

Driving Sustainability Performance in Malaysia's Palm Oil Industry: How Employee Engagement Makes the Difference

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Abstract

Amid rising global scrutiny and environmental challenges, sustainability performance (SP) is crucial to the Malaysian palm oil industry's long-term survival, global competitiveness, and ethical standing. This study examines the influence of transformational leadership (TL), organizational culture (OC), and organizational commitment (OCM) on SP, with employee engagement (EE) as a mediator. Despite increasing global sustainability demands, existing research often analyses these factors in isolation, lacking an integrated perspective on their combined impact. Furthermore, limited studies have investigated how EE translates leadership vision, cultural values, and commitment into tangible sustainability outcomes, particularly in the Malaysian palm oil industry. Grounded in the Resource-Based View (RBV) and Social Exchange Theory (SET), this study bridges these gaps by exploring both strategic and relational mechanisms that enhance sustainability performance. Employing a quantitative research design, the study utilises Structural Equation Modeling (SEM) to analyse the relationships among the variables. The findings provide valuable insights for industry practitioners seeking to enhance corporate sustainability, policymakers formulating sustainability regulations, and academics advancing organizational sustainability research. By aligning leadership, culture, and commitment with employee engagement, organizations can drive transformative ESG change, ensuring long-term resilience, ethical business practices, and sustainable growth in an increasingly competitive and rapidly evolving global market.

Keywords: Sustainability Performance, Environmental, Social, and Governance (ESG), Transformational Leadership, Organizational Culture; Organizational Commitment, Employee Engagement.

Introduction

Sustainability has become a priority for businesses, policymakers, and societies as they face escalating environmental, social, and governance (ESG) challenges. Companies are now

evaluated not only by their financial performance but also by their sustainability and ESG performance, which measures their ability to balance economic growth with environmental responsibility and social equity (IPCC, 2023; United Nations Global Compact, 2025). Sustainability performance is crucial for corporate reputation, investor confidence, and long-term business resilience (Sachs et al., 2019; Islam & Winkel, 2017). However, achieving high ESG performance requires more than regulatory compliance—it depends on how well sustainability principles are integrated into an organization's operations and workforce. One of the key drivers of sustainability performance is employee engagement, which serves as a mediator that translates corporate sustainability strategies into actionable outcomes (Afsar et al., 2018; Pham & Kim, 2019). Engaged employees are more likely to adopt pro-sustainability behaviours, contribute innovative ideas, and align their efforts with an organization's ESG goals. Therefore, understanding the role of employee engagement as a bridge between organizational factors and sustainability outcomes is crucial for fostering responsible business practices.

While external regulations and market demands push organizations toward sustainability, internal organizational factors—such as transformational leadership (TL), organizational culture (OC), and organizational commitment (OCM)—play a crucial role in determining sustainability success (Robertson & Barling, 2017; Afsar et al., 2018). Transformational leadership fosters a vision for sustainability by motivating employees, driving innovation, and embedding ESG goals within the organization's strategic direction (Singh et al., 2021). Meanwhile, organizational culture provides the foundation for sustainability-oriented behaviours, shaping employees' attitudes, values, and ethical decision-making (Naz et al., 2023). A strong sustainability-oriented culture promotes shared responsibility and accountability in achieving ESG goals (Lo et al., 2018). Similarly, organizational commitment enhances employee dedication to sustainability initiatives by fostering emotional, normative, and continuance commitment to the organization's environmental and social objectives (Meyer & Allen, 1991; Rasheed et al., 2022). However, despite the importance of these internal factors, industries with significant environmental and social impact, such as palm oil production, continue to struggle with embedding sustainability within their organizational structures (Chong & Loh, 2023; Hossain et al., 2022).

The global palm oil industry has long been associated with deforestation, biodiversity loss, greenhouse gas emissions, and exploitative labour conditions (Meijaard et al., 2020; Rahman et al., 2019). As international markets impose stricter sustainability requirements, palm oil producers are under increasing pressure to demonstrate ethical sourcing and responsible production practices (European Commission, 2021; U.S. Department of Labor, 2020). While sustainability certification schemes such as the Roundtable on Sustainable Palm Oil (RSPO) and corporate social responsibility (CSR) initiatives have been introduced, these efforts often emphasise regulatory compliance rather than fostering an internal culture of sustainability (Chong & Loh, 2023). Many organizations continue to struggle with weak leadership commitment, resistance to change, and disengaged employees, which hinder the successful implementation of sustainability strategies (Hossain et al., 2022). Addressing these gaps requires a deeper examination of how TL, OC, OCM and EE can collectively drive meaningful ESG performance.

