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Predictors of employee performance in Indonesian family-owned SMEs: The moderating role of work environment

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ABSTRACT

In family-owned small and medium enterprises, distinctive governance frameworks and relational dynamics often hinder workforce productivity. This research evaluates how five interrelated dimensions, leadership style, work environment, motivation, compensation, and job satisfaction, jointly affect employee performance. It also examines whether work environment moderates the paths linking leadership approaches and job satisfaction to overall employee performance. The study collected empirical evidence through questionnaires from 310 permanent employees across family firms in Java, Indonesia, selected via purposive sampling. The study used partial least squares structural equation modeling in SmartPLS 4 to empirically assess these relationships. The results indicate that each of the five organizational variables has a favorable, statistically significant impact on employee performance, with leadership behavior showing the strongest direct association. In addition, a conducive work environment strengthens the links between leadership style and employee performance, as well as between job satisfaction and work performance. These empirical insights enrich social exchange theory by showing that the workplace setting serves as both an immediate performance driver and a contextual catalyst that strengthens interpersonal bonds within the organization. Ultimately, the findings underscore that family businesses must align competent leadership practices, equitable remuneration, intrinsic motivation, job fulfillment, and supportive physical settings to maximize employee productivity.

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1. Introduction

Family-owned small and medium-sized enterprises (SMEs) support employment, economic development, and business continuity, making their long-term sustainability a key management concern (Le Breton-Miller & Miller, 2022; Ramirez-Lozano et al., 2023). However, family enterprises face organizational challenges that arise from the interaction among business objectives, family relationships, and intergenerational interests (Bertschi-

Michel et al., 2020; Pahnke et al., 2024). Succession is particularly challenging because ownership and leadership transitions can affect managerial continuity and organizational stability (Pahnke et al., 2024). Emotional relationships within owning families may further complicate managerial decisions and succession processes (Bertschi-Michel et al., 2020). Moreover, family enterprises' ability to maintain effective employment relationships matters for long-term organizational development (Madison et al., 2018; Ramirez-Lozano et al., 2023). These challenges provide a rationale for examining human resource management practices within family-owned SMEs.

Family-owned SMEs have distinctive organizational characteristics because family involvement can shape managerial authority, employee relationships, and human resource practices (Madison et al., 2018; Ramirez-Lozano et al., 2023). Although family relationships may support commitment and organizational continuity, unequal treatment between family and non-family employees can create concerns about fairness and professional management (Ramirez-Lozano et al., 2023). Madison et al. (2018) describe this unequal treatment as bifurcation bias, which may undermine the benefits of professional human resource practices. In addition, leadership and communication are associated with employee engagement in family enterprises (Ramirez-Lozano et al., 2023). These findings indicate that researchers should consider employment relationships in family businesses alongside ownership and governance characteristics (Madison et al., 2018; Ramirez-Lozano et al., 2023). Accordingly, family ownership provides a relevant organizational context for understanding employee performance.

Employee performance is an important organizational outcome associated with leadership, motivation, compensation, job satisfaction, and workplace conditions (Katebi et al., 2022; Khan et al., 2022; Abdelwahed et al., 2023; Chen et al., 2023). Abdelwahed et al. (2023) examine the relationships between transactional leadership, entrepreneurial passion, and employee performance. Chen et al. (2023) provide meta-analytic evidence concerning the relationship between performance-based compensation and job performance. Katebi et al. (2022) identify a positive association between job satisfaction and employee performance through a meta-analysis. Furthermore, Broeck et al. (2021) show how different motivational dimensions relate to employee outcomes, while Wang et al. (2024) examine the temporal relationship between work motivation and job performance. Research also identifies the importance of leadership and workplace conditions in explaining employees' work-related outcomes (Khan et al., 2022; Lee et al., 2024). These findings provide a foundation for examining employee performance through multiple organizational and individual factors.

Leadership style, motivation, compensation, job satisfaction, and work environment represent complementary dimensions of organizational and individual performance (Abdelwahed et al., 2023; Chen et al., 2023). Leadership influences employee behavior through direction, inspiration, communication, and developmental support (Ng, 2017). Motivation concerns the psychological processes that influence employees' willingness to pursue work-related objectives and invest effort in organizational activities (Broeck et al., 2021; Wang et al., 2024). Compensation represents organizational rewards that may influence employee performance through financial incentives and perceptions of equitable treatment (Chen et al., 2023). Job satisfaction reflects employees' evaluations of their work experiences and is associated with job performance (Katebi et al., 2022). Meanwhile, workplace conditions, including physical facilities and organizational support, can influence employee comfort, satisfaction, and productivity (Öhrn et al., 2021; Abouelela, 2022). These findings support the inclusion of the five constructs in the proposed research framework.

Recent studies have investigated these relationships using different explanatory mechanisms and organizational contexts. Ramirez-Lozano et al. (2023) examine leadership, communication, and job satisfaction in relation to employee engagement and family business sustainability. In contrast, Abdelwahed et al. (2023) investigate transactional leadership and

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entrepreneurial passion as predictors of employee performance. Lee et al. (2024) examine toxic leadership, team social support, job insecurity, role ambiguity, work engagement, and job performance, emphasizing the relevance of organizational and social conditions. Wang et al. (2024) examine the temporal relationship between work motivation and job performance through a meta-analytic review of longitudinal evidence. These studies offer different perspectives on organizational and individual determinants of performance, but differ in their research settings, variables, and analytical approaches (Abdelwahed et al., 2023; Ramirez-Lozano et al., 2023; Lee et al., 2024; Wang et al., 2024). Such differences provide a basis for further investigation of employee performance within family-owned SMEs.

