

# Automation Integration in Cost Management and Profitability among Small and Medium-Sized Enterprises in General Santos City

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## ABSTRACT

Automation in cost management has become a strategic approach to improving profitability among small and medium enterprises. This study examined the relationship between automation integration in cost management and profitability of small and medium enterprises in General Santos City using a descriptive-correlational research design. Data were gathered from 120 respondents selected through stratified sampling using a validated and highly reliable survey questionnaire (Cronbach's alpha = 0.97). Results revealed that small and medium enterprises generally adopt and utilize automated cost management systems, particularly in cost analysis, although wider integration and advanced predictive applications remain limited. Findings also showed that small and medium enterprises exhibit high levels of profitability in terms of net income growth, expense control, and sales performance. Statistical analysis confirmed a significant relationship between automation in cost management and profitability, emphasizing automation as a key driver of financial sustainability and competitive advantage among small and medium enterprises.

**Keywords:** Automation Integration, Profitability, Small and Medium-Sized Enterprises

## INTRODUCTION

### Background of the Study

Automation in cost management has become a critical component in today's rapidly evolving industrial environment, particularly for small and medium enterprises (SMEs). As small and medium enterprises operate under increasing cost pressures and competitive markets, the use of automated cost management systems enables organizations to systematically track financial performance, improve cost control, and support data-driven decision-making. Profitability remains a vital indicator of sustainability, growth, and economic contribution among SMEs. Consequently, integrating automation into cost management processes has emerged as a strategic approach to sustaining profitability and enhancing overall financial performance.

Despite the growing availability of automation technologies, many SMEs continue to experience challenges in effectively integrating automated cost management systems into their operations. While automation promises improved efficiency and financial accuracy, its actual impact on profitability remains insufficiently explored, particularly at the local level. In General Santos City, there is limited empirical evidence examining how automation in cost management—considering proper alignment of people, processes, and technology—directly influences the financial performance and profitability of SMEs. This lack of localized research creates a gap in understanding whether automation investments truly translate into improved profitability outcomes for SMEs.

This study is significant, as it provides empirical insights into how automation in cost management contributes to the profitability of SMEs in General Santos City. The findings will benefit SME owners and managers by guiding informed investment decisions in automation technologies. Policymakers and development agencies may also use the results to design programs that support digital transformation among SMEs. Furthermore, the study contributes to the existing body of knowledge by contextualizing automation and profitability within a developing local economy, thereby offering evidence-based guidance for sustainable SME growth.

As emphasized by Basu (2023), achieving a return on investment from automation initiatives requires proper alignment of people, processes, and technology to determine the appropriate level of automation and ensure effective implementation. However, Biadacz (2020) noted that many medium-sized enterprises still make limited use of modern cost accounting methods, including automated quality costing systems, across manufacturing, production, and service sectors. Recent studies highlight the growing benefits of automation in financial and operational management. Ajiga et al. (2024) reported that continuous advancements in automation technologies contribute to improved operational excellence and industrial performance. Similarly, Chukwuma-Eke et al. (2022) found that the integration of automated workflows, predictive analytics, and AI-driven reporting enhances financial accuracy and operational efficiency. Alharbi (2024) further concluded that the strategic integration of accounting functions with automation practices is essential for achieving sustainable growth in dynamic manufacturing environments. Despite these findings, limited studies have focused on the direct relationship between automation in cost management and profitability among SMEs at the local level.

The primary objective of this study is to examine the relationship between automation in cost management and profitability among small and medium enterprises in General Santos City. Specifically, the study seeks to determine the level of automation integration in cost management in terms of adoption, utilization, and advancement. It also aims to assess the level of profitability of SMEs based on net income growth, expense management, and sales performance. Furthermore, the study analyzes the impact of automation in cost management on the overall financial performance and profitability of small and medium enterprises in General Santos City over the past years.

### **Statement of the Problem**

This study aimed to investigate the extent of automation integration in cost management and profitability of Small and Medium Enterprises in General Santos City. Specifically, it sought to answer the following questions:

What is the level of automation integration in cost management among SMEs in General Santos City in terms of:

- 1.1 adoption;
- 1.2 utilization; and
- 1.3 advancement?