As one of the world's largest palm oil producers, Malaysia faces increasing scrutiny from international markets and regulatory bodies. The European Union and the United States have imposed stringent import regulations, requiring palm oil to be ethically sourced and deforestation-free (European Commission, 2021; U.S. Department of Labor, 2020). In response, Malaysia has introduced sustainability frameworks such as the Malaysian Sustainable Palm Oil (MSPO) certification and has promoted adherence to RSPO standards (Chin et al., 2019; Nelson et al., 2020). However, despite these regulatory efforts, challenges persist in ensuring full compliance, particularly in addressing systemic issues such as weak corporate commitment, inconsistent enforcement, and lack of employee engagement (Chin et al., 2019; Nelson et al., 2020; Hossain et al., 2022). The palm oil industry's sustainability efforts often focus on meeting external demands rather than fostering internal engagement among employees and leadership (Choo & Ng, 2021). Without effective leadership, a strong organizational culture, and committed employees, sustainability initiatives remain fragmented and fail to achieve long-term impact (Afsar et al., 2018; Rasheed et al., 2022). Understanding how internal organizational dynamics—particularly TL, OC, OCM, and EE—affect sustainability performance is crucial for strengthening Malaysia's position in the global palm oil market.

Despite growing research on sustainability performance, existing studies often examine transformational leadership, organizational culture, and organizational commitment in isolation, overlooking their interconnected impact on sustainability (Robertson & Barling, 2017; Afsar et al., 2018). Furthermore, while employee engagement has been recognized as a key driver of organizational success (Naz et al., 2023; Saks, 2019), its mediating role in the TL–OC–OCM–sustainability performance relationship remains underexplored. Prior research primarily focuses on regulatory compliance and external pressures in driving sustainability (Chin et al., 2019; Nelson et al., 2020), neglecting how internal organizational factors cultivate a sustainability-oriented workforce. This study bridges these gaps by integrating the Resource-Based View and Social Exchange Theory to provide a holistic understanding of how leadership, culture, and commitment shape sustainability performance through employee engagement. By empirically validating these relationships within the Malaysian palm oil sector, this study advances theoretical discourse and contributes to the broader discourse on corporate sustainability and responsible governance. The findings offer valuable insights for industry leaders to implement more effective ESG strategies, policymakers to strengthen regulatory frameworks promoting transparency and ethical business practices, and employees and local communities to benefit from improved labour conditions, responsible sourcing, and enhanced CSR initiatives.

Literature Review

Theoretical Foundation

This study focuses on the interrelationships between transformational leadership, organizational culture, organizational commitment, employee engagement, and sustainability performance within the Malaysian palm oil industry. Given the intricate nature of these relationships, a dual theoretical approach is adopted, integrating the Resource-Based View (RBV) and Social Exchange Theory (SET). The RBV provides a strategic lens to understand how firms leverage internal resources for sustainable competitive advantage, while SET offers a relational perspective, explaining how social exchanges foster engagement and commitment to sustainability initiatives. Integrating these two theories enables a

comprehensive analysis of how organizations can enhance sustainability performance through both strategic resource management and relational mechanisms.

Resource-Based View (RBV)

The Resource-Based View (RBV) is a strategic management theory that emphasises the role of internal resources in achieving and sustaining competitive advantage. Initially introduced by Wernerfelt (1984) and later expanded by Barney (1991), RBV argues that firms can outperform competitors by developing and leveraging valuable, rare, inimitable, and non-substitutable (VRIN) resources. These resources can include tangible assets like technology and infrastructure, as well as intangible factors such as leadership, organizational culture, and employee commitment. In the context of sustainability, RBV highlights how firms can integrate ESG principles into their core operations by capitalising on these internal strengths. Companies with a strong sustainability-oriented culture and leadership can embed ESG practices into their long-term strategies, enhancing both corporate reputation and regulatory compliance (Barney, 1991; Wernerfelt, 1984).

