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THE INFLUENCE OF BUSINESS OWNER LEADERSHIP ON EMPLOYEE PRODUCTIVITY THROUGH FINANCIAL LITERACY IN MSMES IN MEDAN CITY

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ABSTRACT

This study aims to analyze the influence of business owner leadership on employee productivity, either directly or through financial literacy as a mediating variable, in Micro, Small, and Medium Enterprises (MSMEs) in Medan City. The study used an associative quantitative approach with a survey method of 175 MSME employees in various sectors (culinary, fashion, handicrafts, and retail trade) who were selected using purposive sampling techniques. Data were collected through a 5-point Likert scale questionnaire and analyzed using the Structural Equation Modeling approach based on Partial Least Square (SEM-PLS) with the help of SmartPLS 4. The results of the study showed that the leadership of business owners had a positive and significant effect on financial literacy (β = 0.412, p < 0.001), financial literacy had a positive and significant effect on employee productivity (β = 0.358, p < 0.001), and business owner leadership had a positive and significant effect on employee productivity directly (β = 0.276, p < 0.01). The results of the mediation test showed that financial literacy partially mediated the influence of business owner leadership on employee productivity (indirect effect = 0.148, p < 0.01; VAF = 34.9%). This finding confirms that increasing the leadership capabilities of business owners needs to be accompanied by strengthening employee financial literacy so that the productivity of MSMEs can be increased sustainably.

Keywords: Business Owner Leadership, Financial Literacy, Employee Productivity, MSMEs, Medan City

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh kepemimpinan pemilik usaha terhadap produktivitas karyawan, baik secara langsung maupun melalui literasi keuangan sebagai variabel mediasi, pada Usaha Mikro, Kecil, dan Menengah (UMKM) di Kota Medan. Penelitian menggunakan pendekatan kuantitatif asosiatif dengan metode survei terhadap 175 karyawan UMKM di berbagai sektor (kuliner, fashion, kerajinan, dan perdagangan ritel) yang dipilih menggunakan teknik purposive sampling. Data dikumpulkan melalui kuesioner berskala Likert 5 poin dan dianalisis menggunakan pendekatan Structural Equation Modeling berbasis Partial Least Square (SEM-PLS) dengan bantuan SmartPLS 4. Hasil penelitian menunjukkan bahwa kepemimpinan pemilik usaha berpengaruh positif dan signifikan terhadap literasi keuangan (β = 0,412, p < 0,001), literasi keuangan berpengaruh positif dan signifikan terhadap produktivitas karyawan (β = 0,358, p < 0,001), serta kepemimpinan pemilik usaha berpengaruh positif dan signifikan terhadap produktivitas karyawan secara langsung (β = 0,276, p < 0,01). Hasil uji mediasi menunjukkan bahwa literasi keuangan memediasi secara parsial pengaruh kepemimpinan pemilik usaha terhadap produktivitas karyawan (efek tidak langsung = 0,148, p < 0,01; VAF = 34,9%). Temuan ini menegaskan bahwa peningkatan kapabilitas kepemimpinan pemilik usaha

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perlu diiringi dengan penguatan literasi keuangan karyawan agar produktivitas UMKM dapat ditingkatkan secara berkelanjutan.

Kata Kunci: Kepemimpinan Pemilik Usaha, Literasi Keuangan, Produktivitas Karyawan, UMKM, Kota Medan

I. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are one of the main pillars of the Indonesian economy, with a large contribution to the national Gross Domestic Product (GDP) and labor absorption in various regions, including Medan City as one of the largest economic centers in North Sumatra Province (Ministry of Cooperatives and SMEs, 2023). In the midst of increasingly fierce business competition dynamics, the sustainability and growth of MSMEs is highly determined by the quality of human resources, especially employee productivity which is the driving force for daily business operations.

In contrast to large companies that have a multi-layered management structure, MSMEs are generally managed directly by their owners, so the leadership style of business owners has a very central role in shaping the work climate, motivation, and performance of employees (Bass & Riggio, 2006). Business owners who are able to apply a leadership style that is adaptive, communicative, and provides clear direction tend to encourage employees to work more productively. However, good leadership is not necessarily enough if it is not accompanied by adequate business financial management capacity, both by the owner and its employees.

Financial literacy is a crucial issue in the context of MSMEs in Indonesia. The National Survey on Financial Literacy and Inclusion conducted by the Financial Services Authority (OJK, 2022) shows that the level of financial literacy of the community, including micro and small business actors, is still at a level that needs to be continuously improved. Low financial literacy at the business operational level can hinder the efficiency of working capital management, cash flow, and daily financial decision-making, which ultimately impacts the overall work productivity of employees (Chen & Volpe, 1998).

Effective business owner leadership is suspected to be one of the driving factors for increasing employee financial literacy, for example through coaching, exemplary, and implementing an orderly financial recording system in the business environment. Furthermore, adequate financial literacy allows employees to understand and support the management of business resources more efficiently, thereby contributing to increasing work productivity. Thus, financial literacy has the potential to play a role as a mediating variable that bridges the influence of business owners' leadership on employee productivity.

Although the topics of leadership, financial literacy, and work productivity have been extensively researched separately, studies that specifically test the three variables in an integrative model in the context of MSMEs in Medan City are still relatively limited. This study intends to fill this gap by analyzing the influence of business owner leadership on employee productivity, either directly or through financial literacy as a mediating variable. Table 1 below summarizes some of the previous studies that are the empirical basis of this study.

