

Enhancing MSME Income in North Sumatra through E-Accounting: Examining the Role of Accounting Literacy from a Maqāsid al-Sharī'ah Perspective

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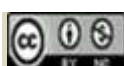
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Abstract

This study examines the impact of E-Accounting on the revenue of MSMEs in North Sumatra Province, addressing the gap in existing literature regarding the role of accounting literacy. The study also explores the challenges faced by MSMEs in adopting E-Accounting. Using a mixed-methods approach with an exploratory sequential design, quantitative data were collected through structured questionnaires from 271 MSMEs across seven districts/cities, analyzed using PLS-SEM. Qualitative data were gathered from in-depth interviews with 20 purposively selected MSMEs. The results show that E-Accounting significantly positively affects MSME revenue, but accounting literacy does not serve as a significant moderating variable, implying that the benefits of E-Accounting in increasing revenue do not rely solely on the users' accounting knowledge. Qualitative findings indicate that while MSMEs recognize the benefits of E-Accounting, they use it mainly for administrative tasks rather than strategic decision-making. Common challenges include limited digital infrastructure, lack of training, and dependence on intuition. The novelty of this research lies in the integration of Sharia principles, such as *amanah* and *hifz al-mal*, offering insights into how Islamic values shape MSME financial practices. This study provides practical, culturally relevant recommendations for improving E-Accounting adoption and enhancing MSMEs' financial resilience through the alignment of technology and ethics.

Keywords: Accounting Literacy, E-Accounting, Moderating Effect, MSME Income



Abstrak

Studi ini meneliti dampak E-Akuntansi terhadap pendapatan UMKM di Provinsi Sumatera Utara, sekaligus mengisi kesenjangan dalam literatur yang ada mengenai peran literasi akuntansi. Studi ini juga mengeksplorasi tantangan yang dihadapi UMKM dalam mengadopsi E-Akuntansi. Dengan menggunakan pendekatan metode campuran dengan desain sekuensial eksploratif, data kuantitatif dikumpulkan melalui kuesioner terstruktur dari 271 UMKM di tujuh kabupaten/kota, dan dianalisis menggunakan PLS-SEM. Data kualitatif dikumpulkan dari wawancara mendalam dengan 20 UMKM yang dipilih secara purposif. Hasil penelitian menunjukkan bahwa E-Akuntansi secara signifikan berpengaruh positif terhadap pendapatan UMKM, tetapi literasi akuntansi tidak berperan sebagai variabel moderasi yang signifikan, yang menyiratkan bahwa manfaat E-Akuntansi dalam meningkatkan pendapatan tidak hanya bergantung pada pengetahuan akuntansi pengguna. Temuan kualitatif menunjukkan bahwa meskipun UMKM menyadari manfaat E-Akuntansi, mereka menggunakannya terutama untuk tugas administratif daripada pengambilan keputusan strategis. Tantangan umum meliputi keterbatasan infrastruktur digital, kurangnya pelatihan, dan ketergantungan pada intuisi. Keunikan penelitian ini terletak pada integrasi prinsip-prinsip Syariah, seperti amanah dan *hifz al-mal*, yang menawarkan wawasan tentang bagaimana nilai-nilai Islam membentuk praktik keuangan UMKM. Studi ini memberikan rekomendasi praktis dan relevan secara budaya untuk meningkatkan adopsi E-Akuntansi dan meningkatkan ketahanan keuangan UMKM melalui penyelarasan teknologi dan etika.

Kata Kunci: Literasi Akuntansi, E-Accounting, Efek Moderasi, Pendapatan UMKM.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) are vital pillars of economic development, not only in developing countries but also globally. They contribute significantly to employment generation, poverty alleviation, and gross domestic product (GDP) across nations (O.E.C.D, 2019). In Indonesia, MSMEs account for 99.99% of all business units, contributing approximately 60.3% to the national GDP while absorbing nearly 97% of the workforce (Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, 2022). Their strategic importance is even more pronounced in entrepreneurial provinces such as North Sumatra, where local economies depend heavily on MSME activity. However, despite their dominant presence, MSMEs often face persistent structural challenges particularly in financial literacy, digital transformation, and formalization of business processes.

