

Modernizing Public Sector Organization: Enhancing Coordination and Communication by the application of E-Government Technology

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Abstract

The Government of Pakistan, realizing the potential benefits of the IT for the development of the country, has embraced IT as a key to modernizing public organizations. Information Technology has been adopted with the aim of broad-based involvement of the key stakeholders in running the affairs of government. The research paper is aimed to investigate the significance of the e-Government technology in modernizing the public sector organizations. The paper has analyzed the application of E-Government technology in improving the coordination and communication between the public sector organizations. The research has done on the basis of three hypotheses. The hypotheses have been analyzed on the basis of collected data from those public organizations where the e-Government Technology is being used for the purpose of modernizing public sector organizations.

Keywords: Modernization, public sector, E-Government technology, paradigm shifts

1. Introduction

Public organizations are those organizations which are owned solely by the government of the country. The public organization can be defined as: "A Public organization is an organization whose primary goal and mission is to provide goods or services that benefit members of the public and stockholders and owners of the organization" (Gortner et al., 2007).

"Public organizations are fundamentally unlike private organizations in their legal, economic and political nature, and roles. Public organizations exist for different purposes than private organizations. They are controlled and funded directly by the government. Their determinant for success is not simply profit, but they are held accountable to constituencies" (Gortner et al., 2007).

The mission of public organizations is to administer the law. Their function is authoritative in the deepest and most formal sense. Their role is as active and pervasive as the reach of law and governmental purpose. Public organizations are an intimate and integral part of constitutional and legal systems of society and a society is based on the rule of law. Government organization is the government's power to implement and administer the law and it embodies the power and authority of the state (Gortner et al., 2007). The government organization to the public at large, moreover, is supposed to do what the public wants in the way the public or its elected representatives have decreed. The federal government has been devolved, turning many services over to state and local governments. The devolution is the practice whereby federal

government delegates to local governments the development, implementation and management of government programs (Berkley and Rouse, 2004).

2. Major Components of Public Organizations

Public organizations are the main pillars in managing the affairs of governments. Public organizations as an organizational system have similar components as private organizations. Leadership, strategic planning, communication and coordination, administrative procedure, and public accountability are their major components.

2.1 Leadership and strategic planning

Leadership in public organizations is a critical component for establishing good governance in a country. Today, leadership issues are gaining increasing importance at different levels of government organizations. Pakistan has undertaken structural and management reforms to enhance the effectiveness of government organization and better align public services with the needs of contemporary society (Ramnarayan and Kumar, 2001). The leadership plays an essential role in developing strategic planning for the organization. Leadership and strategic planning are inseparable. Developing long-term or short-term goals and developing strategies aligned with the capability of the organization for achieving these set goals are an essential part of the organizational leadership. It plays an important role in establishing the dedication and commitment of employees to the underlying value of public services and the interests of citizens to be served. Leadership in the government is considered to be the heart of good governance. Governments cannot achieve enhanced management capacity as well as organizational performance without having good leadership. It is quality of leadership more than any other factor that determines the success or failure of an organization, and it is required at different levels of government sector organizations. Effective leadership helps in making change happen by opening new channels of communication with the public and other stakeholders. It achieves integration across different levels of government. The trend of adoption of Information Technology (IT) by public sector organizations has radically changed the way the organizations work (Qaiser and Khan, 2010). The leadership plays a significant role in utilizing technological advances effectively to improve the performance of the organizations. The IT helps modify or simplify the administrative procedures and promotes newer ways of service delivery. The leadership develops individual, team and organizational capacity for taking on challenges. It brings together public and private actors to achieve developmental goals and strategies in a sustainable manner. Overall, leadership is a critical component of good public governance (Ramnarayan and Kumar, 2001).

2.2 Communication and coordination

Communication and coordination are also critical components of an organization. These both are considered the backbone of organizational success. Communication plays key role in the ability of agents to reach and maintain superior coordination. Communication and organizations are inseparable. Barnard (1938) argued, "In any exhaustive theory of organization, communication would occupy a central place because structure, extensiveness and scope of organizations are almost entirely determined by communication technique" (Barnard, 1979). Three decades later Katz and Khun (1966) stated that, "Communication is the essence of a social system or an organization." At the beginning of the 21st century, the centrality of communication once again has been emphasized in the organizational and inter-organizational success (Gortner et al., 2007).

