

Increasing Household-Level Recycling in the Republic of Korea: The Case of the Volume-Based Waste Fee Policy

Introduction

Decades of rapid economic growth in the Republic of Korea, beginning in the 1960s, led to the side effect of a severe waste problem by the early 1990s. With economic growth and urbanization, consumption increased significantly in urban areas, resulting in a commensurate increase in household waste. In 1992, municipal waste discharged was 75,096 tons per day, with an annual increase rate between 7 and 10 percent since 1988. The average waste generated per person per day was 1.8 kg, outstripping the United States (1.3 kg), Japan (1.0 kg), United Kingdom (0.9 kg), and Germany (0.9 kg). While waste generation was increasing, the recycling rate was below 10 percent prior to 1993, despite years of government interventions. Without meaningful efforts to reduce waste or offset its increase via recycling, most waste ended up in landfills and waste incinerators, and as the amount of household waste continued to grow, the capacity of landfills for urban waste shrank. Furthermore, a 1987 government proposal to construct additional landfills and incinerators across the country was faced with resistance from residents near proposed sites, concerned citizens, and environmental groups. It was clear that a new solution would be necessary.

Development Challenge

The challenge for the Korean government was designing and implementing an effective and sustainable waste management program. While solid waste management is a universal issue, countries that experience economic development are usually met with an evolving waste management situation, with an increase in consumption and consequently per capita generation of waste. This is often complicated by rapid urbanization that puts pressure on existing waste management capacities.

Intervention

The Korean government introduced the Volume-based Waste Fee (VWF) policy, among others, in order to reduce waste by increasing the rate of recycling. Before 1990, the primary concern for local governments was enhancing waste disposal capacities for waste generated in their jurisdictions. With the ever-increasing volumes of waste, coupled with environmental concerns that limited the expansion of waste treatment facilities, governments had to turn instead to minimizing waste. In other words, it was necessary to make the shift from a paradigm of maximum treatment to one of minimum waste generation.

Under the VWF policy, households and small businesses are required to dispose of waste using standardized plastic bags approved by local governments. These bags—available for purchase in local stores—vary in size, and their prices



Korea Program FOR
Operational Knowledge



기획재정부
Ministry of Economy
and Finance

PROJECT DATA

SECTOR:

Waste Management

DEVELOPMENT CHALLENGE:

Improvement of waste management

DELIVERY CHALLENGES:

Coordination and engagement

COUNTRY:

Republic of Korea

REGION:

East Asia

PROJECT DURATION:

1995–2009

This delivery note was adapted with permission by Yongjin Lee from an original case study by Prof. Dong-Young Kim. The original case study was commissioned by the Ministry of Economy and Finance of the Republic of Korea (MOEF) and the KDI School of Public Policy and Management for the Global Delivery Initiative. This adaptation presents a condensed version of the original case study; although the analysis of the delivery note draws on that of the case study, this note does not necessarily reflect the views of the original author, the MOEF, or the KDI School. The preparation of this delivery note was supported by the Korea Program for Operational Knowledge, a partnership between the MOEF and the World Bank Group.

depend on their sizes (i.e., the more the bags can hold the more expensive they are). While the wastes disposed of in these bags end up in landfills and incinerators, recyclable wastes such as plastic, paper, and cans (which do not need to be sent to landfills and incinerators) are collected without charge. However, it is the responsibility of each individual to not only separate recyclable wastes from non-recyclables, but also separate the recyclables into their respective categories – otherwise, households are fined.

Prior to the introduction of the VWF policy, a fixed-rate waste collection fee was charged, as a property tax or monthly fee, regardless of the amount disposed of. Thus, the VWF policy was designed to make individuals responsible for their own household waste (a shift toward the “polluter pays” principle). It created an economic incentive to minimize waste generation and increase recycling by charging according to the amount of waste thrown away.

Addressing the Delivery Challenge: Stakeholder Engagement

The VWF policy was implemented nationwide on January 1, 1995. However, there were various hurdles and delivery challenges in the lead-up to nationwide implementation and as the policy was rolled out. In particular, these issues were related to stakeholder coordination and engagement. In order for the VWF policy to work to reduce waste and increase recycling rates, all key stakeholders would need to play their part in the implementation loop. Most importantly, citizens would have to separate waste and dispose of their non-recyclable waste using the designated plastic bags. A big part of the challenge was to make citizens perceive waste separation to be convenient and believe their behaviors would make real and positive impacts on the environment.

Other stakeholders have important roles to play in the implementation loop as well. Local governments should have adequate human resources and staff to collect and manage waste. Once recyclable wastes are collected, recycling companies should have the capacity to process them. Line ministries should provide financial resources, political support, and adequate legal foundations. If the recycling industry does not have adequate technologies to reprocess recyclable materials, they can end up in the landfill or incinerators. Even one missing piece in this implementation loop could hamper coordinated effort, leading people to think that the system does not work and to ultimately stop participating in reducing waste and recycling altogether.

