Work life balance and pro environmenal behavior on sustainability

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ABSTRACT

This study investigates the impact of work-life balance (WLB) and pro-environmental behavior (PEB) on sustainability outcomes in Indonesia's manufacturing sector. As sustainability becomes increasingly important within industrial settings, understanding the role of human-centric factors like WLB and PEB can offer unique insights into achieving sustainable practices. Data were collected from 278 employees across the top four manufacturing companies in Indonesia. Using Structural Equation Modeling (SEM) via LISREL, the study demonstrates that both WLB and PEB significantly contribute to perceived sustainability outcomes. The results indicate that employees who experience a healthy work-life balance are more likely to engage in behaviors that support environmental initiatives, ultimately enhancing organizational sustainability. These findings suggest that promoting a supportive work environment and encouraging eco-friendly behaviors can facilitate sustainable business practices. The study's implications highlight the importance of integrating employee well-being into sustainability strategies within manufacturing industries, providing actionable recommendations for managers and policymakers aiming to foster sustainable development.

1. Introduction

The manufacturing sector in Indonesia has been a driving force behind the nation's economic development, providing a substantial contribution to Indonesia's Gross Domestic Product (GDP) and offering numerous employment opportunities across the country (Statistics Indonesia, 2023). However, the industry's rapid growth has come with environmental challenges, particularly as it involves resource-intensive processes and generates significant waste and emissions. With the ongoing global shift towards sustainability, manufacturing companies are under increasing pressure to adopt sustainable practices to meet environmental regulations and societal expectations (Shah et al., 2023a). This shift is reflected in the Indonesian government's commitment to the United Nations Sustainable Development Goals (SDGs) and the policies aimed at promoting environmental stewardship within industrial sectors (Ministry of Industry, Indonesia, 2023). One critical aspect of sustainable practices in manufacturing lies in the role of human resource factors (Maskuroh, Widyanty, Nurhidajat, Wardhana, &

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Fahlevi, 2023), including work-life balance and pro-environmental behavior among employees (Mushtaq, Ahmed, Fahlevi, Aljuaid, & Saniuk, 2022). Work-life balance has emerged as a crucial factor in determining employee satisfaction, productivity, and well-being, with significant implications for organizational commitment and performance (Greenhaus & Powell, 2006). Employees who maintain a balanced approach to work and personal life tend to report higher levels of engagement and commitment, which are essential for adopting and implementing sustainable practices in the workplace (Haar, Russo, Sune, & Ollier-Malaterre, 2014). Research suggests that when organizations foster a culture of work-life balance, employees are more likely to engage in behaviors that support the organization's sustainability goals, including energy conservation, waste reduction, and other pro-environmental actions (Norton, Parker, Zacher, & Ashkanasy, 2015).

Pro-environmental behavior (PEB) refers to voluntary actions by individuals that aim to minimize negative impacts on the environment. In the context of the workplace, PEBs can include simple actions like recycling, reducing energy consumption, and advocating for sustainable practices within the organization (Ones & Dilchert, 2012). As organizations recognize the importance of sustainability, promoting PEB among employees has become increasingly relevant. Employees who exhibit PEB contribute to reducing the environmental footprint of manufacturing operations, aligning personal behaviors with broader corporate sustainability goals (Graves, Sarkis, & Zhu, 2013). In Indonesia's manufacturing sector, there is a significant opportunity to enhance organizational sustainability by fostering PEB among employees. According to recent studies, pro-environmental behavior among employees is positively influenced by factors such as leadership support, workplace culture, and individual values (Setyaningrum et al., 2024). However, much of the research on PEB in the workplace has been conducted in Western contexts, with limited exploration in Indonesia or other Southeast Asian nations. Given the distinct cultural and economic dynamics of the region, there is a critical need for studies that examine how these factors influence PEB within Indonesian manufacturing companies.

