Environmental Concern and Ethical Consumption Behavior: A Perspective among Working Adults in Malaysia

Mom-Zee Tan[1]*, Luen-Peng Tan[2], & Kum-Lung Choe[3]

[1]*Department of Marketing, Teh Hong Piow Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Kampar Campus, Perak Malaysia.*
[2]*Department of Entrepreneurship and Supply Chain Management, Teh Hong Piow Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Kampar Campus, Perak Malaysia.*
[3]*Department of Business and Public Adminstration, Teh Hong Piow Faculty of Business and Finance, Universiti Tunku Abdul Rahman, Kampar Campus, Perak Malaysia.*
**Email: tanmz@utar.edu.my*

Abstract

Environmental concerns and consumption behavior have been widely studied, yet research on this relationship among Malaysian consumers remains scarce. Furthermore, the influence of environmental concerns on the social, environmental, and political dimensions of ethical consumption has not been individually examined. This study addresses that gap by modeling environmental concerns as a second-order construct to predict these three specific dimensions. Using the revised New Environmental Paradigm (NEP) scale, data was collected from working adults residing in urbanized cities via quota sampling. The Partial Least Squares – Structural Equation Modeling (PLS-SEM) approach was used for analysis, with findings confirming that environmental concerns significantly predict all dimensions of ethical consumption behavior. To enhance reliability, a PLSpredict analysis was also conducted. This methodological refinement provides a more robust framework, offering valuable insights for policymakers and businesses aiming to promote ethical consumerism by understanding the distinct motivations behind consumers' choices.

Keywords: Ethical consumption behavior; Environmental concern; Working adults

1. Introduction

Ethical consumerism has gained significant attention since 1989 in the United Kingdom to guide ordinary people in making sensible consumption decisions due to the environmental detrimental, social inequality, deteriorating workers' welfare, and working environment (Irving et al., 2002). However, drastic economic development has populous material culture, inducing endless consumer activities, including purchase, consumption, and disposal of goods and services. Fortunately, such culture has alerted consumers to look into their existing consumption practices and has started to embrace more sustainable practices (Arman & Mark-Herbert, 2024; Saxena et al., 2025). Against this backdrop, some consumers are paying closer attention and integrating ethical consumption into their daily lives, especially among Westerners (Hasan et al., 2023; Karimzadeh, 2023; Konuk, 2019). Lately, ethical consumption is also evolving in Asia countries as consumers are becoming more aware of the impacts of their purchases and seeking sustainable options (Ghali, 2021; Hasan et al., 2023; Nguyen et al., 2022).

Ethical consumption is a form of consumption whereby individuals appraise the production and consumption of products that integrate environmental and social concerns (Berki-Kiss & Menrad, 2022; Robichaud & Yu, 2022). Researchers point out that ethical consumption involves protecting the natural environment by reducing waste and supporting human welfare through fair trading, while boycotting products that give unfair treatment to workers' rights (Arman & Mark-Herbert, 2024; Colson, 2023; Šálková et al., 2024). Although ethical consumption is sometimes associated with the ideology and practices of "mindfulness consumption" (Li et al., 2021) or "voluntary consumption" (Shaw and Newholm, 2002), Szmigin and Carrigan (2006) postulate that it is different from anti-consumption as individuals still consume actively but incorporate non-economic considerations in making consumption decisions. Hence, ethical consumption is a form of consumption where individuals take in additional factors when making consumption decisions, including their social, environmental, and political impact, to mitigate the environmental and social issues arising from consumption behavior (Harrison et al., 2005).