Table 1. Summary of Previous Research

Researcher	Context/Variables	Method	Key Findings
Wibowo & Pratama (2022)	MSME Employee Leadership & Performance	Regresi Berganda	Transformational leadership has a positive effect on the performance of MSME employees
Sari & Handayani (2021)	Financial Literacy & Performance of MSMEs in North Sumatra	SEM-PLS	Financial literacy improves the efficiency of business management and the performance of MSMEs
Simanjuntak et al. (2023)	Leadership, Financial Literacy & Productivity	SEM-PLS	Financial literacy mediates the influence of leadership on employee productivity Transformational leadership

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Researcher	Context/Variables	Method	Key Findings
			has a positive effect on the performance of MSME employees
Nasution & Ginting (2022)	Leadership Style of MSME Owners in Medan City	Deskriptif Kuantitatif	Participatory leadership style is dominant in culinary and fashion MSMEs in Medan
Putri & Rahman (2023)	Financial Literacy & Work Productivity	Regresi Mediasi	Employee financial literacy is positively correlated with work productivity

Source: Processed by researchers, 2026

Social Learning Theory and Leadership Modeling

Beyond the transformational leadership perspective, social learning theory (Bandura, 1977) offers a complementary explanation for how the influence of business owner leadership is transmitted to employees' financial understanding. This theory posits that individuals acquire new behaviors, attitudes, and skills largely through observing, imitating, and internalizing the actions of credible role models within their immediate environment, rather than through formal instruction alone. In the setting of MSMEs, where the physical and social distance between owners and employees is minimal, business owners function as salient behavioral models whose day-to-day financial practices, such as recording transactions accurately, monitoring cash flow, and making prudent purchasing decisions, are continuously observed and, over time, imitated by employees. Modeling is reinforced when the observed behavior is seen to produce favorable outcomes for the business, such as smoother cash flow or avoided losses, which increases employees' confidence in replicating the behavior. This perspective strengthens the theoretical basis for expecting that leadership does not only motivate employees in a general sense, but specifically cultivates their financial competence through sustained behavioral modeling embedded in daily operational routines.

Human Capital Theory

Human capital theory (Becker, 1964) explains why financial literacy is expected to translate into measurable gains in employee productivity. According to this theory, knowledge, skills, and competencies acquired by individuals constitute a form of capital that, similar to physical capital, can be invested in and yields future economic returns in the form of higher performance, earnings, or efficiency. Financial literacy, in this sense, represents a specific component of human capital that equips employees with the cognitive tools to interpret financial information, weigh the cost implications of operational choices, and allocate limited resources, such as raw materials, time, and cash, more efficiently. Employees who possess this capital are able to reduce operational waste, avoid costly errors in transaction handling, and make faster, better-informed decisions during daily tasks, all of which are directly reflected in productivity outcomes. Human capital theory therefore provides the micro-level mechanism that links the macro-level constructs of leadership, literacy, and productivity examined in this study, reinforcing the theoretical plausibility of financial literacy as a mediating variable.

Theory of Planned Behavior in Financial Decision-Making

The theory of planned behavior (Ajzen, 1991) further enriches the conceptualization of financial literacy adopted in this study by explaining how knowledge is converted into actual financial behavior. This theory argues that behavior is directly determined by behavioral intention, which is in turn shaped by three antecedents: attitude toward the behavior, subjective norms, and perceived behavioral control. Applied to the MSME context, an employee's intention to practice sound financial habits, such as recording petty cash transactions diligently or flagging discrepancies to the owner, depends not only on financial knowledge but also on whether the employee holds a favorable attitude toward such practices, perceives that the business owner and coworkers expect and value this behavior, and feels capable of performing it given the tools and time available. This framework helps explain why the OJK's (2022) four-dimensional conceptualization of financial literacy, knowledge, skills, beliefs, and attitudes,

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extends beyond mere cognitive understanding to encompass the behavioral and motivational elements that are ultimately responsible for translating literacy into productivity-enhancing action.

Path-Goal and Expectancy Perspectives on Leadership and Productivity

To explain the direct pathway from business owner leadership to employee productivity, this study also draws on path-goal theory (House, 1971) and expectancy theory (Vroom, 1964). Path-goal theory posits that effective leaders enhance subordinate performance by clarifying the paths toward valued goals, removing obstacles, and adjusting their leadership style, whether directive, supportive, participative, or achievement-oriented, according to the characteristics of the task and the employee. In the MSME context, where formal standard operating procedures are often minimal, business owners who clearly communicate expectations and actively coach employees through daily operational challenges directly reduce ambiguity and free employees to focus their effort on productive tasks. Complementing this, expectancy theory suggests that employees are motivated to exert effort when they believe that effort leads to performance, that performance leads to valued outcomes, and that those outcomes are personally meaningful. Business owners who provide clear direction, timely feedback, and recognition strengthen these perceived linkages, thereby increasing employee motivation and, consequently, productivity, independent of any effect channeled through financial literacy.

