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SWIMMING POOL VERSUS ART MUSEUM: EFFICIENCY IN THE PROVISION OF LOCAL PUBLIC FACILITIES WITH HETEROGENEITY

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This paper follows an approach adopted by Cremer, Marchand and Pestieau (1997) to analyze efficiency in the provision of heterogeneous local public facilities. Even when spillovers exist, under certain conditions the local government could still reach the optimum provision of the local public good, otherwise there is under-provision. Secondly, relaxing the non-excludability assumption, provision efficiency could be achieved if the local governments collect the service fees based on the neighboring community user's net marginal willingness to pay. If not, the service fee mechanism would not always be able to eliminate the preexisting allocation inefficiency and could sometimes lead to increased inefficiency due to overprovision of the public good.

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I. Introduction

Except for a few discussions on the public provision of private goods,[1] the contemporary literature on local public services mainly focuses on the inefficiency caused by the non-excludability and non-rivalry characteristics of local public goods. The typical results of those studies claim that spillover effects might lead

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[1] See Epple and Romano (1996), Gouveia (1997), Akutagawaa and Mun (2005).

to either an undersupply or oversupply of public goods.[2] In order to eliminate the inefficiency, discussions are extended to decentralization and local competition.[3]

While talking about services or facilities provided by the local government, the relevant studies typically use local public goods as a general term. However, the reality is that the local governments will provide a variety of services. For instance, providing an art museum is fundamentally different from providing an Olympic-size swimming pool in terms of the characteristics of the goods and the related efficiency analysis.

In a departure from many other studies on the efficiency analysis of local public facilities, Cremer, Marchand and Pestieau (1997) have analyzed the provision efficiency in relation to standard-sized sports facilities (i.e., Olympic-size swimming pools) provided by the local government. The model was created based on the assumption of indivisibility, which restricts the choice of each community to an all-or-nothing decision and examines the provision of local public goods in two-jurisdictions (where decisions are made on the basis of the provision and travel costs). One jurisdiction may choose to supply local public goods, while the other may choose not to supply them and have their residents travel to the other jurisdiction to consume them. Based on a large number of cases, the results showed that either social optimality is achieved in a Nash equilibrium setting without government intervention or it can be implemented through matching grants. On a similar topic related to the spillover effect of public facilities, Bloch and Zenginobuz (2006) used the model with symmetric spillovers to analyze mobility across jurisdictions and characterize Tiebout equilibria as a function of the spillovers across jurisdictions. Bloch and Zenginobuz (2007) revealed the complexity of interactions that plagued the design of institutions for multijurisdictional local public good economies with spillovers. Braid (2010) extended Cremer, Marchand and Pestieau (1997) basic model to more than two adjacent jurisdictions. Besides the under-provision of the public goods, he found under certain circumstances that the number of towns, where public goods are provided, can be higher than the optimal level.

[2] See Brainard and Dolbear (1967) and Williams (1966).

[3] Epple and Zelenitz (1981) investigate whether compensation among local jurisdictions is sufficient to ensure the efficient provision of local public goods. Oates and Schwab(1988) explored the conditions under which horizontal competition among governments is efficiency-enhancing. Besley and Coate (2003) argue that the sharing of the costs of local public spending in a centralized system will create conflicts of interest between citizens in different jurisdictions. Takahashi (2004) studied the competition among the governments that make decisions regarding investments in their excludable public facilities with nonrivalry.