North Sumatra Province is one of the provinces in Indonesia, consisting of 25 regencies and 8 cities. The number of Micro, Small, and Medium Enterprises (MSMEs) in the province is highly diverse, ranging from the agriculture and plantation sectors, fisheries and marine sectors, handicrafts, tourism services, to the food and beverage sector. However, certain areas face geographic limitations such as land that is not suitable for farming or the

absence of coastal zones which hinder engagement in agriculture or marine-based livelihoods. Consequently, in many regencies and cities with such limitations, the majority of MSME actors operate in the food and beverage sector as well as in handicrafts. According to data from the Department of Cooperatives and MSMEs of North Sumatra Province at the end of 2023, the total number of MSMEs recorded was 871,651 businesses, as shown in the following figure:

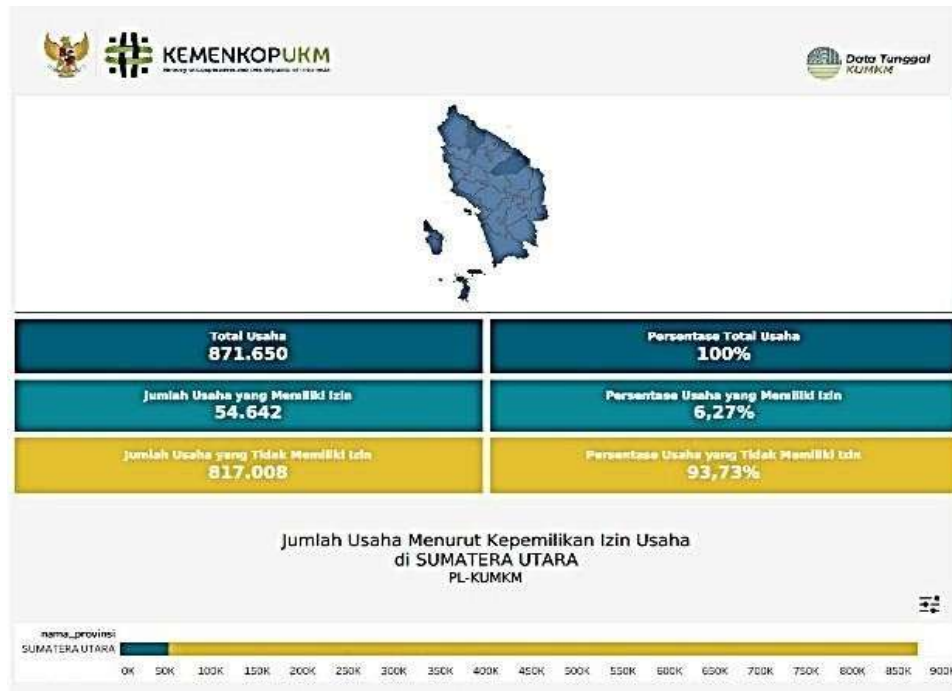


Figure 1. Number of Enterprises Based on Business License Ownership in North Sumatra Province

Figure 1. presents data from the Department of Cooperatives and MSMEs of North Sumatra Province in 2023, which indicates that out of approximately 871,650 MSMEs in the province, only around 6.27% have formal business licenses. This situation highlights the presence of bureaucratic barriers and limited access to government services and support for MSMEs, which ideally should play a significant role in fostering the growth and resilience of this sector. Based on evaluations conducted by the Department of Cooperatives and MSMEs of North Sumatra Province over the past three years, there has been a notable increase in the income of MSME actors in North Sumatra. The following table presents data on income growth and the number of MSMEs that obtained business licenses from 2022 to 2024:

