



Analyzing the Effect of Situational Factor on Recycling Behaviour in Determining the Quality of Life

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Abstract

Failure in managing solid waste could result in environmental deterioration, which affects the quality of life. Recycling is argued to be a better solution to the problem. Although consumers' awareness is increasing, participations in recycling are still low. The objective is to examine the influence of situational factors on recycling behaviour. Using cluster sampling, 300 respondents from selected urban areas in Malaysia were identified as samples. Data is analysed using structural equation modeling. Situational factors are non- significant predictors of recycling behaviour, but are significant predictors of intention to recycle. The findings have significant policy implications in ensuring the quality of life of societies.

Keywords: Quality of Life; Solid Waste Management; Intention to Recycle; Recycling Behaviour; Situational Factors

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1.0 Introduction

Rapid increase in the number and intensity of environmental problems threatens all human societies. The origin of man's environmental problems could be related to the patterns of growth cherished by modern societies. Environmental degradation could threaten the quality of life of modern societies. Failure in managing solid waste has been recognized as one of the contributing factors towards environmental deterioration. Subsequently, this will affect the quality of society's life which refers to an individual's total well-being. Traditionally, land-filling is the solution for solid waste disposal. However, such an action can pose an obvious and immediate danger to societies and eventually, the earth (Iyer & Kashyap, 2007). Environmental degradation is usually viewed as just a threat to quality of life but is actually considered as a fundamental threat to human lives.

Although consumers' awareness and concern about the problem of waste are constantly increasing, participation in recycling is still rather low. It should be highlighted from a marketing viewpoint that recycling is an issue of distribution channel. Research on determining factors of recycling behaviour or environmental behaviour has traditionally focused on the study of personal variables (example: values, beliefs), completely ignoring the direct role of situational variables (situation, physical-environment traits), as Black, Stern and Elworth (1985) pointed out. However, past literature has also indicated situational variable as a significant predictor of recycling behaviour. Previous studies demonstrated that factors such as time, cost, and the facilities' conditions are regarded as hindrances to a pro-environmental behaviour. It is suggested that by improving the facilities' condition and making recycling more convenient, consumers' recycling intentions and recycling frequency could be increased. Therefore, a specified study on the predicting power of situational factors on recycling intention and recycling behaviour should be considered in earnest.

The objectives to be achieved in this study are to examine the influence of situational factors on the intention to recycle and recycling behaviour of consumers and to ascertain the influence of intention to recycle on recycling behaviour of consumers. Further analysis is done to determine whether intention to recycle is a mediator in linking situational factors to recycling behaviour.

2.0 Literature Review

Findings from previous studies reflect that there is a common fear that significant alterations in individual consumer behaviour almost certainly required for a society-wide move towards sustainability (Merkel 2003; Monbiot 2006), will necessarily diminish one's quality of life, in terms of subjective well-being. However, Jacob et al. (2008), suggest that there may not necessarily be an insurmountable conflict between an environmentally responsible lifestyle and personal quality of life. Ecologically sustainable behaviour can also lead to an increase in quality of life. One such example of ecologically sustainable behaviour is recycling behaviour.

Effective administration of a recycling program requires each household to clean, sort, store, and deliver recyclables (Aadland & Caplan, 2006). In other words, such a program needs both the government's initiation and residents' cooperation. Moreover, according to

Derksen and Gartrell (1993), the most important determinant of recycling behaviour is to have access to a structured and institutionalized program that makes recycling easy and convenient. Past literature indicated inconvenience as a major obstacle to recycling behaviour.

According to Ajzen (1991), a situational variable or factor refers to people's perception of the ease or difficulty of performing the behaviour. In contrast, Barr (2007) defined situational variable as a given personal situation with regard to behavioral context (for example, service provision), individual characteristics (such as socio-demographics) and individual knowledge and experience of the behaviour. Situationism in psychology refers to an approach to personality which holds a concept that people are more influenced by external, situational factors than by internal traits (Krahe, 1993). The seven situational variables reviewed (prompts, public commitment, normative influence, goal setting, removing barriers, providing rewards, and feedback) all produce significant increases in recycling behaviour (Schultz et al., 1995). In sum, the influence of situational factors on recycling behaviour deserved to be studied in a more detailed research.

3.0 Methodology

The focus of this study is the quality of life of Malaysian consumers in relation to their recycling behaviour. A total of 300 respondents were selected randomly from three urban areas in Malaysia namely Kuala Lumpur, Penang and Johor Bahru, by using cluster sampling. These areas are chosen based on the availability of recycling facilities. Each of the three cities is serviced by three different providers.