The IT revolution has left tremendous impacts on all aspects of organizational life; especially on the aspect of communication process of organizations, whether be it a public or private organization. Communication allows the organizational structure and process to function. There are variety of organizational structures, such as hierarchical, departmental, team based, and task specialization. The structure of the organization determines the communication pattern between the different levels of organization. The organization communication system is the key mechanism for achieving integration and coordination for being successful. The successful communication process ensures the commonality of purpose and understanding of one's role in the organization (Gortner et al., 2007).

2.3 Public accountability and transparency

In this period, public organizations are under immense pressure and scrutiny to be accountable, responsive and effective. Accountability and responsibility are organizational values interwoven into organizational culture. Responsibility emphasizes a personal commitment to duty (Gortner et al., 2007).

Transparency brings these values together. Transparency is visible decision-making that is open to public input and conducted in cooperation with organizations working together for the common public purpose. The process is transparent, and public organizations are accountable to the public and indirectly accountable to elected officials. An organizational structure can foster good accountability through aspects of organizational structure. Accountability occurs when an organization reports to a higher political authority. The accountability, responsiveness and responsibility emphasize control at different levels of the organization. "Transparency" is becoming the term of choice to describe the traditional notions of political accountability, responsiveness and responsibility. Transparency means that public services are both accountable and responsive and are answerable to the public and open to public scrutiny (Gortner et al., 2007).

Stirton and Lodge (2001) stated that transparency includes the ability of citizens to exert influence or control on public services. The transparency helps to prevent the abuse of authority and corruption and provides citizens and members with informed choice. Nowadays, the notion of transparency is the product of the Information Age. The access to information is a principle tool to fight against corruption. Technological innovation can provide a wealth of information to stakeholders (Stirton and Lodge, 2001). Accountability involves giving workers and managers a level of authority commensurate with their responsibility within an organization. Employees could be more effective and accountable if the structure of the organization allows them to solve problems and make decisions within their designated areas of responsibility. Participation and teamwork are the cornerstones of employee involvement and elements of good governance (Gortner et al., 2007).

The advent of IT has radically changed the working pattern of organization members. It has changed the means of communication and exchange of information at the different levels of organization. It has significantly improved a manager's ability to monitor individual and team performance. It has provided employees with more opportunities to collaborate and share information. In addition, it has made it possible for the people in an organization to be fully accessible any time regardless of where they are. Now communication and the exchange of information among organizational members are no longer constrained by geography or time. The collaborative work efforts among widely dispersed individuals and teams, sharing of information and integration of decision-making and work throughout an entire organization have the potential to increase organizational efficiency and effectiveness (Robins and Coulter, 2007).

3. Paradigm Shifts in the Public Sector Organizations

The innovative application of ICTs in private sector organizations such as multinational business organizations has placed immense pressure on public sector organizations to rethink their hierarchical bureaucratic organization models. The customers, citizens and businesses have faced new innovative e-business models implemented by private sector organizations (Tapscott and Caston, 1993; As'ad et al., 2012). Osborne and Gaebler (1992) referred to citizens as customers of government. Since the advent of the Information Age, the governments of countries need to empower citizens rather than serve; to shift from hierarchy to teamwork and participation and to be mission oriented and customer focused (Osborne and Gaebler, 1992).

Worldwide, governments have faced challenges of transformation and the need to modernize administrative practice and management systems (Tapscott and Caston, 1993). Recognizing the potential opportunities offered by ICT to fit with citizen's demand, to offer better services to citizens and to increase efficiency by streamlining internal processes, the public sector has begun to adopt ICT in their organizations (Ndou, 2004).

Tapscott and Caston (1993) argued that ICT causes a "paradigm shift". It has introduced the age of network intelligence, re-inventing businesses, governments and individuals. This paradigm shift has also begun to prevail in public sector organizations (Tapscott and Caston, 1993). Flexibility, network organization, vertical/horizontal integration, innovative entrepreneurship, organization learning, sped up services delivery, and customer driven strategy are replacing the traditional bureaucratic paradigm characterized by

internal productive efficiency, functional rationality, departmentalization, hierarchical control, and rule-based management (Jones, 2004). This new paradigm thrust, the shift of e-government paradigm emphasizes coordinated network building, external collaboration, and customer service (Tapscott and Caston, 1993).

