

EXTENDING THE THEORY OF PLANNED BEHAVIOUR: SPIRITUAL VALUES AND SOCIAL NORMS AS DRIVERS OF SUSTAINABLE BEHAVIOUR AMONG UNIVERSITY STUDENTS IN MALAYSIA

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Abstract: *University students are often viewed as key agents of change in advancing sustainability, however, their everyday behaviour does not always reflect their environmental awareness. Despite widespread sustainability campaigns and educational initiatives, the translation of knowledge and positive attitudes into consistent sustainable behaviour remains limited. Drawing on the Theory of Planned Behaviour (TPB), this study extends the framework by examining the role of spiritual values and subjective norm in shaping sustainable behaviour among students of public universities in Malaysia. Using a quantitative cross-sectional design, data were collected from 956 students and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicate that both spiritual values and subjective norm significantly influence sustainable behaviour, with spiritual values exerting a stronger effect. This suggests that internal value-based motivations play a crucial role in guiding sustainable actions beyond cognitive understanding and social pressure alone. By incorporating spiritual values into TPB, this study offers a more holistic perspective on sustainable behaviour in higher education and provides practical insights for designing values-oriented sustainability education and interventions.*

Keywords: *Sustainable behaviour, Spiritual Values, Subjective Norm, Theory of Planned Behaviour, Higher Education, Malaysia*

Introduction

Higher education institutions (HEIs) play a crucial role in promoting sustainable development by shaping students' knowledge, attitudes, and values (Leal Filho et al., 2021; Lozano et al., 2023). Universities are not only centres for academic learning but also important environments for character development and social responsibility (UNESCO, 2020). As future leaders and professionals, university students are expected to internalise sustainability principles and translate them into daily behaviour that supports environmental protection and social well-being (Steg & Vlek, 2022).

In recent years, sustainability has been increasingly integrated into higher education through curriculum design, campus greening initiatives, and community engagement programmes (Lozano et al., 2023). Despite these efforts, evidence suggests that students' actual engagement in sustainable behaviour remains inconsistent (Moser & Kleinhüchelkotten, 2021). Many students demonstrate awareness of environmental issues and express positive attitudes towards sustainability, yet fail to consistently practise behaviours such as recycling, energy conservation, or responsible consumption (Bamberg & Möser, 2021; Nielsen et al., 2021). This persistent gap between awareness and behaviour indicates that sustainability-related actions are influenced by factors beyond knowledge and attitude alone.

These observations highlight the importance of examining deeper motivational drivers of sustainable behaviour. While educational initiatives often focus on information dissemination and awareness-building, such approaches may not sufficiently address the internal values and ethical considerations that guide behaviour (Stern, 2020). Understanding sustainable behaviour among university students therefore requires a more comprehensive behavioural framework that accounts for both external influence and internalised values (Klößner, 2021).

Problem Statement

The Theory of Planned Behaviour (TPB) has been widely used to explain sustainable behaviour through its emphasis on attitude, subjective norm, and perceived behavioural control (Ajzen, 1991, 2020). TPB assumes that individuals make rational decisions based on the evaluation of outcomes and perceived social expectations (Ajzen, 2020). While this framework has demonstrated strong predictive ability in various contexts, including environmental and sustainability behaviour, its application to sustainability-related behaviour has been increasingly questioned (Han et al., 2020; Bamberg & Möser, 2021).

Sustainability-related actions are often moral and ethical in nature, involving responsibility towards the environment and future generations (Stern, 2020; Steg & Vlek, 2022). Such actions may not be fully explained by rational evaluation or social pressure alone, as they frequently require internalised moral commitment and ethical judgement (Nielsen et al., 2021). Existing TPB-based studies, particularly in higher education contexts, tend to focus on cognitive and social determinants while paying limited attention to internal value systems that guide ethical behaviour (de Leeuw et al., 2020; Testa et al., 2021). This creates a theoretical limitation in explaining why individuals who are aware of sustainability issues still fail to act consistently (Moser & Kleinhüchelkotten, 2021).

