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**Research Article**

# Factors That Determine Youth's Consumption Behaviour In A Sustainable Way

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**ABSTRACT**

Sustainable consumption behavior among youth is a critical aspect of addressing contemporary environmental challenges. This study employs Structural Equation Modeling (SEM) to investigate the determinants that influence sustainable consumption behavior among young individuals, with a focus on factors supportive of environmental organizations, subjective norms, attitude toward sustainable purchasing, perceived marketplace influence, environmental concern, and sustainable purchase behavior. Firstly, the study explores the role of factors supportive of environmental organizations. Findings reveal that youth who actively support and engage with environmental organizations are more likely to adopt sustainable consumption behaviors. These organizations serve as valuable platforms for educating and mobilizing the youth towards eco-conscious choices. Subjective norms are examined as an important determinant. The study suggests that when young individuals perceive that their peers and social circles endorse sustainable consumption practices, they are more inclined to follow suit. Peer influence plays a pivotal role in shaping their attitudes and behaviors in favor of sustainability Thirdly, attitude toward sustainable purchasing is investigated as a key factor. Results indicate that a positive attitude towards environmentally. The study delves into the influence of perceived marketplace factors. Young consumers who believe that businesses play an active role in promoting sustainability are more likely to engage in eco-friendly purchasing behaviors. This underscores the importance of corporate responsibility and sustainability initiatives. Fifthly, environmental concern is examined as a driving force for sustainable consumption behavior. The findings highlight that higher levels of environmental concern are positively associated with sustainable purchase behaviors. Young individuals who express genuine concern for the environment are more motivated to make eco-conscious choices.

**Keywords**: Behaviours, Sustainable Consumption, Structural Equation Modeling (SEM)

## Introduction

In an era marked by accelerating environmental challenges, sustainable consumption behavior among youth has emerged as a pivotal force in shaping the future of our planet. As the custodians of tomorrow's world, young individuals play a critical role in determining the trajectory of environmental sustainability. Their choices and behaviors not only impact the present but also hold the key to a more sustainable future. Understanding the determinants that drive sustainable consumption behavior among youth is a multifaceted and pressing concern for scholars, policymakers, environmental organizations, and businesses alike.

Sustainability is no longer an abstract concept but a concrete necessity, driven by global concerns over climate change, resource depletion, and ecological degradation. Young people, who are increasingly aware of these issues, are demanding a fundamental shift in the way we consume and interact with our environment. They are the vanguards of change, pushing for more responsible, eco-conscious choices in their daily lives.

This study employs Structural Equation Modeling (SEM) to unravel the intricate web of factors that influence sustainable consumption behavior among youth. SEM is a robust statistical technique that allows for the simultaneous examination of multiple variables and their relationships, offering a comprehensive view of the

dynamics at play. By adopting this approach, we can gain deeper insights into the complex interplay of psychological, social, and environmental factors that underlie sustainable consumption choices among young individuals.

The determinants under scrutiny in this study encompass a range of factors, each contributing uniquely to the understanding of youth sustainable consumption behavior. These determinants include factors supportive of environmental organizations, subjective norms, attitude toward sustainable purchasing, perceived marketplace influence, environmental concern, and sustainable purchase behavior. The examination of these factors will enable us to construct a holistic framework for comprehending the drivers of sustainable consumption behavior among youth.

The role of environmental organizations as a driving force behind sustainable consumption behavior is a focal point of investigation. These organizations act as catalysts for change, providing a platform for education, advocacy, and action. They engage youth in meaningful ways, fostering a sense of responsibility towards the environment and empowering them to make informed choices. Subjective norms, or the perception of what peers and social circles endorse, is another determinant of interest. Young individuals are profoundly influenced by their social networks, and when they perceive sustainability as a shared value, they are more likely to adopt sustainable consumption practices. Understanding the role of peer influence can inform strategies to harness social dynamics for the promotion of eco-conscious behaviors.

Attitude toward sustainable purchasing is a key factor that shapes consumption behavior among youth. A positive attitude towards environmentally friendly products and practices can act as a powerful motivator. It is essential to explore how attitudes are formed and how they influence actual choices, providing valuable insights for educational campaigns and marketing strategies. The study also delves into the influence of perceived marketplace factors. Youth consumers who believe that businesses are actively engaged in promoting sustainability are more likely to engage in eco-friendly purchasing behaviors. The corporate sector plays a pivotal role in shaping consumer choices, and understanding this influence is crucial for fostering a sustainable marketplace.

Environmental concern, as a deeply rooted value, is explored as a driving force for sustainable consumption behavior. Higher levels of environmental concern are expected to positively correlate with sustainable purchase behaviors, reflecting a genuine commitment to ecological responsibility. Lastly, the study examines the direct link between environmental concern and sustainable purchase behavior, shedding light on the intrinsic motivations of young individuals who prioritize sustainability in their choices.

In conclusion, this study embarks on a comprehensive exploration of the determinants responsible for sustainable consumption behavior among youth. The findings promise to offer valuable insights and guidance for policymakers, environmental organizations, and businesses seeking to engage and empower the younger generation in the journey towards a more sustainable future. Understanding these determinants is not only an academic pursuit but a pressing necessity to channel the enthusiasm and ideals of youth towards meaningful, sustainable actions that will shape the world they inherit.