RBV is particularly relevant in industries facing sustainability challenges, such as the Malaysian palm oil sector, where firms must balance economic growth with environmental responsibility. By developing sustainability-focused resources—such as transformational leadership, employee engagement, and ethical corporate governance—organizations can gain a competitive edge while meeting ESG standards. The Natural Resource-Based View (NRBV), an extension of RBV, further emphasises the importance of integrating sustainability into business strategies through pollution prevention, product stewardship, and sustainable development (Hart, 1995). By leveraging these internal resources effectively, firms can drive long-term sustainability performance, mitigate regulatory risks, and enhance market differentiation, ensuring their viability in an increasingly sustainability-conscious global economy (Dubey et al., 2020; Hart & Dowell, 2018)

Social Exchange Theory (SET)

Social Exchange Theory (SET) is a fundamental theory in organizational behaviour that explains how relationships are formed and maintained through reciprocal exchanges of benefits, trust, and commitment. Initially conceptualised by Homans (1961) and later expanded by Blau (1964), SET posits that individuals engage in social interactions based on perceived rewards and costs, leading to mutual obligations over time. Employees are more likely to exhibit higher engagement, commitment, and discretionary effort in the workplace when they perceive fair treatment, organizational support, and recognition (Cropanzano & Mitchell, 2005). Within the context of sustainability, SET suggests that when organizations invest in sustainability-driven policies and recognise employees' contributions to ESG initiatives, employees reciprocate by actively participating in sustainability programs and aligning their behaviours with corporate sustainability goals (Naz et al., 2023).

SET is particularly relevant in industries like the Malaysian palm oil sector, where sustainability performance depends on workforce engagement and ethical business practices. Employees who trust that their organization is genuinely committed to sustainability are more likely to engage in eco-friendly behaviours and compliance with sustainability standards (Wang et al., 2022). Transformational leadership plays a crucial role in fostering these positive exchanges, as leaders who demonstrate ethical behaviour and promote sustainability

initiatives enhance employee motivation and trust (Yu et al., 2021). By integrating SET with sustainability strategies, organizations can build a culture of reciprocity, ensuring long-term employee engagement in ESG initiatives and strengthening corporate reputation in a globally scrutinised industry (Blau, 1964; Cropanzano & Mitchell, 2005)

Sustainability Performance

Sustainability performance (SP) refers to an organization's ability to integrate ESG considerations into its operations to ensure long-term business viability while minimizing negative externalities. It encompasses an organization's success in balancing economic growth with environmental responsibility and social well-being (Epstein & Buhovac, 2014). SP is typically measured through environmental indicators (e.g., carbon emissions, resource efficiency), social factors (e.g., labour rights, community engagement), and governance metrics (e.g., corporate transparency and ethical leadership) (Chew et al., 2021). Organizations that excel in SP not only meet regulatory requirements but also gain competitive advantages such as improved brand reputation, stakeholder trust, and investor confidence (Abdullah et al., 2022).

Several sustainability reporting frameworks, such as the Global Reporting Initiative (GRI) and Bursa Malaysia's Sustainability Reporting Guidelines, provide standardized mechanisms for evaluating corporate sustainability efforts (Bursa Malaysia, 2022). These frameworks help organizations track progress, ensure compliance with international sustainability standards, and enhance transparency for stakeholders. In resource-intensive industries such as the Malaysian palm oil sector, SP is crucial for maintaining market access, especially in regions with stringent environmental regulations (Wu et al., 2018). Companies that actively integrate sustainability into their business strategies—such as through sustainable agricultural practices and ethical supply chain management—are better positioned to enhance long-term profitability while mitigating social and environmental risks (Singh et al., 2021).

Prior research has identified several factors influencing SP, including leadership, organizational culture, employee engagement, and regulatory compliance. Studies show that transformational leadership plays a significant role in driving sustainability initiatives, as leaders who emphasize ethical decision-making and long-term environmental goals inspire employees to adopt sustainable practices (Bass & Riggio, 2006; Dwivedi et al., 2021). Additionally, research highlights the importance of a strong sustainability-oriented organizational culture, which fosters shared values and behaviours that align with ESG objectives (Cameron & Quinn, 2011). Organizations that cultivate a culture of sustainability are more likely to successfully implement long-term environmental and social strategies, leading to enhanced ESG performance and corporate resilience (Naz et al., 2023).

Empirical studies have also demonstrated that EE is a critical mediator between leadership and SP. Engaged employees are more likely to actively participate in corporate sustainability programs, contributing to resource conservation, waste reduction, and social responsibility initiatives (Saks, 2019). Furthermore, firms that align their sustainability efforts with international standards, such as the Roundtable on Sustainable Palm Oil (RSPO), tend to perform better in terms of sustainability outcomes and regulatory compliance (Gimenez et al., 2018). However, research also indicates that achieving SP requires a holistic approach,

integrating strategic resource management with relational mechanisms to ensure long-term organizational success (Chew et al., 2021; Singh et al., 2021).