Integrated Conceptual Framework

Taken together, transformational leadership theory, social learning theory, human capital theory, the theory of planned behavior, path-goal theory, and expectancy theory converge to form an integrated theoretical framework for this study. Business owner leadership is conceptualized as an exogenous variable that shapes employee outcomes through two distinguishable mechanisms: a cognitive-behavioral pathway, in which leadership cultivates financial literacy through modeling, coaching, and the establishment of supportive norms, and a direct motivational pathway, in which leadership clarifies goals and strengthens performance-outcome expectancies.

Financial literacy, informed by human capital theory, is positioned as the mediating mechanism through which the cognitive-behavioral pathway is converted into productivity gains. This integrated framework, illustrated conceptually as Business Owner Leadership (X) influencing Financial Literacy (M), which in turn influences Employee Productivity (Y), alongside a direct path from X to Y, provides the theoretical justification for the four hypotheses developed in the following section and distinguishes this study from prior research that has typically examined leadership, financial literacy, or productivity in isolation rather than as an integrated causal chain.

MSME Characteristics and the Owner-Employee Relationship

The theoretical mechanisms outlined above operate within the distinctive organizational characteristics of MSMEs, which differ substantially from those of large firms and therefore warrant explicit theoretical attention. MSMEs are typically characterized by flat, single-tier management structures in which the business owner simultaneously performs strategic, operational, and supervisory functions, resulting in frequent, direct, and often informal interaction between owner and employees (Kementerian Koperasi dan UKM Republik Indonesia, 2023). This organizational flatness has two important theoretical implications for the present study. First, it amplifies the salience of the owner as a behavioral model under social learning theory, since employees have limited access to alternative role models, such as middle managers or specialized supervisors, whose financial practices might otherwise dilute or compete with the owner's influence.

Second, it shortens the feedback loop between leadership behavior and employee outcomes: because owners observe employee performance directly and immediately, rather than through layered reporting structures, the motivational mechanisms described by path-goal and expectancy theory are likely to operate more quickly and with greater force than in bureaucratic organizations, where the link between individual effort and managerial recognition is often diluted by organizational distance. At the same time, the informality that characterizes financial management in many MSMEs, such as the absence of standardized bookkeeping systems or dedicated finance staff, means that whatever financial competence employees possess is disproportionately self-taught or owner-transmitted rather than acquired through formal organizational training, which further elevates the theoretical importance of

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leadership-driven literacy transfer relative to what would be expected in larger, more bureaucratized firms.

Synthesis of Prior Empirical Studies and Research Gap

The empirical studies summarized in Table 1 collectively illustrate a fragmented pattern in the existing literature: leadership-performance relationships (Wibowo & Pratama, 2022), financial-literacy-performance relationships (Sari & Handayani, 2021; Putri & Rahman, 2023), leadership styles specific to Medan City MSMEs (Nasution & Ginting, 2022), and integrated leadership-literacy-productivity models (Simanjuntak et al., 2023) have each been examined, but predominantly within separate studies, separate sectors, or separate geographic contexts. Only Simanjuntak et al. (2023) tested an integrative model resembling the one proposed here, and that study was conducted using a different regional sample within North Sumatra rather than a sector-diverse sample specifically drawn from Medan City.

This fragmentation matters theoretically because, as discussed above, the mechanisms linking leadership, financial literacy, and productivity, namely social learning, human capital accumulation, planned behavior, and goal-path clarification, are conceptually interdependent rather than independent; testing them in isolation risks overstating the explanatory power of any single mechanism while understating the joint, complementary role that leadership and financial literacy play in shaping MSME employee outcomes. The present study addresses this gap by simultaneously testing the direct and mediated pathways within a single structural model, applied to a sector-diverse and city-specific MSME sample, thereby offering a more complete empirical account of how these theoretical mechanisms operate together in practice

II. LITERATURE REVIEW

Theoretical Framework

Leadership Theory

Transformational leadership theory (Bass, 1990) is the main foundation for understanding how business owner's leadership affects employee work outcomes. Transformational leaders are able to inspire, provide intellectual stimulation, and pay attention to the individual needs of their subordinates, thereby encouraging employees to perform beyond normal expectations. In the context of MSMEs, where business owners play a dual role as leaders as well as operational managers, the leadership style applied has a direct impact on work culture, communication, and capacity building of employees, including capacity to manage business financial aspects (Bass & Riggio, 2006).

Financial Literacy Theory

Financial literacy is defined as the ability to understand and apply various financial concepts in daily decision-making (Chen & Volpe, 1998). The Financial Services Authority (OJK, 2022) classifies financial literacy into four main aspects, namely knowledge, skills, beliefs, and attitudes in financial management. At the MSME level, employee financial literacy is reflected in the ability to understand transaction recording, daily cash management, and operational decision-making that has an impact on cost efficiency, so that financial literacy plays a role as a functional capability that supports the achievement of work targets.

Work Productivity Theory

Work productivity refers to the comparison between work outputs and resources used (inputs) in a certain period (Robbins & Judge, 2017). Employee productivity is influenced by individual factors such as competence and motivation, as well as organizational factors such as leadership style and work systems applied. In the context of MSMEs, employee productivity is highly dependent on the clarity of direction from business owners and the capacity of employees to manage business resources efficiently, including financial resources.