## Review of literature

Vermeir and Verbeke (2006) conducted a comprehensive study on sustainable food consumption and the "attitude-behavioral intention" gap. They found that understanding the psychological factors influencing youth's choices in sustainable food consumption is crucial. Their work emphasized the need to bridge the gap between consumers' attitudes and their actual behaviors. Thogersen (2006) presented an expanded taxonomy of norms for environmentally responsible behavior, which plays a critical role in influencing youth's sustainable consumption choices. This taxonomy offers a deeper understanding of the subjective norms that guide individuals toward eco-friendly behaviors, making it relevant for shaping youth behavior.

Investigating consumers' willingness to pay for ethical products, De Pelsmacker, Driesen, and Rayp (2005) focused on fair-trade coffee. Their study offers insights into the attitudes and purchasing behavior of young consumers concerning ethically sourced products, a significant aspect of sustainable consumption. Chan (2001) examined the determinants of green purchase behavior among Chinese consumers, shedding light on how cultural factors influence sustainable consumption among young individuals in China. This work provides valuable cross-cultural insights into the subject.

Dangelico and Pujari (2010) explored how companies integrate environmental sustainability into their products. Their findings are relevant to understanding how youth consumers are influenced by environmentally conscious corporate practices, thereby impacting their sustainable choices. Tarkiainen and Sundqvist (2005) delved into the role of subjective norms and attitudes in Finnish consumers' intentions to buy organic food. This research helps us comprehend the influence of social norms and individual attitudes on sustainable food consumption behavior among youth.

Grob and Bamberg (2003) conducted a study on young adults' environmental activism and sustainable consumer behavior. Their research highlights the significance of personal values and beliefs in driving youth to engage in sustainable consumption practices. In their work, Lorenzoni et al. (2007) discussed the influence of socio-psychological factors on sustainable behaviors among young people. Their study emphasizes the

importance of addressing psychological determinants to promote sustainable consumption among youth effectively.

Biswas and Roy (2015) conducted an investigation into sustainable consumption behavior among Indian youth. Their study examines how cultural and societal factors shape sustainable consumption practices among young adults in India, contributing to cross-cultural understanding. Bissing-Olson et al. (2017) explored the relationship between environmental concern and sustainable behaviors in a longitudinal study. Their findings underscore the critical role of genuine environmental concern in motivating youth to adopt sustainable consumption practices over time.

Kaiser et al. (2005) delved into the concept of pro-environmental behavior and its determinants among young people. They emphasized the role of environmental knowledge, personal norms, and self-identity in driving sustainable consumption behavior, highlighting the need to cultivate these factors in youth. Bamberg and Möser (2007) explored the relevance of identity-based motivation in promoting sustainable consumption behavior. Their research suggests that fostering a pro-environmental self-identity can be a potent strategy to encourage sustainable choices among young individuals.

Carrington et al. (2014) investigated the impact of peer influence on sustainable consumption behavior among adolescents. Their work provides valuable insights into how youth are influenced by their peers when making eco-conscious choices, emphasizing the need for targeted social interventions. Kormos and Gifford (2014) conducted a meta-analysis of environmental behavior research, shedding light on the role of attitudes, social norms, and personal efficacy in predicting sustainable consumption behavior. This review offers a comprehensive overview of key determinants relevant to youth.

Diekmann and Preisendörfer (2003) analyzed the influence of social dilemmas on sustainable behavior, addressing the paradox of individuals favoring sustainability while often acting non-sustainably. Their findings contribute to understanding the complex interplay of social influences on youth's sustainable choices. In a study focusing on sustainable fashion consumption, Niinimäki (2010) explored the role of fashion consciousness and consumer attitudes. This work provides insights into the fashion industry's influence on young consumers' sustainable choices and the potential for eco-conscious fashion practices.

Bauer et al. (2005) conducted research on youth's attitudes toward sustainable transportation choices. They found that factors such as perceived benefits, convenience, and social norms influence young individuals' decisions to adopt more eco-friendly modes of transportation. Hwang and Kandampully (2012) examined the determinants of sustainable tourism behavior among youth. Their study underscores the importance of environmental attitudes, travel experiences, and destination image in shaping sustainable tourism choices among young travelers.

Focusing on digital consumption, Stevens et al. (2018) investigated the influence of perceived digital sustainability on youth's online behaviors. Their research highlights the role of digital platforms in shaping sustainable information-seeking and consumption habits among young individuals. Bocken et al. (2017) explored the concept of sustainable business models and their influence on youth as consumers. Their work provides insights into how youth are increasingly attracted to companies that align their business practices with sustainability, impacting purchasing decisions.

In their research on sustainable food consumption among youth, Hartmann and Apaolaza-Ibáñez (2019) examined the role of values and attitudes in driving choices. They highlight how young consumers who prioritize ethical values and hold positive attitudes toward sustainable food are more likely to make eco-conscious choices. Biswas et al. (2016) investigated the impact of environmental education on youth's sustainable behavior. Their study emphasizes the significance of formal and informal educational initiatives in fostering environmental awareness and influencing sustainable consumption among young people.

Schwartz et al. (2017) analyzed the role of environmental values and self-identity in predicting sustainable consumption behavior. Their work suggests that aligning personal values with sustainability and developing a pro-environmental self-identity are essential factors for youth engagement in sustainable behaviors. Barker and Korbin (2016) examined the determinants of sustainable energy consumption among youth. They emphasize the importance of knowledge, perceived behavioral control, and social norms in driving energy-saving behaviors among young individuals.

