



E.L.E.N.A.

Experimenting flexible Labour tools for
Enterprises by eNgaging men And women

European Commission / DG Justice

DEPARTMENT FOR EQUAL OPPORTUNITIES-PRESIDENCY OF
COUNCIL OF MINISTERS

in partnership with

DONDENA RESEARCH CENTER ON SOCIAL DYNAMICS AND
PUBLIC POLICIES, UNIVERSITA' BOCCONI

WS1 - Innovative ways of organizing work and time

1. Literature review

2. Identification of the specific policy to be tested, among the best practices of flexible working arrangements.

3. Building of the indicators to measure outputs: target individuals (wellbeing, sharing activities and caring responsibilities among men and women)

4. Building of the indicators to measure outputs: target companies (productivity of workers, performance, cost-benefits)

1. Literature Review

1.1 Introduction

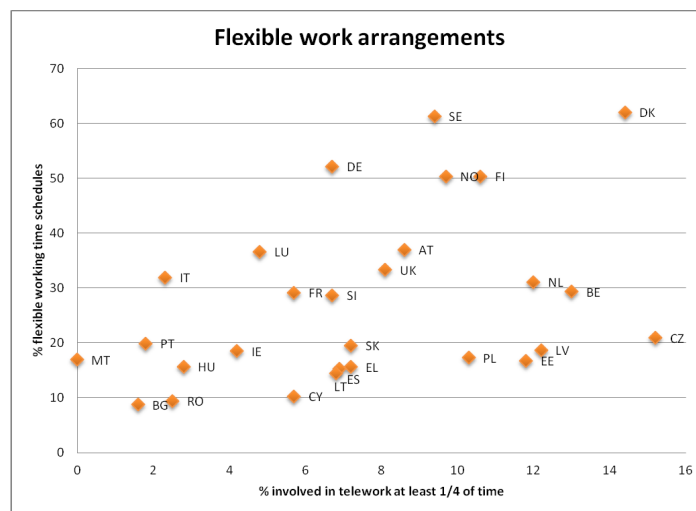
Work-life balance is a major goal of modern societies. Sharing family and domestic responsibilities between men and women is crucial to reach better work-life balance. Policies play an important role in this context. Flexible working arrangements as well as a greater use of parental leaves by men may help improving work-life balance for both men and women.

Flexibility in work arrangements has become increasingly relevant for both employees and their ability to reconcile work and family life and employers, who are looking for new ways to increase productivity, adapt to new technologies and retain talents. The main features characterizing a more flexible organizational structure are teleworking and flexible working time schedules, both to be determined at the company level.

Available data show that, even though there seems to be a generic trend of increasing the implementation of these policies, there is a certain degree of heterogeneity among European countries.

Figure 1 represents the comparison between these two elements in EU-27 plus Norway.

Figure1: Flexible working arrangements in Europe



Source: Personal elaboration on Eurostat, EU labour force survey 2004 and LFS ad hoc module 2004, and EWCS 2005

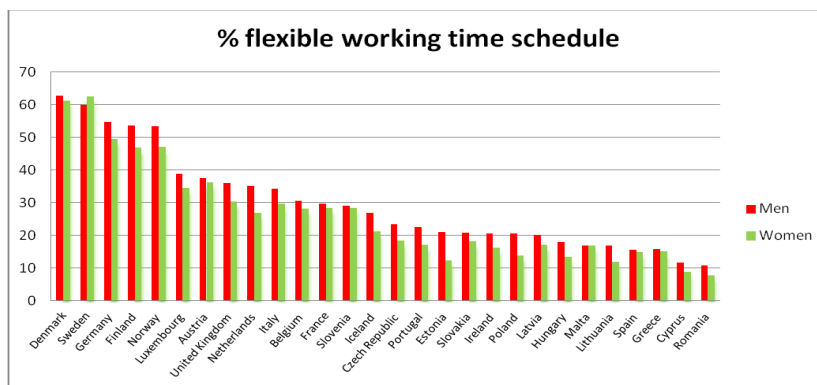
Teleworking is shown to be a much less spread factor, with Czech Republic having the highest percentage of employees that work at home for at least 25% of time (15.2%), followed by Denmark (14.4%) and Belgium (13%). Data available, however, do not refer to the possibility of teleworking from a location different from the house. In Italy, teleworking has not found its way as an organizational strategy; the country is ranked 24th among the EU-27 countries and only 2.3% of its employees are involved in this type of flexible work policy.