Within the ethical consumption literature, environmental concern is one of the determinants that guide human behavior towards broader ethical responsibility (Cruz & Manata, 2020; Gelibolu & Mouloudj, 2025; Xu et al., 2021). Research on environmental concerns has become the subject of study because persistent human well-being and health, economic and social stability, and sustainable development are built on this basis. Dunlap and Jones (2002) elucidate the imperative of environmental concern as it relates to individuals' degree of awareness of environmental problems, their supporting efforts to mitigate the problems, and personal willingness to solve them. Even though many studies have examined the relationship between environmental concern and ethical consumption behavior (An & Kim, 2022; Cruz & Manata, 2020; Maduku, 2024; Xu et al., 2021). However, Hawcroft and Milfont (2010) contend that the anarchy state of the environmental concern measurement scale brings difficulty in comparing results across studies. There are several prevalent scales, such as the Environmental Concern Scale by Schultz (2001), The Value Orientation Scale by Stern et al. (1993), The Anthropocentric and Ecocentric Attitudes Scales by Thompson and Barton (1994), The New Environmental Paradigm Scale (NEP) by Dunlap and Van Liere (1978), and the New Ecological Paradigm Scale (revised NEP) by Dunlap et al. (2000). The absence of a standardized measurement scale causes difficulty in comparing the research findings (Lou & Li, 2021; Zollo, 2021) and distorting the ability to understand the nuances of environmental concern in the ethical consumption context. Consequently, it impedes the development of effective strategies and interventions to facilitate ethical actions.

To address the gap of inconsistent measurement scale, researchers (e.g., Dunlap et al., 2000; Dunlap & Jones, 2002; Hawcroft & Milfont, 2010; Lou et al., 2022; Lou & Li, 2022; Stern et al., 1995) recommend that future researchers use the revised NEP, which consists of five facets (i.e., limits to growth, anti-anthropocentrism, the nature's balance, anti-exceptionalism, and possibility of eco-crisis) to examine environmental concern. Additionally, Alibeli and White (2011) also mention that the complexity of environmental concern should be reflected through a multidimensional facet, instead of a unidimensional fixed phenomenon. Since environmental concern is imperative in the literature of ethical consumption behavior, this study follows the suggestion from past researchers by using the most widely adopted measurement scale (Hawcroft & Milfont, 2010; Lou et al., 2022; Milfont & Duckitt, 2010) which is the revised NEP scale by Dunlap et al. (2000). Also, we treated the revised NEP scale as a second-order higher construct following the recommendation from Alibeli and White (2011) and Amburgey and Thoman (2012) by combining five distinct facets rather than a

unidimensional phenomenon to capture the complex and multifaceted nature of environmental attitude. Besides that, a vast number of past studies on ethical consumption behavior have rarely paid attention to the different dimensions, namely the environmental, political, and social dimensions, as proposed by Toti and Moulins (2016), except for a recent study by Ghali (2021). Harrison et al. (2005) and Toti and Moulins (2016) urge researchers to examine the dimensions independently to address a holistic approach to ethical consumption behavior.

Hence, this study aims to adopt the revised NEP scale as a second-order higher construct to represent the environmental concern in examining its relationship with the three dimensions of ethical consumption behavior. Theoretically, this study could offer a new perspective on the environmental concern among working adults toward the three dimensions of ethical consumption behavior. In addition, this study is among the pioneer studies to offer such a perspective because the revised NEP is used. Practically, this study could offer impactful insights to business practitioners in framing effective marketing and communication strategies to facilitate ethical consumption behavior, as well as whether to focus on environmental, political, or social dimensions when promoting different ethical consumption domains.

2. Literature Review

2.1 Ethical consumption behavior

Ethical consumption is a form of consumption practice that considers the self-responsibility for the environment and society (Carrington et al., 2021; Casais & Faria, 2022; Šálková et al., 2024). Generally, the concept of ethical consumption delineates a sense of taking care of natural resources from destruction and depletion, while avoiding inequality, injustice, and exploitation in society (Berki-Kiss & Menrad, 2022; Gelibolu & Mouloudj, 2025; Ghali, 2021). In light of this, Carrington et al. (2020) and Kutaula et al. (2024) contend that researchers are mostly studying various factors that impact consumption from environmental and societal perspectives. For instance, consumers who are embracing ethicality are more attentive to the consequences of their purchasing and consumption decisions by expressing their concerns via different actions (i.e., co-sharing, buying from thrift shops, reducing ecological footprint, prioritizing workers' welfare, actively participating in environmental-related campaigns, etc.) to reduce anthropogenic impacts on the environment (Karimzadeh & Boström, 2023; Kutaula et al., 2024).

