

Factors Influencing Sustainable Consumption of Malaysian Households from Perspectives of Income and Consumption Expenditure

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ABSTRACT

Sustainable consumption is an important issue that has gained increasing attention in recent years. This study identifies the factors influencing sustainable consumption among Malaysian households from the perspective of income and consumption expenditure among Malaysian households. A cross-sectional study was conducted among 700 households in eight districts in Perak using stratified random sampling to ensure socioeconomic diversity in representation. The findings show that monthly income ($B = 0.003$, $P\text{-value} = 0.001$), consumption expenditure ($B = -2.804$, $P\text{-value} = 0.006$), and number of children ($B = -1.229$, $P\text{-value} = 0.024$) influence sustainable consumption in Malaysian households. The findings contribute to a better understanding of sustainable consumption in Malaysia and provide policymakers and other stakeholders with valuable information for developing targeted interventions.

Keywords: sustainable consumption, income, consumption expenditure, multiple linear regression, Malaysian households

INTRODUCTION

Sustainable consumption is an increasingly important issue that has gained attention in recent years. Sustainable consumption is a driving force of the global economy in promoting sustainable household lifestyles [1]. Within the Malaysian context, households stand as critical units influencing the nation's economic growth, social dynamics, and environmental footprint [2]. The relationship between income, consumption expenditure, and sustainable consumption has never been more pertinent as Malaysia strives to strike a balance between economic progress and ecological preservation.

Rapid urbanisation, rising incomes, and technological advancements have propelled Malaysia into a new phase of development, altering consumption patterns and expenditure behaviours across various income strata [3]. As households experience shifts in income levels, their consumption habits inevitably transform, subsequently impacting resource utilisation, waste generation, and overall environmental impact [4]. Low-income households often prioritise basic needs, while higher-income groups indulge in more resource-intensive lifestyles. Thus, examining the interplay between income and consumption expenditure becomes crucial to understanding the disparities in sustainable consumption practices.

As Malaysia undergoes rapid urbanization, rising incomes, and technological advancements, consumption patterns and expenditure behaviors across various income strata are changing [1]. However, low sustainable consumption expenditure among Malaysian households remains a concern, particularly among low-income households. Understanding the relationship between income, consumption expenditure, and sustainable consumption is essential to identifying disparities in sustainable consumption practices. By analysing how different income groups allocate their resources and engage with consumer goods and services,

policymakers, researchers, and stakeholders can garner insights that inform targeted interventions and strategies [5]. This, in turn, can steer the nation towards a more sustainable trajectory where economic prosperity coexists harmoniously with reduced environmental impact. By understanding the level of sustainable consumption among Malaysian households, we can identify key areas that require attention and devise strategies to encourage more environmentally friendly and socially equitable consumption practices.

Problem Statement

The level of sustainable consumption among Malaysian households, viewed through the lens of income and consumption expenditure, presents a critical concern in the context of the nation's pursuit of balanced development. Malaysia's dynamic economic growth, urbanisation, and changing consumer behaviour have resulted in varying patterns of consumption across different income groups. The problem at hand lies in the disparities that emerge in sustainable consumption practices, driven by the diverse economic circumstances of households. As Malaysia advances towards achieving sustainable development goals, it faces the challenge of reconciling economic expansion with responsible resource utilisation and environmental preservation [6]. While higher-income households often exhibit greater purchasing power and engagement in resource-intensive consumption, low-income households focus on meeting basic needs with limited capacity to adopt sustainable practices [7]. This divergence raises concerns about the equitable distribution of the benefits of sustainable consumption and the potential exacerbation of socio-economic inequalities.

The level of sustainable consumption in Malaysian households from the perspectives of income and consumption expenditure presents several challenges and concerns. Unsustainable consumption patterns promote discouraging patterns of consumption with negative impacts on society and contribute to inequalities and poverty [1]. Achieving sustainable consumption patterns is more technically and politically complex than changing production patterns because it raises important issues such as human values, equity, and lifestyle choices [1]. The survey dataset on the level of sustainable consumption of Malaysian households from the perspective of income and consumption expenditure provides insights into the level of sustainable consumption among Malaysian households in terms of income and expenditure consumption [1]. The findings show that the level of sustainable consumption expenditure among households in Terengganu is still low. This suggests that there is a need to address the factors contributing to this low level of sustainable consumption expenditure and promote more environmentally friendly and socially equitable consumption practices among households in Malaysia.

