Extended Theory of Planned Behaviour for Promoting Construction Waste Recycling in Hong Kong

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Abstract

Changing individual’s recycling attitude and behaviour is of utmost importance in achieving sustainable construction and demolition (C&D) waste management, yet it has often been underachieved. This study aims to identify, prioritize, and quantify the relationships among key categories that affect C&D waste recycling behaviour of various stakeholders in Hong Kong (i.e., representatives from construction-related organizations, environmental consultants and contractors, and government engineers). Different from traditional C&D waste behavioural determinants studies, this paper utilizes an integrated analytical method through structured interviews and survey questionnaire on the basis of Theory of Planned Behaviour (TPB). Qualitative thematic analysis and quantitative frequency analysis were performed to analyse responses from structured interviews and questionnaires, followed by correlation analysis to quantify the relationships between categories. Results indicated that four key categories: (i) regulatory compliance, (ii) economic incentives, (iii) accreditation scheme, and (iv) logistics and management incentives directly influenced recycling behaviour of individuals. Regulatory compliance was the most determining category for consultants, contractors, experts, and government officials, whereas economic incentives were of great concern to the public. Under the category of economic incentives, strong positive relationships were identified between disposal costs and collection and sorting costs, thus increasing waste disposal charging fee may promote recycling behaviour. In comparison, accreditation scheme deserved better recognition to facilitate a closed-loop material flow in the construction industry. These findings help to devise more effective and stakeholder-oriented policy tools to raise awareness and encourage behavioural change towards C&D waste recycling, and assist policy makers to establish regulations and practices for sustainable resource management.