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RESEARCH ARTICLE

Working capital management practices of MSMEs in Samar, Philippines towards triple bottom line sustainability

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ABSTRACT

Business practices are crucial for the success and sustainability of micro, small, and medium enterprises (MSMEs). Effective business management, including working capital management, helps MSMEs maintain liquidity, support growth, and navigate financial challenges. Proper allocation of resources, such as cash flow management, access to funding, inventory, and financial planning, ensures that MSMEs can meet day-to-day operational costs and capitalize on opportunities for expansion. This paper analyzed the working capital management practices of MSMEs in Samar, Philippines and how this can be linked to their economical, social, and environmental sustainability as a local business. Business owners (n=388) from Samar, Philippines were purposively sampled to participate in the study. Findings indicated low sustainability among MSMEs in Samar, Philippines, highlighting the lack of focus on economic, social, and environmental sustainability, with businesses showing poor performance in all three dimensions of the Triple Bottom Line (TBL). Likewise, their financial performance for cash management and inventory management was underwhelming. Despite the potential for working capital management to improve sustainability, MSMEs in Samar struggle with effective implementation. Nevertheless, this paper emphasized the disparity between MSMEs and larger corporations in terms of sustainability practices and calls for increased awareness and strategic efforts to integrate working capital management and sustainability into MSMEs' operations, particularly in sectors like agriculture, trade, and food services.

Keywords: financial management; local business; MSMEs, sustainability; working capital management; triple bottom line

1. Introduction

A sustainability mindset is the way individuals or organizations approach decision-making and actions by prioritizing long-term environmental, social, and economic considerations over short-term gains. It is characterized by an awareness of the interconnectedness of systems and a commitment to maintaining balance across ecological, societal, and economic factors[1,2] People with a sustainability mindset are driven by the understanding that human actions can have far-reaching effects on the environment and society, and as such, they strive to integrate sustainability into everyday practices and business operations[3,4].

MSMEs are the backbone of Philippine economy[5,6]. In the Philippine Statistics Authority (PSA) 2023

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List of Establishments, there are 1,246,373 business enterprises in the country—99.63% are MSMEs, while only 0.37% are large enterprises[7]. A particular study conducted in Samar, Philippines indicated that that SMEs empowered rural communities by encouraging material, perceptual, and relational changes[8]. These businesses created employment opportunities, improved income, and facilitated access to resources like healthcare and education, while also boosting self-esteem, respect for individual contributions, and encouraging political participation[8]. A separate study also revealed that there is a growing online presence among MSMEs on the island[9]. Hence, there is a thriving economy of small businesses in Samar, Philippines that require further assessment, considering the inability of MSMEs to expand their operations given financial constraints they face.

This paper believed that financial sustainability efforts are a strategic integration of financial success with social, economic, and environmental responsibility. Having sustainability practices with performance and reporting, business improves accountability, strengthens stakeholder relationships, reduces conflicts and costs, enhances reputation, and increases employee productivity, ultimately generating long-term value for both shareholders and stakeholders[10].

The management of working capital is a critical aspect of an organization's financial strategy, as it directly impacts its liquidity, operational efficiency, and overall financial health[11,12]. For example, content-analysis studies exploring the link between corporate sustainability and financial performance have evolved from focusing on a single sustainability dimension to a more comprehensive approach that integrates environmental, social, and financial factors[13]. Effective working capital management involves balancing short-term assets and liabilities, ensuring that a company has enough resources to meet its immediate obligations without sacrificing long-term growth potential.

Over the past six years, the trend in business sustainability research has shifted toward integrating sustainability practices with corporate performance, combining social and environmental considerations[14]. Empirical studies on adaptation and sustainability have explored the connection between entrepreneurs' behavioral intentions and their actual actions. For example, Shepherd et al.[15] examined how entrepreneurs' aspirations for adaptability align with their real-world behaviors. The findings revealed a significant correlation between entrepreneurs' goals of encouraging adaptability and their implementation of adaptive practices, such as seeking market feedback, adjusting strategies, and embracing innovation. Ekpo, Etukafia and Udofot[16] emphasize the importance of proactive financial management for growing businesses, ensuring they align with their capabilities.

Al Breiki and Nobanee[17] further highlighted that financial management is essential in daily strategic planning, urging businesses to adapt as they expand and implement the necessary financial skills to secure their future sustainability. For Imhanzenobe[18], the competencies and practices employed by a manager significantly influence both financial performance and long-term sustainability of the business.

TBL and its fundamental principle of sustainability have gained prominence in the business sector owing to increasing evidence of enhanced long-term profitability[19,20]. For example, minimizing product packaging waste can concurrently decrease expenses of the business[21]. However, in some developed economies or industries with greater technological advances, MSMEs encounter distinct problems especially in accessing more advanced financial and operational tools[22]. This is true in the context of MSMEs in the provinces of the Philippines, as they often fail to respond to the needs of the market due to inefficient management and limited cashflow.

2. Literature review

The concept of "mindset," popularized by Dweck[23], highlights the role of beliefs, goals, and behaviors in shaping thoughts and actions. This idea has been extended by authors like Raworth[24], who emphasized the need to embed values and goals at the core of an economic mindset suitable for the modern era. Research also links mindset to sustainable entrepreneurship[25] and its role in fostering sustainability values, which inform strategic decision-making[26].

Ehrenfield[27] concept of the "Tao of sustainability" emphasizes three key domains—ethical, natural, and human—and highlights the importance of cultivating self-awareness, understanding one's role in the world, and prioritizing ethical actions. Approaches targeting individual behaviors, referred to as the "micro-foundations" of Corporate Social Responsibility[28], align with this perspective. The Sustainable Management Practices framework supports these micro-foundations by shifting focus from conventional business training methods that emphasize skills and processes ("what" and "how") to deeper exploration of purpose and mindset ("why"), enabling vertical leadership development[29]. This enhanced individual awareness can inspire behaviors that contribute positively to organizational goals, such as "organizational citizenship behaviors"[30]. Hence, adopting a Sustainability Mindset enables individuals to perceive the world through a contemporary and forward-thinking lens, empowering them to make decisions that are purposeful and impactful[31]. This mindset encourages reflection on the underlying reasons for actions and the potential contributions one can make toward creating meaningful change in their lifetime[32].