Furthermore, the intricate interplay between income levels and consumption expenditure patterns underscores the need for a comprehensive understanding of consumer behaviour in Malaysia. A comprehensive investigation is required to identify the barriers that hinder the adoption of sustainable consumption practices across different income strata. In light of these challenges, this study aims to identify the factors that influence sustainable consumption behaviours among Malaysian households, specifically focusing on the role of income and consumption expenditure. Through an in-depth exploration of these factors, the research endeavours to unearth the underlying drivers of unsustainable consumption patterns and propose strategies to promote more responsible consumption practices that are accessible and equitable across different income groups. Ultimately, this research aims to speed the transition to a more resilient and sustainable society where economic growth is harmoniously balanced with social well-being and environmental preservation.

METHODOLOGY

A dataset has been collected primarily among 700 households in Perak, Malaysia, through a direct questionnaire. A questionnaire was adopted from [1]. The questionnaire was divided into several sections. Section A contains the characteristics of demographics; Section B refers to the profile of family members; Section C refers to information on sources of income of the household head; Section D contains questions on consumption allocation by categories; Section E concerns savings; Section F pertains to information on

household consumption patterns; and lastly, Section G concerns the quality of life among the households. This study employs a quantitative research methodology to identify the factors that influence sustainable consumption practices in Malaysia. There are ten variables included in this study, which are gender, age, marital status, employment, education, health, monthly income, saving, number of children, and monthly expenditure. This study carried out multiple linear regression (MLR) using IBM SPSS version 16.0. Multiple regression will help determine the extent to which income and consumption expenditure predict variations in sustainable consumption practices while controlling for potential confounding variables. The interpretation of the regression coefficients will provide information regarding the strength and direction of these relationships, possibly indicating positive or negative associations between income, consumption expenditure, and sustainable consumption behaviours. The general multiple linear regression model is as in (1).

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon \quad (1)$$

where

Y is the dependent variable,

X_1, X_2, \dots, X_n are the independent variables,

ε is the error term,

β 's are the regression coefficients with β_0 is the constant term

The initial procedure to apply this method is by exploring its assumptions. There are four assumptions that must be fulfilled first before performing Multiple Regression analysis to ensure the results are reliable and valid. The assumptions are as follows:

1. The error terms are normally distributed.
2. The error terms have constant variance.
3. No multi collinearity exists.
4. There is no outlier existing in the dependent variable.

RESULT

Results of normality test of residuals

The normal P-P plot for the residuals of the model has been developed to test the normality assumption as shown in Fig. 1. The closer the dot lie to the diagonal line, the closer to normal the residuals are distributed. In this study, the assumption of the normality for the residuals is not violated since all the dots are closer to the diagonal line.

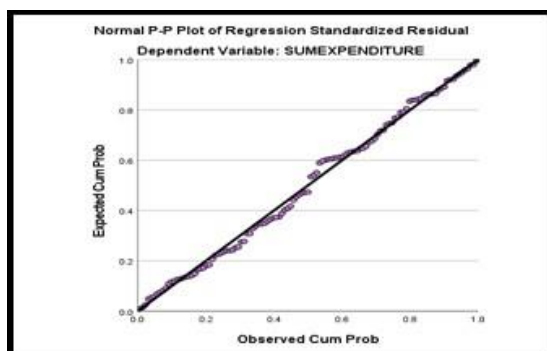


Fig.1 The normal P-P plot for the residuals of the model

Results of homoscedasticity

Fig. 2 shows the graph of “standardized residuals” against the “standardized predicted value” used to verify that the variance of the residuals is constant. The residuals were constant across the predicted values since the residuals fluctuated randomly around zero in an un-patterned fashion. Hence, the plot did not suggest violations of the assumptions of zero means and constant variance of the random residuals.