Furthermore, although subjective norm captures social influence, reliance on external pressure may lead to compliance rather than genuine commitment (Truelove & Gillis, 2021; Steg & Vlek, 2022). In collectivist societies such as Malaysia, social norms are particularly influential in shaping individual behaviour (Rai et al., 2022). However, without internal value alignment,

sustainable behaviour driven by social expectations may not be sustained over time (Klöckner, 2021). This highlights the need to extend TPB by integrating spiritual values as an internal motivational construct that supports moral responsibility and long-term behavioural consistency (Zsolnai & Illes, 2020; Crowe & Brennan, 2022). Addressing this gap, the present study examines the roles of spiritual values and subjective norm in shaping sustainable behaviour among university students in Malaysia.

Literature Review

This literature review addresses five main areas: sustainable behaviour in higher education, the application of the Theory of Planned Behaviour, limitations of TPB in sustainability research, the role of spiritual values as an internal driver, and the influence of subjective norm as a social determinant of sustainable behaviour.

Sustainable Behaviour in Higher Education

Sustainable behaviour has received growing attention within higher education research due to universities' strategic role in shaping environmentally responsible citizens (Tapia-Fonllem et al., 2020; Leal Filho et al., 2021). Previous studies consistently report that university students generally demonstrate moderate to high levels of sustainability awareness and positive attitudes towards environmental protection (Bamberg & Möser, 2021). However, empirical evidence also indicates that such awareness does not consistently translate into actual sustainable practices, such as recycling, energy conservation, or responsible consumption (Moser & Kleinhüchelkotten, 2021; Lozano et al., 2023). This persistent intention-behaviour gap suggests that cognitive understanding alone is insufficient to explain sustainability-related actions.

Several scholars argue that this gap reflects the limitations of approaches that focus predominantly on knowledge acquisition and attitudinal change (Klöckner, 2021; Steg & Vlek, 2022). While awareness is a necessary condition, it does not guarantee behavioural consistency, particularly when actions require moral commitment, self-regulation, or value alignment (Stern, 2020). Consequently, sustainability research in higher education increasingly calls for deeper examination of motivational and ethical factors that influence behaviour beyond surface-level cognition (Nielsen et al., 2021).

Theory of Planned Behaviour and Its Limitations

The Theory of Planned Behaviour (TPB) has been widely applied to explain sustainable behaviour due to its structured framework linking attitudes, subjective norm, and behavioural intention to action (Ajzen, 1991). Numerous studies confirm TPB's predictive capacity across various sustainability contexts, reinforcing its relevance as a behavioural model (Han et al., 2020; Zhang et al., 2020). However, despite its empirical robustness, TPB has been criticised for its rational-choice orientation, which may oversimplify the complexity of sustainability-related behaviour (Bamberg & Möser, 2021).

Critics argue that TPB inadequately captures moral obligation and internalised values, which are central to behaviours grounded in ethical responsibility (Stern, 2020; Steg & Vlek, 2022). Sustainability-related actions often involve considerations of long-term environmental impact and intergenerational responsibility, dimensions that extend beyond rational evaluation or social pressure (Klöckner, 2021). As a result, reliance on TPB without theoretical extension may lead to incomplete explanations of why individuals with positive intentions still fail to engage consistently in sustainable behaviour (Moser & Kleinhüchelkotten, 2021).

Spiritual Values as an Internal Motivational Driver

Spiritual values emphasise meaning, interconnectedness, and responsibility towards others and the natural environment (Zsolnai & Illes, 2020). Unlike external motivators, spiritual values function as internalised moral compasses that guide behaviour even in the absence of external monitoring or social enforcement (Crowe & Brennan, 2022). Empirical studies suggest that individuals with strong spiritual orientations are more likely to engage in ethical and pro-environmental behaviour due to a sense of moral duty rather than instrumental benefits (Rai et al., 2022).

Despite this evidence, spirituality remains underexplored within mainstream sustainability behaviour models, particularly those grounded in TPB (Klößner, 2021). Existing studies that incorporate value-based constructs often focus on moral norms or environmental identity, leaving spirituality marginalised or treated implicitly (Steg & Vlek, 2022). This omission is notable given that spiritual values may provide a more enduring motivational basis for sustainable behaviour than attitudes or social norms alone, especially within educational settings where values formation is a core objective (UNESCO, 2020).

