The inclination towards telework in small businesses: inhibitors analysis in the Italian case

Francesca della Ratta – Rinaldi, Patrizio Di Nicola, Simona Rosati[1]
(University "La Sapienza", Rome - ITALY)

[1] This work comes from a common effort; paragraphs 1, 2 and 5 are written by Francesca della Ratta, Patrizio Di Nicola and Simona Rosati, paragraph 3 by Francesca della Ratta, paragraph 4 by Simona Rosati.

1. INTRODUCTION

This paper presents the results of the survey carried out in Italy into the E-Gap[2] project, the aim of which is to analyse the inclination towards telework in small businesses, specifying potentialities and delays through comparison between various European countries.
The research activities of the E-Gap project are focused on one region in every participating country; in Italy we chose Emilia Romagna. This choice was dictated by two important circumstances: on one hand the importance of small businesses in the productive system of the region, on the other, the attention that the local administration has bestowed upon technological innovation and the computer development of the area over the last few years, both in the public and private sectors.
This paper will focus on the inhibitors to the diffusion of telework, analysing those more closely linked to the organisation of work in businesses which emerged in the field analysis.

2. METHODOLOGY

The empirical sources used for investigating the organisational and technological obstacles to the diffusion of telework derive from the research carried out in the project:

- the quantitative survey carried out on a sample representing small and medium sized businesses (500 questionnaires);
- a phase of qualitative investigation culminating in 60 in-depth interviews with entrepreneurs, companies experimenting with telework, teleworkers and stakeholders.

One of the most significant results of the quantitative survey was the demonstration of the close link between technological and organisational factors: for a telework experience to succeed, the 'telework-ability' of the working process and the availability of technology for long-distance work are not enough; an *organisational culture* orientated towards evaluating results and promoting the autonomy and responsibility of human resources is also necessary. The main obstacle to experimentation with telework is to be found in managerial mentality, as by now inconveniences of a technological nature seem to have been overcome thanks to the widespread diffusion of basic ICT technology in the region.
If the quantitative survey demonstrated that organisational variables are decisive for the success and development of telework, the qualitative form allowed us to investigate the attitudes and opinions of those involved in telework and crucial aspects such as the level of autonomy and flexibility of staff in more depth. The qualitative analysis phase also showed that the main obstacles to telework are to be found in the organisational dimension, due to the persistence of a company culture of control which sees in-company presence as an essential criteria for evaluating the work of employees.

3. SOCIAL ASPECTS

3.a. Organizational level

The field research[3] allowed us to identify certain obstacles to the diffusion of telework of an organisational type in the opinion of the interviewees, which can be organised under the following headings:

- control culture;

[2] eGap (E-society Gap Assessment Project), project number: IST-2001-35179. Project Partner: France, United Kingdom, Finland, Hungary, Japan. www.egap-eu.co.
[3] We will make further note of the quantitative survey phase to indicate the data collected from it, whilst we will refer to the interview phase to indicate the successive phase of qualitative investigation.

- insufficient orientation towards results;
- not being used to measuring output;
- non-existent timetable flexibility;
- normative uncertainties;
- lack of information about telework;
- the "alleged" non-'telework-ability' of the production process.

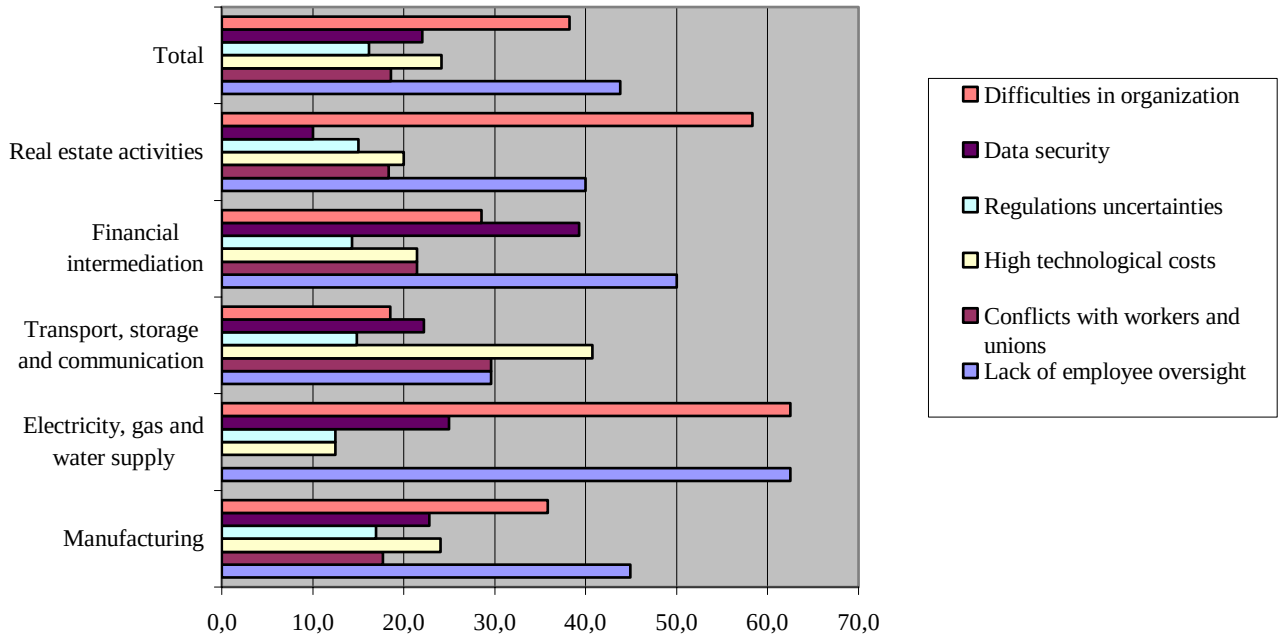
Interviewees agreed that technological aspects did not constitute a significant obstacle, even if some pointed out that in order to make the most of all the opportunities connected to telework, the diffusion of more advanced technological practices would be necessary, co-operative work for example, which go beyond a simple exchange of e-mails.