However, Toti and Moulins (2016) assert that ethical consumption behavior comprises three dimensions based on individuals' interests and motivations. According to Toti and Moulins (2016), the environmental dimension relates to the conservation of a balanced ecosystem, the political dimension relates to the dispute of a product's nature or business initiative, and the social dimension relates to justice and equality regards consumption decisions. The political dimension is aligned with the political consumerism, such as boycott and buycott (Copeland & Boulianne, 2022; Rössel & Patrick, 2018), as the individuals take care of their own welfare in addition to other human and non-human species. Instead of conceptualizing ethical consumption behavior solely from the environmental and social dimensions, including the political dimensions, it provides a holistic understanding and enriches the literature.

2.2 Environmental Concern

Research on environmental concerns has prevailed since the 1960s. A vast study affirms the explanatory power of environmental concern on ethical consumption behavior (Lou & Li, 2021; Schultz, 2001; Tomşa et al., 2021; Xu et al., 2021). In a study by Maduku (2024), the researcher reveals that environmental concern influences sustainable consumption among South African consumers. Although environmental concern has always been treated as a predictor of ethical consumption behavior, however, for years, researchers have defined and measured environmental concerns heterogeneously (Fransson & Gärling, 1999) to suit different study contexts. Such inconsistency has drawn the argument on the research findings.

Lately, several researchers (i.e., Lou et al., 2022; Xiao et al., 2019) have shown that environmental concern is moving from a specific attitude toward environmental behavior to a new way of thinking that is the NEP. Following the NEP, Dunlap and Jones (2002) defined environmental concern as the intensity of an individual's awareness regarding environmental problems and their endeavors and willingness to solve such problems. Lou et al. (2022) highlight that consistently adapting the NEP scale as the proxy of environmental concern could reduce the confounding effects compared to using different measurement scales. The NEP recognizes the interconnectedness of the human-nature relationship without prioritizing human interests over the natural environment. It discusses the growth limitation and rejects the precedence of human power over nature (Xiao et al., 2019). As updated by Dunlap et al. (2000), the revised NEP scale comprises five facets, namely the reality of limits to growth (LTG), anti-anthropocentrism (AA), the fragility balance of nature (NB), anti-exemptionalism (AE), and the possibility of eco-crisis (Crisis). In order to achieve consistency in conceptualizing and measuring environmental concern, this study follows the suggestion from past researchers (i.e., Hawcroft & Milfont, 2010) by using the revised NEP to explain and predict the dimensions of ethical consumption behavior. Thus, we hypothesize that:

H1: Environmental concern is positively related to the social dimension of ethical consumption behavior.
H2: Environmental concern is positively related to the environmental dimension of ethical consumption behavior.
H3: Environmental concern is positively related to the political dimension of ethical consumption behavior.

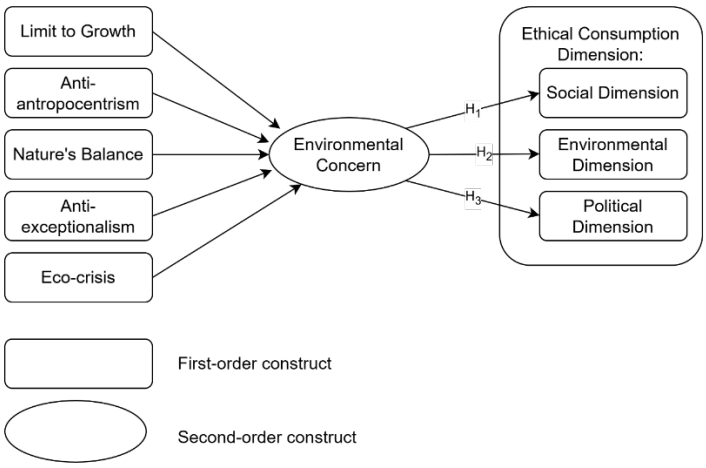

Figure 1: Conceptual model of the research

3. Research Methodology

3.1 Measurement Development

For this study, environmental concerns were measured by using the five facets of the NEP scale, which was revised by Dunlap and the team in 2000. In line with the suggestion of Amburgey and Thoman (2012), environmental concerns were measured as a higher-order construct with five first-order constructs: the reality of limits to growth, anti-anthropocentrism, the fragility of nature's balance, anti-exemptionalism, and the possibility of an eco-crisis. Each of the first-order constructs was measured with three reflective items adapted from Dunlap et al. (2000). Moreover, ethical consumption behavior is measured using Toti and Moulin's (2016) scale, which consists of three dimensions: social, environmental, and political to showcase respondents' commitment in reducing environmental and social issues (e.g., avoiding products that give unfair treatment to their employees, not consuming excessively, supporting fairly traded products, and choosing environmentally friendly products).

