Coping Italian Emergency COVID-19 through Smart Working: From Necessity to Opportunity

VALERIO LANGÈ* & LUCA GASTALDI**

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Abstract

Smart working is defined as a new managerial philosophy characterized by higher flexibility and autonomy in the choice of working spaces, time and tools in return for more accountability on results. The health emergency related to Covid-19 helped the spread of smart working and public administrations are experimenting a frequent and intensive use of smart working practices and technologies. Through a survey on 52 Italian municipalities and 26 other public administrations we have explored the level of adoption of smart working and explored its correlation with work-life balance, autonomy, and innovation. Findings show that: (1) before the spread of coronavirus and the consequent lockdown, workers used to work in the office just for half of their working time; (2) women are more likely than men to part-time work; (3) part-time work is an effective tool to promote work-life balance, which is easier for those who do not have relatives to take care for; (4) smart working adoption results in larger autonomy, which promotes confidence and so propensity towards innovation. The main contribution of this work is to draw a first overall picture of the effects of smart working on innovation in Italian municipalities. This work presents some first results of a research still in progress and can be the basis for further research, both as regards more extensive research and for more in-depth research. The work also provides some useful working ideas for setting the exit route from the health emergency.

Keywords: Smart working, Public Administration, Work-life balance.

Introduction

In Italy, in 2016 the discussion on smart working started in Parliament based on two different proposals[1], aiming to:

- Respond to the need of a flexible method of organizing employment relationship, in order to increase productivity and to facilitate work-life balance;

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[1] DDL 2229 presented on February 3rd, 2016 by Maurizio Sacconi and DDL 2233 presented on February 8th, 2016 by Giuliano Poletti

- Provide employers and employees with an adequate legal framework to bring in a new idea aboutworking and work organization that was gradually emerging.

This second proposal indicated that the forms of self-employment or employee work in this new mode were based on phases, cycles and objectives and do not have time or place constraints. Much of the parliamentary discussion focused on the definition of working time, on the freedom to choose smart working and on the role of the trade unions, on the purpose of smart working as a tool for better work-life balance (for the worker) or as a mean to manage personnel more flexibly, for the benefit of businesses, at the cost, however, of greater job insecurity. The discussion focused on the instrumental nature of smart working and on the fact that it could be beneficial to support cultural and technological change in working environments. The two original proposals have been integrated and the final version was approved by the Senate on May 10th, 2017. The law was promulgated by the Head of State on May 22nd, 2017. Smart working is defined by law 81/2017 as a method of executing subordinate employment relationship established by an agreement between the parties, in addition to some forms of organization by phases, cycles and objectives and without specific time or place of work restrictions, with the possible use of technological tools for carrying out the work activity. The articles that regulate the fundamental aspects go from number 18 to number 23; it should also be taken into account that law 145/2018 (Budget law 2019) integrated other aspects into smart working, further conceiving it as a tool for better work-life balance.

1. Smart working in the public sector

Law 81/2017 specifies that smart working is a way of working suitable for both the private and public sectors, but in the same years the reform of public employment, with law 124/2015, had laid the foundations for promoting smart working in the public sector, which was further fostered by the subsequent 3/2017 directive (so-called Madia directive). The objectives set by law 124/2015 are primarily aimed at ensuring work-life balance of public employees, promoting the use of different forms of part-time work, as well as the use of telework, experimenting with forms of co-working and smart working.

In line with law 81/2017, the Madia Directive confirms for the public sector as well that no category or type of worker is excluded a priori, and it is not allowed to discriminate employees based on their contract. It is also

necessary to encourage new mothers and parents of children with disabilities, as required by law 145/2018.

To facilitate smart working arrangements, the Madia directive confirms that work must be organized not based on physical presence, but on actual employee performance, identifying specific, measurable, compatible objectives that are coherent with the organizational context. Of course, priority must be provided to those in situations of personal, social or family disadvantage or those who are engaged in volunteering. The aim of the various interventions was to redesign spaces, favoring collaborative environments and promoting the usage of digital technologies. Moreover, smart working must be characterized by spatial flexibility, which makes it possible to work both within and outside the administration premises. If no fixed location is required outside (unlike teleworking), it is nevertheless advisable to identify the premises outside the usual workplace where the work will take place. However, this identification is not mandatory. Another element of flexibility concerns the schedule; in fact, the Directive asks to promote goal-oriented work culture.