∑ *Control Culture*

Both the quantitative survey and the interviews showed that the main reason for the diffidence of entrepreneurs towards telework is the difficulty in controlling how and how much employees work outside the office.

In the survey, the disadvantage of telework that was most often mentioned, especially in industrial sectors, was exactly this impossibility to control workers, together with organisational difficulties. Small businesses especially fear this lack of supervision, whilst larger companies mostly mention organisational complications. Moreover, companies in the financial sector raise the problem of data security, whilst those in the communications and transport field pay more attention to the problem of costs.

Graph 1. Disadvantages of telework by production sector (percentage)



The fear of losing sight of workers and the consequent impossibility of controlling them, mentioned by 44% of those interviewed, is indicative of the prevalent entrepreneurial mentality, based on exercising hierarchical power rather than evaluating individual resources, which would be essential for a full use of telework. This mentality is particularly deep rooted in very small businesses, the most resistant to organisational innovation and in which it is difficult to sketch out a precise role for each employee: having people available on-site means

being able to ask them to carry out a myriad of different tasks, something that would be impossible with telework.
This is an important obstacle if we consider that over 70% of those interviewed declared that the main criteria of staff control was direct supervision, and in only 20% of cases work was organised according to delivery deadlines and individual and group objectives. Furthermore, only 30% of companies said they organised a part of their work by projects.
The most resistance to organisation forms of work based around greater independence of staff and orientation towards results are to be found in the more traditional industrial sectors (see tab. 1).

Table 1. Type of work management by production sector (percentage)

	Manufacturing	**Electricity, gas and water supply**	**Transport, storage and communication**	**Financial intermediation**	**Real estate activities**	**Total**
Direct supervision	74,6	63,6	69,4	72,7	70,5	73,2
Automatic recording of performance	3,2	9,1	5,6	9,1	3,8	4,0
Delivering of output with specified deadlines	10,8	0,0	8,3	3,0	9,0	9,6
Individual goals	4,4	0,0	5,6	6,1	2,6	4,2
Team goals	4,4	27,3	11,1	6,1	10,3	6,4
Other	2,6	0,0	0,0	3,0	3,8	2,6
Total (N)	342	11	36	33	78	500

∑ *Insufficient orientation towards results*

Both the stakeholders and the companies that experiment with telework that we interviewed said that in order for telework to establish itself, moving from a culture of assessing work by presence to by results was necessary, even if there is still a long way to go in this field.[4] For telework to spread, it is essential to shift attention from **presence** to **productivity** and reverse traditional management logic: telework has a strong impact on the whole organisation and turns general work logic upside down, getting people used to the idea that one can produce autonomously, even outside the office. It is necessary, however, to impress this on both workers, who need to learn to task manage with greater autonomy and employers, who find it difficult to give up control and exercising hierarchical power.