Work-life balance (WLB) is another influential factor that can affect employees' attitudes towards sustainability. When employees experience a balance between their work and personal life, they are more likely to experience job satisfaction, reduced stress, and higher levels of organizational commitment (Shanafelt et al., 2012). A supportive work-life balance can enhance employees' overall well-being and increase their willingness to go beyond their regular duties, often resulting in behaviors that benefit the organization (Abbas, Ekowati, Suhariadi, Fenitra, & Fahlevi, 2022), such as participating in sustainability initiatives (Kelliher & Anderson, 2010). In contrast, a lack of work-life balance can lead to burnout, decreased productivity, and reduced employee engagement, which can negatively impact an organization's sustainability goals (Bakker & Demerouti, 2007). In Indonesia's manufacturing sector, where long hours and high demands are common, achieving work-life balance can be challenging. However, research suggests that companies prioritizing work-life balance initiatives can foster a more engaged workforce willing to support sustainability practices. In particular, a balanced work environment allows employees to better manage their time, enabling them to participate in workplace sustainability programs actively. Despite the recognized importance of WLB, there is limited empirical research linking work-life balance to sustainability outcomes in Indonesia's manufacturing context, indicating a gap in the literature (Kartika et al., 2022).

Although the relationship between work-life balance, pro-environmental behavior, and sustainability has been explored in various industries, there remains a notable gap

in the research concerning Indonesia's manufacturing sector. The majority of studies have examined these factors in service-oriented industries or within developed nations, limiting the generalizability of findings to the manufacturing context in Indonesia. Furthermore, most research to date has utilized linear regression methods to analyze relationships between work-life balance, PEB, and sustainability, overlooking the complex interplay between these factors (Shah et al., 2023b). This study aims to bridge this research gap by utilizing Structural Equation Modeling (SEM) with LISREL, which allows for a more nuanced analysis of the interrelationships between work-life balance, pro-environmental behavior, and sustainability outcomes. By employing SEM, this study can capture both direct and indirect effects of WLB and PEB on organizational sustainability, offering insights into how these human-centric factors contribute to achieving sustainability goals. Moreover, this research will explore these dynamics specifically within Indonesia's manufacturing sector, providing contextually relevant findings that can inform policies and practices to support sustainable manufacturing in Indonesia.

The primary objective of this study is to examine how work-life balance and pro-environmental behavior contribute to sustainability outcomes within Indonesia's manufacturing sector. By analyzing data collected from manufacturing employees, this research seeks to identify the extent to which work-life balance and pro-environmental behavior influence sustainability practices, both individually and in combination. The study's findings are expected to contribute to the literature by demonstrating the importance of human resource factors in driving sustainability within the manufacturing sector, highlighting the critical role of employee well-being and environmental consciousness. In addition, this research will provide actionable insights for policymakers and industry leaders seeking to promote sustainability in manufacturing. By understanding the link between work-life balance, pro-environmental behavior, and sustainability, organizations can develop targeted interventions that support employee well-being while fostering a culture of sustainability. For instance, companies may consider implementing work-life balance initiatives and environmental training programs to encourage sustainable behavior among employees.

Through this study, we aim to enhance the understanding of how employee behavior and workplace culture can drive sustainability in Indonesia's manufacturing sector, ultimately contributing to the achievement of broader environmental goals. The findings will not only add to the theoretical knowledge on work-life balance and sustainability but also provide practical implications for fostering sustainable practices within the manufacturing industry. In light of the challenges facing Indonesia's manufacturing sector, particularly the need to balance economic growth with environmental responsibility, this study's focus on work-life balance and pro-environmental behavior offers a timely and relevant perspective. By examining the complex interactions between these factors using SEM with LISREL, this research will provide valuable insights into how manufacturing companies can leverage human resource factors to achieve sustainability objectives. Ultimately, this study seeks to contribute to the ongoing discourse on sustainable manufacturing in Indonesia, emphasizing the role of employee well-being and environmental behavior in fostering a more sustainable future.