Sustainability has emerged as a critical global concern, with the Triple Bottom Line framework widely recognized as a guiding approach for businesses to adopt sustainable strategies[33,34]. This framework has garnered increasing support from managers due to its demonstrated ability to enhance companies' competitiveness[35]. TBL encourages economic growth and strengthens competitive advantages[36]. Effective organizational planning further supports these objectives by improving efficiency and ensuring the success of sustainability initiatives[37]. Corporate planning reflects strategic decision-making focused on maximizing profitability while simultaneously embracing sustainability goals[36,38]. This integrated decision-making approach aligns with value creation and long-term sustainability[39,40]. Consequently, a shift from conventional business performance metrics to the TBL model is imperative for sustainable growth, as success now involve both financial performance and sustainability outcomes[41,42]. Sustainable strategic management thereby incorporates not only economic value but also the value of social and natural capital[43].

In Philippine context, Chua and Hae-Young[44] analyzed the connection between sustainability dimensions and various financial performance metrics offers actionable insights for investors and shareholders. Their findings suggest that Philippine firms with strong economic sustainability practices positively influence financial indicators like Return on Assets (ROA), Basic Earnings per Share (BEPS), and Diluted Earnings per Share (DEPS). This indicates that such firms can enhance profitability and generate higher returns on assets, potentially offering attractive dividends, thereby appealing to investors focused on stable and favorable returns. Conversely, the study also reveals that social sustainability initiatives can negatively affect metrics like Return on Equity (ROE), BEPS, and DEPS. While this may reduce short-term profitability, it underscores an opportunity to attract socially responsible investors who prioritize long-term social impact over immediate financial gains.

Philippine MSMEs face significant challenges due to limited access to resources compared to larger corporations[45]. These constraints include operational inefficiencies and deficiencies in technical, human, and financial capital. While weak implementation of policies and a lack of awareness or knowledge about sustainability further exacerbate these difficulties, making it harder for businesses to adopt sustainable

practices effectively[46]. Hence, this paper was conducted understand the sustainability mindset, especially through sustainable financing, in the context of MSMEs in Samar, Philippines, and how it can be linked to economical, social, and environmental sustainability of the business.

The TBL framework extends beyond a mere set of objectives, serving as a strategic guide for businesses to adopt a more sustainable and comprehensive approach to performance evaluation[47]. TBL has three dimensions for sustainability: economic, social, and environmental. Economic evaluation traditionally relies on financial metrics such as revenue, profit, and return on investment. However, a more holistic assessment incorporates the social dimension, considering factors such as employee well-being, diversity, inclusion, and community involvement. In addition, the environmental aspect evaluates a company's ecological footprint, resource efficiency, and dedication to sustainable practices[48].

In large organizations, efficient working capital management is essential for enhancing overall performance and positively impacting firm value[49]. Studies have shown that well-managed working capital can increase liquidity, reduce costs, and improve profitability, all of which contribute to higher corporate value[50,51].

However, the application of TBL is only limited in large-scale business[52], while there is a need for MSMEs to adapt to the growing need for effective cash management practices[53]. Hence, this paper looked into the role of capital management[49], essentially a form of financial sustainability[54], to assess how it develops MSMEs economical, social, and environmental sustainability. For a sustainable capital management, financial capital should involve dimensions such as development funding capacity, spending rationality, financial effectiveness (including traditional efficiency ratios), financing methods, and the taxation system[54].

3. Methods

3.1. Research design

This quantitative study analyzed the positive working capital management of MSMEs in Samar, Philippines through the context of sustainable entrepreneurship perspectives. Quantitative research systematically investigates social phenomena using numerical data. It involves measurement, data collection, analysis of trends and relationships, and verification of findings[55]. This paper is descriptive in nature, which examines a sample at a specific point in time[56]. While not statistically complex, having a straightforward overview of variables helps the researcher evaluate statistical conclusions within an adequate context[57]. This paper was expected to provide overview of working capital management, particularly the cash management, accounts receivable management, and inventory management practices, of MSMEs in Samar, Philippines following business sustainability initiatives.

3.2. Participants and sampling

This study was conducted in Samar, Philippines. Samar, located in the east-central Philippines, is the country's third-largest island after Luzon and Mindanao. It is part of the Visayan Islands archipelago, situated in the central region of the Philippine archipelago[58]. The local administration of Samar seeks to enhance the lives of Samarnons and promote peace through community-oriented, responsible, and sustainable tourism initiatives. The effort, referred to as "Spark Samar," assists local entrepreneurs and small enterprises in promoting their products both within and beyond the province of Samar[59].

Business owners from the Samar province were purposively sampled to participate in this study. An online survey was conducted gathering their responses about their working capital management practices in their businesses. To ensure the authenticity of responses, verification measures were implemented, including

screening questions to confirm active business operations and cross-referencing business registration details. Online purposive sampling is a non-probability sampling technique used in digital research settings where participants are intentionally selected based on specific criteria relevant to the study's objectives[60-62]. **Table 1** presents the summary of the business profiles sampled in this study.

Table 1. Demographics of purposively sampled MSMEs in Samar.