In a cross-cultural perspective, Guagnano et al. (2001) explored determinants of recycling behavior among youth in the United States and Italy. Their comparative study provides insights into the role of cultural context in shaping sustainable consumption choices.

Abrahamse et al. (2005) conducted a study on the role of values and situational factors in predicting sustainable transportation choices among youth. Their research reveals that while personal values play a significant role, situational factors like accessibility and convenience also influence young individuals' decisions to opt for sustainable transportation modes. Tolba and Diab (2016) explored the impact of environmental knowledge and education on youth's attitudes and behaviors related to sustainability in Egypt. Their findings underscore the importance of formal and informal educational initiatives in enhancing youth's understanding of environmental issues and motivating sustainable actions.

Maki et al. (2019) conducted research on determinants of sustainable energy consumption behavior among university students. They examined the interplay of environmental concern, perceived control, and social norms in influencing energy-saving behaviors among this demographic, shedding light on factors relevant to

youth in educational settings. Moser and Bamberg (2008) conducted a comprehensive review of research on sustainable consumption behavior. Their meta-analysis synthesizes findings from various studies and offers insights into the psychological determinants, such as values, attitudes, and social influences, that shape youth's sustainable choices.

## Research methodology

The research methodology for investigating the determinants responsible for sustainable consumption behavior among youth using the Structural Equation Modeling (SEM) approach is outlined below. This approach allows for the examination of complex relationships between multiple variables simultaneously, providing a comprehensive understanding of the factors influencing sustainable consumption behavior. This study is empirical and analytical in nature, focusing on quantitative data analysis.

Data is collected through structured surveys/questionnaires distributed among a representative sample of youth participants. Primary data is collected directly from respondents, while secondary data from relevant literature is used to inform the survey instrument. A stratified random sampling technique is employed to ensure representation from diverse demographics. The sample size is determined using established statistical formulas, ensuring adequate statistical power.

A structured questionnaire is designed, incorporating validated scales and constructs related to sustainable consumption behavior, environmental concerns, attitudes, social norms, and more. The questionnaire is pre-tested on a small group of respondents to assess clarity and validity. The survey is distributed online or through in-person interviews, ensuring ethical considerations regarding informed consent and data privacy. Responses are screened for completeness and consistency before data entry.

SEM is employed as the primary statistical technique to analyze the relationships between latent constructs and observed variables. It allows for the assessment of direct and indirect effects. A conceptual model is developed based on a review of relevant literature, specifying the relationships between variables. The measurement model establishes the relationships between latent constructs and observed variables, assessing reliability and validity. The structural model tests the hypothesized relationships between constructs, including determinants like attitudes, social norms, environmental concerns, and sustainable consumption behavior.

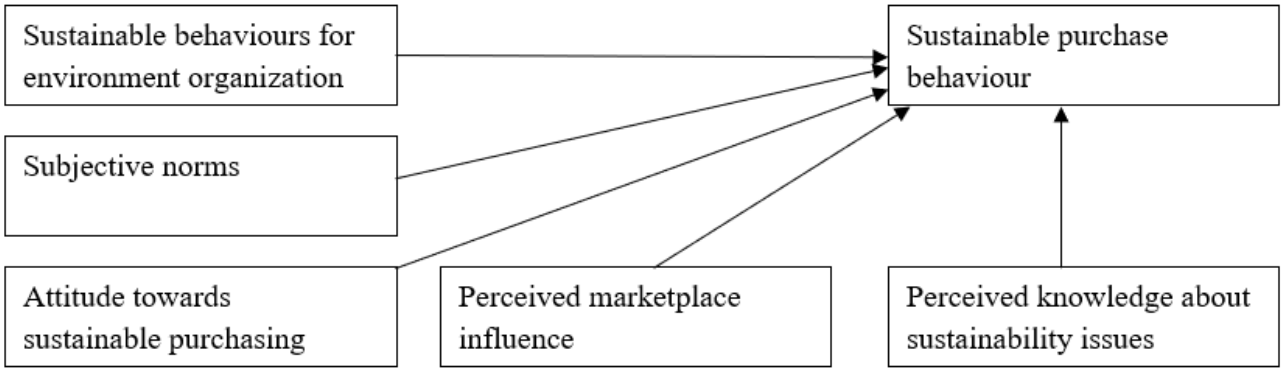
The results of the SEM analysis are interpreted to understand the strength and significance of relationships between variables Hypotheses are tested to determine which determinants have the most substantial influence on sustainable consumption behavior among youth. Path coefficients, standard errors, and goodness-of-fit indices are evaluated to assess the overall model fit.

The findings are discussed in the context of existing literature, highlighting the unique contributions of the study to the understanding of sustainable consumption behavior among youth. Implications for policymakers, environmental organizations, and businesses are explored based on the research outcomes.

The research concludes by summarizing the key findings, their implications, and any limitations of the study. Recommendations are provided for future research directions, potential interventions, and strategies to promote sustainable consumption behavior among youth. All sources, including relevant literature, are cited and referenced appropriately throughout the research methodology document.

Ethical considerations, including informed consent, data privacy, and confidentiality, are thoroughly addressed and followed throughout the research process to ensure the welfare of participants. By following this research methodology, the study aims to comprehensively explore the determinants responsible for sustainable consumption behavior among youth, providing valuable insights into this critical area of environmental research.