This study employed self-administered questionnaire for data collection. Respondents could attend them at their own convenient time without pressure or favour from any quarters (Zainudin, 2010). The structured questionnaire was designed to measure all constructs involved in the theoretical framework as shown in Figure 1, which illustrates the theorized inter-relationships among constructs in the study.

The theoretical framework shows the dependent construct is recycling behaviour, and the independent construct is situational factors. The respondents' intention to recycle is the mediating construct in the study. These constructs are selected in light of prior researches on the determinants of engagement in recycling. The study intends to test the following three hypotheses as shown in Figure 1:

H₁: Situational factor has significant and direct effects on recycling behaviour

H₂: Situational factor has significant and direct effects on intention to recycle

H₃: Intention to recycle has significant and direct effects on recycling behavior

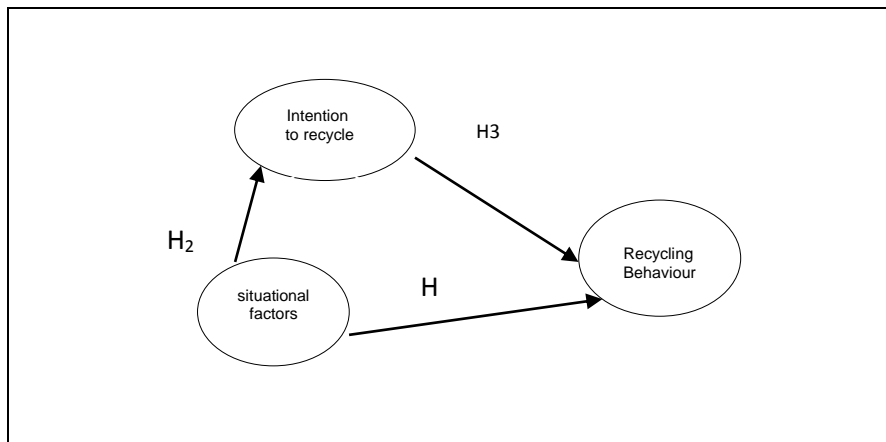


Figure 1: Theoretical framework

The analysis consists of two parts namely measurement model and structural model. The measurement model for each construct is analyzed for its validity and reliability prior to modeling the structural model. Before data analyses are carried out, data mining and descriptive analysis for demographic variables are done. This is followed by factor analysis, determining the normality of the data, and finally hypotheses are tested. Data is analyzed using structural equation modeling (SEM). The statistical package Analysis of Moment Structures (AMOS) is used to analyze for model fit (Goodness of fit index), predictive power (regression) and significance of paths for the specified model proposed.

4.0 Results and Discussions

The aim of the analyses is twofold. The first is to check the influence of situational factors on the intention to recycle and recycling behaviour. Secondly, it is to check the mediator role of intention to recycle linking between situational factors and recycling behaviour.

In the data mining process, all skewness values lie between -1.0 and 1.0, and is considered normally distributed and acceptable to proceed with the parametric analysis procedure. Descriptive analysis for demographic variables shows that the respondents are almost equally represented between male and female. On average, the respondents are young single or married, with or without children, educated (at least have attended secondary school or schooling until seventeen years old), and living in medium-cost houses with two to three rooms. Only two demographic variables namely; educational level and types of living areas (or location of houses) have a significant effect on intention to recycle or recycling behaviour (significant values are less than 0.005). The most recycled materials in this study are paper, plastic and aluminium cans. This data conformed to the findings of Hassan et al. (2000) and the result is also in line with the information given by the service providers for the three cities under study – Alam Flora, SWM and Penang Town Council.

Kaiser-Meyer-Oikin (KMO) measure of sampling adequacy for the three variables is close to 1.0. These KMO values exceed the recommended value of 0.6 and this suggests that the data is appropriate to proceed with data reduction procedure.