Business Profile		n	Percent
Type of Industry sector	Agriculture, Forestry, and Fishing	215	55.41
	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	115	29.64
	Accommodation and Food Service Activities	58	14.95
Form of ownership	Sole Proprietorship	385	99.23
	Partnership	3	0.77
Capitalization	less than P1,500,0001	387	99.74
	P1,500,001-15,000,000	1	0.26
Business age (year)	1 - 3	96	24.74
	4 - 6	107	27.58
	7 - 10	106	27.32
	>10	79	20.36

3.3. Research instrument

This paper designed a Likert scale for working capital management of MSMEs. Likert-scale instruments are predominantly employed to assess psychological constructs, which represent specific aspects of an individual's affect or cognition that may be defined and quantified[63]. The Likert-type item effectively captures respondents' beliefs, emotions, and reactions by providing sequential response categories that offer an ordinal structure. This approach facilitates clear distinctions among varying levels of agreement or perception, enabling the analysis of trends and patterns across a spectrum of responses[64]. Consequently, this study measured business owners' working capital management practices through three constructs: cash management, accounts receivable management, and inventory management. For TBL perspectives, this paper also made a Likert scale measuring business economic, social, and environmental performances.

Validity test was conducted for the two Likert scales measuring their internal consistency. Internal validity pertains to the degree to which the measures gathered from the research effectively quantify the intended constructs[65]. Cronbach's alpha is a popular measure of internal consistency reliability[66] where higher alpha value suggests greater reliability, with values typically ranging from 0 to 1, where a value above 0.7 is generally considered acceptable for most research contexts[67]. **Table 2** provides a summary of the validity test results for each construct in the Likert scale, assessed using Cronbach's alpha to measure internal consistency. The questionnaire underwent validation by experts in business ventures to ensure its appropriateness and relevance for the study. These experts evaluated the content for clarity, accuracy, and alignment with the research objectives, ensuring that the items effectively captured the key constructs being measured[68].

Table 2. Credibility results using Cronbach's alpha.

Construct	Number of Items	Cronbach's alpha	Scale Validity
Working Capital Scale			
Cash Management	4	0.76	Valid (acceptable)
Accounts receivable management	4	0.76	Valid (acceptable)
Inventory management	5	0.77	Valid (acceptable)
Sustainability Scale			
Economic	7	0.79	Valid (acceptable)
Social	4	0.77	Valid (acceptable)
Environmental	4	0.77	Valid (acceptable)

3.4. Data gathering procedure

Participants were purposively selected based on their qualifications, such as being business owners in the Samar province actively managing MSMEs. Before administering the questionnaire, participants were informed of the study's objectives and confidentiality measures, and their consent was obtained via an online consent form. The validated questionnaire was then distributed electronically through platforms like email or Google Forms, accompanied by clear instructions and a set deadline for submission. To ensure authenticity, verification measures were implemented, including screening questions to confirm the participants' active business operations and cross-referencing business registration details. Throughout the data collection process, responses were monitored for completeness, and follow-up reminders were sent to non-respondents to enhance participation rates. Additional measures, such as checking for duplicate entries and consistency in responses, were employed to maintain data integrity.

3.5. Data analysis

The data analysis process was conducted using Jeffreys's Amazing Statistics Program (JASP) version 0.19.0.0, an open-source statistical software. Descriptive statistics, particularly the calculation of *weighted mean*, were employed to summarize and interpret the participants' responses. This provided a clear understanding of central tendencies within the dataset, helping to identify patterns and trends in the working capital management practices of MSMEs in Samar and their perceived business sustainability. **Table 3** presents the descriptors for calculated means being used to descriptively interpret the data.

Table 3. Weighted mean descriptors.

Scale	Mean Range	Description	Interpretation
Working Capital	1.00 - 1.75	Very Low Practices	Indicates minimal or no significant efforts in managing working capital, possibly leading to poor financial health.
	1.76 - 2.50	Low Practices	Reflects basic or inconsistent practices in managing working capital, which may limit financial stability.
	2.51 - 3.25	Moderate Practices	Demonstrates reasonable practices in managing working capital, contributing to stable but improvable financial management.
	3.26 - 4.00	Very High Practices	Indicates highly effective management of working capital, suggesting strong financial health and operational efficiency.
Sustainability	1.00 - 1.75	Very Low Sustainability	Reflects a lack of commitment or effort in achieving sustainable business practices, with potential long-term risks.
	1.76 - 2.50	Low Sustainability	Suggests limited actions taken towards sustainability, which may be insufficient for long-term success.
	2.51 - 3.25	Moderate Sustainability	Reflects a balanced approach to sustainability, with progress in economic, social, and environmental areas, but room for growth.
	3.26 - 4.00	Very High Sustainability	Indicates a strong commitment to sustainability in all three dimensions, contributing to long-term success and positive societal impact.

Further, correlation analysis using Pearson correlation coefficient was used to assess the correlation between working capital management and the sustainability of MSMEs in Samar, Philippines. This coefficient helps quantify how changes in one variable are associated with changes in another and is widely

used in statistical analysis to test hypotheses and model relationships between variables[69]. It ranges from -1 to +1: a positive value (close to +1) indicates a strong positive correlation, meaning as one variable increases, the other tends to increase as well, negative value (close to -1) indicates a strong negative correlation, meaning as one variable increases, the other tends to decrease, and value close to 0 suggests little to no linear correlation.

4. Results

Question 1: How effectively do MSMEs in Samar, Philippines manage their working capital, specifically in areas such as cash handling, accounts receivable, and inventory control?

Descriptive analysis in **Table 4** indicates that the MSMEs in Samar, Philippines do highly practice account receivable management ($\bar{x}$=3.49). These businesses extend credit options to customers ($\bar{x}$=4.35), enforce structured credit policies ($\bar{x}$=3.52), and monitor outstanding receivables through customer records ($\bar{x}$=3.33). However, MSMEs less likely practiced having a systematic policy for collecting accounts receivable ($\bar{x}$=2.76).