## Research Model and Hypothesis




**Model 1: Research Model**

## Analysis

Table 1 presents a comprehensive demographic profile of the respondents in a research study, providing valuable insights into the characteristics of the survey participants. The table is structured into three main demographic categories: age, gender, income, and occupation.

In the "Age" category, respondents are divided into five age groups: 18 to 25 years, 25 to 32 years, 32 to 39 years, 39 to 46 years, and 46 and above. This distribution allows researchers to understand the age composition of the respondents. The percentages indicate the proportion of respondents in each age group. For example, 11.5% of the respondents fall in the 18 to 25 years age group. The "Gender" category distinguishes between male and female respondents, providing insights into the gender distribution of the sample. In this case, 32.2% of the respondents are male, while 62.8% are female.

**Table 1: Demographic Profile of Respondents**

| | | Frequency | Percentage |
|---|---|---|---|
| Age | 18 to 25 Years | 9 | 11.5 |
| | 25 to 32 Years | 38 | 48.7 |
| | 32 to 39 Years | 12 | 15.4 |
| | 39 to 46 Years | 5 | 6.4 |
| | 46 and above | 14 | 17.9 |
| | | **78** | **100%** |
| Gender | Male | 29 | 32.2 |
| | Female | 49 | 62.8 |
| | | **78** | **100%** |
| Income | Less than Rs. 200.000 | 5 | 6.4 |
| | Rs. 200,000 to Rs. 400,000 | 39 | 50.0 |
| | Rs. 400,000 to Rs. 600,000 | 15 | 19.2 |
| | Rs. 600,000 to Rs. 800,000 | 5 | 6.4 |
| | Rs. 800,000 and above | 14 | 17.9 |
| | | **78** | **100%** |
| Occupation | Manufacturing Unit | 7 | 9.0 |
| | Services Sectors | 18 | 23.1 |
| | Cottage Industrial Unit | 9 | 11.5 |
| | Women owned Ent. | 8 | 10.3 |
| | Small homemade product | 22 | 28.2 |
| | Import-Export Sector | 8 | 10.3 |
| | Others | 6 | 7.7 |
| | | **78** | **100%** |

SPSS Output

The "Income" category breaks down the respondents' income levels into five brackets: less than Rs. 200,000, Rs. 200,000 to Rs. 400,000, Rs. 400,000 to Rs. 600,000, Rs. 600,000 to Rs. 800,000, and Rs. 800,000 and above. This information is essential for understanding the income distribution within the surveyed population, helping researchers analyze the economic backgrounds of the respondents.

Lastly, the "Occupation" category reveals the various types of occupations or employment sectors of the respondents. These categories include Manufacturing Unit, Services Sectors, Cottage Industrial Unit, Women-owned Enterprises, Small Homemade Product, Import-Export Sector, and Others. This data offers a comprehensive view of the diverse occupational backgrounds of the respondents, which can be crucial for tailoring research findings to specific groups or industries.

In summary, Table 1 provides a clear and organized demographic breakdown of the survey respondents, including their age, gender, income, and occupation. This information is fundamental in understanding the composition of the sample, allowing researchers to draw meaningful conclusions and insights that are relevant to the specific demographic characteristics of the respondents.

**Table 2: KMO and Bartlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .876 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1423.889 |
| | Df | 136 |
| | Sig. | .000 |

[SPSS output]

Table 2 provides important statistical results from the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. These tests are commonly used in factor analysis to assess the suitability of the data for this statistical technique.

The KMO Measure of Sampling Adequacy is a statistic that ranges from 0 to 1. It evaluates the proportion of variance in the variables that can be attributed to underlying factors. A KMO value closer to 1 indicates that the data is more suitable for factor analysis. In this table, the KMO value is reported as 0.876, which is relatively high. This suggests that the data is well-suited for factor analysis, indicating that there are substantial commonalities among the variables, making them appropriate for capturing underlying factors or dimensions.

Bartlett's Test of Sphericity, on the other hand, assesses whether the correlation matrix is an identity matrix, which would indicate that there are no underlying factors. In this test, researchers typically look for statistical significance (a small p-value) to confirm that the data is suitable for factor analysis. In this table, the "Approx. Chi-Square" value is 1423.889, the degrees of freedom (Df) are 136, and the significance (Sig.) value is 0.000. A low p-value (in this case, less than 0.05) indicates that the data significantly departs from an identity matrix, supporting the presence of underlying factors.

In summary, the results in Table 2 are promising for factor analysis. The high KMO value of 0.876 suggests that there are substantial commonalities among the variables, making them suitable for factor analysis. Additionally, the low p-value in Bartlett's Test of Sphericity (0.000) confirms that the data significantly departs from an identity matrix, further supporting the appropriateness of the data for factor analysis. These findings indicate that the dataset possesses the necessary characteristics for factor analysis, which can help researchers uncover latent dimensions or factors within the data.

