A KNOWLEDGE MANAGEMENT APPROACH TO CITIZEN RELATIONSHIP MANAGEMENT IN E-GOVERNMENT CONTEXT

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─**Abstract** ─

With globalization, the Internet and increasing demands from citizens, governments around the world are pressured to serve citizens and businesses electronically thus to adopt policies that reduce bureaucracy and be agile to changes in structure. This entails that the electronic government that has been serving as a means for support in the last decade is no longer adequate. Government agencies are expected not to be working in silos. More and more government operations are expected to be networked and interconnected. Increasingly, governments are pressured to have a single view of citizens through Citizen Relationship Management (CzRM). The paper proposes a conceptual framework on CzRM using the knowledge management approach. It builds on prior literature in knowledge management. This constitutes knowledge characteristics, knowledge management strategy, knowledge management processes and knowledge management technological infrastructure in managing citizen relationship. The implications for research and practice are further discussed.

Key Words: *Citizen Relationship Management, E-government, Knowledge Management, Balanced Scorecard*
JEL Classification: M15

1. INTRODUCTION

1.1. Customer Relationship Management

The notion of creating and maintaining relationships with customers that result in increasing companies' market share and reducing costs has given rise to Customer Relationship Management (CRM). CRM has been defined as the "process of acquiring, retaining and growing profitable customers that requires a clear focus on the service attributes that customers would value and thus create loyalty to the organization" (Brown, 2000). Pan and Lee (2003) coined CRM as a business strategy that provides seamless integration among marketing, sales, customer service and field support business areas that touch the customers through integrated management of people, process and technology. The concept of CRM in private organizations applied to government organizations has given rise to Citizen Relationship Management (CzRM).

1.2. Citizen Relationship Management

Over the years, information technology and information systems (IT/IS) is recognized as an enabler that breaks the barriers between government and citizens. With globalization, the Internet and increasing demands from citizens, governments around the world are pressured to serve citizens and businesses electronically; thus to adopt policies that reduce bureaucracy and be agile to changes in structure. This entails that the electronic government that has been serving as a means for support in the last decade is no longer adequate. Government agencies are expected not to be working in silos. More and more government operations are expected to be networked and interconnected. Increasingly, governments are pressured to have a single view of citizens through CzRM.

CzRM has been referred to as "a cluster of management practices, channel and technological solutions that apply private sector Customer Relationship Management (CRM) in the public sector" (Schellong, 2006). With CzRM, citizens have a one-stop channel that is capable of providing all government services via their preferred channel and without the need for them to approach different civil servants of various authorities. Further, citizens have the options to switch-over seamlessly to another channel. CzRM aims at assuring citizens' trust of the government with higher quality in electronic government delivery systems and at lower costs (Larsen and Milakovich, 2005).

While there appears to be an abundance of literature on CRM, the number of research on CzRM seems below that of CRM. This is as evident through a Scholar Google search using *Citizen Relationship Management* and *One-Stop Government* in title of articles. This calls for more research on CzRM and resonates well with Schellong and Langenberg (2006) who echoed that the organizational value of citizen relationship management that includes effective knowledge management and knowledge exploitation, has not been fully explored. Thus, the aim of the paper is to build on knowledge management theory in explaining CzRM.

2. LITERATURE REVIEW AND RELATED THEORIES

2.1. Balanced Scorecard and Citizen Relationship Management

The Balanced Scorecard has been used in CRM studies (Kim et al., 2003; Grabner-Kraeuter et al., 2007); e-CRM (Kimiloglu and Zarali, 2009) and; government (Kloot and Martin, 2000; Wilson et al., 2003). The Balanced Scorecard (Kaplan and Norton, 1996) could be a solution in the government for monitoring actual performance against set targets. It comprises four perspectives: financial, citizen, internal business processes, and learning and growth perspectives. Financial perspective may concern with how the government should look to citizens and other stakeholders. Measures include return-on-investment and economic-value-added of CzRM projects. The citizen perspective may address issues regarding how citizens view the government. Measures concern with citizens' satisfaction with government services including at governments' Websites. The internal business process perspective concerns with the processes the government must institute to excel in its service delivery. Measures focus on

turnaround time for conceptualizing improvements in service delivery and actual delivery of services to citizens and citizens' problems solved. Learning and growth perspective addresses issues concerning with how the government continues to improve and create value for citizens. Measures concern with government's human capital development programs for its employees. This may include employees' satisfaction, training and skills.

