Sustainable Environmental Service - Knowledge Management: A Case of Bangkok MSW Management

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ABSTRACT

Knowledge management (KM) is a key factor to increase effectiveness of management system. There have been researches of KM on many environmental services. Unfortunately, only a few researches have focused on sustainable service for Municipal Solid Waste (MSW). There are evidences of ineffective waste management causing socio-economic and environmental problems, especially in urban areas of developing countries. Humans live in service economy and knowledge society. Waste management is one of the most important public services that all residents should receive while knowledge is needed to make service run smoothly and sustainably. This paper combines concepts of sustainable service and KM to clarify the importance and how these concepts have impacts on societal well-being. Literature reviews and questionnaire surveys are main analysis methods of this paper. Sustainable service with KM roles will be described and co-created values are identified.

Keywords: Environmental Service, Knowledge Management, Municipal Solid Waste, Sustainable Service, Waste Management

INTRODUCTION

Waste has become one of the most important concerns of cities all over the world. It does not only cause socio-economic impacts, but also more vitally environmental problems. Although there has been a wide attention given to make waste management system more effective, there are many obstacles causing the system faraway from accomplishment. There are evidences that socio-economic and environmental problems are harmfully caused by ineffective waste management, especially in urban areas of developing countries, such as odor, leftover waste, or air pollution (Pires, 2011). Having an effective waste management is difficult; however, it is pos-
sible. The current ineffective municipal solid waste management (MSWM) is caused by many factors. A very important reason leading to performance of MSWM system is staff’s knowledge and related stakeholders applied to each process of management system. It has been evidenced that in some processes, waste management staff do not technically know how to use machines whereas residents would like to be educated of suitable household waste management methods or how to sort waste for disposal correctly.

It is undeniable that humans live in service economy and at the same time in knowledge society. In service sector, environmental service has gained much recognition in recent years especially on a Payments for Environmental Service (PES) perspective (Kumar, 2013; Legrand et al., 2013). PES has rapidly developed all over the world. It is a mechanism of a new type of subsidy objects to protect the environment and ecosystem services based on provision of economic incentive. PES is considered as a new market-based initiative for conservation and environmental management (Fauzi & Anna, 2013). It encompasses a diversity of mechanisms ranging from voluntary compensation to non-voluntary one.

Unfortunately, there have been only a few studies related to municipal solid waste management (MSW). In those studies, PES was widely used in many applications; however, in MSWM, it was used in economical prospect such as willingness to pay for improving waste collection service, which finally contributes to a better waste management system or a public-private partnership for waste management system incentive. Despite the fact that PES schemes can improve waste collection service in some cases, it is insufficient to say that economic based incentive system can be applied to all cities, especially in developing ones. Thus, it is important to find alternative methods to increase the effectiveness of MSWM system, which this paper emphasizes on roles of KM that will eventually lead to value co-creation for a better society well-being.

Waste management is one of the most important basic public services that all residents should receive. Knowledge, in the same way, is needed to make service run smoothly, consistently, reliably, and sustainably. Every process of waste management needs different types of knowledge and different ways to exploit the knowledge. Thus a good management of knowledge is very essential for a successful waste management. The importance of effective KM has increasingly been recognized in both business viewpoint (Deng, 2010; An et al., 2013) and academic viewpoint (Nonaka & Takeuchi 1995). Knowledge is a form of capital where the main competitive advantage is an intangible asset in all types of organizations. In the past decades research on KM is fragmented across industries. Many factors are important to KM, for example, KM strategies (Shin & Chou, 2012), KM processes (Grover & Davenport, 2001), or KM enablers (Choi & Lee, 2002). On a perspective of MSWM, KM is needed in all processes. Since each process requires different knowledge to effectively manage waste, this is one of the most vital factors showing the performance of MSWM system. Moreover, to emphasize its importance, knowledge transfer and knowledge sharing are factors that should be taken into account to KM in order to avoid occurrence of knowledge gap and hidden knowledge.

As mentioned earlier, MSWM is a basic public service. It is in need that provided service should be sustainable and affordable by community. Applying a concept of sustainable environmental service is a key to increase performance of MSWM system in long-term. The concept of service sustainability is to satisfy the need of current providers and recipients to practice mutual value co-creation without decreasing the quality of future value co-creation. In other words, the provided service should meet society needs, conform to standards, and most importantly cause no harmful impacts to society, economy and the environment.

This paper combines the two very important concepts which are sustainably environmental service and KM to clarify the importance and how these concepts have impacts on society well-being in a case of an environmental service perspective. In each process of MSWM, roles of
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