

Effects of a Unit-Based Pricing Program on Municipal Solid Waste: Evidence from New Taipei City

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ABSTRACT

This study estimates the effects of the unit-based waste pricing program in New Taipei City. The study used fixed-effects models with district-level panel data regarding waste and recycling from July 2007 to December 2011, and demonstrated that the program was related to a significant 40% reduction in monthly per capita waste and a 15% increase in recycling. City-level data from 2000 to 2017 prove that the waste reduction did not rebound in the long term. Because the results were robust under different model specifications and indicated no adverse effects, the paper provides evidence to support arguments that this type of program can effectively reduce waste in high-population-density municipalities.

Key Words: environmental policy, garbage bag, program evaluation, unit-pricing system, waste management

單位定價方案對都市垃圾量之影響 ——以新北市為例

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摘 要

本文旨在探討新北市採取垃圾隨袋徵收一單位定價方案之效果。本文利用2007年7月至2011年12月新北市各區的縱橫資料 (panel data)，以固定效果模型進行垃圾量和回收量的分析。研究發現新北市採行單位定價方案後，每月人均垃圾量大幅減少40%，而回收量增加15%。另以2000年到2017年的市級數據看來，在隨袋徵收政策之後，垃圾量長期而言並無明顯的反彈趨勢。鑒於本文之各項檢測皆顯示一致的結果，作者認為垃圾隨袋徵收一單位定價方案確實能有效降低垃圾量，本文研究結果將得以提供高人口密度都市採行垃圾減量方案之參考。

關鍵字：環保政策、垃圾袋、方案評估、單位定價系統、垃圾處理