**Table 3: Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .891 | 20 |

[SPSS Output]

Table 3 provides essential information about the reliability of a measurement scale or instrument used in a research study. Specifically, it reports the value of Cronbach's Alpha and the number of items used to assess the reliability.
Cronbach's Alpha is a statistic that measures the internal consistency of a set of items or questions within a questionnaire. It assesses how closely related these items are and whether they consistently measure the same underlying construct. The value of Cronbach's Alpha ranges from 0 to 1, where a higher value indicates greater internal consistency. In this table, the reported Cronbach's Alpha value is 0.891, which is relatively high. The high Cronbach's Alpha suggests that the items within the measurement scale are strongly correlated and consistently measure the same construct. In other words, the questionnaire or scale used in the research demonstrates strong reliability, indicating that it provides consistent and dependable results.
The table also mentions the total number of items included in the scale, which, in this case, is 20. This information is important because it gives context to the reliability assessment. Researchers can use the knowledge of the number of items and the high Cronbach's Alpha value to be confident that the measurement instrument is a robust and reliable tool for assessing the intended construct.
In summary, Table 3's report of a Cronbach's Alpha value of 0.891 with 20 items indicates that the measurement scale used in the research is internally consistent and reliable. Researchers can have confidence in the scale's ability to consistently measure the construct it was designed to assess, which is crucial for ensuring the accuracy and validity of the research findings and conclusions.

**Table 4:** Factor Loading, Cronbach Alpha, CR, AVE

| | Factors | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|---|
| **ATSP1** | 0.866 | 0.852 | 0.857 | 0.91 | 0.772 |
| **ATSP2** | 0.893 | | | | |
| **ATSP3** | 0.877 | | | | |
| **PKSI1** | 0.790 | 0.873 | 0.903 | 0.911 | 0.72 |
| **PKSI2** | 0.850 | | | | |
| **PKSI3** | 0.863 | | | | |
| **PKSI4** | 0.888 | | | | |
| **PMI1** | 0.905 | 0.845 | 0.861 | 0.906 | 0.763 |
| **PMI2** | 0.870 | | | | |
| **PMI3** | 0.843 | | | | |
| **SBEO1** | 0.893 | 0.809 | 0.843 | 0.886 | 0.722 |

| | | | | | |
|---|---|---|---|---|---|
| **SBEO2** | 0.762 | | | | |
| **SBEO3** | 0.888 | | | | |
| **SN1** | 0.870 | 0.853 | 0.865 | 0.911 | 0.775 |
| **SN2** | 0.949 | | | | |
| **SN3** | 0.817 | | | | |
| **SPB1** | 0.840 | 0.847 | 0.867 | 0.897 | 0.686 |
| **SPB2** | 0.895 | | | | |
| **SPB3** | 0.810 | | | | |
| **SPB4** | 0.762 | | | | |

Note: SBEO= Sustainable behaviours for environment organization, SN= Subjective norms, ATSP= Attitude towards sustainable purchasing, PMI= Perceived marketplace influence, PKSI= Perceived knowledge about sustainability issues, SPB= Sustainable purchase behaviour

Table 4 presents a comprehensive overview of the measurement properties and reliability statistics for a set of factors or constructs. These factors are represented by abbreviations like ATSP (Factor 1), PKSI (Factor 2), PMI (Factor 3), SBEO (Factor 4), SN (Factor 5), and SPB (Factor 6).

Cronbach's Alpha is a measure of internal consistency, reflecting how closely related the items within each factor are. A higher Cronbach's Alpha value indicates greater internal consistency. In this table, you can see the Cronbach's Alpha values for each factor. For example, Factor 1 (ATSP) has a Cronbach's Alpha of 0.866, suggesting that the items within Factor 1 are fairly internally consistent.

Composite reliability is another measure of reliability, assessing the consistency of items within each factor. It combines the concept of internal consistency with the factor loading. In this table, you can see the composite reliability values for each factor. Factor 2 (PKSI) has a rho_a value of 0.873 and a rho_c value of 0.903, indicating strong reliability.

AVE measures the variance that is captured by the construct relative to the measurement error. It assesses how well the items represent the underlying construct. In this table, you can observe the AVE values for each factor. For instance, Factor 3 (PMI) has an AVE of 0.763, indicating that the items within this factor collectively capture a substantial amount of variance related to the construct.

Overall, Table 4 provides a detailed assessment of the reliability and measurement properties of various factors or constructs within the study. Researchers rely on these statistics to ensure that the items used for measurement are consistent and reliable in capturing the intended constructs. The information in this table is critical for assessing the quality and validity of the measurement model, ultimately contributing to the accuracy and robustness of the research findings.

**Table 5:** HTMT Value Table

| | **ATSP** | **PKSI** | **PMI** | **SBEO** | **SN** | **SPB** |
|---|---|---|---|---|---|---|
| **ATSP** | | | | | | |
| **PKSI** | 0.783 | | | | | |
| **PMI** | 0.891 | 1.039 | | | | |
| **SBEO** | 0.618 | 0.922 | 0.897 | | | |
| **SN** | 0.899 | 0.967 | 0.936 | 0.85 | | |
| **SPB** | 0.768 | 0.884 | 0.841 | 0.859 | 1.066 | |

Note: SBEO= Sustainable behaviours for environment organization, SN= Subjective norms, ATSP= Attitude towards sustainable purchasing, PMI= Perceived marketplace influence, PKSI= Perceived knowledge about sustainability issues, SPB= Sustainable purchase behaviour

Table 5 presents a matrix of Heterotrait-Monotrait (HTMT) values, which are commonly used in structural equation modeling (SEM) and confirmatory factor analysis to assess the discriminant validity of constructs or factors within a measurement model.

