

# Rejecting Innovation: How Italian Public Employees are Killing Creativity and Digitalization

Marco Berardi, Andrea Ziruolo and Fabrizia Fontana

G. d'Annunzio, University of Chieti-Pescara, Italy

[marco.berardi@unich.it](mailto:marco.berardi@unich.it)

[andrea.ziruolo@unich.it](mailto:andrea.ziruolo@unich.it)

[fabrizia.fontana@unich.it](mailto:fabrizia.fontana@unich.it)

**Abstract:** Within the general context of new ideas generation, there is a grey area that still concerns the organizational design solutions related to creativity. In fact, if personal characteristics and other community-related issues have been quite explored so far, some organizational mechanisms still need to be deepened. In this paper we aim to investigate the impact of professional networks on Innovative Work Behaviour in the local government to achieve public value. We investigate the contribute of creativity in the digitalization of Italian public administration considering the contribution of public employees on developing knowledge management. Moreover, we investigate a community of 190 employees of municipalities divided into three macro categories: deputy employees, Managers and Senior Managers. An OLS regression model has been used to understand to what extent the degree of collaboration and advice among employees and their propensity to adopt digitalization in ordinary practice considering social capital variables. What emerges from the OLS regression is that despite accelerating the ordinary work using the leverage of digitalization and knowledge management, there is the custom of not applying the enormous benefit of process re-engineering and continuing their work attitude in what the economic literature defines "the comfort zone". The results consolidate the current literature about the creation of public value showing the resilience of public employees to change their state of mind reflecting any kind of innovation.

**Keywords:** Innovation, Creativity, Knowledge management, Public sector

---

## 1. Introduction

In the post covid era, digitalization and knowledge management practices should be considered two of the main leverages in the creation process of public value (Berardi et. al. 2022). International literature agrees on this point showing that the improving of socio-economic systems are strictly connected to the skills of the organization to quickly re-act on unconventional forms regarding external disturbs through innovation and digitalization in order to achieve smart governance (Vial, 2019). Moreover, in a new public management scenario, public value is created when public organization can measure the outcome or the impacts that their policy brings in the referred context or ambient (Boyne, 2002). Even if part of international literature has shown that the creation of public value refers to a multiversity of variables such as intellectual capital components of public workers (Ramirez, 2021), public performance and alignment between managers and politicians (Walker et. al, 2013), social capital (Stolle, 1999) only a few authors are investigating the contribution of creativity (Di Vincenzo et. al, 2021) while other authors are considering innovation (Amabile, 1990).

As confirmed by part of international literature, innovation practices such as digitalization (Vial, 2019) and creativity (Di Vincenzo, 2021), have been deeply investigated in literature especially in the private sector (Amabile 1996). In this sense, innovation is a fundamental strategic asset for all organizations (Crosby et al. 2017). To innovate with effective results, managers and entrepreneurs must clarify the relationship between creativity and innovation. Innovation is considered as the implementation of ideas in useful business. Therefore, we may have creativity without innovation but not innovation without creativity. The understanding of the link between innovation and creativity requires to focus on how the ideation process works. Amabile (1996, 1997) argues that innovation is the successful implementation of creative ideas within each organization. So, the ability to promptly devise innovative solutions and answers is a priority for any organizations, mostly in conditions of low intelligibility of information and limited ability to forecast.

On this topic, we must consider the effort of authors such as Soliman and Spooner (2000), as they highlighted that the successful implementation of new technologies is dependent on many factors including the efficient management of human resources. As shown by those authors, the strategic role of the human resources department in identifying strategic and knowledge gaps using knowledge mapping as far as they propose drivers and implementation strategies for knowledge management programs.

Moreover, many authors refer creativity to the generation of ideas or solutions that are simultaneously innovative, unusual and original as well as appropriate, practical and useful for the problem in question (Shalley, 1991; Woodman et. al, 1993). Considering this definition, the post-covid era represents the perfect scenario

inside whom to verify the contribution of innovation and creativity in a non-investigated context such as the public sector. In this sense, we have conducted an exploratory study trying to identify how public organizations creativity and innovation have affected the post covid era and how those two variables contribute to the creation of public value through the leverage of knowledge management.

