



# The complexities of electronic services implementation and institutionalisation in the public sector



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## ABSTRACT

Electronic service implementation (ESI) in the public sector attempts to improve efficiency, effectiveness, and transparency of governmental departments. Despite having provided the necessary infrastructure and investment, many governments have struggled to realise such aims due to the various forces that challenge implementation and institutionalisation. Using institutional theory as a lens, we explored the forces influencing the implementation and institutionalisation of ESI in the public sector. While our results reinforced previous research in IT implementation and organisational transformation, they showed that the dynamic nature of technology poses unanticipated pressures, and that these can impede the implementation and institutionalisation process.

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## 1. Introduction

With the emergence of e-service delivery in the public sector (ESD-PS) administrations around the world have realised the importance of making their service more efficient, transparent, and available to all stakeholders [1]. They have tried to emulate the private sector by offering more citizen-centric, accessible services [24]. Different researchers have identified factors that entice governments to implement e-services. For instance, Carter and Bélanger [4] argued that e-services can help restore public trust by coping with corruption, inefficiency, ineffectiveness and policy alienation. Conversely, lack of access them and the digital divide may influence trust and thus impede the addition of e-services.

A common argument that surfaces is that ESD-PS offers many benefits and can potentially provide opportunities to governments [11]. Yet, its implementation has faced many barriers that have contributed to delayed projects and sometimes even failures. The reasons for such barriers are often triggered by the complexity of the changes that are introduced during implementation; these are primarily due to the use of the Internet and its array of Information and Communication Technologies (ICTs) compared to prior traditional reforms [9]. Although many studies have explored

these complexities, few have adopted a critical and theoretical stance to understand their impact of ESD-PS.

The State of Qatar in Western Asia was used as the empirical context for our study, as it involved a place where both high investment and strategic commitment were needed to make the radical transformations to the public sector using ESI. In this respect, our focus was intended to answer the question: *what forces influence the institutionalisation of e-service delivery and its subsequent impact on reshaping the public sector organisation?* Our research also used institutional theory to formulate a conceptual frame of reference to synergise e-service implementation (ESI) complexities in the PS and offer a reference point for practitioners and researchers involved in PS ESD to relate implementation paradoxes and associated complexities.

## 2. Analysing e-service implementation complexities in the PS: a theoretical lens

PS ESI is expected to provide efficient, low cost, rapid service to customers, centralised government service to stimulate economic development, reduce corruption, improve transparency, and create a more participative form of government by encouraging online debating, voting, and exchange of information [8,12,13]. Thus the major issue in the development of PS e-service is to maximise the benefits and make use of any opportunity for improvement using ICT. The problems of implementing ESI include: lack of readiness and awareness, access to e-services, usability of public sector e-service websites, lack of trust, concerns about privacy and security, resistance to change, lack of skills and funding the digital divide,

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lack of citizens' interest, lack of government support, lack of legislation, and lack of strategy and frameworks. These are hindering the implementation and adoption of PS sector e-services in many countries [20]. Nevertheless, in an environment where citizens' needs and demands continuously change, institutions need to respond as quickly as possible to the changes. Thus, an institution's response to change will depend on socio-, politico-, organisational-, and technological-developments and trends in different contexts, influenced by external aspects that are more complex than the internal influences that impact more conventional organisational changes [27].

Institutional theory has been used by many scholars to explain this; it offers an appropriate conceptual lens with which to study organisational change in public sector and e-service contexts. Kim et al. [19] found that strong leadership was crucial to success. Similarly, Currie and Guah [7] explored the complexities of implementing e-systems in the National Health Service and the associated pressures influencing change. Additionally, the pressures have led public institutions to adopt online services and several features of ICT such as security, privacy and interoperability standards for building systems. These studies are further corroborated by Baptista et al. [2] who emphasised the significant role that technology can play in maintaining institutional stability. While these studies offer insights into the implementation and institutionalisation of technology, only limited research effort has been expended on ESI in the public sector using an institutional lens. These isomorphic mechanisms can be categorised as coercive, normative, or mimetic, where the first two are controlled via interconnected relations while the last is controlled by structural equivalence.