A pre-test was carried out. Two academic experts from ethical consumption research and one sustainability and climate change specialist were approached to assess the content validity, reliability, and clarity of the items. Overall, the content validity of the constructs was well-organized, but several items needed to be restructured to enhance clarity. Based on the suggestions, the items involved were restructured, and pilot testing on 38 respondents was implemented. The respondents were clear about the instructions and questions and felt at ease with the questionnaires. Based on the pilot testing results, composite reliability ranged between 0.663 (environmental dimension) to 0.888 (the possibility of an eco-crisis). As suggested by Nunnally and Bernstein (1994), composite reliability values of 0.60 to 0.70 are acceptable, and a value between 0.7 and 0.90 is considered satisfactory. Therefore, the items were reliable as the composite reliability of the constructs exceeded the threshold of 0.6 as suggested. The finalized questionnaire is ready for full-scale data collection.

3.2 Data Collection and Sample Characteristics

The data was collected physically from the most urbanized cities in Malaysia: Putrajaya, Kuala Lumpur, Selangor, Malacca, and Pulau Pinang. The target respondents are working adults aged 25 to 64 years old who are currently residing in these cities. The quota sampling technique was used to ensure the number of respondents from each city was proportionate to obtain a high-quality representative sample. Consent was first obtained from the respondent, while we also defined ethical consumption with examples, and they were required to indicate their understanding of ethical consumption before answering the questionnaire. A total of 487 questionnaires were distributed, and 349 were returned. The returned responses were then checked for completeness, screened out responses with 10 percent or above unanswered questions, and outliers. Out of 349 questionnaires returned, 16 were incomplete questionnaires and 5 were outliers. 328 responses were usable for data analysis purposes, which counted for a 67.35% response rate.

The sample consists of 174 (53%) males and 154 (47%) females. In terms of age, 69 (21.0%) respondents were aged 55-64 years old, followed by 75 (22.9%) respondents aged 45 – 54 years old, 90 (27.4%) respondents aged 25-34 years old, and 94 (28.7%) respondents aged 33 – 44 years old. With respect to ethnicity, most respondents are Malay, which is 163 (49.7%), 99 (30.2%) Chinese respondents, 42 (12.8%) Indian respondents, and the least 24 (7.3%) indicating

other ethnicity. For marital status, most of the respondents are married with kid(s), which is 181 (55.2%) responses, with 9 (2.7%) indicating other. There are 100 (30.5%) respondents holding a diploma, 99 (30.2%) respondents obtained a bachelor's degree, 70 (21.3%) respondents who are master's degree holders, 40 (12.2%) respondents with SPM qualification, 16 (4.9%) respondents holding a doctorate, and lastly 3 (0.9%) respondents fall under other categories. Most of the respondents, 78 (23.8%) incomes that ranged from RM3,001 to RM4,500, followed by 54 (16.4%) respondents who earned an income between RM6,001 to RM7,000. There are two groups of respondents, with 53 (16.2%) respondents which are RM1,501 to RM3,000 and RM4,501 to RM6,000. Respondents with income RM7,501 to RM9,000 and RM9,000 and above also have the same responses, which is 45 (13.7%) responses.

4. Data Analysis

4.1 Common Method Bias

Given that the self-administered survey was used, while both independent and dependent variables were collected simultaneously from the same respondents, the common method bias (CMB) was addressed to ensure the reliability and validity of the empirical results (Kock et al., 2021; MacKenzie & Podsakoff, 2012; Podsakoff et al., 2003). Following the suggestions from Podsakoff et al. (2003), four remedies were taken in addressing CMB issues. First, a clear definition and example of ethical consumption were presented to the respondents before they answered the questionnaire to avoid discrepancies between respondents' understanding of ethical consumption with the questions being asked. Second, the measurement scale of environmental concerns consists of 7 negative statements to ensure respondents pay closer attention to answering questions, to reduce response bias (Baumgartner & Steenkamp, 2001). Third, the measurement scales for both constructs that were adapted have been validated. At the same time, pre-testing and pilot testing were conducted to make sure respondents understood the wording and instructions given without confusing them. Fourth, the respondent was well informed that their details are to be kept confidential, anonymous, and there is no 'right' or 'wrong' answer.