What is the extent of profitability among SMEs in General Santos City in terms of:

- 1.4 net income growth;
- 1.5 expense management; and
- 1.6 sales performance?

Is there a significant relationship between automation integration in cost management and the profitability of SMEs in General Santos City?

### **Hypothesis**

Ho: There is no significant relationship between the level of automation integration in cost management and profitability among small and medium-sized enterprises in General Santos City.

### **Significance of the Study**

The following benefited from the study's findings.

**Business Owners.** This study provides quantitative evidence on how automation in cost management affects operational efficiency and profitability among SMEs. The findings may support business owners in making data-driven decisions on automation investments and resource allocation to enhance competitiveness.

**Employees.** The results highlight the role of cost management automation in improving work efficiency and overall business performance. This may encourage employees to adapt to automated systems and develop relevant skills in a technology-driven work environment.

**Researchers.** This study equips researchers with concrete insights into how automation in cost management influences SME profitability. It enhances their understanding of digital transformation in local business contexts and sharpens their ability to analyze and interpret the impact of technology on financial performance.

**Future researchers.** This study serves as a source of empirical data on the relationship between automation in cost management and SME profitability in General Santos City. The findings may be used as a reference for future comparative, longitudinal, or sector-specific studies on automation and financial performance.

### Scope and Delimitation

This study focused on determining the level of automation integration in cost management and profitability among small and medium enterprises in General Santos City. The respondents were selected from trading, servicing, and hybrid businesses of Barangay Dadiangas East and Barangay Dadiangas. A stratified sampling technique was employed to select one hundred twenty (120) respondents. Additionally, Barangay Dadiangas North and Barangay Dadiangas South were excluded from this study.

## REVIEW OF RELATED LITERATURE AND STUDIES

This chapter presented a comprehensive review of the literature and studies on integrating automation into cost management and profitability in small and medium-sized enterprises in General Santos City.

### Related Literature

#### Automation Integration in Cost Management

Cost management accounting is an important information channel that helps managers build, organize, implement, monitor, control, and evaluate activities and make optimal decisions (Co Trong et al., 2022). Additionally, modern cost accounting methods are a tool to support the management of sustainable businesses (Biadacz, 2024). Meanwhile, cost management offers significant advantages over traditional accounting systems by addressing limitations and shortcomings and enabling proper allocation of products and services, leading to more reliable pricing and profitability. Waste elimination aims to create value for shareholders through continuous improvement (Rounaghi et al., 2021). The integration of cost management systems assesses product costs and increases profitability (Potnik et al., 2023). Moreover, analyzing quality costs in the context of a process approach allows for fairly objective information to be obtained through corrective actions, significantly improving the functioning of a business process by increasing its efficiency and effectiveness, as well as improving preventive measures (Surkova & Chaika, 2022, .22). Moreover, analyzing quality costs in the context of a process approach allows obtaining fairly objective information using corrective actions, significantly improves the functioning of a business process by increasing its efficiency and effectiveness, as well as improving of preventive measures (Surkova & Chaika, 2022).

**Adoption.** Adopting automated cost management systems can significantly improve financial activity monitoring, reduce errors, and increase efficiency (Kim, 2020). Because of this, automation is widely recognized as revolutionizing the accounting profession, allowing accountants to focus on professional skills and technical knowledge that drive organizational success (Jackson & Allen, 2023). Embracing information technology systems is essential for improving customer service and financial management. These factors for future applications are crucial to have clear pre-implementation policies, functions, and benefits (Moodley & James, 2024). Furthermore, adopting automation is revolutionizing management accounting by improving efficiency,

accuracy, and strategic decision-making. For rapid transformation of the accounting process, management must be fully aware of how automation is rapidly evolving (Padmanabhan & Khandelwal, 2024). Ultimately, Baiod & Hussain (2024), as the adoption of automation becomes more common, it is important to elaborate on the accounting professionals' experience and perceptions in investigating the organizational adoption and use of emerging technologies.