Table 1. Number of MSMEs with Business Licenses in North Sumatra Province (2022– 2024)

Year	Number of MSMEs	Average Monthly Income	Percentage Increase
2022	644,279 MSMEs	IDR 6,355,000/month	-
2023	871,650 MSMEs	IDR 6,610,000/month	4%
2024	939,023 MSMEs	IDR 7,072,000/month	7%

Source: Department of Cooperatives and MSMEs of North Sumatra Province (2024)

According to the data on business license ownership among MSME actors in North Sumatra Province, income has increased consistently over the past three years from 2022 to the third quarter of 2024 by 4% to 7%. The highest growth occurred during the 2024 National Sports Week (PON), which was co-hosted by Aceh Province and North Sumatra Province. The increase in MSME income in North Sumatra is primarily concentrated in seven regencies/cities: Medan City, Pematang Siantar City, Tebing Tinggi City, Binjai City, Serdang Bedagai Regency, Deli Serdang Regency, and Simalungun Regency.

To validate this income growth, the researcher conducted a pre-survey among MSME actors in the aforementioned seven regencies/cities, selecting five MSMEs from each area some with regular financial record-keeping practices and others without. The results of the pre-survey indicate that most of the income increases occurred among MSMEs that regularly maintained financial records. Conversely, MSMEs without financial record-keeping showed stagnant income or even declines, often due to surplus raw materials and unsold products, which led to financial losses and reduced profits. These pre-survey findings align with a study by Harahap et al., (2022), which demonstrated that a structured financial recording system enables the identification of sales trends, spending patterns, and operational cost changes. This allows MSMEs to make more informed decisions. With accurate data, MSMEs can not only identify opportunities to improve operational efficiency and increase profit margins but also establish a strong foundation to withstand crises or other challenging periods.

Although several previous studies have examined technology adoption in MSMEs, there are still significant research gaps regarding the factors influencing e-accounting adoption, particularly in regions with limited digital infrastructure such as North Sumatra. Most previous studies have focused on quantitative analysis without considering the moderating role of accounting literacy, and fewer have examined how a Sharia perspective can influence the use of accounting technology in MSMEs operating in predominantly Muslim regions. This study addresses these gaps by analyzing the influence of accounting literacy on the effectiveness of e-accounting in increasing MSME revenue and integrating a Sharia perspective into MSME financial management.

The literature review indicates that e-accounting has a positive impact on improving MSME financial performance. For example, Romadhoni & Putri, (2024) found that digital accounting information systems help MSMEs make

better decisions and increase revenue. Research by Kilay et al., (2022) also shows that financial literacy can improve MSME performance, but digital literacy is far more influential in optimizing the use of e-accounting. Badria & Hasanah, (2024); Nugraha et al., (2024) also emphasize the importance of access to digital infrastructure to ensure successful technology adoption in MSMEs. Meanwhile, research by Syarifuddin et al. (2021) shows that Sharia values, such as amanah (trustworthiness) and hifz al-mal (trustworthiness), also influence financial management in MSMEs, making a Sharia perspective relevant in the context of e-accounting adoption.

This research's novel contribution lies in its analysis of the local context of North Sumatra Province, which has not been widely discussed in the related literature, and its focus on the role of accounting literacy as a moderating variable in the impact of e-accounting on MSME revenue. This research also integrates a Sharia perspective in discussing MSME financial management, a topic that has not been widely explored in previous research. Therefore, this study makes a theoretical contribution by introducing digital readiness and data-driven changes in business behavior as key factors determining the effectiveness of e-accounting adoption, beyond accounting literacy alone.

Accordingly, this study focuses on two main objectives: First, to examine the effect of E-Accounting use on the income of MSME actors in North Sumatra Province. Second, to analyze the effect of E-Accounting use on MSME income as moderated by accounting literacy. Third, to explore the perceptions, experiences, and challenges faced by MSME actors in implementing E-Accounting. Through a mixed-methods approach, the research aims to present a holistic understanding of how digital accounting can transform financial practices among MSMEs, supporting not just economic resilience but also alignment with Islamic ethical principles.

