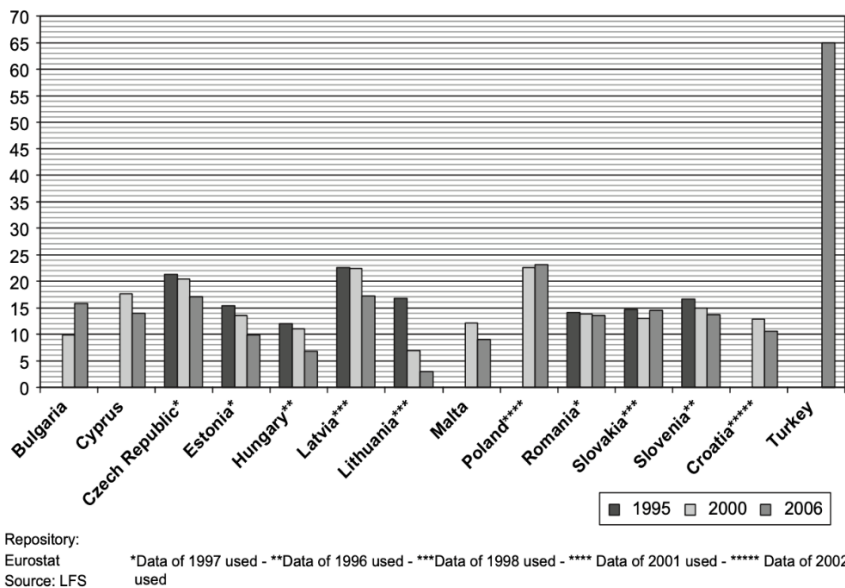
---

<sup>22</sup> J.C. Messenger, 2011



Source: J. C. Messenger, Working Time Trends and Development in Europe, 2011

Figure 1.4: Percentage of all workers with usual weekly hours of 48 or more, new 12 – EU plus Croatia and Turkey.



Source: J. C. Messenger, Working Time Trends and Development in Europe, 2011

### 1.2.2 THE WORK-LIFE BALANCE

Excessive working hours and can be related to the concept of work-life balance: as stated by Karas A., Belzowski P., 2020 there are many definitions of work-life balance but the common concept refers to the time management according to professional and personal needs.

According to Karas A., et al., 2020, the concept of “time allocation” in working life is widely debated. In fact, speaking about excessive working hours there is no beneficial effect for employees. What seemed to be necessary for employees starting from the 70s was to create a balance between working and private life<sup>23</sup>. Work life balance is considered a topic in response to lengthen working hour, and oriented towards working hour reduction. Moreover, it has to be understood as a topic that affect both workers and companies’ perspectives: according to Karas A., et al, 2020 the company performance will not improve if workers are not satisfied about their working position and private life, that in majority of cases depends on job satisfactions.

The gap between working and personal life can be filled by the introduction of new working time system that involves the use of flexibility in working time

---

<sup>23</sup> Karas A., Belzowski P., The concept of balancing working and private life, The Małopolska School of Economics in Tarnów Research Papers Collection ISSN 1506-2635, e-ISSN 2658-1817 2020, 47(3), 133–145



arrangement and increase in the efficiency – that are topics that will be discussed later on this document<sup>24</sup>.

For the reasons illustrated above, it is necessary to establish legal working hours in matter of how many hours an employee should work and the workplace arrangement, in order to benefit both the company's and the worker's side.

### 1.3 PATTERNS ON WORKING TIME ARRANGEMENTS: TRENDS TOWARD REDUCTION

Reducing working hours has been proposed by many, and for many different reasons. This overview of the arguments used reflects the diversity of goals and motivations why people want to work less. While some advocate less work in the context of improving employees health, allowing people to spend time freely and be creative, others focus on creating more jobs or increasing productivity.

It is evident that not all the arguments put forward are compatible with each other. Increasing productivity by reducing working hours is not compatible with the desire to build a sustainable economy or even to redistribute employment. Therefore, the effects of working time reductions are very different depending on who is implementing them, for what reasons and how.

---

<sup>24</sup> Karas A., Belzowski P., 2020

According to Messenger, 2018 hours of work arrangement can be seen as the volume and length of working hours in the economy. A definition of it is given by The ICLS – International Conference Of Labor Statistician, 2008:

*“Working-time arrangements describe measurable characteristics of a job that refer to the organization (length and timing) and scheduling (stability or flexibility) of work and non-work periods during a specified reference day, week, month or longer period and applies to all types of jobs. Multiple characteristics (such as part-time, flexible schedule) may apply as they are not mutually exclusive”*<sup>25</sup> (ICLS – International Conference Of Labor Statistician, 2008).

Speaking about working hours arrangement, a question arise: is there a fixed number of working hours that people have to work in order to grant of the employment status?<sup>26</sup>.

While the problem of long hours of work continues to exist, since the beginning of 20<sup>th</sup> century with the Industrial Revolution, workers gradually start developing new forms of work arrangements. It is turned to be a very important matter since it can affect both workers and company success.

Following the traditional pattern, the standard weekly work organization is the one where an employee works 8 hours a day for 5 days a week. However, according to

---

<sup>25</sup> ICLS – International Conference Of Labor Statistician, 2008

<sup>26</sup> Kamerade D., Balderson U., Burchell B., Wang S., Courts A., Shorter Working Week and Worker Well-being and Mental Health, Centre for Business Research, University of Cambridge, working paper no. 522, September 2020.

Messenger, 2018 this workweek view is changing in favor of new type of workweek arrangements that are linked to the concept of working hour reduction<sup>27</sup>.

In this regard, another question may arise: why people want to work reduced working hours? As widely explained in the literature, working time reduction is associated to the constraints that pressure woman to part-time schedule because of home duties. Nowadays, there are factors influencing the choice that covers a board range of topics clustered in push factors, described form D. Kamerade as “*the negative aspect of employment*” – extreme workload and difficult tasks that leads to worker mental diseases – and pull factors, presented as “*the desire to spend time in more varied and enjoyable ways*” – resulting from bad experiences<sup>28</sup>.

### 1.3.1 PART TIME WORK

Nowadays, there is the global tendency towards working hours reduction, that open to several hours of work arrangements, such as the so-called short hours or part-time work<sup>29</sup>. According to the ILO Part-Time Work Convention, 1994 (No.175) a part-time worker is an “*employed person whose normal hours of work are less than those of comparable full-time workers*”<sup>30</sup>. This kind of working time arrangements refers to those jobs where the working hours are lower than the standard limit

---

<sup>27</sup> Jon Messenger, Working time and the future of work, International Labor Organization, ISBN 978-92-2-132219-1 (web pdf), International Labour Office – Geneva: ILO, 2018

<sup>28</sup> Kamerade et al, 2020

<sup>29</sup> Jon Messenger, 2018

<sup>30</sup> Jon Messenger, 2018

established by a country<sup>31</sup>: that is, the part-time definition varies within countries but normally, it is referred to be less than 30 hours per week.

There are differences and similarities that can be referred to part-time work arrangement within countries: first, it can be done several different ways, but the most common model used in Europe is the one of fixed hours per day<sup>32</sup>.

Referring to the similarities, this kind of arrangement is typical of women instead of men: according to Messenger, 2011 and to the OECD data, in 2004 women covers three-quarters of part-time jobs (OECD, 2004). According to Messenger, 2018, Part-time schedule is typical of women due to the fact that they are more involved in the domestic home-manage. This working time arrangement is considered to be typical of the advanced economies in order to make employees benefit of free time and leisure with families<sup>33</sup>.

However, related to this type of working time arrangement is also the problem of “*reversibility*” of part-time work: if part-time model is used in order to cope situation of family duties, once they have expired, it is not a foregone conclusion that the worker can return to this previous work arrangement – full-time<sup>34</sup>.

---

<sup>31</sup> Jon C. Messenger, *Working time trends and developments in Europe*, Cambridge Journal of Economics 2011, 35, 295–316 doi:10.1093/cje/beq022, Advance Access publication 20 July 2010.

<sup>32</sup> J.C. Messenger, 2011

<sup>33</sup> Messenger, 2018

<sup>34</sup> J.C. Messenger, 2011

Part-time is generally considered in disadvantage with respect to full-time, in terms of working conditions such as wage, benefits and career promotions<sup>35</sup>. Moreover, working on part-time basis can be related to “involuntary part-timers” or “time-related underemployment” – for ILO: these concepts explain people who would like to work more hours per week, but they cannot find a more suitable solution, this way covering an involuntary occupational situation. For example, it can be the case of managerial part-time, that involve people that work equal or less than 15 hours per week. This worker status can be examined as “involuntary part timers”, where people have no option but to work very short hours for a very low income.

Moreover, this working time arrangement is considered to be typical of the advanced economies in order to make employees benefit of free time and leisure with families<sup>36</sup>.

As the problem of excessive working hours, part-time work arrangement affects both workers and companies: according to Messenger, 2011, there is a “dual logic” behind this working schedule that refers to the employee and employer view of part-time work. As stated before, part-time arrangement is the model that fit at best with women families’ duties, but also press women to this work arrangement in order to meet with domestic work. In the employer perspective, on the one hand, part-time work can be offered to help workers in matching with personal duties and family,

---

<sup>35</sup> J.C. Messenger, 2011

<sup>36</sup> Messenger, 2018

as for the employee. On the other hand, it can be used as a for of flexible working time in order to cover peaks period – that will be explained in the following chapter.

### 1.3.2 THE SHORTER WORKWEEK: THE WORKER HEALT, PRODUCTIVITY AND UNEMPLOYMENT TOOL.

Workweek reduction is a debated argument in literature which is present in various fields, such as worker well-being and mental health, productivity and as a tool to cope unemployment or crisis periods. When a process towards a reduction starts, it is necessary to take into account that the decrease in the working days have to be made according to these factors.

D. Kamerade analyze these topics linked to workweek reduction. In the article “*Shorter working week and worker’s well-being and mental health, Kamerade et al, 2020*” the researcher explains the importance of workers mental health in the workweek reduction choice and the use of this tool to cope unemployment and historical crisis period<sup>37</sup>. With reference to the worker mental health, the study conducted by Kamerade et al, 2020 on UK working hours trends shows that it is better for a worker to work small hours (between 1 to 8) then remaining unemployed, and this way benefit the mental health. Although the study reveals the beneficial effect of working shorter hours instead of being unemployed, there is no

---

<sup>37</sup> Kamerade et al, 2020

optimum number of hours of work that maximize the worker well-being and mental health<sup>38</sup>. Moreover, workweek reduction is also closely related to job standards and mental health. According to Kamerade et al, 2020, job standard can be used to forecast worker mental health. In fact, reducing the workweek from five to four working days involves compressing the workload into fewer days, having negative consequence on worker health. In addition, also physical working environment is negatively affected: it may happen that workload concentration in fewer days makes employees more distractive and less attentive to the working condition to be respected. In this regard, it is possible to notice that, sometimes shorter workweek may lead to a drop in job standard. According to Kamerade et al, 2020, a workweek reduction model for Europe can be developed throughout the application of three job quality dimensions – doing meaningful and useful work, quality of social environment, job intensity – that leads to the right way for managing a shorter workweek without harming employees' conditions.

Regarding the workweek reduction as a tool to face unemployment and crisis period – such as the Covid 19 pandemic – it is possible to state that people can benefit of better quality of life from a four-days week, by re-allocating the work within unemployed people<sup>39</sup>. Examples of the usage of this emergency labor market measure can be made by considering Austria which adopted the market policy

---

<sup>38</sup> Kamerade et al, 2020

<sup>39</sup> Kamerade et al, 2020

adopted was the “Covid-19 short time work” scheme, and UK, with the “Coronavirus Job Retention Scheme”<sup>40</sup>.

As stated by Lufkin et al, 2021, the workweek can be reduced in different ways<sup>41</sup>. Speaking about the reduction of the workweek to four working days per week, where you can either establish a day off or reducing the number of working hours by the 20%, it is possible to state that, even though the variety of models for which the workweek can be reduced, a commonality is that employees take the same wages for lower hours of work<sup>42</sup>. For instance, in Iceland the Reykjavík City Council and the national government conducted research on the reduction of the workweek in order to boost productivity. From 2015 to 2019, the 1% of the working population – about 2,500 workers in preschools, offices, social service providers, and hospitals – were paid the same wage for working less hours<sup>43</sup>. As the test achieved a great success, the government bargained on working time and today employees are more and more oriented to a shorter workweek.

According to the literature, one of the most important topics related to the workweek reduction is the one referred to productivity. In fact, speaking about the working hours reduction a question may arise from companies’ behalf: is it good

---

<sup>40</sup> Kamerade et al, 2020

<sup>41</sup> Bryan Lufkin and Jessica Mudditt, August 2021, BBC <https://www.bbc.com/worklife/article/20210819-the-case-for-a-shorter-workweek>

<sup>42</sup>Lufkin et al, 2021

<sup>43</sup> Four-day week “an overwhelming success” in Iceland, BBC, 2021, <https://www.bbc.com/news/business-57724779#comments>



for companies to pay workers to work less? As a matter of the fact, it seems to be a topic related to the worker efficiency at work. According to Jhon Trougakos, University of Toronto professor of Organizational behavior and leadership, the general 40 hours week is not oriented toward efficiency, because people attention is limited. His study shows that workers end up scrolling down the social networks for about 2h of the working days<sup>44</sup>. *“It is a matter of changing the focus to hours worked to productivity – that is from “the busy work” to “the right work”*.

This means that an employees will be more efficient in working less hours and focusing on tasks they are required to do instead of staying at work longer and being inefficient. The trend for companies is to measure goals in performance and output produced, not time.

Nowadays, according to the literature there is not a uniformly adoption of the shorter workweek within countries but there are sectors and companies that decided to implement it.

For instance, two examples of a shorter workweek choice can be presented.

Considering the adoption of the shorter workweek for safeguarding jobs and thus to cope with a possible unemployment situation in Europe, can be seen in the Volkswangen experiment in 1993<sup>45</sup>.

---

<sup>44</sup> Lufkin et al, 2021

<sup>45</sup> De Spiegelaere S., Pisana A., Perché e Come Ridurre L’orario di Lavoro, European Trade Union Institute, 2018

Instead of laying off people, it was working hours that would be dismissed, at a rate of 20 per cent and the working was reduced from 36 to 28.8 hours per week<sup>46</sup>.