As shown in different studies, knowledge management has deeply conditioned the public administration scenario in different countries even if the most investigated one until now is Italy as it is considered the most hardly hit by the pandemic (Berardi et. al, 2022; Sebastiani et. al, 2020). As shown by other authors, in the first year of the pandemic, Italy had more than 90,000 deaths and over 2,500,000 Covid-19 cases (Senate of the Italian Republic, 2021). In 2020, faced with an international health emergency and to avoid the spread of the virus, the prime minister, Giuseppe Conte, ordered various restrictions on Italian citizens, with an initial severe lockdown lasting three months and then a series of other restrictions. This strategy strongly pushed, among other things, a rethinking of the way in which public services acted, based upon the rapid digitalization of the Italian public sector through Knowledge Management patterns, and thus a rethinking of the “public administration mindset” with a smart governance approach (Heeks, 2002, 2003).

So, the aim of this paper is to continue investigating this country on this research topic: *is creativity and digitalization pushing the creation of public value in Italy in the post covid era?* This paper will show that, despite the enormous effort conducted by the Italian central government to push for digitalization and innovation, the resilience regarding part of public employees is literally killing innovation and creativity hindering the creation of public value through those two leverages.

## 2. The Effort Of Creativity on Digitalization and Knowledge Management on the Italian Context

Part of international literature has shown that the reaction on extraordinary events such as Covid-19 has modified what it has been considered for decades the so called “Knowledge management toolkit for public policies (Robinson et al., 2010)” considering new variables such as the trust of citizens in the public policy (Berardi et. al, 2022), (figure 1).

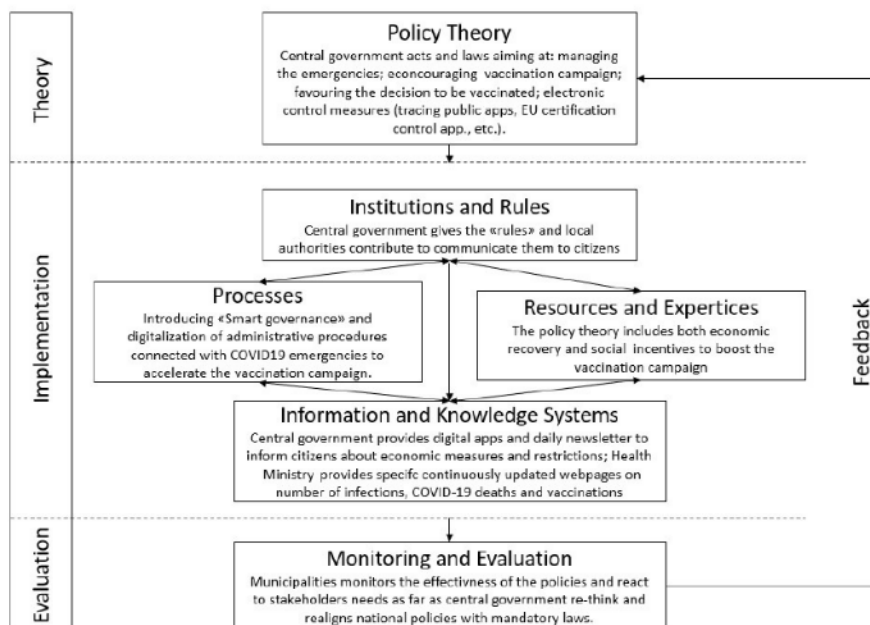
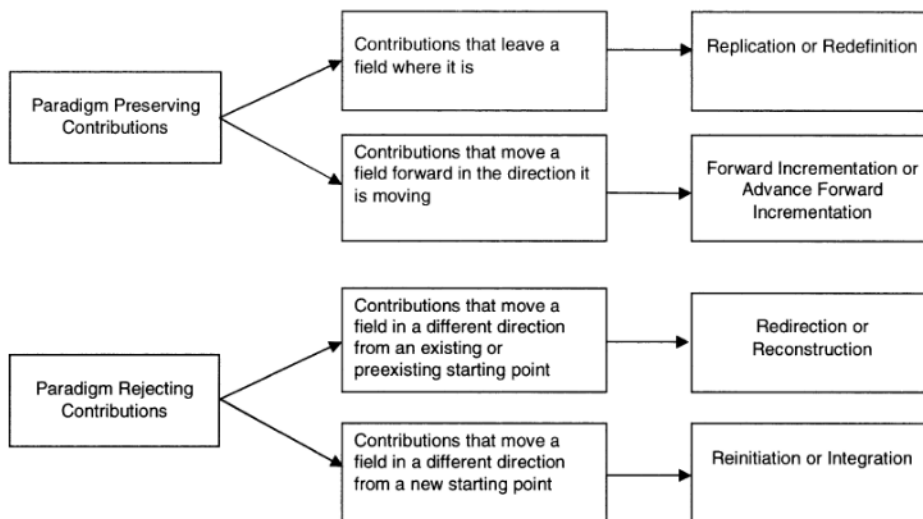