2. Methodology

This study involves data collection from 278 respondents across Indonesia's Big 4 manufacturing companies, using Structural Equation Modeling (SEM) with LISREL

to analyze the relationships between the study variables. A random sampling method was applied to select respondents, and G*Power analysis was conducted to determine the minimum sample size required for robust statistical analysis. A detailed measurement table for each variable is also provided. This research employs a quantitative approach, using a survey method to collect data from employees in Indonesia's top four manufacturing companies. The goal is to examine the impact of work-life balance (WLB) and pro-environmental behavior (PEB) on sustainability outcomes within the sector. SEM with LISREL was chosen as it allows for an in-depth analysis of the relationships and latent variables that traditional regression methods may not capture. This research design is cross-sectional, meaning data were collected at a single point in time to provide a snapshot of the relationships between the study variables.

2.1. Population and Sample

The target population for this study includes employees from the top four manufacturing companies in Indonesia, representing a broad range of roles and departments to capture diverse perspectives on work-life balance, environmental behavior, and sustainability practices. Given the scope of the study, a sample size of 278 respondents was determined based on G*Power calculations to achieve adequate statistical power. G*Power software was used to calculate the minimum sample size necessary for SEM analysis. Using an effect size of 0.15 (medium effect), an alpha level of 0.05, and a power of 0.80, the software indicated a minimum sample size of approximately 200 respondents. The actual sample of 278 exceeds this minimum, providing sufficient power for detecting significant relationships among the variables. A random sampling method was used to ensure that the sample was representative of the population. Participants were selected from employee lists provided by each of the four companies, ensuring that each individual had an equal chance of being included in the study. This approach minimizes selection bias and increases the generalizability of the study findings to the broader population of employees in Indonesia's manufacturing sector.

2.2. Data Collection

Data were collected using a structured questionnaire distributed electronically to the participants. The questionnaire was divided into sections to measure each variable, including items on demographic information, work-life balance, pro-environmental behavior, and perceived sustainability outcomes. A total of 300 questionnaires were distributed, with 278 completed responses used for the final analysis after removing incomplete responses.

2.3. Measures and Variables

To capture the constructs of work-life balance, pro-environmental behavior, and sustainability, this study used validated scales from previous research, adapted to the manufacturing context in Indonesia. The following table provides details on each variable, the number of items, example items, and sources.

Each item was measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The scales were translated and back-translated to ensure clarity and cultural relevance for Indonesian respondents.

Table 1. Measurements

Variable	Deftnition	Items	Example Items	Source
Work-Life Balance (WLB)	The degree to which employees perceive a balance between work demands and personal life needs.	5	"I can manage my work responsibilities without compromising my personal time."	Haar et al., 2014
Pro-Environmental Behavior (PEB)	Voluntary actions employees take to reduce negative environmental impacts in the workplace.	6	"I try to minimize waste and energy use in the workplace."	Norton et al., 2015
Sustainability Outcomes	Employees' perceptions of their organization's sustainability performance and its impact.	7	"My company has implemented effective environmental policies."	Lin et al., 2024

2.4. Data Analysis

The data were analyzed using Structural Equation Modeling (SEM) with LISREL. This approach was chosen as it allows for simultaneous examination of multiple relationships between the latent variables, capturing both direct and indirect effects. Step 1: Measurement Model. Confirmatory Factor Analysis (CFA) was conducted to assess the validity and reliability of the measurement model for each construct. Step 2: Structural Model. After confirming the measurement model, the structural model was evaluated to test the hypothesized relationships among work-life balance, pro-environmental behavior, and sustainability outcomes. Step 3: Model Fit. Model fit indices such as Chi-square, RMSEA, CFI, and TLI were used to assess the overall fit of the model.

2.5. Validity and Reliability

To ensure the validity and reliability of the measurement instruments, the following tests were conducted. Construct Validity, assessed through CFA to confirm that each item correctly measured its intended construct. Factor loadings above 0.50 were considered acceptable. Convergent Validity verified using Average Variance Extracted (AVE), with values above 0.50 indicating that the constructs share a substantial amount of variance with their indicators. Discriminant Validity, ensured by comparing the square root of the AVE values with the inter-construct correlations; AVE values were greater than the correlations, confirming discriminant validity. Reliability, assessed using Cronbach's Alpha and Composite Reliability (CR) with values above 0.70 considered acceptable.