The Effect of E-Accounting Use on the Income of MSME Actors in North Sumatra Province

Based on the results of the outer model analysis, all the tested hypotheses have met the required criteria and can therefore be used as an analytical model in this study. Hypothesis testing in this research uses a 5% alpha level, meaning that the hypothesis is accepted if the t-statistic value is ≥ 1.960 or the probability value is \leq the level of significance ($\alpha = 5\%$). The 0.05 threshold indicates that the margin of error is only 5%, and the remaining 95% implies that the hypothesis can be accepted.

Hypothesis testing in this study is divided into two parts: direct effect testing and indirect effect (mediation) testing. The direct effect testing is conducted using bootstrapping in the SmartPLS 3.0 software, while the indirect effect testing uses the t-statistic from the indirect effect output. The path coefficients are evaluated through the t-statistic values, which must be higher than the t-table value of 1.97. This indicates that there is an influence of the exogenous variable on the endogenous variable for each predefined hypothesis. A t-statistic value ≥ 1.97 or a probability value \leq the significance level ($\alpha = 5\%$) leads to the conclusion that the hypothesis is accepted, meaning there is a significant effect between the tested variables. The explanation of each hypothesis tested in this study is detailed below.

Table 2. The Hypothesis Testing Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Moderating Effect à Income	0.011	-0.009	0.111	0.097	0.923
E-Accounting Usage à Income	0.725	0.723	0.068	10.638	0.000

Hypothesis 1

H1: The use of E-Accounting has a significant effect on the income levels of MSME actors in North Sumatra Province.

Based on the test results presented in Table 1, it can be seen that the t-statistic value for the relationship between the use of E-Accounting and income improvement is 10.638 with a significance value of 0.000. These results show that the t-statistic value is ≥ 1.96 and the significance value is \leq the level of significance ($\alpha = 5\%$). This indicates that there is a significant influence of the use of E-Accounting and income improvement. Therefore, Hypothesis 2 is accepted.

Hypothesis 2

H2: The use of E-Accounting affects income improvement as moderated by accounting understanding among MSME actors in North Sumatra Province.

Based on the test results presented in Table 4.16, it can be seen that the t-statistic value for the relationship of Accounting Understanding as a moderating variable between the use of E-Accounting and income improvement is 0.097 with a significance value of 0.976. These results show that the t-statistic value is ≤ 1.96 and the significance value is \geq the level of significance ($\alpha = 5\%$). This indicates that Accounting Understanding does not moderate the relationship between the use of E-Accounting and income improvement. Therefore, hypothesis 2 is rejected.

Table 3. Conclusion of the Hypothesis Results

Hypothesis	Statement	Result
H1	The use of E-Accounting has a significant effect on the income levels of MSME actors in North Sumatra Province.	Accepted
	The use of E-Accounting affects income improvement as moderated by accounting understanding among MSME actors in North Sumatra	Rejected

H2 Province.

The use of e-Accounting has been shown to have a significant impact on the revenue of MSMEs in North Sumatra Province. Quantitative testing revealed that e-Accounting has a strong positive effect on increasing MSME revenue. The statistical results showed a high t-statistic, indicating that the hypothesis regarding the significant effect of e-Accounting on MSME revenue is accepted. The use of e-Accounting applications such as BukuWarung and Si-Apiik has made it easier for MSMEs to record transactions more accurately, allowing them to track cash flow in real time, and optimize the management of expenses and income, ultimately resulting in increased revenue.