This work presents some first results of a research still in progress about the impact of smart working adoption in Italian municipalities.

2. Objectives

The covid-19 health emergency required the identification of new ways of working to balance the continuity of administrative and economic activities and the protection of public health; smart working has been recognized suitable. As established by central government, until the end of the emergency, on the whole national territory and at any subordinate employment relationship, smart working can be activated just by sending the worker the safety information and uploading a file with the list of workers in smart working.

In the public sector, smart working saw the formal end of the experimental phase with the decree-law 9/2020. After being a test, it now becomes the norm. The circular 1/2020 of the Minister also highlights the importance of having recourse, as a matter of priority, to smart working as a more advanced form of flexibility in work performance.

In the context described, it is easy to imagine that Public Administrations, and particularly municipalities, are experimenting a situation in which a frequent and intensive use of technologies is needed. Moreover, working from home is currently compulsory for many workers in the public sector and probably it will be the new normal, according to the Ministry of Public Administration, who declared that "the challenge of

the public administration of tomorrow will be to make smart working a solid reality in the organization of public work"[2].

It is then interesting to inquire to what extent and for which aspects improvement can be reached. More in details, it is worth to inquire the level of adoption of smart working in municipalities before the emergency and the perception of workers in respect to confidence and autonomy, and how this results in fostering innovation. Moreover, it appears to be interesting to inquire about the opinion of different categories of workers (male or female, with or without children to care for, with or without elderly or disabled people to care for) about work-life balance as well, in order to differentiate interventions to consolidate the practices that are currently spreading and systematize them in a more organic way. This could make smart working a good way to promote work-life balance, autonomy and innovation in municipalities.

3. *Data and methodology*

Our data derive from a survey distributed to about 20,000 public administrations in Italy by Polytechnic University of Milan and Synergia s.r.l.. Data regarding municipalities are presented here. The survey considers smart working because of working hour (temporal) flexibility (Scandura et al., 1997), a degree of digitization and the use of ICT tools (Lieke et al., 2012; Chen et al., 2018),layout and space flexibility (following the classic distinction between behavior, bytes, and bricks). It considers also work-life balance (Nam, 2014), autonomy (Tummers et al., 2018), confidence and the perception of a culture that fosters creativity and innovation. Each issue has been inquired through several items, and each item has been transposed into a statement. The level of agreement has been asked for each statement on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Items have been aggregated via principal component factors analysis.

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variables for the regressions. The distribution of working time in different places (office, home, means of transport, public spaces) before the beginning of the lockdown period has also been taken into consideration.

Tab. 1 - The sample considered

Median age (years old)	53
Median seniority (years)	22
Gender of respondents	%
Male	34,62
Female	65,38
Children living at home	%
Yes	36,54
No	63,46
Elderly/disabled people living at home	%
Yes	29,41
No	70,59
Supervisory role	%
Yes	63,46
No	36,54

Analysis through descriptive statistics and t-tests have been conducted as well.

The sample is composed of 52respondents from municipalities distributed all over the Italian territory. 88% of respondents are full-time workers. Table 1 shows the main characteristics of the sample.

4. Results

First, it is interesting to notice that, before the beginning of the covid-19 emergency, municipalities workers did not work just only in their office. More in details, just half of their time was spent in the office, while more

than one out of three of it was spent working from home; public spaces are taken into consideration, too. Results are shown in table 2.

Tab. 2 - Time spent in each place

Place	%
Office	50,33
Home	35,00
Public spaces	9,73
Means of transport	2,80
Other offices	2,13

Looking at work-life balance, data confirms that women are more likely than men to part-time work, probably because the weight of care for non-self-sufficient relatives falls on them. It is also worth to notice that work-life balance shows higher results for respondents who have no children living at home and no elderly/disabled people living at home. Part-time works to favor work-life balance, as expected. Results are shown in table 3, differences are statistically significative at 95%.