The workers avoided mass redundancies; for the company, this agreement meant considerable short-term savings (no need for a social plan) and long-term preservation of human capital. At first glance, this was a victory for everyone, but a closer look gives a more nuanced impression. The reduction in working hours was accompanied by a substantial pay cut. In order to prevent employees from struggling with their monthly financial outgoings, IG Metall, the German metalworkers union, negotiated a simple rule: by increasing the hourly wage by one per cent and with the gradual payment of holidays and the annual bonus, the monthly pay for the employees remained stable, while the annual pay dropped by about 16 per cent (against a reduced working time of 20 per cent)<sup>47</sup>. The halting of mass redundancies through the reduction of working hours was thus mainly paid for by the employees and somewhat by the employer.

In 1999, the problem of overcapacity was resolved and there was a return to traditional working hours. The 28.8 hours per week remained on the books but, in fact, most employees returned to working longer hours. In 2006, the company

---

<sup>46</sup> De Spiegelaere S., Pisana A., 2018

<sup>47</sup> De Spiegelaere S., Pisana A., 2018

officially returned to a 33-hour week for blue-collar workers and a 34-hour week for white-collar workers<sup>48</sup>.

Volkswagen and IG Metall were thus able to drastically reduce working hours for several years, in exchange for job security, without any state intervention.

However, the very specific context in which this experiment took place must be recognized. Firstly, wages at Volkswagen were much higher than average and industry minimums. Secondly, Volkswagen and IG Metall attached great importance to the consensual relationship between the company and employees. In fact, the management was not particularly eager to dismiss a third of its staff and Volkswagen employees possess a number of company-specific skills<sup>49</sup>.

How should the Volkswagen experiment be evaluated? In terms of employment, the reduction of working hours at Volkswagen had a positive, but eminently defensive effect. A strong wave of redundancies was avoided; as far as stress is concerned, three out of four employees found, for example, that their workload had become heavier in one week by 28.8 hours. This was especially the case for office workers; another result was an increase in productivity. This was partly due to the increase in work intensity, but also to the improved performance of the employees, who were better equipped to work<sup>50</sup>.

---

<sup>48</sup> De Spiegelaere S., Pisana A., 2018

<sup>49</sup> De Spiegelaere S., Pisana A., 2018

<sup>50</sup> De Spiegelaere S., Pisana A., 2018

Overall, an evaluation of the Volkswagen experiment leads to the conclusion that it was positive, but not entirely. It succeeded in avoiding short-term lay-offs, but it came at a very high price for the employees in terms of reduced income and increased work pressure.

Another debated example is the experiment conducted by the US giant Microsoft in its Japanese subsidiary. The Japanese subsidiary of the US-based giant allowed its 2,300 employees to work only four days a week in August as part of the 'Work Life Challenge 2019 Summer' programme, paying them the same salary as in other months. In the Asian region the work rhythms and pressure are so high that they frequently lead to deaths from stress-related illnesses or suicides induced by psychological problems caused by work-related stress. Government in Japan, the country known for *karoshi* that is the phenomenon of death from overwork, has decided to reverse course by pushing companies to offer their employees a four or five-day working week<sup>51</sup>. The initiative started in 2019 by Microsoft Japan, which showed a 40% increase in productivity, a 23% reduction in electricity consumption and a 59% reduction in paper consumption<sup>52</sup>. However, there are objection concerning this trial. The experiment was time-limited and the workers suspected that a successful outcome of the experiment could lead to a permanent '4-days-a-

---

<sup>51</sup> Gatlin-Keener C., Lunsford R., Four-Day Workweek: The Microsoft Japan Experience, 2020.

<sup>52</sup> Alessia Conzonato, *Lavorare 4 giorni a settimana, nove è già possibile. Paesi e aziende che hanno adottato la settimana corta*, Corriere della Sera, 2022 <https://www.corriere.it/economia/lavoro/cards/lavoro-l-ipotesi-settimana-corta-che-diventa-realta-quali-paesi-aziende-l-hanno-adottata/belgio.shtml>

week' regime. This could have had an effect on the commitment, and thus the performance, of the workers in the single month. Furthermore, specific cultural aspects should not be overlooked: dedication to work and a genuine devotion of employees to their company are strongly felt in Japanese culture and hardly equaled in the rest of the world<sup>53</sup>. All things considered, Microsoft Japan has improved productivity and more free time for employees to devote to their families, without lowering their wages.

In conclusion, it is therefore possible to highlight the workweek reduction have to be made according to some criterion that may affect the worker health, productivity and wages. Referring to the worker well-being it is possible to state that there is no optimum number of working hours but it needs to be decided according to the maintenance of good jobs standards. As the Microsoft experiment in the Japan subsidiary shows, employees are more efficient in working less, this way increasing productivity. Moreover, despite the Japan cultural tendency to overwork, employees experienced a better quality of life.

Furthermore, the shorter workweek can be adopted also to face crisis period and as emergency plans. As the Volkswagen experiment in Germany in 1993, and the emergency plans adopted by Austria and UK during the Covid-19 pandemic shows, the overcapacity problem can be faced with the adoption of the workweek

---

<sup>53</sup>CUE, Microsoft Giappone e la settimana corta: benefici, costi e sensazionalismi, 2019, [https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide\\_e\\_criticit](https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide_e_criticit)

reduction. However, research is still being carried out on how to implement the short week to avoid negative consequences for employees, such as reduced income and increased work pressure.

## CHAPTER 2: FLEXIBILITY IN WORKING TIME

During the recent years, the trend regarding working time shows a decreasing effect in developed countries but at the same time it becomes more flexible. The importance of work flexibility results also in the organization of the work arrangements that better increase efficiency in the production process.

This way, from the conventional forms of working arrangement such as the ones that includes atypical working hours (working during the weekend, evening, and nights), part-time work and shift work, it is possible to identify more advanced form of work organization. In this regard it is necessary to identify flexible working schedule as teleworking and mobile working<sup>54</sup>.

These kind of flexible work arrangements can be related to innovation: in fact, the digital revolution has contributed to the development of new forms of flexible working time arrangements<sup>55</sup>.

Moreover, outcomes resulting from the application of flexible working time arrangement has been analyzed. In fact, flexibility in working time has a positive impact on worker well-being: according to the literature, by arranging work as they prefer, employees have the opportunity to better balance professional and personal life. However, flexibility can also lead to negative impact, resulting from gender,

---

<sup>54</sup> Erhel, et al, 2021

<sup>55</sup> Erhel, et al, 2021; Hallapée, Mauroux, 2019; Clark, 1997

paid and non-paid work, personal characteristics, and countries' institutional context.

## 2.1 FLEXIBLE WORKING TIME ARRANGEMENTS

As stated in the previous chapter, the main dimension regarding working time are hours of work and working time arrangement. Speaking about working time arrangement in general, ILO, 2011 state the following: “*any given number of hours of work can, at least theoretically, be organized in an almost infinite number of ways, and how those hours are organized can have important consequences for both workers and enterprises*”<sup>56</sup>. In this regard, also the ICLS – International Conference of Labor Statisticians define the working time arrangement and typologies that differs to the standard workweek by also analyzing the flexible working-time arrangements. According to J. M. Evans, et al, 2001, flexible working time arrangement can be defined as “*working hours arrangements which allow employees to match labor input more closely with production needs*”<sup>57</sup>.

Chung H, et al, 2020<sup>58</sup> defined flexible working as the “*worker's control over when and where they work*”. This trend has increased over the years across most

---

<sup>56</sup> ILO, *Working time in the twenty – first century*, Condition of Work and Employment Programme, Geneva 2011

<sup>57</sup> J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45, 2001

<sup>58</sup> Chung H, et al, 2020



industrialized countries. Moreover, it seems to be required by new generation at work, so becoming the norm in the future.

Linked to the concept of flexibility in working hours there is the one of “modulation” of hours of work: it consists in the possibility for employees of programming the working hours differently for different weeks<sup>59</sup>. In fact, according to the actual trends on working time arrangements, working hours – both actual and legal are going to reduce and to be flexible<sup>60</sup>.

Flexible working time arrangement can be set from employer – involuntary for the workers – or employee’s behalf – wanted by the employees<sup>61</sup>. According to Eurofound, “*employer-friendly forms of working time flexibility are those that allow organizations to bring human capital in line with the temporal requirements following from business*”<sup>62</sup> and “*to provide workers with the freedom to adopt their working hours and schedule to meet their own personal and family needs*”<sup>63</sup>.

Flexibility can be understood both as the number of hours worked in a day/week and in contemporary form of working arrangement such as flextime, compressed hours, annual hours, teleworking, career breaks or sabbaticals<sup>64</sup> and so on and so

---

<sup>59</sup>J. M. Evans, et al, 2021

<sup>60</sup>Lee et al., 2007, Messenger 2018

<sup>61</sup> Oscar Vargas-Llave, Irene Mandl, Tina Weber and Mathijn Wilkens, Telework and ICT-based mobile work: Flexible working in the digital age, EUROFOUND, Publications Office of the European Union, 2020

<sup>62</sup> Oscar Vargas-Llave, et al, 2020

<sup>63</sup> Oscar Vargas-Llave, et al, 2020

<sup>64</sup>CIPD (2019), Mega trends: flexible working, <https://www.cipd.co.uk/knowledge/work/trends/megatrends/flexible-working>

forth. In this regard, flexibility in working time assumes different forms such as temporal flexibility, numerical or contractual flexibility, wage flexibility and functional flexibility. Furthermore, the author explains how to make working time more flexible considering the variation of one of these four factors: the number of hours worked per day, the number of hours worked per working day, the specific hours worked per working day and the specific days that are worked<sup>65</sup>.

First of all, it is possible to make some consideration about part-time work. As a matter of the fact, in the previous chapter the analysis on part-time working hours refers to the recent trend of reduction in hours of work. By referring to flexibility in working hours, not all form of part time working arrangement let people to choose flexible working time. Employees working hours choice will represent the trend towards the adoption of part time, but on the other hand, part-time work is connected to the lower training level and to lower wage<sup>66</sup>.

According to ILO, 2011, despite the working time arrangements presented in Chapter 1 – part time working arrangement and the short workweek – several type of flexible working time arrangement can be identified. Also, CIPD, 2019 describe the main practice on flexible working time arrangement.

Overtime work is a way to expanding the daily or weekly working time, and it is defined as “*all hours worked in excess of the normal hours.. unless they are taken*

---

<sup>65</sup>ILO, 2011

<sup>66</sup>J. M. Evans, et al, 2001

*into account in fixing remuneration in accordance with custom*<sup>67</sup>. Overtime changes in regulation depend on the institutional setting (law or collective bargaining for example). Regarding the frequency in the use of overtime as flexible working time arrangement, in Europe it seems to be widespread within countries and industries, although there are countries such as UK, France, Germany, and Nordic countries that are more inclined to use this tool. The overtime can be also related to the Japan “karoshi” phenomenon where the majority of worker are used to work (55%). By considering the overtime payments, in EU the majority of companies are used to pay for overtime work. However, there is a 20% that pay overtime with free time (time off) and a 30% that pay overtime with both wage and time off. There is also a low percentage of companies that do not pay overtime at all<sup>68</sup>.

Over the years, overtime as a source of flexibility is increasingly giving way to new forms of flexible working time arrangement such as shift work<sup>69</sup>. As a matter of the fact, OECD states that shift work (night work and weekend work) type of working arrangement starts spreading from the 80’s where it was referred to the production sector<sup>70</sup>. It is defined by ILO as “*a method of organization of working time in which workers succeed one another at the workplace so that the establishment can operate*

---

<sup>67</sup> ILO, 2011

<sup>68</sup> ILO, 2011

<sup>69</sup> J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45, 2001

<sup>70</sup> J. M. Evans, et al, 2001

*longer than the hours of work of individual workers*"<sup>71</sup>. This way, companies not only can manage to operate longer hours of work – the capital operating time will be further away of the one of the weekly hours of work – but also to accommodate peak period in the demand. Shift work can be implemented in several ways, but they can be classified in two main categories: fixed shift system – where employees work always the same shift, and rotating shift – where employees work different shift in time (morning/afternoon, afternoon/evening). According to Parent-Thirion et al, 2007, page 22, Lee, McCann, and Messenger, 2007 this kind of flexible work arrangement is typical of health and social works, manufacturing, restaurant, transport ecc. However, in China it can be found mostly in the manufacturing working arrangements. Eurofound, 2010, shows that in Europe 17% of workers practice shift work. Within the shift work arrangement category, it is possible to refer to two main arrangement forms, such as night work and weekend work, which are also called “unsocial working hours”. Night work schedule is defined from the ILO Convention No. 171, as “*all work which is performed during a period of not less than seven consecutive hours, including the interval from midnight to 5am*”, while weekend work is defined as “*any work occurring on normal days of rest*” (ILO, *Working time in the twenty – first century*, Condition of Work and Employment Programme, Geneva 2011).

---

<sup>71</sup> ILO, 2011

According to Lee, McCann, and Messenger, 2007 weekend work arrangement is common in the hotel and restaurant industry and retail, especially in China, while in Europe the Sunday work is not widespread.

Staggered Hours and Compressed Workweeks (CWW) are both organizational models that represent changes in the standard workweek. Staggered hours can be considered a fixed working time arrangement rather than a flexible one: in fact, here employees have different starting and finishing, for different groups of workers in the same company but, these terms always remain the same. An example could be the one of the transport industries, where people are employed in the same amount during peak hours. On the other hand, the compressed working week is considered a flexible working time arrangement, in which the same number of working hours will be planned in fewer days<sup>72</sup>. Consequently, working days will become longer than the standard ones – more than 8 hours of work per day in order to reduce the working week from 5 to 4 working days. This working time arrangement can be related to the workweek reduction. However, in the second case, the number of working hours per week is also reduced while in the compressed working week the number of hours is not reduced. According to ILO, 2011, the CWW can be applied in order to better organize the company's environment by reducing the operating cost.