∑ *Not being used to measuring output*

Shifting emphasis to productivity forces entrepreneurs to intervene on methods of evaluating work too. This is something that we have focused on a lot in the in-depth qualitative phase, however obtaining only vague and imprecise answers: for most of the people we interviewed, evaluation and control are carried out "*by sight*", checking the number of workers present in company and the way they are carrying out tasks assigned to them. If this vagueness in evaluating workers' output is rarer in telework cases, we must emphasise that even telework does not seem to have systematically confronted the question of evaluating the performance of those who work from home and of measuring, even if qualitatively, differences in the output of workers when they are at home.
The lack of interest in this field shown by entrepreneurs reduces the awareness in these same companies of the advantages of telework, still generally perceived as an opportunity to meet

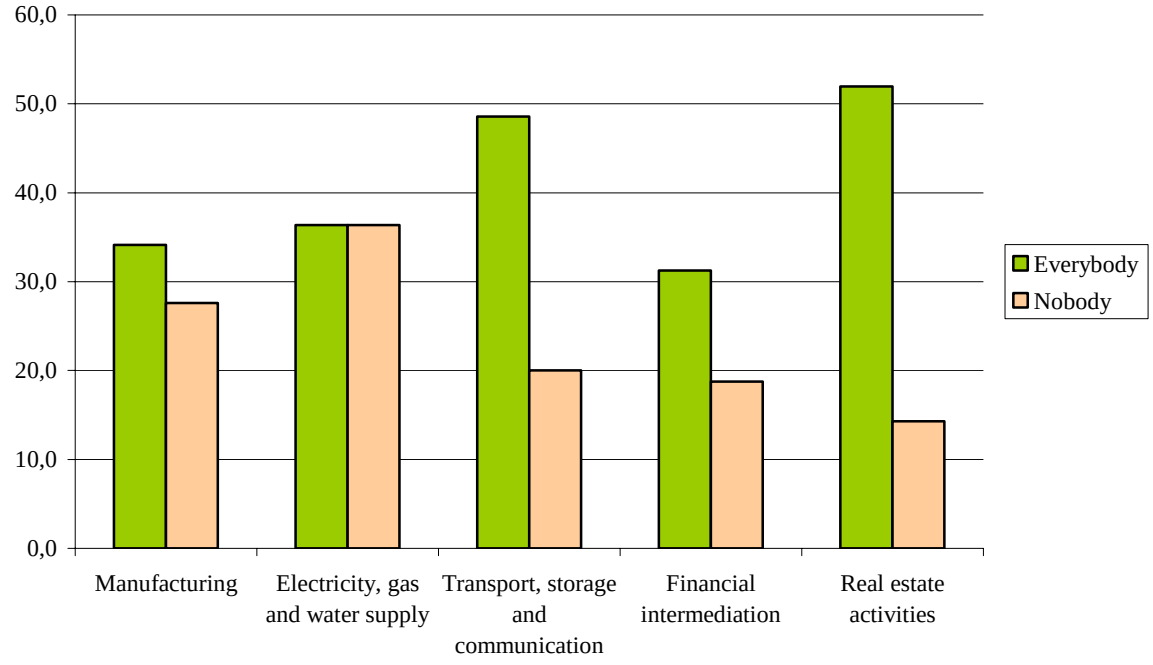
4 Falivene M., "Innovazione tecnologica e processo lavorativo. Il caso del telelavoro", *Sociologia e Ricerca Sociale*, no. 64, 2001.

workers' needs rather than an advantage for the company, which has the benefit of greater productivity and motivation among employees. Indeed, a good 63% of the entrepreneurs who took part in the survey saw workers as being the main beneficiaries of telework, and only 11% mentioned a rise in productivity as a specific advantage of telework.
Whoever has defined specific productivity indicators knows that they are needed to be able to plan activity more precisely, manage work tasks and avoid overloading workers. Furthermore, if one can calculate in advance the resources needed to complete a job, one can also to decide whether to involve freelance workers or employ new staff.
One obstacle to this type of planning is the pace of the working process: more and more customers need services or products to be ready as quickly as possible and this makes planning difficult: to finish as quickly as possible, avoid making mistakes and concentrate all available energies. For this reason, many people mention a lack of time: as punctuality has become a decisive element, everyone must be present in company in order to carry out tasks quickly and be available to help resolve urgent problems.

∑ *Non-existent timetable flexibility*

Those interviewed believe that telework is only suitable for people able to carry out their role in total autonomy, something which is fairly rare in small businesses.
The survey showed, indeed, that from a timetabling point of view, for example, flexibility in working hours is still uncommon, especially in industrial sectors, where the percentage of companies respecting a rigid timetable is nearly 90%.
On the other hand, the possibility for staff to organise their own working time freely is widespread in the services sector and above all in Real Estate activities and in the communications sector, sectors where the possibility of self-organisation applies to all employees, respectively in 52% and 49% of cases.

Graph 2. Who can organise their own working time by production sector (percentage)



∑ *Normative uncertainties*

During the quantitative survey, this aspect did not appear to be particularly significant, and only 16% of those interviewed indicated normative uncertainties as being amongst the disadvantages of telework, whilst the qualitative interviews allowed more detailed investigation into this area. In order to justify a lack of experimentation with telework in their company, many people said they could not begin to imagine how they would resolve normative problems, given the lack of one single law encompassing the problems of telework. This, however, is only true for company employees, as the situation is exactly the opposite for freelance workers. Most of those questioned did seem to agree, on the other hand, with the idea of telework being an excellent way to change contractual relations with some collaborators, making them into "*entrepreneurs of themselves*". As regards company employees, on the other hand, the most common opinion is that telework must be considered above all as a temporary experience, useful for meeting the personal requirements of individual workers (maternity, illness, need to look after elderly relatives).