If, instead, we consider the share of employees who telework for most of the working time, we see a much lower involvement, with all countries having data entries below 4%, except for Czech Republic, which is, once again, an outlier with its 9% record.

Nordic countries have the highest percentage of workers involved in flexible working time schedules, Denmark being the top performer with its 62%, followed by Sweden (61.3%) and Germany (52.15%). In terms of working time schedules flexibility, Italy has a relatively better performance, even though, with its 31.95%, it is far from reaching the level of involvement of leading countries. This data concerns the average among men and women scores.

Figure 2 shows data disaggregated by sex and underlines how, with the exception of Sweden, in all considered countries, men are more involved in flexible time schemes. In some countries such disparity is more consistent than in others (such as Estonia), while, among the best performers, Denmark and Austria are the ones showing the smallest gaps.

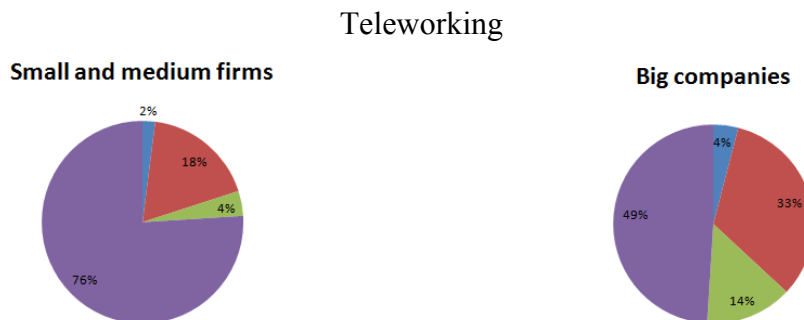
Figure 2: Flexible working time schedule in Europe

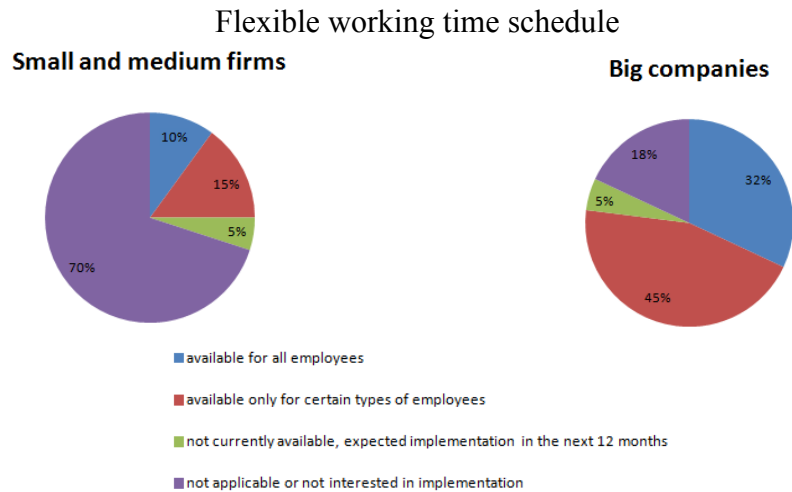


Sources: Eurostat, EU labour force survey 2004 and LFS ad hoc module 2004

Italy is an interesting case study, as flexible working arrangements are still limited and have only recently been regulated by the law, providing a normative point of reference to all of the companies that are interested in introducing this kind of organizational policy. A recent study on a sample of Italian companies shows that there are some differences in the extent to which such policies have been adopted in big vs. small and medium firms.

Figure 3: Teleworking and flexible working time in Italian companies





Source: Politecnico di Milano, La diffusione e i benefici dello smart working in Italia: Report 2013

These charts present two main findings. On the one hand, they show that both teleworking and flexible working time schedules are more common in big companies; on the other hand, they show that in most cases, among firms (irrespective of their size) that allow for flexible work arrangements, these options are available only for certain types of employees and not for the entire workforce.