Hypothesis Development

The Influence of Business Owner Leadership on Financial Literacy

Business owners who implement transformational leadership tend to provide coaching, informal training, and exemplary business financial management to their employees. Through open communication and direct mentoring, business owners can improve employee understanding of

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transaction recording, cash management, and operational cost control. Simanjuntak et al. (2023) found that participatory leadership contributes significantly to increasing employee financial literacy in MSMEs in North Sumatra.

This process aligns with social learning theory (Bandura, 1977): employees who regularly observe their business owner engaging in disciplined recording of transactions and transparent cash management are more likely to internalize and imitate these behaviors, particularly when the owner explicitly explains the reasoning behind financial decisions rather than simply performing them. Furthermore, from the perspective of the theory of planned behavior (Ajzen, 1991), supportive leadership shapes employees' subjective norms regarding financial diligence, whereby employees perceive that careful financial conduct is expected and valued within the workplace, which in turn strengthens their intention to acquire and apply financial knowledge. Leadership behaviors such as involving employees in simple budgeting discussions, providing constructive feedback on cash-handling errors, and creating psychologically safe conditions for employees to ask questions about financial procedures are therefore expected to accelerate the development of financial literacy beyond what formal training alone could achieve.

It is nevertheless important to note a boundary condition on this hypothesis: the strength of this leadership-to-literacy transfer is likely to depend on the owner's own level of financial competence, since a business owner who is confident but personally lacks sound financial habits may still inspire employees without necessarily transmitting accurate financial knowledge. This qualification does not invalidate the hypothesized positive relationship but suggests that the effect may be moderated by the owner's own financial capability, a boundary condition that is beyond the scope of the present model but worth noting when interpreting the hypothesized association.

Based on this description, the first hypothesis is formulated as follows:

H_1: The leadership of business owners has a positive and significant effect on the financial literacy of MSME employees in Medan City

The Effect of Financial Literacy on Employee Productivity

Employees with adequate financial literacy have better ability to manage business resources, minimize waste, and make financially efficient operational decisions. This in turn supports the achievement of work targets with more optimal use of resources. Putri and Rahman (2023) found a positive relationship between employee financial literacy and work productivity levels in the small and medium business sector.

This relationship is consistent with human capital theory (Becker, 1964), which conceptualizes financial knowledge and skills as a productive asset that employees can deploy to reduce errors, avoid resource waste, and make faster operational decisions. In micro and small business settings where employees often handle cash transactions, inventory purchasing, or informal bookkeeping as part of their daily tasks, the ability to accurately interpret financial information directly shortens the time needed to complete transactional tasks and lowers the incidence of costly mistakes, such as incorrect change-giving, mismanaged stock reordering, or undetected pilferage. Moreover, financially literate employees are better positioned to translate general work instructions into financially sound micro-decisions without requiring constant supervision from the business owner, thereby increasing the pace and accuracy of daily operations, both of which are core dimensions of the productivity construct adapted from Robbins and Judge (2017).

It is also plausible that this relationship operates with diminishing returns: once an employee possesses sufficient financial literacy to handle routine tasks competently, additional increments of financial knowledge may yield progressively smaller productivity gains unless accompanied by expanded decision-making authority. This possibility does not contradict the hypothesized positive linear relationship tested in this study but suggests a further avenue for refinement in future non-linear modeling of the literacy-productivity relationship.

Thus, the second hypothesis is formulated as follows:

H_2: Financial literacy has a positive and significant effect on the productivity of MSME employees

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in Medan City

The Influence of Business Owner Leadership on Employee Productivity

Effective business owner leadership can directly increase employee productivity through providing clear work directions, motivation, and creating a conducive work environment. Wibowo and Pratama (2022) prove that the transformational leadership of business owners has a positive effect on the performance and productivity of MSME employees.

This direct pathway can be explained through path-goal theory (House, 1971) and expectancy theory (Vroom, 1964). By clearly communicating work expectations, offering timely coaching, and adjusting their leadership style to the demands of specific operational tasks, business owners reduce role ambiguity and enable employees to direct their effort more precisely toward productive outcomes. In parallel, business owners who consistently follow through on promises of recognition, additional responsibility, or informal incentives strengthen employees' belief that increased effort will be rewarded and that these rewards are personally valuable, thereby raising overall motivation to perform. Because MSME owners are typically present on the shop floor and interact with employees continuously throughout the working day, the opportunity for this direct motivational influence to operate is considerably greater than in larger firms with layered management structures, which may explain why the direct effect of leadership on productivity remains significant even after accounting for the mediating role of financial literacy.

At the same time, this direct effect is expected to coexist with, rather than substitute for, the indirect effect proposed in H4, since path-goal and expectancy mechanisms address employees' motivation and effort allocation, whereas the mediated pathway addresses employees' capability; a fully productive workforce arguably requires both dimensions to be strengthened concurrently rather than either being pursued in isolation.

Therefore, the third hypothesis is formulated as follows:

H_3: The leadership of business owners has a positive and significant effect on the productivity of MSME employees in the city of Medan.

The Role of Financial Literacy Mediation

In addition to having a direct effect on employee productivity, the leadership of business owners is also suspected to have an indirect effect through increasing employee financial literacy. Business owners who nurture their employees to understand business financial management indirectly equip employees with capabilities that support work efficiency, so that financial literacy acts as a bridge (mediator) between leadership and work productivity.