Coordination and engagement challenges presented an obstacle to the completion of this implementation loop and to effectively convincing citizens to participate. A key issue was that some important actors, such as environmental NGOs and other civil society groups, were skeptical of the policy, criticizing it on the grounds that a governmental responsibility for waste management was being passed to citizens.

In order to engage stakeholders in the implementation process, the Ministry of Environment solicited the opinions of various groups—including waste management experts, waste management companies, consumer groups, housewives’ associations, waste bag manufacturers, and local government officials—through public hearings and consultation sessions in 1993, before the pilot project was designed. Subsequently in 1994, the pilot study was conducted in 15 cities and provinces. When the pilot showed positive effects in recycling and waste reduction, other regions voluntarily participated in more tests. To get support from civic groups who opposed the policy, the Ministry asked the civic groups to assess the performance of the pilot tests of the VWF policy. Seeing the outcomes of the VWF pilot tests as positive, these groups moved toward collaboration with the government on subsequent policies related to waste management. The Ministry shared these positive outcomes at a workshop in June 1994, which hosted 330 local government officials in the field of waste management, as well as scholars, experts, and journalists. The participants discussed the problems identified in the pilot tests of the VWF policy and improvement plans.

After nation-wide implementation of the VWF policy, members of local civic groups were involved in monitoring teams to help ensure citizen compliance with the VWF policy. Also, to effectively address coordination challenges, the government built up administrative capacity and introduced legal provisions to support the measures, and created organizations with adequate human resources and budget to help implement the new waste management system. For example, the Act on the Promotion of Resources Saving and Recycling (1992) promulgated the basic framework for waste recycling, including basic plans for recycling by government, and the roles and responsibilities of enterprises and citizens in promoting waste recycling. In addition, the budget for waste management increased

gradually from 7 billion Korean won (equivalent to US\$7.0 million) a year in the 1980s to 24.5 billion Korean won (US\$33.4 million) by 1991.

Lessons Learned

It is important to understand the VWF policy as a process of trial and error, or “muddling through,” rather than as a flawless solution perfectly crafted from the beginning. The Korean government worked through a complex arrangement of factors to build an effective waste management system. The government consulted experts and stakeholders, conducted pilot tests, monitored, evaluated, and improved the system gradually. In this process, there were a number of critical factors that led to the success of the VWF policy.

Engaging with civic groups. First of all, the government was strategic in approaching the civic groups whose support was crucial for the success of the new set of policies. Environmental groups, in particular, had disagreements with the government regarding environmental issues, and their relationship with the government was characterized by tension and distrust. It was tough to bring on board the civic groups that opposed the VWF policy. Yet these groups would also be important for implementation, as those civic groups had networks across the country. Once convinced of the necessity and efficacy of the program, however, groups such as the YMCA, YWCA, Korean Federation of Housewives, Korean Federation for Environmental Movement, and Citizen Society for Solving Waste Problems played significant roles in raising awareness of the VWF policy, as well as during the preparation, implementation, and monitoring phases. This network of civic groups was also effective in identifying regional characteristics of waste management, which contributed to the success of the policy.

Importance of facilitating institutions. The second success factor was related to government institutions. To implement a paradigm-shifting policy across the nation, the government needed solid legal foundations, effective organization and competent and adequate human resources, as well as sufficient budget. Prior to the design and implementation of the VWF policy, the Korean government had already reorganized government agencies to address environmental issues, upgrading the Environmental Office (established in 1980) to the Environmental Agency in 1990. In 1994, the Environmental Agency was subsequently upgraded to the Ministry of Environment, with considerably more organization, manpower, and budget. The Office of Waste Management within the Environmental Agency was strengthened into the new Department of Wastes and Resources that includes sub-Departments of Waste Policy, Waste Management, Waste Facilities, and Waste Recycling. In addition, local governments in Korea were able to obtain more administrative power and increased budget from 1995 as Korea moved toward greater decentralization of government with the introduction of the “local autonomy system.”

Importance of coordination with stakeholders. Finally, effective coordination with important stakeholders was indispensable. For example, private recycling businesses that collected and processed recycled materials were usually small and medium-sized enterprises with a lack of human and financial resources, yet they were critical to the success of the policy system. To support such businesses, the Korea Environment and Resources Corporation consulted them in order to improve the recycling system. The Corporation also provided long-term, low-interest loans to revitalize the recycling industry to support the installation of recycling facilities, technical development, and stable management.



© 2019 International Bank for Reconstruction and Development / The World Bank. Some rights reserved. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent. The World Bank does not guarantee the accuracy of the data included in this work. This work is subject to a CC BY 3.0 IGO license (<https://creativecommons.org/licenses/by/3.0/igo>).