Subjective Norm and Social Influence

Subjective norm represents perceived social expectations regarding behaviour and has been shown to influence sustainable behaviour, particularly in collectivist cultures (Ajzen, 2020; Rai et al., 2022). In such contexts, individuals are more likely to conform to behaviours endorsed by peers, family members, or institutional authorities (Truelove & Gillis, 2021). Prior studies confirm that social norms can effectively encourage pro-environmental behaviour in the short term (Bamberg & Möser, 2021).

However, scholars caution that behaviour driven primarily by social pressure may result in compliance rather than genuine commitment (Steg & Vlek, 2022). When external monitoring diminishes, norm-driven behaviour may weaken, raising questions about its long-term sustainability (Klößner, 2021). This suggests that while subjective norm remains an important determinant, its effectiveness may depend on the extent to which social expectations align with individuals' internal value systems (Moser & Kleinhückelkotten, 2021).

Research Gap and Conceptual Positioning

The reviewed literature highlights two critical gaps. First, sustainability behaviour research in higher education remains overly reliant on cognitive and social determinants, with insufficient attention to internal value-based motivations (Klößner, 2021; Steg & Vlek, 2022). Second, spirituality, despite its relevance to ethical and moral behaviour, remains underrepresented within TPB-based sustainability models (Zsolnai & Illes, 2020; Crowe & Brennan, 2022).

Addressing these gaps, the present study extends the Theory of Planned Behaviour by integrating spiritual values alongside subjective norm to explain sustainable behaviour among university students in Malaysia. By doing so, the study moves beyond descriptive accounts of sustainability behaviour and contributes a more nuanced, value-oriented perspective that acknowledges both internal and external drivers of behaviour.

Research Model and Hypotheses

Grounded in the Theory of Planned Behaviour (TPB), this study conceptualises sustainable behaviour as the outcome of both internal value-based motivations and external social influences. While TPB traditionally explains behaviour through attitudes, subjective norm, and

perceived behavioural control (Ajzen, 1991, 2020), recent sustainability literature highlights the need to incorporate deeper moral and ethical drivers to better explain sustainability-related actions (Klöckner, 2021; Steg & Vlek, 2022).

In line with this perspective, the present study extends TPB by integrating spiritual values as an internal motivational construct alongside subjective norm as an external social determinant. Spiritual values are expected to guide sustainable behaviour through internalised moral responsibility and ethical awareness, whereas subjective norm reflects perceived social expectations and pressures from significant others. Accordingly, the following hypotheses are proposed:

H1: Spiritual values have a significant positive effect on sustainable behaviour.

H2: Subjective norm has a significant positive effect on sustainable behaviour.

Research Methodology

This study employed a quantitative cross-sectional survey design to examine the proposed relationships between spiritual values, subjective norm, and sustainable behaviour. Data were collected from 956 undergraduate students enrolled in selected Malaysian public universities, exceeding the recommended minimum sample size for Partial Least Squares Structural Equation Modelling (PLS-SEM) and ensuring adequate statistical power (Hair et al., 2021).

Sustainable behaviour was measured using items related to everyday pro-environmental practices, including recycling, energy conservation, and pollution reduction. Spiritual values were operationalised through indicators reflecting moral responsibility, ethical awareness, and environmental connectedness, consistent with prior studies emphasising spirituality as an internal moral compass guiding sustainable behaviour (Zsolnai & Illes, 2020; Rai et al., 2022). Subjective norm captured respondents' perceptions of social pressure from peers, family members, and the university community. All constructs were measured using a five-point Likert scale. Data were analysed using PLS-SEM via SmartPLS, following a two-stage approach involving assessment of the measurement model and the structural model, which is appropriate for theory extension and predictive analysis (Hair et al., 2021).