4.2 Data Analysis and Results

This study employed the PLS-SEM approach to estimate causal relationships while maximizing the explanation of the variance of the dependent variable, which is used to predict the relationship between variables. SmartPLS 4 was used to analyze the data. There are two stages involved in data analysis, which are an assessment of the measurement model to confirm the reliability and validity of the measurement model, and an assessment of the structural model to test the hypotheses (Hair et al., 2021; Sarstedt et al., 2022).

4.2.1 Assessment of Measurement Model

The reliability of each item was measured using composite reliability as recommended by Ramayah et al. (2018). Table 1 exhibits that the composite reliability is above the threshold of 0.7 (Ramayah et al., 2018), ranging from 0.803 to 0.932. Additionally, the AVE for all constructs has met satisfactorily with an AVE greater than 0.5 (Hair et al., 2019), ranging between 0.577 to 0.820. For factor loadings, except AA2 (0.687) and NB2 (0.707) less than 0.708, the rest of the

items achieved loadings above 0.708. However, both items are kept, given that Cronbach's alpha, composite reliability, and AVE were achieved.

Table 1: Internal Consistency, Factor Loadings, and Convergent Validity Statistics

First-order constructs	Items	Loadings	Composite Reliability	AVE
Limit to growth (LTG)	LTG1	0.915	0.892	0.735
	LTG2	0.728		
	LTG3	0.915		
Anti-anthropocentrism (AA)	AA1	0.810	0.803	0.577
	AA2	0.687		
	AA3	0.777		
The fragility of nature's balance (NB)	NB1	0.927	0.897	0.746
	NB2	0.707		
	NB3	0.937		
Anti-exemptionalism (AE)	AE1	0.865	0.873	0.697
	AE2	0.799		
	AE3	0.839		
The possibility of eco-crisis	Crisis1	0.935	0.899	0.750
(Crisis)	Crisis2	0.723		
	Crisis3	0.924		
Social dimension	ECB_S1	0.889	0.929	0.813
(ECB_S)	ECB_S2	0.899		
	ECB_S3	0.917		
Environmental dimension	ECB_E1	0.899	0.932	0.820
(ECB_E)	ECB_E2	0.926		
	ECB_E3	0.891		
Political dimension	ECB_P1	0.815	0.916	0.686
(ECB_P)	ECB_P2	0.782		
	ECB_P3	0.877		
	ECB_P4	0.816		
	ECB_P5	0.847		

Discriminant validity was assessed using the HTMT ratio as suggested by Henseler et al. (2015) to ensure that a construct is distinct from other constructs and exhibits a stronger relationship with its own indicators rather than with any other construct (Hair et al., 2022). Table 2 exhibits the HTMT result, showing that all the HTMT ratio values are lower than the threshold of 0.9, indicating that discriminant validity is established between the constructs (Franke & Sarstedt, 2019). The construct of ethical consumption behavior is modeled as a first-order construct, while environmental concerns are modeled as a second-order construct.

Table 2: Heterotrait-Monotrait Ratio (HTMT)

	LTG	AA	NB	AE	Crisis	ECB_S	ECB_E	ECB_P
LTG								

AA	0.491						
NB	0.883	0.466					
AE	0.861	0.734	0.659				
Crisis	0.878	0.549	0.892	0.666			
ECB_S	0.627	0.425	0.505	0.451	0.573		
ECB_E	0.479	0.482	0.317	0.395	0.365	0.727	
ECB_P	0.392	0.449	0.275	0.363	0.300	0.643	0.862

4.2.2 Assessment of the Second-order Model

Environmental concerns were modelled as a formative second-order construct with five first-order reflective facets: the reality of limits to growth, anti-anthropocentrism, the fragility of nature's balance, anti-exemptionalism, and the possibility of an eco-crisis (Amburgey & Thoman, 2012). A disjoint two-stage approach was used in assessing environmental concerns because it offers the advantage of estimating a more parsimonious model (Cheah et al., 2019).