This study draws primarily on social exchange theory (SET) by Blau (1964), which offers a framework for understanding how organizational treatment and reciprocal employment relationships shape employee behavior. Within family enterprises, the unequal treatment of family and non-family employees may weaken the effectiveness of professional human resource practices and affect organizational outcomes (Madison et al., 2018). Fair organizational treatment, supportive leadership, and constructive workplace relationships shape employees' perceptions of their organizations and their work-related responses (Jena et al., 2018; Ramirez-Lozano et al., 2023). Motivation-related explanations complement this perspective by recognizing that employees differ in the needs and psychological processes underlying their work behavior (Broeck et al., 2021). Transformational leadership provides another complementary perspective by emphasizing leaders' roles in communicating organizational goals, supporting employee development, and encouraging performance (Ng, 2017). These theoretical perspectives support examining organizational treatment, motivation, and leadership as interconnected explanations of employee performance.

SET is particularly relevant to family-owned SMEs because family involvement and differential organizational treatment may shape employment relationships (Madison et al., 2018). Madison et al. (2018) demonstrate that bifurcation bias can undermine the benefits of professional human resource practices in family enterprises. Similarly, Ramirez-Lozano et al. (2023) identify leadership, communication, and job satisfaction as important considerations in employee engagement and family business sustainability. Research also links employee attitudes and organizational trust to transformational leadership, engagement, and psychological well-being (Jena et al., 2018). These findings indicate that organizational practices should be examined in relation to the social and managerial conditions under which employees perform their responsibilities (Jena et al., 2018; Madison et al., 2018). Therefore, this study treats family ownership as an organizational context that may influence employment relationships rather than merely a descriptive business characteristic.

Despite the available evidence, several issues justify further investigation. First, existing studies examine different explanatory mechanisms, including leadership and entrepreneurial passion (Abdelwahed et al., 2023), leadership and employee engagement in family enterprises (Ramirez-Lozano et al., 2023), and motivation–performance relationships (Wang et al., 2024). These differences support evaluating leadership style, motivation, compensation, job satisfaction, and the work environment within one analytical framework. Second, family business research highlights the implications of ownership-related employment practices, particularly differences in how family and non-family employees are treated (Madison et al., 2018; Ramirez-Lozano et al., 2023). Third, leadership and workplace-condition studies show that organizational support and social relationships matter for employee outcomes (Khan et al., 2022; Lee et al., 2024). However, whether the work environment strengthens the relationships between leadership style and employee performance and between job satisfaction and employee performance remains an empirical question in the specific setting examined here. This study therefore evaluates the work environment as both a direct predictor and a moderating condition.

Accordingly, this study investigates the relationships between leadership style, motivation, compensation, job satisfaction, work environment, and employee performance among permanent employees of family-owned SMEs in Java, Indonesia. It also examines whether the work environment moderates the relationships between leadership style and employee performance and between job satisfaction and employee performance. The proposed model draws on empirical evidence on leadership, compensation, job satisfaction, and workplace-related employee outcomes. The study aims to contribute context-specific evidence on SET's applicability to employment relationships in family-owned SMEs. Practically, it aims to inform integrated human resource management approaches involving leadership development, fair compensation, employee motivation, job satisfaction, and supportive workplace conditions. The following are the reasons the work environment is an appropriate moderating variable. The work environment, encompassing both physical aspects (lighting, facilities, comfort) and non-physical aspects (organizational climate, social support, work culture), acts as a boundary condition. An individual with high motivation (independent variable) can achieve exceptional performance (dependent variable) when supported by a conducive work environment (e.g., adequate tools, a comfortable atmosphere). Conversely, regardless of an employee's motivation or competence, performance may decline if the work environment is poor (e.g., noisy, characterized by broken facilities, or toxic).

2. Literature Review and Hypothesis Development

2.1. Literature Review

2.1.1. Social Exchange Theory

Grounded in Blau's (1964) classical contributions, social exchange theory (SET) serves as the core theoretical lens for this research in organizational psychology. The theory assumes that interpersonal interactions are reciprocal exchanges in which individuals or groups are motivated by anticipated returns. After receiving advantages, actors develop an implicit obligation to reciprocate. In corporate settings, SET captures how employers and their personnel interact: entities distribute vital resources ranging from monetary remuneration to socio-emotional mechanisms, including wholesome working climates and policies facilitating work-life balance (Arimbawa et al., 2026).

2.1.2. Employee Performance

Employee performance is defined as the results of work provided by employees and adjusted to company regulations (Tuffaha, 2020). Therefore, Employee performance reflects both personal willingness to contribute and perceptions of the rewards offered for that contribution. Performance serves as the dependent construct because the research seeks to explain differences in employees' contributions within family enterprises. Following Ramli (2019), its conceptual basis includes work achievement relative to equally qualified peers and employees' satisfaction with their own results. Family-business relationships can add a subjective dimension through employees' affinity for and loyalty to the owning family. The assessment therefore combines peer-referenced work comparisons with self-evaluations of task outcomes.