E-Government is the systemic use of ICTs to support the functions that a government performs for its constituents, typically the provision of information and services. E-Government is the use of ICT to transform the traditional government by making it accessible, transparent, effective, and accountable. E-Government does not mean putting more computers on the desks of government officials and is more than just a government website on the Internet. The political, social, economic and technological aspects determine e-governance. It establishes a relationship between government officials and citizens (World Bank, 2006). E-Government is also known as digital government, and online government. Here it refers to government's use of ICT to exchange information and services with citizens, businesses, and other arms of government (World Bank, 1991). The table 1 shows the paradigm shift of public service delivery from a bureaucratic paradigm to an e-government paradigm in the public sector organizations.

The wave of e-government application in government organization and public administration is rising across the world. More and more governments are using ICT to deliver services to citizens, business organizations, employees, and other non-governmental organizations. Across the world, public organizations are beginning an "e-government journey" by publishing static information on the Internet and establishing an online presence in the hope of increasing efficiency, effectiveness and organization performance (Guchteneire and Mlikota, 2008).

E-Government has emerged as a revolutionary mechanism for the management of public sector organization on a global basis. It incorporates high-level services, accelerated processes, increased transparency, and low cost output as the mega products of e-government. These objectives can be achieved through the adoption of ICTs in various functional units. E-Government has been adopted by developed as well as developing countries for providing better services to their stakeholders (Basu, 2004). It could bring forward the new concept of citizenship by enabling and empowering them to interact directly. These interactions can be known as Government-to-Government (G2G), Government-to-Business (G2B), Government-to-Citizens (G2C) and Government-to-Employee (G2E). The rapid growth of Internet usage and the development of ICTs and e-commerce / e-business in the private sector have put pressure on public sector organizations to serve citizens electronically. Currently, public sector organizations are under pressure to use ICT in their processes (Ramaswamy and Selian, 2007). E-Government initiatives and frameworks are appealing to practitioners and researchers to develop consensus on the e-government initiatives and implementation of a framework. E-Government provides information when organizations and public agencies publish static information on the Internet, or provide interactive communication, e-transactions, or integrate virtual governmental services (Harris, 2000; Bekkers, 2003).

In this age of information technology (IT), public organizations are also facing immense challenges in dealing with the complexities of performing the functions of government (Haque et al., 2012). The dissemination of IT tools (i.e., computers, Internet, and mobile communication) has enabled national governments to face the complexities and facilitate officials in improving the performance of assigned tasks in a better and effective manner. Modern governments are adopting IT as a vital instrument to improve the functional operation of public organizations (Ghayur, 2006). ICT can be used for rendering services to the public, such as obtaining general certificates, personal documents, identity, commercial information, transfers, contracts, death notices, notary information, or facilitating the payment of taxes and dues. In the area of public safety, ICT can be useful in infrastructure solutions (equipment and personnel) and in building a network including a database for combating drug trafficking and arms smuggling, as well as for the centralized control of criminals and border patrol operations. Most significantly, ICT generates a democratization factor and becomes a means for creating mechanisms and policies conducive to learning. The new technology is facilitating the sharing of solutions among different levels of government and the population (McLean and Tawfik, 2005).

4. Research Methodology

This research has been conducted on the public sector organization where e-government technology has been used for the purpose of modernizing the government organizations. The data has been collected

through survey from 8 government organizations. Key respondents are the government personnel who have been using e-government at the different levels of federal government organizations and have been involved in online interaction using e-government applications. The data has been analyzed by using Good Governance scale introduced by the UNDP. The research has developed three hypotheses and data has been analyzed prove the hypotheses.

5. Research Findings

H₁- Effective capacity planning management has a positive impact on strategic planning process of the organization.

The above hypothesis explains that effective capacity planning management improves the strategic vision of the organization. It is asserted that e-government technology enhances the capacity of planning management of the public organization and, consequently, it improves the strategic vision process of the organization. The obtained result from the data analysis demonstrates that there is a 62% level of enhancement in strategic vision. The strategic vision of the organization is related with strategic planning management of the organization. The related public organizations can use e-government technology for obtaining reliable sources of information for developing long-term and short term planning for the country.

The findings demonstrate that the strategic vision has enhanced 62%. According to the measurement scale of good governance (50%-64% = moderate), the outcome of 62% demonstrates the moderate level of enhancement to the good governance. Therefore, it is concluded from the obtained result in the above figure that H1 hypothesis is accepted and it asserts that e-government technology increases the planning capacity of the organization and thus enhances the strategic vision of the public organization.

H₂. Improving decision-making significantly improves the efficiency of the leadership of the organization.