Tab. 3 - The level of implementation of smart working

	all	male	female	diff.
part-time work	0,88	1	0,82	0,18
	all	w/o children	with children	diff.
work-life balance	0,00	0,20	-0,34	0,54
	all	w/o elderly/ disabled	with elderly/ disabled	diff.
work-life balance	0,04	0,22	-0,39	0,61
	all	part-time workers	full-time workers	diff.
work-life balance	0,00	0,91	-0,12	1,02

Then, through factor analysis and then using a simultaneous equations model the relations between smart working, confidence, autonomy and
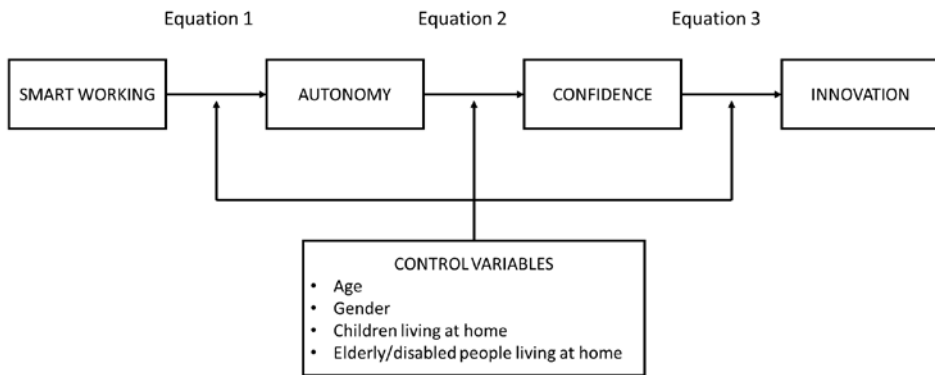
innovation have been inquired. Each relation depicted in figure 1 has been inquired through a linear regression. Results are shown in table 4.

Tab. 4 - Simultaneous equations model results

	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]	
EQUATION 1 (innovation)						
confidence	0.7005	0.1065	6.5800	0.0000	0.4917	0.9092
constant	- 1.5385	0.9280	- 1.6600	0.0970	- 3.3573	0.2803
Control variables						
age	0.0272	0.0162	1.6800	0.0930	- 0.0046	0.0591
gen	- 0.0095	0.2102	- 0.0500	0.9640	- 0.4214	0.4024
children	0.0582	0.2365	0.2500	0.8060	- 0.4053	0.5216
caregiver	0.2051	0.2171	0.9400	0.3450	- 0.2204	0.6306
EQUATION 2 (confidence)						
autonomy	0.3837	0.1348	2.8500	0.0040	0.1195	0.6478
constant	- 2.4002	1.1514	- 2.0800	0.0370	- 4.6569	- 0.1434
Control variables						
age	0.0408	0.0202	2.0200	0.0430	0.0012	0.0804
gen	- 0.0437	0.2745	- 0.1600	0.8730	- 0.5817	0.4942
children	0.6875	0.2946	2.3300	0.0200	0.1101	1.2649
caregiver	- 0.0231	0.2846	- 0.0800	0.9350	- 0.5810	0.5348
EQUATION 3 (autonomy)						
smart working	0.4103	0.1374	2.9900	0.0030	0.1410	0.6796
constant	- 0.0657	1.2082	- 0.0500	0.9570	- 2.4337	2.3023
Control variables						
age	0.0074	0.0212	0.3500	0.7260	- 0.0340	0.0489
gen	- 0.2991	0.2791	- 1.0700	0.2840	- 0.8460	0.2479
children	0.0168	0.3030	0.0600	0.9560	- 0.5771	0.6108
caregiver	- 0.3147	0.2873	- 1.1000	0.2730	- 0.8778	0.2484

Results in table 4 show that the adoption of smart working results in larger autonomy and this, via an increased level of confidence, can foster innovation. This has been verified also in general (not only for municipalities), and in general has been found that increasing autonomy job satisfaction increases as well.