2.1.3. Leadership Style

Leadership style refers to the skills, traits, and behavioral patterns leaders use to influence subordinates and achieve efficiency and organizational goals (Udin, 2023). Researchers have widely examined leadership as a determinant of employee performance and attitudes toward work (Lukito et al., 2025). Evidence links

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transformational leadership's emphasis on participation, direction, and shared purpose to improved performance and job satisfaction. Jena et al. (2018) link transformational leadership to organizational trust, engagement, and employees' psychological well-being. Abdelwahed et al. (2023) connect leadership and motivation with performance and examine entrepreneurial passion as a moderator. Evidence on harmful leadership suggests the opposite: toxic leadership, inadequate social support, role ambiguity, and job insecurity can undermine engagement and performance (Lee et al., 2024). Leadership may therefore facilitate or impede employee effectiveness, depending on the behaviors and conditions employees encounter.

2.1.4. Motivation

Work motivation refers to the conditions and psychological forces that encourage employees to invest effort, persist in their responsibilities, and pursue work-related goals (Bakker, 2017). This definition aligns with the study's indicators, which emphasize employee ideas, responsibility, authority, constructive competition, and a willingness to improve performance. Motivation helps explain the energy, persistence, and commitment employees bring to their responsibilities (Demır, 2020). Motivated employees commonly report greater job satisfaction and work more effectively toward organizational objectives. Employee performance consequently reflects both personal willingness to contribute and perceptions of the rewards offered for that contribution.

2.1.5. Compensation

Compensation is examined as an external reward that may influence motivation and performance (Reddy, 2020). Pay perceived as equitable and competitive can encourage satisfaction and loyalty; rewards regarded as insufficient or unfair may weaken motivation and increase intentions to leave, with consequences for sustained performance (Ismail & Ghemy, 2026). Here, compensation concerns employees' judgments about whether their earnings are appropriate in relation to the firm's financial capacity, their education, and their work results. Employees who feel their contributions are appropriately rewarded may feel more valued and respond with greater dedication and productivity.

2.1.6. Job Satisfaction

Job satisfaction represents employees' evaluation of their employment experience, including assigned tasks, relationships with colleagues and supervisors, organizational policies, and rewards (Judge et al., 2017). Satisfaction indicators include the clarity and fairness of organizational policies, opportunities to take responsibility for planning and completing work, and the perceived balance between compensation and workload. Satisfaction reflects how favorably employees view organizational rules, development opportunities, and the alignment between pay and responsibilities (Spector, 2022). These evaluations can also influence decisions about staying with an employer or seeking work elsewhere.

2.1.7. Work Environment

The work environment encompasses the physical and organizational conditions in which employees perform their tasks (Noya, 2024). Consistent with the measurement adopted in this study, the construct focuses on physical and facility-related conditions, including adequate space, lighting, and ventilation; comfortable furniture; controlled noise; facilities that support task completion; and the

orderliness of work arrangements. Suitable conditions can improve comfort, reduce avoidable pressure, and make tasks easier to complete, helping employees concentrate and work effectively. Supportive surroundings are expected to reinforce the benefits of effective leadership and positive work evaluations (Zhenjing et al., 2022).

2.2. Hypothesis Development

2.2.1. Leadership Style and Employee Performance

Empirical evidence shows that leadership approaches shape how employees execute tasks and meet organizational requirements. For instance, participative and transformational styles elevate performance by inspiring discretionary effort. Bagga et al. (2023) show that organizational culture moderates the link between transformational leadership and change management, underscoring its importance in virtual team transitions. By fostering development, vision, and innovation, transformational leaders provide socio-emotional resources that, according to Blau's (1964) SET, compel employees to reciprocate with high performance, sustaining intrinsic motivation and responsibility over time.

However, managing family enterprises involves unique tensions as leaders balance business imperatives with family expectations. While authentic and transformational leadership enhances performance, trust, and goal identification (Ng, 2017; Ramirez-Lozano et al., 2023), centralized or ineffective leadership restricts participation and weakens outcomes. This risk is critical in family SMEs, where authority aligns with ownership, so non-family employees heavily evaluate leaders on fairness, participation, and recognition (Madison et al., 2018). Grounded in SET by Blau (1964), when family SMEs offer equitable social exchanges, non-family workers reciprocate with higher productivity, proving that leadership effects depend heavily on the organizational context. **H_1: Leadership Style Has a Positive Effect on Employee Performance.**

2.2.2. Motivation and Employee Performance

Motivation is a key variable in this study because it is closely linked to job satisfaction and productivity (Pancasila et al., 2020). In family businesses, however, maintaining employee motivation can be more difficult because employees may feel uncertain about their career opportunities and may work within rigid organizational structures (Lukito et al., 2025). Consequently, motivation is a pivotal construct for evaluating workforce performance in Indonesian family enterprises. Furthermore, this investigation examines family-owned firms' ability to cultivate an organizational climate that is both supportive and constructively competitive, thereby facilitating improvements in employee motivation and job performance.

Evidence generally supports a positive relationship between work motivation and employee performance, although the strength of this relationship may vary across work settings. Broeck et al. (2021) show that more self-determined forms of motivation are associated with desirable employee attitudes and behaviors. More recent evidence also suggests that motivation and performance should not be viewed as a purely static relationship (Wang et al., 2024). In family-owned SMEs, uncertainty about promotion, recognition, and the distribution of responsibility may influence motivation. From SET by Blau (1964), employees who receive recognition, meaningful responsibility, and opportunities to contribute may interpret these conditions as favorable organizational treatment, reciprocating by investing greater effort in their work. **H_2: Motivation Has a Positive Effect on Employee Performance.**

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2.2.3. Compensation and Employee Performance

Compensation is an important variable in this study because a fair, transparent pay system often improves employee performance. In family businesses, however, building a fair compensation system can be harder because benefit distribution may be seen as favoring family members over non-family employees. Ramli (2019) and Idris et al. (2020) show that fair compensation positively affects both job satisfaction and employee performance.

