## Assessing the formal and informal waste recycling business processes through a stakeholders lens in Pakistan

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## **Abstract**

With this study, we aim to assess integration possibilities of formal and informal waste management approaches in a low-income country context by using recycling as a tool towards sustainability. Using a holistic approach, this study examines both formal and informal aspects of recycling value chains through a stakeholder lens. Pakistan is far from being a circular economy, as evident from the dismal levels of municipal solid waste collection and recycling. This problem calls for the effective integration of formal and informal recycling business processes to fill the void. With this study, we seek to assess various aspects of formal and informal waste recycling in Pakistan through an inductive qualitative research design by examining the case of one of the most populous cities, Lahore, in the Punjab province of Pakistan. Equal representation to various stakeholders is accorded, with 25 interviews each with managers of private companies, public companies, waste pickers and scrap dealers in the target area. The study highlights that recycling sector in Pakistan is completely informal and unregulated with no or little support available due to a lack of funds and systematic planning. The empirical evidence suggests that the formal sector lacks the capacity for proper waste disposal of total waste generated. The recycling aspects are left to informal sector stakeholders who improvise to extract value from MSW in an entrepreneurial manner. The formal sector holds a bias towards informal stakeholders due to the fact that their work also serves as a theft bargain and resale platform under the guise of waste collection and recycling. The study highlights the most and least sought after recyclables, identifies gray channel markets of spare parts, metal recycling and counterfeit products, and practices of adulteration in the target area. This study recommends as a policy input, to overcome bias towards the informal sector, the creation of a central recycling commission to overlook and regulate the affairs of hitherto unregulated and informal municipal solid waste and recycling value chains. © 2021 by the authors. Licensee MDPI, Basel, Switzerland.

## **Author keywords**

Entrepreneurs; Formal recycling; Informal recycling; Public–private partnerships; Salient stakeholders; Sustainability; Waste pickers sustainopreneurs