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NON-GOVERNMENT DELIVERY OF URBAN SOLID WASTE COLLECTION SERVICES

Roland Schertenleib and Thelma Triche

Public operated solid waste management (SWM) services in many developing countries are inefficient and typically do not service low-income neighborhoods. One approach to improving the overall efficiency of SWM is to involve the private sector in service delivery, beginning with collection. A complementary strategy aimed at filling some of the gaps in service is to support community-based collection schemes and informal recycling activities.

BACKGROUND

Many cities in developing countries face serious environmental degradation and health risks caused by uncollected domestic refuse and by uncontrolled open dumping of solid waste. Although municipalities expend substantial resources on waste management (often 20 to 30 percent of municipal revenues), they typically gather about 60 to 70 percent of the refuse generated and serve only 50 percent of the population. The poorest segments of the population are frequently not served at all. There is also evidence that existing collection services in many urban areas of developing countries are operated inefficiently.

FORMAL PRIVATE SECTOR INVOLVEMENT IN THE DELIVERY OF SWM SERVICES

One approach to improving the overall efficiency of SWM is to involve the private sector in service delivery, beginning with collection. Many publicly organized SWM services in the industrialized market economies, as well as in several developing countries (especially in Latin America and West Africa), have incorporated some form of private service delivery for many years, particularly in collection activities. Private participation has been less common in the ownership and operation of processing and disposal facilities, but it is growing.

Studies that have been conducted in the United States and Western Europe have shown that privately operated SWM collection services are significantly more efficient than publicly operated services when (i) the collection districts include more than 50,000 inhabitants, and (ii) when a single operator services each collection district. Under these conditions, the private sector appears to be more adept at taking advantage of economies of scale than the public sector. Some preliminary research in a number of cities in Latin America

and West Africa has also shown that private firms usually operate collection services more efficiently than public entities. For example, there is evidence that the publicly operated waste management services in Rio de Janeiro cost at least twice as much per capita as the largely privately operated services in Sao Paulo. The superior performance of private firms appears to be due to (i) the presence of (or potential for) competition, which encourages managers to reduce costs and adopt effective management techniques, and (ii) labor policies, such as the freedom to hire and fire and incentive pay schemes, which result in better worker performance.

The efficiency benefits of private operations can only be captured by the public in the form of lower prices and increased coverage if there is a strong and professionally competent municipal agency to negotiate contracts and monitor the performance of contractors.

DECENTRALIZED COMMUNITY-BASED ACTIVITIES IN SWM

Even if formal services are efficient, they are often unavailable to low-income peri-urban areas, squatter communities and/or high density areas where narrow lanes make access by large collection vehicles impossible. The most promising approach for extending collection services to those areas is through community-based primary collection schemes using simple equipment (for example, hand-carts). A variety of such schemes have been introduced in a number of countries (for example, Guatemala, Columbia, Cameroon, Nepal, Indonesia). They are sometimes combined with recycling activities that generate employment as well as revenues that cover all or part of the collection costs.

Strong evidence suggests that poor people are willing to pay for or contribute labor to reliable primary collection services, even in situations where they are already paying taxes that are supposed to cover the cost of SWM services. However, it is unrealistic to expect community-based services to provide for transfer out of the community and for disposal. It is therefore essential that links with municipal services be developed, so that wastes collected from residents can be removed from community bins and disposal of in a timely manner. The effectiveness of many community-based primary collection schemes has been compromised in the past because they were not integrated into municipal schemes.

PUBLIC SUPPORT FOR INFORMAL RECYCLING ACTIVITIES

In many countries, recycling activities that are performed almost entirely by the informal sector make a valuable contribution to SWM. In Manila, for example, there are about 3,500 families with 20,000 dependents engaged in scavenging and recycling activities. Similar numbers are reported from many other cities in developing countries (for example, Mexico, Cairo, Jakarta, Bangkok). Scavenging not only provides income to one of the poorest segments of the population, but the reuse of scavenged materials can potentially result in reduced disposal costs, resource conservation, and foreign exchange savings. Public sector intervention is needed, however, to reduce the health and safety risks of these activities and to reduce conflicts with organized collection and disposal operations.

One approach to this problem is to improve working conditions and reduce interference with the operation of dumpsites and transfer stations. Elements of such an approach might be (i) providing a special area for scavenging activities that is physically separate from actual transfer or landfill operations; (ii) providing manual or very simple mechanical sorting equipment, and training in their use, to the scavengers; (iii) assisting scavengers to undertake processing activities that would add market value to recyclables; (iv) providing latrines and showers in the controlled scavenging areas. Another approach is to promote materials separation at the household level and allow scavengers to collect recyclables directly form households.

The difficulties surrounding a change in existing arrangements for dumpsite scavenging are considerable. These activities are usually very tightly controlled by informal groups. Any intervention should include the participation of representatives of scavengers in planning and implementation.

ONGOING RESEARCH

A series of case studies is being prepared through a joint UNDP/World Bank/IRCWD study. This study will provide information on what type of SWM arrangement (ownership, operating arrangements, regulatory framework, and capacity) is most appropriate under the range of institutional, economic, and settlement patterns found in developing countries. A systematic evaluation of successful and unsuccessful community-based collection schemes will also be undertaken.

TO LEARN MORE

The material summarized in this Note is treated in greater detail in Non-Government Delivery of Urban Solid Waste Services by Roland Schertenleib and Thelma Triche (currently in draft).

As part of the above-mentioned research, case studies of SWM in four Latin American cities (Rio de Janeiro, Sao Paulo, Buenos Aires, and Santiago) have been carried out by Luiz Leite. (Reports are available from the authors.)

Luger, M.I., Private Sector Options for the Solid Waste Disposal: A Background Survey for Applications in Nigeria. Infrastructure and Urban Development, INURD WP # 10. World Bank. Washington, 1990.

A Regional Sector Study on Solid Waste Management has been undertaken by LATIE. Case studies of Mexico City, Monterrey, Santa Cruz, and Caracas have been completed. Contact Mr. Tim Campbell, LATIE.

E.S. Savas, The Organization and Efficiency of Solid Waste Collection, Lexington Books, 1977, presents results of comparative research on the efficiency of publicly and privately operated SWM services in the U.S.

For further information contact Ms. Thelma Triche (ext. 33472), Mr. Carl Bartone (ext. 31301), Mr. Jack Fritz (ext. 33987), or Mr. Mike Garn (37515). Mr. Roland Schertenleib is Director of IRCWD in Zurich, Switzerland.