

Title	都市廃棄物マネジメントシステム向上のための知識基盤サービスモデルの研究
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論文の内容の要旨

In the world's most advanced economies, over 70% of their gross domestic product (GDP) generates by service, which ultimately influences societal outcomes. According to the significance of service in global economy, a large number of questions have raised upon ways of having sustainable service leading to substantial outcomes for firms' success, well-being of consumers, and society. Fortunately, scholars and researchers have been focusing more on service study. Trends, challenges, or potential implementation processes of countless services have been researched. Regrettably, out of the vast amount of studies providing environmentally sustainable public service and emphasizing on enhancement of societal well-being through involvement of stakeholders has been slightly tapped on. It is undeniable that humans live in service economy; however, people have to admit that nowadays they also live in knowledge society. In any management systems, to be successful and effective, knowledge is essentially needed for well management. This is to make the right knowledge available to the right people at the right time. In other words, the making available process is universally known as knowledge management (KM).

In public service perspective, provided services such as sanitation, water supply, city planning, health care, and security are mostly overseen by government. Although it is a fundamental factor for well-being of society, public sector is unlikely to implement comprehensive sustainability performance evaluation. Therefore, it is important that government provide effective and sustainable service in an innovative co-creation way to increase the overall well-being of the society in this era that service and knowledge are ubiquitous. Being as one of the most profoundly important public services, municipal solid waste management (MSWM) is selected as the studied environmental service. It is in need that the provided MSWM service be sustainable and affordable by community.

An overwhelming amount of generated waste is a serious side effect of increasing consumption and

production. The demand for more goods and services to meet human needs is creating a huge amount of waste that is being disposed of into the environment. Accordingly, the provided MSWM service does not go in the same pace with increasing amount of waste. As a result, ineffective of MSWM system has become a problem posing pollution to all mankind. Due to the inefficiency, along with more awareness of human health, environmental impacts, social problems, and depleted natural resources; these have created desires for strategies and techniques to enhance the performance of MSWM system and sustainably alleviate MSW related problems.

To enhance the effectiveness of MSWM service provision, this study adopts the combined essence of two important fields of concepts. The first field is sustainable service concepts, which are tripartite service concept and partnership concept. Therefore, this study aims to identify impacts of having relating stakeholders namely service providers, service recipients, and service ecosystem to corporately work together in providing MSWM service. The second field is KM concept. Through the interactions of all related stakeholders in the MSWM system, there is knowledge creation process. This study aims to shed the light on identifying co-created knowledge that can enhance the performance of MSWM service.

Through the multifaceted research methods, this study employs triangulation research method as the main research framework. This is to validate and increase credibility of the obtained data through cross verification from different sources of information. By integrating all analyzed results, influential factors that have impacts on MSWM system are identified; possibility of partnership implementation, roles and responsibilities of involved stakeholders, together with potential service policies to be applied in MSWM are explained; needed knowledge and co-created values of adopting the combined concepts are discussed. In addition, the study proposes a knowledge based service provision conceptual model in the perspective of enhancing MSWM service performance.

The results reveal that applying service and KM concepts is explicable to alleviate the complexity of MSWM system and eventually enables the improvement of the management processes as a whole. This study provides comprehensive practicalities for researchers and practitioners to apply the knowledge based service provision approach through practicing or implementing the proposed knowledge based service provision model. Accordingly, the provision of MSWM service will be enhanced in a sustainable value co-creation way.

Keywords: Environmental service provision, municipal solid waste management, knowledge based service, tripartite service concept, value co-creation.

論文審査の結果の要旨

発展途上国の都市部で深刻化している廃棄物問題は、人間の生活の質に大きく影響を与えている。これまで廃棄物マネジメント研究では、廃棄物を出す者と処理を担う公的機関との2者間関

係で捉えられることが多く、また現実でも主体間の価値観の違いが廃棄物創出の増大に歯止めをかけられない現状があった。こうした問題の改善には多様なセクター関係者が協同して対応していく必要があるものの、十分な研究の蓄積が無い。この背景から本研究では、分析視点として三者間価値共創と多主体協力というサービス持続可能性に関わる概念と、知識マネジメントを取り入れ、タイ・バンコク市を対象にした多面的調査に基づき、新しい廃棄物マネジメントの概念を提案している。

論文は3つの研究（A、B、C）で構成されている。研究 A ではバンコク市の廃棄物問題の現状について、とりわけ生活者が廃棄物最小化にどのような態度を有しているのかを把握するために、質問紙調査（422 件）および専門家インタビューを実施した。その結果、回答した生活者の 8 割は何らかの形で廃棄物マネジメントに協力したいという意欲があるものの、それが実現されていないことを見出した。そこで研究 B では、CBO(Community Based Organization)が、廃棄物マネジメントに関する関係者の協力を結集するうえでどのような可能性を有しているかを、生活者への質問紙調査（729 名）と廃棄物収集者（49 名）への質問紙調査および専門家インタビューを実施し分析した。その結果、CBO が多主体のリサイクル意識を形成する効果を持つ等、関係者の態度形成に影響をもたらしていることを確認した。研究 C では、主に環境への価値を共創するうえでどのような知識が必要か分析するために、27 名の専門家インタビューと公開資料分析を実施した。その結果、廃棄物マネジメントプロセスに応じた必要な知識を 6 項目明らかにし、それが得られた際に共創される価値との対応付けをした。

論文では、こうした研究群を総括し多主体価値共創型の廃棄物マネジメントとそれを実践していくための知識創造活動過程について考察している。いうまでもなく廃棄物の形態や状況に応じてその実践の形態は変化するが、本研究の特筆すべき点は CBO が中間組織となって利害関係者の共同および知識創造を促進していける可能性を、ロードマップを作成して段階的に示したことにある。これは、政策立案者が実際に都市廃棄物問題について検討する際のシナリオ作成において極めて有効な視座を提供する。

以上、本論文は、発展途上国の廃棄物問題に関し、サービス学と知識マネジメントの観点から多主体を関与させ知識創造を促進させることで環境への価値を創出する概念モデルを提案したものであり、学術的に貢献するところが大きい。よって博士（知識科学）の学位論文として十分価値あるものと認めた。