Transformational Leadership

Transformational leadership (TL) is a leadership style that inspires and motivates employees to exceed expectations by fostering a culture of trust, vision, innovation, and personalised development (Bass, 1985). This leadership approach is characterised by four core dimensions: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. Idealised influence refers to the leader's ability to act as a role model by demonstrating ethical behaviour, accountability, and commitment to shared values (Afsar et al., 2020; Sun & Wang, 2020). Inspirational motivation involves articulating a compelling vision that aligns with individual and organizational goals, fostering employee commitment to long-term sustainability objectives (Qi & Liu, 2020; Li et al., 2022). Intellectual stimulation encourages employees to think creatively and challenge conventional practices, leading to innovative solutions to operational and sustainability challenges (Mittal & Dhar, 2019). Lastly, individualised consideration ensures that leaders provide mentorship and personal support to employees, fostering engagement and organizational commitment (Choi et al., 2019).

Empirical studies highlight that TL significantly enhances sustainability efforts by fostering a culture of innovation, ethical decision-making, and long-term strategic alignment (García-Morales et al., 2012). Research indicates that transformational leaders play a crucial role in embedding sustainability into organizational practices by ensuring alignment with international sustainability frameworks such as the Global Reporting Initiative (GRI) and Roundtable on Sustainable Palm Oil (RSPO) (Nguyen et al., 2020). Additionally, TL has been found to positively influence employee engagement, innovation, and resilience in industries facing sustainability challenges (Bass & Riggio, 2006). Studies suggest that firms with transformational leaders are more likely to adopt advanced sustainability practices such as circular economy principles, renewable energy integration, and ethical supply chain management (He et al., 2021).

TL plays a crucial role in enhancing sustainability performance by influencing ESG dimensions. Leaders who integrate sustainability principles into the organizational vision encourage employees to adopt eco-friendly practices such as waste management, carbon footprint reduction, and sustainable sourcing (Fernando et al., 2019; Mubarak et al., 2021). Moreover, transformational leaders foster social sustainability by promoting ethical labour practices, workplace diversity, and community engagement, ensuring that firms adhere to fair labour policies and corporate social responsibility (Hassan et al., 2020). In terms of governance, TL strengthens transparency, accountability, and ethical decision-making, minimising compliance risks and reinforcing corporate sustainability commitments (Shakeel et al., 2020; Nawaz & Pongpirul, 2020). Research further emphasises that TL fosters high-quality leader-follower relationships through trust and reciprocity, motivating employees to contribute to ESG initiatives actively and thereby reinforcing sustainability as a core business objective (Wang et al., 2022). Based on these insights, it can be hypothesised that:

H1a. Transformational leadership has a positive effect on sustainability performance.

H1b. Transformational leadership has a positive effect on employee engagement.

Organizational Culture

Organizational culture (OC) refers to the shared values, beliefs, and norms that influence employee behaviour, decision-making, and corporate performance (Schein, 1992; Denison et al., 2019). It serves as a "social glue" that binds employees together through common expectations and behaviours, shaping how they interact with one another and external stakeholders. A sustainability-oriented OC embeds ESG values into business operations, ensuring that sustainability is not merely a compliance obligation but an integral part of corporate identity (Nguyen & Tu, 2020). Key components of OC include values and beliefs, norms and practices, artefacts (such as sustainability certifications and policies), and leadership behaviour, all of which shape sustainability initiatives within firms (Cameron & Quinn, 2019; Giorgi et al., 2020).

Prior studies emphasise the critical role of OC in driving sustainability performance. Research suggests that companies with strong sustainability-oriented cultures exhibit higher ESG performance as sustainability values become ingrained in employee mindsets and operational practices (Hartmann et al., 2022). Schein's Model of Organizational Culture (1985, 1992) explains how sustainability principles evolve from visible structures (such as sustainability policies and reports) to deeply embedded organizational beliefs. Additionally, studies highlight that organizations with robust cultural foundations experience improved regulatory compliance, enhanced stakeholder trust, and long-term sustainability success (Chew et al., 2021). Firms that cultivate a sustainability-driven culture tend to outperform those that treat sustainability as a secondary priority, as their employees and leaders are more aligned with ESG goals (Sharma et al., 2021).

