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A MULTIVOCAL AND MULTILEVEL INSTITUTIONALIST PERSPECTIVE TO ANALYZE INFORMATION TECHNOLOGY- ENABLED CHANGE IN THE PUBLIC SERVICE IN AFRICA

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Abstract

The research adopts a multivocal and multilevel institutionalist perspective to analyze information technology-enabled change into the structures of the public service in Africa as reflected in changes of practices around information processing. Information systems scripts and guidelines are considered as vocal to new logics of public service (e.g., new public management) imported into the local setting through international public sector reforms. The research will focus on the micro or agent level as the locus of institutional change. Here, formal structures planned at the policy (macro) and organizational level (meso) are modified through sensemaking as users change there is and information processing practices in order to seek realignment between competing logics embedded in new and old public administration models. The analysis will be undertaken based on a case study of the Ministry of Health in Kenya. The research will provide new insights into the implications of institutional mechanisms for the integration of new IT-enabled service models in the public sector of developing countries.

Keywords

Public service, IT-enabled change, Africa, institution theory

Please use the following format when citing this chapter:

Bernardi, R., 2008, in IFIP International Federation for Information Processing, Volume 267, Information Technology in the Service Economy: Challenges and Possibilities for the 21st Century, eds. Barrett, M., Davidson, E., Middleton, C., and DeGross, J. (Boston: Springer), pp. 271-280.

1 RESEARCH AREA AND QUESTION

The research adopts a multivocal and multilevel institutionalist perspective to better understand the implications of information systems for the re-engineering and quality of the public service in Africa.

The value of the research is twofold. First, it is related to the importance of information technology in the restructuring of the public administration for improved accountability and good governance (Ciborra 2005; Fountain 2002; Heeks 2001; World Bank 1997). Actually, under the aegis of the new public management (NPM), most public sector reforms in Africa and in the rest of the developing world leverage IT to reduce hierarchical structures into flatter, more information-efficient organizational forms (Bellamy and Taylor 1992; Cresswell et al. 2006; Lucas and Baroudi 1994; Osborne and Gaebler 1992).

However, divergent opinions on the extent and implications of the IT impact on the institutional arrangements and values of the public administration (e.g., Ciborra 2005; Diamond and Khemani 2006) have highlighted the lack of a linear causality between IT and specific organizational outcomes. This has inspired an analytical approach that is more grounded in the institutional context of IT users (Orlikowski and Robey 1991). Under this perspective, the way users make sense of the information processed by consciously choosing to enact and ignore institutions' scripts encoded in information systems influences the impact of IT on organization structures.

Finally, the value of the research is linked to the peculiarity of the public sector context in Africa, cauterized by specific institutional properties. It is believed that a deeper consideration of the institutional setting may enhance the analysis of the effects of IT-enabled public sector reforms.

In Africa, as in other developing countries, the logics embedded in imported reform models such as the new public management (e.g., Hood 1991) overlap with the divergent and, somehow, competing logics of the old public administration (e.g., Lynn 2006) nested in the existing local public service models (see Table 1).

The former is at the core of development initiatives to enhance *governance* and *accountability* (Bangura and Larbi 2006; Djelic and Sahlin 2006) in order to fight corruption, mismanagement, and inefficient bureaucracies (Drori 2006; Hood 2000; Lynn 2006). It embodies "developmentalist and neoliberal logics" (Drori, 2006) advocating economic values, increased efficiency, and equity through managerialism and market-like mechanisms such as competition (Dunleavy et al. 2006; Heeks 2001; World Bank 2002).

The latter represents the traditional model of state bureaucracies (Lynn 2006) inherited from the colonial and post-independence period (Haruna 2001; Saxena and Aly 1995). It is mainly characterized by logics of politicization and bureaucratization underpinning patrimonial, clientelistic, and rent-seeking behaviors (Batley and Larbi 2006) of authoritarian political regimes. Western countries have identified in it the main causes of the inefficient and ineffective implementation of development policies (Kiragu and Mutahaba 2006; Larbi 2006) opening the door to the NPM movement.