Theoretically, this mediating role reflects the integration of the cognitive-behavioral and motivational pathways discussed earlier: business owner leadership first cultivates employees' financial understanding through modeling and supportive norms, and this enhanced literacy subsequently functions as human capital that employees deploy to work more efficiently. Because the direct path from leadership to productivity is expected to remain significant, the mediation is hypothesized to be partial rather than full, indicating that leadership continues to exert an independent motivational influence on productivity that operates through channels other than financial literacy, such as the goal clarification and expectancy-strengthening mechanisms described above. Identifying the relative strength of the mediated versus the direct pathway is therefore of particular theoretical interest, as it clarifies whether interventions aimed at improving MSME productivity should prioritize leadership development, financial literacy training, or a combined approach that addresses both simultaneously.

Consistent with the broader mediation literature in organizational behavior research, this hypothesis further implies that the total effect of leadership on productivity, encompassing both its direct and financial-literacy-mediated components, should exceed either pathway considered alone, underscoring the practical value of interventions that strengthen both leadership practice and employee financial capability in tandem rather than as competing priorities for limited MSME training resources.

Based on this description, the fourth hypothesis is formulated as follows:

H_4: Financial literacy mediates the influence of business owners' leadership on the productivity of

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MSME employees in Medan City

III. RESEARCH METHODS

This study uses a quantitative approach with a causal associative research design to test the influence of business owner leadership on employee productivity through financial literacy as a mediation variable. The research population is all MSME employees operating in the city of Medan in the culinary, fashion, handicrafts, and retail trade sectors. The research sample was determined using purposive sampling techniques with the following criteria: (1) MSMEs have been operating for at least two years; (2) have at least three permanent employees; and (3) business owners are directly involved in the management of daily operations. Based on these criteria, a research sample of 175 employee respondents from 58 MSMEs (from the final target of 120–150 MSMEs) in Medan City was obtained.

Primary data were collected through a closed questionnaire with a 5-point Likert scale (1 = strongly disagree up to 5 = strongly agree). Business owner leadership variables were measured using 8 indicators adapted from the Multifactor Leadership Questionnaire (Bass & Riggio, 2006), financial literacy variables were measured using 10 indicators adapted from OJK instruments (2022), and employee productivity variables were measured using 9 indicators adapted from Robbins and Judge (2017).

Data analysis was carried out using the Structural Equation Modeling approach based on Partial Least Square (SEM-PLS) with the help of SmartPLS 4 software. The analysis stage included evaluation of the measurement model (outer model) through convergent validity tests (outer loading and Average Variance Extracted/AVE), discriminant validity, and reliability tests (Composite Reliability and Cronbach's Alpha). Furthermore, structural model evaluation (inner model) was carried out through the determination coefficient (R^2), hypothesis testing with a bootstrapping procedure (5,000 subsamples), and mediation effect testing using the Variance Accounted For (VAF) approach.

IV. RESULTS AND DISCUSSION

Research Results

Descriptive Statistics

Table 2 presents descriptive statistics of research variables based on 175 respondents. The average business owner's leadership score of 3.82 indicates that employees assess the leadership style of business owners in Medan City MSMEs as quite good. The average financial literacy score of 3.41 with a standard deviation of 0.61 indicates that the level of financial literacy of employees is at a moderate level and varies considerably between MSMEs. The average employee productivity score of 3.76 indicates a relatively good level of work productivity.

Table 2. Descriptive Statistics of Research Variables (N = 175)

Variable	Min	Maks	Mean	Std. Dev
Business Owner Leadership (X)	2,25	5,00	3,82	0,54
Financial Literacy (M)	1,90	4,90	3,41	0,61
Employee Productivity (Y)	2,44	5,00	3,76	0,49

Source: Primary data processed, 2026

Validity and Reliability Tests

The results of the measurement model test showed that all indicators had an outer loading value above 0.70, thus qualifying for convergent validity. The Average Variance Extracted (AVE) value for all variables was above the threshold of 0.50, and the Composite Reliability and Cronbach's Alpha values were above 0.70, indicating that the research instrument was reliable.

Table 3. Validity and Reliability Test Results

Variable	Outer Loading	AVE	Composite Reliability	Cronbach's Alpha
Business Owner Leadership	0,724 - 0,891	0,612	0,912	0,887
Financial Literacy	0,712 - 0,856	0,588	0,897	0,865
Employee Productivity	0,738 - 0,879	0,634	0,921	0,902

Source: SmartPLS 4 output, data processed 2026

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Hypothesis Test (Structural Model)

The results of the structural model evaluation showed an R^2 value for the financial literacy variable of 0.298, which means that the leadership of the business owner was able to explain 29.8% of the variation in employee financial literacy. The value of R^2 for the variable of employee productivity was 0.487, which means that the leadership of the business owner and financial literacy together were able to explain 48.7% of the variation in employee productivity. The SRMR value of the model of 0.061 (< 0.08) showed that the research model had a good level of fit.