---

<sup>72</sup> ILO, 2011, CIPD, 2019

Flexitime work arrangement let workers adopting their working hours to their need, by choosing when to start and when to finish (although with limits). According to Chung H, et al, 2020, flexitime can be defined as “*having control over the timing of one’s work*”<sup>73</sup>. This way worker not only can decide when to start and when to finish his daily work, but he can also change the number of hours worked per day or week. On the other hand, in working time autonomy workers have full control over the organization of their working life<sup>74</sup>. The main difference between these two types of working time arrangement is that in flexitime exist restriction on the number of hours that must have been worked per week. Related to flexitime, there is flexiplace, that “*allow workers to work outside of their normal work premises*” (working from home)<sup>75</sup>. Figure 2.1 shows how much flexible working time arrangement have been used in European countries in 2015, according to the European Working Condition Survey (flexitime and working time autonomy), at least several times over a year.

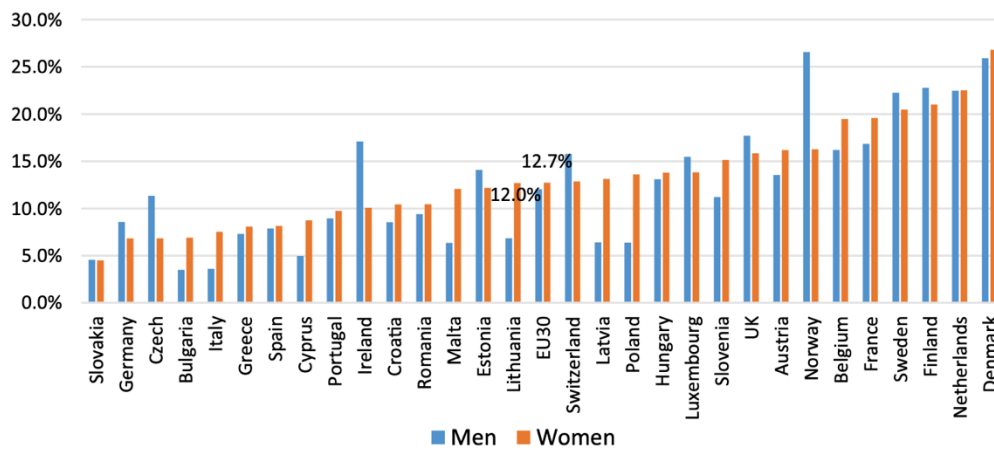
---

<sup>73</sup> Chung H, et al, 2020

<sup>74</sup> Chung H, et al, 2020

<sup>75</sup> Chung H, et al, 2020

Figure 2.1: Proportion of dependent employed with working from home across 30 European countries in 2015



Source: EWCS 2015

From the graph above it is possible to state that, there are difference on the implementation of flexible working time arrangement across countries. In fact, the northern Europe is characterized by high percentage of workers working from home while it is not the same for southern Europe. Furthermore, there are also differences between men and women in the use of flexible working time arrangement. More on the topic in the following paragraph<sup>76</sup>.

Other flexible arrangements practices are term time working, job sharing, annual hours, career breaks and commissioned outcomes.

<sup>76</sup> Chung H, et al, 2020

Nowadays, due to the covid 19 pandemic, another form of flexible working time arrangement starts spreading, that is working from home. As a matter of the fact, according to CIPD, 2019, the percentage of employees who work from home is increasing<sup>77</sup>. This kind of arrangement see employees working from home on a regular basis – which differ from mobile working or teleworking, where employees work in a different location with respect to the employer which may be the employees' home<sup>78</sup>.

Teleworking and mobile working are considered to be the future in terms of the work arrangements<sup>79</sup>. According to the Eurofound, 2020; Eurofound and ILO, 2017 these form of flexible work arrangements offers workers flexibility in time and space they work. In fact, telework and Information and Communication Technologies – ICT mobile work give workers the opportunity not to practice commuting, to increase autonomy and work-life balance, this way increasing the worker satisfaction.

Therefore, it is necessary to consider the ICT impact such as smartphone and tablet, that let people the possibility to always be connected. This way, the border between working and private life starts to reduce<sup>80</sup>. More on this topic in the following chapter.

---

<sup>77</sup> CIPD, 2019

<sup>78</sup> CIPD, 2019

<sup>79</sup> Erhel et al, 2021

<sup>80</sup> Messenger, 2018.



## 2.2 THE LINKAGE BETWEEN INNOVATION AND FLEXIBLE WORKING TIME ARRANGEMENT

According to Mas e Pallais, 2020 the concept of flexible working time arrangement can be related to innovation. As a matter of the fact, ICT – information communication technologies – can be used for time and space management in the workplace. In their study on the determinants of alternative work arrangements, they discovered that IT technologies have a great influence over the working time arrangement choice<sup>81</sup>. In fact, internet and IT – that are always in progress – have allowed employees to work remotely while lowering cost of working arrangements for employers. In this regard, is the “traditional working” considered obsolete? According to Mas e Pallais, 2020, there is not homogeneity in the cost of working reduction due to the technology advance. However, it seems to be lowered: in fact, during the period between 2000 and 2015 people that possess a computer device at home are increased about 30%, while the presence of internet at home increased of 35%. Furthermore, online platforms for file storage were also implemented<sup>82</sup>. However, the cost for flexible working arrangement is still elevated for works where it is required a strict collaboration between clients and companies, or for works where working from home is not feasible at all<sup>83</sup>.

---

<sup>81</sup> Alexandre Mas, Amanda Pallais, Alternative Work Arrangements, Princeton University and NBER Harvard University and NBER (2020)

<sup>82</sup> Mas e Pallais, 2020

<sup>83</sup> Mas e Pallais, 2020

Referring to flexible schedule such as teleworking and mobile working, they are related to innovation and IT due to the fact that they extend the work accessibility for longer hours<sup>84</sup>. In this regard, new flexible working time arrangements come up thanks to the ICT, giving rise to new form of work organization regarding time and space management.

Furthermore, working time flexibility can be related to innovation also in another way: in fact, internal flexibility in the organization – such as the utilization of part time work and trust-based working time – can leads to the company innovation and product improvements<sup>85</sup>. This way, flexibility and innovation are related in both directions: the ITC help in developing new forms of work organization and as a consequence, these new organizational forms – internal flexibility – leads to innovation. According to Preenen P, et al 2015, internal labor flexibility – that is functional flexibility referring to the way a company can face changes in the demands by “*redesigning jobs*” in the organization of the company<sup>86</sup>, let companies to face changes in the demand. However, in Europe seems to be widespread the use of external flexibility – that let companies to face the demand flexibility by making changes in the amount of hour of labor worked, for example using temporary

---

<sup>84</sup>Erhel, Guergoat-Lariviere, Mofakhami, *Working Time Arrangements, innovation and Job Satisfaction: a workplace level analysis for France*, Document du travail du centre d’etudes de l’emploi et du travail, n. 204, mars 2021

<sup>85</sup> (Erhel, Guergoat-Lariviere, Mofakhami, 2021)

<sup>86</sup> Preenen P., Vergeer R., Kraan K., Dhondt S., *Labor Productivity and Innovation Performance: The importance of Internal Labor Flexibility Practices*, EID Economic and Industrial Democracy, 2015

contract. In spite of the above, internal flexibility results seems to be more encouraging regarding innovation and sales<sup>87</sup>.

### 2.2.1 TICTM – TELEWORK AND ICT-BASED WORK ARRANGEMENT

Telework and ICT-based mobile work – TICTM – is considered to be a flexible working time arrangement, as it let people working form different places thanks to the use of Information Communication Technology – ICT<sup>88</sup>. In fact, it is a technology-based arrangement that enable flexibility in time and space.

For instance, working from home is the main example of working time arrangement that has been risen by information and communication technology. However, this is possible only with the use of digital infrastructures and online devices such as platforms, computer, tablets and smartphones. In the study conducted by Oscar Vargas-Llave, et al 2020 they identified four types of TICTM working time arrangement as follow:

- Regular Home-Based: workers that use ICT frequently
- Highly Mobile: workers that use ICT frequently added to high mobility
- Occasional: workers that use ICT outside the workplace and on occasional bases

---

<sup>87</sup> Preenen P, et al 2015

<sup>88</sup> Oscar Vargas-Llave, et al, 2020

- Self-employed: workers that use ICT on workplace and outside, on occasional or frequent bases.

Table 2.1 shows the four categories by use of ICT and work location.

Table 2.1: Work arrangement compared in the report

Employment status	Category of work arrangement	Intensity of ICT use	Place of work/frequency
Employee	Regular home-based TICTM	High	Mainly from home, at least several times a month
	Highly mobile TICTM	High	In at least two locations, several times a week
	Occasional TICTM	High	One or more places outside the employer's premises, with a lower degree of mobility than the highly mobile group, occasionally
	Always at employer's premises, high ICT use	High	The employer's premises
	Always at employer's premises, low ICT use	Low/no	The employer's premises
Self-employed	Self-employed TICTM	High	More than one location
	Self-employed with a fixed workplace	High/low/no	Only one place of work

Note: TICTM categories are the ones in blue

Source: based on Eurofound and the ILO, 2017, Oscar Vargas-Llave, et al 2020.

This digitalized work arrangement not only introduce new tool for data storage, communication and information but also include flexibility, considering both in time and space.

Although it is true that TICTM working time arrangement cannot be implemented in every working sector, the percentage of companies involving this tool is growing. It can be adopted from the employees or employer request: as a matter of the fact, from the employee's behalf, they want to implement TICTM as working time arrangement in order to be more flexible, shaping their personal needs with the professional ones. On the other hand, employers can use telework to reduce the cost

of work, increasing efficiency and productivity – always because if employees feel well with the working environment and amount of hour of work, they will be more productive in less time. Obviously, in order to implement telework and ICT- based work, workers have to possess all the requirement to access to the company’s information as in the normal working space, by using devices and cloud platforms<sup>89</sup>. According to the Sixth European Working Condition Survey: 2015 – EWCS, the 19% of worker in EU have adopted the TICTM work arrangement<sup>90</sup>.

Figure 2.2 shows both employees and self-employer workers that adopted TICTM work arrangement. According to the survey, telework and ICT-based work arrangement is spread in the north and west of Europe. In fact, as Figure 2.2 shows, the highest percentage refers to countries such as Denmark (38%), Sweden (33%), Netherlands (31%), Luxemburg (29%), UK (27%), France (26%).

According to ILO, the variation that exist within countries can be explained by factors such as the degree of spread of information and communication technology, the internet connection, the ability to the use of ICT, country’s economy and company’s culture – the tendency towards different type of managerial model<sup>91</sup>. Moreover, other factors that influence the use of TICTM work arrangement are the importance of regulation and collective bargaining on flexible working time, that

---

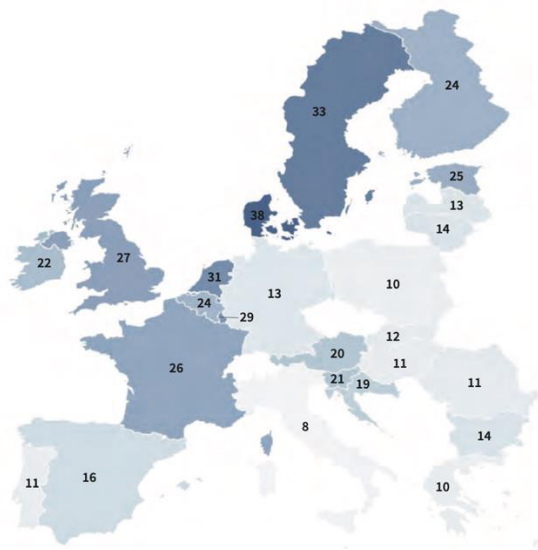
<sup>89</sup>Oscar Vargas-Llave, et al 2020

<sup>90</sup>EWCS, 2015 <https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys/sixth-european-working-conditions-survey-2015>

<sup>91</sup> Oscar Vargas-Llave, et al 2020

change within countries. All things considered, it is possible to state that in Europe there is tendency to the use of ICT-based arrangement and so the trend toward flexibility in working time arrangement continues to rise<sup>92</sup>.

Figure 2.2: Shares of Workers with TICTM arrangement, 2015



Source: EWCS 2015

According to the four category identified by ILO, it is possible to allocate sectors to TICTM categories<sup>93</sup>:

- Regular Home-Based: education, ITC, scientific activities;
- Highly Mobile: it is spread out across sectors such as wholesale, retail, manufacturing, health, transportation;

---

<sup>92</sup> Oscar Vargas-Llave, et al 2020

<sup>93</sup> Oscar Vargas-Llave, et al 2020

- Occasional: it is the most common and can be referred to manufacturing, professional and scientific activities, public administration;
- Self-employed: it is referred mainly to scientific sectors, information and communication, wholesale, and retail trade.

With reference to the sector where the TICTM is used Figure 2.3 show the proportion of workers in each category by sector, in EU, in 2015<sup>94</sup>.

What is possible to state is that sectors with the highest use of TICTM work arrangement seems to be the ones that most depends on ICT and flexibility in work location. As a matter of fact, it refers to information and communication (57% of worker in this sector), then to professional and scientific activities sector (53%), real estate (43%) and public administration (30%).

In conclusion, in EU there is an increasing trend toward the use of TICTM working arrangement such as working remotely and not in the general workplace.

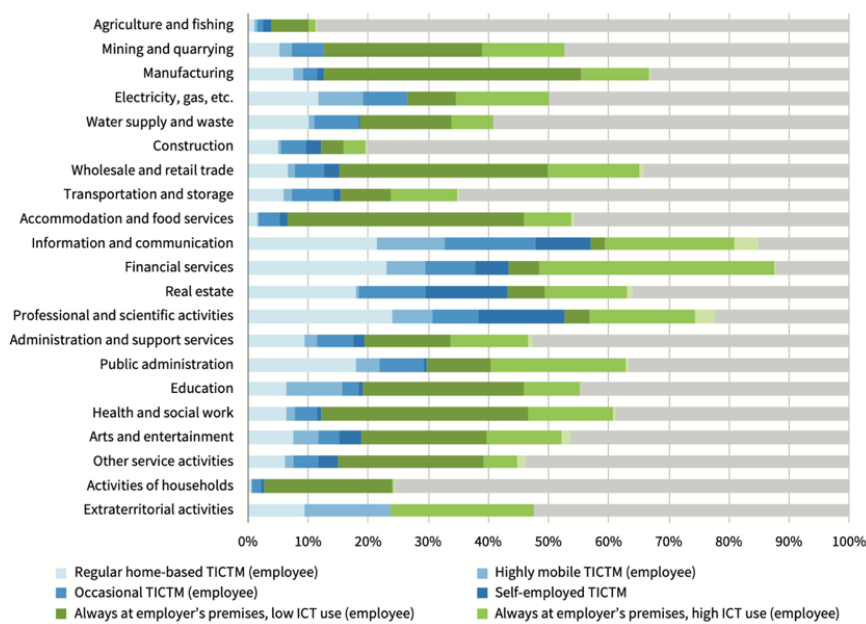
However, there are differences within countries due to a combination of factors as the advancement of information and communication technology, internet, the use of ICT, country's economy, and company's culture such as the tendency towards different type of managerial model.

