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The continuity of underperforming ICT projects in the public sector

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ABSTRACT

There is a growing body of research on the successes and failures of information and communications technology (ICT) projects in the public sector. However, this literature has rarely addressed the question of why some projects persist and continue despite functioning poorly in several areas. In this paper, we suggest that the notions of institutional logics and status differences provide useful insights into the structure and trajectory of this type of continuity. We build our arguments through an in-depth qualitative case study of a public information and communications technology (PICT) project in India. From our findings, we develop a process model of PICT project continuity. We explain how the employment of bureaucratic posturing – a manifestation of bureaucratic logic – as a tactic by high status groups could lead to poor performance on several fronts. The paper elaborates on two levels of continuity: *policy-level continuity*, which in our case was enabled by the logics of decentralization and technocracy, and *operational-level continuity*, which was achieved when groups with contrasting status-related motivations supported the project.

1. Introduction

Within public-sector settings, information and communications technology (ICT) is now viewed as a catalyst of growth and transformation [49,50]. Governments are increasingly initiating innovative projects by leveraging the power of ICT [see 28,34]. It is widely acknowledged that the diffusion of such public information and communications technology (PICT)[2] projects is a key driver for inclusive development and better governance [18,33]. Unlike their private sector counterparts, which are almost always concerned only with business objectives, ICT deployments in the public sector aim to use technology extensively to also address issues of social inclusion, transparency, decentralized delivery of public services, public accountability and governance [8,19,46]. Increasingly, many PICT projects are also launched with the objective of cutting costs in government departments [19]. While they share many characteristics with other public sector initiatives, PICT projects are distinctive in that their outcomes are intimately connected with the properties inscribed in ICT and with how human actors attribute multiple meanings to, and socially shape, technology.

The actual impact of these types of ambitious PICT projects remains a point of much debate, with some studies suggesting that 60–80% of them end in failure [see 19]. Particularly in settings that are similar to this paper's empirical sections (i.e., emerging economy contexts), there is even more emphatic evidence that PICT projects do not perform very well. Choudhuri [8] notes that despite receiving overwhelming support from stakeholders, PICT projects in a number of emerging economy sectors have struggled to meet their objectives. For instance, dubious outcomes in the case of health-sector PICT projects have been vividly demonstrated and discussed at length [see 30,38–40]. A more recent example that underlines the question marks surrounding PICT projects is India's Unique Identification Project [see 15,31]. This project seeks to associate every citizen with a unique identification number to help them gain better access to government programs and other essential services. However, the project has become entangled in so many difficult political and ideological disputes that it appears to be a long way from meeting any of its intended goals [see 31].

Although extant studies have documented many instances of PICT projects whose objectives were not met, there remains an important gap in the literature. Very few studies have examined how and why some PICT projects persist and continue when they are clearly underperforming in many areas. To better understand the processes underlying such a continuation of PICT projects, we draw on the notion of institutional continuity [25,42]. Here, we apply the idea of continuity to the specific case of PICT projects and

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[2] The term 'PICT projects' refers to ICT projects in which governmental agencies play a leading role.

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define *PICT project continuity* as the long-term persistence of underperforming PICT projects. Analyzing and explaining the influences on continuity can provide important insights into the forces that shape the trajectory of PICT projects. This type of analysis can also help to develop a deeper understanding of PICT projects and may challenge the conventional wisdom that successful projects continue and poorly performing ones are terminated. From a practical perspective, an in-depth analysis of continuity can alert public policy designers to the potential structural weaknesses underlying PICT projects.

While there is scarce research on the continuity of underperforming PICT projects, some studies, although not focusing on continuity per se, provide important clues about this phenomenon. These studies can be broadly categorized into two groups. The first group of studies appears to relate the continuity of projects to the dominance of institutional norms and discourses. For instance, drawing on a study of an innovative PICT project in India, Ravishankar [34] suggests that certain cultural contexts might be normatively inclined to tolerate projects, even when the trajectories of such projects are ambiguous and their outcomes uncertain. In a similar vein, other empirical research has implicitly linked the sustainability of innovative PICT projects to institutional perceptions about distributive justice [see 30], accountability [see 43] and political expediency [see 6]. Broadly, this first group of studies indicates that the embedded norms, beliefs and perceptions in an institutional environment may have a significant bearing on PICT project continuity. In other words, they suggest that particular *institutional logics* [12,27,40,45] could guide projects through difficult periods and weak outcomes. Hence, our first research question in this paper is: How do institutional logics influence PICT project continuity?