However, despite the significant benefits of e-Accounting applications, qualitative interviews revealed that many MSMEs still use e-Accounting solely for administrative purposes, such as recording daily transactions, and have not yet fully utilized its strategic features for more in-depth financial analysis (Alrizwan et al., 2025). This suggests that while these applications have significant potential to increase revenue, their use remains limited to administrative aspects, rather than for more complex strategic planning and decision-making. The main challenge in implementing e-Accounting is limited digital infrastructure, such as unstable internet connections and outdated devices. Furthermore, low digital literacy and a lack of adequate training for MSMEs also hinder the full utilization of e-Accounting (Susilowati et al., 2025). Some MSMEs, despite possessing basic accounting knowledge, find it difficult to optimally utilize e-Accounting applications due to their limited digital capabilities. Therefore, it is crucial for the government and the private sector to invest in improving digital infrastructure and intensive training that can help MSMEs optimize the use of this technology in their financial management (Nugraha et al., 2024).

Within the context of *Maqāṣid al-Sharī'ah*, the use of e-Accounting can be seen as an effort to increase transparency and accountability in asset management, which aligns with the Islamic goal of *hifz al-mal* (protection of assets). By providing clear and accurate financial records, e-Accounting helps MSMEs maintain trust and enhance the trust of business partners and consumers, which in turn supports greater financial resilience. Therefore, the integration of sharia principles in E-Accounting applications, such as zakat management and riba-free transaction reporting, will further support the adoption of this technology among MSMEs, especially those operating in Muslim-majority areas, such as North Sumatra (Syarifuddin et al., 2021).

The effect of E-Accounting use on MSME income as moderated by accounting literacy

This result contrasts with previous studies such as those by Firayani et al., (2024); Syariati et al., (2021), who found that accounting literacy served as a significant moderating factor in the relationship between financial recording practices and MSME performance. Their findings emphasized that MSMEs with strong accounting literacy could implement Sharia-compliant financial recording more effectively and engage in better financial planning. However, the present study highlights that despite understanding accounting principles, MSME actors in North Sumatra often use E-Accounting merely in an administrative capacity rather than as a tool for strategic decision-making. This suggests that knowledge alone is insufficient without behavioral transformation and digital readiness.

Further supporting this notion, Mufidah et al., (2021) identified that digital financial systems yield better outcomes when users possess both accounting and technological competencies. However, interviews conducted in this research indicated that many MSMEs even those with basic accounting knowledge struggle to integrate digital tools into business strategy due to low digital infrastructure, limited time, or habitual reliance on intuition over data. These limitations suggest that practical challenges, rather than cognitive ones, limit the effectiveness of E-Accounting. MSMEs may comprehend financial data but still struggle to apply it in strategic business contexts, such as cost analysis, pricing, or expansion planning.

Moreover, findings from Lutfi et al., (2022); Susilowati et al., (2025) support the idea that digital financial tools like E-Accounting can improve business performance especially when supported by external pressures (e.g., the COVID-19 pandemic) or infrastructure investments. However, in the absence of such supporting conditions, accounting literacy alone may not yield the expected benefits. This reinforces the importance of considering contextual and infrastructural variables in assessing the real impact of digital accounting tools on MSME growth. The gap between potential and practice lies not in accounting knowledge per se, but in the capability and willingness to use such knowledge through digital platforms strategically. Finally, this study emphasizes that efforts to improve MSME income through E-Accounting must go beyond literacy training. Government and private sector stakeholders should facilitate a comprehensive digital transformation ecosystem one that includes training on how to use E-Accounting features strategically, provision of adequate technological infrastructure, and behavioral change programs to promote data-driven decision-making. Only then can MSMEs harness the full potential of E-Accounting, translating data into actionable strategies that drive sustainable income growth.

