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# Organization formalization, sector and social media: Does increased standardization of policy broaden and deepen social media use in organizations?

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ABSTRACT

Adoption of information and communication technology (ICT) has been studied extensively in public administration, particularly social media. The immediate adoption and actual use of such tools may be significantly influenced by organizational rules, norms and policies. This exploratory paper provides an empirical test of hypotheses that focus on the final stage of the three stage adoption process: standardization of rules and procedures governing the use of the new ICT We also address sectoral differences in ICT application. Using a sample of over 1100 respondents in organizations across sectors, we find strong evidence that organizations with greater rule standardization and rule clarity have higher levels of social media use over a wider array of application domains. The findings suggest that rules and standardization can be powerful tools for promoting and diffusing new information and communication technologies within organizations. Results also support work on how information technology management and use differs across public and private sectors.



## 1. Introduction

In both our personal lives and organizational roles, information and communication technologies (ICT) have come to dictate how we get things done (Perrin, 2015; West, 2005). Over the past 30 years – first with the delivery of individual real time access to computing capacity and its myriad applications, then through networking of that capacity and enhanced communications, to finally the delivery of both immediate real time mobile communications with advanced computing applications – ICT allows individuals and organizations to enhance efficient and productive play and work. The most recent incarnation of ICT applications is a bundle of tools collectively referred to as social media applications. Like previous waves of new ICT, it has both its advocates (Bertot, Jaeger, & Hansen, 2012) and detractors (Turkle, 2012); and like other previous waves of ICT it has moved from being initially applied by individuals in mostly a personal social realm to an organizational context, which inspires more attention to how social media use evolves in organizations (Mergel, 2013). Without such a focus, less is known about the true value of social media for both internal organizational efficiency and external mission delivery.

Using social media as a context, Mergel and Bretschneider (2013) provide a theoretical model to describe the process by which these individual ICTs become organizational technologies. One part of this process suggests that organizations, at some point, must consider promulgating rules and procedures associated with the new technology (i.e. limits and allowances for how organizational actors can use social media). This is because, according to the theory, such rules standardize processes for adopting and using social media, hastening its implementation, and speeding up its diffusion and use for specific organizational functions. Overall, formalization affects innovation within organizations, which subsequently influences how it can be leveraged for organizational development as well as providing goods and services. This exploratory paper attempts to test this part of the theoretical model by empirically investigating the theoretical link between standardization or rules and procedures for new ICTs generally and social media specifically by relying on a sample of organizations drawn from all three sectors: public, private and non-profit organizations.

Why consider sectoral differences? Some scholars have argued that social media applications have a particularly valuable role to play in public organizations, which typically have higher demands for public transparency and related forms of accountability (Bertot, Jaeger, & Grimes, 2010a, 2012a; Bertot, Jaeger, Munson, & Glaisyer, 2010b; Linders, 2012; Picazo-Vela, Gutierrez-Martinez, & Luna-Reyes, 2012). Furthermore, like their private sector and non-profit counterparts, public organizations can arguably benefit from a number of straight forward

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advantages from social media applications associated with both internal management and client service delivery (Kavanaugh et al., 2012; Lovejoy & Saxton, 2012). It is not uncommon for various types of organizations to borrow methods or approaches for managing resources and implementing solutions. For example, the extent to which private sector managerial approaches inform public and nonprofit operations as well as the blurring of sectoral lines has led to private and public sector organizations to partner in providing goods and services (Aucoin, 1990; Billis, 2010; Brinkerhoff & Brinkerhoff, 2011; Hood, 1991; Pattberg, 2012; Van der Wal, De Graaf, & Lasthuizen, 2008).

Sectoral influence has been particularly relevant in the context of social media. Private organizations' implementation of this ICT has acted as a model and driver for public and nonprofit organizations doing the same, although their primary function of addressing public welfare likely necessitates various adaptation of social media use (Mergel, 2012a, b). Thus, exploring how sectors use social media and how the influence of formalization varies by sector can contribute to existing research about organizational differences and inform the strategies practitioners (e.g. managers) use for implementing and developing this tool in a way that considers the uniqueness of various organizations.

Considering the aforementioned discussion, we propose the following research questions: (1) to what extent do formal rules and policies about ICT (including email and social media) influence how often social media is used in organizations? and (2) does the purpose of social media use vary by organizational sector? Although a primary focus of the paper is social media, we also include email as in important ICT given its strong connection to social media (e.g. social media applications typically use a form of email as a communication mechanism). Thus, how email usage is formalized may also be connected to how rules and polices influence the application of social media use.

The next section of the paper reviews relevant literature about adoption and use of new ICTs in organizations. It also summarizes the basic theoretical framework that will be used to organize the empirical analysis and is followed by a section that summarizes the relevant testable hypotheses. Then, the paper describes the data collection and measurement of variables. Next, we present the analytic model used and the estimation results. The paper finally discusses the findings and limitations of the study, which leads to a discussion of some management and theoretical implications and directions for future research.