∑ *Lack of information about telework*

Another barrier that emerged in the interview stage was a general lack of information specific to telework. Indeed, some of those interviewed mentioned that a greater diffusion of news about success stories, laws and available incentives could definitely encourage the development of this type of work. This lack of information is particularly critical as regards contractual and normative aspects, and the advantages in store for companies who take on telework. The negative judgement of the level of general information is shared by entrepreneurs who practice telework, who also point out the lack of consultancy and orientation services to do with telework.

∑ *The "alleged" non-'teleworkability' of the production process*

The interviews showed quite clearly that, for a combination of the factors discussed above, small and medium sized businesses do not feel the need to experiment with telework. On one hand they cannot imagine any advantages for the company, on the other, they are convinced that in their specific case, the working process is not compatible with telework, especially among smaller businesses. If it is true that in many of the cases under analysis, the non-'telework-ability' of the working process constitutes a real problem, often this statement seemed to us to be dictated by an *a priori* prejudice and a resistance to innovation rather than a reasoned evaluation. Entrepreneurs who have never taken telework into consideration consider this method of working to be risky as it eliminates the advantages of team synergy and slows down the production process, preventing them from checking tasks as they are being carried out and forcing managers to establish precise specifications. Some entrepreneurs point out candidly that if they could really identify parts of the working process to be carried out in full autonomy, it would be more convenient for the company to entrust them to outsourcing.

And it is for this reason too that telework is only taken into consideration when employees request it, in the conviction that this form of work is only useful to meet workers' needs.

3.b. Personal level

During the interview phase, it was also possible for us to investigate the teleworkers evaluation of their own experience of working long-distance.

In their opinion, one reason for diffidence is a fear of isolation and progressive estrangement from the company. This worry is, in fact, often unfounded, as the worker, especially in cases of alternate telework, is often in constant contact with the company. Furthermore, time freed

up from travelling allows many to recuperate local social relationships which they had sacrificed during their lives as commuters.
In any case, the cases we analysed allowed us to highlight some critical aspects of telework that can constitute a serious limit to the success of the experiment.

∑ *Organisational isolation*

One of the worst feelings for a teleworker is to perceive a marked scepticism about telework within the workplace, as in this case he then feels compelled to demonstrate continuously that even if from a distance, he is working just as much. A suspicious and diffident boss, who suspects his employee of taking advantage of telework so as to have to work less, creates a lot of stress for the worker.
Furthermore, bad management of communications is certainly a critical factor: teleworkers must not be abandoned to themselves and the company must guarantee constant contact between the office and the teleworker: inefficient technical instruments that hinder the communicative process should therefore be avoided. The company could, on the other hand, take it upon itself to prevent the risk of isolating teleworkers by contacting them more than necessary to agree on work stages in order to make them feel as if they were still part of company life.
The practice of evaluating time spent on work rather than its results must be considered unsuitable for telework: outcome parameters are often different between home and the office: if registering time spent on work can be stressful for the worker ("my nightmare is finishing the time"), fixing objectives to reach increases satisfaction and output.

∑ *Current skills and knowledge*

Experimenting with telework without the appropriate training is definitely not to be advised. This is a method of working which makes learning new skills which are not always indispensable in office life necessary, such as the ability to plan the working day, co-operate with colleagues at a distance, resolve problems autonomously and plan work in such a way as to respect timetables and deadlines. At home, as one interviewee pointed out, "you don't have emergencies to guide you anymore"
The incapacity to distinguish between home and office life can reduce the worker's satisfaction, and the greatest risk is *workaholism*, which sees a pervasive penetration of work into the private life of the teleworker and his family.

∑ *The balance between family and work*

As regards private life, those interviewed seem to have learnt for themselves that when you have children and you have to work, you risk no longer being in control of your own time and that it is necessary to be well organised so as to prevent the anxiety caused by a simultaneous "double presence"` which can bring about stress and dissatisfaction. This is especially true for women, who in Italy are more likely to be overburdened with domestic duties.
It is therefore necessary to establish a pact with one's family, so as to set out boundaries between private life and work, ensuring equal dignity for the needs of the worker (silence, tranquillity, inviolable work space) and of the family (sufficient time for the family, sharing of domestic tasks, flexibility of timetables etc.). Only with these precautions can telework become an advantageous opportunity for the worker and his family, thanks to the possibility of recuperating time and flexibility.