---

<sup>94</sup> Oscar Vargas-Llave, et al 2020

Furthermore, it is noticed that the use of TICTM is more common in sector such information and communication, financial service, scientific activities and public administration.

Figure 2.3: Prevalence of type of work arrangement, by sector, in EU28, 2015



Source: EWCS 2015

Moreover, the importance of flexibility for workers is considered: as a matter of the fact, surveys shows that workers do telework on occasional basis to face their personal needs.

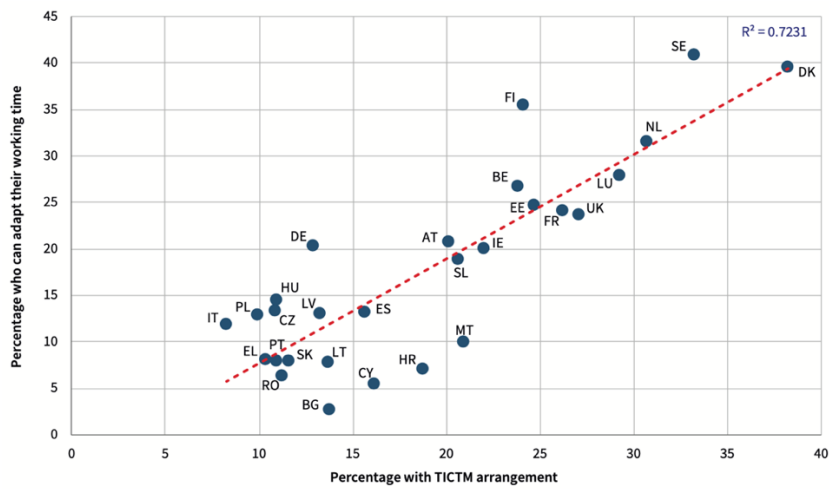
Flexibility is a concept strongly related to TICTM work arrangement and innovation technology. ICT – information and communication technology let employers to develop new form of work organization that gives them more flexibility on where and when to work.



“These types of work are not necessarily tied to regular working time but require workers to be on-call, meet deadlines or reach targets set by employers or clients (Eurofound, 2019a)”<sup>95</sup>.

Figure 2.4 shows the correlation between flexible working time arrangement and TICTM work arrangement. According to the survey conducted by Oscar Vargas-Llave, et al 2020 there is a strong relation because both flexible working time arrangement and TICTM are popular in countries like France, Finland, Estonia, Belgium, Denmark, UK.

Figure 2.4: Correlation between flexible working time and TICTM, member state, 2015



Source: EWCS 2015

<sup>95</sup> Oscar Vargas-Llave, et al 2020

### 2.3 THE WORKER WELL-BEING AND FLEXIBLE WORKING TIME ARRANGEMENTS: POSITIVE AND NEGATIVE OUTCOMES.

According to the literature the adoption of flexible working time arrangement rises both positive and negative effect on worker well-being.

First of all, it is necessary to identify the main problems that exist in speaking about flexibility in working time arrangement, that is the blending of work and private life, that affect the worker well-being.

As stated by Erhel, Guergoat-Lariviere, Mofakhami, 2021 flexible working time arrangement has a double effect on worker well-being. In fact, while it makes possible to manage working time on the basis of personal life, giving people the opportunity to make a balance between work and private sphere, flexible working time arrangement are blending more and more these two spheres, leading to confusion and stress in people<sup>96</sup>.

Regarding the problem of the integration between work and private life, Lott 2014, analyze the effects reported from flexible working time arrangement on worker well-being related to time adequacy<sup>97</sup>. As stated before, nowadays employees require resources to combine different roles – paid and domestic work, education, and social life. Therefore, the European Union implemented some policies to face

---

<sup>96</sup> Erhel, et al, 2021

<sup>97</sup> Yvonne Lott, “*Working time flexibility and autonomy: Facilitating time adequacy? A European perspective*”, Insitute of Economic and Social Research, June 2014

this problem, such as flexicurity strategy – giving employees permanent employment with flexible contract; the 2006 Commission Consultation Document – that relate to employee’s well-being also in terms of childcare; the Europe 2020 strategy – which aims to promote gender quality and work-life balance<sup>98</sup>.

Also Lott, 2018 refers to that topic: by analyzing the German Socio-Economic Panel Study, she shown that employees seems to have less spillover when using flexible working time arrangement than the employer-oriented schedule. According to the study on the effects of flexible working time arrangement and spillover for women and men in Germany, working time schedule – flexible schedule in particular as working at home – are linked to the effect that work has on worker’s personal life at home, that is what is called “work-to-home spillover”<sup>99</sup>. As a matter of the fact, as ICT are always more used at work and in the working time schedule, workers are running the risk of blending boundaries between work and private spheres, this way involving the labor life into the family one. As a consequence, employees have to face spillovers for the incapacity to tourn off from work in non-work world. On the other hand, by using flexitime, employees will be able to adopt their working hours to their need, by choosing when to start and when to finish, this way reducing the work-to-home spillover. Moreover, research shows that

---

<sup>98</sup> Lott, 2014, Heejung Chung, Tanja van der Lippe, “*Flexible Working, Work–Life Balance, and Gender Equality: Introduction*”, Social Indicators Research (2020) 151:365–38

<sup>99</sup> Yvonne Lott, Does Flexibility Help Employees Switch Off from Work? Flexible Working-Time Arrangement and Cognitive Work-to-Home Spillover for Woman and Man in Germany, November 2018

employees benefit more from flexitime than from working time autonomy, where they have plain control over their working time duration<sup>100</sup>.

Spillover effect of flexible working time arrangement may depend also on other factors such as the gender difference.

In fact, flexible working time schedule may be used by men or women according to features that are mainly referred to gender. For example, women which are mainly involved in household duties – that is also called the “second shift” after a working day – might benefit more from flexitime and working time autonomy than the employer-oriented flexible schedule, due to the fact that it will be difficult for them to organize both working and private schedule when the working ones may change over time<sup>101</sup>. All things considered, women are the one that face more the problem of work-to-home spillover, because they are involved not only in the working life but also in the family one. For these reasons, they are more inclined to use flexible instruments such as flexitime and working time autonomy rather than men<sup>102</sup>.

Discussion on the flexible working arrangement outcomes have been made also by Chung H, et al, 2020 which examine the problem of gender inequality and work-life balance<sup>103</sup>. In fact, flexible working time arrangement may increase women

---

<sup>100</sup> Lott, 2018, A. M. Dockery, et al, 2014

<sup>101</sup> Lott, 2018, A. M. Dockery, et al, 2014

<sup>102</sup> Lott, 2018, A. M. Dockery, et al, 2014

<sup>103</sup> Heejung Chung, Tanja van der Lippe, “*Flexible Working, Work–Life Balance, and Gender Equality: Introduction*”, *Social Indicators Research* (2020) 151:365–381

satisfaction by letting them to better manage work and private life, so it can be a useful tool to achieve the gender equality. Nevertheless, due to the “gender normative views” that our society has on women and men family’s responsibilities, flexible working time arrangement may have the opposite effect, leading to an increasingly traditionalist view of gender roles. Therefore, it is possible to state that flexible working arrangement and work-life balance create a variety of outcomes that are different from men and women, that still more in charge of domestic duties than men<sup>104</sup>.

In summary, according to Lott, 2018 “*Women might have less work-to-home spillover with flexitime and working-time autonomy. Men, by contrast, might experience higher levels of spillover because of long and intense work hours*”.<sup>105</sup>

However, flexible working time arrangement may have negative consequence when speaking about overtime hours, and the work-to-home spillover may rise. What it is necessary to be considered is that working for longer hours can have negative effect on worker’s health and this happens when using flexibility in working time – as explained in Chapter 1<sup>106</sup>.

Furthermore, according to Chung., et al, 2020, flexible working arrangements turn out to expand the working sphere rather than the reduction of it<sup>107</sup>. This can be

---

<sup>104</sup> Chung H, et al, 2020

<sup>105</sup> Lott. 2018

<sup>106</sup> Lott, 2018, A. M. Dockery, et al, 2014

<sup>107</sup> Chung H, et al, 2020

explained by several theories, that can be summarized as follow: gift exchange theory – employees want to thank employer for the concession of flexible arrangement, enabled intensification – employees can work for longer hours thanks to flexible arrangement (boundaries are blended) and enforced intensification – employer increase workload and provide workers with more flexibility<sup>108</sup>.

In this regard, it is possible to analyze the positive and negative outcomes that flexible working time arrangement have on work-to-home spillover.

As a matter of the fact, employees with flexible working time arrangement can choose time, space, and duration of work and so the amount of time to dedicate to rest and family; flexible working time schedule help also in managing longer hours of work with family duties. In this regard, flexibility have positive outcomes on worker's well-being<sup>109</sup>.

On the other hand, flexible working time arrangement may lead to negative outcomes by eliminating the boundaries between working and private life, causing the work-to-home spillover. In fact, flexibility in working hours can be used to increase performance this way lowering the attention toward family duties. However, the negative sides of flexible working hour arrangement seem to be low for flexitime, which is considered to be the better option that combines work and private life. This way employees can decide when to star and when to finish the

---

<sup>108</sup> Chung H, et al, 2020

<sup>109</sup> Lott, 2018, A. M. Dockery, et al, 2014

working day in a due range of time, in order to dedicate the rest of the time to personal non-working activities, and at the same time, relying on a guaranteed schedule<sup>110</sup>.

Positive and negative outcomes may depend also on gender differences. According to the studies, flexible working time arrangement are mainly used by women to face family's households in order to have a better work-life balance<sup>111</sup>. On the other hand, man can risk working for longer hours. A possible explanation can be related to the concept of "gendered life courses". According to Lott, 2014 "*Since life courses are gendered, with women still assuming the main responsibilities of unpaid work and men investing most of their time in paid work, the norm of "ideal worker"<sup>112</sup> applies less to women than men*"<sup>113</sup>. This means that the ideal worker is mainly referred to flexible working time arrangement – that is typical for women to take care of house duties – where workers adjust themselves to the market demand but, due to gender inequality it seems to belong more to men rather than women, that are more inclined to work overtime hours.

Discussion on the flexible working arrangement outcomes have been made also by Chung H, et al, 2020 which examine the problem of gender inequality and work-

---

<sup>110</sup> Lott, 2018, A. M. Dockery, et al, 2014

<sup>111</sup> Chung H, et al, 2020

<sup>112</sup> *The ideal worker has no obligations or commitments outside of work and is fully dedicated to his or her work*, Lott, 2014

<sup>113</sup> Lott, 2014, Chung H., et al, 2020

life balance<sup>114</sup>. In fact, flexible working time arrangement may increase women satisfaction by letting them to better manage work and private life, so it can be a useful tool to achieve the gender equality. Nevertheless, due to the “gender normative views” that our society has on women and men family’s responsibilities, flexible working time arrangement may have the opposite effect, leading to an increasingly traditionalist view of gender roles. Therefore, it is possible to state that flexible working arrangement and work-life balance create a variety of outcomes that are different from men and women, that still more in charge of domestic duties than men<sup>115</sup>.

*“Men’s jobs often “consume their lives”. For them, flexibility does not deliver work-life balance. The female gender identity, in contrast, is less work-oriented and more care-oriented. For women, flexibility and autonomy provide the potential to combine work with other life roles” (Lott, 2014).*

Furthermore, flexible working time also increase worker’s motivation that can lead to stress for working longer hours. This way, men are considered to be more inclined to stress and work-to-home spillover.

---

<sup>114</sup> Chung H, et al, 2020

<sup>115</sup> Chung H, et al, 2020



Summarizing, flexible working time arrangement are positively related to women – in order to adjust family’s duties to work – while are negatively related to men – that seems to compress their working time, resulting in intensive work<sup>116</sup>.

Positive and negative outcomes of flexible working time arrangement also depend to countries institutional context. Also Chung H., et a, 2020 analyze the problem of differences in the flexible working time arrangement application across countries and company’s organizational context<sup>117</sup>. According to the literature examined by Lott, 2014, some countries examples can be identified and compared: UK is characterized by “liberal flexibilization regime” with high flexibility. The unpaid work is considered a private matter and only people with enough money resources can take care about family’s households. Moreover, there is no gender equity and flexibility in working time is implemented according to the employer’s needs. For this reason, employees in UK may prefer fixed hours contract in order to avoid employer’s will. On the contrary, in Sweden flexibility is granted to all workers with gender equity. In fact, in the country are adopted “family-friendly measures” that gives the same chance to both women and men in working time arrangement. Another example is represented by Germany, that is characterized by a “traditional

---

<sup>116</sup> Lott, 2014, Chung H., et al, 2020

<sup>117</sup> Chung H, et al, 2020

regime with low gender equity and high flexibilization” that is mainly granted to women throughout the use of part-time work<sup>118</sup>.

Furthermore, literature explains that flexible working time arrangement outcomes change from one worker to another also according to attribution of priorities<sup>119</sup>. In other words, if employees gives more importance to paid work then the non-paid one, it is more likely that flexibility will expand toward working life while for those who emphasize the non-paid work, flexibility can be translated into the expansion of household duties. However, the attribution of priorities not always is an employee’s matter<sup>120</sup>.