Figure 1: Knowledge Management Toolkit for Public Policies (Robinson et al., 2010)

Once the emergency has passed, public entities continue to guarantee the efficiency of public services with a lack of resources such as the effort of public money and a lack of public employees due to emergency transfers of resources from the central government. So, in order to achieve public value and maintain the same level of efficiency for public services, international literature underlines that innovation and creativity should guarantee the achievement of public goals. As a matter of fact, increased performance requirements subsequently to the emergency requests by citizens and stakeholders has led many public service organizations to develop innovative service delivery mechanisms in response to wicked issues, by creating and adding value to service

delivery (Bonner, 2023). Moreover, what is considered by social and public value is what brings value in terms of satisfaction to stakeholders dealing with : user value, value to wide stakeholders, value to wider society (Moore, 1995; Talbot, 2008). Because of the Covid-19 emergency a kind of “pressure for reform” has generated in all public agencies that forced public managers and leaders to collaborate in partnerships with other stakeholders to develop novel methods of delivery, evaluation, and measurement services. In the Italian scenario, this aspect has resulted in an almost total transformation of public management services for customers that boost on digitalization and innovative tools to guarantee public services. As far as the push for digitalization, the creativity of central governments on introducing new strategies to guarantee public services comes out. The most emblematic was the “Reform of digitalization in emergency” (legislative decree n. 18) that the Italian government applied in 2020.

Because of this extraordinary intervention by the central government what comes out was a facilitated process for all public administrations to acquire digital goods and services, with reference to services that operate in the cloud (Software-as-a-Service, such as for example hosting services, but also applications, services that allow teleworking, or direct services to citizens and businesses). Organizations will be able to purchase these goods and services with a negotiated procedure but without a call for tenders and in derogation of any provision of law other than criminal law, subject to compliance with the provisions of the Italian anti-mafia law code. This kind of intervention is defined by international literature as “government creativity” (Rangarajan, 2008) and represent a good example of the definition of creativity given by some authors (Shelley, 1991; Woodman et. al, 1993). Part of the literature and in particular Sternberg (1999) proposed a conceptual framework of creativity called the propulsion model that focuses on the creative outcome. The propulsion aspect reflects the will to shift from a current state to a future state as envisioned by the proponent of the boost leverage (figure 2).



**Figure 2: Propulsion Model of Creativity Inspired by Stanberg (1991) and Adapted by Rangarajan (2008)**

Following this theoretical framework two possible paradigms should come out. In the first paradigm we have the preserving contribution of creativity while in the second we have the rejection. Considering the knowledge management toolkit for public policies, we should consider the creativity paradigm (Rangarajan, 2008) as an integrated part of the “process” included in the “implementation phase”. So, the effectiveness of a public process is directly linked with the preservation of the creativity of ideas that the policy maker proposed in their own policies. More specifically, the efficiency of a public policy is strictly connected with the capabilities of public entities to achieve specific goals “a field forward in the direction it is moving” or that at least contributes to “a field where it is”. Otherwise, a public policy fails if public bodies “move a field element in a different position” or at least “in a different direction” (Rangarajan, 2008; Stanberg, 1991).