Tabel 4. Hasil Pengujian Hipotesis (Bootstrapping 5.000 Resample)

Hypothesis	Track	Coefficient (β)	t-Statistics	p-value	Explanation
H1	Business Owner Leadership → Literasi Keuangan	0,412	5,842	0,000***	Accepted
H2	Financial Literacy → Employee Productivity	0,358	4,716	0,000***	Accepted
H3	Business Owner Leadership → Employee Productivity	0,276	3,298	0,001***	Accepted
H4	Business Owner Leadership → Financial Literacy → Employee Productivity (indirect)	0,148	3,014	0,003**	Accepted (Partial Mediation)

Description: *** p < 0.001; ** p < 0.01. Source: SmartPLS 4 output, data processed 2026

DISCUSSION

The Influence of Business Owner Leadership on Financial Literacy (H_1)

The first hypothesis (H_1) proved to be accepted with a coefficient of β = 0.412 (p < 0.001), which means that the better the business owner's leadership style, the higher the employee's financial literacy. This finding supports transformational leadership theory (Bass, 1990) which emphasizes the role of leaders in providing intellectual stimulation and coaching to subordinates. In the context of MSMEs in Medan City, business owners who actively involve employees in recording daily transactions and cash management have been proven to be able to improve their employees' financial understanding, in line with the findings of Simanjuntak et al. (2023).

From a theoretical standpoint, this result lends empirical support to the social learning mechanism proposed in the theoretical framework: employees appear to acquire financial competence not solely through formal training but through sustained exposure to, and imitation of, the financial conduct modeled by business owners in daily operations. This is consistent with the descriptive finding that the average business owner leadership score (mean = 3.82) was rated notably higher than the average financial literacy score (mean = 3.41) among employees, suggesting that leadership quality in the sampled MSMEs has outpaced the financial competence it is expected to cultivate, a gap that reinforces the practical relevance of treating financial literacy development as an intentional leadership responsibility rather than a by-product of general supervision.

Compared with Nasution and Ginting's (2022) finding that participatory leadership styles dominate the culinary and fashion MSME sectors in Medan City, the present result suggests that participatory practices, such as involving employees in discussions about daily cash positions or simple budgeting decisions, may be a particularly effective vehicle for literacy transfer, although the cross-sectional design of this study cannot establish the specific behavioral mechanisms with certainty. It also suggests that leadership development programs for MSME owners in Medan City could pay closer attention to modeling behavior, not only motivational communication, since employees appear to learn financial habits mainly by watching how owners themselves handle money on a daily basis.

The Effect of Financial Literacy on Employee Productivity (H_2)

The second hypothesis (H_2) was accepted with a coefficient of β = 0.358 (p < 0.001). These findings confirm that employees with good financial literacy are able to manage business resources more efficiently, thereby contributing to increased work productivity. These results are consistent with Chen and Volpe (1998) who stated that financial literacy contributes to the quality of daily financial decision-

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making, and is in line with the findings of Putri and Rahman (2023) in the context of small and medium enterprises.

This finding reinforces the human capital argument that financial knowledge functions as a productive asset rather than a purely cognitive attribute. The comparatively large explanatory contribution of financial literacy to employee productivity (β = 0.358), which exceeds the direct contribution of leadership itself (β = 0.276), indicates that in the MSME context, competence-based factors may carry as much or more weight than motivational factors in driving day-to-day work output. This pattern departs somewhat from studies conducted in larger organizational settings, where leadership effects on performance tend to dominate motivational and competence-based pathways combined, and may reflect the operational reality of MSMEs, where employees are frequently required to perform financially consequential tasks, such as handling cash, pricing goods, or managing informal credit with customers and suppliers, with minimal supervision or standardized procedures. Under such conditions, an employee's personal financial competence becomes a more immediate determinant of task efficiency than in settings where financial decisions are centralized. This underscores the practical importance of extending financial literacy interventions beyond bookkeeping staff to frontline employees who make micro-financial decisions as part of their routine responsibilities. It also implies that even brief, informal explanations from owners about why a financial decision was made, rather than simply issuing instructions, may carry real productivity value over time.

The Direct Influence of Business Owner Leadership on Employee Productivity (H_3)

The third hypothesis (H_3) was accepted with a coefficient of β = 0.276 ($p < 0.01$), showing that the leadership of business owners has a direct positive effect on employee productivity even though the magnitude of the influence is smaller than the influence of financial literacy. This indicates that the work direction, motivation, and example provided by business owners directly encourage employee performance, in line with the findings of Wibowo and Pratama (2022) who affirm the importance of transformational leadership in the context of MSMEs.

Although smaller in magnitude than the effect of financial literacy, the significant direct effect of leadership on productivity confirms that motivational and goal-clarification mechanisms operate independently of employees' financial competence. This is consistent with the theoretical expectation, derived from path-goal and expectancy theory, that leadership shapes productivity partly through channels unrelated to financial knowledge, such as reducing task ambiguity, providing timely feedback, and reinforcing employees' belief that their effort will be recognized and rewarded. The relatively modest size of this direct effect, compared with the effect of financial literacy, may also reflect a ceiling associated with the informal and personalized nature of leadership already practiced in most MSMEs; because business owners in this sector are typically present on the shop floor and interact with employees daily, the marginal productivity gain obtainable purely from further improving general leadership behavior, without a corresponding improvement in employees' financial capability, may be inherently limited. This interpretation suggests that the magnitude of leadership's direct effect should be understood in conjunction with complementary human-capital-building efforts rather than in isolation. In practice, this means that motivation alone, without a parallel effort to build employees' financial understanding, is unlikely to produce the full productivity gains that business owners in Medan City are seeking.