2.6. Ethical Considerations

The study was conducted in compliance with ethical standards. Informed consent was obtained from all participants, and responses were kept anonymous to ensure confidentiality. Participation was voluntary, and respondents were informed of their right to withdraw from the study at any time.

3. Results

3.1. Characteristics of Respondents

A total of 278 respondents from Indonesia's top four manufacturing companies participated in this study. The demographic profile of the respondents is summarized in

Table 2 below.

Table 2. Profile Respondents

Characteristic	Frequency	Percentage (%)
Gender		
Male	155	55.8
Female	123	44.2
Age		
21-30 years	90	32.4
31-40 years	130	46.8
41-50 years	40	14.4
Above 50 years	18	6.5
Education Level		
High School Diploma	35	12.6
Bachelor's Degree	190	68.3
Master's Degree	53	19.1
Years of Employment		
1-5 years	120	43.2
6-10 years	100	36.0
Above 10 years	58	20.9

The demographic profile of the study's respondents, drawn from four major manufacturing companies in Indonesia, offers insights into the composition of the workforce and provides context for understanding perspectives on work-life balance, pro-environmental behavior, and sustainability. The gender distribution among respondents was relatively balanced, with 55.8% identifying as male (155 respondents) and 44.2% as female (123 respondents). This close distribution helps ensure that the findings reflect both male and female perspectives within the manufacturing sector, where traditionally male-dominated roles have been prominent but are increasingly inclusive of female participation. Age-wise, the largest group of respondents (46.8%) fell within the 31–40-year age range, encompassing 130 individuals. This age group is often at a career stage where work-life balance and professional development are key concerns. The next largest age group was 21-30 years, accounting for 32.4% of respondents (90 individuals). This younger demographic likely brings a fresh perspective on pro-environmental behavior and may be more inclined towards sustainability initiatives. Additionally, 14.4% of respondents (40 individuals) were aged 41-50, reflecting experienced professionals who may have well-established views on sustainability practices. A smaller segment, 6.5% (18 respondents), was over 50, providing insights from highly experienced employees who may value work-life balance differently based on their years in the workforce.

Regarding education levels, a substantial majority held a bachelor's degree (68.3%), amounting to 190 respondents. This high level of education suggests a workforce equipped with the foundational knowledge necessary to understand and potentially support sustainability initiatives. Additionally, 19.1% of respondents (53 individuals) had a master's degree, indicating advanced education that could influence their approach to pro-environmental behavior and sustainability awareness. A smaller portion, 12.6% (35 respondents), held only a high school diploma, highlighting a range of educational backgrounds within the manufacturing sector. Years of employment also revealed a diverse distribution, with 43.2% of respondents (120 individuals) having 1-5 years of work experience, suggesting a sizable group of relatively new employees who may be more adaptable to new initiatives, including sustainability programs. Those with 6-10 years of experience made up 36.0% (100 respondents), representing mid-career employees likely balancing personal life with growing professional responsibilities. Lastly, 20.9% (58 respondents) had over 10 years of employment, providing insights from long-term employees whose deep understanding of the industry and organizational

culture could significantly impact the effectiveness of sustainability initiatives, the demographic profile suggests a diverse workforce across gender, age, education, and experience, offering a well-rounded perspective on factors influencing work-life balance and pro-environmental behavior within Indonesia's manufacturing sector

3.2. Descriptive Statistics

The descriptive statistics, including mean and standard deviation for each variable, are shown in Table 3. Each variable was measured on a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

Table 3. Descriptive Statistics

Variable	Mean	Standard Deviation
Work-Life Balance (WLB)	3.85	0.72
Pro-Environmental Behavior (PEB)	4.10	0.66
Sustainability Outcomes	4.05	0.71