## 2. Literature review

The interest in innovation and adoption derives from the observable impact of new ideas and technologies on almost every aspect of human endeavor, including public management (Birkinshaw, Hamel, & Mol, 2008; Damanpour & Schneider, 2006, 2009). Innovations are often viewed as a mechanism by which public managers and public organizations can improve both the efficiency and effectiveness of their work (Damanpour & Schneider, 2006). While these motivations also encourage innovation for private sector organizations in order to remain competitive and gain market share, there are also major motivations for innovation in the public sector (Abrahamson & Rosenkopf, 1993; Criado, Sandoval-Almazan, & Gil-Garcia, 2013; Rogers, 2010). Over the past 30 years this has been particularly the case as public organizations increasingly consider new ICTs (Jun & Weare, 2011; Navarra & Cornford, 2005).

Adoption is generally defined as the acceptance and use of something new, either to the individual or to an organization (Frambach & Schillewaert, 2002; Hall, Loucks, Rutherford, & Newlove, 1975; Tornatzky & Klein, 1982). Work on adoption of ICT may be then broadly divided into these two units or levels of analysis: individuals or organizations. In both cases, most theories that have been applied try to focus on first a decision to accept the focal technology and then some notion of type and extant of use. Theories like the technology acceptance model (Legris, Ingham, & Collerette, 2003; Venkatesh & Davis, 2000), which center on the individual level, develop a type of cost and benefit logic to explain the behavior of the individual adoption and usage of technology. At the organizational level, theories like the technology-organization-environment model (Sharif, Troshani, & Davidson, 2015) develop a similar approach by identifying an array of factors related to various costs and benefits.

While adoption and utilization focuses on the outcome of the decision to adopt, diffusion theory looks at the aggregate process resulting from adoption of innovation through a particular population. Most of this work relies heavily on models of contagion where an 'infected' user of the new technology then communicates and then transmits its use to others (Rogers & Shoemaker, 1971). Since most applications of this approach explain the process over time, the theory has grown to include issues surrounding early and late adopters of the process (Agarwal, Ahuja, Carter, & Gans, 1998). For example, this idea has been recently applied to the phenomenon of open innovation (Chesbrough & Crowther, 2006), mobile internet services (Pedersen, 2005), and electronic communications between patients and their physicians (Houston, Sands, Jenckes, & Ford, 2004).

Work by Mergel and Bretschneider (2013) looks at how new ICTs diffuse within a single organization. Although this model focuses on government entities, it borrows from theories pertinent to organizations writ-large and organizes adoption over time into stages. The theory begins by assuming that the new technology already exists as a market driven set of competing products for individual use (Freeman, 1979; Venkatesh, Thong, & Xu, 2012). Early ICT examples include personal computers and more recent examples include cell phones, Facebook and Twitter accounts and blogs. A second important feature of this model is that the process is driven by individuals who engage in 'intrapreneurial' activity within the organization often competing with other 'intrepenueurs' (Schumpeter, 1934). Each stage of the model is explained in further detail below.

The first stage of the process is called *intrapreneurship and experimentation*, which is characterized by informal use of the new technology by individuals with some prior experiences with it in a non-work-related setting (Davis, Bagozzi, & Warshaw, 1989; Lewis, Agarwal, & Sambamurthy, 2003; Venkatesh et al., 2012). As change agents, they diffuse the use of the technology following the classic communication of innovation process (Rogers & Shoemaker, 1971). Since the process is informal and driven by individuals, there is likely variation in both the forms and implementation processes across the organization, leading to uncertainty (Utterback, 1994). While locally there can be great successes, growing problems of compatibility beyond local usage are likely. Blurring of the line between personal and organizational application is also possible, not unlike previous issues surrounding personal use of phones and email within an organization. These growing tensions lead to an organizational response.

The second stage called *order from chaos* is characterized primarily by an organizational level response to growing tensions arising from multiple and conflicting successful 'intrepreneurs' (Drejer, Christensen, & Ulhoi, 2004; Hoppe, 2013). It is likely that there has been sufficient success in applying the new ICT to warrant an organizational response; though while failed applications are likely ignored, organizational disasters associated with the new ICT may have a similar effect. A typical response involves an active evaluation and investigation process (Kuratko, Montagno, & Hornsby, 1990). This can be led by existing sub-units like the IT department, advisory boards, or steering committees (Huang, Zmud, & Price, 2010). Essentially, this activity reflects internal governance of ICT within the organization (De Haes & Van Grembergen, 2009).

The final stage, *institutionalization,* reflects the active implementation of a set of rules and procedures governing the use of the new ICT (Bia & Kalika, 2007; Hrdinova, Helbig, & Peters, 2010). Driven by the objective of removing the uncertainty created by multiple forms of the technology, this set of standardized rules derive directly from the organizational response during phase two, which re-asserts organizational control, leadership and governance over the new ICT (Zmud, 1982).

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