However, value and legal systems pertaining to the traditional bureaucratic institutions (Higgo 2003; Marikanis 1994; Russell et al. 1999) and the "rhetoric of reforms" (Therkildsen 2006) instilled by the pressures of donor countries (Kimaro and Nhampossa, 2005; Kiragu and Mutahaba 2006) have posed no few challenges to the implementation

Table 1. Institutions of the New Public Management and Old Public Administration Models

PA Models	Logics	Institutions	Literature
NPM	Managerialism	<ul style="list-style-type: none"> • Increased responsibility and decision-making power at managerial level • Depoliticization of implementing structures and functions 	Drori 2006 Hope 2001 Olowu 2006
OPA	Bureaucracy and politicization	<ul style="list-style-type: none"> • External political control (budgets, recruitment policies, political change, donor assistance) • Decision-making is concentrated at top of hierarchy • Input controls, rules and procedures 	Bajjaly 1999 Bozeman & Bretschneider 1986 Kraemer & Dedrick 1997
NPM	Accountability	<ul style="list-style-type: none"> • Result and performance-oriented management system • Personnel and salary reforms and incentive schemes 	Hope 2001
OPA	Meritocracy	<ul style="list-style-type: none"> • Political rewarding system 	Grindle 1997 Owusu 2006 Peterson 1998
NPM	Market	<ul style="list-style-type: none"> • Competition • Externalization of the public service to free market • Disaggregation and agencification 	Hope 2001 Grindle 1997
OPA	Monopoly logic	<ul style="list-style-type: none"> • Internalization of service delivery • Lack of competition • Weak market economy • Centralized control over financial and human resources 	Ciborra 2005 Ciborra & Navarra 2005 Heeks 2001
NPM	Customer service	<ul style="list-style-type: none"> • Responsive, diversified and exclusive service • Customer identity of public service beneficiaries 	Ciborra 2005 Drori 2006 Hope 2001
OPA	Politicization of service	<ul style="list-style-type: none"> • Public service complies with international/national policy priorities • Impersonalized and bureaucratic/administrative public service delivery 	Grindle 1997 Owusu 2006 Peterson 1998

of NPM reforms (Batley and Larbi 2006; Kiragu and Mutahaba 2006). This has also been evidenced in the analysis of the failure of IT initiatives at the core of NPM reforms (Bellamy and Taylor 1994; Cordella 2007; Heeks 2001). Actually, the rationalization and decentralization of bureaucratic structures and the inconsistency of aid programs have led to the fragmentation of information systems increasing policy complexity (Dunleavy et al. 2006; Kimaro and Nhampossa 2005).

Given the rationale and modalities of diffusion of the new logics and the way they clash with the old ones, we might expect that the logics of the NPM are either resisted

or translated (Czarniawska and Joerges 1996) into new localized models of public service (Hood 2000; Lynn 2006).

This research posits that the way IT users make sense and enact new and old logics is key to the understanding of the influence of IT on organizational change in the public sector of developing countries. Hence, informed by institutional entrepreneurship (Dacin et al. 2002), the objective of the research is to increase the understanding of how the practices of IT users fulfil, ignore, or reinvent norms and meanings underpinning different sets of logics (Schneiberg and Clemens, 2006) through patterns of use and non-use of IT (Orlikowski and Robey 1991). This is based on the argument that a way to analyze how IT-enabled public sector reforms have effectively impacted organizational structures is to focus on changes of practices of IT users (Orlikowski 1992; Orlikowski and Robey 1991). As the latter are embedded into multivocal institutional contexts, it is assumed that users try to realign the institutional order by legitimating new meanings and practices (Johnson et al. 2000; Lounsbury 2007). In their choices, they are driven by different institutional forces underpinning different types of legitimacies.

Hence, the research will adopt a multilevel institutionalist perspective (Chreim et al. 2007) to uncover in which way and under what circumstances IT users react to different legitimating pressures. More specifically, by taking the micro or agency level as an analytical focus, the research will seek to view how IT users either conform to or change *prescribed* or *normative* behaviors embodied in rules and norms at the macro or policy level (e.g., public sector reforms) and meso or organizational level (e.g., professional norms). Institutional mechanisms at the macro and meso levels are connected to each other (Chreim et al. 2007) and are seen as supportive of both NPM and OPA logics. Hence, users can either conform to NPM logics or resist them by reproducing the logics of the old public administration model. However, new opportunities for change might also arise as IT users legitimate their actions as they seek realignment between competing logics.