2.2. Knowledge Management

Knowledge is regarded as an asset to organizations. Thus, knowledge needs to be managed effectively. The processes that deal with "development, storage, retrieval, and dissemination of information and expertise within an organization to support its business performance" have been referred to as knowledge management" (Gupta et al., 2000).

2.2.1 Knowledge Characteristics

As a first step in knowledge management, organizations need to understand and manage knowledge characteristics. Polyani (1962) suggested knowledge characteristics comprise explicit and tacit knowledge. According to Nonaka (1994), organizational knowledge is created through a continuous dialogue between tacit and explicit knowledge. Tacit knowledge represents knowledge that people possess. It has a personal quality that makes it hard to formalize and communicate (Nonaka, 1994). Explicit knowledge, on the other hand, represents knowledge that can be codified in a tangible form (Nonaka and Takeuchi, 1995). Explicit knowledge is transmittable in formal and systematic language. Explicit and tacit knowledge are regarded as essential for the success of any organization (Nonaka, 1991; Nonaka and Takeuchi, 1995).

2.2.2 Knowledge Management Strategy

A knowledge management strategy defines the overall approach an organization intends to take to align its knowledge resources and capabilities to the intellectual requirements of its business strategy; thus reducing the knowledge gap between what an organization must know to perform its strategy and what it does know (Meronõo-Cerdan et al., 2007). Two kinds of knowledge management strategies

are highly emphasized in the literature. Personalization (human) approach is suggested for tacit knowledge while codification (system) approach is recommended for explicit knowledge (Choi and Lee, 2002).

Personalization strategy focuses on person-to-person approach, such as brain storming, where knowledge is shared not only face-to-face, but also by electronic communications, thus building networks of people (Meron˜o-Cerdan et al., 2007). Codification approach recognizes that knowledge in organizations is stored in documents, manuals, databases and electronic repositories. Thus, codification takes on the approach that depends heavily on information technologies. This strategy allows many people to search for and retrieve codified knowledge without having to contact the person who originally developed it. Hence, codification creates intellectual capital, by converting individual knowledge into structural capital (Meron˜o-Cerdan et al., 2007). The emphasis on both system and human-focused approaches is known as the socio-technical approach and is well-supported by the literature (Gold et al., 2001; Lee and Choi, 2003).

2.2.3 Knowledge Management Culture

Organizational culture reflects the norms and beliefs that guide the behaviour of the organization's members (Becerra-Fernandez et al., 2004). According to Gold et al. (2001) organizational culture is the most important factor for successful implementation of knowledge management process. Therefore, organizations should establish an appropriate culture that encourages people to create and share knowledge within an organization (Holsapple and Joshi, 2000). Different kinds of variables are highlighted in the literature as organizational culture: collaboration among organizational members (Lee and Choi, 2003; Al-Alawi et al., 2007; Wong, 2005), inter-personal trust (Politis, 2003; Lee and Choi, 2003; Lustri et al., 2007), learning corporate culture (Lee and Choi, 2003; Claver-Cortes et al., 2007), organizational strategy aligned with knowledge management (Jennex and Zynger, 2007; Jafari et al., 2007; Wei et al., 2009) and, management support for knowledge management effort (Gold et al., 2001; Davenport and Prusak, 1998).

2.2.4 Knowledge Management Process

Bozbura (2007) defines knowledge management process as the practice of acquiring, capturing, sharing and using productive knowledge, wherever it resides, to enhance learning and performance in organizations. Similarly, Hung et al. (2005) define knowledge management process as, the creation, extraction, transformation and storage of the correct knowledge and information in order to design better policy, modify action and deliver results. According to Gold et al. (2001), knowledge management includes the process of acquisition, conversion, application, and protection of knowledge. Although discrepancies on definitions on knowledge management process seem to exist in the literature, at the minimum, the four basic processes of knowledge management involve creating, storing/retrieving, transferring, and applying knowledge (Alavi and Leindner, 2001). Nevertheless, among the knowledge management processes, knowledge creation and knowledge sharing processes seem to receive the most attention (Lee and Choi, 2003).