The Experiences, and Challenges Faced by MSME Actors in Implementing E-Accounting

1. Experience in Using E-Accounting

The integration of E-Accounting tools such as BukuWarung, Si-Apik, and BukuKas has significantly supported many MSME actors in North Sumatra in managing their financial activities more effectively. Business owners reported improvements in recording daily transactions, tracking financial flows, and generating simple yet informative financial statements. For instance, users like

Mr. Ahmad from Medan and Ms. Ummi Alya from Tebing Tinggi emphasized how digital applications helped reduce manual errors and enabled better financial decisions through features like automatic logging and monthly reporting. Additionally, users appreciated how E-Accounting helped distinguish between personal and business finances, thus fostering greater professionalism and customer trust. These findings align with (Harahap et al., 2022), who noted that digital accounting systems enhance financial accuracy and support business income growth.

However, E-Accounting adoption remains uneven due to barriers such as poor internet connectivity, outdated mobile devices, and limited digital literacy. Informants such as Ms. Fitri and Mr. Joko expressed interest in using the apps but cited a lack of familiarity and technical access as key limitations. MSME facilitators like Ms. Sri Wahyuni and Ms. Sugi Hartaty acknowledged the usefulness of E-Accounting but admitted that training and support had not yet been prioritized due to other pressing concerns like marketing. Despite these constraints, the overall attitude toward E-Accounting remains positive, indicating that with proper mentoring, user-friendly features, and technological access, adoption among MSMEs could increase significantly (Nugraha et al., 2024).

2. Income Growth

Many MSME actors across North Sumatra have acknowledged that the use of E-Accounting applications, combined with basic financial literacy, contributes positively to income stability and gradual growth. Users of apps like Si-Apik and BukuWarung such as Mr. Ahmad from Medan and Ms. Ummi Alya from Tebing Tinggi reported that digital transaction tracking and financial summaries allowed them to better evaluate revenue patterns, identify peak sales periods, and make timely operational adjustments. In turn, this resulted in more effective cost control and improved profit margins. Ms. Aisyah from Medan, for example, highlighted that financial reports helped her identify unnecessary spending, thereby enabling wiser financial decisions. Moreover, digital records enhanced their business image and transparency, especially when dealing with partners or customers. These outcomes support the findings of Miti & Kabubi, (2025), who stated that digital financial tools promote better decision-making and increased income for MSMEs.

Conversely, MSMEs that have not adopted E-Accounting due to limited access to technology, low digital literacy, or reliance on manual bookkeeping have not seen the same level of income improvement. Informants such as Ms. Fitri and Mr. Joko expressed interest in using such apps but cited technical and financial barriers. MSME facilitators, including Ms. Sri Wahyuni and Ms. Sugi Hartaty, recognized the potential of E-Accounting to enhance financial performance but noted that the lack of training remains a major challenge. Overall, the interviews demonstrate that while digital tools offer clear benefits in financial management and revenue growth, their full impact depends on adequate training, accessibility, and support systems (Setiana et al., 2025). This suggests that financial digitalization is not merely a technological advancement but a strategic asset for MSME competitiveness and sustainability.

3. Accounting Understanding

Understanding basic accounting principles is increasingly seen as a critical skill among MSME actors, particularly in managing day-to-day financial operations. Although most business owners in North Sumatra lack formal accounting training, many are gradually adopting concepts such as cost tracking, asset management, and profit calculation to support financial decision-making. For example, Mr. Hasan from Deli Serdang shared how self-taught accounting practices such as calculating net profit by comparing daily revenue and operational costs have helped him avoid financial losses. Similarly, Ms. Aisyah from Medan and Ms. Ummi Alya from Tebing Tinggi highlighted how even limited exposure to accounting terms through short training or digital applications like BukuWarung enhanced their financial confidence and strategic thinking. These findings are consistent with (Warren et al., 2016), who stress that the ability to interpret financial data is vital for accurate business decisions and sustainability.