The proposed research question will be addressed by adopting information behavior as an empirical lens of the practices of IT users. It is argued that the information behavior of individuals depends on how they legitimize their information needs and, in turn, on their choice to either enact or ignore institutions' *scripts* encoded in formal IS designs, and, more broadly, in organizational and regulative models. The focus on information behavior links back to the view of organizations as information processing systems, whereby the structuring of organizations is associated with their information needs (e.g., Galbraith 1977) and the information flows between the different parts of an organization (Mintzberg 1979). The main assumption here is that changes in information processing practices reflect changes into the structures of organizations.

2 MULTILEVEL INSTITUTIONALIST FRAMEWORK

The proposed multilevel institutionalist framework (Figure 1) is meant to analyze how the information processing practices of IT users reproduce, adapt, or combine patterns of meanings embodied in the NPM and OPA logics under the pressure of institutional elements at the macro and meso levels. In particular, it provides a more comprehensive view of how regulative and normative institutional mechanisms at these

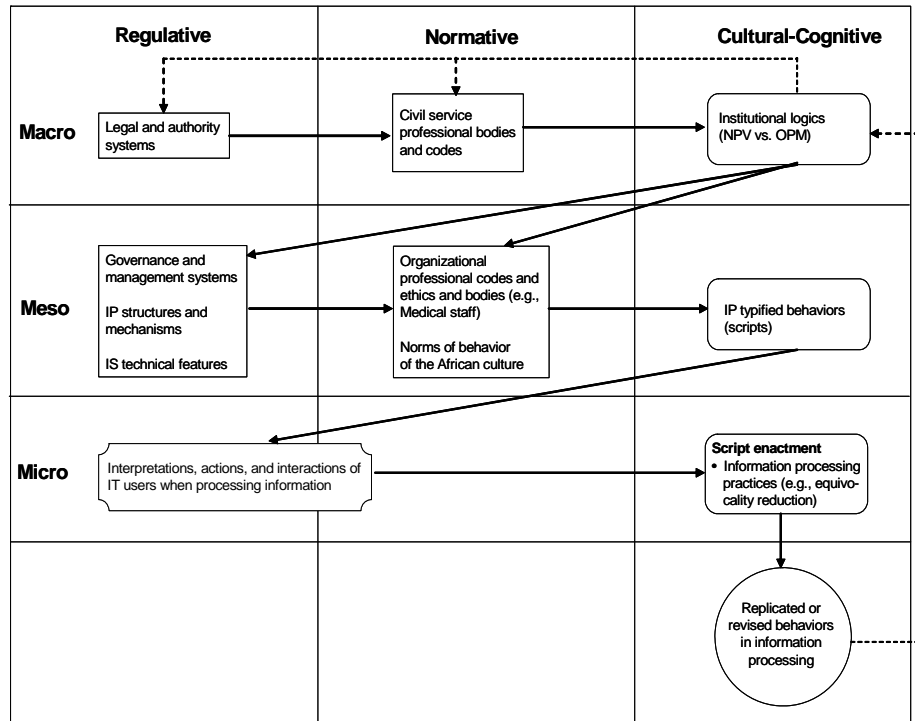


Figure 1. Multilevel Institutional Framework

two levels influence the encoding of cultural–cognitive institutions (or institutional logics) at the micro level. It thus accounts for the difference in salience between pillars (Schneiberg and Clemens 2006; Scott 2001) in conditioning the legitimacy-seeking behavior of human actors as they enact different logics.

Drawing on institutional entrepreneurship, the proposed framework seeks to address the limitations of institution theory in taking into account the microfoundations of institutional change (Chreim et al. 2007). By focusing on agency at the microlevel as a locus of change, the framework is meant to analyze the intersubjective and interaction processes through which human agents interpret and enact institutional logics (DiMaggio 1988; Greenwood and Suddaby 2006). It does so by integrating microlevel institution theory with a structuration (Barley and Tolbert 1997) and sensemaking (Weber and Glynn 2006) perspective.

Structuration theory extends the limitations of institution theory by including agency into the definition of structure. By adding this perspective, institutions both constrain and enable action. Hence, institutional logics are not only socially constructed meaning systems (Friedland and Alford 1991) framing the action of human agents, but also a source of interpretive, legitimating and material resources that individual actors can reinterpret and mobilize toward a new institutional order (Sewell 1992). The ability to mobilize resources comes from a sensemaking effort by human actors. The impact of institutional logics depends on how these are sensed by human actors (Johnson et al. 2000).