The above hypothesis illustrates that the improvement in decision-making increases efficiency and effectiveness of the organization and consequently it improves the effectiveness of the leadership. It is asserted that e-government technology facilitates the availability of the timely and useful information required for making timely and sound decisions. The availability of useful information to decision makers helps them to make sound decisions regarding the different matters of the government business operations and find solutions to problems. Consequently, the improvement in decision-making increases the effectiveness and efficiency of the leadership as well of the public organizations. The obtained result from the data analysis demonstrates that there is 66% level of enhancement in the efficiency.

The H₂ findings demonstrate that e-government technology has enhanced 66% level of efficiency of the public organization, which is highest score of all indicators of good governance. According to the measurement scale of good governance (65%-80% = Good), the Efficiency demonstrates a good level of enhancement to good governance. Therefore, it is concluded that H3 hypothesis is accepted. The outcome of result asserts that e-government technology helps in bringing improvement in the decision-making process and thus enhances the efficiency of leadership of the public organization.

H₃. Streamline interaction has positive impact on improving the communication and coordination process of the organization. The higher streamlining of interaction, the higher is the level of co-ordination.

The above hypothesis illustrates that the streamlining of the interaction between the different units or departments can improve the communication and coordination process of the organization. It is asserted that e-government technology facilitates streamlining the interactions between the several departments or units of the organization. This interaction is conducted through the electronic exchange of information within organization. The improvement in streamlining the interaction helps in improving the communication and coordination process within the departments or units of the organization and thus it increases the competency of the organization in carrying out the various functions of the organization in a useful manner. Consequently, the improvement in the communication and coordination processes within or between the organizations result in the enhancement of effectiveness of the functional operations of the public organizations. Therefore, it is concluded that streamlining of interaction between departments can improve the communication and coordination process of the organization. The obtained result from data analysis demonstrates that there is 66% level of enhancement in the efficiency. The findings demonstrate that e-government technology has enhanced efficiency 66%, which is at the good level, higher than other indicators of good governance. According to the measurement scale of good governance (65%-80% =

Good), the efficiency demonstrates the good level of enhancement. Therefore, it is concluded from the result that H4 hypothesis is accepted. It asserts that e-government technology helps in streamlining the interaction within the organization and consequently it improves the communication and coordination process within and between the organization.

Conclusion

Since the inception of the Information Age, developing countries such as Pakistan have been striving for bringing the improvement in the functional efficiency and effectiveness of public organizations. Currently, good governance has been the main objective of the government to improve the administration of the country. For attaining the goal of modernizing the public organizations with the aim of improving their functional efficiency and effectiveness IT is adopted as tool for development. This goal has been embraced in the establishment of EGD and the formulation of e-government strategy by the federal government. Besides that, government organizations at the provincial and district levels have also started the journey of modernizing their public sector organizations with the purposes of improving functional efficiency and effectiveness in the business operation of government and enhancing good governance capability at the federal and provincial levels of government.

The research findings in all three hypotheses have demonstrated that e-government technology has substantially improved the strategic vision, accountability, efficiency and effectiveness of the public organizations at the moderate level of enhancement. The research findings demonstrate that e-government demonstrates a substantial impact in enhancing the good governance capability of public organizations. It has played the role of improving strategic vision, the role of enhancing accountability, the role of enhancing efficiency, and the role of enhancing transparency at the moderate level of good governance. However, it still requires more effort and commitment from top level of management of the government for bringing more improvement in the good governance capability of public organizations.

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Table 1: Paradigm Shifts in Public Service Delivery

	Bureaucratic Paradigm	E-Government Paradigm
Orientation	Production cost efficiency	User satisfaction and control, flexibility
Process Organization	Functional rationality, departmentalization, vertical hierarchy of control	Horizontal hierarchy, network organization, information sharing
Management Principle	Management by rule and mandate	Flexible management, interdepartmental teamwork, with central coordination
Leadership Style	Command and control	Facilitation and coordination, innovative entrepreneurship
Internal Communication	Top down, hierarchical	Multidirectional network, with central coordination, direct communication
External Communication	Centralized, formal, limited channels	Formal and informal direct and fast feedback, multiple channels
Mode of Service Delivery	Documentary mode and interpersonal interaction.	Electronic exchange, none face-to-face interaction
Principles of Service Delivery	Standardization, impartiality, Equity.	User customization, personalization

Source: Tapscott and Caston, 1993