


Exploring the Relation Between the Digital Divide and Government's Effort to Develop E-Participation: A Global Longitudinal Analysis

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ABSTRACT

According to the digital divide theory, the provision of opportunities to broaden participation in political processes pose a challenge for governments worldwide. In this research, the authors analyze the relationship between the evolution governments' effort to develop citizen e-participation in public policy—measured through the UN's e-participation index—and that of national contexts variables identified by the digital divide theory at country level, using panel data for 178 countries over the period 2008-2016. The results confirm the strong and positive connection between EPI and economic development and technological infrastructure of the countries, ageing population associated to higher life standards, as well as a negative impact of rurality, gender, and political freedom and democracy result not influential, as well as education. Some practical implications derive from the findings, contributing to explain performance differences across different national settings and identifying current inequalities that still require public action to bridge the divide.

KEYWORDS

Crossectional Analysis, Digital Divide, E-Government, E-Participation Index (EPI), Longitudinal Analysis, Panel Data, United Nations

INTRODUCTION

E-government (EG) can be an instrument to improve the relationship between people and their government. In the achievement of public governance, EG aims at increasing participation in decision making and making public institutions more transparent and accountable. In this sense, the purpose of EG is consistent with the principles and goals of the United Nation (UN)'s 2030 Agenda for Sustainable Development. "Overall, enhanced e-participation and the related social practices can support the realization of the Strategic Development Goals (SDG) by enabling countries to ensure that

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their policy decisions are more participatory” (UN, 2015). E-participation may offer an opportunity to engage marginalized groups and rebalance power relationships in policy areas (Kim and Lee, 2017).

Citizens’ willingness and capacity to engage with digital technology play a major role in making EG projects a success (Abu-Shamad and Al Jamal, 2015). However, only 49% of individuals aged 16 to 74 reported using the Internet for interaction with public authorities, according to Eurostat Statistics (EC, 2018). Furthermore, since 2009, this share has risen by only 15% on average (EC, 2019). The relatively low take-up can not only mean that governments find it difficult to justify expenditure on EG, but also that citizens are not benefiting from the investment in it. Dawes (2009) pointed to a multi-dimensional digital divide that poses challenges to governments trying to provide equitable access to information and services as well as opportunities to broaden participation in political processes.

As Krishnan, Teo and Lim (2017) point out, there is research gap for macro-level quantitative empirical studies that examine e-participation from the supply- side (i.e., government) perspective. As far as the authors have identified, only a reduced group of works have explored this specific topic (i.e. Girish, Yates and Williams, 2012; Zhao, Ning and Collier, 2014; Jho and Song, 2015; and Krishnan et al, 2013, 2017). In this context, this article attempts to contribute to the existing research and enhance the understanding of the drivers affecting a country’s effort to permit and promote citizen e-participation, adopting the approach provided by the Digital Divide Theory. With that aim, the authors take the UN’s E-participation Index (EPI) as indicator for a governments’ offer on e-participation and study its evolution over the period 2008-2016 in a sample of 178 countries. The EPI measures the availability of e-participation tools on national government portals (UNDESA, 2016).

The structure of the paper consists of six sections, considering the introduction. The following section synthesizes the relevant literature of reference and leads to the third section, which conveys the theoretical framework and the hypotheses development. Section four describes the data measures, method and main results. The findings are discussed against previous literature in section five, which also includes the theoretical contribution, implications for practice, limitations and future research. The paper finishes in section six with the relevant conclusions. The list of bibliographical references is also provided at the end of the paper.

LITERATURE REVIEW

A broad line of research have described and measured the attributes of government websites trying to assess their maturity in terms of EG development (Kim, 2007; Gandía and Archidona, 2008; Tolbert, Mossberger and McNeal, 2008; Gallego, Rodríguez and García, 2010; Jorge, Moura, Pattaro and Lourenco, 2011; Siau and Long, 2015; Das, Singh and Joseph, 2017). Generally, these studies have also investigated the factors affecting that development, considering politic, socio-economic and demographic variables, mainly.

A less abundant amount of publications have studied, from a model based quantitative perspective, the potential of EG to permit citizen participation (i.e., Alryalat et al., 2015; Dwivedi et al., 2017; Rodríguez, Welicki, Giulianelli and Vera, 2008; Reddick, 2011; Rana and Dwivedi, 2015; Rana et al., 2011, 2012b, 2013a, 2013b, 2013c, 2013d, 2014, 2015a, 2015b, 2015c, 2015d, 2016, 2017, 2020; Sharma et al., 2018; Sandoval and Gil-García, 2012). Pina, Torres and Royo (2009), in their web maturity assessment in the European Union (UE) local governments, detected that democratic participation and citizen dialogue presented the lowest scores. For their part, Pina, Torres and Acerete (2007), Bonsón, Torres, Royo and Flores (2012), Girish et al (2012), Zhao et al (2014) or Jho and Song (2015) analysed EG development in terms of supply-sided e-participation and connected it with economic, socio-demographic, cultural and information society factors, among others.

In this research, the authors use panel data and compare ordinary least squared linear regression model with two linear mixed-effect models to test hypotheses as to the relationship between the evolution of national governments’ effort to develop citizen e-participation in public policy and that of economic and socio-demographic variables of the national context identified by the Digital Divide

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