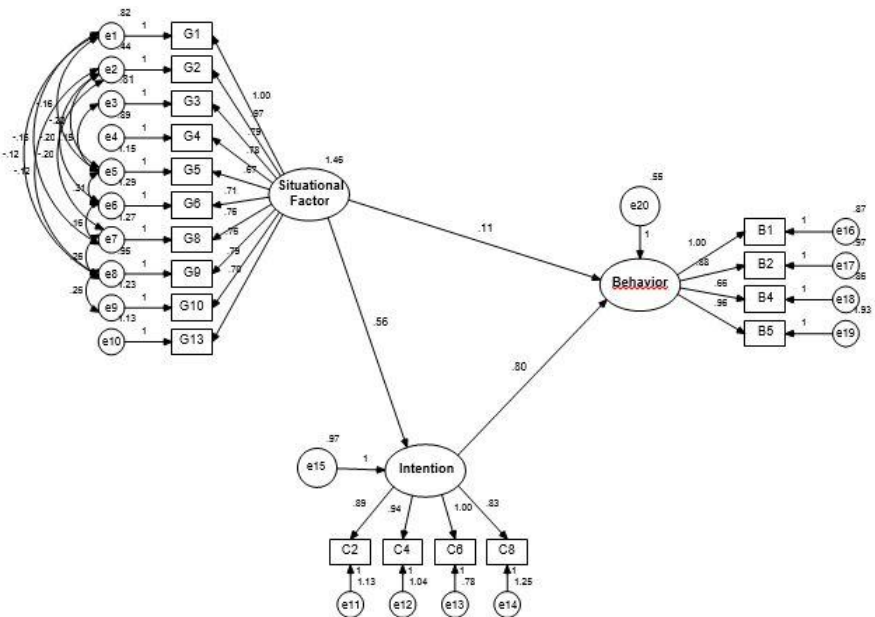


Figure 2: Unstandardized Model of Situational Factors produced by AMOS

Note: B1 – B5 are items measuring variable 'recycling behaviour'
 C2 – C8 are items measuring variable 'intention to recycle'
 G1 – G13 are items measuring variable 'situational factors'

After removing the items with factor loading of less than 0.6, the fitness index for the measurement model is 0.945, which is more than 0.9 and near to 1.0. This indicates that the proposed model is a very good fit to the data. The CMIN (Chi-sq) value divided by the degree of freedom is 3.3, which also indicates a good fit for the model.

This study is interested to prove that 'intention to recycle' construct mediates the relationship between 'situational factors' construct with 'recycling' construct. The variable 'intention to recycle' is said to have a mediating (intervening) effect in linking 'situational factors' to 'recycling behaviour' if the following three conditions occur. If the regression coefficient of 'situational factors' on 'recycling behaviour' is not significant, the regression coefficient of 'situational factors' on 'intention to recycle' is significant, and finally, the regression coefficient of 'intention to recycle' on 'recycling behaviour' is also significant.

Referring to Figure 2, it is found that the regression coefficient of situational factors on recycling behaviour is significant (p-value = 0.002), meaning that situational factors is a significant predictor of recycling behaviour, as have been claimed by Schultz et al. (1995).

The regression coefficient of situational factors on intention to recycle (p -value = 0.000) is also significant. Thus, situational factor is also a significant predictor of intention to recycle. Since the regression coefficient of intention to recycle on recycling behaviour (p -value = 0.027) is also significant, therefore, construct intention to recycle is a partial mediator in linking situational factors to recycling behaviour. Past literatures have shown that intention to recycle is an intervening variable or mediating variable between several personal characteristics, such as attitudes towards the behaviour and subjective norms (Ajzen, 1991), of consumers and recycling behaviour. However, the findings in this study show that intention to recycle is only a partial mediator, not a full mediator, between situational factors and recycling behaviour. However, all three hypotheses in this study are supported. Situational factor has significant and direct effect on both recycling behaviour and intention to recycle. This finding highlights very important information for all related bodies.

5.0 Conclusion and Recommendation

The results of this empirical study indicate that situational factors have significant influence on actual recycling behaviour. Furthermore, situational factors also have significant influence on consumers' intention to recycle. It means that the less the facilities provided to the consumers, and the more inconvenience felt by them in carrying out the process of recycling, the lower would be the participation in recycling. In addition, the respondents' intention to recycle has significant influence on their actual recycling behaviours. Conclusively, the study found that intention to recycle partially mediates the relationship between situational factors with the consumers' actual recycling behaviour. Intention to recycle will only be a full mediator when situational factors have a non-significant influence on recycling behaviour. Nevertheless, this study has highlighted significant policy implications as far as the development and implementation of publics' recycling policies and programs are concerned. It shows that consumers will actively engage in recycling when more facilities are provided. The government can manage to convince the consumers that recycling is not only good for the environment and themselves but is also a prosocial behaviour.

The findings of this study have provided the authorities with important information so that the local authorities could create and implement effective strategies in order to encourage active public participation in solid waste recycling, thus minimizing problems pertaining to waste management. Since consumers' perceived lack of facilities impacts consumers' intention to recycle, local governments must pay attention to the improvement and provisions of facilities for recycling, even if the services are provided by the private sectors. More collecting centres should be created to do recycling work, and make them more accessible to the consumers. Higher participation in recycling from consumers is crucial to minimize environmental degradation. Indeed, when we have better environmental quality, then we and the future generations will have better quality of life.

Since intention to recycle is only a partial mediator, further research should be carried out by considering other mediating or moderating variables, especially cross-cultural factors. More studies are recommended among other groups such as schools, universities, hospitals

and businesses to understand different recycling behaviours among different groups. Other components of situational factors could also be introduced in the study.

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