Is this poor performance depending on employees' preferences? Probably not. A study carried out by McKinsey & Company (Mc Kinsey, 2013) on a sample of 1,300 Italian workers shows that the great majority of interviewed workers (93%) perceive the implementation of firm's welfare policies as important. This preference is expressed by more than 90% of the considered sample even when disaggregating data by sex, age, presence of children in the household and income level. Workers' needs range from services related to childcare, such as parental leaves, and elderly care, to flexible time schedules. This suggests that the interaction between the use of parental leaves and flexible working arrangements is also an interesting dimension to be explored.

The process of collecting data on flexible working arrangements is a challenging one, given that such organizational structures are negotiated and determined at the company level. This limitation clearly hinders the analysis of the impact of policies such as teleworking and flexible working time schedules and represents one of the main reasons why substantial and comprehensive literature on this topic is still lacking. In fact, only few academic studies have been carried out so far attempting to show a causality relationship between flexible working arrangements and target groups outcomes and to measure the gains through an experimental design.

The first relevant work of this kind is from Orpen, University of South Africa, who analyses the impact of allowing for flexible start and end working time on workers' productivity and morale. The selected sample consisted of 72 women, half of which were selected to avail themselves of the flexible work policy, while the others kept working according to their regular schedule. The results show significant effects of flexible schedules on workers' satisfaction but negligible effects on performance and productivity (Orpen 1981). It is worth underling the fact that this first experiment involved female workers exclusively. As a matter of fact, policies aimed at increasing flexibility at work have been historically considered as relevant for women, who's traditional role is to burden the weight of care duties (towards children, elderly and the house) within the family. Even though this

reasoning is definitely relevant in promoting a higher participation of women in the work force, flexible work policies should be addressing all workers, favouring a more balanced share of household duties between men and women, instead of segregating female workers in jobs that allow for flexibility.

Workers' wellbeing and productivity have become increasingly relevant for all social parts, namely workers, employers and decision-makers. The widespread idea is that a certain work flexibility for the types of work that allow its applicability, improves the morale, health, wellbeing, work-life balance and especially the productivity of workers. However, after the first pioneer attempt, it took about 20 years to see some scientific research focused on this matter.

1.2 Measuring Health and Well-being

The author who investigated most extensively the impact of flexible work arrangements is Phyllis Moen (University of Minnesota), who focused mainly on health and personal well-being outcomes.

With the support of relevant data for scientific analysis, she carried out several works on this matter demonstrating the positive impact of flexible work policies on her outcomes of interest.

In her first work with Erin Kelly, they underline some limitations of flexible work policies, propose a conceptual model of how schedule control impacts work–life conflicts, and describe specific means to increase employees' schedule control, including best practices for implementing common flexible work policies (Kelly & Moen, 2007).

In 2008 Moen and colleagues run a cluster analysis on 917 white-collar employees that led to identify 4 job ecologies and 5 home ecologies. This process has been done to compare work-family to life-course fit (Moen, Kelly, & Huang, 2008).

In 2011 she conducted a study based on the collecting of survey data from a sample of employees at a corporate headquarters (N=659 employees), in order to investigate the effects of an organizational innovation called ROWE—Results Only Work Environment on health, wellbeing and health-related outcomes (Moen, Kelly, Tranby, & Huang, 2011). This work demonstrates that organizational changes in the structuring of time can promote employees' wellness, particularly in terms of prevention behaviors.

In 2013 another study came out, which used the same dataset (N=550 employees followed before and 6 months after the implementation of an organizational intervention – ROWE) to test the relationship between time strain (work-time demands and control) and seven self-reported health outcomes (Moen, Kelly, & Lam, 2013). This paper demonstrates the value of including time strain in investigations of the health effects of job conditions. Results encourage longitudinal models of change in psychological time demands as well as time control, along with the development and testing of interventions aimed at reducing time strain in different populations of workers.

Using the same dataset (N = 775), she also investigated the impact of ROWE on turnover. This research moves the “opting-out” argument from one of private troubles to an issue of greater employee work-time control and flexibility by showing that an organizational policy initiative can reduce turnover.

