Faculty of Economics and Business

The Mediating Effect of Personal Value towards Food Hawkers' Behaviour on Environmentally Friendly Food Packaging

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The Mediating Effect of Personal Value towards Food Hawkers' Behaviour on Environmentally Friendly Food Packaging

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

……

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ABSTRACT

Food packaging has become a major environmental concern in the society in recent years, including with part of sustainable development goal globally. Particularly on gradual increment usage and waste among food hawkers in the market. The usage and waste of food packaging generated from food hawkers significantly contributed to current pollution. Therefore, environmentally friendly food packaging has been introduced into the market to encourage good management practises among food hawkers and thereby lower levels of environmental pollution. Many researchers have brought attention to this issue, and numerous suggestions have been made to use environmentally friendly food packaging to improve sustainability in the context of the green environment. Despite, the government and non-governmental organisations (NGOs) have launched a slew of promotions and campaigns to raise awareness in usage of environmentally friendly food packaging. However, environmentally friendly food packaging implementation among food hawkers remain low. Thus, the purpose of this study is to explore and identify the actual cause low usage of environmentally friendly food packaging among food hawkers by using Theory of plan behaviour with personal value as a mediator. Using a quantitative approach, the data obtained from the local food hawkers with structured questionnaire with a 10-point Likert scale through multistage sampling. The results generated by using Structural Equation Modeling with the IBM-SPSS and IBM-AMOS software to test the hypotheses. The finding indicated that personal values is significant as a mediator construct, while attitudes toward and perceptions of behavioural control had significant effects on both the intention to use EFFP and actual behaviour toward EFFP. Moreover, result generated provide an important step forward in the development of a more comprehensive theoretical framework to explain

hawkers' behaviour. This is an important step forward in providing practical and theoretical implications for economic and societal.

Keywords: Environmentally friendly food packaging, personal value, behaviour, food hawkers

Tingkah Laku Penjaja Terhadap Pembungkus Makanan Mesra Alam: Nilai Peribadi Sebagai Faktor Pengantara

ABSTRAK

Pembungkusan makanan telah menjadi perhatian utama dalam kesedaran persekitaran di kalangan masyarakat dalam beberapa tahun kebelakangan ini, termasuk dengan tujuan pembangunan lestari di seluruh dunia. Terutama pada peningkatan penggunaan dan pembaziran secara beransur-ansur di kalangan penjaja makanan di pasaran. Penggunaan dan pembaziran pembungkusan makanan yang dihasilkan dari penjaja makanan banyak menyumbang kepada pencemaran semasa. Oleh sebab itu, pembungkusan makanan yang mesra alam telah diperkenalkan ke pasaran untuk mendorong amalan pengurusan yang baik di kalangan penjaja makanan dan dengan itu menurunkan tahap pencemaran alam sekitar. Banyak penyelidik telah meneliti masalah ini, dan banyak cadangan telah dibuat untuk menggunakan pembungkusan makanan yang mesra alam untuk meningkatkan kelestarian dalam konteks persekitaran hijau. Walaupun demikian, agensi kerajaan dan agensi-bukan kerajaan (NGO) telah melancarkan banyak promosi dan kempen untuk meningkatkan kesedaran dalam penggunaan pembungkus makanan mesra alam. Walau bagaimanapun, pelaksanaan pembungkus makanan yang mesra alam di kalangan penjaja makanan masih rendah. Oleh itu, tujuan kajian ini adalah untuk meneroka dan mengenal pasti penyebab sebenar rendahnya penggunaan pembungkus makanan mesra alam di kalangan penjaja makanan dengan menggunakan Theory of Planned Behaviour dengan nilai peribadi sebagai mediator. Dengan menggunakan pendekatan kuantitatif, data yang diperoleh dari penjaja makanan tempatan dengan soal selidik berstruktur dengan skala 10-titik Likert Scale melalui pensampelan pelbagai peringkat. Hasil yang dihasilkan dengan menggunakan Structural Equation Modelling dengan perisian IBM-SPSS dan IBM-AMOS untuk menguji

hipotesis. Hasil kajian menunjukkan bahawa nilai peribadi adalah penting sebagai konstruk mediator, sementara sikap dan persepsi kawalan tingkah laku mempunyai pengaruh yang signifikan terhadap niat untuk menggunakan pembungkus makanan mesra alam dan tingkah laku terhadap pembungkus makanan mesra alam. Lebih-lebih lagi, hasil yang dihasilkan memberikan langkah penting dalam pengembangan kerangka teori yang lebih komprehensif untuk menjelaskan tingkah laku penjaja. Ini merupakan langkah penting dalam memberikan implikasi praktikal dan teori untuk ekonomi dan masyarakat.