The descriptive statistics for the key variables—Work-Life Balance (WLB), Pro-Environmental Behavior (PEB), and Sustainability Outcomes provide insight into the general attitudes and behaviors of respondents in Indonesia's manufacturing sector. For Work-Life Balance (WLB), the mean score is 3.85 with a standard deviation of 0.72. This suggests that, on average, respondents perceive a relatively balanced approach to managing their work and personal life, though there is moderate variability among individuals. A mean score close to 4 on a 5-point scale indicates that most respondents feel they are able to maintain a satisfactory balance between work demands and personal responsibilities, a critical factor that often influences employee satisfaction and productivity. Pro-Environmental Behavior (PEB), with a mean of 4.10 and a standard deviation of 0.66, shows a generally high level of pro-environmental behavior among respondents. This higher mean suggests that many employees are engaged in actions that support environmental sustainability, such as reducing waste, conserving energy, and supporting green initiatives within the workplace. The relatively lower standard deviation here indicates that attitudes toward PEB are more consistent across respondents, reflecting a potential shared commitment to environmental responsibility within these companies. For Sustainability Outcomes, the mean score is 4.05, with a standard deviation of 0.71. This score reflects a positive perception among respondents regarding their companies' achievements in sustainability, suggesting that employees believe their organizations are making effective strides in sustainable practices. Like WLB, the moderate variability in responses shows that while most respondents agree on the organization's sustainability outcomes, there are some differences in perception that could be attributed to varying departmental roles, tenure, or direct involvement in sustainability initiatives. These descriptive statistics highlight an encouraging trend: respondents generally report high levels of pro-environmental behavior and positive sustainability outcomes, supported by a satisfactory work-life balance, indicating that these factors may positively influence organizational sustainability within Indonesia's manufacturing sector

3.3. Validity and Reliability

To assess the validity and reliability of the constructs, we conducted Confirmatory Factor Analysis (CFA) in LISREL, focusing on factor loadings, Average Variance Ex-

tracted (AVE), Composite Reliability (CR), and Cronbach's Alpha for each construct.

Table 4. Outer Model

Variable	Factor Loadings	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Work-Life Balance (WLB)	0.63 - 0.82	0.83	0.86	0.61
Pro-Environmental Behavior (PEB)	0.65 - 0.80	0.85	0.88	0.62
Sustainability Outcomes	0.68 - 0.81	0.84	0.87	0.59

All Cronbach's Alpha values exceeded the acceptable threshold of 0.70, indicating internal consistency. CR values were above 0.70 for all constructs, suggesting good reliability. AVE values exceeded 0.50, confirming convergent validity for all constructs.

3.4. *Model Fit*

To evaluate the fit of the structural model, multiple goodness-of-fit indices were examined, including Chi-square (χ^2), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI).

Table 5. Model Fit Index

Fit Index	Acceptable Threshold	Model Value
Chi-square (χ^2) / df	< 3.0	2.10
RMSEA	< 0.08	0.06
CFI	> 0.90	0.92
TLI	> 0.90	0.91

The model exhibited an acceptable fit, with χ^2/df, RMSEA, CFI, and TLI all meeting the required thresholds. This indicates that the model adequately represents the data.

3.5. *Path Analysis Results*

The path analysis results, illustrating the relationships between work-life balance, pro-environmental behavior, and sustainability outcomes, are presented in Table 6. The standardized path coefficients, t-values, and significance levels are shown below.

Table 6. Coefficients

Hypothesized Path	Standardized Coefficient (β)	t-value	Signiftcance (p-value)
Work-Life Balance → Sustainability Outcomes	0.35	5.12	< 0.001
Pro-Environmental Behavior → Sustainability Outcomes	0.42	6.28	< 0.001
Work-Life Balance → Pro-Environmental Behavior	0.31	4.86	< 0.001

Work-Life Balance–Sustainability Outcomes, the path coefficient for WLB to Sustainability Outcomes was 0.35 (p < 0.001), indicating a significant positive relationship. Employees who experience a better work-life balance are more likely to support sustainable practices within their organization. Pro-Environmental Behavior–Sustainability Outcomes, the PEB to Sustainability Outcomes path was significant (β = 0.42, p <

0.001), showing that employees engaging in pro-environmental behaviors contribute positively to the organization's sustainability outcomes. Work-Life Balance Pro-Environmental Behavior, there was a significant relationship (β = 0.31, p < 0.001) between WLB and PEB, suggesting that a balanced work-life approach encourages employees to participate in pro-environmental actions at work. The results reveal that work-life balance positively influences both pro-environmental behavior and sustainability outcomes within Indonesia's manufacturing sector. Pro-environmental behavior also shows a significant positive effect on sustainability outcomes, underscoring the role of employee behaviors and well-being in supporting organizational sustainability efforts. This analysis demonstrates that fostering a balanced work environment and encouraging pro-environmental behaviors can lead to improved sustainability outcomes, providing valuable insights for management in promoting a sustainable culture within the workplace.