4.2.3 Multicollinearity

High correlations between the indicators of the formative measurement model are not preferable (Hair et al., 2014). The variance inflation factor (VIF) was assessed to ensure there is no collinearity issue, where each predictor construct in the regression model is not highly correlated with the other. Table 3 illustrates the VIF value of the formative constructs. According to Ramayah et al. (2018), a VIF value less than 5 indicates that collinearity is not an issue between the constructs' formative indicators.

Table 3: Assessment of VIF

Formative Constructs	**VIF values**
Limit to growth (LTG)	3.483
Anti-anthropocentrism (AA)	1.406
The fragility of nature's balance (NB)	2.819
Anti-exemptionalism (AE)	2.259
The possibility of eco-crisis (Crisis)	2.887

4.2.4 Evaluation of Significance and Relevance of Indicator Weights

The significance and relevance of indicator weights were assessed using the bootstrapping procedures. Table 4 shows that all the weights of formative indicators have significant t-values, denoting the empirical support to retain all the indicators (Hair et al.,2014). Additionally, the p-values and confidence intervals of the formative constructs offered additional evidence of the significance of weights because there is no zero figure between the lower and higher values of the confidence intervals.

T**able 4:** Testing of Significance of Weights and Confidence Interval

Relationship	**Std. Beta**	**Std. Dev**	**T-values**	**p-values**	**95% BCa CI**
LTG -> Environmental Concern	0.297	0.016	18.113	0.000	(0.272, 0.326)
AA -> Environmental Concern	0.227	0.027	8.288	0.000	(0.182, 0.272)
NB -> Environmental Concern	0.227	0.020	11.431	0.000	(0.193, 0.259)
AE -> Environmental Concern	0.234	0.020	11.794	0.000	(0.201, 0.266)

Crisis -> Environmental Concern	0.253	0.017	15.057	0.000	(0.225, 0.281)

4.3 Assessment of the structural model

To assess the structural model, SmartPLS 4.0 software was used. Following the suggestion from Becker et al. (2023), the significance of the path coefficients was assessed using a bootstrapping method with 10,000 resamples. The relationship between hypothesized hypotheses was depicted in Table 5. The path coefficient findings in Table 5 show that environmental concern is positively related to the environmental, political, and social dimensions of ethical consumption behavior. The results indicate that environmental concern is positively related to the environmental dimension of ethical consumption behavior (β = 0.423, $p < 0.05$), hence, H_1 is supported. Similarly, environmental concern is also positively related to the political dimension (β = 0.375, $p < 0.05$) and the social dimension (β = 0.551, $p < 0.05$) of ethical consumption behavior, respectively. Thus, H_2 and H_3 are supported. Based on the coefficient of determination (R^2), environmental concern explained 30.6% of the variance of the social dimension, followed by the environmental dimension (21.6%) and the political dimension (16.4%). This denotes that environmental concern substantially explains the social dimension and moderately explains the environmental and political dimension (Cohen, 1988). Next, environmental concern has a large effect size towards the social dimension (f^2 = 0.445), while environmental concern has a medium effect size towards the environmental dimension (f^2 = 0.280) and political dimension (f^2 = 0.200) (Cohen, 1988).

Table 5: Structural model analysis

Hypothesis	**Std.Beta**	**Std. Dev**	**T-value**	**P value**	**PCI LL**	**PCI UL**	f^2	R^2	**Result**
H_1: EC -> ECB_E	0.423	0.048	8.798*	0.000	0.369	0.535	0.280	0.216	Supported
H2: EC -> ECB_P	0.375	0.048	7.789*	0.000	0.31	0.472	0.200	0.164	Supported
H3: EC -> ECB_S	0.551	0.037	15.081*	0.000	0.477	0.609	0.445	0.306	Supported

Note: *p<0.05

Furthermore, predictive relevance (Q^2) was computed using a blindfolding procedure (Chin, 1998) to assess the model's predictive quality. As illustrated in Table 6, the Q^2 predictions for each item are greater than zero, indicating that the model has predictive relevance.