In conclusion, flexible working may help people achieve a better work-life balance and improved family functioning, but we must. It is used differently by men and women, with corresponding differences in wellbeing, work-life balance, and job intensity. Be conscious of any potential gendered applications that may arise: men are more likely to prioritize and broaden their work spheres, whereas women are more likely to take on additional domestic duties while working flexibly. In this regard, flexible working time arrangement may support a “traditional division of labor”. Moreover, we must also come to the conclusion that gender is too broad a category to be used to analyze the effects of flexible working on work-life balance

---

<sup>118</sup> Lott, 2014, Chung H., et al, 2020

<sup>119</sup> Chung H, et al, 2020

<sup>120</sup> Chung H, et al, 2020

outcomes. We have also to consider the companies' culture as well as the institutional context of it.

### CHAPTER 3: SMART WORKING: BETWEEN FLEXIBILITY AND INNOVATION

After having analyzed what the literature says about different types of work organization, flexibility in the workplace and the use of innovation to implement new ways of organizing work, it is possible to refer to smart working as a tool that includes both flexibility and innovation in itself.

Work by objectives, decide working hours and balance private and working life, innovating the way of thinking, renewing the employees and managers way of doing business using cooperation, empowerment, and trust are the main successes of smart working that is now considered as an opportunity for companies and their employees. As a matter of the fact, benefits have been discovered exponentially during the Covid-19 pandemic. In 2020 its application literally exploded, however the phenomenon has been present in the world, and in Italy, for many years.

On the other hand, also negative aspect may be identified.

Furthermore, employers have to be aware on how and when it is possible to implement smart working inside the organization. In fact, they may take into account some specific characteristics that in some cases can lead to an increase in worker productivity.

### 3.1 SMART WORKING: A GENERAL OVERVIEW

The concept of smart working became familiar to most of the Italian population after the advent of the COVID-19 pandemic. However, its roots can be traced back to an earlier historical period, and in some countries, it was already implemented. In fact, many organizations over the last ten to twenty years have gradually shifted their focus towards a working model oriented on goals to be achieved, rather than on actual hours spent in the office<sup>121</sup>. It is considered more effective and stimulating for workers, and this model is the one that better fits with offering employees flexible hours and space.

Smart working objectives can be referred to the empowerment of workers, the enhancement of their skills, and greater trust in them. Achieving these conditions can certainly have a very positive effect on worker's productivity<sup>122</sup>.

In the implementation of this working model, there are two other fundamental aspects: the management of new technological infrastructures and workspaces. As a matter of fact, mobile devices, screen sharing opportunities and the cloud contribute to the possibility of making the working arrangements completely flexible – that is the importance of innovation. In addition, workspaces are also relevant. In fact, the traditional concept of the office is not in line with the new

---

<sup>121</sup> Cellini M., et al, “*Indagine sullo Smart working e questioni di genere negli enti di ricerca italiani durante l'emergenza Covid19*”, IRPPS Working papers No. 119/2020.

<sup>122</sup> Khan M, *The Impact of Training and Motivation on Performance of Employees*, Business Review, 2012

practices of smart working: it is important to redefine workspaces to favor social moments and creativity<sup>123</sup>.

Given the growing importance of smart working practices within business processes, models were developed to describe the correct implementation. The one under consideration, developed by Clapperton and Vanhoutte, formalizes the fundamentals described above and it is defined as the guide for the introduction of smart working within a company. This model is based on the assumption that change must be implemented from the top down. The focus is on three levers on which an organization have to act in order to allow employees to work at the highest of their productivity, and at the lowest cost. The first lever is called "behaviors": in fact, smart working shifts the focus from working hours to the achievement of objectives in the shortest time and with the highest quality possible. In order to do that, smart workers must be given responsibility in time management. The second lever is that of "bytes", i.e. technological aids: sharing tools are fundamental in the implementation of smart working procedures and finally, "bricks", that refers to the concept of workspaces: fixed workstations are not compatible with smart methodologies which prefer more open and less formal spaces<sup>124</sup>.

---

<sup>123</sup> Crespi F., “*Lavoro agile: legge ed evoluzione normativa dello Smart Working*”, 2021, [https://blog.osservatori.net/it\\_it/evoluzione-normativa-smart-working#legge-lavoro-agile](https://blog.osservatori.net/it_it/evoluzione-normativa-smart-working#legge-lavoro-agile)

<sup>124</sup> Hartog K.L., et al, “*The smart working book – L’età del lavoro agile è arrivata. Finalmente!*”, 2015

The correct implementation and integration of these three aspects makes it possible to create an effective smart working environment.

Speaking about some definitions, according to Clapperton G. and Vanhoutte P, smart working can be defined as *"the permission granted by employers to employees to be able to carry out their tasks in their preferred spaces and times, as long as the objectives are met"*<sup>125</sup>. As stated before, this type of working time arrangement can be seen as the combination of innovation and flexibility in workplace: flexibility regarding time and space and the adoption of new technologies for carrying out work are introduced. Obviously, the definition above refers to a new managerial culture that considers both innovation and flexibility.

According to the Ministry of Labor and Social Policies smart working is defined as *"a model of execution of the subordinate employment relationship characterized by the absence of time or space constraints and an organization by phases, cycles and objectives, established by agreement between employee and employer; a model that helps the worker to reconcile work and lifetime and, at the same time, encourages the growth of his or her productivity"*<sup>126</sup>.

Although there are now many studies on this phenomenon, the term smart working is sometimes used incorrectly, replacing concepts such as agile work and

---

<sup>125</sup> Clapperton G., Vanhoutte P., 2014

<sup>126</sup> Smart Working, Ministero del Lavoro e delle Politiche Sociali, <https://www.lavoro.gov.it/strumenti-e-servizi/smart-working/Pagine/default.aspx>

teleworking. In fact, as reported by Crespi F, 2020, this model is often associated with remote work, when its full implementation requires a transformation of the organization and a different way of understanding work<sup>127</sup>.

Unlike teleworking – I.e. the performance of work dislocated from the office to a location agreed with the employer, typically the employee's home, where the teleworker is connected to the company with the aid of computer and telematic communication tools, in which the same responsibilities are transferred to the employee's new workplace and the same obligations regarding hours and rest remain – smart working, is a solution that allows a greater degree of freedom and flexibility. In full autonomy, the employee chooses where and when carry the work out, does not have a fixed location, so he may change location as and when he prefers without even having constraints on the timetable. What is relevant is that his activity is evaluated according to objectives<sup>128</sup>.

As a matter of the fact, other studies on the subject have raised the central issue of workspaces: the demolition of barriers, that have characterized corporate offices in recent decades is seen as an effective accelerator to the achievement of better results by employees, who are more involved and motivated in this type of environment. This type of analysis is also shared by the Smart working Observatory of the

---

<sup>127</sup> Crespi F., 2020

<sup>128</sup> Smart Working, Ministero del Lavoro e delle Politiche Sociali, <https://www.lavoro.gov.it/strumenti-e-servizi/smart-working/Pagine/default.aspx>



Politecnico di Milano, which emphasizes how the transition towards new workspaces, such as co-working solutions, but also more simply bars and waiting rooms, could be a new paradigm for the society, which would benefit from both flexibility and less urban congestion<sup>129</sup>.

With reference to the recent trend on the use of smart working in the European Union, it is possible to state that smart working as flexible working time arrangement was already implemented before the Covid-19 pandemic. As a matter of the fact, in order to find out which country in Europe worked from home even before the Covid-19 measures, we can turn to the database of EuroStat, the European statistical office<sup>130</sup>, as showed in Figure 3.1.

According to EuroStat data, we can identify countries that have adopted smart working arrangement over the years.

From the data covering the period 2012 - 2021, updated to 4 July 2022, and taking into account workers between 15 and 65 years of age, we can see that countries such as Belgium, France, Luxembourg, Switzerland and the Nordic countries represent the countries that have already been using smart working for years, with the trend in most cases being upwards. The countries that instead seem to make less use of smart working as a business organization tool are Romania, Turkey and

---

<sup>129</sup> Crespi F., 2020

<sup>130</sup> Eurostat, Employed persons working from home as a percentage of the total employment, by sex, age and professional status (%) <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

Macedonia. As far as Italy is concerned, on the other hand, the data shows that the use of smart working is not widely practiced but the trend is growing. Regarding the Italian context, the country is placed at the bottom of the ranking – in the 25<sup>th</sup> position – of the 27 European nations<sup>131</sup>. The Italian context will be better analyzed below<sup>132</sup>.

All in all, as the data show, the trend in the use of smart working seems to be growing, and this is certainly attributable to the pandemic context that has increased its use by companies.

Figure 3.1: Employed persons working from home as a percentage of the total employment, by sex, age and professional status (%)<sup>133</sup>

GEO/TIME	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
European Union - 27 countries (from 2020)	6,3	7,0	6,9	8,1	8,3	8,0	8,4	9,0	8,6	10,6
European Union - 28 countries (2013-2020)	8,2	8,8	8,8	9,8	9,9	9,6	9,9	10,8	:	:
European Union - 15 countries (1995-2004)	9,1	9,8	9,8	10,9	11,0	10,8	11,0	12,1	:	:
Euro area - 19 countries (from 2015)	5,9	6,6	6,6	8,0	8,2	7,9	8,2	8,9	8,5	11,1
Belgium	11,3	12,3	13,7	14,2	15,5	16,5	16,1	17,7	16,5	13,7
Bulgaria	1,4	1,1	1,0	0,7	1,0	0,6	0,7	0,6	1,8	3,7
Czechia	4,6	4,7	4,4	4,1	5,0	5,2	5,4	5,4	5,9	7,3
Denmark	18,6	18,5	18,2	18,2	23,7	21,1	19,6	20,7	18,3	17,9
Germany (until 1990 former territory of the FRG)	7,9	7,7	7,7	8,0	7,7	6,0	6,6	7,4	7,3	7,7
Estonia	6,1	6,2	7,5	7,6	9,2	10,3	12,0	13,1	10,8	11,4
Ireland	9,9	10,2	9,9	9,6	9,3	11,5	12,8	12,9	10,5	7,3
Greece	2,7	2,6	2,5	3,0	3,4	3,2	3,1	3,4	3,4	8,2

<sup>131</sup> Pighi C., Staffolani S., 2019.

<sup>132</sup> Eurostat, Employed persons working from home as a percentage of the total employment, by sex, age and professional status (%) <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

<sup>133</sup> Eurostat

Spain	2,8	3,2	2,6	2,9	2,9	3,0	3,2	3,5	4,2	5,8
France	8,8	12,2	12,4	12,4	13,4	13,6	14,1	15,8	13,7	17,2
Croatia	2,7	3,2	2,4	3,1	3,9	4,6	5,3	5,0	7,9	8,7
Italy	1,2	1,2	0,9	1,0	1,0	1,1	1,2	1,1	1,4	6,5
Cyprus	1,0	1,4	1,4	1,1	1,3	1,3	1,0	1,2	2,9	6,0
Latvia	1,1	1,3	1,4	1,0	1,6	1,2	1,9	1,8	1,6	2,6
Lithuania	1,5	1,6	1,4	1,9	2,1	2,1	2,1	2,1	2,9	5,2
Luxembourg	12,2	12,7	13,4	18,9	20,4	20,9	19,8	21,5	24,4	17,0
Hungary	6,3	6,8	6,3	5,3	4,2	4,1	3,7	3,4	7,4	8,8
Malta	1,8	1,8	2,3	2,3	2,9	3,1	3,9	5,4	10,9	14,4
Netherlands	:	:	:	20,9	21,2	21,4	21,7	23,0	22,3	31,3
Austria	11,5	11,1	11,0	11,8	12,1	12,1	11,7	12,1	11,1	12,5
Poland	7,9	8,7	8,5	10,2	9,4	9,1	9,4	9,8	9,2	8,4
Portugal	6,4	7,2	7,8	8,0	8,1	8,3	8,6	9,0	8,7	11,5
Romania	0,3	0,2	0,2	0,3	0,3	0,2	0,3	0,6	0,6	4,2
Slovenia	9,0	10,0	10,6	10,8	10,1	11,0	10,9	11,0	12,6	12,3
Slovakia	5,3	5,0	5,5	5,6	5,0	4,9	5,4	5,8	5,9	8,4
Finland	12,9	14,0	14,3	14,8	15,4	16,2	17,0	17,6	14,1	16,2
Sweden	23,1	24,7	25,3	25,9	26,8	27,4	29,4	31,3	:	19,2
Iceland	27,0	29,3	26,5	28,3	28,0	26,7	25,0	24,1	29,3	:
Norway	6,0	6,6	6,3	6,0	6,1	5,3	5,9	5,2	6,8	25,7
Switzerland	24,2	24,5	25,3	25,1	26,4	26,8	26,9	27,7	35,0	26,4
United Kingdom	20,6	20,7	20,4	20,2	19,5	19,8	19,4	21,7	:	:
Montenegro	7,7	7,3	4,3	4,2	2,7	1,5	1,6	1,4	1,2	:
North Macedonia	:	:	:	:	:	0,8	0,9	1,4	1,6	:
Serbia	4,7	4,3	3,9	2,9	2,4	2,4	2,4	2,5	2,4	3,7
Turkey	0,7	0,7	1,2	1,0	0,8	0,7	0,7	1,0	1,7	:

Source: Eurostat

Influences in smart working trends – as discussed in the previous chapter – include technological developments, economic structures and working culture. In fact, according to Eurofound, 2017, Finland, Japan, the Netherlands, Sweden and the

United States represent the countries with a high percentage of remote workers<sup>134</sup>. In general, the impact of smart working varies considerably, ranging from 2% to 40% of employees depending on the country, job, sector and frequency with which employees perform this type of work. Across the EU-28, on average around 17% of employees telework or perform mobile work<sup>135</sup>.

According to the ISTAT survey, the prevalence of remote working depends mainly on the type of sector. The economic activities in which more than half of the workforce can work remotely are information and communication services (76.2%), electricity, gas, steam and air supply (68.7%), professional, scientific and technical activities (62.7%), education (53.7%), financial and insurance activities (52.6%) while other activities are much more limited for this mode of work such as accommodation and food services (3.4%), other service activities (6.7%) and health and social work (10.2%).