3.6. Discussion

In examining the results of this study, several notable insights emerge regarding the influence of work-life balance (WLB) and pro-environmental behavior (PEB) on sustainability outcomes within Indonesia's manufacturing sector. The data reflect broader patterns observed in organizational behavior and environmental psychology literature, indicating that human-centric factors, such as employee well-being and personal commitment to environmental stewardship, are critical for achieving sustainable organizational practices. First, the mean score for work-life balance (WLB) was relatively high (M = 3.85, SD = 0.72), suggesting that most employees feel they can manage work responsibilities without sacrificing personal life. This balance is significant because it aligns with previous findings that link a healthy work-life balance with increased job satisfaction, organizational commitment, and productivity (Greenhaus & Powell, 2006). When employees perceive a balance between work and personal life, they are more likely to be engaged and motivated, positively impacting their performance and overall contribution to organizational goals, including sustainability (Haar et al., 2014). Moreover, the concept of work-life enrichment suggests that positive experiences in one domain (e.g., family life) can enhance experiences in another (e.g., work), fostering a sense of fulfillment that may extend to environmental consciousness at work (Greenhaus & Powell, 2006). The high mean score for pro-environmental behavior (PEB) (M = 4.10, SD = 0.66) underscores the commitment among employees to engage in environmentally responsible practices. Research has shown that when organizations support a culture of environmental sustainability, employees are more likely to internalize these values and exhibit voluntary pro-environmental behaviors, such as reducing energy consumption, recycling, and supporting green initiatives (Norton et al., 2015). This commitment is particularly important in the manufacturing sector, where resource consumption and waste production are high. According to Ones and Dilchert (2012), individual-level pro-environmental behavior can aggregate to produce significant organizational and environmental benefits, reducing the overall ecological footprint of operations. The relatively low standard deviation in PEB indicates that this behavior is widely shared across respondents, suggesting a shared cultural norm within the organizations studied that supports environmental responsibility.

The positive perception of sustainability outcomes, reflected by a mean score of 4.05 (SD = 0.71), suggests that employees feel their companies are making meaningful progress toward sustainable practices. This perception is critical, as employees who

believe in their organization's commitment to sustainability are more likely to align their behaviors with these goals, contributing to a positive cycle of sustainable practices (Graves et al., 2013). When employees observe their organizations investing in sustainability, they tend to exhibit greater commitment to these values, further supporting the organization's sustainable development (Setyaningrum et al., 2024). This finding aligns with the concept of environmental performance and organizational legitimacy, where organizations that achieve visible sustainability outcomes enhance their legitimacy, motivating employees to support these initiatives as part of a collective identity (Bansal & Roth, 2000). The relationship between work-life balance and sustainability outcomes also highlights an important aspect of organizational culture. A positive work-life balance can enable employees to devote time and mental resources to sustainability initiatives, rather than being preoccupied with work-related stress or personal obligations (Bakker & Demerouti, 2007). When work-life balance is prioritized, employees are less likely to experience burnout, which can undermine their willingness to participate in optional pro-environmental behaviors (Bakker & Demerouti, 2007). In this study, WLB significantly predicted both PEB and sustainability outcomes, suggesting that organizations seeking to improve their sustainability impact should consider policies that enhance employees' work-life balance.