Despite this progress, accounting knowledge among MSMEs remains uneven. Informants such as Mr. Ahmad, Mr. Budi, Ms. Aisyah, and others acquired a foundational understanding through seminars, cooperative-led training, or online resources, which allowed them to effectively use E-Accounting tools like Si-Apik and BukuKas for financial reporting and planning. However, most are unfamiliar with more complex accounting standards such as SAK EMKM, and consider formal financial documents like balance sheets and depreciation too advanced for their scale of business. Meanwhile, other MSME actors such as Ms. Fitri, Ms. Lina, and Mr. Joko have little to no accounting background, often relying on unstructured notes or memory. Facilitators like Ms. Sri Wahyuni and Ms. Sugi Hartaty also noted the urgent need for accessible accounting education tailored to microbusinesses. This highlights the importance of expanding accounting literacy initiatives as a strategic investment in MSME development and sustainability (Warren et al., 2016).

4. Sharia Values in Financial Management

The application of sharia values in managing the finances of Micro, Small, and Medium Enterprises (MSMEs) represents a holistic approach that goes beyond mere profit-oriented goals. It integrates spiritual and social dimensions into every financial decision. The core concept of sharia-based financial management in MSMEs is grounded in fundamental Islamic principles such as the prohibition of *riba* (interest), *gharar* (excessive uncertainty), and *maysir* (speculation), while promoting justice, transparency, and blessings (*barakah*) in every transaction. The implementation of these values requires MSME actors to understand that every rupiah they manage is a trust (*amanah*) that must be accounted for not only to business stakeholders but ultimately to Allah SWT.

Challenges in applying sharia values to MSME financial management include limited access to Islamic financial institutions, low sharia financial literacy among MSME actors, and the complexity of understanding fatwas related to modern business transactions. Nevertheless, with strong commitment and proper mentoring, the adoption of sharia principles can bring long-term blessings to the sustainability of businesses, build high levels of trust from consumers and business partners, and contribute to the

development of a just economy. Ultimately, MSMEs that embrace sharia values in managing their finances are not only striving for worldly success but also seeking the pleasure (ridha) of Allah SWT as the highest goal of all business activities.

Based on statements from various informants regarding the implementation of sharia values in MSME financial management, efforts were found to be varied, often limited by understanding and available resources. Informants such as Mrs. Sri Wahyuni (IPEMI chairperson), Mrs. Sugi Hartaty, Mr. Ahmad, Mr. Hasan, Mr. Budi, Mrs. Aisyah, Mr. Faisal, Mr. Agus, Mr. Zainal, Mr. Tono, and Mrs. Nabila tried to implement values like amanah (honesty) and avoid riba by recording transactions transparently using E-Accounting apps like Si-Apik, BukuWarung, and BukuKas or manual bookkeeping. They also avoided interest-based loans under sharia principles. Some calculated business zakat manually due to app limitations, but lacked understanding of gharar and maysir due to limited sharia knowledge. Conversely, informants such as Mrs. Siti, Mrs. Lina, Mrs. Fitri, Mr. Joko, Mrs. Nur, Mrs. Rina, and Mrs. Maya had very minimal knowledge of sharia principles, did not calculate business zakat, and were unfamiliar with concepts such as amanah, riba, gharar, or maysir, focusing only on running a halal business with manual or no formal records. Mentors like Mrs. Sri Wahyuni and Mrs. Sugi Hartaty promoted values like transparency and the prohibition of riba, but their limited understanding of zakat, gharar, and maysir hindered their ability to provide specific guidance. This highlights the need for deeper Sharia training to support Islamic-compliant financial management in MSMEs.

5. Barriers in Financial Recordkeeping and the Use of E-Accounting

One of the primary challenges in using E-Accounting applications in today's digital era stems from interconnected and complex issues, starting with the limited human resources capable of operating modern technology. Many business owners especially from generations not raised with digital tools struggle to understand the interfaces and features offered by modern E-Accounting platforms. They often feel overwhelmed by dashboards filled with unfamiliar menus and options, leading them to stick with manual bookkeeping methods that they have used for years. Additionally, fear of making input errors that might corrupt the entire system acts as a significant psychological barrier, preventing them from leaving their comfort zone of traditional accounting practices.