Table 6: Predictive relevance (Q^2)

Item	**Q^2predict**	**Item**	**Q^2predict**	**Item**	**Q^2predict**
ECB_E1	0.137	ECB_P1	0.066	ECB_S1	0.251
ECB_E2	0.174	ECB_P2	0.047	ECB_S2	0.201
ECB_E3	0.098	ECB_P3	0.123	ECB_S3	0.264
-		ECB_P4	0.061	-	

4.4 Discussion

To examine the relationship of environmental concern towards the three dimensions of ethical consumption behavior, the revised NEP scale is used and treated as a second-order higher construct to represent the environmental concern. Among the three dimensions, environmental concern has the strongest relationship with the social dimension ($\beta = 0.551$, $p < 0.05$), followed by the environmental dimension ($\beta = 0.423$, $p < 0.05$), and lastly the political dimension ($\beta = 0.375$, $p < 0.05$). These results are consistent with earlier work by Toti and Moulin (2016) and Ghali (2020), affirming that individuals who exhibit greater concern for environmental problems have a propensity to engage in ethical consumption across different domains.

First and foremost, the results of this study found that the environmental concern is positively related to the environmental dimension ($\beta = 0.423$, $p < 0.05$), hence, H_1 is supported. The positive relationship between environmental concern and the environmental dimension implies that individuals who are concerned about the environment or worry about the quality of human life in the future are more likely to engage in green consumption, simplify their daily lives, and embrace renewable energy (Ghali, 2019). This study result is similar to Gareiou and Zervas (2021) in Greece that Greeks believe the earth is reaching its limit in supporting the human population, and humans are abusing the environment. Nonetheless, they agreed that humans are bound to nature's laws, and the environment is fragile in nature. The researchers also reported that the continuance of harmful human activities sooner or later will cause severe calamities to the planet. Such worldviews trigger the Greeks' concern about the current state and future of nature and lead to more conservative consumption patterns.

Second, H_2 is supported as environmental concern is positively related to the political dimension ($\beta = 0.375$, $p < 0.05$). The finding is consistent with the political consumerism study by Copeland and Boulianne, (2022); McCright et al. (2016) and Rössel and Patrick (2018). The previous literature documented that individuals who are involved in political consumption tend to engage in boycotts, buy to support a good practice (buycott), as well as engage in discursive political consumerism. Political consumerism frames the consumption selection to demonstrate individuals' political and ethical stances, which in turn influence their purchasing decisions beyond a rationalist consumption perspective (i.e., maximize personal self-interest and utility) (Zollo, 2021). Copeland and Boulianne (2022) point out that political consumerism will eventually transform the market into a space for political action. In this context, ethical consumption goes beyond the typical cost-benefit relationship (Carrington et al., 2021) as individuals consider the broader perspectives when making consumption choices to align with their values, this is similar to the concept of political consumerism. For instance, Konuk (2019) asserts that individuals with a higher environmental concern score demonstrate a willingness to pay and buy fairly traded food compared to those with a lower environmental concern score. In a similar vein, other researchers (i.e., Kushwah et al., 2019a, 2019b; Shin et al., 2017) argue that environmental concern is positively related to organic food consumption and show supportive behavior in local food consumption.

Third, the relationship between environmental concern and the social dimension was positively related, hence H_3 is supported ($\beta = 0.551$, $p < 0.05$). Environmental concern and the social dimension of ethical consumption behavior are related, as individuals consider the broader impact of consumption beyond self-interest (Carrington et al., 2021; Gareiou & Zervas, 2021). Zollo et al. (2021) explains that the revised NEP highlights the interconnectedness between humans and society, which triggers broader ethical consumption behavior, including fighting for social justice for labor, human rights, and saying no to child

labor. Such socially motivated consumption aligns with the argument of Andorfer and Liebe (2013) that individuals who transact in moral markets recognize the connection between environmental degradation and social justice. In the Tunisian context, Ghali (2020) discloses that taking care of the environment and society is part of the consideration among environmental concern individuals. This group of individuals is aware of current environmental problems and hence engages in supporting sustainable development by taking actions to preserve and conserve resources. Similar to Toti et al. (2021), who postulate that individuals with a sense of empathy will uphold the rights of marginal groups by seeking social equality and justice through their consumption decisions.