Another research published in 2011 was focused on family conflict caused by work (Kelly, Moen, & Tranby, 2011). This academic analysis clearly demonstrates that the workplace initiative positively affects the work-family interface, primarily by increasing employees' schedule control. This study

points to the importance of schedule control for the understanding of job quality and for management policies and practices.

Lastly, the most recent work by Moen (Moen et al., 2016) has stress as the focal of interest. Using a group-randomized field trial with longitudinal data from 867 information technology (IT) workers, it investigates the well-being effects of the STAR program (Support, Transform, Achieve, Results). Once again, the results prove a positive impact of flexible work arrangements on several indicators: over 12 months, STAR reduced burnout, perceived stress, and psychological distress, and increased job satisfaction. Moderating effects show that STAR benefits women in reducing psychological distress and perceived stress, and increases non-supervisory employees' job satisfaction. This study demonstrates, with a rigorous design, that organizational-level initiatives can promote the well-being of employees. Once again, the gender dimension finds its relevance, with this study confirming that it might be women who benefit the most from a higher capability of self-organization of work, given the higher share of household duties the burden.

There are also few other examples of studies carried out on this matter. The Boston College Center for Work & Family has conducted a two-year research project to assess the impact of workplace flexibility on the lives of employees: the National Work Life Measurement Project (Pruchno, Litchfield, & Fried, 2000). This research is an example of empirically-based information to support this experience, concluding that in most cases greater workplace flexibility is a win-win situation for companies and the individuals they employ. Among the different aspects that are connected with the flexible work arrangements, Halbesleben & Buckley focus on burnout due to work stress and on the relevance that organizational intervention in the work place might have in reducing this problem (Halbesleben & Buckley, 2004).

1.3 Measuring Work-life balance

Another relevant aspect in the analysis of the effects of flexible work arrangements is the possibility for workers to have a higher work-life balance, an issue that is closely linked to workers' wellbeing. In 2005, Dex and Bond have studied the growing pressures on work-life balance in modern British society since 90s (Dex & Bond, 2005). The work is mainly a summary of the work-life balance literature and includes the design of a scale aimed at discovering the principal workers' characteristic that influence their work-life balance. Their analysis was able to measure employees' work-life balance and showed that the number of weekly hours of work was a very important determinant, alongside their occupations, gender, age and caring responsibilities.

Manfredi and Holliday instead, presented the findings of a university-wide audit that was carried out to gain information on staff experience of work-life balance policies and practices at Brookes (Manfredi & Holliday, 2004). They consider that "the concept of work-life balance is based on the notion that paid work and personal life should be seen less as competing priorities than as complementary elements of a full life".

1.4 Measuring Productivity

Productivity is a major outcome of interest in the evaluation of flexible policies at work, especially because it is the most attractive one from the employers' point of view. This outcome, as well, is clearly interconnected with the ones previously described, since a higher level of perceived wellbeing and ability to balance one's work-life affects his/her ability to be productive in the workplace. However, because of the complexity of this concept, it is often hard to find objective ways to measure it, as underlined by a survey on flexibility programs in Arizona in 2013 (WorldatWork, 2013). The Derexel University (Derexel University, 2010) has, for instance, developed a methodology that uses different measures of productivity: improved morale and job satisfaction, greater commitment, work organized to respond to individual work styles (ex: early versus late energy), expanded coverage, reduced work and/or parking space demands/costs, enhanced reputation as an employer of choice.

One of the very basic metrics that can be measured objectively, however, is absenteeism, or rather, its opposite: presenteeism, as stated by Koopman and colleagues (Koopman & et al., 2002).

The International Labor Office of Geneva produced a document about the effects of working time on productivity and firm performance (Golden, 2012). This work studies how the length of working hours affects unit productivity and how various types of flexible or innovative working time arrangements affect enterprise performance. They consider volume (quantity) of working hours, and they conclude that manufacturing productivity does not necessarily increase when hours are lengthened, and that in many industries, it appears that shorter hours are associated with higher output rates per hour. Those arrangements directly restrain unit labor costs of production and improve employees' health, well-being, job or life satisfaction, without raising current labor costs.