Financial limitations also play a critical role, particularly for micro and small businesses with restricted operating capital. Subscription fees for premium E-Accounting applications, along with the need to invest in suitable hardware such as computers, laptops, or tablets with sufficient specifications, are often viewed as non-essential expenses. Many small business owners still perceive that investing in accounting technology does not provide direct returns unlike spending on inventory or production equipment. Furthermore, training employees to use a new system, hiring IT consultants, and anticipating costs related to data recovery in case of technical failure contribute to a high total cost of ownership, which deters many businesses from adopting these digital tools.

Data security and privacy concerns pose deep psychological barriers, especially with increasing reports of cybercrime and data leaks in the media. Many entrepreneurs are uneasy about storing sensitive financial information on third-party cloud servers, fearing unauthorized access or misuse by competitors. Their limited understanding of data encryption, backup systems, and security protocols used by service providers only deepens their distrust. In addition, Indonesia's evolving data protection regulations make many businesses adopt a "wait-and-see" approach rather than take perceived unnecessary risks. Technological infrastructure in some regions remains underdeveloped, with unreliable or slow internet connections making cloud-based applications frustrating to use. Frequent disconnections during data entry can lead to unsaved records or corrupted files. Limited electricity supply, with occasional blackouts, also disrupts recording processes leading many MSMEs, especially in rural areas, to view manual systems as more reliable and predictable than digital solutions.

MSME actors also face challenges in applying proper financial reporting due to low digital and accounting literacy, limited access to modern smartphones, high internet costs, lack of E-Accounting training, and a tendency to prioritize production and sales over financial administration. E-Accounting users like Mr. Ahmad, Mr. Hasan, Mr. Budi, Mrs. Aisyah, Mr. Faisal, Mr. Agus, Mr. Zainal, Mr. Tono, and Mrs. Nabila reported issues such as unstable internet connectivity and the lack of sharia-compliant features (e.g., zakat calculators) or tools for analyzing seasonal sales. Meanwhile, non-users like Mrs. Siti, Mrs. Lina, Mrs. Fitri, Mr. Joko, Mrs. Nur (Tebing Tinggi), Mrs. Rina, and Mrs. Maya rely on manual records or memory, which are less effective and prone to error. They also express fears regarding application errors. Mentors like Mrs. Sri Wahyuni (IPEMI Chair) and Mrs. Sugi Hartaty highlight the lack of training for business coaches and the MSMEs focus on non-financial aspects. Proposed solutions include practical sharia-based accounting training, free E-Accounting apps with relevant features (e.g., zakat calculators or warranty trackers), subsidized internet access, and intensive training modules for both business mentors and MSME owners to improve efficiency and sharia compliance in financial management.

Conclusion

This study yielded three main findings: first, the use of e-accounting has a significant positive impact on MSME revenue; second, accounting literacy does not act as a significant moderating variable; and third, digital readiness and other contextual factors, such as infrastructure and training, play a more decisive role in the effectiveness of e-accounting use. These findings emphasize that while accounting literacy is important, external factors such as technological support and digital readiness play a more significant role in enhancing the impact of e-accounting on MSMEs. Furthermore, this study integrates Sharia values, such as amanah (trustworthiness) and hifz al-mal (trustworthiness), providing a new perspective on understanding MSME financial practices in Indonesia.

The theoretical contribution of this study is the increased understanding of the relationship between digital technology and ethical values in MSME financial management. Practically, these findings highlight the importance of

focusing not only on accounting literacy but also on developing a supportive digital ecosystem. Therefore, to increase the adoption and effectiveness of e-accounting, a comprehensive digital transformation is necessary, including practical training, improved digital infrastructure, and encouragement of data-driven decision-making. These recommendations aim to strengthen the financial resilience of MSMEs and support them in facing future economic challenges.

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