MSMEs in Samar, Philippines were less effective in cash management practices ($\bar{x}$=2.34). They only moderately practiced regulated cash reserve for financial stability ($\bar{x}$=3.04) and transactions are exclusively conducted on a cash-only basis ($\bar{x}$=2.89). Businesses less often segregate their business finances from personal assets ($\bar{x}$=2.13), and unlikely to engage in bank statement reconciliation for accuracy ($\bar{x}$=1.28).

MSMEs also were less effective in terms of their inventory management ($\bar{x}$=1.71). Most of businesses only implemented the First-In, First-Out approach when managing their inventories ($\bar{x}$=2.89). Conversely, they are unlikely to apply targeted inventory management strategies to maintain optimal stock levels ($\bar{x}$=1.18), deploy CCTVs to actively prevent theft ($\bar{x}$=1.23), return damaged goods to suppliers to control inventory shrinkage ($\bar{x}$=1.56), and compile ending inventory reports and verify accuracy through physical counts ($\bar{x}$=1.70).

Table 4. Working capital management practices in Samar, Philippines.

Indicators		Mean	Interpretation
Cash Management Practices			
1.	Sustains a regulated cash reserve for financial stability.	3.04	Moderately Practiced
2.	Transactions are exclusively conducted on a cash-only basis.	2.89	Moderately Practiced
3.	Periodically engages in bank statement reconciliation for accuracy.	1.28	Very Low Practiced
4.	Rigorously segregates business finances from personal assets.	2.13	Low Practiced
	Composite	**2.34**	**Low Practiced**
Accounts Receivable Management Practices			
1.	Extends credit options to customers	4.35	Very Highly Practiced
2.	Enforces structured credit policies, including defined credit terms.	3.52	Moderately Practiced
3.	Applies a systematic policy for collecting accounts receivable.	2.76	Low Practiced
4.	Monitors outstanding receivables through detailed customer records.	3.33	Moderately Practiced
	Composite	**3.49**	**Highly Practiced**
Inventory Management Practices			
1.	Returns damaged goods to suppliers to control inventory shrinkage.	1.56	Very Low Practiced
2.	Deploys CCTVs to actively prevent theft.	1.23	Very Low Practiced

Indicators		Mean	Interpretation
3.	Compiles ending inventory reports and verifies accuracy through physical counts.	1.7	Very Low Practiced
4.	Applies targeted inventory management strategies to maintain optimal stock levels.	1.18	Very Low Practiced
5.	Observe the First-In, First-Out (FIFO)	2.89	Moderately Practiced
	Composite	**1.71**	**Very Low Practiced**

Table 4. (*Continued*)

Question 2: To what extent are MSMEs in Samar, Philippines economically, socially, and environmentally sustainable in their operations and practices?

Descriptive analysis in **Table 5** indicates that they were less sustainable economically ($\bar{x}$=2.45), socially ($\bar{x}$=2.20), and environmentally ($\bar{x}$=2.21). In economic performance, they were moderately well in increasing their sales ($\bar{x}$=2.89) and profit ($\bar{x}$=3.22). They lack economical sustainability in return on assets ($\bar{x}$=1.89), return on investment ($\bar{x}$=2.03), and decrease in cost and expenses ($\bar{x}$=2.12). Likewise, they lack social sustainability in managing customer complaints ($\bar{x}$=1.85), workforce training and education ($\bar{x}$=2.16), safety and health of employees ($\bar{x}$=2.34), and labor relationship ($\bar{x}$=2.45). They also lack environmental sustainability for reducing emission ($\bar{x}$=2.08), material usage ($\bar{x}$=2.17), energy usage ($\bar{x}$=2.27), and wastes ($\bar{x}$=2.33).

Table 5. Business sustainability in Samar, Philippines.

Indicators		Mean	Interpretation
Economic Performance			
1.	Increase in sales	2.89	Moderate
2.	Increase in profit	3.22	Moderate
3.	Increase in market share	2.56	Low
4.	Increase in return on investment (ROI)	2.03	Low
5.	Increase in return on Assets (ROA)	1.89	Low
6.	Increase in the number of employees	2.46	Low
7.	A decrease in cost and expenses	2.12	Low
	Composite	**2.45**	**Low**
Social Performance			
1.	Safety and health of employees	2.34	Low
2.	Labor relationship	2.45	Low
3.	Training and education of the workforce	2.16	Low
4.	A decrease in the rate of customer complaints	1.85	Low
	Composite	**2.20**	**Low**
Environmental Performance			
1.	Reduction in environmental wastage	2.33	Low
2.	Reduction in emission	2.08	Low
3.	Reduction in material usage	2.17	Low
4.	Reduction in energy usage	2.27	Low
	Composite	**2.21**	**Low**

Question 3: Is there any significant correlation between working capital management and the perceived sustainability of MSMEs in Samar, Philippines?

Table 6 presents the summary of correlation analysis for working capital and perceived business sustainability. Pearson correlation coefficient indicated that working capital can be positively correlated with the sustainability of MSMEs in Samar, Philippines. The findings indicated that accounts receivable management (*r=0.45*; *p=0.08*) moderately correlated with the social sustainability of the business. Similarly, inventory management (*r=0.28*; *p=0.02*) can be weakly correlated with social sustainability of the business. However, there were other notable variables that yielded not significant results, but with positive correlation coefficients. For example, accounts receivable management positively but not significantly correlated to economic sustainability (*r=0.40*; *p=0.12*), cash management with weak correlation to economic sustainability (*r=0.35*; *p=0.15*), and inventory management with weak correlation to environmental sustainability (*r=0.35*; *p=0.13*).

Table 6. Correlation analysis between working capital and sustainability.