In order to analyze how IT users make sense of competing logics in information processing, the framework adopts a script perspective (Gioia and Poole 1984), which allows us to look into micro-level processes by which users either reproduce or revise the cognitive schema informing information behavior (Barley and Tolbert 1997; Johnson et al. 2000).

Hence, the multilevel perspective seeks to operationalize the interplay between institutional forces at the macro and meso levels and behavioral scripts at the micro level to shed light on the circumstances and mechanisms causing institutionally embedded actors (Greenwood and Suddaby 2006) to either resist or produce change.

Specifically, the main elements of the framework are the following. At the *macro* or *policy level*, the main sources of institutional pressures are legal and authority systems under the regulative pillar and civil service norms under the normative pillar (Scott 2001). Being cognitively constructed, regulative and normative elements embody the institutional logics of the NPM and OPA under the cultural–cognitive pillar.

Institutional logics at the macro level influence the institutional elements at the *meso* or *organizational level* (Chreim et al. 2007). At this level, the regulative pillar not only includes governance and management systems, but, given the empirical focus on information behavior, also includes information processing structures and mechanisms and information systems technical features (e.g., programming scripts). Under the normative pillar, the main institutional elements are norms related to the main professional category of the public organization staff (e.g., medical staff) and norms of behavior related to the African context (Higgo 2003). Hence, imbued with different institutional logics from NPM and OPA, these institutional elements encode specific *action scripts* (i.e., patterns of typified or taken-for-granted behaviors) (Barley 1986; Barley and Tolbert 1997; Weber and Glynn 2006) representing the legitimating resources in information processing behavior.

Finally, at the *micro level*, IT users draw from this set of institutionalized patterns of information behavior. Such patterns of behavior or scripts are assumed to encode different institutional logics both from the NPM and the OPA. Depending on how these are sensed, IT users build their perceptions and assumptions on information needs and their choice of the best actions, processes, and structures to meet them. Through their actions and interactions, users enact information behaviors that may either replicate or revise the scripts. In the second case, they give rise to new patterns of information behavior underlying changes in the structures of the public administration. Such changes can become institutionalized provided that these new scripts are commonly shared and become taken for granted among public employees (Berger and Luckmann 2004).

3 DATA COLLECTION

A case study is being conducted at the Ministry of Health in Kenya. The case study comprises three units of analysis: the central unit of the health management information systems, the HIV/AIDS division, and the immunization division.

Data collection is based on semi-structured interviews and documentary material. The sample of informants consists of program officers and health information officers. Interviews are meant to gather historical perception of change in information processing for the execution of their tasks following the automation of their health management information systems and the introduction of public sector reforms.

The content analysis of official documents (e.g., reports) aims to spot changes in meanings underpinning new practices in information processing.

4 DATA ANALYSIS

1. The main institutional and technological changes that have occurred over the last 20 years will be allocated to a time period.
2. For each time period, data will be coded into typified behaviors (or *scripts*) in information processing in order to identify variation in patterns of information behavior across time.
3. Patterns of behavior will be confronted with the main institutional logics (NPM or OPA) for each period to highlight commonalities in the case of conforming behaviors or variation in the case of revised behaviors and logics.
4. Finally, the analysis will be focused on the main institutional elements and mechanisms (regulative, normative, and cognitive) that, across the three levels (macro, meso, micro), have contributed to the shaping and shifting of patterns of information behavior encoding specific to institutional logics across time.

5 CONCLUDING REMARKS

The research will provide new directions on how multivocal rationalities at different institutional levels influence the enactment of a technology. By better understanding the relationship between the three mechanisms of institutionalization across multiple institutional levels and logics (Ruef and Scott 1998; Schneiberg and Clemens 2006), the research will provide new insights on how variation, contradiction, ambiguity among different policy, organizational and IT models trigger the sensemaking activity of human agents in shaping the institutional environment at the micro level (Colyvas 2007; Colyvas and Powell 2006; Weber and Glynn 2006).

It addresses the need to better understand how formal changes, envisaged in public sector policies, are translated and reflected onto the performance of IT users. Focusing on the practices of human actors can yield uncovered aspects of IT-driven public sector reforms, such as the emergence of informal and unplanned practices that are not envisaged in public sector reforms. The formal–informal perspective provides a deeper insight into the link between IT and *actual existing development* as opposed to official normative frameworks (Ciborra 2005) and the process by which alternative patterns of actions embedded in IT-led organizational change are created. This can improve the understanding on how new public service delivery models should be regulated and adapted to a specific context.

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