Concerning that literature considers that the efficiency of a public policy is directly affected by the human capital that operates in different public entities (Lappi et. al, 2019; Al Ahabbi, 2019) we investigated a data set constituted by 190 employees of municipalities divided into three macro categories: deputy employee, Managers and Senior Managers. This represents a preliminary study conducted on a sample of employees of the four biggest cities in the Italian Abruzzo Region: Pescara, L’Aquila, Chieti and Teramo that has been considered

by the Italian Health Agency as the mostly hidden hit during the second and third wave of Covid-19 and that are considered by the Italian Agency for digital innovation (AGID) as the most responsive on digitalization and implementation of knowledge management procedures all across the Italian peninsula.

### 3. Methodology of the Research

Considering previous literature, we focus our study on the same geographical area that has been investigated by other authors such as Battiston et. al. (2021), Marziano et. al. (2021) Berardi et. al. (2021b, 2022) to provide more details that can contribute to better understanding how the public policy has affected local authorities.

In the period between September 2022 and January 2023 we conducted 190 interviews with public employees of the municipalities of Pescara, L’Aquila, Chieti and Teramo divided into three macro categories: deputy employee (150 interviews), Managers (30) and Senior Managers (10). Those four municipalities are the Largest in terms of total inhabitants of the Abruzzo Region (296.130 inhabitants in the four municipalities over 1.312 million of total inhabitants of the entire region) and have been largely investigated by Italian literature (Papi et. al, 2022; Deidda Gagliardo, 2012). In Table 1 we reported the demographic of the respondent.

**Table 1: Demographic Characteristics of the Respondents**

Employee	Deputy Employee (150)		Managers (30)		Senior Managers (10)	
	Frequency	%	Frequency	%	Frequency	%
<b>Age</b>						
<i>18-30</i>						
<i>31-44</i>	10	6				
<i>45-59</i>	115	76	25	83	10	100
<i>60 - 79</i>	25	18	5	17		
<i>80+</i>						
<b>Gender</b>						
<i>M</i>	90	60	25	83	8	80
<i>F</i>	60	40	5	17	2	20
<b>Education</b>						
<i>No schooling completed</i>						
<i>Nursery school to 8 year grade</i>						
<i>High School</i>	120	80				
<i>Bachelor or master's Degree</i>	30	20	30		8	80
<i>Phd</i>					2	20

Starting from this dataset we extract from interviews our dependent variable (Y) called “preserving creativity” computed as the use of new technological procedures inducted by ne national policies on digitalization of procedures to achieve smart governance (Vial, 2019). Such variable was based on prior studies and used a validated single item measure (de Jong & den Hartog, 2010; Mascia & Cicchetti, 2011), by asking them: ‘How often have you adopted new technological items introduced in your organization after the covid-19 emergency?’. This measure captured the effectively usage by new software or digital procedures introduced in the local body with responses on a five-point scale ranging from 1 (never) to 5 (very frequently). We chose this variable in consideration of the impact that the central government acts consequently to the legislative decree 18/2020 should have on the efficiency of public procedures. The dependent variables reconduct to social capital

variables identified by international literature (Ramirez, 2020) and identified in table 2 in coherence with the process phase of the “knowledge management toolkit” (Robinson et. al, 2010) measured with a Likert scale 0-5.