In 2020, compared to the previous year, there was an increase in the probability of using smart working for according to every companies. This probability has increased by 5 percentage points for companies belonging to an Italian group, by 4 percentage points if the company has invested in cloud technologies, and by 6 percentage points for companies primarily involved in exports. The probability for holder firms, less prone to innovation and change, is much lower, about 7

---

<sup>134</sup> Eurofound, 2017

<sup>135</sup> Eurofound, et al, 2017

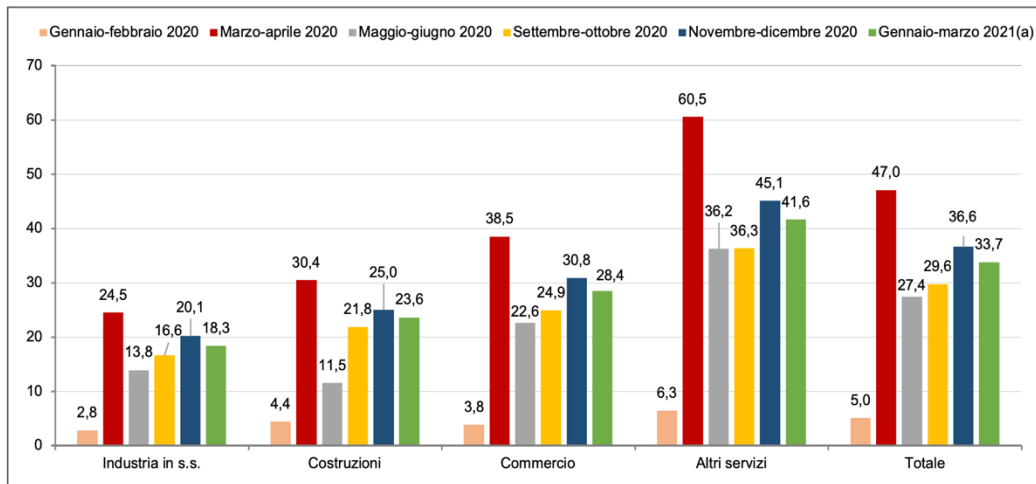
percentage points less<sup>136</sup>. These data show that larger, more dynamic, more international, more technology and innovation-oriented companies are inclined to new ways of working, such as smart working.

Moreover, there were also differences in the use of remote work depending on the time period. According to Istat data, the peak intensity was reached in the national lockdown months between March and April 2020. In the service sector, the share of smart working reached 60.5%, followed by trade (38.5%), construction (30.4%) and industry in the narrow sense (24.5%). In the following period, the share of smart workers fell due to the less stringent measures adopted by the government, reaching an average of 27.4%<sup>137</sup>.

Figure 3.2: Share of smart working employees in companies that have activated remote working, by macro sector of economic activity (percentage values)

---

<sup>136</sup> Basso G., et al, “*The New Hazardous Jobs and Worker Reallocation*”, Institute of Labor Economics, 2020



Source: Istat, Indagine imprese *COVID-19*, prima e seconda edizione

Regarding the global landscape, in Japan, smart working is widespread and widely encouraged to reduce office space, which is very expensive for companies. Workers in Brazilian cities are opting for remote working to save the very long commuting times and with a substantial economic benefit, as well as an environmental benefit. In the USA, the percentage of smart working has risen to 37% and between 2007 and 2014, 78% of the extra hours worked were from home<sup>138</sup>.

### 3.1.1 POSITIVE AND NEGATIVE EFFECT OF SMART WORKING ON EMPLOYER AND EMPLOYEES' SATISFACTION

---

<sup>138</sup> Eurofound, et al, 2017

According to the literature, advantages and disadvantages can be identified for both workers and companies. The benefits brought by smart configuration are multiple and involve both employers and employees.

Regarding the former, it can be said that employers will encounter fewer running costs as far as offices are concerned: the reorganization of space through sharing policies will certainly reduce the volume required by the company. Another positive aspect for managers is the possibility of attracting employees, as the adoption of smart working procedures is seen as an additional opportunity to improve work-life balance. Moreover, workers will be motivated by the benefit of smart working, managing to increase their productivity (by around 15% according to the Smart Working Observatory) and the quality of their performance<sup>139</sup>. As a matter of the fact, companies benefit from the improved work-life balance, which can lead to increased motivation, reduced staff turnover, as well as improved productivity and efficiency, and the reduction of necessary office space and related costs.

On the other hand, from the employees' point of view, they benefit of more time for their personal lives, which will alleviate stress levels, allowing them to work in a more relaxed way. The possibility of working at home will also represent a reduction in both time and costs for employees, which for instance, will not have to spend the same amount of money on gasoline or public transport<sup>140</sup>.

---

<sup>139</sup> Crespi F., 2020

<sup>140</sup> Crespi F., 2020

Finally, also the benefits for the environment and society have to be considered, such as the decrease in smog resulting in people working from home. Furthermore, as for the environment is concerned, the reduction of traffic would contribute to the reduction of carbon dioxide emissions in the air by 135 kg per year per person considering a journey of forty kilometers<sup>141</sup>.

It is possible to speak of a win-win agreement between company and employee, which benefit financially: saving costs and better working condition.

It is also necessary to consider the other side of the coin, that the implementation of smart working can have on both workers and companies, i.e. the aspects that the adoption of smart working could worsen compared to traditional forms of working. In fact, a new way of working, can totally disrupt the organization of a company and the managerial culture at the time of adoption. Within the disadvantages that the implementation of smart working can generate, it is possible to identify the resistance from manager behalf – who fear losing their control over employees and are afraid of a reduction in their productivity; resistance of people – who may not being able to manage their working hours without physical control from managers. Furthermore, there are the reduced interactions between colleagues, which are fundamental for building a present and effective corporate culture. In fact, the most

---

<sup>141</sup> Crespi F., 2020



important issues concern feelings of isolation and loneliness, which are rather frequent phenomena in remote working conditions<sup>142</sup>.

Beside this, there is the problem of availability: many workers, given the tools they are equipped with, perceive the duty to be connected twenty-four hours a day, a condition that would undermine their right to a satisfying private life. In any case, the lack of real hourly constraints of smart working is taken into account by Italian law (art.18 of Law 81/2017), which sets daily and weekly limits within which the service must be performed<sup>143</sup>.

Moreover, the greater difficulty of communication leads workers to share less of their feelings and difficulties, a dynamic that can lead to a decrease in individual motivation and the disposition to cooperate with colleagues. These mechanisms can be detrimental for the company's economy, which must therefore identify the most effective ways of communication possible, for example, favoring short and informal video calls, that allows for a better perception of the different aspects of a conversation<sup>144</sup>.

Linked to positive and negative effect carry out by smart working arrangement, it is necessary to consider both companies and worker satisfaction. In this regard,

---

<sup>142</sup> Nervi L., “*Lavoro agile: il diritto alla disconnessione va disciplinato negli accordi collettivi*”, 2019, <https://www.ipsoa.it/documents/lavoro-e-previdenza/rapporto-di-lavoro/quotidiano/2019/06/10/lavoro-agile-diritto-disconnessione-disciplinato-accordi-collettivi>

<sup>143</sup> Nervi L., 2019

<sup>144</sup> Bilocchi S., et al, *Smart working*, 2020, Ufficio Studi PwC

firms have to choose employees to telework according to specific characteristics such as education and business sector. Sector specific characteristics influence the assignment of telework. According to Staffolani S., and Pignini C., 2019 “*it is necessary that occupation specific heterogeneity is properly accounted for*”: cost may change for firm when it comes to small or large businesses. In fact, they stressed the importance of the lack of expertise and capital for small firms to invest in technologies in order to monitoring workers, so they may prefer employees going on site. Therefore, teleworking can be considered a working arrangement that can apply only for some job position.

Also, education plays an important role: in fact, according to Staffolani S. and Pignini C., 2019, it is associated to the probability of being a teleworker due to the fact that it is related to the worker talent. In fact, workers with high education will know how to make a better use of technology.

### 3.2 SMART WORKING AND COVID 19 PANDEMIC: THE ITALIAN CONTEXT

The advent of the COVID-19 pandemic has undoubtedly contributed to raising awareness on smart working issues, as many companies have been forced to implement this type of measure in order to maintain acceptable productivity levels and simultaneously limit the risks of contagion.

In Italy, the speeding up of this process was promoted by the central authority through Decree no. 6 of 23 February 2020 on urgent measures for the containment and management of the epidemiological emergency, which provided for the immediate possibility to adopt smart working, without the need for prior communication to the employees.

According to Osservatori Digital of Politecnico di Milano in just three years, smart working as working arrangement has grown in an unpredictable way due to the pandemic, this way affecting many work habits and needs.

As a matter of the fact, according to what they explored in Italy in 2015, 17% of large Italian companies had already launched Smart Working projects, such as the introduction of new digital tools, organizational policies, new managerial behaviors and new layouts of spaces<sup>145</sup>.

Nearly seven years have passed since then, in which the Smart Working phenomenon has been analyzed, and over the last years, thanks to the health emergency, smart working arrangement has become a key player. In fact, it is strongly linked to the issues of social, environmental, and economic sustainability and the wellbeing of the individual.

As the research by the Smart Working 2020 Observatory found, during the most acute phase of the emergency, smart working in Italy involved 97% of large

---

<sup>145</sup> NETWORK Digital 360, 2022; Osservatori Digital Innovation, 2018

enterprises, 94% of Italian PAs and 58% of SMEs, about one third of Italian employees. In the second quarter of 2021, the number gradually began to fall to 4.71 million, with the largest drop in the public sector (1.08 million), followed by microenterprises (1.02 million), SMEs (730 thousand) and large companies (1.88 million). In September, the number of smart workers stood at 4.07 million, with a total of 1.77 million agile workers in large enterprises, 630 thousand in SMEs, 810 thousand in micro-enterprises and 860 thousand in the public sector<sup>146</sup>.

However, the return to traditional workplace does not mean a decline in the use of smart working, on the contrary, with the end of the pandemic, organizations expect an increase in the number of smart workers.

The decision to pursue smart working is motivated by the benefits experienced by workers and companies. Work-life balance represent an improvement in the majority of large companies (89%), SMEs (55%) and PA (82%). But the combination of forced remote working and pandemic also had negative consequences for smart workers: the percentage of those fully 'engaged' fell from 12% to 7%, 28% suffered from technostress, 17% from overworking<sup>147</sup>.

On the other hand, smart working passed from emergency measure to modernization tool. As stated by Mariano Corso, Scientific head of the Smart

---

<sup>146</sup> NETWORK Digital 360, 2022; Osservatori Digital Innovation, 2018

<sup>147</sup> Smart Working in Italia: dati, numeri e trend post-pandemia, 2021, Osservatori Digital Innovation, Politecnico di Milano, <https://www.osservatori.net/it/ricerche/comunicati-stampa/smart-working-italia-numeri-trend>

Working Observatory, "*the pandemic has accelerated the evolution of work models towards more flexible and intelligent forms of organization and changed the expectations of companies and workers*" and "*now it is necessary to build the future of work on true Smart Working, which is not an emergency measure, but a modernization tool*".

### 3.2.1 POST PANDEMIC CONSEQUENCES

Pandemics and increased productivity would seem to be two antitheses, but this was not the case during the emergency period, thanks to the massive introduction of smart working. Businesses have been able to verify, in concrete terms, how the increased use of agile working has prevented productivity from being interrupted and even increased.

However, it is necessary to reflect on how smart working can be used in the post-pandemic period: in fact, according to Roberto Camera in IPSOA, it will certainly need to be remodeled, as the continuation of remote performance alone would cause negative effects such as the loss of a sense of belonging to the company, which only personal interactions can achieve.

The smart modality must therefore be contained with respect to ordinary on-site services: the worker must always feel that he is part of a community and shares with it the objectives that are, from time to time, given. There can be a feeling of

abandonment and non-participation in company projects as well as social isolation, that is not good for either the employee or the individual.

A proper alternation between in-company and remote work can certainly benefit the relationship between employer and employee: in fact, the more comfortable and involved an employee is in company dynamics, the more productive he will be. In addition, the stable implementation of agile working can attract a new workforce and motivate employees by making them more satisfied with their work and performance. This will lead to greater loyalty and thus reduce turnover<sup>148</sup>.

According to Gal and Leidecker, in post-Covid-19 Italy, the opinions of employers and employees in using this form of work, has an increasing role in the future. However, companies expect to make smart working possible for about 40 per cent of the workforce, while employees' expectations are more radical as can be seen in Figure 3.3. On average, employees expect that 70 per cent of the workforce will be able to do smart working in the post-pandemic period. Employers and employees also agree that the ideal frequency of smart working is between two and three days per week: only 12 per cent of employees and 3 per cent of employers expect total remote working<sup>149</sup>.

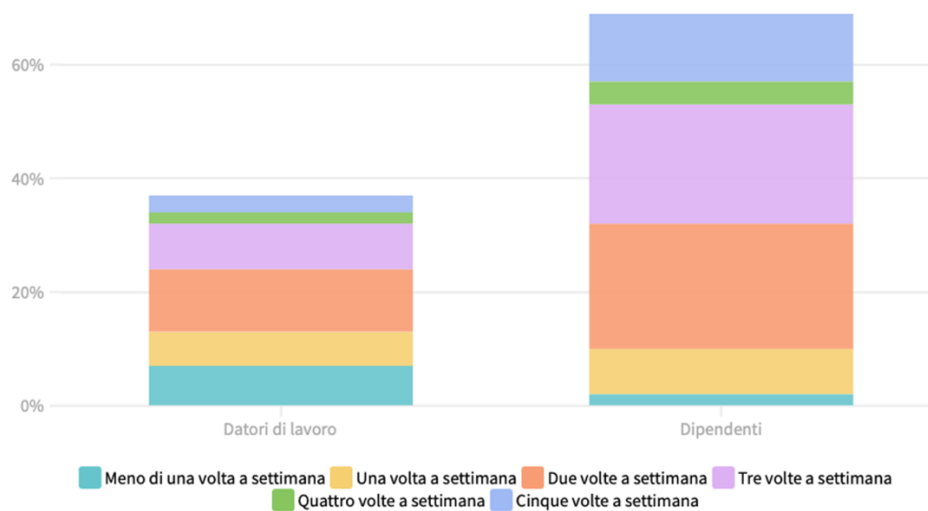
---

<sup>148</sup> Roberto Camera, Smart working: come dovrà essere utilizzato e rimodulato dalle imprese dopo il 31 marzo, in IPSOA, 2022

<sup>149</sup> Criscuolo, et al, "Dopo la pandemia: cosa resterà dello smart working?", La voce.info, 2022

Still therefore, the Italian business and labor world expects more smart working, but in a hybrid form, where presence at the workplace is guaranteed for a few days of the week. This seems to be the best solution to maximize the benefits and at the same time reduce the risks linked to remote working.