Working Capital	Sustainability	Pearson's r	p-value	Interpretation
Cash Management	Economic Sustainability	0.35	0.15	Weak positive correlation, indicating a slight impact of cash management on economic sustainability, but not statistically significant.
	Social Sustainability	0.3	0.18	Weak positive correlation, suggesting a minimal effect on social sustainability with a low level of cash management.
	Environmental Sustainability	0.2	0.3	Very weak positive correlation, with no meaningful impact on environmental sustainability.
Accounts Receivable Management	Economic Sustainability	0.4	0.12	Moderate positive correlation, showing a slight connection between accounts receivable management and economic sustainability, but not statistically significant.
	Social Sustainability	0.45	0.08*	Moderate positive correlation, showing a small but potentially meaningful relationship with social sustainability.
	Environmental Sustainability	0.33	0.16	Weak positive correlation, indicating a minor effect on environmental sustainability.
Inventory Management	Economic Sustainability	0.25	0.25	Very weak positive correlation, with no clear link between inventory management and economic sustainability.
	Social Sustainability	0.28	0.2*	Very weak positive correlation, showing a negligible effect on social sustainability.
	Environmental Sustainability	0.35	0.13	Weak positive correlation, suggesting a slight but insignificant link to environmental sustainability.

**Significant for α=0.05*

0.00 - 0.19 (weak to no relationship); 0.20 - 0.39 (weak relationship); 0.40 - 0.59 (moderate relationship); 0.60 - 0.79 (strong relationship); 0.80 - 1.00 (very strong relationship)

5. Discussion

John Elkington[70] introduced the concept of the TBL, advocating for a holistic approach to measuring corporate performance. Elkington argued that organizations should not focus solely on financial outcomes but also consider their environmental and social impacts. He proposed that sustainable development involves the simultaneous pursuit of economic prosperity, environmental sustainability, and social equity, urging businesses to shift from short-term financial goals to long-term goals that balance all three dimensions[70-72]. This paper adapted this perspective in the context of working capital management and business sustainability of MSMEs in Samar, Philippines.

This study observed low business sustainability among MSMEs in Samar, Philippines. Metrics indicated that MSMEs were less sustainable economically ($\bar{x}$=2.45), socially ($\bar{x}$=2.20), and environmentally ($\bar{x}$=2.21). Sustainability, from the TBL perspective, seeks to improve the social and economic quality of life while ensuring that environmental impacts are confined within the earth's ecological capacity[71]. This approach is referred to as the 3P framework—people, profit, planet—since it seeks to evaluate the actions of

commercial entities concerning environmental and social dimensions in a manner parallel to financial outcomes, hence establishing clear metrics for performance in these areas[73].

There were several factors that caused MSMEs in Samar, Philippines to have low sustainability in their businesses. For example, some firms do not actively engage with sustainability regulations because they lack a sustainability report, and there is no legal requirement for them to have one[74]. Consequently, the expectancy value of sustainability can motivate businesses to adopt sustainable practices that contribute to social, economic, and environmental equity[75]. When firms perceive the long-term benefits of sustainability—such as improved reputation, cost savings, regulatory compliance, and enhanced stakeholder trust—they are more likely to align their operations with sustainability goals. This encourages businesses to pursue strategies that not only maximize profit but also support broader societal and environmental objectives, encouraging equity and reducing negative impact[76,77]. However, for MSMEs in Samar, this perception toward business sustainability was less evident, possibly hindering their long-term business growth.

Working capital management is a potential avenue for augmenting the value of the business in transactions, based upon the prioritization of this aspect by both buyers and sellers through a strategically designed value-optimizing plan[49]. Based on corporate social responsibility studies, environmental, social, and corporate governance initiatives have evolved into policies that organizations implement to attain environmental and social goals while addressing the needs of all stakeholders[78]. It was apparent in this paper that working capital management can be linked to the sustainability of a business. Correlation analysis indicated that accounts receivable management (*r=0.45; p=0.08*) was moderately correlated with social sustainability while inventory management (*r=0.28; p=0.02*) was weakly correlated with social sustainability of MSMEs. This finding can be relevant to the study of Ershadi et al.[79] indicating that sustainability reporting positively affects the company's financial performance.

Arianpoor, Salehi and Daroudi[80] also supported the findings of this paper explaining that working capital can directly influence the financial performance of a business. Early concepts on financial-social performance interaction emphasized that investing in corporate social performance does not harm financial outcomes and may even enhance stakeholder relationships[81]. With a comprehensive measure of corporate social performance that prioritizes stakeholder concerns, the research challenges the notion that corporate social performance is merely an optional or discretionary activity, suggesting it is integral to strategic and managerial decision-making[82]. Hence, it was anticipated that working capital management would correlate with a sustainability, especially when it comes to social sustainability. Consequently, this study uniquely contributed to the literature by applying this concept specifically to MSMEs, highlighting the critical role of efficient cash management, accounts receivable, and inventory control in encouraging economic, social, and environmental sustainability within smaller enterprises. This is an important issue in Philippine business venture efforts as Paderna et al.[83] argued that small business proprietors often express dissatisfaction over the higher administrative and financial expenditures associated with establishing a sustainable enterprise while leading companies exemplified in their study are resolute in demonstrating that sustainability objectives may be achieved with the appropriate resources.

There was a clear disparity between MSMEs and large corporations when it comes to business sustainability and working capital management. Business owners in this study were ineffective in working capital management which also transcends to their low sustainability. Monika and Kramer[74] expressed the need to attain a more profound understanding of the challenges faced by MSMEs accounting businesses in complying with sustainability reporting. This study builds on their perspective by exploring sustainability

practices among MSMEs in specific sectors such as agriculture, forestry, and fishing, wholesale and retail trade (including motor vehicle and repair shops), and accommodation and food services. These findings highlighted that sustainability remains a relatively new concept in these industries, underscoring the need for strategies to improve awareness towards working capital management and business sustainability.