For coercive pressures, public institutions often enforce regulations in order to modify the behaviour of citizens under their influence. However, they can be enforced by their ES. Liang et al. [23] argued that there are two types of coercive pressure in PS ESI: formal (direct) or informal. Direct pressures are reports required for a specific procedure while indirect pressure arises in organisations that are associated with government. Likewise, in a PS ESI context, the government will assign a governmental unit that acts as a regulatory body to develop and implement different phases of ESI projects, while other governmental units will follow the rules and regulations assigned by this unit. Consequently, the inclusion of any additional ES will follow the same rituals and apply the same rules. This will ensure the success of governmental organisations in implementing such technologies. Normative pressures in bureaucratic organisations, such as PS, influence and control the practices, rules and beliefs of those within the system. In this respect, ICT innovations can be considered part of the normative influences. Thus, if technology is implemented in an organisation, external people and organisations will consider it to be legitimate.

Modern institution theory views mimetic pressures as the result of notions, ideas, and values in meaningful systems. Thus they mould a structural equivalence among organisations that

helps diffuse good business practices among organisations in the same business domain. Teo et al. [25] listed the ways that organisations mimic one another; they suggested that the same economic position, same industry, same goals and objectives, same challenges, same conditions and sharing the same customers and suppliers are key reasons for mimetic behaviour. Therefore, in the context of ESD, when the network among internal and external organisations expands, its complexity will increase, resulting in competitive advantage because of the relationships between internal subunits and external organisations. As a result, ESD affects the government agencies so that each public institution will be encouraged or required to adopt online services. We therefore decided to study PS ESI related change by considering the key forces influencing implementation from political, social, organisational and technology aspects.

### 2.1. Theme 1: political influence

Traditionally, institutional theory involves forming new rules, procedures, arrangements and actions that are required to develop a successful organisation. These will affect the decisions and behaviour of leaders and decision makers in the organisation. Strong government support, financial resources, political leadership, and legal and regulatory issues are essential at all levels of government in order to achieve PS transformation. Top management support and commitment is an important factor in shaping an institutions' structure; PS organisations require individuals with the right attitude and leadership ability as well as a good understanding of ESD and its impact on local, regional, and national aspects of government. From an institutional perspective, leadership has influence over and above mechanical compliance with the routine directives of the organisation. Funding facilitates the infrastructure (buildings, technologies, and human resources) that is needed to implement e-services within given targets and milestones. Consequently, organisational procedures and policies are accepted as legitimate and rational means to attain organisational goals. The new actions and arrangements that are influenced by organisational change that takes place because of PS ESI are likely to impact the decisions and behaviour of leaders and decision makers in the organisation [14]. In particular, e-services will require many regulations and legislation acts to cope with changes such as electronic signatures, insuring data protection, and preventing computer crime and hackers, in addition to freedom of information. These political forces that influence ESI in the PS sector are presented in Table 1.

### 2.2. Theme 2: social influence

Public institutions that have introduced e-services have radically transformed their organisational structure using the latest technology. External pressures can control the input processes of an organisation, resulting in actions that ultimately increase the quality of services and improve customer satisfaction,

**Table 1**  
Political forces influencing the implementation and institutionalisation of ES in the PS.

Forces	Description	Institutional theory dimension
Government support	Top management commitment and support during the implementation of e-services projects	Providing support for development of new rules, procedures, arrangements and actions
Availability of funding	Long term financial support to maintain sustainability of e-services	Political commitment to provide the necessary infrastructure and resources for maintaining the PS
Leadership qualities	Ability to deliver and reach the goals of various e-service projects in the on time and within budget	Behaviour of leaders and decision makers to understand all impacts of PS e-services
Legal and regulatory issues	Regulations and legislation to ensure required change due to e-services	Providing support for regulatory and legal issues at all levels of government to achieve PS transformation, political power, and legitimacy

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