**Utilization.** The use of automation is essential nowadays in a fast-changing technological world. Government, curriculum framers, private non-governmental organizations, and stakeholders must give greater priority to these digital tools in the future (Kumar, 2024). Automation technologies are widely used in financial distress, financial fraud, stock market forecasting, and auditing, especially in costing (Zhang et al., 2020). Additionally, technologies such as artificial intelligence and machine learning have enabled accountants to extract valuable insights from financial data, thereby improving decision-making and stimulating long-term business growth (Novichenko et al., 2024). The utilization of information technology and the competence of human resources have a positive and significant effect on the effectiveness of accounting information systems, either partially or simultaneously (Fatimah, 2022). The use of new technologies is considered one of the most practical methods (Kim et al., 2022).

**Advancement.** Advancements in automation have transformed small and medium-sized enterprises by improving efficiency and streamlining processes, especially in cost management and profitability. This advancement offers the potential to transform multiple industries by enabling safety, productivity, and sustainability in manufacturing workflows (Chakravarthi et al., 2024). However, small and medium-sized enterprises commonly face cyberattack concerns. Doing digital businesses must evolve to meet the challenges. Businesses may implement a cyberattack team to protect the company from hackers. Despite these difficulties, automation has been recognized as a key to competitive advantages in a dynamic marketplace (Chowdhry et al., 2020). Additionally, automation in post management has been shown to be great for the finances of small and medium enterprises. These technologies help small and medium enterprises make the most of their finances, including the relationship between the owner and the supplier, and increase profits across many industries (Kumar, 2024). However, successful implementations included strategic planning and efficient change management and aligned with company goals. Furthermore, the literature emphasizes the importance of developing adaptable automation frameworks that account for the specific demands and limitations of small and medium enterprises in the future. Studies demonstrate the adaptability of technology-driven cost management frameworks and the need for sector-specific approaches to overcome adoption barriers (Oluwafisayo, 2024). Additionally, automation advancement nowadays is no longer an option; it is becoming the core mechanism to boost SMEs' profitability (Hernández et al., 2024). To make small and medium-sized businesses even more resilient and competitive, future researchers should investigate how to integrate sustainability and innovation with these frameworks.

### **Profitability of Small and Medium Enterprises**

Profitability is one indicator of SME performance that needs to be assessed by integrating automation to boost overall performance (Aisyah & Umami, 2022). However, small and medium enterprises play a very important role in driving the economy into the digital era both nationally and internationally (Ibrahim et al., 2021). The study reveals that firms need to ensure efficient automation management to maximize profitability. Youssef et al. (2023) argues that profitability will help stakeholders and corporate executives make sound decisions to ensure firm-level sustainability and stability. This is particularly important given the key role SMEs play in economic development and growth. Moreover, previous studies have not examined whether firms can use internal automation cost-control systems to promote profitability (Vu & Nga, 2021). Small and medium enterprises may face an internationalization-innovation paradox: engaging in both activities may not be a feasible strategic option, and prioritizing internationalization over innovation may entail costs and lower profitability (Vuorio et al., 2020).

**Net Income Growth.** Maximizing income and minimizing risk is the solution to the problem of structural choice, which can be understood as an assessment of the dynamics of income and risk at a characteristic point where different resource allocation structures yield the same combination of income and risk (Sukharev, 2020). In managing the finances of small and medium enterprises, understanding net profit margin enables them to make

more comprehensive financial decisions (Gunanto & Preda, 2023). Additionally, net income, inflation, and interest rates have no effect on the combined stock prices index, whereas the exchange rate has a significant effect (Sembiring et al., 2022). Handayani & Winarningsih (2020) stated that profit growth is very important in many ways. Both for the country's benefit and for the company. Net profit margin is one indicator of the company's financial performance (Budiyanta, 2021).

**Expense Management.** Expense management is essential for small and medium enterprises to earn finances. Present studies have shown how automation and digital technologies can change the way the process works. Adding digital tools such as enterprise resource planning systems, artificial intelligence analytics, and automated inventory management has been reported to significantly lower management and production costs. Some studies have reported lower costs and better operational efficiency (Yermekova et al., 2024). Technologies enable rapid decision-making and simplify expense tracking and reporting, thereby enhancing competitiveness and profitability. However, there are often setbacks to adopting such systems. Such as the requirement for staff training, which is included in the initial investment cost and can be challenging for small and medium enterprises with limited funding (Soni et al., 2025).