This inconsistency suggests that compensation may depend not only on the reward amount but also on how employees evaluate its fairness. In family-owned SMEs, this issue matters because family and non-family employees may perceive differences in access to rewards and organizational benefits. Such asymmetric treatment may weaken fairness perceptions and reduce positive employee responses (Madison et al., 2018). From a SET perspective (Blau, 1964), compensation represents a visible organizational return for employees' time, ability, and effort. Employees who perceive the reward system as fair are more likely to view the employment relationship as balanced and reciprocate through stronger performance (Kong et al., 2023). **H_3: Compensation Has a Positive Effect on Employee Performance.**

2.2.4. Job Satisfaction and Employee Performance

More broadly, job satisfaction shows how comfortable and content employees feel with different aspects of their work. These include organizational rules, opportunities for personal development, and the balance between pay and job responsibilities. Job satisfaction also affects whether employees choose to stay in the organization or look for opportunities elsewhere (Redondo et al., 2021). In family businesses, internal factors such as strong family values, emotional attachment, and informal organizational structures can influence job satisfaction in both positive and negative ways.

This issue is particularly relevant in family-owned SMEs. Employees may evaluate job satisfaction partly through perceptions of fairness, recognition, career opportunities, and equal treatment between family and non-family employees. These perceptions can strengthen or weaken their responses to the organization (Madison et al., 2018). From a SET by Blau (1964), employees who evaluate their work experience positively are more likely to reciprocate through greater contribution and stronger performance. By including job satisfaction as a key variable, this study aims to understand how the work environment and relationships within family firms shape employee satisfaction and, in turn, employee performance. **H_4: Job Satisfaction Has a Positive Effect on Employee Performance**

2.2.5. Work Environment and Employee Performance

A supportive and well-organized workplace can improve employee comfort, reduce unnecessary work pressure, facilitate task completion, and enhance productivity (Rizky et al., 2023). Social support and a positive workplace atmosphere may also strengthen employee involvement and work outcomes. These conditions can facilitate or constrain employees' ability to complete their tasks effectively. A favorable work environment can reduce barriers to task completion and support employees' concentration, comfort, and productivity. Adequate workplace design and facilities can also influence employee satisfaction and psychological responses (Abouelela, 2022).

However, workplace conditions should not be viewed only as physical characteristics. The organizational value of these conditions depends on whether

employees receive sufficient resources and support to perform responsibilities effectively. From a SET perspective (Blau, 1964), favorable workplace conditions can be interpreted as organizational investment and support. Employees may reciprocate this support through greater effort and stronger performance. **H_5: Work Environment Has a Positive Effect on Employee Performance.**

2.2.6. Moderating Role of Work Environment Between Leadership Style and Job Satisfaction and Employee Performance

Transformational leadership provides direction, encouragement, and support, but employees may not fully respond when workplace conditions limit task completion. Similarly, job satisfaction represents a favorable employee attitude, but satisfaction may translate into stronger performance only when employees have sufficient workplace resources and support (Judge et al., 2020). In contrast, this study models work motivation and compensation as direct drivers of performance rather than as relationships that require the same contextual mechanism. SET (Blau, 1964) helps explain this contextual mechanism. According to Blau (1964), organizational interactions are governed by reciprocal obligations: when leaders offer high-quality socio-emotional resources, such as transformational behaviors, and organizations provide structural resources, employees feel obligated to reciprocate with positive workplace behaviors and discretionary effort.

Therefore, workplace conditions are posited as a contextual moderator that either amplifies or attenuates how supervisory leadership translates into staff productivity, meaning the magnitude of the leadership–performance nexus fluctuates across varying environmental qualities. Similarly, Khan et al. (2022) examined the moderating roles of workplace atmosphere, ethical leadership, digital competencies, and work–life equilibrium across multiple organizational outcomes, notably staff commitment, collaborative teamwork, and job contentment. Their empirical evidence suggests that while morally grounded leadership strengthens key workplace dimensions, spiritual leadership has no immediate impact on employee performance (Pio, 2022). **H_6: Work Environment Moderates the Relationship Between Leadership Style and Employee Performance**

2.2.7. Moderating Role of Work Environment Between Job Satisfaction and Employee Performance

A similar argument applies to job satisfaction. Employees who are satisfied with organizational policies, responsibilities, compensation, supervisory support, professional development opportunities, and workplace relationships generally show better work outcomes. According to SET by Blau (1964), organizational life is governed by contingent interactions that generate obligations beyond formal contracts. When organizations provide favorable conditions, employees feel indebted and compelled to reciprocate with high performance, emotional commitment, and discretionary effort.

Nevertheless, how much job satisfaction translates into higher employee performance may depend on the day-to-day conditions in which employees work. A favorable workplace can provide employees with the resources and support necessary to convert positive work attitudes into productive behavior, whereas poor workplace conditions may reduce this effect. Across the literature, the work environment is consistently portrayed as a critical condition for improving work–life balance and, in turn, raising performance levels (Öhrn et al., 2021; Kazmi, 2022; Kosec, 2022).