Kata kunci: *Pembungkus makanan mesra alam, nilai peribadi, tingkah laku, penjaja makanan*

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LIST OF ABBREVIATIONS

AB	Actual Behaviour
ABM	Actual Behaviour Model
AVE	Average Variance Extracted
BI	Behavioural Intention
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
CSD	Commission on Sustainable Development
DOE	Department of Environment
DV	Discriminant Validity
EFA	Exploratory Factor Analysis
EFFP	Environmentally Friendly Food Packaging
EMS	Environmental Management System
EPS	Expanded Polystyrene
ESB	Environmentally Significant Behaviour
EU	European Union
FA	Factor Analysis
IARC	International Agency for Research on Cancer
IAT	Implicit Association Test
KMO	Kaiser-Meyer-Olkin
KRIC	Kelantan Tourist Information Centre
MLE	Maximum Likelihood Estimator
MOSTE	Ministry of Science, Technology and Environment

MP	Malaysia Plan
MSA	Measure of Sampling Adequacy
NAT	Norm-Activation Theory
NGO	Non-Governmental Organisations
OLS	Ordinary Least Square
PBC	Perceived Behavioural Control
PMO	Personal Moral Obligation
PV	Personal Value
SEM	Structural Equation Modelling
SEPA	State Environmental Protection Administration Agency
SIRIM	Standard and Industrial Research Institute of Malaysia
SME	Small-to-Medium Sized Enterprises
SN	Subjective Norm
SPM	Sijil Pelajaran Malaysia
SPSS	Statistical Package for the Social Sciences
SQAVE	Square Root Average Variance Extracted
TAT	Thematic Apperception Test
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
VBN	Value-Belief-Norm
WHO	World Health Organisation

CHAPTER 1

INTRODUCTION

1.1 Overview of Chapter

The initial chapter of this study presents the research background, problem statement, research objectives and research questions that have motivated the researcher to undertake this study. This chapter also addresses the research importance and operational definitions including the information regarding the structure of the study and the research scope. In brief, this study aims to investigate the acceptance level of food hawkers through their behaviour towards environmentally friendly food packaging (EFFP), whereby the ultimate purpose of this study is to examine and further understand the lack of EFFP usage relative to food hawkers' behaviour towards environmental sustainability. Problem Statement

There are many formats available for writing final thesis. The formats have been introduced to assist postgraduate students in preparing their thesis. However, the formats are unique and could not be used for other universities. Therefore, a standard format for every Universiti Malaysia Sarawak (UNIMAS) student to follow will enable all postgraduate students to produce their thesis according to the format set by the university.

1.2 Introduction

The issues of safety awareness regarding food packaging are not something new or unique in the food industry. Food packaging has, for some time, been heatedly debated as the cause of significant problems in developing and developed nations concerning ecological degradation as well as its contribution to chronic illnesses. According to Rahimi and García (2017), there is a considerable amount of food packaging that is not recyclable as it mostly

uses polystyrene plastic petroleum. In other words, the material contains the harmful elements of expanded polystyrene (EPS) as can be found in consumer packaging such as egg cartons, disposable cups, plastic trays, cutleries, disposable or take away containers and dairy product containers (Jayaraman et al., 2011; Zhu et al., 2018; Christensen et al., 2019).

From a global perspective, one of the approaches suggested by previous researchers in alleviating the issue of food packaging is through packaging waste management (Marsh & Bugusu, 2007; Vanderroost et al., 2014; Biji et al., 2015; Majid et al., 2018). In this context, the European Union (EU) had introduced several measures surrounding the management of packaging waste in the 1980s to ensure that the packaging waste management in European countries is adequately addressed since the European nations contribute to the most substantial amount of packaging waste compared to the rest of the world. To uniform this initiative, legislation on packaging waste at the national scale under Directive 94/62/EC was established under the EU in 1992, which aims to coordinate the national measures of waste production and alleviate the effects of packaging and associated waste on the ecosystem. The measures under the directive assumed a plan for the avoidance of packaging waste on the recycling and the recovery of packaging (Lülfs & Hahn, 2013; European Commission, 2014; Elsacker et al., 2019).

However, despite the Directive of the EU to manage packaging waste, food packaging remains one of the major problems that cause environmental pollution to date (Min & Galle, 1997; Rokka & Uusitalo, 2008; Peloza & Shang, 2011; Dubey et al., 2017). In developing countries, packaging waste management has also become a major concern since food packaging consumption has increased over time and significantly contributed to environmental degradation, which resulted from polystyrene and plastic wastage. Besides,

it is estimated that non-organic products will take at least 500 hundred years to decompose completely (Giménez et al., 2016). According to the International Agency for Research on Cancer (IARC) and the World Health Organisation (WHO), non-organic food packaging contains carcinogens and styrene that can cause chronic diseases such as cancer when these agents contaminate food. As such, this has supported the need to undertake swift actions towards encouraging sustainable packaging or green packaging in promoting a sustainable environment and good health behaviour.

