Universities in numbers:

an international comparative analysis of the role of digitalization

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EXTENDED ABSTRACT

Purpose: It is widely recognized that in the current digital era human practices have been significantly affected by the adoption of digital tools and approaches. These latter have re-shaped governance of public administrations (Andrews 2019; Dunleavy et al. 2005) and of higher education institutions (Hazemi et al. 2012). The purpose of this research is to focus on the impact of digitalization on the performance measurement and management systems adopted within universities. Indeed, while extant research has analysed the use and misuse of performance measurement and management systems in universities (e.g. Arnaboldi and Azzone 2010; Espeland et al. 2016; Guthrie and Parker 2014; Humphrey and Gendron 2015; Modell 2005; Pianezzi et al. 2019), limited attention has been paid to understand the role of digitalization in this context (Agostino and Arnaboldi 2017; Lavertu 2016; Nørreklit et al. 2019). Therefore, the focus of the research is on whether and how digitalization does influence the way in which performance is conceptualized, measured and communicated among actors, contributing (or not) to make performance systems effective.

Setting, Method & Theory: The research analyses cases of public-funded universities in two contexts, Denmark and Italy. Digitalization is a growing trend in both countries, with an effect on public education services (OECD 2019) whose delivery and management are becoming more and more digitalized. Further, both countries have seen the widespread adoption and implementation of NPM-inspired reforms, among which the development of performance measurement systems, despite with different traits. Specifically, Denmark is the Scandinavian country with the most radical NPM-oriented reforms (Schmidt and Langberg 2007), while Italy shows an incremental pattern of adoption of NPM-oriented reforms being considered a laggard country (Hyndman et al. 2014). Drawing on pragmatic constructivism (Nørreklit 2017), this research aims at achieving a deeper understanding of the role played by digitalization in determining the effectiveness of performance systems within universities. Regarding effectiveness, we are concerned about how the use of digitalization in university management does influence university academics' work. We investigate whether the digital data are integrated in dialogical managerial language games that support and take into account the university academics' cognitive habitus or in contrast whether the digital data are integrated into a managerial monolog that side-lines the academics' cognitive habitus, and thereby the language game, because the concepts and structures are predefined in a reductive script beyond the reach and control of the scholars (Nørreklit, Jack and Nørreklit 2019). The habitus-based language game of scholarly argumentation makes up the social factory that is to produce

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academic results. Without dialogical interaction with the scholars' cognitive habitus progress in knowledge is stalled and hence such monologist management approach cannot be effective.

We collect data by conducting semi-structured interviews and informal conversations with academics, and by gathering (digital) data and documents available on the websites of the universities or made available to the researchers.

Results: The research expects to point out whether and how digitalization can foster the use of performance measurement and management systems within universities, for instance, by introducing new mechanisms for communicating performance. The findings can thus provide insights on whether and how digitalization can amplify the critical consequences of performance measurement systems or contribute to improve their effectiveness. Results can show whether academics may be governed by imposed digital-based systems or/and may contribute to their enforcement through their value-driven choices (e.g. use of optional digital tools).

Relevance: Given the predominance of digitalization and the continuous development of performance measurement systems but their debatable effectiveness, it is pivotal to investigate the changes brought by both these trends within universities, a topic still underdeveloped. The rationale expectation beyond digitalization is that the increased production of digital information can improve decision making and consequently public service efficiency and public value creation (Agostino and Arnaboldi 2017; Andrews 2019). In contrast, the process of digitalization can result in challenging and unexpected results (Nørreklit et al. 2019). This justifies the call for this research. Numbers-driven digital management narratives are growingly used by actors to build and communicate their performance. Whether these narratives work or not can explain the effectiveness of performance systems (or lack of).

Implications: The inquiry of whether and how digital tools and approaches are useful to make performance measurement and management effective can result in relevant insights for inspiring actors in charge of designing and implementing such systems within universities. Further, the findings can be used to reflect on situations and practices of digital-based performance measurement systems within other universities and even in different countries to find out how practices can differ in space and provide further comparative insights.

Keywords: digitalization, performance measurement, pragmatic constructivism

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