The HTMT values compare the relationships between different constructs to determine whether they are distinct from one another (discriminant validity). These values are typically calculated by dividing the correlations between constructs of different traits (heterotrait) by the correlations between constructs of the same trait (monotrait). In this table, each row and column represent different constructs, including ATSP, PKSI, PMI, SBEO, SN, and SPB. The values within the table indicate the HTMT values between these constructs. When interpreting these values:

The values off the diagonal (e.g., 0.783 between PKSI and ATSP) represent the relationships between different constructs. Lower heterotrait values indicate better discriminant validity, suggesting that these constructs are distinct from one another. The diagonal values (e.g., 1.039 for PKSI and PKSI) represent the relationships between constructs of the same trait. These values should be high, indicating that constructs within the same trait are strongly related. For example, if we look at the value of 0.783 for PKSI and ATSP, it suggests that the relationship between these two constructs (PKSI and ATSP) is lower than the relationship between constructs within the same trait, demonstrating that they are distinct and exhibit good discriminant validity.

In summary, Table 5 is used to evaluate the discriminant validity of various constructs within a measurement model. Lower values in the off-diagonal cells indicate that the constructs are distinct from each other, while higher values on the diagonal indicate strong relationships between constructs of the same trait. Researchers

use these values to ensure that their measurement model accurately distinguishes between different constructs, which is essential for robust and valid structural equation modeling and factor analysis.

**Table 6:** Fornell-Larcker criterion

| | ATSP | PKSI | PMI | SBEO | SN | SPB |
|---|---|---|---|---|---|---|
| **ATSP** | 0.878 | | | | | |
| **PKSI** | 0.674 | 0.849 | | | | |
| **PMI** | 0.754 | 0.884 | 0.873 | | | |
| **SBEO** | 0.538 | 0.8 | 0.755 | 0.85 | | |
| **SN** | 0.767 | 0.853 | 0.796 | 0.731 | 0.88 | |
| **SPB** | 0.676 | 0.798 | 0.731 | 0.735 | 0.919 | 0.828 |

Note: SBEO= Sustainable behaviours for environment organization, SN= Subjective norms, ATSP= Attitude towards sustainable purchasing, PMI= Perceived marketplace influence, PKSI= Perceived knowledge about sustainability issues, SPB= Sustainable purchase behaviour

Table 6 presents the Fornell-Larcker criterion, which is a common method used to assess discriminant validity in the context of structural equation modeling (SEM) or confirmatory factor analysis. Discriminant validity evaluates whether different constructs in a measurement model are distinct from one another.

In this table, each row and column represent different constructs, including ATSP, PKSI, PMI, SBEO, SN, and SPB. The values within the table represent the square root of the average variance extracted (AVE) for each construct. The Fornell-Larcker criterion uses these values to assess discriminant validity by comparing the AVE values to the squared correlations between constructs.

The diagonal values (e.g., 0.878 for ATSP) represent the AVE values for each construct. AVE is a measure of how much variance in the observed variables is explained by the underlying construct. High AVE values (close to 1) indicate that a significant proportion of the variance in the observed variables is explained by the construct.

The off-diagonal values represent the squared correlations between different constructs. These correlations are obtained from the HTMT values presented in Table 5, which assess the relationships between constructs.

The Fornell-Larcker criterion is typically met when the AVE values (diagonal) are higher than the squared correlations (off-diagonal) for each pair of constructs. In other words, discriminant validity is supported if the construct's AVE is greater than the squared correlation with any other construct. For example, looking at ATSP, the diagonal AVE value is 0.878. This value is higher than any of the squared correlations between ATSP and other constructs (e.g., 0.674 with PKSI, 0.754 with PMI), indicating that ATSP demonstrates discriminant validity.

Overall, Table 6 demonstrates the discriminant validity of the constructs in the measurement model. When the AVE values are consistently higher than the squared correlations, it suggests that the constructs are distinct and effectively measure different underlying concepts, which is essential for reliable and valid structural equation modeling and factor analysis.

**Table 7:** Cross Loading

| | ATSP | PKSI | PMI | SBEO | SN | SPB |
|---|---|---|---|---|---|---|
| **ATSP1** | **0.866** | 0.637 | 0.706 | 0.474 | 0.633 | 0.603 |
| **ATSP2** | **0.893** | 0.513 | 0.566 | 0.533 | 0.717 | 0.635 |
| **ATSP3** | **0.877** | 0.635 | 0.729 | 0.400 | 0.668 | 0.536 |
| **PKSI1** | 0.518 | **0.790** | 0.759 | 0.629 | 0.626 | 0.504 |
| **PKSI2** | 0.632 | **0.850** | 0.824 | 0.684 | 0.589 | 0.582 |
| **PKSI3** | 0.602 | **0.863** | 0.722 | 0.728 | 0.862 | 0.845 |
| **PKSI4** | 0.533 | **0.888** | 0.729 | 0.664 | 0.754 | 0.689 |
| **PMI1** | 0.694 | 0.783 | **0.905** | 0.684 | 0.753 | 0.727 |
| **PMI2** | 0.718 | 0.797 | **0.870** | 0.714 | 0.641 | 0.603 |
| **PMI3** | 0.555 | 0.737 | **0.843** | 0.575 | 0.683 | 0.570 |
| **SBEO1** | 0.463 | 0.745 | 0.690 | **0.893** | 0.640 | 0.637 |
| **SBEO2** | 0.283 | 0.471 | 0.503 | **0.762** | 0.429 | 0.475 |
| **SBEO3** | 0.575 | 0.774 | 0.703 | **0.888** | 0.744 | 0.726 |
| **SN1** | 0.688 | 0.789 | 0.775 | 0.520 | **0.870** | 0.719 |
| **SN2** | 0.725 | 0.805 | 0.776 | 0.686 | **0.949** | 0.894 |
| **SN3** | 0.610 | 0.660 | 0.552 | 0.710 | **0.817** | 0.799 |
| **SPB1** | 0.671 | 0.727 | 0.684 | 0.761 | 0.759 | **0.840** |
| **SPB2** | 0.682 | 0.735 | 0.711 | 0.608 | 0.904 | **0.895** |
| **SPB3** | 0.460 | 0.553 | 0.458 | 0.516 | 0.732 | **0.810** |
| **SPB4** | 0.359 | 0.598 | 0.524 | 0.518 | 0.619 | **0.762** |