4. UTILIZATION OF TECHNOLOGY

The impossibility of possessing or having access to technological resources clearly represents a highly restrictive factor for any company when choosing whether to introduce or adopt telework. Furthermore, in order to make the most of the potential of current technology, adapting the organisational and cultural processes and skills specific to the characteristics of these instruments is essential. A similar process of organisational and cultural adaptation requires a large investment in terms of time and can bring about a delay in the return of investments, triggering an attitude of mistrust and resistance to change. For this reason, it is fundamental to bear in mind the so-called "external network effect", on the basis of which "it is much cheaper to invest in ICT when more people are doing so, exactly because ICT facilitates interaction between businesses"[5].

In the current situation in Italy, the main technological obstacle to experimenting with telework does not so much regard the level of ICT development as the uneven level of penetration of this same technology by productive sector and reference background. The use of technology in company processes appears strongly linked to the industrial and entrepreneurial characteristics of our country, whose medium-small configuration does not encourage quick and deep ICT penetration.

Emilia Romagna, despite high levels of ICT development does still display profound differences in the level of penetration of technology by size and production sector of the businesses operating in the region. The quantitative survey showed how the technological equipment of companies in Emilia Romagna seems to decrease in smaller businesses and in traditional sectors (manufacturing and energy), whose overall technological level is therefore rather contained.

Table 2. Percentage of individual technological equipment by production sector

	Manufacturing	**Electricity, gas and water supply**	**Transport, storage and communication**	**Financial intermediation**	**Real estate activities**	**Total**
Internet	93,3	90,9	94,4	97,0	96,2	94,0
Email	91,2	72,7	91,7	97,0	97,4	92,2
Web site	57,3	72,7	60,0	63,6	65,4	59,5
Intranet	26,7	36,4	42,9	63,6	36,0	31,9
Groupware system	17,4	9,1	22,9	37,5	29,7	20,8
Sale on line	6,1	18,2	11,1	27,3	14,1	9,4
Video conference	3,2		5,6	18,2	9,0	5,2

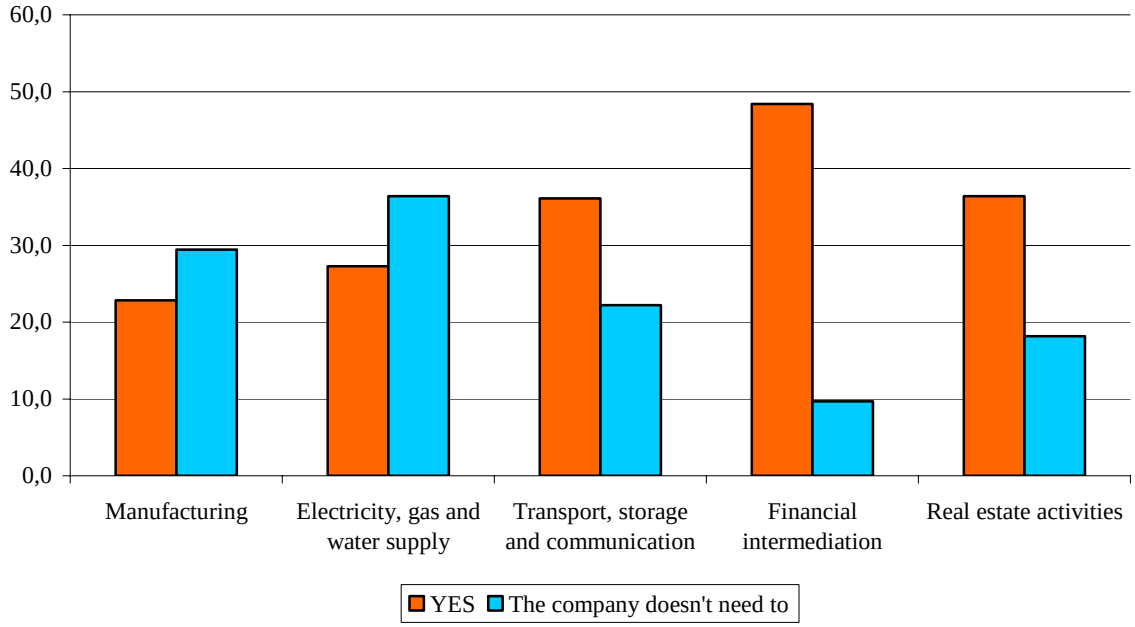
Table 3. Percentage of individual technological equipment by company size

	Up to 9 employees	**From 10 to 14 employees**	**From 15 to 30 employees**	**More than 30 employees**	**Total**
Internet	89,5	95,1	95,1	98,0	94,0
Email	88,7	91,4	93,3	100,0	92,2
Web site	50,0	58,4	58,9	88,2	59,5
Intranet	25,2	26,9	32,3	62,7	31,9
Groupware system	13,2	23,9	17,2	41,7	20,8
Sales on line	5,6	7,4	8,6	27,5	9,4
Video conference	2,4	4,3	3,7	19,6	5,2

5 Report on "Innovation and digital technology in Italy", Ministry for Innovation and Technology, Rome, 2003, http://www.innovazione.gov.it/ita/index.shtml.