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Jena et al. (2018) further argue that psychological well-being and employee engagement are central to building organizational trust. Within SET, trust is the foundational currency; unlike economic exchanges, social exchanges involve unspecified future obligations and require one party to trust the other to reciprocate. Employees who feel psychologically supported and meaningfully engaged are more likely to trust their organization and view the relationship as a fair, long-term partnership. Leadership style is particularly important here, as it acts as a primary catalyst for this exchange. By fostering a work environment that supports employee engagement, supportive leadership signals the organization's goodwill, which consequently enhances organizational trust and performance. **H_7: Work Environment Moderates the Relationship Between Job Satisfaction and Employee Performance**

Informed by the preceding theoretical arguments, the study examines motivation, compensation, job satisfaction, and leadership style as primary predictors of employee performance. The inquiry tests whether the work environment serves as a boundary condition that modifies the strength of key relationships in the structural model. Figure 1 depicts the overarching research framework, detailing both the direct hypotheses and the proposed moderating effects.

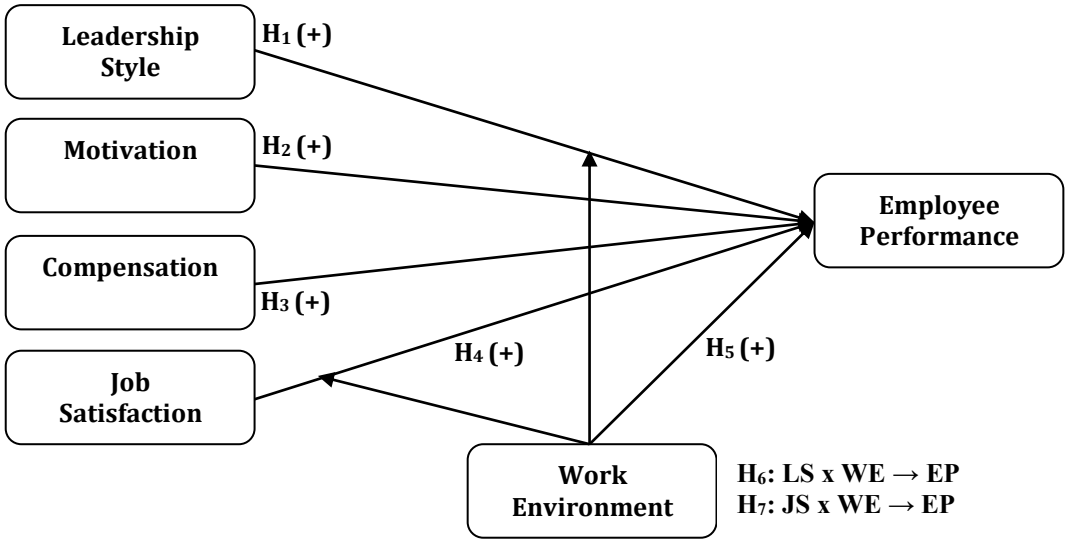


Figure 1. Research Framework

3. Research Methods

3.1. Population and Sampling Methods

The study population consists of permanent employees in family-owned small and medium-sized enterprises (SMEs) on Java, Indonesia. While data from The Central Bureau of Statistics and the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia provide figures on the number of SME business units and their workforce, they do not categorize SMEs based on family ownership status, nor do they distinguish between permanent and non-permanent employees. Consequently, no sampling frame (a complete list of population members) exists. The target population is now explicitly defined as all permanent employees of family-owned SMEs in Java. We also explain that the exact size of this population is unknown because no official registry or sampling frame records the number of permanent employees in family-owned SMEs, and Indonesian SME statistics do not distinguish family-owned firms from other SMEs.

For this reason, a complete sampling frame was unavailable, and the study used non-probability purposive sampling.

Second, because the population size is unknown, the study could not apply population-based formulas (e.g., Slovin or Krejcie–Morgan). Following Memon et al. (2020), the minimum sample size was instead determined using criteria developed for partial least squares structural equation modelling (PLS-SEM): An a priori power analysis in G*Power 3.1 by Faul et al. (2009) for the most complex regression in the model (employee performance with seven predictors: five direct predictors and two interaction terms; $f^2 = 0.15$, $\alpha = 0.05$, power = 0.95) required at least 153 respondents; the ten-times rule by Hair et al. (2019) required at least 70 respondents; and the ratio of five respondents per item for the 49 measurement items required at least 245 respondents. The final sample of 310 exceeds all three thresholds (approximately 6.3 respondents per item). Third, we now report the data screening process: the questionnaire was distributed to 310 employees, 310 responses were returned, and 0 were excluded because they did not meet the eligibility criteria, were incomplete, or showed patterned responses, leaving 310 valid questionnaires for analysis.

The study's geographical scope was limited to Java. Therefore, the sample should not be interpreted as representative of all family-owned SMEs in Indonesia. The study selected Java as the empirical setting because it provided access to family-owned SMEs across the manufacturing, trade, and service sectors. Accordingly, the findings are interpreted within the context of family-owned SMEs in Java rather than generalized to the entire Indonesian SME population.

3.2. Data Collection Methods

All questionnaire items used a Likert scale from 1 (Strongly disagree) to 5 (Strongly agree). The response format was retained from, or adapted consistently with, the original measurement instruments. The scale provided sufficient response categories for respondents to express differences in their perceptions of organizational and workplace conditions. The study applied the same response format across all constructs to maintain measurement consistency. Specifically, the study operationalized leadership style with a seven-item scale from Arif et al. (2019), while an eight-item measure from Kuswati (2020) captured work motivation. To evaluate compensation and the work environment, the study employed six indicators from Donkor et al. (2021) and nine indicators from Ntalakos et al. (2023), respectively. Lastly, following Ramli (2019), the study assessed job satisfaction using seven statements and gauged employee performance using twelve items.