A sustainability-oriented culture significantly influences sustainability performance by embedding ESG considerations into corporate decision-making and employee behaviour. Organizations with strong sustainability cultures demonstrate improved environmental performance through responsible resource management, carbon footprint reduction, and ethical sourcing practices (Hartmann et al., 2022). Social sustainability is also enhanced as firms prioritise fair labour practices, workplace diversity, and community engagement. Additionally, ethical governance structures are strengthened through cultural norms emphasising transparency, accountability, and stakeholder inclusivity (Abdullah et al., 2021). The RBV suggests that a sustainability-driven culture serves as a unique, inimitable resource that provides a competitive advantage, while SET explains how sustainability culture fosters trust and reciprocity, encouraging employees to participate in ESG initiatives actively (Dubey et al., 2020; Hartnell et al., 2019). Therefore, the following hypotheses were formulated:

H2a. Organizational culture has a positive effect on sustainability performance.

H2b. Organizational culture has a positive effect on employee engagement.

Organizational Commitment

Organizational commitment (OCM) refers to employees' psychological attachment and dedication toward their organization, influencing their engagement, loyalty, and decision-making behaviours (Meyer & Allen, 1991). The Three-Component Model of Commitment, developed by Meyer and Allen, categorises commitment into affective, continuance, and normative commitment. Affective commitment reflects an emotional connection with the organization, leading employees to stay because they genuinely identify with its goals and values. Continuance commitment arises from employees' perception of the costs associated

with leaving the organization, such as financial instability or career setbacks. Normative commitment is based on a sense of moral obligation, where employees remain because they feel a duty to do so (Ng & Feldman, 2011). These dimensions collectively shape an employee's motivation to contribute to organizational success, making commitment a key factor in fostering sustainable business practices.

Previous studies highlight the significant role of OCM in enhancing employee engagement, retention, and performance. Research suggests that high levels of affective commitment drive employees to go beyond their formal job responsibilities, actively participating in corporate social responsibility (CSR) initiatives and sustainability programs (Naz et al., 2023). Employees with strong normative commitment uphold ethical standards, contributing to transparency, social equity, and regulatory compliance. Although driven by external factors such as job security, continuous commitment ensures workforce stability, which is crucial for long-term sustainability strategies (Chew et al., 2021). Empirical studies have demonstrated that companies with committed employees report better financial performance, lower turnover rates, and improved corporate reputation, particularly in industries with substantial sustainability requirements (Rasheed et al., 2022).

OCM plays a vital role in sustainability performance by ensuring consistent employee participation in ESG initiatives. Employees with high affective commitment voluntarily engage in sustainability projects, such as resource conservation, renewable energy adoption, and waste reduction programs, due to their intrinsic motivation (Singh et al., 2021). Normative commitment fosters a culture of responsibility, encouraging employees to promote fair labour practices, ethical sourcing, and corporate accountability (Ramus & Vaccaro, 2017). Continuance commitment contributes to long-term stability, ensuring that organizations retain experienced personnel essential for implementing sustainability policies and achieving certification standards such as RSPO (Chew et al., 2021). Grounded in SET, OCM strengthens reciprocity and trust between employers and employees, reinforcing sustainability as an enduring corporate value. Thus, the following hypotheses are proposed:

H3a. Organizational commitment has a positive effect on sustainability performance.

H3b. Organizational commitment has a positive effect on employee engagement.

The Mediating Role of Employee Engagement

Employee engagement (EE) is defined as the psychological connection employees have with their work and organization, influencing their level of enthusiasm, dedication, and absorption in their job roles (Kahn, 1990). It is a multidimensional construct that includes physical, emotional, and cognitive engagement, where employees exert effort, form an emotional connection with the company's mission, and actively think about improving organizational outcomes (Schaufeli et al., 2002). Unlike job satisfaction, which focuses on how employees feel about their work, engagement emphasises proactive and sustained participation in achieving organizational objectives. A highly engaged workforce is essential for achieving long-term corporate success, particularly in sustainability-driven industries where employee participation is crucial for meeting ESG goals.

Existing studies highlight the significance of EE in driving organizational performance and sustainability outcomes. Research suggests that engaged employees exhibit higher productivity, creativity, and job retention, contributing to the overall resilience of

organizations (Bakker & Demerouti, 2008). Studies in sustainability-driven industries indicate that engaged employees are more likely to participate in corporate social responsibility (CSR) initiatives, environmental conservation programs, and ethical decision-making (Naz et al., 2023). Additionally, organizations that foster a culture of engagement through supportive leadership, clear communication, and employee recognition report better sustainability outcomes, as engaged employees actively contribute to ESG efforts (Chew et al., 2021).