Regarding investments for future expansion of technological equipment too, the businesses most inclined towards innovation are those operating in the services sector (brokerage and other activities) and bigger businesses. Consequently, these businesses also show themselves to be more aware of their characterization and technological capacity compared to their competitors.

Graph 3. Future expansion of technological equipment by production sector (percentage)



The same trend can be seen, furthermore, regarding the availability of remote access to the computer services of the company by its staff; a possibility which is extremely rare in traditional companies operating in the manufacturing sector and in transport. This is an important figure if we consider that the possibility of accessing company systems from remote positions constitutes an essential prerequisite for experimentation with forms of telework or e-work.

Attitudes towards new technology are influenced by the availability or lack of such tools. Naturally, companies equipped with specific technological solutions are also able to concretely evaluate the positive and negative effects, whilst companies which do not have up to date technological equipment express opinions based more on prejudices than on daily practice.
It is not by chance, therefore, that the risk of staff using the Internet for their own purposes is a fear expressed mainly by larger companies, which in practice enjoy a higher level of technological equipment. Another problem mentioned is data security, something emphasised in particular by bigger companies and by those belonging to the financial sector. Questions relating to the damage done to human relationships by ICT technology and the waste of time that the Internet can represent were seen as less important.

Graph 4. Who has access to company computer systems by production sector (percentange)

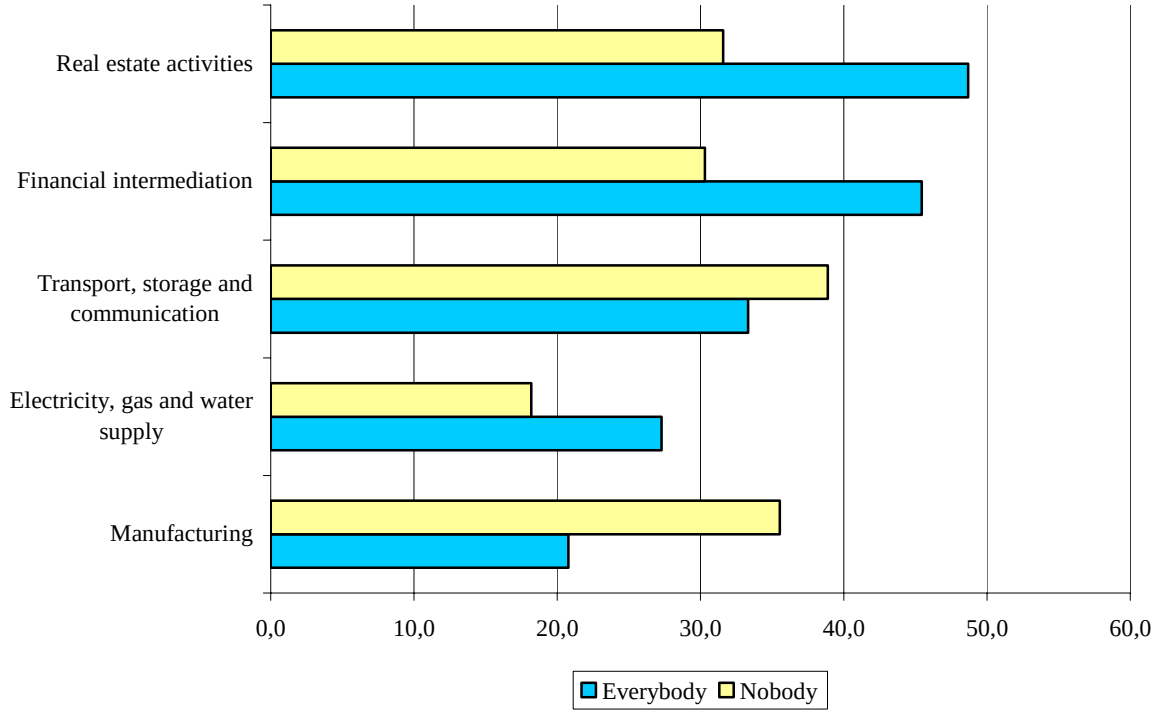


Table 4. Some risks connected to ICT use by production sector (percentage)

	Manufacturing	**Electricity, gas and water supply**	**Transport, storage and communication**	**Financial intermediation**	**Real estate activities**	**Total**
The personnel can use internet for personal needs	61,1	36,4	63,9	63,6	61,5	61,0
It is difficult to guarantee the security of information	48,2	18,2	44,4	57,6	46,2	47,6
Internet is a waste of time	16,1	0,0	11,1	18,2	10,3	14,6
Use of ICT damages human relations	24,6	0,0	22,2	21,2	14,1	22,0