The review of literature shows that knowledge creation process has been defined from different perspectives. Nonaka and Toyama (2003) conceptualize knowledge creation as a dialectical process, in which various contradictions are synthesized through dynamic interactions among individuals, the organization, and the environment. They believe that knowledge is created through the synthesis of the contradictions between the organization's internal resources and the environment. According to Nonaka et al. (1994), organizational knowledge creation (distinct from individual knowledge creation), takes place when all four models of knowledge creation (socialization, externalization, combination, internalization) are organizationally managed to form a continual cycle. From customer knowledge creation perspective, Menguc et al. (2013) define knowledge creation as the collective ability of team members to gather, analyze, interpret, and reconfigure customer-related knowledge.

Similarly, knowledge sharing refers to the act of making knowledge available to others within the team so that knowledge held by an individual team member is converted into a form that can be understood, absorbed, and used by other members (Ipe 2003). The term knowledge exchange has been used interchangeably with knowledge sharing (Wang and Noe, 2010). Knowledge exchange includes both knowledge sharing (employees providing knowledge to others) and knowledge seeking (employees searching for knowledge from others).

2.2.5 Knowledge Management Technological Infrastructure

Information technology (IT) infrastructure includes data processing, storage, and communication technologies and systems (Becerra-Fernandez et al., 2004). IT infrastructure contributes to knowledge management in many ways (Gold et al., 2001). IT can be viewed as one of the most critical enablers of knowledge management implementation (Kuo and Ye, 2010). IT is widely used to connect people and facilitates conversations (Lee and Choi, 2003), that would lead to knowledge creation and sharing. Among the recent IT innovations, groupware and information portal are the two most important tools that enable people scattered around the world to collaboratively work on the same tasks and helps the capture, storage, and sharing of knowledge in spite of geographical limitations (Kuo and Ye, 2010). Literature on knowledge management has identified various technology related variables, for example, IT support (Lee and Choi, 2003), artificial intelligence systems (Wong 2005), groupware (collaboration) (Gold et al., 2001), information and communication technology use (Lin, 2007), distributed learning (Becerra-Fernandez et al., 2004), and integrative systems (Jennex and Zynger, 2007) that support knowledge management.

3. PROPOSITIONS AND RESEARCH MODEL

Built on the literature, we advance the following propositions:
P1: Government agencies that emphasize on knowledge characteristics (explicit and tacit) have extensive citizen relationship management practices.
P2: Government agencies with knowledge management strategy have extensive citizen relationship management practices.
P3: Government agencies with knowledge management culture have extensive citizen relationship management practices.
P4: Government agencies with KM processes have extensive citizen relationship management practices.
P5: Government agencies with knowledge management technological infrastructure have extensive citizen relationship management practices.
Figure 1 shows the proposed conceptual framework.

Figure-1:   Conceptual Framework
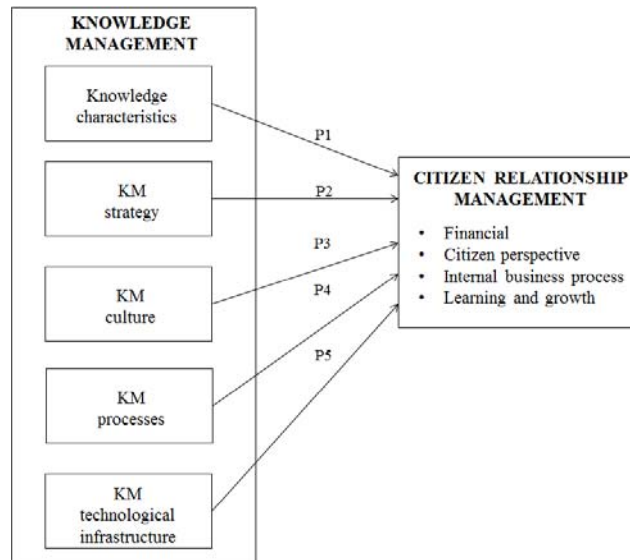
4. CONCLUSION

Governments around the world are continuously challenged to deliver better services to citizens. Recognizing this, we propose a conceptual framework on citizen relationship management using the knowledge management approach. The research builds on prior literature in knowledge management. This constitutes knowledge characteristics, knowledge management strategy, knowledge management processes and knowledge management technological infrastructure in managing citizen relationship. For researchers, this presents a first step toward clarifying relationships between knowledge management and citizen relationship management. For government practitioners, this provides insights into the knowledge management elements that may be considered when managing citizen relations. It is worth mentioning that the paper presents an initial conceptualization of association between knowledge management and citizen relationship management. Thus, future research calls for further exploration, test and validation of propositions to verify these relationships.

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