EE serves as a mediating variable that links organizational resources—such as transformational leadership, organizational culture, and commitment—to sustainability performance. Studies suggest that while leadership and culture create an enabling environment for sustainability, engagement is the mechanism that translates these efforts into actionable behaviours (Liao et al., 2020; Afsar et al., 2020). For example, transformational leaders who inspire a sustainability vision rely on engaged employees to implement and drive ESG initiatives. Similarly, a strong sustainability-oriented culture provides a normative framework, but engagement ensures that employees internalise and act on these values in their daily tasks (Nguyen & Tu, 2020; Hartmann et al., 2022). Without active engagement, sustainability efforts may remain aspirational rather than producing tangible results, making engagement a critical factor in achieving sustainability success. Therefore, the following hypotheses are formulated:

H4. Employee engagement has a positive effect on sustainability performance.

H5a. Employee engagement mediates the effect of transformational leadership on sustainability performance.

H5b. Employee engagement mediates the effect of organizational culture on sustainability performance.

H5c. Employee engagement mediates the effect of organizational commitment on sustainability performance.

Conceptual Framework

This study's conceptual framework examines the influence of transformational leadership, organizational culture, and organizational commitment on sustainability performance in the Malaysian palm oil industry, emphasising the mediating role of employee engagement. Grounded in relevant theories and hypotheses development, the framework illustrates how these organizational factors (transformational leadership, organizational culture, and organizational commitment) contribute to sustainability outcomes, with employee engagement acting as a crucial mechanism linking leadership, culture, and commitment to sustainability performance, as presented in Figure 1.