Table 5. Some risks connected to ICT use by company size

	Up to 9 employees	**From 10 to 14 employees**	**From 15 to 30 employees**	**More than 30 employees**	**Total**
The personnel can use internet for personal needs	55,6	57,4	63,8	76,5	61,0
It is difficult to guarantee the security of information	41,1	46,3	50,9	56,9	47,6
Internet is a waste of time	10,5	17,9	14,1	15,7	14,6
Use of ICT damages human relations	20,2	25,3	18,4	27,5	22,0

Another thematic group relative to technological innovation is represented by the difficulties which can emerge following the implementation of new technology in a company. It is interesting to note that answers connected to problems of a managerial nature prevail above all in larger businesses (staff diffidence, managerial changes, the generation gap); furthermore, service businesses mainly fear problems of a managerial nature.

Table 6. Difficulties induced by ICT by company size (percentage)

	Up to 9 employees	**From 10 to 14 employees**	**From 15 to 30 employees**	**More than 30 employees**	Total
Generational gap	22,2	27,9	26,1	31,3	26,3
Short corporate training time	63,9	61,8	67,4	64,6	64,4
Management resistance	5,6	9,6	14,5	16,7	10,9
Employee resistance	13,9	11,0	15,9	20,8	14,4
Reconfiguration of working environment	17,6	16,2	10,1	14,6	14,4
Changes in management of work organization	38,0	38,2	31,2	43,8	36,5
Total (N)	**108**	**136**	**183**	**48**	**430**

Table 7. Difficulties induced by ICT by production sector (percentage)

	Manufacturing	**Electricity, gas and water supply**	**Transport, storage and communication**	**Financial intermediation**	**Real estate activities**	Total
Generational gap	26,1	22,2	20,7	18,8	33,8	**26,3**
Short corporate training time	64,7	77,8	69,0	68,8	56,9	**64,4**
Management resistance	11,2	0	6,9	15,6	10,8	**10,9**
Employee resistance	13,9	22,2	13,8	28,1	9,2	**14,4**
Reconfiguration of working environment	13,9	11,1	27,6	15,6	10,8	**14,4**
Changes in management of work organization	34,9	33,3	34,5	40,6	43,1	**36,5**
Total (N)	**295**	**9**	**29**	**32**	**65**	**430**

In the specific case of Emilia Romagna, therefore, we find that company size and industrial sector play a determining role in encouraging or obstructing ICT development and indirectly in experimentation with practices of innovative work, closely connected to technological availability. In Emilia Romagna, as in the rest of Italy, the services sector therefore represents one of the main triggers for technological and organisational innovation. This is no accident if we consider that the immaterial nature of most of the services provided allows digital technology to revolutionise methods of production, commercialisation and provision. Whilst manufacturing companies tend to identify the effects of technological innovation most important to them in the improvement of product quality and the increase in production capacity, the services sector tends to consider innovation as a possibility to access new markets and as an improvement to the quality of the service provided.

However, we cannot ignore that for both sectors the most critical obstacles for the introduction of innovation are the costs of innovation, the lack of innovative financial instruments and the skills of the staff, above all in small and medium sized companies. For this reason it is essential that Italian SMEs understand the importance of accompanying

technological and organisational innovation with an opening to collaboration with other businesses in the area. It is, indeed, the "rigid links within local networks that obstruct the creation of the virtual networks needed to share resources and knowledge"[6].

4.a. Technological infrastructure

At present the most critical point is the modernisation of networks of access to infrastructure and broadband services. The main problem consists in the coexistence of various technologies in function of the various services required, and the costs and time necessary for the creation of infrastructure. Furthermore, in a competitive system, advanced infrastructures tend to be made more available to areas with the most potential (those quickest at returning investments), and only then carry on to cover the rest of the territory, thus determining a technologically uneven situation amongst various territorial areas (digital divide).
According to the constant monitoring carried out by the Broadband Observatory, there is an excess of provision compared to actual demand and of strong competition in strategic policies in the Centre-North, whilst the number of operators is drastically reduced in the cities of the South. On a network level, too, there is great heterogeneity between large metropolitan areas and peripheral areas. Thus, the prevalent transmission method in network access is still the old-fashioned copper wire, which connects the user to the local plant.
This situation is the result of two main problems: one cultural and one purely technological. On one hand the lack of general knowledge of the actual potential of such technology; on the other, the understanding that in order to encourage the possibility of using a wide range of services on various platforms of distribution and of creating new innovative services, it is essential to create the conditions for the interconnection of various techniques of access and transport (IP networks, fixed, mobile and television) able to transmit digital contents.