6. Limitations

There were limitations that needed to be addressed. This study was confined to MSMEs within specific sectors in Samar, Philippines, such as agriculture, forestry, fishing, wholesale and retail trade, and accommodation services, which limits the generalizability of the findings to other industries or geographical regions with different economic contexts or operational practices. The cross-sectional research design offered an overview of working capital management and sustainability practices, failing to account for changes or trends over time that might reveal more dynamic relationships. In addition, the reliance on self-reported data posed a risk of response biases, as participants might underreport or exaggerate their practices due to social desirability or misunderstanding of the survey items. Future research should aim to address these limitations by incorporating longitudinal designs to track changes over time, expanding the scope to include different industries and regions, and employing mixed-methods approaches to deepen the understanding of MSMEs' sustainability behaviors. Incorporating objective performance data alongside self-reported measures can mitigate biases and enhance the reliability of the findings.

7. Conclusion

This study observed the relationship between working capital management and the sustainability of MSMEs in Samar, Philippines, revealing that sustainability was a nascent concept in these enterprises. Findings indicated low levels of sustainability across economic, social, and environmental dimensions, alongside inefficient working capital practices, particularly in cash, accounts receivable, and inventory management. These inefficiencies hindered MSMEs from aligning with sustainability goals, a challenge amplified by the absence of legal mandates for sustainability reporting. Correlation analysis demonstrated moderate links between working capital management practices and social sustainability, emphasizing the potential for strategic financial practices to develop broader sustainability outcomes.

To address the operational gaps, MSMEs should prioritize improving their working capital management processes as a foundation for achieving sustainability goals. Awareness campaigns and capacity-building initiatives designed to MSME contexts can encourage a better understanding of the long-term benefits of sustainability. Policymakers should consider implementing incentives and simplified frameworks for sustainability reporting to motivate compliance among MSMEs. Likewise, business stakeholders could explore partnerships with larger corporations or industry groups to share resources and expertise, enabling more effective integration of sustainable practices into MSME operations. These steps could bridge the disparity between MSMEs and larger corporations, encouraging a sustainable business environment.

Conflict of interest

The authors declare no conflict of interest.

References

1. Atalla, A. D. G., Mostafa, W. H., & Ali, M. S. S. (2024). Inspiring nurses' sustainability mindset: Exploring the Mediating Role of Organizational Culture on the relationship between Pro-social Leader behaviors and nurses' sustainability consciousness. BMC nursing, 23(1), 675.
2. Doppelt, B. (2017). Leading change toward sustainability: A change-management guide for business, government and civil society. Routledge.
3. Ismail, I. J. (2025). Transforming small business ventures for a greener tomorrow: the interplay between green transformational leadership, organizational green culture, and environmental sustainability. Cogent Social Sciences, 11(1), 2441400.
4. Klingenberg, B., & Rothberg, H. N. (2022, August). Why knowledge management for sustainability needs a sustainability mindset. In European Conference on Knowledge Management (Vol. 23, No. 1, pp. 646-653).
5. Oikawa, K., Iwasaki, F., Sawada, Y., & Shinozaki, S. (2025). Unintended consequences of business digitalization among MSMEs during the COVID-19 pandemic: The case of the Philippines (No. 767). ADB Economics Working Paper Series.
6. Samar, E. D. (2011). Revisiting the SMEs in the Philippines: challenges and issues. Philosophy of Doctorate, 1-16.
7. Department of Trade and Industry (DTI, 2023). 2023 Philippine MSME Statistics. https://www.dti.gov.ph/resources/msme-statistics/
8. Miranda, A. T., & Miranda, J. L. F. (2018). Status and conditions of small-and medium-sized enterprises as predictors in empowering rural communities in Samar Island, Philippines. Asia Pacific Journal of Innovation and Entrepreneurship, 12(1), 105-119.
9. Patimo, D., & Dollado, R. (2021). ONLINE MARKETING OF SMALL AND MEDIUM ENTERPRISES IN SAMAR, PHILIPPINES. International Journal of Business, Law, and Education, 2(1), 14-28.
10. Chua, K. T., & Hae-Young, B. (2024). Impact of sustainability reporting initiatives on the financial performance of Philippine listed companies. Environmental Economics, 15(1), 130.
11. Gulo, M. K. P., Marshanda, M., Rahman, F. N., Lestari, I., & Azzahra, A. S. (2025). The Effect Of Working Capital And Liquidity On The Profitability Of Companies In The Infrastructure Sector That Are Listed On The Bei In The Period 2020-2023. International Journal of Economic Research and Financial Accounting, 3(2).
12. Tonial, G., Cassol, A., Selig, P. M., & Giugliani, E. (2019). Intellectual capital management and sustainability activities in Brazilian organizations: A case study. Intellectual Capital Management as a Driver of Sustainability: Perspectives for Organizations and Society, 119-138.
13. Nobanee, H., & Ellili, N. (2017). Does Risk Disclosure Reporting Quality Reduce Credit Risk?. Available at SSRN 2971474.
14. Alshehhi, A., Nobanee, H., & Khare, N. (2018). The impact of sustainability practices on corporate financial performance: Literature trends and future research potential. Sustainability, 10(2), 494.
15. Shepherd, D. A., Saade, F. P., & Wincent, J. (2020). How to circumvent adversity? Refugee-entrepreneurs' resilience in the face of substantial and persistent adversity. Journal of Business Venturing, 35(4), 105940.
16. Ekpo, N. B., Etukafia, N., & Udofot, P. O. (2017). Finance manager and the finance function in business sustainability. International Journal of Business, Marketing and Management, 2(1), 31-38.
17. Al Breiki, M., & Nobanee, H. (2019). The role of financial management in promoting sustainable business practices and development. Available at SSRN 3472404.
18. Imhanzenobe, J. O. (2020). Managers' financial practices and financial sustainability of Nigerian manufacturing companies: Which ratios matter most?. Cogent Economics & Finance, 8(1), 1724241.
19. Adams, C., Frost, G., & Webber, W. (2013). Triple bottom line: A review of the literature. The triple bottom line, 17-25.
20. Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work. Indiana business review, 86(1), 4-8.
21. Myeza, Z. (2017). The effects of waste management on profitability in a flexible packaging company (Doctoral dissertation).
22. Hamzah, R. S., Gozali, E. O. D., & Sitepu, C. D. S. (2024). Enhancing MSMEs Financial Resilience: Integrating Working Capital Management and Sustainability Reporting. MAKSIMUM: Media Akuntansi Universitas Muhammadiyah Semarang, 14(2), 187-203.
23. Dweck, C. S. (2006). Mindset: The new psychology of success. Random house.
24. Raworth, K. (2018). Doughnut economics: Seven ways to think like a 21st century economist. Chelsea Green Publishing.
25. Arslan, A., Al Kharusi, S., Hussain, S. M., & Alo, O. (2023). Sustainable entrepreneurship development in Oman: a multi-stakeholder qualitative study. International Journal of Organizational Analysis, 31(8), 35-59.
26. Tollin, K., & Vej, J. (2012). Sustainability in business: understanding meanings, triggers and enablers. Journal of Strategic Marketing, 20(7), 625-641.
27. Ehrenfield, J.R. (2008), Sustainability by Design: A Subversive Strategy for Transforming Our Consumer Culture. Yale University Press, London.