Fig. 1 - The simultaneous equations model

Conclusion

The survey presented shows that in the sample of municipalities considered, before the spread of coronavirus and the consequent lockdown, workers used to work in the office just for half of their working time. In municipalities, women are more likely than men to part-time work; part-time work is an effective tool to promote work-life balance, that is easier for people with no children or other relatives to take care for.

Smart working adoption results in larger autonomy, that promotes confidence and so propensity towards innovation.

The lockdown has obliged workers and administrations to work from home, making necessary (and compulsory, to some extent) home working and the use of digital tools. The emergency made evident that working from places different than the office is possible and this practice must be consolidated.

If the emergency and the consequent lockdown will foster the adoption of smart working practices, workers in municipalities could gain in

autonomy and confidence. This could result in a larger propensity towards innovation in public administration.

The main contribution of this work is to draw a first overall picture of the effects of smart working on innovation in Italian municipalities. This work presents some first results of a research still in progress and can be the basis for further research, both as regards more extensive research and for more in-depth research. The work also provides some useful working ideas for setting the exit route from the health emergency. This research considers just a sample of Italian municipalities: it would be worth to analyze these issues in a more extensive way and not only looking at the period before the lockdown. It would be interesting to measure if and to what extent phenomena examined here saw an increase during the lockdown period.

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	all	*part-time workers*	*full-time workers*	*diff.*
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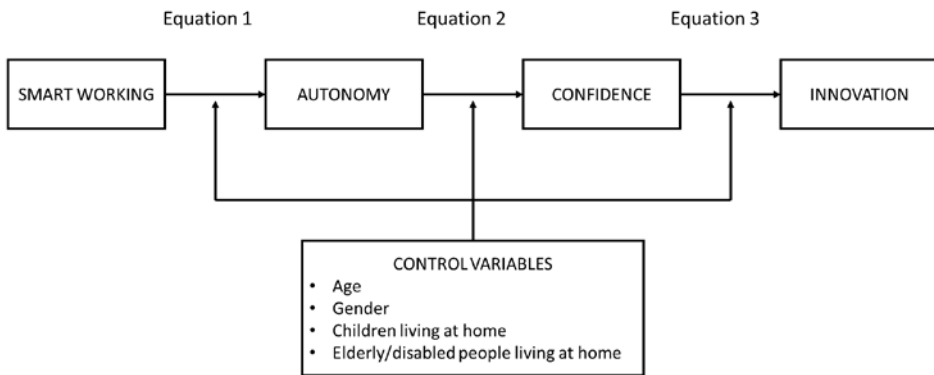
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Fig. 1 - The simultaneous equations model

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The survey presented shows that in the sample of municipalities considered, before the spread of coronavirus and the consequent lockdown, workers used to work in the office just for half of their working time. In municipalities, women are more likely than men to part-time work; part-time work is an effective tool to promote work-life balance, that is easier for people with no children or other relatives to take care for.

Smart working adoption results in larger autonomy, that promotes confidence and so propensity towards innovation.

The lockdown has obliged workers and administrations to work from home, making necessary (and compulsory, to some extent) home working and the use of digital tools. The emergency made evident that working from places different than the office is possible and this practice must be consolidated.

If the emergency and the consequent lockdown will foster the adoption of smart working practices, workers in municipalities could gain in

autonomy and confidence. This could result in a larger propensity towards innovation in public administration.

The main contribution of this work is to draw a first overall picture of the effects of smart working on innovation in Italian municipalities. This work presents some first results of a research still in progress and can be the basis for further research, both as regards more extensive research and for more in-depth research. The work also provides some useful working ideas for setting the exit route from the health emergency. This research considers just a sample of Italian municipalities: it would be worth to analyze these issues in a more extensive way and not only looking at the period before the lockdown. It would be interesting to measure if and to what extent phenomena examined here saw an increase during the lockdown period.

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