**Table 2: Research Items of the Process Phase of the Knowledge Management Toolkit (Robinson, 2010)**

Process research Items	Deputy employee	Managers	Senior Managers
	Likert scale average	Likert scale average	Likert scale average
<b>Smart governance</b>	2	4.66	4.66
Are the measures adopted in line with the goal of achieve a digital environment?	1	5	5
Are the internal policies adopted in line with the national policy?	3	4	4
The timeline for the adoption of measure has been respected?	2	4	4
<b>Digitalization</b>	1	5	5
Do you work now in a more digital environment?	1	5	5
Has the digitalization of procedures made an improvement of your productivity?	1	5	5
<b>Outcome</b>	1	3	3
Do you have received positive feedback from stakeholder over the introduction on new digital procedures?	1	3	3

Once the indicators were defined, the following regression model was applied (OLS) to consider all the variables included in the survey. In the equation below, Y represent the dependent variables,  $a$  represents the constant of the model,  $\beta$  represents the coefficient of the estimation of the variables (independent variables),  $\log x_i$  represents the logarithmic conversion of the variables measured with Likert scale 0-5 (Table 2), while  $\epsilon$  represents the standard error (Bun and Harrison, 2019). The logarithmic conversion of some variables has been applied to reconduct the model to a Gaussian distribution. As a result, we build up three different regression models considering the three different clusters of interviews:

- Deputy employee’s creativity model:  $YDE = a + \beta x_1 + \beta \log x_2 + \beta \log x_3 + \beta x_4 + \beta \log x_5 + \beta \log x_6 + \epsilon_i$ ;
- Manager’s creativity model:  $YM = a + \beta x_1 + \beta \log x_2 + \beta \log x_3 + \beta x_4 + \beta \log x_5 + \beta \log x_6 + \epsilon_i$ ;
- Senior Manager’s creativity model:  $YSM = a + \beta x_1 + \beta \log x_2 + \beta \log x_3 + \beta x_4 + \beta \log x_5 + \beta \log x_6 + \epsilon_i$ ;

The combination of the 6 variables which were considered showed no problems in all the three models related to heteroskedasticity (Breusch–Pagan tests results:  $\chi^2 = 0.00$ ;  $\text{Prob} > \chi^2 = 0.856$ ) and specificity (Ramsey test results:  $F(1.86) = 0.88$ ;  $\text{Prob} > F = 0.473$ ), as well as autocorrelation of some variables so it was no necessary to proceed through step-wise regression (Shapiro–Wilk test results:  $pvalue = 0.732$ )

#### 4. Analysis of the Results

What emerges from the analysis of the results and answering to rq1 is a misalignment between employees and managers contribution on creativity and digitalization to the creation of public value. As shown in table 3 the YDE model is completely irrelevant for our analysis as it has shown non-significant results while YM and YSM model reflects a complete opposite situation.

Table 3: Results of the OLS Regression

Item	Regressor	YDE	YM	YSM
Smart Governance	x1	-1,187 (0,245)	3.274 (1.988) *	3.172 (1.978) *
	logx2	0,137 (1,287)	6,846 (1,903) **	6,786 (1,897) **
	logx3	-1,481 (1,377)	8,133 (2,003) ***	7,983 (1,992) ***
Digitalization	x4	-1,876 (0,345)	4,179 (2,078) *	3,879 (1,578) *
	logx5	-2,385 (2,273)	6,074 (1,738) *	5,874 (1,684) *
Outcome	logx6	-3,175 (1,548)	2,507 (1,887) **	2,498 (1,787) **

To better understand the sense of this static approach we report some extracts from the interviews conducted in the data set included in the YDE following the methodology suggested by part of the literature (Heeks, 2002; Heeks, 2003, Della Porta, 2018). In reference to the research item Smart Governance, we asked them: “Are the measures adopted in line with the goal of achieving a digital environment?” while the managers just answer without any doubt that they are operating in the right direction, most of the employees specified that: “we are just doing what they asked us to do with absolutely no knowledge about the new software. We are just inserting data but honestly, we do not have any kind of acknowledgment or training about those new procedures. We are acting in the old way but with new sophisticated tools and instruments. Honestly, most of us are still having problems on procedures as they had a real lack regarding back knowledge about Information Technologies. We have just received some basic commands and we move one step at a time. This aspect had a terrible impact on our productivity because we must help those who are still having a problem after at least two years after the introduction of these new procedures. Moreover, many of us are afraid about the consequences of making an error so we spent a lot of time on re-checking all the phases of the single processes”.