As highlighted by the United Nations Sustainable Development Goal 12: ensure responsible consumption and production patterns (Assembly, 2015; Fonseca et al., 2020), reducing food waste and increasing resource efficiency have become global priorities. Food waste accounts for 1.3 billion tonnes of total global waste (Gbolagade & Lekan, 2018) and accounts for 7 percent of greenhouse gas emissions. Packaging contributes to the reduction of food waste by protecting food, reducing food losses, and extending the shelf life of food (Fonseca et al., 2020). However, packaging, particularly single-use plastics, has become an environmental burden as a result of its reliance on fossil fuel resources and a lack of appropriate waste management practises. Plastic packaging accounts for 26 percent of total plastics consumption, and approximately 72 percent of these materials are currently lost, with 40 percent ending up in landfills and 32 percent ending up in the oceans and urban areas respectively.

Furthermore, the total production of plastics accounts for approximately 6% of the world's total oil consumption. Despite the fact that the rate of plastic recycling has increased, only 14 percent of the material is recycled, and after further processing, only 5 percent of the material cost is retained (Hák et al., 2016; Naidoo & Fisher, 2020). The environmental

consequences of food packaging have been extensively researched. The majority of studies looked at the direct effects of packaging throughout a product's life cycle, taking into account the production of packaging and the management of waste generated throughout the food supply chain. Although less well-known, indirect effects associated with the role of packaging within a product's supply chain are beginning to receive more attention (Fahimnia et al., 2015; Li, 2017). Similarly, studies integrating circular economy (CE) principles have also been conducted, primarily for the purpose of beverage packaging. The New Plastics Economy (NPE) recognises that plastics use is increasing at an alarming rate, and that this has negative consequences for resource use, climate change, and ecosystems (Pazienza & De Lucia, 2020). The NPE seeks to "deliver better system-wide economic and environmental outcomes by creating an effective after-use plastics economy, drastically reducing the leakage of plastics into natural systems (particularly the ocean), and other negative externalities (Barrowclough & Deere Birkbeck, 2020).

Similarly, food packaging also contributes predominately to the amount of plastic waste. For example, Malaysia produces 18,000 metric tons of waste per day and 25% of this amount originates from plastic waste (Economic Planning Unit, 2006). Therefore, to address these issues, plastic consumption in many developed countries has resultantly been banned by their respective governments. According to Clean Up Australia (2008), since almost 20 years ago, developed countries have also been adopting certain actions in banning plastic consumption as part of their countries' responses in achieving a sustainable environment.

A further prevailing issue is related to food packaging costs. Globally, every country bears the cost of managing wastage produced by food packaging in the sense that the larger the volume of wastage, the higher the cost that the country must incur. For example, in 2003,

more than 11 million tonnes of plastic food wastage was produced in the US, which is related to the urban wastage category. Similarly, in Malaysia, studies have found that 24% of wastage in this country also consists of food waste that includes food packaging (Economic Planning Unit, 2006). Even though many countries have widely practised recycling to reduce environmental degradation caused by plastic and polystyrene, the activity of recycling has its own set of challenges, which opposingly may cause significant environmental pollution problems (Yue et al., 2010; Yue, Dennis, Behe, Hall, Campbell & Lopez, 2011; Yue, Campbell, Hall, Behe, Dennis & Khachatryan, 2016; Heidbreder et al., 2019). Accordingly, the rapid movement towards producing EFFP has become an important agenda item for business practitioners and policymakers alike as one of the measures to ensure environmental sustainability.

Previous research has proven that sustainable packaging shows promise in leading towards sustainable development (Hellstorm & Saghir, 2007; Nordin & Selke, 2010; Svanes et al., 2010; Gronman et al., 2013; Verghese et al., 2015; Steenis et al., 2017). As such, the development and application of sustainable packaging have been recognised as one of the measures for achieving this outcome. Over the past two decades, there has been a vast number of campaigns to minimise or reduce the impacts caused by packaging on the environment through various media channels with approval in certain countries' legislation (Svanes et al. 2010; Williams et al., 2012; Lindh et al., 2016). In view of this, sustainable packaging, also known as green packaging, has been adopted as a measure to minimise the adverse environmental impact caused by packaging whilst helping to achieve sustainable development.