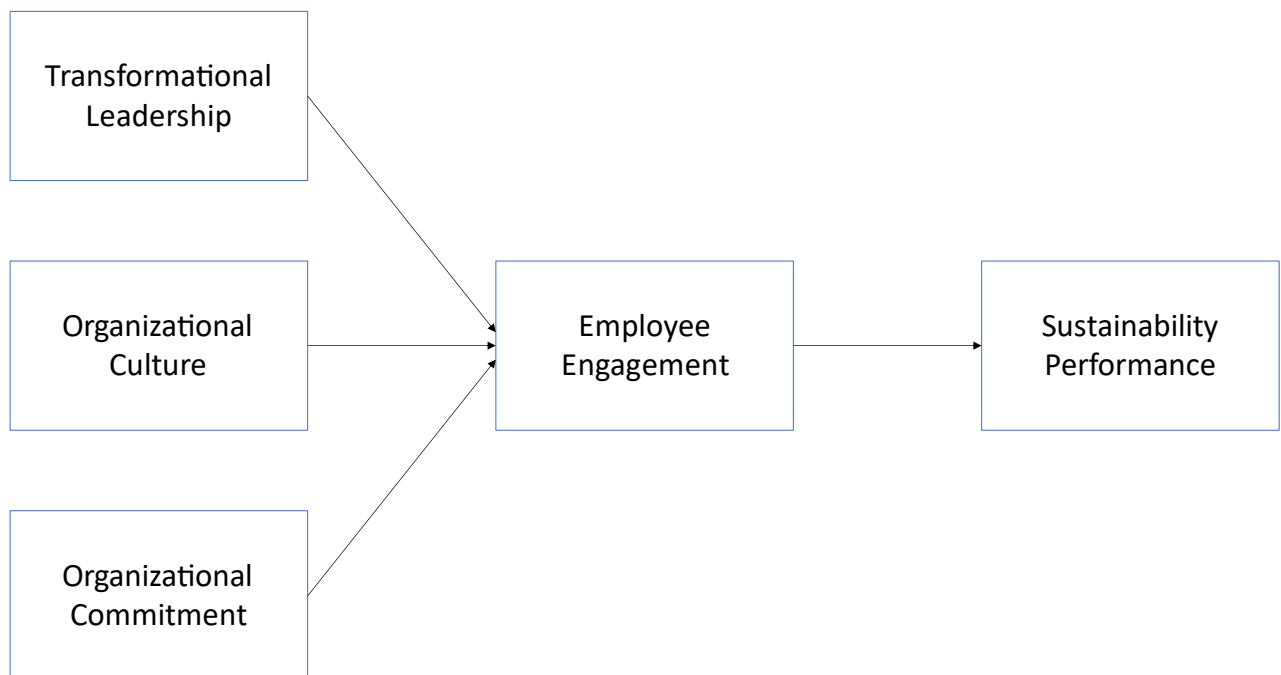


Figure 1. Conceptual Framework

Research Methodology

Research methodology is the framework that guides the process of data collection, analysis, and interpretation in scholarly investigations (Creswell & Poth, 2018). This study employs a quantitative methodology to examine how transformational leadership, organizational culture, and commitment affect sustainability performance in the Malaysian palm oil industry, focusing on the mediating role of employee engagement and moderating effects of demographic and structural variables. By providing empirical evidence, the methodology offers a rigorous and generalisable approach to understanding the complex relationships within this context, contributing to both theoretical knowledge and practical applications (Tashakkori & Teddlie, 2010).

Research Design

The research design of this study follows a positivist paradigm, emphasising empirical measurement, objectivity, and hypothesis testing through quantitative research methods. A deductive approach is employed, ensuring that hypotheses derived from established theories are validated. The study utilises a deductive approach, beginning with theoretical frameworks from the Resource-Based View (RBV) and Social Exchange Theory (SET) to examine the relationships between transformational leadership, organizational culture, organizational commitment, employee engagement, and sustainability performance. A survey strategy is implemented to collect large-scale, standardised data from employees in the Malaysian palm oil sector.

Survey Method

This study adopts a survey strategy, a widely used research method for collecting quantitative data through questionnaires (Fowler, 2014). The survey method is chosen for its ability to gather data from a large and geographically dispersed sample, making it well-suited for the

Malaysian palm oil industry, which consists of numerous plantations, mills, and corporate offices (De Vaus, 2014). Surveys provide a standardized approach, minimizing variability and enhancing comparability across participants, which is crucial for measuring constructs like leadership, culture, engagement, and sustainability performance (Bryman, 2016). Additionally, surveys are cost-effective and time-efficient, allowing for large-scale data collection within a feasible timeframe (Saunders et al., 2019). By employing structured questionnaires with validated measurement scales, this method ensures statistical rigour and empirical validity, making it the most suitable approach for investigating the influence of organizational factors on sustainability performance in the Malaysian palm oil industry (Collis & Hussey, 2014).

Population

This study's population consists of employees working under the control of Malaysian palm oil organizations certified under the Malaysian Sustainable Palm Oil (MSPO) and Roundtable on Sustainable Palm Oil (RSPO) certification schemes. These participants are directly involved in sustainability-related initiatives within their respective organizations, ensuring that the study captures insights from individuals engaged in implementing and monitoring sustainability practices.

Unit Analysis and Sampling Frame

The unit of analysis in this study is individual employees rather than entire organizations. Specifically, the study targets employees who are directly involved in sustainability initiatives, including those in environmental management, corporate social responsibility (CSR), supply chain sustainability, compliance, and governance. This ensures that responses come from individuals with direct knowledge and experience in implementing sustainability-related policies and practices. Employees in non-relevant roles, such as administrative staff, general labourers, or those without involvement in sustainability efforts, will be excluded from the study to maintain data relevance and accuracy. By focusing on this specific subset of employees, the study aims to capture informed perspectives on how organizational factors influence sustainability performance in the Malaysian palm oil industry.

Sampling Design

The sampling design adopted in this study is purposive sampling, a non-probability sampling technique. This approach ensures that only key personnel who are actively involved in sustainability initiatives within MSPO- or RSPO-certified organizations are selected. Purposive sampling enhances the study's validity by ensuring respondents have relevant industry-specific knowledge that aligns with the research objectives.

Sample Size

This study's sample size is 200–250 participants, aligning with Structural Equation Modeling (SEM) guidelines, which recommend a minimum of 200 respondents for robust analysis (Kline, 2016; Hair et al., 2019). A target sample size of 250 participants has been set to account for potential non-responses, ensuring adequate statistical power (0.80) to detect medium effect sizes ($f^2 = 0.15$) at a 0.05 significance level (Cohen, 1988).