Baughman and colleagues investigate the Family-supportive employment benefit (Reagan Baughman, Daniela DiNardi, & Douglas Holtz-Eakin, 2003). Their measure of productivity is based on morale, reduction of turnover rates, absenteeism and recruiting effectiveness. They find out with a survey of 120 employers in an upstate New York county that having flexibility is the best way for balancing work and family and have good employees.

Rau and Hyland consider also a peculiar aspect of flexible work arrangement: organizations with flexible work arrangements are more attractive to job seekers than those with a standard work arrangement (Rau & Hyland, 2002). These results suggest that work arrangements have a growing importance in responding to workers' needs and that organizations should carefully consider recruitment implications when analyzing costs associated with these policies.

As a matter of fact, there are already some examples of supervisors and companies that have already perceived flexible work policies as beneficial, not only in order to be more attractive for potential workers, but also in terms of productivity and costs reduction.

Riedmann and colleagues (Riedmann & Bielenski, 2006) provide results based on the European Establishment Survey on Working Time and Work-Life Balance or ESWT, a cross-national survey comprising 21 EU countries realized in over 21,000 establishments with 10 or more employees. Their findings show that 22% of interviewed managers declared a reduction of paid overtime, 54% of them a better adaptation of workload, 27% registered lower absenteeism and 61% reported higher job satisfaction in the workplace. The numbers increase if employees' representatives are interviewed.

UK is the leading European countries in the study and analysis of the impact of flexible working. The Agile Future Forum (Agile Future Form, 2014), supported by McKinsey & Company, produced a report stating that companies adopting these policies are enjoying benefits equivalent to 3-13% of their workforce costs. Even though this kind of work does not comprise a scientific design and is not of academical relevance, its findings are worth mentioning. Some case studies are illustrated, providing more insights on what the specific determinants of the estimated benefits are. Addleshaw Goddard increased in-house capabilities and moved 30% of the team permanently to home working, which, together with the adoption of a number of agile practices, led to an 15-20% increase in productivity and a 50% reduction in absenteeism for home workers. BT cut physical accommodation needs by 48%, which led to global savings of £100m per year and to an estimation of 1.4 tonnes of CO2e net saving per home-based employee, by promoting widespread use of communication technologies. Tesco's implementation of the Ideal Schedule Change Programme, which consisted in allowing employees to change their hours voluntarily, improved both customer satisfaction and staff morale. These are only few examples of successful stories related to more flexible working arrangements.

1.5 The Role of Institutions

The growing attention drawn from different angles towards the issues of flexible organization at work led to the involvement of various research centres in the development of flexible arrangements policies and in the identification of best practices and of available statistics.

The Georgetown University Law Center has studied in 2006 selected cases of flexible work arrangements (McGuire & Brashler, 2006) and also underlined which are the sources for statistical data on flexible work arrangements available (Water Boots & Danziger, 2008).

The study of the Families and Work Institute, a nonprofit center dedicated to providing research for living in today's changing workplace, is noteworthy (Matos & Galinsky, 2014). Matos and Galinsky produced a document called "2014 National Study of Employers". It is the most comprehensive and far-reaching study of the practices, policies, programs and benefits provided by U.S. employers to enhance organizational and employee success by addressing the changing realities of today's economy, workforce and workplace.

The university of Chicago (The University of Chicago, n.d.), that describes and shows several options to the employees. The guide begins taking into account the fact that several national surveys repeatedly showed that workers seek flexibility as the key response to the competing demands of work and personal responsibility and finally provides an application form to ask for flexibility.

Also the Massachusetts Institute of Technology is interested in the topic of flexible work arrangements and has developed a Guide to job flexibility (MIT, 2004).

Even international organizations and national governments have not been left out of this growing interest towards innovative way of organizing work through flexible arrangements and have moved some steps in order to facilitate the companies' implementation of such policies.

It is often argued that the difference between unemployment rates for countries or regions are in part explicable in terms of different degrees of labor market flexibility. A study carried out by the OECD (Kossek & Michel, 2010) considers and discusses the different aspects of labor market flexibility,

devoting special attention to the implications which different degrees of labor market flexibility may have for employment, also for example in the event of external price shock.