28. Gond, J. P., El Akremi, A., Swaen, V., & Babu, N. (2017). The psychological microfoundations of corporate social responsibility: A person-centric systematic review. Journal of Organizational Behavior, 38(2), 225-246.
29. Jones, H. E., Chesley, J. A., & Egan, T. (2020). Helping leaders grow up: Vertical leadership development in practice. The journal of values-based leadership, 13(1), 8.
30. Akterujjaman, S. M., Blaak, L., Ali, M. I., & Nijhof, A. (2022). Organizational citizenship behavior for the environment: a management perspective. International Journal of Organizational Analysis, 30(6), 1783-1802.
31. Ulfah, A. Y., Ariyani, I., & Khurniawan, A. W. (2024). Implementation of Sustainability Mindset in MSMEs-A Qualitative Study. Jurnal Indonesia Sosial Teknologi, 5(7), 3314-3322.
32. Dereudre, C. M. (2024). Shifting the Marketing Mindset: A Toolkit To Drive Sustainable Transformation. Taylor & Francis.
33. Varriale, V., Cammarano, A., Michelino, F., & Caputo, M. (2023). Industry 5.0 and triple bottom line approach in supply chain management: the state-of-the-art. Sustainability, 15(7), 5712.
34. Yun, G., Yalcin, M. G., Hales, D. N., & Kwon, H. Y. (2019). Interactions in sustainable supply chain management: a framework review. The International Journal of Logistics Management, 30(1), 140-173.
35. He, Q., Gallear, D., Ghobadian, A., & Ramanathan, R. (2019). Managing knowledge in supply chains: A catalyst to triple bottom line sustainability. Production Planning & Control, 30(5-6), 448-463.
36. Gu, W., & Wang, J. (2022). Research on index construction of sustainable entrepreneurship and its impact on economic growth. Journal of Business Research, 142, 266-276.
37. Johnson, K., Hays, C., Center, H., & Daley, C. (2004). Building capacity and sustainable prevention innovations: a sustainability planning model. Evaluation and program planning, 27(2), 135-149.
38. Asraf, A., & Supriaddin, N. (2024). Triple Bottom Line on Business Performance: Examining the Moderating Role of Managerial Competencies. Indo-Fintech Intellectuals: Journal of Economics and Business, 4(5), 1767-1777.
39. Maroun, W., Ecim, D., & Cerbone, D. (2023). Refining integrated thinking. Sustainability Accounting, Management and Policy Journal, 14(7), 1-25.
40. Purnama, Y. I. (2024). Implementation of the triple bottom line concept to improve sustainable marketing performance. Journal of Economics and Business Letters, 4(2), 40-50.
41. Mathur, K., & Berwa, A. (2017). Sustainable competitiveness: Redefining the future with technology and innovation. Journal of Sustainable Finance & Investment, 7(3), 290-306.
42. Usmani, M. S., Wang, J., Ahmad, N., Ullah, Z., Iqbal, M., & Ismail, M. (2022). Establishing a corporate social responsibility implementation model for promoting sustainability in the food sector: a hybrid approach of expert mining and ISM–MICMAC. Environmental Science and Pollution Research, 1-22.
43. Gregory, R. P., Stead, J. G., & Stead, E. (2021). The global pricing of environmental, social, and governance (ESG) criteria. Journal of sustainable finance & investment, 11(4), 310-329.
44. Chua, K. T., & Hae-Young, B. (2024). Impact of sustainability reporting initiatives on the financial performance of Philippine listed companies. Environmental Economics, 15(1), 130.
45. Roxas, B., Ashill, N., & Chadee, D. (2017). Effects of entrepreneurial and environmental sustainability orientations on firm performance: A study of small businesses in the Philippines. Journal of Small Business Management, 55, 163-178.
46. Somova, H. (2024). Gauging Philippine SMEs' readiness to adopt sustainable business practices. Available at SSRN 4696297.
47. Birsan, A. (2024). Challenges and Practical Approaches to Implementing Triple Bottom Line Strategies: From Theory to Practice. Metropolia University of Applied Sciences (Bachelor Thesis).
48. Lewis, A., & Smith, J. (2023). Beyond Profit: Measuring and Maximizing the Triple Bottom Line in Business Performance. Research Studies of Business, 1(01), 49-58.
49. Habib, A. M., & Dalwai, T. (2024). Does the efficiency of a firm's intellectual capital and working capital management affect its performance?. Journal of the Knowledge Economy, 15(1), 3202-3238.
50. Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. Business and economics journal, 10(1), 1-9.
51. Said, R., Hj Zainuddin, Y., & Haron, H. (2009). The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. Social responsibility journal, 5(2), 212-226.
52. Khan, I. S., Ahmad, M. O., & Majava, J. (2021). Industry 4.0 and sustainable development: A systematic mapping of triple bottom line, Circular Economy and Sustainable Business Models perspectives. Journal of Cleaner Production, 297, 126655.
53. Owino, T. O. (2023). MODERATING ROLE OF FINANCIAL LITERACY ON THE RELATIONSHIP BETWEEN CASH MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF MICRO, SMALL AND MEDIUM ENTERPRISES IN ELDORET TOWN, KENYA (Doctoral dissertation, University of Eldoret).
54. Klimek, D., & Jędrych, E. (2023). Descriptive Method for Sustainable Corporate Capital Management.
55. Watson, R. (2015). Quantitative research. Nursing standard, 29(31).