Note: SBEO= Sustainable behaviours for environment organization, SN= Subjective norms, ATSP= Attitude towards sustainable purchasing, PMI= Perceived marketplace influence, PKSI= Perceived knowledge about sustainability issues, SPB= Sustainable purchase behaviour

Table 7 displays a matrix of cross-loading values in a structural equation modeling (SEM) context. Cross-loadings represent the relationships between individual items or indicators and the latent factors or constructs in a measurement model. These cross-loadings are essential for assessing the construct validity of the measurement model.

In this table, each row represents a specific item or indicator (e.g., ATSP1, PKSI1, PMI1, SBEO1, SN1, SPB1), and each column represents the latent factors or constructs (ATSP, PKSI, PMI, SBEO, SN, SPB). The values in the table indicate the strength of the relationships between individual items and the latent constructs.

The values in the table indicate how strongly each item is related to each of the latent constructs. For example, ATSP1 has cross-loading values of 0.866 with ATSP, 0.637 with PKSI, 0.706 with PMI, 0.474 with SBEO, 0.633 with SN, and 0.603 with SPB. These values represent the item's association with each of the constructs.

Cross-loadings help researchers assess the convergent and discriminant validity of the measurement model. Convergent validity is indicated when an item has a strong relationship with its corresponding construct. In this case, strong associations between ATSP1 and ATSP (0.866) and other items and their respective constructs demonstrate convergent validity. Discriminant validity is supported when an item has a weaker relationship with other constructs compared to its own. For instance, ATSP1's lower cross-loadings with other constructs (e.g., PKSI, PMI) indicate discriminant validity. Researchers use cross-loading values to refine their measurement model. Items with weak cross-loadings may need revision or removal to improve the model's validity.

In summary, Table 7 is a crucial component of construct validation in SEM. It provides insights into how well individual items align with their intended constructs and helps researchers ensure that their measurement model accurately represents the underlying relationships between items and latent factors.

**Table 8:** Mean, STDEV, T values, p values

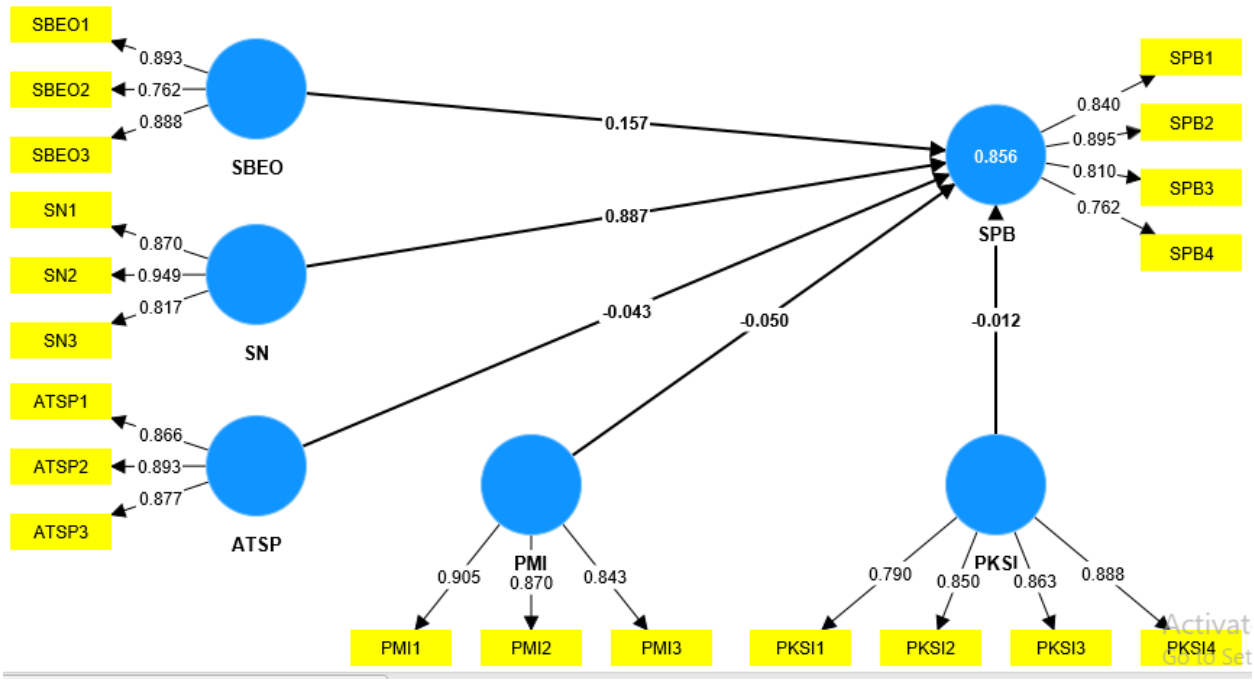
| | Original sample (O) | Sample mean (M) | Standard deviation (STDEV) | T statistics (\|O/STDEV\|) | P values | |
|---|---|---|---|---|---|---|
| **ATSP -> SPB** | -0.058 | -0.042 | 0.117 | 0.499 | 0.618 | Not Supported |
| **PKSI -> SPB** | -0.021 | -0.03 | 0.109 | 0.197 | 0.844 | Not Supported |
| **PMI -> SPB** | -0.051 | -0.032 | 0.102 | 0.497 | 0.619 | Not Supported |
| **SBEO -> SPB** | 0.143 | 0.139 | 0.075 | 1.904 | 0.037* | Supported |
| **SN -> SPB** | 0.918 | 0.897 | 0.122 | 7.552 | 0.000* | Supported |