Focusing on national governments, we must acknowledge the example of the state of Singapore (Ministry of Community Development and Sports & Work-Life Unit, 2002), where a detailed guide for the employees explains the possible applications of flexibility. This Asian guide wants to emphasize that flexibility helps improving employees' productivity, measured as the ability to meet deadlines and achieving targets, and "morale".

The Australian government provides the workers with a "toolkit" of flexibility (Australia Government & Workplace Gender Equality, 2015), where it is explained what is meant by flexibility and how it can be applied at work. In these guidelines, productivity is measured by direct questions.

The United Kingdom as well is involved in providing helpful guidelines (Equality and Human Rights Commission, 2009). The Equality and Human Rights Commission produced a guide to show how flexible working can add value to ones business.

These are only some examples of manuals, guidelines and case studies, but more have been produced by both researchers and governments.

1.6 Conclusions on Italy

The project ELENA will be focused on the Italian case. Italy has been lagging behind in the implementation of practices favouring a higher degree of flexibility. The recent approval of a law regulating flexible work arrangements is surely a step in the right direction, but there is still much work to do. A few virtuous examples are given by the Provincia Autonoma di Trento, the Bank of Italy, Intesa San Paolo and Piano C, among other Italian companies, but we are far from being able to consider flexibility as a widespread policy in the Italian working culture and organizational structure.

A recent study conducted by the Smart Work Observatory of the Politecnico of Milan (Politecnico di Milano, 2013) estimated that adopting smart working practices could lead to 37 billion Euros potential savings for Italian firms. Their calculation considers an increase by € 27 billion Euros in productivity determined by teleworking, workers mobility and spread of mobile devices, as well as a reduction in direct costs amounting to 10 billion Euros deriving from the reduction in commuting and travel expenses and the decrease in workspace facilities. Another important side effect estimated by the study is a reduction of CO₂e which is equal to 1.5 tonnes per year, which means savings for citizens amounting to about 4 billion Euros.

Regarding the impact that these practices might have on employees, a McKinsey study on Italy shows that the value attributed by workers to firms' welfare policies is higher than the sustained economic costs. The estimation for the engagement index in companies that provide welfare services can rise by about 30%, with an increase in satisfaction, effort at work and retention.

A key element that is missing in all previous analyses is the experimental approach, which is essential to deduce causality. Indeed, without a properly designed randomized experiment, it is not possible to draw a clear conclusion or to describe the mechanisms that play a role in the achievement of the previously described improvements. Hence, this project has the main innovative feature of being the first experimental study to be carried out in this field in Italy, representing a pilot for more extensive analysis also at the European level.

2. Identification of the specific policy to be tested, among the best practices of flexible working arrangements.

On the basis of the literature review of several academic results and our review of some examples of best practices, we have identified as convenient policy to assign 1 day of the week to flexibility, that can be freely managed by the workers in terms of time and/or space.

3. Building of the indicators to measure outputs: target individuals (wellbeing, sharing activities and caring responsibilities among men and women)

In order to assess the effective success of the introduction of flexibility, we will supply 2 questionnaires: one before the introduction of the policy, and one nine months later immediately after the introduction of the trial policy.

In these questionnaires, we have decided to ask questions about several dimensions: some general information about the employees and their families; questions about their productivity at work; questions about the environment and pollution; questions about flexibility; questions about individual wellbeing; questions about individuals' work-life balance and finally questions about commitment towards the company.

The productivity outcome is very hard to measure, as it previously emerged from the literature review. On the basis of the academic and best practice literature, we have decided to measure it through self-reporting. However, in order to obtain a more objective measure of we will also ask workers' supervisors to report on this matter. Finally we will look for a firm that can be able to measure productivity also with objective indicators.

4. Building of the indicators to measure outputs: target companies (productivity of workers, performance, cost-benefits)

The target company has not already developed any form of flexibility. In this way we can measure and comment the results of the introduction of a completely new policy.

The target company has to have workers with different tasks, both males and females, and with different family structures.

Finally, the target company has to have a way to measure productivity in an objective way, even if there might be different measures on the basis of the different tasks performed by the workers and their job types.

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