5. Conclusions

First of foremost, the findings of this study offer an insightful outcome to the theoretical development of ethical consumption behavior by validating the usability of the revised NEP scale in representing environmental concern across environmental, political, and social dimensions of ethical consumption behavior. The prevalence of ethical consumption studies mainly focuses on different contexts, but it merely examines the multifaceted nature of ethical consumption behavior, particularly in the Malaysian context. This study is among the few that examine environmental concern by using the revised NEP on the three dimensions of ethical consumption behavior, offering a new perspective on the way developing nations preserve and conserve the planet that we live on. Although Malaysians are aware of the environmental problems and show an improving willingness to buy eco-friendly products, but concentration on the ethical aspect in overcoming environmental problems is still in the infancy stage among Malaysians. Furthermore, different strengths of the relationship between environmental concern and ethical consumption dimensions imply that environmental concern may interact uniquely with specific ethical consumption behavior, suggesting that future researchers treat ethical consumption behavior as a multidimensional construct rather than a unidimensional construct.

From a practical perspective, the results of this study offer insightful value for business operators and policymakers aiming to promote ethical consumption. For business operators, they need to communicate and bring the concept of ethical consumption closer to Malaysian consumers because this presents a strategic opportunity to enhance their brand reputation, further engage with customers, and foster long-term success through attracting ethically driven market segments. Importantly, business operators shouldn't emphasize environmental protection but also human and fair labor rights, as well as child-free labor practices, to appeal to broader ethical concepts to consumers. Communicating their commitment to ethical practices (i.e., sustainability practices and ethical sourcing policies), by providing detailed product information (e.g., fair trade certified, organic certified, eco-friendly products, support for social causes, etc.) could increase trust and encourage greater support from consumers. Besides, business operators could differentiate their business from competitors, aligning themselves with progressive causes such as climate justice and corporate political responsibility. Such a strategy might win the heart of consumers who translate their environmental concern into political consumption behavior, and also among informed consumers who are embracing ethical consumption choices. Of course, building an ethical practices image improves the avoidance of negative publicity and is remarkably

valuable in crisis management. On the other hand, policymakers should introduce policies to allow ethical consumption to become more accessible and scalable. Policies that support and enhance the relationship between environmental concern and ethical consumption are required. For instance, mandating the business operators to display clear labelling, disseminate transparency of the supply chain, and disclose their environmental footprint could empower consumers to make sound ethical decisions that are in line with their environmental values. Moreover, incentivize ethical business practices like giving subsidies, tax incentives, or certifications to encourage businesses to adopt environmentally and socially responsible practices to enhance the consumers' demand for ethical products. Nonetheless, integrating sustainability into public education and campaigns promoting the interconnectedness of environmental, political, and social issues might encourage consumers to view consumption decisions as civic responsibilities.

Despite this study offering several contributions, it comes with three limitations, and future research should address these limitations. First, this study aims to examine complex behavior under an ethical consumption context, whereby the chosen respondents must understand the concept of ethical consumption behavior before participating in this study. This requirement posed a challenge in the data collection process. Although the definition and briefing were given to the respondents, they still need more guidance when answering the questionnaire. To overcome the first limitation, instead of using abstract questions, designing a questionnaire based on real-world scenarios will allow the researchers to create a real-life scenario that better captures the nuances of respondents' daily situations (Utomo et al., 2022). An example of a real-world scenario questionnaire is "If you found out a company was using child labor in their production, would you be less likely to buy their product?" Second, the causal relationship between environmental concern and ethical consumption behavior was based on predictive relevance (Q^2), ignoring the out-of-sample predictive capability. Future studies need to include the out-of-sample predictive power, as suggested by Shmueli et al. (2019) to explain how well a model's ability to precisely predict a new dataset. Third, the model and causal relationship of this study focus on working adults residing in urbanized cities from heterogeneous cultures, not allow us to generalize the study results. Future research could study consumers who are residing in areas with different population densities and employment opportunities by focusing on different cultural contexts.

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