3.3. Data Analysis Methods

Data processing used SmartPLS 4 with a PLS-SEM approach. Following the sequential assessment protocol proposed by Hair et al. (2019), evaluations were divided into measurement model verification and structural model testing. Indicator reliability within the outer model was accepted when outer loadings were ≥ 0.7. Cronbach's alpha and composite reliability were used to assess internal consistency, with a minimum acceptable benchmark of 0.7. Convergent validity was supported by average variance extracted (AVE) values of at least 0.5, and construct distinctiveness was confirmed by Heterotrait–Monotrait (HTMT) ratios below 0.85.

For the inner structural model, parameters under review included potential collinearity, model explanatory capacity, effect size, and statistical significance of hypothesized relationships. A variance inflation factor (VIF) ceiling of 3.3 guaranteed freedom from critical multicollinearity. The coefficient of determination (R^2) gauged explained variance and was interpreted as substantial (0.75), moderate (0.50), or weak

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(0.25). Effect sizes (f^2) reflected large, moderate, and small influences at cut-offs of 0.35, 0.15, and 0.02, respectively, and values below 0.02 were considered trivial. Hypothesis testing for direct effects and moderating relationships was executed using a 5.000-subsample bootstrap re-sampling method, deeming associations significant at $p < 0.05$ with corresponding two-tailed t-statistics exceeding 1.96 (Hair et al., 2019).

4. Results and Discussion

4.1. Demographic Profile

Table 1 presents the demographic and business characteristics of the respondents. A total of 310 respondents participated in the study: 162 (52.3%) males and 148 (47.7%) females, indicating a relatively balanced gender distribution. In terms of age, the largest proportion of respondents were 31-40 years old (36.1%), followed closely by those aged 41–50 years (35.2%). Respondents aged 51–60 years accounted for 15.8% of the sample, while 11.0% were 22-30 years old. Only 1.9% were aged 61 years or above. Participating family businesses also differed in age. The largest group had operated for 6–10 years (37.7%), followed by businesses operating for 11–15 years (24.2%) and 1–5 years (21.6%). Businesses operating for 16–20 years represented 10.0% of the sample, while 6.5% had operated for more than 20 years. In terms of industry composition, manufacturing accounted for 35.8% of the sample, trade for 33.2%, and services for 31.0%. The relatively balanced distribution across the three sectors provides a diverse setting for examining employee performance in Indonesian family-owned SMEs.

Table 1. Respondent Background

Demographic Variable	Frequency	%
Gender		
Male	162	52.3
Female	148	47.7
Age		
22–30 years	34	11.0
31–40 years	112	36.1
41–50 years	109	35.2
51–60 years	49	15.8
61 years and above	6	1.9
Business Age		
1–5 years	67	21.6
6–10 years	117	37.7
11–15 years	75	24.2
16–20 years	31	10.0
More than 20 years	20	6.5
Industry		
Manufacturing	111	35.8
Trade	103	33.2
Services	96	31.0

4.2. Measurement Model

Figure 2 presents the final PLS-SEM model. The measurement model satisfied the recommended criteria for reliability and convergent validity. Outer loadings ranged from 0.749 to 0.890 and exceeded the recommended threshold of 0.70. Cronbach's alpha values ranged from 0.908 to 0.955, while composite reliability values ranged from 0.927 to 0.962. The AVE values ranged from 0.645 to 0.737 and exceeded the recommended

minimum of 0.50 (Hair et al., 2019). These results support indicator reliability, internal consistency, and convergent validity. Table 2 presents detailed results.

Table 2. Convergent Validity, Reliability, and AVE Value

Construct	Outer Loading	VIF	Cronbach's Alpha	Composite Reliability	AVE
Leadership Style			0.941	0.952	0.737
LS1	0.881	3.325			
LS2	0.865	3.117			
LS3	0.853	2.826			
LS4	0.824	2.332			
LS5	0.870	3.038			
LS6	0.825	2.489			
LS7	0.890	3.438			
Motivation			0.935	0.946	0.689
M1	0.840	2.566			
M2	0.850	2.801			
M3	0.818	2.403			
M4	0.832	2.439			
M5	0.869	3.085			
M6	0.790	2.215			
M7	0.803	2.280			
M8	0.834	2.552			
Compensation			0.922	0.939	0.720
C1	0.832	2.374			
C2	0.860	2.697			
C3	0.844	2.542			
C4	0.854	2.604			
C5	0.865	2.783			
C6	0.837	2.335			
Job Satisfaction			0.908	0.927	0.645
JS1	0.824	2.282			
JS2	0.820	2.331			
JS3	0.809	2.148			
JS4	0.749	1.833			
JS5	0.802	2.089			
JS6	0.824	2.353			
JS7	0.792	2.150			
Work Environment			0.955	0.962	0.737
WE1	0.855	3.110			
WE2	0.859	3.019			
WE3	0.876	3.387			
WE4	0.860	3.138			
WE5	0.864	3.176			
WE6	0.859	3.272			
WE7	0.876	3.460			
WE8	0.857	3.194			
WE9	0.821	2.668			
Employee Performance			0.954	0.960	0.667
EP1	0.844	3.008			
EP2	0.796	2.388			
EP3	0.802	2.559			
EP4	0.822	2.669			
EP5	0.780	2.203			
EP6	0.825	2.733			
EP7	0.789	2.450			
EP8	0.826	2.817			
EP9	0.818	2.683			
EP10	0.839	2.891			
EP11	0.829	2.850			
EP12	0.825	2.746			