A second group of studies point to the likely influence of vested interests on the continuity of projects. Keil [21] showed how competitive rivalries between groups and the desire to protect one's status can result in an escalation of commitment to a failing IT project. Similarly, Allen [1] notes that because of their interest in maintaining the status quo, actors tend to adopt a variety of tactics that render technology commitments 'irreversible'. In general, this group of studies suggests that the continuity of projects may also be linked to differences in status and to focused human efforts to protect extant hierarchical structures. Hence our second research question in this paper is as follows: How do status differences influence PICT project continuity? In the following sections, we present a review of the literature on institutional logics and status differences and their possible relevance to PICT projects.

2. Institutional logics

The notion of institutional logics is a key concept in institutional theory. Thornton and Ocasio [44, p. 804] define institutional logics as "the socially constructed, historical pattern of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material substance, organize time and space, and provide meaning to their social reality". In simpler terms, institutional logics are socially shared cultural beliefs and assumptions that shape the cognitions and behaviors of actors [12,27]. When different groups in a setting adhere to different logics, agreements are difficult to reach and consensus can be elusive [12,16,49]. Groups may collaborate, compete, or choose to remain divided depending on the underlying beliefs of their respective institutional logics. Indeed, in a given institutional environment, multiple institutional logics can compete [27,40,49], resulting in one of three possible outcomes: (1) emergence of a single dominant logic [11], (2) co-existence of multiple logics in the absence of a single dominant logic [36] and (3) short-lived dominant logics marked by constant change [45].

In the specific case of PICT projects, research has shown how particular institutional logics may guide and influence implementation outcomes [9,40,49]. For example, in a study of a geographical information system (GIS) project in the Indian forestry sector, Walsham and Sahay [49] demonstrated how an embedded political logic guided most forest management decisions, while at the same time, a contradictory scientific-modeling logic prescribed GIS-enabled ways of managing forests. Walsham and Sahay [49] argue persuasively that the conflicts created by the simultaneous presence of these two logics had a detrimental effect on the performance of the GIS project. Similarly, in an action research project featuring an IT-enabled health management information system (HMIS) in Tajikistan, Sahay et al. [40] showed how attempts to replace a historically powerful set of institutional logics can be a futile exercise in the absence of support from influential political actors. This inability to replace and transform deeply embedded logics can indeed lead to the failure of well-intentioned projects [see 6]. More recently, some research has highlighted the possibility that the application of specific institutional logics may contribute to the continued underperformance of a PICT project. For example, in an empirical study of the Bangalore One project, Ravishankar [34] notes that a logic of 'ambiguity tolerance' employed by the private partners facilitated the continuity of the project at crucial junctures. Although this study focuses more on the successes of the project and does not explicitly refer to the term 'logic', it is evident in the paper that the same logic of ambiguity tolerance was also responsible for many of the poor outcomes of the project. Overall, it appears that the notion of institutional logics has the potential to add a novel and useful dimension to explanations of continuity. Therefore, as noted earlier, in this paper we explore its influence on PICT project continuity in greater detail.

3. Status differences

Status is "an effective claim to social esteem in terms of positive or negative privileges" [51, p. 305]. As Chen et al. [7] observe, hierarchies and differences in status permeate social and organizational life. According to these authors, there are two possible routes to social status: (a) dominance-based and (b) prestige-based. Dominance-based status – and by implication status differences – are realized and maintained by the application of 'coercion and aggression', whereas prestige-based status differences are created through 'respect, admiration, and deference'. The former route is often blamed for the poor outcomes of public projects. In other words, dominance-based approaches to maintaining status differences may push PICT projects to the brink [see 38].

While some scholars have argued that status differences have historically played a positive role in helping individuals to make cognitive adjustments and to manage their sense of self-entitlements [10], others have shown how status differences negatively affect learning [5], hinder multiparty collaboration [26,35] and weaken the performance of work-groups [3]. Invariably, every social order is characterized by status hierarchies, with some groups enjoying a super-ordinate status and others occupying a subordinate status [14,41,52]. Different characteristics or markers (such as age, gender, and profession) can signify high and low status groups in different cultures [see 4,41]. For instance, the Indian caste system is an established social order that determines, based on birth, whether one belongs to a higher caste or a lower caste. Here, *caste* can be viewed as an important characteristic or marker of status. Levina and Vaast [26] list four types of status characteristics that may give rise to status differences: (1) economic capital, (2) intellectual capital, (3) social capital and