

An Analysis on the Cost of Municipal Solid Waste Collection focusing on the difference of Collection Services and the size of municipalities

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1. Introduction

There are 4 types of service organizations which deal with waste collection including a public sector, a contractor, a licensed private collector, and an union of local public bodies for the purpose of managing jointly a part of their affairs (partial union). Each organization operates with different collection cost per ton. The purpose of this research is to analyze differences in the collection cost per ton and other properties, such as the amount of waste collected and, population for design garbage collection, which correspond to different types of collection services.

2. Organizations that relate to waste collection

The contractor and the licensed private collector belong to private sectors. The contractor operates the municipal waste collection as a part of public services of cities, towns, and villages, and the licensed private collector operates as commercial services. Apart from that, waste is collected by the employees of the public sector and the partial union.

3. The classification and the calculation of collection cost per ton based on types of collection services

The way of waste collection in cities, towns, and villages were classified in order to analyze how different types of collection services affect the collection cost per ton and other properties. And then, according to the classification, the distribution of collection cost per ton, the amount of waste collected and population for design garbage collection were compared. In this research, the classification of municipalities and calculation of collection cost per ton were considered from various viewpoints.

4. Analysis of the differences in the amount of waste collected, population for design garbage collection, and collection cost per ton of the different types of collection services

From the result of the analysis, the following points became clear. With the participation of the private sectors such as licensed private collector and contractor in the collection services, lower budget for waste collection of municipality is required. If the licensed private collector is included in the collection services, there is a tendency of more population for design garbage collection and more amount of waste collected will be taken charged. As mentioned above, there are many private sectors in the services of waste collection, and consigning the collection services to a licensed private sector leads to the reduction of the collection cost per ton. This fact can explain why local governments tend to authorize licensed private collectors to collect wastes in the present situation because the financial condition of each local government has been tight.

5. Conclusion

It is not good municipalities consigning the waste collection to private sectors, such as the licensed private collector easily since there are many troubles of an administration side and a private sector contractor, such as an Unjust bid.

Citation

Tatsuhito Ikematsu : Cost Analysis of Separate Collection Systems concerning the difference of Municipal Solid Waste Collection Services, 京都大学工学研究科環境工学専攻修士論文,2002