The Role of Financial Literacy Mediation (H_4)

The results of the mediation test showed an indirect effect of 0.148 ($p < 0.01$) with a Variance Accounted For (VAF) value of 34.9%, which is in the range of 20%–80%. This shows that financial literacy partially mediates the influence of business owner leadership on employee productivity. In other words, business owner leadership not only affects employee productivity directly, but also through the path of increasing employee financial literacy first. These findings strengthen the argument that business owners' investment in building employee financial capacity is an effective strategy to increase MSME productivity in a sustainable manner, in line with the findings of Simanjuntak et al. (2023) in the context of MSMEs in North Sumatra.

The partial mediation pattern identified in this study, with a VAF of 34.9%, indicates that financial literacy accounts for approximately one-third of the total effect of business owner leadership

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on employee productivity, while the remaining two-thirds operates through the direct motivational pathway discussed above. This proportion suggests that, while financial literacy is a meaningful and statistically significant mechanism, it is not the sole conduit through which leadership translates into productivity gains, and that leadership development and financial literacy training should be regarded as complementary rather than substitutable interventions. From a theoretical standpoint, the coexistence of a substantial direct effect alongside a significant indirect effect supports the integrated conceptual framework proposed earlier, in which cognitive-behavioral and motivational pathways operate in parallel rather than in isolation. Practically, this implies that MSME owners seeking to maximize employee productivity gains from limited coaching time may achieve the greatest returns by combining behaviors that build financial competence, such as involving employees in transaction recording, with behaviors that clarify goals and reinforce motivation, such as regular feedback and recognition, rather than emphasizing either dimension exclusively. Given the limited time and resources typically available to MSME owners, this combined approach need not require additional budget, but rather a shift in how existing day-to-day interactions with employees are used.

The findings of this study contribute to the theoretical literature in several ways. First, by empirically testing an integrated model that combines transformational leadership theory, social learning theory, human capital theory, and expectancy-based perspectives within a single structural framework, this study demonstrates that these theories, which have largely developed along separate streams in the organizational behavior and financial literacy literature, offer complementary rather than competing explanations of employee productivity in the MSME context. Second, the confirmation of partial rather than full mediation extends the theoretical understanding of financial literacy's role: rather than functioning as the sole transmission mechanism between leadership and productivity, financial literacy operates alongside a still-influential direct motivational pathway, suggesting that future theoretical models of MSME employee performance should retain both cognitive-behavioral and motivational constructs rather than collapsing them into a single mediating mechanism. Third, this study provides empirical grounding, specific to the Indonesian MSME context, characterized by owner-centric management structures and predominantly informal financial practices, for theories that were largely developed and validated in Western, large-organization settings, thereby contributing to the broader discussion of the cross-contextual applicability of leadership and human capital theories in emerging-economy small business environments. These contributions suggest promising directions for future theory development, particularly in refining how modeling-based and motivation-based pathways interact under varying degrees of owner-employee proximity characteristic of micro and small enterprises.

Beyond its theoretical contributions, this study offers several practical implications for MSME owners, employees, and policymakers. For business owners, the results suggest that leadership effectiveness in driving productivity cannot be fully realized without a deliberate effort to build employees' financial competence; owners are therefore encouraged to treat everyday operational moments, such as recording sales, managing petty cash, or reconciling supplier payments, as informal coaching opportunities rather than purely administrative tasks. Simple, low-cost practices, such as explaining the reasoning behind pricing or cash-flow decisions, involving employees in basic budgeting conversations, and providing constructive feedback when financial errors occur, appear well aligned with the modeling and norm-setting mechanisms identified in this study and may be more feasible for resource-constrained MSMEs than formal, classroom-based training programs.

For policymakers and business development institutions, such as the Medan City Cooperatives and SMEs Office, the finding that leadership and financial literacy jointly, rather than independently, drive productivity suggests that assistance programs may achieve greater impact by integrating leadership coaching with financial literacy modules in a single program, rather than offering them as separate, disconnected initiatives. For employees, the results highlight that proactively seeking opportunities to participate in financial recording and decision-making processes, even informally, may accelerate their own competence development and, correspondingly, their contribution to business performance. Collectively, these implications point toward an integrated capacity-building approach,

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one that simultaneously strengthens business owner leadership practices and employee financial competence, as a more effective strategy for enhancing MSME productivity than interventions that target either dimension alone.

Because the research sample spans four heterogeneous sectors, culinary, fashion, handicrafts, and retail trade, the strength of the leadership-literacy-productivity chain identified in this study is likely to vary across business types depending on the nature of daily financial transactions involved. In culinary and retail trade businesses, for instance, employees typically handle cash and make pricing or restocking decisions multiple times per day, creating frequent opportunities for both financial-literacy modeling by owners and the practical application of financial knowledge by employees; the productivity payoff from financial literacy may therefore be more immediate and observable in these sectors than in handicraft or fashion businesses, where financial transactions may be less frequent but individually larger in value, and where production-related competencies may compete with financial competencies as the dominant driver of productivity.

This descriptive pattern is broadly consistent with Nasution and Ginting's (2022) observation that participatory leadership styles are especially dominant in Medan City's culinary and fashion MSMEs, suggesting that the specific configuration of leadership style, financial literacy demand, and productivity determinants may not be uniform across sectors. While the present study's structural model does not formally test for sectoral moderation, this observation points to a valuable direction for subsequent research to examine whether the magnitude of the direct and mediated effects identified here differs meaningfully by business sector.