Another point of relevant discordance can be found in the measurement of the outcome or, in other terms, about the impact that the new procedures are having on the benefits for citizens and stakeholders.

What emerges from interview is that managers had a more long-range point of view about the outcome on communities: “we are giving our citizens the possibility to literally manage the service from their own beds. In our context almost the 80% of public services can be managed online or by sending an email or filling an online format. With the electronic identity everyone should manage and control their own business without coming here in person. In my opinion that is a revolution in the Italian public sector. On the other hand, we are encountering several problems especially with old persons that have serious issues on learning the new procedures. In this sense, the public policy is probably to far from the real needs of citizens. Probably what we really earn is a shift in culture that must start from the re-training of citizens. As a matter of fact, many of them have still problems with them so it is not easy for us to manage all the issues that come out. As a consequence, we have to ask to our employees to take care of the issues and, as a consequence, we overcharged their workdays”.

The extract of the interviews and the analysis conducted clearly show that while the managerial area of local bodies contributes to preserve the creative steam inducted by introducing new policies to introduce digitalization in public bodies, the employees almost reject innovation declining all the positive effects that these could have on their daily routine confirming the second paradigm proposed by Rangarajan (2008) and the paradox suggested by Soliman (2000). This creates a “way of no return” in the process of creating public value in terms of user value, value to wide stakeholders or “value to wider society” and basically let the achievement of public value as you are not in the condition of measuring the real outcome on stakeholders or at least you have no impact as suggest by Stolle (1999)

## 5. Conclusions

As shown in the introduction of this paper, within the general context of new ideas generation, a grey area still concerns the organizational design solutions related to creativity. As a matter of fact, there is a lack of literature that investigates the contribution of creativity in the creation of public value and this field is almost unexplored (Soliman, 2000; Sebastiani, 2020; Rangarajan, 2008). With this paper we explored just one dimension of the policy making process that considers a knowledge management approach also considering that the data set that we referred only considers the public bodies organization of four cities (Berardi et. al, 2021b).

On the other hand, this paper gives a first contribution on this topic showing that in a complex organization constituted by employees, managers and senior managers, the process of creativity is completely different divided in three different categories (Heeks, 2002; Della Porta, 2018). The results of the OLS regression are emblematic and confirm that the process of creativity is strictly correlated on different levels and attitude as supposed by different authors (Bonner, 2023; Rangarajan, 2008; Stanberg, 1991). Moreover, creativity positively affects the creation of public value only when there is an alignment between the entire technostructure that gives the opportunity to effectively measure the impact of the policies and measures adopted.

