

UNIVERSITI TEKNOLOGI MARA

**URBAN HOUSEHOLD'S
BEHAVIOUR TOWARDS DOMESTIC
WASTE RECYCLING, SHAH ALAM,
SELANGOR**

NURUL RIF'AH AFIQAH BINTI ABD RAUF

Thesis submitted in fulfillment
of the requirements for the degree of
Master of Science
(Built Environment)

College of Built Environment

August 2023

ABSTRACT

Solid waste management has become one of the challenging issues and problems faced by local governments in developing countries worldwide, and poor waste management can raise costs and harm the environment. Thus, many countries encourage recycling to protect the environment and improve waste management. However, domestic waste management during the COVID-19 pandemic, a scarcity of land for landfill, and low household recycling involvement affect waste recycling in Malaysia. Therefore, this study attempts to construct a Human Behaviour Framework for urban households in domestic waste recycling. The researcher examines the theory and factors of household behaviour, investigates the practice of domestic waste recycling, analyses the recycling factors and practices, and proposes the human behaviour framework for domestic waste recycling. This study utilised Site Observation, Questionnaires, Expert Interviews, and Focus Group Discussion (FGD). The 360 urban households in *Seksyen 2, 6, 7, 8, 10 and 11, Shah Alam*, were selected using Stratified Random Sampling and analysed using Statistical Package Social Sciences (SPSS). It was found that urban households' domain factors in recycling behaviour influence their intention to recycle, and the efficiency of waste recycling mechanisms and systems reflects their involvement in waste segregation and domestic waste recycling practises. The study indicated five (5) behavioural factors in recycling behaviour: Knowledge (K), Attitude (A), Spatial and Physical (SP), and Situational (ST) factors. Knowledge and attitude have the most negligible impact compared to spatial, physical, situational, and social factors. People recycle if they have access to waste facilities and recycling centres, if garbage offenders are prosecuted, and if the community recycles and separates waste. Hence, the study suggests improved recycling policies and strategies through the proposed Human Behaviour Framework (HBF). The interview and FGD provided study insights such as house-to-house patrols to collect waste, a recycling movement, and mobile applications. It enforced waste separation and recycling policies to boost recycling. Separation-at-Source at home reduces waste sent to landfills and establishes a new framework of Waste as a Circular Economy - from waste to cash. These findings may help improve the environment and public health in Shah Alam by influencing household recycling behaviour. It could be a useful reference to the authority and waste operators' efforts and broaden the knowledge of domestic waste recycling for better waste management, improve the quality of life and contribute to the government as a policymaker that may deliver an effective recycling policy and framework.

ACKNOWLEDGEMENT

Firstly, I thank Allah for allowing me to embark on my Master's Degree by research and complete this long and challenging journey. My appreciation and thanks go to my supervisor Dr Hamizah Yakob and my co-supervisor, Associate Prof Dr Yusfida Ayu Abdullah, for their patience, motivation, enthusiasm, and immersion knowledge. Their guidance and advice carried me through all the stages of my study.

My appreciation goes to the local authority of Shah Alam, stakeholders, and waste managing organisation who provided the information, shared knowledge, and experiences during data collection. Furthermore, Shah Alam's residents have contributed immensely to participating as my survey's respondents. Thanks to everyone who contributed to my research.

My special thanks also go to the Centre for Postgraduates Studies and my colleagues in the Faculty of Architecture, Planning and Surveying (FSPU), UiTM Shah Alam, for their continuous support and sharing during my master's journey. To my lovely friends, Nurul Ain Shuhada and Nurul Khalida, thank you for lending me your time and ears. We spent much time together and discussed many things about our studies, sharing experiences, problems and motivations and always supporting each other, regardless of capacity, during these difficult years.

Finally, and most importantly, this thesis is dedicated to my mother, _____ and my father, _____, for their endless support and determination to educate me. Words cannot describe my gratitude to both of you for your infinite love, patience, understanding and sacrifices that allowed me to finish my study. I am proud to be your child. To my dearest family members, I am thankful for your kind support and understanding of my condition throughout my journey as a student.

This piece of work is devoted to both my parents and family. Alhamdulillah.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	xii
LIST OF FIGURES	xvi
LIST OF ABBREVIATIONS	xxiii
CHAPTER ONE INTRODUCTION	1
1.1 Research Background	1
1.2 Problem Statement	3
1.2.2 Research Gaps	7
1.3 Aim	23
1.4 Research Questions	23
1.5 Objectives	23
1.6 The Scope of Study	24
1.7 Theories Relating to Human Behaviour in Domestic Waste Recycling	28
1.7.1 The Theory of Reasoned Action (TRA)	29
1.7.2 The Theory of Planned Behaviour (TPB)	31
1.7.3 Justification for using the Theory of Planned Behaviour (TPB) Framework	34
1.8 Research Methodology	35
1.8.1 Research Method – Triangulation Method	36
1.9 Research Framework	38
1.10 Significant of the Study	39
1.11 Research Limitations	40
1.12 Summary	42

CHAPTER ONE

INTRODUCTION

1.1 Research Background

The world continuously faces human destruction and natural disasters, such as climate change, pollution, infectious diseases, and threatened natural resources. Consequently, most countries are raising awareness, especially in environmental protection practices. The government of Malaysia also raised its concern about environmental protection by forming policies and strategic plans. First, the Malaysian Prime Minister announced the latest five (5) years national plan, the 12th Malaysia Plan 2021-2025 encourages the pursuit of “a prosperous, inclusive and sustainable Malaysia.” The program focuses on three (3) primary themes: resetting the economy, strengthening security, well-being, inclusivity, and advancing sustainability. And Theme 3: Advancing Sustainability provides a strategic plan related to the environment, conveyed through Chapter 8: Embracing the Circular Economy to address balancing socioeconomic and environmental sustainability. The circular economy will reduce waste generation, pollution, diseases, and dependency on natural resources (Economic Planning Unit of The Malaysian Government, 2021).

Malaysia is also experiencing the global issue of waste management, scarcity of land for landfills, weaknesses in recycling management and enforcement, lack of recycling practices, pollution, and the rising cost of waste management (Behzad et al., 2011)—the issues since 2011 yet still been there until recent years in 2021. According to Solid Waste Corporation (SWCorp) Malaysia, due to the population increasing rapidly, waste generated rises estimated to be 38,472 metric tonnes per day, of which 82.5 per cent is disposed of the landfills (Malaysia Investment Development Authority, 2021). However, most Malaysians are still unaware of the value of the waste generated, despite the government’s efforts to reassure the public practices in recycling through campaigns since the 1990s. As a result, it shows the nation’s recycling rate of around 31.52 per cent, in contrast with most developed countries, which have achieved high recycling rates of over 60 per cent (New Straits Times, 2022).

The 12th agenda of the United Nations’ Sustainable Development Goals (SDGs) advocates a “Responsible Consumption and Production” ideology to ensure sustainable