Measurement Instrument

This study utilises well-established measurement instruments to assess key constructs. Transformational leadership (TL) is measured using the Multifactor Leadership Questionnaire (MLQ), which evaluates leadership behaviours across four dimensions: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration (Bass & Avolio, 1995). Organizational culture (OC) is assessed using the Organizational Culture Assessment Instrument (OCAI), based on the Competing Values Framework, which categorises culture into clan, adhocracy, market, and hierarchy (Cameron & Quinn, 2011). Organizational commitment (OCM) is measured using the Three-Component Model (TCM) of the Commitment Survey, evaluating affective, continuance, and normative commitment (Meyer & Allen, 1991). Employee engagement (EE) is assessed using the Utrecht Work Engagement Scale (UWES-9), covering vigour, dedication, and absorption (Schaufeli et al., 2006). Lastly, sustainability performance (SP) is measured using an adapted scale based on the Triple Bottom Line (TBL) framework, incorporating environmental, social, and economic performance indicators (Elkington, 1997).

Coding Scale

The study employs a five-point Likert scale for all measurement instruments, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), ensuring clarity, ease of response, and statistical comparability (DeVellis, 2016). This scale allows for standardized data collection, minimizing response variability and enhancing reliability. The Likert scale facilitates quantitative analysis, including SEM, correlation, and regression, ensuring robust hypothesis testing and empirical validity (Hair et al., 2019).

Pilot Test

A pilot test will be conducted to evaluate the survey instrument's reliability, validity, and clarity before full-scale data collection. It will involve 30 employees from the target population, ensuring representation across different organizational levels and geographical regions (Julious, 2005). The survey will be administered in English and Bahasa Malaysia to assess comprehension and clarity. Participants will provide structured feedback through follow-up interviews and written comments to identify ambiguities, survey length concerns, and comprehension issues. Based on the feedback, necessary adjustments will be made to enhance respondent engagement, such as rewording ambiguous items, improving formatting, and optimizing survey length to maintain an estimated completion time of 25–30 minutes. Additionally, cultural sensitivity modifications will be incorporated to ensure alignment with local norms (Sekaran & Bougie, 2016).

Data Collection

The data collection for this study will follow a structured process to ensure efficiency and data integrity. The survey questionnaire will be finalised based on pilot test feedback, and ethical approval will be obtained before distribution. The survey will be administered through two primary methods: (1) online distribution via platforms like SurveyMonkey, enabling broad and time-efficient participation, and (2) face-to-face distribution for participants with limited internet access, ensuring inclusivity (Regmi et al., 2016). The survey will remain open for four weeks, with reminder emails and follow-ups to maximise response rates and minimise non-response bias (Baruch & Holtom, 2008). All responses will be securely stored using password-

encrypted digital platforms and locked physical storage to uphold confidentiality and data integrity.

Data Analysis

The data analysis will follow a rigorous, multi-step approach. Data preparation will involve cleaning, coding, and handling missing values, with missing data analysed using Little's MCAR test and imputed if necessary (Enders, 2017). Descriptive statistics will summarise respondent demographics and key variables, while inferential techniques such as correlation and multiple regression analysis will assess relationships between variables (Dancey & Reidy, 2017). The study will employ Structural Equation Modeling (SEM) using SmartPLS to test direct and mediating effects, validating the measurement model through Confirmatory Factor Analysis (CFA) (Byrne, 2016). Goodness-of-fit indices such as SRMR (<0.08), RMSEA (<0.08), and CFI (>0.90) will ensure model adequacy (Hu & Bentler, 1999). These statistical techniques will provide robust insights into how transformational leadership, organizational culture, commitment, and employee engagement influence sustainability performance.

Conclusion

This study aims to investigate how transformational leadership (TL), organizational culture (OC), and organizational commitment (OCM) influence sustainability performance (SP) in the Malaysian palm oil industry, with employee engagement (EE) as a mediating factor. Through quantitative analysis using Structural Equation Modeling (SEM), the study is expected to reveal significant relationships between these organizational factors and sustainability outcomes, emphasising the critical role of leadership, culture, commitment, and employee engagement in driving sustainable practices. The findings will provide theoretical contributions by expanding the understanding of employee-driven sustainability and offer practical insights for organizations to enhance sustainability strategies. The implications of this study benefit multiple stakeholders: (1) Industry practitioners can use the insights to develop leadership training programs, foster a sustainability-oriented culture, and enhance employee commitment to sustainability initiatives; (2) Policymakers can design better regulatory frameworks supporting corporate sustainability efforts; and (3) Investors and consumers can make informed decisions based on sustainability performance indicators. For future research, this study suggests exploring longitudinal approaches to examine the evolving impact of leadership, culture, and commitment on sustainability over time, as well as incorporating qualitative methods to gain deeper insights into employee perceptions and challenges in implementing sustainability initiatives.

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