## References

- Al Ahababi, S. A. et al. (2019) 'Employee perception of impact of knowledge management processes on public sector performance', *Journal of Knowledge Management*, 23(2), pp. 351–373. doi: 10.1108/JKM-08-2017-0348.
- Amabile, T. (1996), "Assessing The Work Environment for Creativity", *Academy of Management Journal*. Vol. 39 No.5 pp 1154-1184.
- Amabile, T. M., Goldfarb, P., & Brackfield, S. C. (1990), "Social influences on creativity: evaluation, coaction, and surveillance", *Creativity Research Journal*, Vol. 3, pp. 6–21.
- Amabile, T. M. et al. (2014) 'Assessing the Work Environment for Creativity ASSESSING THE WORK ENVIRONMENT FOR CREATIVITY University of Michigan University of Southern California', 39(5), pp. 1154–1184.
- Battiston, P., Kashyap, R. and Rotondi, V. (2020) 'Trust in science and experts during the COVID-19 outbreak in Italy'. doi: 10.31219/osf.io/twuhj.
- Berardi M., Ziruolo A., Cifoletti S. (2021b), "Overcoming the COVID-19 Crisis with KM and Smart Governance: The Challenge for the Italian Public Sector", conference proceedings of the ECKM 2021, ISBN: 978-1-914587-06-1;
- Berardi M., Antonucci, G., Fontana, F., Ziruolo, A. (2022), "Rethinking classical knowledge management toolkits for the post covid public sector", *Electronic Journal of Knowledge Management*, Vol.20 n.3, ACPI, UK eISSN: 1479-4411;
- Berardi, M. et al. (2022) 'Trust and Governance in a Rethinking of Classical Knowledge Management Paradigms: Toolkits for Public Sector during the COVID-19 Emergency', *Electronic Journal of Knowledge Management*, 20(3), pp. 167–178. doi: 10.34190/ejkm.20.3.2603.
- Berardi, M. and Ziruolo, A. (2022) 'A Lack of Smart Governance in the Public Sector: The Italian Case Study', *Lecture Notes in Information Systems and Organisation*, 50 LNISO, pp. 219–232. doi: 10.1007/978-3-030-86858-1\_13.
- Bonner, A. (Ed.). (2023). *COVID-19 and Social Determinants of Health: Wicked Issues and Relationalism* (1st ed.). Bristol University Press. <https://doi.org/10.2307/j.ctv36k5b4g>
- Boyne, G. (2001) 'Planning, Performance And Public Services', *Public Administration*, 79(1), pp. 73–88. doi: 10.1111/1467-9299.00246.
- Crosby, B., C., Hart, P., Torfing, J. (2017) "Public value creation through collaborative innovation", *Public Management Review*, Vol 19, issue 5, pp. 655-669, DOI: 10.1080/14719037.2016.1192165.
- Della Porta, A. Della, Berardi, M. and Ziruolo, A. (2018) 'Un'analisi della qualità della programmazione attraverso il DUP', in "L'armonizzazione contabile negli enti locali italiani: Implicazioni e prime conseguenze tra adattamento formale e cambiamento" edited by Del Bene L. and Bartocci, L., pp. 133–155, Maggioli, Italy.
- Di Vincenzo, F. and Iacopino, V. (2022) "'Catching the new": Exploring the impact of professional networks on innovative work behavior in healthcare', *Creativity and Innovation Management*, 31(1), pp. 141–151. doi: 10.1111/caim.12476.
- Heeks, R. (2002) "Information systems and developing countries: failure, success, and local improvisations", *The information society*, Vol. 18, pp. 101-112.
- Heeks, R. (2003) "Most e-government for development projects fail: how can risks be reduced?", *iGovernment Working Paper Series*, Paper no. 14.
- Lappi, T. M., Aaltonen, K. and Kujala, J. (2019) 'Project governance and portfolio management in government digitalization', *Transforming Government: People, Process and Policy*, 13(2), pp. 159–196. doi: 10.1108/TG-11-2018-0068.
- Ramírez, Y., Dieguez-Soto, J. and Manzanique, M. (2021), "How does intellectual capital efficiency affect firm performance? The moderating role of family management", *International Journal of Productivity and Performance Management*, Vol. 70 No. 2, pp. 297-324. <https://doi.org/10.1108/IJPPM-03-2019-0119>
- Rangarajan, N. (2008) Evidence of Different Types of Creativity in Government: A Multimethod Assessment, *Public Performance & Management Review*. doi: 10.2753/pmr1530-9576320106.
- Sebastiani, G., Massa, M. and Riboli, E. (2020) 'Covid-19 epidemic in Italy: evolution, projections and impact of government measures', *European Journal of Epidemiology*, 35(4), pp. 341–345. doi: 10.1007/s10654-020-00631-6.
- Soliman, F. and Spooner, K. (2000), "Strategies for implementing knowledge management: role of human resources management", *Journal of Knowledge Management*, Vol. 4 No. 4, pp. 337-345. <https://doi.org/10.1108/13673270010379894>
- Stolle, D., & Rochon, T.R. (1999). The myth of American exceptionalism: A three-nation comparison of associational membership and social capital. In J. W. van Deth, M. Maraffi, K. Newton, & P. F. Whiteley (Eds.), *Social capital and European democracy* (pp. 192-209). London: Routledge.
- Walker, R. M., Jung, C. S., and Boyne, G. A. (2013). Marching to different drummers? The performance effects of alignment between political and managerial perceptions of performance management. *Public Administration Review*, 73(6), 833–844. <https://doi.org/10.1111/puar.12131>