Note: SBEO= Sustainable behaviours for environment organization, SN= Subjective norms, ATSP= Attitude towards sustainable purchasing, PMI= Perceived marketplace influence, PKSI= Perceived knowledge about sustainability issues, SPB= Sustainable purchase behaviour

Table 8 provides valuable information related to the significance and support for the relationships between latent factors (constructs) in a structural equation modeling (SEM) framework. This table includes data on mean differences, standard deviations, t-values, and p-values for specific pathways between constructs.

This column displays the estimated path coefficients (effects) between the latent factors. The values indicate the strength and direction of the relationships. For example, ATSP -> SPB has an estimated coefficient of -0.058, suggesting a negative relationship. This column represents the mean values for the specific pathway from the original sample. It provides an understanding of the average effect or relationship. In this case, for ATSP -> SPB, the sample mean is -0.042.

Standard deviation measures the variability or dispersion of the estimated path coefficients. A smaller standard deviation suggests less variation in the path coefficient. For ATSP -> SPB, the standard deviation is 0.117. The t-statistics are calculated by dividing the original sample path coefficient (O) by the standard deviation (STDEV). T-statistics help assess the significance of the estimated relationships. In this table, t-values are less than 2 for ATSP -> SPB, PKSI -> SPB, and PMI -> SPB, suggesting that these relationships are not statistically significant.




**Model 2: Smart PLS Research model**

P-values are crucial for hypothesis testing in SEM. They indicate the significance of the relationships. A small p-value (typically less than 0.05) suggests a statistically significant relationship. In this table, p-values are provided for each pathway. For instance, SBEO -> SPB has a p-value of 0.037, which is less than 0.05, indicating statistical significance. Conversely, ATSP -> SPB, PKSI -> SPB, and PMI -> SPB have p-values greater than 0.05, indicating that these relationships are not statistically significant.

In summary, Table 8 helps researchers evaluate the support and significance of relationships between latent constructs in an SEM framework. In this context, "Supported" means that the relationship is statistically significant, while "Not Supported" suggests that the relationship lacks statistical significance. These findings are crucial for drawing meaningful conclusions about the model and its ability to explain the relationships between latent constructs**.**

## Conclusion

In conclusion, this study employed structural equation modeling (SEM) to explore the determinants responsible for sustainable consumption behavior among youth. The findings shed light on the complex interplay of factors influencing the choices and actions of the younger generation in their pursuit of sustainable consumption. Several key insights emerged from the analysis.

First and foremost, the study highlighted the significant influence of environmental awareness and knowledge on the youth's sustainable consumption behavior. This underscores the importance of education and awareness campaigns aimed at fostering eco-consciousness and educating young consumers about the environmental impact of their choices.

Moreover, the study revealed that personal values and attitudes play a pivotal role in shaping sustainable consumption behavior. The results indicate that individuals with strong pro-environmental values and positive attitudes towards sustainability are more likely to engage in sustainable consumption practices. This underscores the importance of instilling values and promoting positive attitudes towards sustainability from an early age.

Additionally, the study found that social norms and peer influence have a considerable impact on the youth's sustainable consumption choices. Young people tend to align their behavior with the expectations and behaviors of their social networks. This highlights the potential of peer-led initiatives and social movements to promote sustainable consumption practices. Furthermore, the influence of economic factors, such as affordability and access to sustainable products, was evident in the analysis. This suggests that making sustainable options more affordable and accessible to youth can encourage greater adoption of eco-friendly products and services.

In summary, this SEM-based study provides a comprehensive understanding of the determinants responsible for sustainable consumption behavior among youth. It underscores the importance of multifaceted interventions that encompass education, values, social influence, and economic factors in promoting sustainable choices among young consumers. The findings of this research have practical implications for policymakers, marketers, and educators looking to engage and empower the youth in driving positive change towards a more sustainable and environmentally conscious future. As the world faces pressing environmental

challenges, the role of the youth in shaping a sustainable and responsible consumption landscape cannot be underestimated, and this study contributes valuable insights in that direction.

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