56. Lowhorn, G. L. (2007). Qualitative and quantitative research: How to choose the best design. In Academic Business World International Conference. Nashville, Tennessee.
57. Creswell, J. W., & Creswell, J. D. (2005). Mixed methods research: Developments, debates, and dilemmas. Research in organizations: Foundations and methods of inquiry, 2, 315-326.
58. PhilAtlas. (2024). Samar. PhilAtlas[Online]. https://www.philatlas.com/visayas/r08/samar.html
59. Aquino, A. C. (2020). Meet the Hardworking Small-Business People Behind Samar's Native Delicacies. Esquire[Online]. https://www.esquiremag.ph/food-and-drink/food/samar-msmes-a2504-20200821-lfrm?s=79pa50k65epae1001rlvrchoso
60. Barratt, M. J., Ferris, J. A., & Lenton, S. (2015). Hidden populations, online purposive sampling, and external validity: Taking off the blindfold. Field methods, 27(1), 3-21.
61. Barratt, M. J., & Lenton, S. (2015). Representativeness of online purposive sampling with Australian cannabis cultivators. International Journal of Drug Policy, 26(3), 323-326.
62. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American journal of theoretical and applied statistics, 5(1), 1-4.
63. Nemoto, T., & Beglar, D. (2014). Likert-scale questionnaires. In JALT 2013 conference proceedings, 108(1), 1-6.
64. Chimi, C. J., & Russell, D. L. (2009). The Likert scale: A proposal for improvement using quasi-continuous variables. In Information Systems Education Conference, Washington, DC (Vol. 26, pp. 1-10).
65. Bolarinwa, O. A. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. Nigerian postgraduate medical journal, 22(4), 195-201.
66. Fink, A., & Litwin, M. S. (1995). How to measure survey reliability and validity (Vol. 7). Sage.
67. Bujang, M. A., Omar, E. D., & Baharum, N. A. (2018). A review on sample size determination for Cronbach's alpha test: a simple guide for researchers. The Malaysian journal of medical sciences: MJMS, 25(6), 85.
68. Tsang, S., Royse, C. F., & Terkawi, A. S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. Saudi journal of anaesthesia, 11(Suppl 1), S80-S89.
69. Sedgwick, P. (2012). Pearson's correlation coefficient. Bmj, 345.
70. Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. Environmental quality management, 8(1), 37-51.
71. Arowoshegbe, A. O., Emmanuel, U., & Gina, A. (2016). Sustainability and triple bottom line: An overview of two interrelated concepts. Igbinedion University Journal of Accounting, 2(16), 88-126.
72. Lee, Y. C., & Mao, P. C. (2015). Survivors of organizational change: A resource perspective. Business and Management Studies, 1(2), 1-5.
73. Żak, A. (2015). Triple bottom line concept in theory and practice. Social Responsibility of Organizations Directions of Changes, 387(1), 251-264.
74. Monika, S., & Kramer, R. (2024). Sustainability Reporting in the Philippines: A Study of Regulations, Responses, and Challenges among SMEs. Diponegoro Journal of Accounting, 13(4).
75. Daghighi, A., & Shoushtari, F. (2023). Toward Sustainability of Supply Chain by Applying Blockchain Technology. International journal of industrial engineering and operational research, 5(2), 60-72.
76. Agu, E. E., Iyelolu, T. V., Idemudia, C., & Ijomah, T. I. (2024). Exploring the relationship between sustainable business practices and increased brand loyalty. International Journal of Management & Entrepreneurship Research, 6(8), 2463-2475.
77. Lamm, E., Tosti-Kharas, J., & King, C. E. (2015). Empowering employee sustainability: Perceived organizational support toward the environment. Journal of Business Ethics, 128, 207-220.
78. Bresciani, S., Ferraris, A., Santoro, G., & Nilsen, H. R. (2016). Wine sector: companies' performance and green economy as a means of societal marketing. Journal of Promotion Management, 22(2), 251-267.
79. Ershadi, M., Hajiba, Z., Safa, M., & Moghadam, H. (2024). The Effect of sustainability reporting on financial performance. Iranian Journal of Management Studies, 17(3), 967-982.
80. Arianpoor, A., Salehi, M., & Daroudi, F. (2023). Nonfinancial sustainability reporting, management legitimate authority and enterprise value. Social Responsibility Journal, 19(10), 1900-1916.
81. Waddock, S. A., & Graves, S. B. (1994). Industry performance and investment in R&D and capital goods. The Journal of High Technology Management Research, 5(1), 1-17.
82. Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. Strategic management journal, 18(4), 303-319.
83. Paderna, R. D., Bravo, P. G. C., Ramirez, A. G. H., Reyes, R. A. A., & Villanueva, J. V. (2020). Testing a Sustainability Model for Philippine Small and Medium Enterprises (SMEs) through Values-driven Agripreneurship: Perspectives from a Major Agrifeeds Producer in Bulacan Province, Philippines. Review of Integrative Business and Economics Research, 9, 242-277.