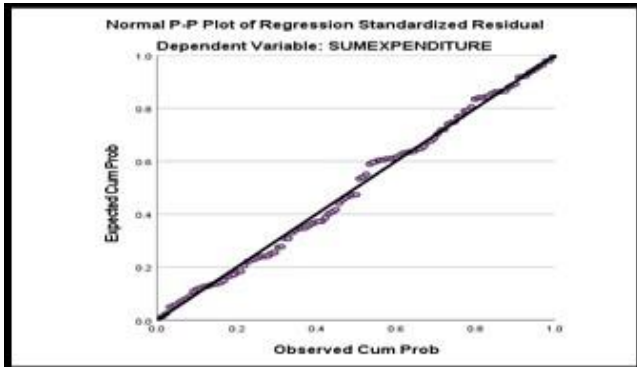


Fig. 2 Plot of “standardized residuals” against the “standardized predicted value”

Results of the multicollinearity test

Table 1 displayed the collinearity statistics that are referred to test the existence of multicollinearity. The analysis of collinearity results showed this assumption is met as Tolerance scores were over 0.2 meanwhile Variance Inflation Factor (VIF) scores were below 10. Hence, there is no multicollinearity exists in the data.

Table 1. Collinearity statistics

| Variables | Collinearity Statistics | |
|--------------------|-------------------------|--------|
| | Tolerance | VIF |
| Monthly income | 0.962 | 1.039 |
| Expenditure | 0.952 | 1.0501 |
| Number of children | 0.947 | 1.056 |

Multiple Regression Analysis

The F-Statistics obtained was 14.920 with a p-value is 0.001 which is less than the significance level of 0.05 indicating that the estimated regression is valid and statistically significant at the significance level of 0.05. Based on Table 2, the regression results showed that monthly income, number of children, and expenditure are significant at the level of 0.05 which implies these three variables are significantly affecting Malaysian households’ sustainable consumption.

Table 2. ANOVA for the model of regression in the sustainable consumption

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------|
| Regression | 7174.081 | 3 | 2391.360 | 14.920 | 0.001 |
| Residual | 18111.218 | 113 | 160.276 | | |
| Total | 25285.299 | 116 | | | |

Table 3 shows the factors contributing to sustainable consumption among Malaysian Muslim households. The results show that monthly income (B=0.003, P-value=0.001) has a positive correlation with sustainable

consumption among Malaysian households. This implies that as the monthly income of Malaysian household increase then sustainable consumption will also increase while other independent variables remain constant. However, the expenditure and the number of children have a negative and significant effect on sustainable consumption, with a negative unstandardized coefficient of -2.804 and -1.229 respectively. Overall, these coefficient estimates provide valuable information about the direction, magnitude, and significance of the predictors' impact on sustainable consumption. The equation was written as in equation (2).

$$\text{Sustainable consumption} = 141.618 + 0.003 (\text{Monthly income}) - 2.804 (\text{Expenditure}) - 1.229 (\text{Number of children})$$

Table 3. Model of regression in the total expenditure

| Model | Unstandardized | | Sig. |
|--------------------|----------------|-----------|-------|
| | B | Std Error | |
| Constant | 141.618 | 3.717 | 0.001 |
| Monthly income | 0.003 | 3.717 | 0.001 |
| Expenditure | -2.804 | 0.992 | 0.006 |
| Number of children | -1.229 | 0.536 | 0.024 |

CONCLUSION

This study essentially focused on the potential factors that may sustainable consumption among Malaysian households by considering some factors such as gender, age, marital status, employment, education, health, monthly income, saving, number of children, and monthly expenditure. Multiple Linear Regression using stepwise has been performed to achieve the objective stated in this study where it concluded that amongst nine independent variables monthly income, number of children, and monthly expenditure have significant effects on sustainable consumption among Malaysian households. The findings highlight the importance of income levels and spending habits in determining sustainable consumption practices. Monthly primary income was found to be a significant predictor of sustainable consumption, with higher-income households exhibiting more responsible and eco-conscious behaviours. In conclusion, this study provides valuable insights into Malaysia's sustainable consumption practices. By leveraging these findings and implementing the recommended strategies, policymakers and stakeholders can work towards fostering responsible and environmentally friendly consumption behaviours, resulting in a society that is more resilient and sustainable.

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