Figure 3.3: Employers and employees in comparisons



Source: Criscuolo, et al, “Dopo la pandemia: cosa resterà dello smart working?”, La voce.info, 2022

### 3.3 SMART WORKING: DOES EMPLOYEES PRODUCTIVITY INCREASE?

It is a crucial point to study the efficiency of the new working model compared to the old working practice. An increase in efficiency, and thus in productivity, prompts companies to consider this new way of working, to introduce it and, after the health emergency, even to maintain it, if the results will be satisfactory.

Smart working, including flexible time schedule, flexible place of work and flexible period to work during the workweek, make the analysis of productivity more complex due to the fact that it is new approach.

As stated by Angelici M., et al 2020, studies “*cannot establish whether smart-working increases productivity, or whether companies with high productivity are more likely to introduce smart-working*”<sup>150</sup>. Moreover, productivity can be influenced though changes in worker well-being and work-life balance<sup>151</sup>.

Studies have been made on the relationship between productivity and different management practice such as smart working. Nevertheless, fewer studies have been made to identify the effects of managerial practice on productivity.

For instance, it is possible to refer to the experiment made by Bloom, et al, 2014 in the article “*Does working from home work? Evidence from a Chinese experiment*”, where authors evaluated the benefits in case of employees having the choice to work from home<sup>152</sup>.

The experiment was carried out by one of China's largest call center companies: faced with the high cost of office rent, the company wondered whether it should allow its sixteen thousand employees to work from home. However, the managers were still afraid of the increased shirking, which is why they decided to proceed

---

<sup>150</sup> Angelici M., et al, 2020

<sup>151</sup> Angelici M., et al, 2020

<sup>152</sup> Nicholas Bloom James Liang John Roberts Zhichun Jenny Ying, DOES WORKING FROM HOME WORK? EVIDENCE FROM A CHINESE EXPERIMENT, NBER WORKING PAPER SERIES, Working Paper 18871, NATIONAL BUREAU OF ECONOMIC RESEARCH, 2014



with the guided experiment at the end of which they would decide.

Bloom and colleagues had the opportunity to study the experiment and interviewing employees and managers to obtain the additional information they needed to arrive at objective conclusions<sup>153</sup>.

The experiment consisted of two work groups, one treatment and one of control, where the treatment group had to work from home four days and the fifth in the office for nine months, while the control group continued to be in the office for all five days. The only difference was therefore the place of work during the four days because the shifts were exactly the same, as were the tasks, the objectives, the workflow and the salary<sup>154</sup>.

The results of the experiment showed an increase in the productivity of the employees in the treatment group of 13%, i.e. they worked more minutes during working hours, because they took fewer breaks and requested less sick days or leave, and were more productive in terms of calls made per minute.

Respondents stated that they were more comfortable working at home, and above all, they specified that they worked in a quieter environment which allowed them to understand customer requests more easily and thus handle phone calls faster, last

---

<sup>153</sup> Bloom, et al, 2014

<sup>154</sup> Bloom, et al, 2014

but not least, they cancelled delays caused by commuting to work. Thanks to this increase in productivity, they achieved an increase in their salary of at least 9.9%<sup>155</sup>. It is necessary to specify that the increase in productivity was concentrated in the middle period of the experiment, while at the beginning due to adaptation, performance plummeted and at the end the employees confessed that they were exhausted of working from home and that they were beginning to suffer from loneliness and these reasons led to a lower performance.

Analyzing the benefits of employees, they declared that during the experiment, they experienced increased satisfaction, increased positive attitudes and reduced work-related stress. Another aspect of high importance is the reduction of redundancies. Thanks to the possibility of working from home, the employees reduced their redundancy rate, a very important factor in the Chinese company, which resulted in a substantial expense for the firm, not only in terms of bureaucratic paperwork but also in the training costs spent, and again to be repeated for newly recruited employees.

As mentioned above, at the end of the experiment, negative aspects of smart working emerged, among which it was found that in the long term, the possibility of advancing one's career and obtaining a promotion are damaged due, primarily, to the lack of contact with team leaders who train employees on a daily basis.

---

<sup>155</sup> Bloom, et al, 2014

On the whole, the results were very positive, which is why the administration decided to let all their sixteen thousand employees choose the way they want to work and this further doubled the performance gains.

It can be confirmed that employees choosing the way they of work is beneficial. However, it cannot be taken for granted that everyone prefers agile working. It turned out that the reasons for these choices essentially lay in the need for social interactions. This motivation came as a great surprise to the company managers because they thought that this issue had been taken into account before the start of the experiment, and that the time and financial savings due to no-commuting would overcome the fear of loneliness. Instead, it all suggests the great value of social interactions in the workplace.

Summarizing, this study made by Bloom, et al, 2014 again highlights the great benefits that companies can achieve by allowing their employees to choose what they think is best working solution for them.

However, it is difficult to ensure that positive aspect would be evident in every type of company and for every profession.

The Chinese firm is in fact represent a special case where the job is very well suited to being carried out from home<sup>156</sup>. In this regard, other evidence on call center workers have been provided: Mas and Pallais, 2017 state that employees on call

---

<sup>156</sup> Bloom, et al, 2014

center do not appreciate flexible working hours, instead they would like to work from home – for example women with families’ issues.

Nevertheless, working in a call center is considered a routine type of work. In fact, non-routine work can take advantage of flexible working hours, due to the highest focus required on work and the less exposure to the risk of being isolated<sup>157</sup>.

In this regard, it is possible to refer to the study made Dutcher, “*The Effects of Telecommuting on Productivity: An Experimental Examination. The Role of Dull and Creative Tasks*”.<sup>158</sup>

Using an experimental approach, the economist assessed the effect of smart working on productivity according to occupation and the characteristics of the tasks performed, and making the distinction between creative tasks and repetitive tasks.

The experiment was carried out at a university in Florida on 125 young people, half of whom worked in a laboratory within the university, as if they were in an office, and the other half worked from home. The only difference was therefore the location.

The main objective was to understand the effect in the two different types of work.

The experiment consisted of two parts: the first evaluated productivity in a

---

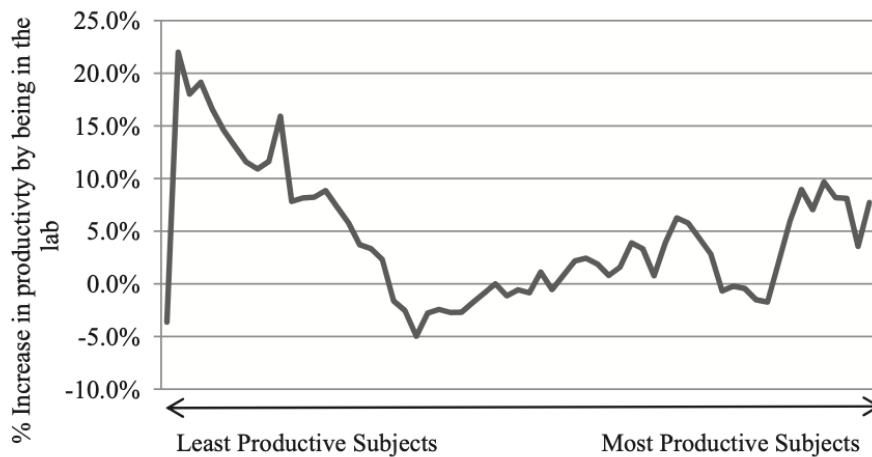
<sup>157</sup> Marta Angelici, Paola Profeta, Smart-Working: Work Flexibility without Constraints, CESifo Working Papers, ISSN 2364-1428 (electronic version), 2020

<sup>158</sup> E Gleen Dutcher, “*The Effects of Telecommuting on Productivity: An Experimental Examination. The Role of Dull and Creative Tasks*”, *Journal of Economic Behavior & Organization* 84 (2012) 355–363

repetitive task and the second in the creative task. Each task was further divided into two others, the main task, an exercise, and the secondary task, a game against the computer. The student made a profit both when he completed the exercise correctly and when he won the game, but the latter had a lower gain<sup>159</sup>.

Analyzing the results of the repetitive tasks it is showed that the subjects in the lab were more productive.

Figure 3.4: Productivity of those Inside vs. Outside the Lab: Typing Task. This graph shows how much more productive someone in the lab is vs. their same productivity counterpart outside the lab for the typing task.



*This graph shows how much more productive someone in the lab is vs. their same productivity counterpart outside the lab for the typing task.*

Source: E. Glenn Dutcher / Journal of Economic Behavior & Organization 84 (2012) 355–363

<sup>159</sup> Dutcher, 2012

Overall, Dutcher found that when it comes to mainly repetitive and non-creative work, subjects are 6.10% less productive if they work from home - i.e. not in the office<sup>160</sup>.

Analyzing the creative task, employees who worked from home were more productive than those who performed the test in the laboratory.

Here again, the difference in productivity between two groups is particularly significant. Overall, the subjects are 11-20% more productive outside the lab when performing creative tasks<sup>161</sup>.

The conclusion obtained is therefore that the effect on productivity changes depending on the task: employee productivity increases by working from home on creative tasks while it decreases by working from home on repetitive tasks. Conversely, employee productivity increases by working in the lab on repetitive tasks while it decreases by working in the lab on creative tasks.

Despite the test performed, the answers obtained are not entirely satisfactory, as Dutcher did not consider many other factors that could have influenced the results positively or negatively, including the workspace, the presence of Internet connection in the office – which could cause many additional distractions, the teamwork factor and the interactions between employees<sup>162</sup>.

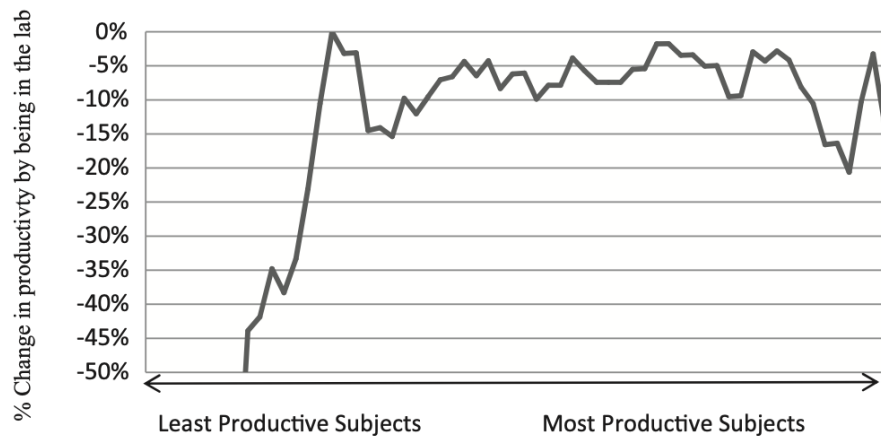
---

<sup>160</sup> Dutcher, 2012

<sup>161</sup> Dutcher, 2012

<sup>162</sup> Dutcher, 2012

Figure 3.5: Productivity of subjects Inside vs. Outside the Lab: Creative Task. This graph shows how much more productive someone in the lab is vs. their same productivity counterpart outside the lab for the creative task.



*This graph shows how much more productive someone in the lab is vs. their same productivity counterpart outside the lab for the creative task.*

Source: E. Glenn Dutcher / Journal of Economic Behavior & Organization 84 (2012) 355–363

Overall, smart working is usually associated to an increase in productivity.

An explanation could be the so-called '*Hawthorne effect*'. It stems from the satisfaction that workers feel from being on smart working and, therefore, unconsciously find themselves working more and more efficiently, as they feel they owe it to the company<sup>163</sup>.

<sup>163</sup> Angelici M., et al, 2020

However, according to several studies conducted on worker's health prior to the pandemic and reported by the OECD, the efficiency of workers may decrease due to prolonged use of smart working, as there could be a reduction in personal interactions and a consequent burdening of communication processes, a slowing down of learning and a lowering of supervision by superiors.

As stated before, during the pandemic, workers experienced a drop in productivity mainly attributed to psychological and physical ailments caused by the lockdown. In this situation, in fact, a large proportion of employees stated that they were dissatisfied with their current job. This can also be explained by the fact that many, although ill, continue to work, albeit below standard conditions<sup>164</sup>.

Compared to virtual meetings and the use of communication tools such as chats, calls or e-mails, face-to-face meetings allow for more immediate and effective verbal communication. Video conferences, in fact, reduce the so-called non-verbal signals and therefore a significant increase in cognitive resources is required to understand and perceive the meaning of the communicative gestures of the other participants. The effort required, also referred to as "*Zoom fatigue*", is greater and leads to an increase in misunderstandings and a decrease in productivity<sup>165</sup>.

---

<sup>164</sup> EDITORIAL, Remote Workers During the COVID-19 Lockdown. What Are We Missing and Why Is Important, 020 American College of Occupational and Environmental Medicine, JOEM, Volume 62, Number 11, November 2020

<sup>165</sup> Pwc, *Smart Working*, Pwc Uffici, 2020



For smart working leading to an increase in business productivity, it is therefore essential that employee satisfaction increases sufficiently to offset the potentially negative effects due to the lack of personal interaction. The data available suggest that negative effects increase as the number of hours spent on smart working increases, as opportunities to communicate in person decrease<sup>166</sup>.

In the meantime, however, it is useful to start pulling together some of the strategies that have proven to be successful in managing smart working: Michael Page International, for example, advises not to underestimate the importance of continuing to publicly recognize the commitment and achievements of team members in order to maintain a high level of engagement; for the same reason, it suggests daily wrap-ups to take stock of the team's performance and to discuss the results of the smart working process, giving each person precise objectives, tasks and deadlines; moreover, he invites not to overdo group calls, meeting a need that many of us felt during the spring, when it became clear how exhausting these tools can be if abused<sup>167</sup>. This way it will be possible to use smart working in order to increase productivity.

A repetitive task may lead to lower productivity with smart working rather than in the traditional workspaces. In fact, as stated also by Dutcher, 2012, the type of task influence on the choice of teleworking, as worker education.

