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"Public Personnel in Digital Local Government"

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With the rise of personal computers, the use of new information and communication technologies (ICTs) and the internet, the digital transformation in the public sector has altered the working procedures of public personnel. The public administration of the future will be digital. The digital transformation does not only include "changes in the processes" due to the use of technology in public administration, but "emphasize[s] the cultural, organizational, and relational changes" within public administration (Mergel, Edelmann, and Haug 2019, 12). It affects demands on both civil servants and public employees – hereafter summarized as public sector employees – concerning their tasks and roles, skills and competences, and mindsets (Bovens and Zouridis 2002; Mergel, Edelmann, and Haug 2019; Ritz 2019). As the digital transformation progresses, "transforming the public-sector workforce (…) will become the key factor for a successful digital transformation" (Barcevičius et al. 2019, 59), in particular on the subnational and local level where a large share of the public personnel work (Kuhlmann, Veit, and Bogumil 2015, 168).

Existing literature on digital government highlights the important role of public personnel for the digital transformation in the public sector. While some authors stress the aspect of staff being a barrier (Norris and Moon 2005, 71; Moon 2002, 429; Goldfinch 2007, 919; Coursey and Norris 2008, 529), others emphasize the their skills, competences, and mindset as enabler for the digital transformation (Mergel, Edelmann, and Haug 2019, 9; Ritz 2019, 185). Despite growing attention towards the topic (Savoldelli, Codagnone, and Misuraca 2014, 66), there is a lack of empirical knowledge how different public service systems cope with the challenges associated with the digital transformation of local government. Therefore, the research question reads:

How are European public service systems capable to cope with the challenges of digital government?

Consequently, two sub-questions emerge: First, what are the challenges for public sector employees in digital local government? And second, which features of European public service systems support the capability to respond to these challenges?

The paper identifies three major challenges:

(1) Changing *tasks and roles* of public personnel in digital local government: While routine tasks and administrative and operative roles are most likely to disappear due to automatization or digital self-service (Autor, Levy, and Murnane 2003, 1286; Frey and Osborne 2017, 265; Lindgren et al. 2019, 426), nonroutine tasks and interactive and frontlines as well as cognitive roles are complemented, supported or executed by ICT, thus shifting discretional power from street-level bureaucrats to system-level bureaucrats (Bovens and Zouridis 2002; Schuppan 2016). As a results, on the one hand, the traditional case worker role vanishes, and on the other hand, new cognitive roles dealing with nonroutine tasks, e.g. system designers, legal policy staff, and IT experts, emerge.

(2) Individual *skills and competences* and thus, public personnel's readiness for digital local government (Distel, Ogonek, and Becker 2019; Hunnius, Paulowitsch, and Schuppan 2015):

A need for re- or upskilling occurs especially in IT skills but also in management and social skills (Schuppan 2014; 2009). Higher education qualifications and training of public personnel becomes more important (Pollitt 2012, 63).

(3) *Mindset*, which refers to the acceptance of altered work organization and day-to-day work in digital local government and to technology acceptance and intention to use, which depends on the perceived usefulness and perceived ease of use (Mergel, Edelmann, and Haug 2019, 9–10; Dukić, Dukić, and Bertović 2017; Venkatesh and Davis 2000), in order to overcome

In order to assess the European local public service systems' capability to respond to the aforementioned challenges, four quantitative and qualitative features are taken into consideration: local public employment quota, recruitment and career patterns, wages in local government, and continuous training (Demmke 2019; Kuhlmann, Veit, and Bogumil 2015; Kuhlmann and Wollmann 2019).

In open, position-based systems, more flexible recruitment and career patterns enable local governments to choose suitable employees on the principle of the best match between candidate's skills, competences, and qualifications and job requirements. However, as the wage gap between the public and the private sector for more highly educated employees, who are needed in the 'new' higher job positions with more nonroutine and cognitive tasks (e.g. IT experts, legal policy staff), is negative, it becomes difficult to attract them (de Casto, Salto, and Steiner 2013). As a consequence, wages are raised for this particular group of employees to improve the public sectors position when competing with the private sector, which results in a widening wage gap between the more and less 'requested' groups of employees (Demmke 2019, 380).

Closed, career-based systems have the advantage to react to the new demands by integrating the necessary skills and competences in the education and training curriculum to provide public personnel with the necessary tools for their tasks and roles in digital government; but do not fully exploit this potential (Mergel 2019, 166). The same applies for continuous training, lifelong education, skills and competences development, whose implementation was dramatically reduced due to austerity measures, and as a consequence, public sector employees are requested to proactively show personal initiatives to acquire the necessary competences (Demmke 2019, 380).

However, there is hardly any knowledge about public employment and the characteristics of public sector employees, at least in a comparative perspective and especially on the local level. This research gap concerns not only aspects such as the educational and professional background or prior experiences in the private sector (i.e. the characteristics of a *typical* public sector employee at the local level) but also knowledge about "work systems, quality and autonomy of work, teamwork, job control, measurement and change of competence" (Demmke 2019, 381). Moreover, the connection between institutional characteristics and structures and the capacity of local public service systems needs further examination in order to assess its role the digital transformation of local government.

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