Both Cronbach's alpha (0.908 to 0.955) and composite reliability (0.927 to 0.962) substantially surpassed the 0.70 threshold across all measures. The AVE values ranged from 0.645 to 0.737, confirming that each construct captured more than 50% of the variance in its items. Inner-model collinearity was assessed using the variance inflation

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factor. Table 2 presents the VIF values, which ranged from 1.833 to 3.460, well below the accepted threshold of 5 (Hair et al., 2019). Together, these results confirm robust indicator reliability, internal consistency, and convergent validity. We assessed discriminant validity using the HTMT criterion. All HTMT values were below the conservative threshold of 0.85. The highest value was 0.469 between job satisfaction and employee performance. These results support discriminant validity among the constructs (Hair et al., 2019). Table 3 presents detailed HTMT values.

Table 3. HTMT Model Output

Construct	CS	EP	JS	LS	MT
Compensation					
Employee Performance	0.417				
Job Satisfaction	0.236	0.469			
Leadership Style	0.152	0.448	0.234		
Motivation	0.143	0.361	0.196	0.084	
Work Environment	0.149	0.406	0.252	0.185	0.111

4.3. Hypothesis Test

Table 4. Hypothesis Output Summary

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Compensation → Employee Performance	0.245	0.245	0.039	6.250	0.000
Job Satisfaction → Employee Performance	0.229	0.230	0.040	5.710	0.000
Leadership Style → Employee Performance	0.289	0.290	0.043	6.760	0.000
Motivation → Employee Performance	0.206	0.208	0.038	5.464	0.000
Work Environment → Employee Performance	0.212	0.212	0.045	4.661	0.000
Work Environment x Job Satisfaction → Employee Performance	0.085	0.083	0.036	2.381	0.017
Work Environment x Leadership Style → Employee Performance	0.211	0.208	0.044	4.753	0.000

As summarized in Table 4, the empirical analysis fully supports all seven proposed hypotheses. Among the direct predictors of employee performance, leadership style shows the strongest positive contribution. The analysis also confirms substantial direct associations for compensation, job satisfaction, work environment, and motivation. Regarding moderating effects, workplace conditions significantly strengthen the positive link between leadership style and employee performance and amplify the path from job satisfaction to performance. Taken together, these results confirm that while all five organizational dimensions directly foster worker productivity, favorable workplace settings further reinforce the impact of both leadership practices and job fulfillment.

The data corroborated both moderation hypotheses. The interaction term for leadership style and work environment had a significant positive effect on employee performance, indicating that improved working conditions reinforce leadership-driven performance gains. Thus, the sixth hypothesis is supported. Furthermore, the moderating

effect between job satisfaction and work environment was also positive and significant. Although smaller, this result shows that a positive work environment strengthens the link between job satisfaction and performance, supporting the seventh hypothesis.

4.4. Discussion

4.4.1. Leadership Style and Employee Performance

Leadership emerged as the strongest direct predictor among the five factors in the structural model, indicating that effective leadership is the primary mechanism for driving work productivity in family businesses (Maharajh et al., 2024). Based on SET by Blau (1964), high-quality leadership behavior encourages employees to reciprocate with positive attitudes and superior performance through the principle of reciprocity. When family members centralize decision-making, non-family employees evaluate leadership based on perceptions of fairness, participation, and inclusion; equal treatment (rather than bifurcated treatment) has been shown to yield more positive employee responses (Madison et al., 2018). Therefore, these findings suggest that family-owned SMEs in Java, Indonesia, can improve employee performance by shifting from purely owner-centered authority to inclusive leadership practices that communicate goals, encourage participation, and recognize employee contributions (Madison et al., 2018).

4.4.2. Motivation and Employee Performance

Under highly motivating conditions, employees tend to exert greater effort, remain persistent in fulfilling their work obligations, and meet higher performance standards (Broeck et al., 2021). Based on SET by Blau (1964), motivation and the fulfillment of psychological needs lead to job satisfaction and commitment, whereby employees feel a social obligation to reciprocate these favorable organizational conditions with greater dedication. The relationship between work motivation and performance is dynamic, not merely a purely static association (Wang et al., 2024). For family businesses, maintaining motivation requires special attention because of uncertainties about promotions or the distribution of responsibilities; therefore, organizations need to address these uncertainties through supportive human resource practices, such as providing autonomy, recognition, and meaningful responsibilities, to strengthen employees' autonomous motivation (Hagger & Star, 2026).

4.4.3. Compensation and Employee Performance

Compensation is the second-largest direct effect in the model, indicating that employees' perceptions of the fairness of fixed compensation remain highly relevant to their willingness to perform (Peluso et al., 2017). Based on SET by Blau (1964), compensation is the organization's tangible form of reciprocity for employees' time, skills, and effort; if deemed fair in terms of distribution and procedure, it motivates employees to reciprocate with greater effort. This fairness issue is particularly critical in family businesses because bifurcation bias (asymmetrical or unequal treatment between family and non-family employees) can undermine the benefits of professional human resource practices (Madison et al., 2018). Therefore, these findings suggest that family businesses in Indonesia should establish a transparent compensation system based on responsibilities, competencies, and work contributions, rather than on family status (Lukito et al., 2025).