Research Design and Sample

This study employed a quantitative cross-sectional survey design to examine the relationships between spiritual values, subjective norm, and sustainable behaviour. Data were collected from undergraduate students enrolled in selected Malaysian public universities. A total of 956 valid responses were obtained, exceeding the minimum sample size recommended for Partial Least Squares Structural Equation Modelling (PLS-SEM) and ensuring adequate statistical power for analysis (Hair et al., 2021).

Sampling Technique

A convenience sampling technique was employed due to accessibility considerations and the heterogeneous nature of the student population across public universities. This sampling approach is commonly used in higher education sustainability research and is considered appropriate for exploratory and theory-extension studies involving large student populations (Hair et al., 2021).

Measurement of Variables

Sustainable behaviour was measured using items related to everyday pro-environmental practices, including recycling, energy conservation, and pollution reduction. Spiritual values

were operationalised through indicators reflecting moral responsibility, ethical awareness, and environmental connectedness, consistent with prior sustainability and spirituality research (Zsolnai & Illes, 2020; Rai et al., 2022). Subjective norm captured respondents' perceptions of social pressure from peers, family members, and the university community. All items were measured using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5).

Ethical Considerations

Ethical considerations were carefully observed throughout the research process. Participation in the study was entirely voluntary, and informed consent was obtained from all respondents prior to data collection. Respondents were assured that their participation was anonymous and that all responses would be treated with strict confidentiality. No personally identifiable information was collected, and the data were used solely for academic research purposes.

Results

The measurement model assessment demonstrated satisfactory reliability and validity for all constructs. Composite reliability and average variance extracted values exceeded recommended thresholds, indicating adequate internal consistency and convergent validity. Discriminant validity was also established, confirming that the constructs captured conceptually distinct dimensions.

Structural model analysis revealed that spiritual values exert a significant and positive influence on sustainable behaviour, with a stronger effect size compared to subjective norm. Subjective norm also showed a significant positive effect, indicating that social influence remains an important determinant. However, the stronger influence of spiritual values suggests that internalised moral motivations play a more decisive role than external social pressure in shaping sustainable behaviour among university students.

Discussion

The findings confirm that spiritual values play a central role in shaping sustainable behaviour, supporting prior research that highlights spirituality as a key driver of ethical and pro-environmental actions (Rai et al., 2022; Crowe & Brennan, 2022). This reinforces the argument that sustainability challenges are not merely technical or informational issues but are deeply rooted in values, ethics, and moral responsibility.

While subjective norm remains significant, its comparatively weaker influence suggests that sustainable behaviour driven primarily by social expectations may be less enduring. Internal motivation grounded in spiritual values appears more effective in sustaining long-term behaviour, particularly in educational contexts. These findings support calls to extend TPB by integrating internal value-based constructs to better explain sustainability-related behaviour beyond cognitive and social determinants alone (Steg & Vlek, 2022).

Implications

From a theoretical perspective, this study extends the Theory of Planned Behaviour by incorporating spiritual values as an internal determinant of sustainable behaviour. This extension enhances TPB's explanatory power by addressing its limitation in capturing moral and ethical motivations underlying sustainability-related actions, particularly in higher education contexts.

Practically, the findings suggest that universities should complement awareness-based sustainability initiatives with values-oriented and reflective learning approaches. Integrating ethical reflection, spiritual development, and values-based sustainability education into curricula and campus activities may foster deeper commitment and encourage more consistent sustainable behaviour among students.

Conclusion And Limitations

This study demonstrates that both spiritual values and subjective norm significantly influence sustainable behaviour among Malaysian university students. By extending TPB, the study highlights the importance of internal moral values alongside social influence in promoting sustainable behaviour. These findings provide meaningful insights for sustainability education, institutional policy, and behavioural interventions in higher education.

Nevertheless, the study has several limitations. The cross-sectional design restricts causal inference, and reliance on self-reported data may introduce response bias. Future research may adopt longitudinal or mixed-method approaches, examine different institutional or cultural contexts, and incorporate additional constructs such as environmental identity or institutional support. Overall, this study supports SDG 4 (Quality Education) through values-oriented education, SDG 12 (Responsible Consumption and Production) through behaviour change, and indirectly SDG 13 (Climate Action) by promoting sustainable practices.

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