5. CONCLUSIONS

The analysis carried out here has shown that at present the most important barriers to telework in Italy are organisational and managerial aspects within the company.
One cannot deny that there is a fairly low level of public interest in telework. For small and medium sized businesses that have been involved in research into telework, it appears inapplicable and not very advantageous and thus not tempting to experiment with. Furthermore, most experiences of telework under analysis were initiated following the request of the employee, who in most cases was only able to continue working for the company thanks to telework. In very few cases analysed, telework was started up as a consolidated organisation practice, more often becoming an extraordinary or exceptional experience.
Despite this, those who experiment with telework work more, and better, although their employers are not always capable of recognising it.
So, what prevents businesses from reaping the benefits of telework, in terms of making staff more responsible and more loyal and a greater flexibility in managing space and time?
One of the reasons for this resistance is that telework has a disruptive impact on the whole organisation as (when applied well) it does not only affect those working long distance but the organisation as a whole, forcing workers and managers to work towards objectives, plan activity, avoid being driven by emergency and focus attention on results rather than time spent in the office.
The interview phase allowed us to confirm that telework, in its quality of organisational innovation, makes an upheaval in entrepreneurial mentality necessary. Probably above all for small businesses (even in an advanced region such as Emilia Romagna) the time is not yet

6 Report on "Innovation and digital technology in Italy", Ministry for Innovation and Technology, Rome, 2003, http://www.innovazione.gov.it/ita/index.shtml.

right for this upheaval, and a traditional mentality based on hierarchy and power management still prevails.
Maybe the habit up until now of using telework to respond to particular individual needs could be used to bring attention to some good practices, which could have the effect of tempting more innovative entrepreneurs to experiment with this method of working within their own businesses and more generally, organisational formulae which encourage (where possible) responsibility and autonomy in staff.
Finally, technological barriers do not so much consist in a low level of ICT development, even if the spread of broadband appears still to be inadequate, as in the uneven level of penetration and application of technology within various area of business. In Italian SMEs, the lack of awareness about the numerous potentialities offered by digital technology prevents the development of an attitude propulsive towards the organisational and technological innovation that can there ensue.

BIBLIOGRAPHY

Castells M, *The Rise of the Network Society*, Blackwell Publishers Ltd, Oxford, 2000.
Ciacia Cinzia, Di Nicola Patrizio, *Manuale sulle best pratice del telelavoro*, Rome, L'officina di Next, 2001.
Di Nicola Patrizio (eds), *Il nuovo manuale del telelavoro*, Rome, Seam, 1999.
Di Nicola Patrizio (eds.), Telelavoro domiciliare. Il servizio Info12 di Telecom Italia, Rome, Ediesse, 2002.
Duxbury Linda, Higgins Christopher, Neufeld Derrick, "Telework and the Balance Between Work and Family: is telework a part", in Igbaria Magid, Tan Margaret (Eds), *The Virtual Workplace*, U.S.A., 1998.
Falivene Michele, "Innovazione tecnologica e processo lavorativo. Il caso del telelavoro", *Sociologia e Ricerca Sociale*, n. 64, 2001.
Felstead Alan, Jewson Nick, In Work, at Home: Towards an Understanding of Homeworking, Routledge, London, 1999.
Fontana Renato, Mazza Barbara (eds), *E-job. Guida al lavoro nella net-economy*, Guerini e Associati, 2001.
Hedberg, Bo, "Organizing in a New Economy: between Inside and Outside", *Fifth International Telework Workshop*, Beyond, Stockholm, 2000.
Huws Ursula, Korte Werner B., Robinson Simon, *Telework: Towards the Elusive Office*, John Wiley and Sons, London, 1992.
Ministry for Innovation and Technology, *Report on innovation and digital technology in Italy*, Rome, 2003 http://www.innovazione.gov.it/ita/index.shtml.
Pocek Adria, "PMI: voglia di crescita hi-tech", www.smau.it, May 2003.
Pratt Joanne H., "Cost Benefits of Teleworking to Manage Work/life Responsibilities", *International Telework Association & Council*, U.S.A.,1999.
Report Anfov, *Broadband update: mercati e nuove regole*, Torin, 2003, http://www.anfov.it/nuovo/rapporto/index.html.
Report Assinform on ICT, Milan 2002, , www.assinform.it.
Report ISTAT, Indagine Multiscopo sulle famiglie "I cittadini e il tempo libero", Year 2000, Rome, 2002.
Smau Research, *Italia-ICT. Innovazione e competitività del Sistema Paese*, Milan, 2/2003, www.smau.it.
Trippi Alberto, "Costruiamo il 2004 "Anno dell'innovazione", Conference Federcomin, September 2003, www.federcomin.it.