Several limitations should be acknowledged when interpreting the findings of this study. First, the cross-sectional survey design captures leadership, financial literacy, and productivity at a single point in time, which allows for the testing of statistical associations consistent with the hypothesized causal directions but does not permit definitive causal inference; it remains possible, for example, that more productive employees are more receptive to leadership coaching or more capable of acquiring financial literacy, rather than the reverse. Second, all constructs were measured using self-reported Likert-scale questionnaires completed by employees, which introduces the possibility of common method bias and social desirability bias, particularly for the leadership variable, where employees may be reluctant to rate their employer unfavorably.

Third, the purposive sampling technique, while appropriate for the exploratory and theory-testing aims of this study, limits the statistical generalizability of the findings beyond MSMEs in Medan City that meet the specified operational criteria, such as a minimum of two years of operation and at least three permanent employees; findings may not extend to newly established or informal microenterprises that fall outside these criteria. Finally, the four sectors represented in the sample were analyzed as a pooled dataset rather than being formally tested for sectoral moderation, meaning that potential differences in the strength of the hypothesized relationships across business types, as discussed above, remain a matter of descriptive inference rather than statistical confirmation. These limitations, rather than undermining the study's contributions, help delineate clear boundaries for interpretation and identify concrete opportunities for the future research directions outlined in the following section.

Viewed together, the four hypothesis tests reveal a coherent pattern rather than four disconnected findings. The strongest single path in the model is the effect of business owner leadership on financial literacy ($\beta = 0.412$), followed closely by the effect of financial literacy on productivity ($\beta = 0.358$), while the direct effect of leadership on productivity is comparatively smaller ($\beta = 0.276$). This ordering suggests that business owner leadership in Medan City's MSMEs exerts its strongest influence on shaping the capability base of employees, namely their financial literacy, rather than acting as a direct performance lever; productivity gains, in turn, appear to depend more heavily on employees actually possessing that capability than on leadership alone. This pattern is consistent with a capability-centered, rather than a purely motivation-centered, account of productivity in the MSME context, and it refines the transformational leadership narrative that has traditionally emphasized inspiration and motivation (Bass & Riggio, 2006) by showing that, at least in this setting, leadership's most consequential contribution to productivity may run through the capabilities it builds in employees rather than through

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motivation it instills directly. The relatively high explanatory power of the productivity model (R^2 = 0.487) compared with the financial literacy model (R^2 = 0.298) further indicates that factors beyond leadership and financial literacy, such as individual competence, work systems, and possibly sector-specific operational demands, also contribute meaningfully to productivity variation, leaving room for future models to incorporate additional predictors alongside the leadership-literacy-productivity chain examined here.

The findings of this study also resonate with the broader policy context of financial inclusion in Indonesia. The Financial Services Authority's national financial literacy and inclusion survey (OJK, 2022) has repeatedly identified the micro and small business workforce as a population segment in need of targeted financial literacy intervention, yet formal, classroom-based training programs often struggle to reach dispersed, resource-constrained MSME employees who cannot easily leave their workplaces for extended training sessions. The mechanism identified in this study, whereby financial literacy is substantially shaped through everyday leadership practice rather than solely through formal training, suggests a scalable complementary pathway: rather than relying exclusively on centralized training programs, financial inclusion initiatives could equip MSME owners themselves with simple coaching techniques and structured on-the-job financial communication practices that they can then deliver to employees as part of routine supervision. Such an owner-mediated approach would be considerably less costly to scale across the large and dispersed population of Indonesian MSMEs than employee-targeted classroom training, while still leveraging the modeling and norm-setting mechanisms shown here to be effective. This suggests a natural point of collaboration between financial-sector regulators, cooperative and MSME development agencies, and academic institutions in designing leadership-embedded financial literacy programs specifically tailored to the operational realities of micro and small enterprises

V. CONCLUSIONS AND SUGGESTIONS

Conclusion

This study provides empirical evidence that business owner leadership has a positive and significant effect on financial literacy and employee productivity in MSMEs in Medan City, both directly and through financial literacy as a mediation variable. Financial literacy is proven to play a role as a partial mediator that strengthens the influence of business owner leadership on employee productivity, with mediation contributing 34.9% of the total influence. This finding confirms that the increase in the productivity of MSME employees does not only depend on the quality of business owner's leadership alone, but is also greatly influenced by the extent to which employees have adequate financial literacy capabilities.

Suggestions

1. For MSME owners in Medan City, it is recommended to implement a more participatory and supportive leadership style, as well as actively involve employees in the process of recording and managing business finances as a form of informal financial literacy coaching.
2. For the Medan City Cooperatives and SMEs Office and related institutions, the results of this research can be the basis for the preparation of a financial literacy training program that is integrated with leadership training for MSME actors.
3. For MSME employees, it is recommended to proactively participate in business financial management coaching and training to increase work contribution to overall business productivity.
4. For further research, it is recommended to expand the scope of the sample to other regions in North Sumatra, add moderation variables such as employment period or employee education level, and use a longitudinal approach to strengthen the validity of causality between variables.

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