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4.4.4. Job Satisfaction and Employee Performance

A later meta-analysis similarly reported a positive relationship between job satisfaction and job performance across a large body of empirical evidence (Katebi et al., 2022). However, interpret the relationship carefully because satisfaction does not automatically produce superior performance under all organizational circumstances. From a SET perspective (Blau, 1964), satisfied employees are more likely to view their employment relationship positively and reciprocate with greater commitment and contribution.

Job satisfaction may therefore reflect accumulated employee evaluations of supervision, organizational policy, rewards, relationships, and working conditions rather than a response to a single organizational practice (Ahmad, 2018). In family-owned SMEs, these evaluations may also include perceptions of fairness between family and non-family employees. Asymmetric human resource treatment can create perceptions of organizational injustice, whereas professionally designed, consistently applied human resource practices can strengthen employee responses and organizational performance (Madison et al., 2018). The findings therefore suggest that improving job satisfaction in family firms requires attention not only to employee comfort but also to fairness, managerial support, responsibility, and the transparency of organizational practices.

4.4.5. Work Environment and Employee Performance

Employees perform better when workplace conditions support concentration, comfort, interaction, and task completion (El-Sherbeeny et al., 2023). From the perspective of SET by Blau (1964), a well-designed workplace represents a symbolic investment by the organization that triggers employees' moral obligation to reciprocate with greater dedication and productivity. These positive direct effects theoretically demonstrate that strong individual motivation or effective leadership cannot fully compensate for inadequate working conditions (Cadiz et al., 2019). For family-owned MSMEs, which often face resource constraints, improving the work environment does not always require large investments; practical interventions such as spatial arrangement, lighting, noise management, and interpersonal support are sufficient as non-monetary assistance that strengthens social exchange relationships and effectively enhances employee performance capacity (Fang et al., 2016).

4.4.6. Moderating Role of Work Environment Between Leadership Style and Employee Performance

The combination of leadership behavior and work environment conditions significantly and positively affects employee performance (Joshi et al., 2025). Based on SET by Blau (1964), a conducive environment reinforces the value of leadership efforts, thereby maximizing employees' moral obligation to reciprocate with their best performance. Conversely, poor work conditions limit employees' ability to translate positive leadership experiences into strong work outcomes. The work environment moderates, rather than mediates, the relationship between leadership style and employee performance; it does not mediate leadership's influence but instead modifies the strength of that relationship (Madison et al., 2018). Therefore, these findings underscore the importance of family-owned SMEs evaluating leadership practices alongside workplace conditions through the lens of social exchange (Maneethai et al., 2026).

4.4.7. Moderating Role of Work Environment Between Job Satisfaction and Employee Performance

Job satisfaction's ability to enhance employee performance is further strengthened when employees perceive their work environment as supportive (Dziuba et al., 2020). According to SET by Blau (1964), job satisfaction independently drives higher performance because employees tend to reciprocate the organization's positive treatment by improving their task performance. However, a positive attitude alone is not always enough; employees need a supportive environment, such as adequate facilities and good interpersonal relationships, to channel that satisfaction into productive behavior (Katebi et al., 2022). Therefore, the work environment moderates this relationship; consequently, family-owned SMEs should manage job satisfaction and work environment conditions together from a social exchange perspective, rather than treating them as separate human resource management issues (Katebi et al., 2022).

5. Conclusion

Empirical evidence confirms that each of the five organizational dimensions has a favorable, statistically significant effect on employee performance. Among these determinants, transformational leadership has the strongest direct path coefficient, followed by compensation, job satisfaction, workplace environment, and motivation. Furthermore, a conducive work environment positively moderates the relationship between transformational leadership and job satisfaction and employee performance. Overall, these insights demonstrate that supportive workplace settings bolster the productivity gains driven by leadership practices and positive worker attitudes.

Theoretically, the study contributes to SET by showing that both direct organizational resources and contextual workplace conditions shape employee performance. In family-owned SMEs, perceptions of fairness, support, and professional management may matter more because family relationships can shape authority, rewards, and organizational opportunities. In practice, owners and managers should integrate transformational leadership, fair compensation, motivation, job satisfaction, and supportive workplace conditions. Practically, the findings suggest that owners and managers of family-owned SMEs should prioritize developing effective leadership practices while strengthening compensation systems, employee motivation, job satisfaction, and workplace conditions. Family-business managers should focus on leadership practices that communicate clear organizational direction, encourage employee involvement, provide developmental support, and promote equitable treatment between family and non-family employees because leadership style had the largest direct effect. Fair compensation and supportive workplace conditions should complement these leadership practices to create an environment where employees can consistently perform effectively.

The study also provides implications for human resource practitioners and related institutions. Human resource policies in family-owned SMEs should move beyond administrative personnel management toward more professional practices that integrate leadership development, performance management, employee recognition, fair compensation, and workplace support. Training and development programs can also strengthen managerial capabilities and employee adaptability, improving workforce performance in family-owned SMEs.

Acknowledging the boundaries of the current research highlights several promising pathways for future exploration. First, restricting the respondent pool to permanent personnel in family-owned SMEs across Java calls for broader geographical sampling across Indonesia to test the results' generalizability across regional economies and institutional contexts. Furthermore, because a cross-sectional snapshot cannot track dynamic changes,

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longitudinal designs are needed to assess whether the structural relationships endure over extended periods. Another constraint is the exclusive use of self-report survey instruments; future studies should combine staff perceptions with objective output records or supervisory appraisals to minimize potential common method bias. In closing, expanding the current five-factor framework by integrating theoretically justified variables, such as workplace culture, job-related stress, training programs, or length of service, would enrich future analytical models.

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