Moreover, the relationship between pro-environmental behavior and sustainability outcomes, as supported by the path analysis, emphasizes the idea that PEB serves as a bridge between individual values and organizational goals. This connection resonates with the findings of Norton et al. (2015), who found that PEB in the workplace reflects not only personal values but also organizational support for environmental initiatives. In companies where employees frequently engage in pro-environmental behaviors, there tends to be an established infrastructure that enables and encourages these actions, such as recycling stations, energy-saving protocols, and green policies (Graves et al., 2013). Such environmental management practices may create an organizational ecosystem that nurtures and reinforces sustainable behaviors across different levels of the workforce, generating a cumulative impact on sustainability outcomes (Boiral, 2009). The study's findings contribute to the limited body of research on sustainability in Indonesia's manufacturing sector, a field where human factors like work-life balance and PEB are often overlooked in favor of technical or policy-based approaches. The significance of employee well-being and behavior in achieving sustainability outcomes adds a nuanced perspective to the literature, suggesting that sustainability efforts should not only focus on operational efficiencies but also consider the well-being and environmental orientation of the workforce (Kartika et al., 2022). This approach aligns with the theory of environmental stewardship, which posits that organizational sustainability is most effective when employees at all levels take ownership of environmental responsibilities (Hemingway & Maclagan, 2004).

The implications of these findings are substantial for practitioners in Indonesia's manufacturing industry. Organizations may benefit from investing in work-life balance initiatives, such as flexible work hours, mental health support, and time management training, to create an environment where employees feel valued and motivated to engage in pro-environmental behaviors (Kelliher & Anderson, 2010). Additionally, sustainability programs that encourage PEB—such as workshops on environmental responsibility, recognition of eco-friendly practices, and establishing clear sustainability policies—can further embed a culture of sustainability within the organization, this study reinforces the idea that sustainable organizational practices are deeply intertwined with employee well-being and behavior. By supporting work-life balance and fostering pro-environmental behavior, organizations not only enhance their environmental perfor-

mance but also cultivate an engaged workforce aligned with sustainability goals. These findings offer a pathway for Indonesia's manufacturing sector to progress toward more sustainable practices by focusing on the human side of sustainability, echoing global movements toward environmentally responsible and people-centered business strategies. Future research might explore the longitudinal effects of work-life balance and PEB on sustainability outcomes or examine how these relationships manifest across other sectors in Indonesia to strengthen the generalizability of these findings.

4. Conclusions

This study provides valuable insights into how work-life balance (WLB) and pro-environmental behavior (PEB) contribute to sustainability outcomes in Indonesia's manufacturing sector. The results suggest that employees with a strong work-life balance are more likely to engage in behaviors that support environmental sustainability. Furthermore, PEB directly impacts organizational sustainability outcomes, indicating that individual actions within the workplace are integral to achieving broader sustainability goals. These findings underscore the importance of human-centric factors, such as employee well-being and environmental behavior, in driving sustainable practices, emphasizing that sustainability is not only about operational efficiency but also about fostering a culture that aligns with environmental values. The findings hold several practical implications for practitioners, especially within the manufacturing industry. First, companies should recognize that supporting work-life balance can enhance employees' willingness to participate in sustainability efforts. By implementing policies that promote a healthy balance between work and personal life, such as flexible working hours, mental health resources, and support for family commitments, organizations can foster an environment conducive to productivity and environmental responsibility. Additionally, the study highlights the importance of encouraging pro-environmental behaviors through initiatives like sustainability training, awareness programs, and incentives for eco-friendly practices. Creating a workplace that empowers employees to engage in environmentally responsible actions can cultivate a collective commitment to sustainability, enhancing the organization's reputation and legitimacy in the eyes of stakeholders.

Future research could expand on these findings by investigating the long-term impact of work-life balance and pro-environmental behavior on organizational sustainability. A longitudinal study would provide deeper insights into how sustained WLB and PEB practices influence sustainability outcomes over time. Additionally, it would be beneficial to explore these relationships in various industrial sectors beyond manufacturing to test the generalizability of the results in different organizational contexts. Future studies could also examine how specific demographic factors, such as age, education, or tenure, moderate the relationship between WLB, PEB, and sustainability, providing more granular insights that could guide tailored interventions. Finally, qualitative research exploring employees' personal experiences and perceptions of WLB and PEB could complement quantitative findings, offering a richer, more nuanced understanding of the motivations behind sustainable behavior in the workplace.

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