---

<sup>166</sup> PwC, 2020

<sup>167</sup> PwC, 2020

Staffolani S. and Pigni C., 2019, elaborate an empirical strategy in order to understand how firm can assign teleworking to employees.

The firm profit can be defined as follow:

$$\pi_{ij} = y_j^k(\theta_i)h_j - w_{ij}^k - c_j^k$$

they state that the profit of a firm is equal to the productivity of the worker  $i$ , with a certain talent  $\theta$ , employed in a job  $j$ , with position  $k$  – both teleworkers (TW) or regular workers (RW). Productivity directly depends on talent, so the ratio between productivity and talent is higher than zero;  $h$  are the number of hour worked by the workers  $i$  in job  $j$ ; worker  $i$  earn a certain wage  $w$  for the job  $j$  and firm face cost  $c$  for the job  $j$ , depending to the type of work position  $k$  (TW or RW)<sup>168</sup>.

Then, the utility of a worker can be defined as follow:

$$u_{ij}^k = w_{ij}^k - g^k(h_j)$$

The utility of worker  $i$ , in job  $j$ , for position  $k$ , is equal to the wage  $w$  of the worker  $i$ , in job  $j$ , for position  $k$ , minus the disutility of work  $g$ , for position  $k$ , that is directly related to the hours worked  $h$ , in job  $j$ <sup>169</sup>.

In this regard, according to different job position – TW or RW – productivity may vary. The productivity variation due to telework is defined as follow:

---

<sup>168</sup> Staffolani S., Pigni C., Teleworkers in Italy: who are they? Do they make more? [International Journal of Manpower](#), 2019, vol. 40, issue 2, 265-285

<sup>169</sup> Staffolani S. and Pigni C., 2019

$$\Delta y_{ij}(\theta_i) \equiv y_j^{TW}(\theta_i) - y_j^{RW}(\theta_i)$$

Since the variation in productivity depends on talent, and then the ration between the variation of productivity and talent is higher than zero, that is the difference in productivity due to telework is higher for workers with higher talent, “*it will be more convenient/less costly for firm to transform regular positions into telework position for the more talented employees*”. Instead, if the ratio between the variation in productivity and talent is lower than zero, “*less talented workers will be assigned to telework*”<sup>170</sup>.

Also, costs are affected by telework working arrangement: as a matter of the fact, telework may change the cost of work arrangement by reducing the cost for working equipment in the traditional workplace and generating cost for the creation of a workspace at home.

This way, the cost for working equipment can be defined as follow:

$$\Delta c_j \equiv c_j^{TW} - c_j^{RW}$$

The disutility of work is also affected by the choice to telework. In fact, it depends on the importance that the worker assigns to spent time with family and household duties<sup>171</sup>.

The variation in disutility between TW and RW can be defined as follow:

$$\Delta g_{ij} \equiv g^{TW}(\bar{h}_j) - g^{RW}(h_j)$$

---

<sup>170</sup> Staffolani S. and Pigni C., 2019

<sup>171</sup> Staffolani S. and Pigni C., 2019

While, on the one hand, teleworking reduces commutism and increase the time spent with families, so reduce the disutility of work that is lower than zero, on the other hand if worker value more the time spent at the office in order to be promote, for example, the disutility of work will be higher than zero<sup>172</sup>.

Therefore, the employee preference of teleworking is measured as the difference in disutility produced by the two-work position, TW and RW, while the firm preference of teleworking can be referred to positive profit, either with positive or negative productivity as long as cost are lower than productivity.

Teleworking is convenient for both employer and employee when both worker utility and firm profit increase after bargaining.

---

<sup>172</sup> Staffolani S. and Pigini C., 2019

## **CONCLUSIONS**

Summarizing, smart working can be referred also as teleworking and telecommuting, to all innovative approaches that are based on flexible working schedule and goal-oriented objectives. As stated by Clappenrton and Vanhoutte, 2014, teleworking aims to move from traditional working arrangement to innovative ones where workers can decide where and when to work: what matter is the achievement of results established by the company.

According to the literature, smart working was already implemented in Europe: however, the spreading still not uniform within countries. Regarding Italy, it ranks in the 25<sup>th</sup> position on 27<sup>th</sup> countries. Not only countries, but also differences across sectors have been found: as Istat data shows, the service sector is the one that seems to apply smart working more, reaching about 60% of the total service employment. Without any doubts the COVID-19 pandemic has accelerated the adoption process: over the last years, due to the health emergency, smart working arrangement has become a key player. In fact, it is strongly linked to the issues of social, environmental, and economic sustainability and the wellbeing of the individual. Today, as the pandemic seems to be overcome, smart working passed from emergency measure to modernization tool. In fact, the end of the critical situation does not mean that the smart working tool have to be abandoned. Instead, it could be modulated to every companies' characteristics.

Beside the worker well-being, effects on productivity has been considered. According to the literature analyzed, a correct implementation of smart working can lead to an increase in worker productivity and wage; firm must choose to assign smart working to employees according to the job task they perform. As for employees, smart working seems to be chosen in order to have a better work-life balance, and it depends on the importance that the worker assigns to spent time with family and household duties.

## **BIBLIOGRAPHY**

Luis Cárdenas and Paloma Villanueva, *Challenging the working time reduction and wages trade-off: a simulation for the Spanish economy*, *Cambridge Journal of Economics* 2021, 45, 333–351 doi:10.1093/cje/beaa055, Advance Access publication 4 January 2021;

Courtney Gatlin-Keener, Ryan Lunsford, *Four-Day Workweek: The Microsoft Japan Experience*, University of the Incarnate Word, University of the Incarnate Word;

Paweł Bełzowski, Anna Karaś, *The concept of balancing work and private life*, The Małopolska School of Economics in Tarnów Research Papers Collection ISSN 1506-2635, e-ISSN 2658-1817, 2020, 47(3), 133–145;

Jon Messenger, *Working time and the future of work*, International Labor Organization, ISBN 978-92-2-132219-1 (web pdf), International Labour Office – Geneva: ILO, 2018;

Sangheon Lee, Deirdre McCann and Jon C. Messenger, *Working Time Around the World: Trends in working hours, laws and policies in a global comparative perspective*, Published in Switzerland in 2007 by the International Labour Office, 1211 Geneva 22, Switzerland, ISBN: 978-92-2-119311-1;

Jon C. Messenger, *Working time trends and developments in Europe*, Cambridge Journal of Economics 2011, 35, 295–316 doi:10.1093/cje/beq022, Advance Access publication 20 July 2010

Lehndorff, S. 2000. 'Working time reduction in the European Union: a diversity of trends and approaches' in Golden, L. and Figart, D. (eds) *Working Time: International trends, theory and policy perspectives* (London, Routledge).

Karas A., Belzowski P., *The concept of balancing working and private life*, The Małopolska School of Economics in Tarnów Research Papers Collection ISSN 1506-2635, e-ISSN 2658-1817, 2020, 47(3), 133–145

Kamerade D., Balderson U., Burchell B., Wang S., Courts A., *Shorter Working Week and Worker Well-being and Mental Health*, Centre for Business Research, University of Cambridge, working paper no. 522, September 2020.

Gatlin-Keener C., Lunsford R., *Four-Day Workweek: The Microsoft Japan Experience*, 2020.

De Spiegelaere S., Pisana A., *Perché e Come Ridurre L'orario di Lavoro*, European Trade Union Institute, 2018

J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45, 2001

MESSENGER J. (2018), *Working time and the future of work*, ILO Research Papers Future of Work series, 6



LEE S., MCCANN D., MESSENGER J. (2007), *Working Time Around the World*,  
Routledge

Erhel, Guergoat-Lariviere, Mofakhami, *Working Time Arrangements, innovation  
and Job Satisfaction: a workplace level analysis for France*, Document du travail  
du centre d'études de l'emploi et du travail, n. 204, mars 2021

J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD  
Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45,  
2001

ILO, *Working time in the twenty – first century*, Condition of Work and  
Employment Programme, Geneva 2011.

J. M. Evans, D. C. Lippoldt., M. Pascal, *Trends in Working Hours in OECD  
Countries*, OECD Labour Market and Social Policy Occasional Papers No. 45,  
2001

Alexandre Mas, Amanda Pallais, “*Alternative Work Arrangements*”, Princeton  
University and NBER Harvard University and NBER (2020)

Caterina Giannetti and Marianna Madia, “*Work arrangements and firm innovation:  
is there any relationship?*”, Oxford University Press, Cambridge Journal of  
Economics, March 2013, Vol. 37, No 2 (March 2013), pp. 273-297

Preenen P., Vergeer R., Kraan K., Dhondt S., “*Labor Productivity and Innovation  
Performance: The importance of Internal Labor Flexibility Practices*”, EID  
Economic and Industrial Democracy, 2015

Erhel, Guergoat-Lariviere, Mofakhami, *Working Time Arrangements, innovation and Job Satisfaction: a workplace level analysis for France*, Document du travail du centre d'études de l'emploi et du travail, n. 204, mars 2021

Oscar Vargas-Llave, Irene Mandl, Tina Weber and Mathijn Wilkens, *Telework and ICT-based mobile work: Flexible working in the digital age*, EUROFOUND, Publications Office of the European Union, 2020

Yvonne Lott, “*Does Flexibility Help Employees Switch Off from Work? Flexible Working-Time Arrangement and Cognitive Work-to-Home Spillover for Woman and Man in Germany*”, November 2018

A. M. Dockery and Sherry Bawa, “*Is Working from Home Good Work or Bad Work? Evidence from Australian Employees*”, Curtin University, AUSTRALIAN JOURNAL OF LABOUR ECONOMICS Volume 17 • Number 2 • 2014 - 190

Yvonne Lott, “*Working time flexibility and autonomy: Facilitating time adequacy? A European perspective*”, Insitute of Economic and Social Research, June 2014

Heejung Chung, Tanja van der Lippe, “*Flexible Working, Work–Life Balance, and Gender Equality: Introduction*”, Social Indicators Research (2020) 151:365–381

Eurofound and the International Labour Office (2017), *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union, Luxembourg, and the International Labour Office, Geneva.

Nicholas Bloom James Liang John Roberts Zhichun Jenny Ying, *DOES WORKING FROM HOME WORK? EVIDENCE FROM A CHINESE EXPERIMENT*, NBER

WORKING PAPER SERIES, Working Paper 18871, NATIONAL BUREAU OF ECONOMIC RESEARCH, 2014

Marta Angelici, Paola Profeta, Smart-Working: Work Flexibility without Constraints, CESifo Working Papers, ISSN 2364-1428 (electronic version), 2020

E. Glenn Dutcher, “*The Effects of Telecommuting on Productivity: An Experimental Examination. The Role of Dull and Creative Tasks*”, *Journal of Economic Behavior & Organization* 84 (2012) 355–363

EDITORIAL, *Remote Workers During the COVID-19 Lockdown. What Are We Missing and Why Is Important*, 020 American College of Occupational and Environmental Medicine, JOEM, Volume 62, Number 11, November 2020

Cellini M., et al, “*Indagine sullo Smart working e questioni di genere negli enti di ricerca italiani durante l'emergenza Covid19*”, IRPPS Working papers No. 119/2020.

Khan M, *The Impact of Training and Motivation on Performance of Employees*, Business Review, 2012

Hartog K.L., et al, “*The smart working book – L'età del lavoro agile è arrivata. Finalmente!*”, 2015

Basso G., “*The New Hazardous Jobs and Worker Reallocation*, Institute of Labor Economics, 2020

Biocchi S., et al, *Smart working*, 2020, Ufficio Studi PwC

Roberto Camera, *Smart working: come dovrà essere utilizzato e rimodulato dalle imprese dopo il 31 marzo*, in IPSOA, 2022

Criscuolo, et al, “*Dopo la pandemia: cosa resterà dello smart working?*”, La voce.info, 2022

Staffolani S., Pigini C., *Teleworkers in Italy: who are they? Do they make more?* [International Journal of Manpower](#), 2019, vol. 40, issue 2, 265-285

## SITEOGRAPHY

Alessia Conzonato, *Lavorare 4 giorni a settimana, nove è già possibile. Paesi e aziende che hanno adottato la settimana corta*, Corriere della Sera, 2022

<https://www.corriere.it/economia/lavoro/cards/lavoro-1-ipotesi-settimana-corta-che-diventa-realta-quali-paesi-aziende-l-hanno-adottata/belgio.shtml>

*Four-day week “an overwhelming success” in Iceland*, BBC, 2021,

<https://www.bbc.com/news/business-57724779#comments>

Bryan Lufkin and Jessica Mudditt, August 2021, BBC

<https://www.bbc.com/worklife/article/20210819-the-case-for-a-shorter-workweek>

CUE, *Microsoft Giappone e la settimana corta: benefici, costi e sensazionalismi*,

2019, [https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide\\_e\\_criticita](https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide_e_criticita)

[https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide\\_e\\_criticita](https://managementcue.it/microsoft-giappone-settimana-corta-4-giorni/13036/#Sfide_e_criticita)

Eurostat dataset, Hours of work – annual statistics

[https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=Hours\\_of\\_work\\_-\\_annual\\_statistics](https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=Hours_of_work_-_annual_statistics)

CIPD (2019), Mega trends: flexible working,

<https://www.cipd.co.uk/knowledge/work/trends/megatrends/flexible-working>

Smart Working, Ministero del Lavoro e delle Politiche Sociali,

<https://www.lavoro.gov.it/strumenti-e-servizi/smart-working/Pagine/default.aspx>

Eurostat, Employed persons working from home as a percentage of the total employment, by sex, age and professional status (%)  
<https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

Crespi F., “*Lavoro agile: legge ed evoluzione normativa dello Smart Working*”, 2021, [https://blog.osservatori.net/it\\_it/evoluzione-normativa-smart-working#legge-lavoro-agile](https://blog.osservatori.net/it_it/evoluzione-normativa-smart-working#legge-lavoro-agile)

Nervi L., “*Lavoro agile: il diritto alla disconnessione va disciplinato negli accordi collettivi*”, 2019, <https://www.ipsoa.it/documents/lavoro-e-previdenza/rapporto-di-lavoro/quotidiano/2019/06/10/lavoro-agile-diritto-disconnessione-disciplinato-accordi-collettivi>;