Despite all of these, research continuously shows that integrating automation improves profitability through better expense management (Akhmetgareeva et al., 2024). Furthermore, automated expense management systems, particularly those that incorporate the internet of things, technology, have become efficient for small and medium enterprises to optimize expenses and lower carrying costs, increase inventory accuracy, and lessen shortages (Ugbebor et al., 2024). Automated reordering and real-time monitoring systems also reduced manual processing time and improved working capital efficiency, which leads to real cost savings and better cash flow management. Since small and medium enterprises benefit from reducing operating costs, improving supplier collaboration, and achieving greater cost satisfaction, these advancements in expense management directly improve profitability (Salih et al., 2023). Yet, through planning, technical expertise, and organizational preparedness, navigating integration setbacks is necessary for successful implementation. A broader body of studies on cost management emphasizes the significance of strategic frameworks and data-driven financial management systems in enhancing SME profitability. Real-time cost transparency is enabled by advanced digital tools and automation, which help SMEs manage expenses in line with corporate goals and achieve optimized profits (Okeke et al., 2024). Data-driven systems and automation improve cash flow, reduce costs, and enable more strategic financial decisions, all of which contribute to sustainable growth, as evidenced across a variety of industries. SMEs that actively use automation in their expense management procedures are more likely to achieve higher profitability, despite the fact that the General Santos City context may present particular local challenges (Maslak et al., 2023).

**Sales Performance.** The sales performance of small and medium enterprises in General Santos City affects the profitability (Amador et al., 2022). Using digital marketing resources is an option for reaching customers, fostering real-time interactions, and ultimately achieving customer satisfaction (Zahara et al., 2023). That's why digital marketing is essential to the effectiveness of small and medium enterprises (Sharabati et al., 2024, .24). In addition, good sales tactics affect customer satisfaction, retention, and ultimately the financial success of these small and medium enterprises. Profitability is influenced by pricing strategies and the ability to achieve daily sales goals. There are challenges in competing with larger companies due to limited resources, such as capital, technology, and marketing expertise. As a result, SMEs must use effective marketing strategies to improve their profitability (Sy & Alona, 2024). Small and medium enterprises must implement effective sales and marketing strategies to satisfy customers, such as boosting digital sales management. Product pricing is an important aspect of operating a business, as it helps set an affordable price for a high-quality product, enhance sales performance, and generate profits (Garduce et al., 2024).

## Related Studies

Automation has been shown to improve efficiency, reduce costs, and enhance the economic sustainability of enterprises. For instance, Jaradat et al. (2025) found that the effective use of automation systems improved control over product life-cycle costing, thereby enhancing the economic sustainability of enterprises in the Jordanian industrial sector. Similarly, automation in small and medium enterprises (SMEs) improves service delivery, optimizes resource allocation, and reduces reliance on manual labor. Economic advantages of

automation, such as cost reduction, error minimization, and improved scalability, enable SMEs to remain competitive in fast-paced markets (Nurlan, 2025; Ngochindo et al., 2024).

Meanwhile, Moreira et al. (2024) highlighted that implementing business process automation in SMEs improves operational efficiency and reduces the time spent on routine tasks. Integration of financial and cost management systems further enhances the benefits of automation. Bacay et al. (2020) found that SME profitability with integrated accounting technology depends on how financial information is reported and presented. Clifort (2025) emphasized that computerized accounting systems empower SMEs to gain deeper insights into financial performance and evaluate key profitability metrics. Nama (2022) argued that cloud-based systems are becoming essential for financial management by optimizing resource usage and reducing operational costs, though existing studies mainly focus on large corporations rather than SMEs. Automation technologies such as real-time analytics, predictive maintenance tools, enterprise resource planning (ERP) systems, Robotic Process Automation (RPA), Natural Language Processing, and Generative AI have also been shown to streamline operations, minimize downtime, and reduce labor costs (Balaguru, 2024).

In the healthcare sector, the integration of these technologies improves revenue cycle management, automates patient registration, medical coding, and claims processing; and enhances financial compliance—all while reducing operational difficulties (Balaguru, 2024). Although these studies focus on efficiency gains, they often lack specific cost-reduction or profitability metrics and rarely address SMEs, highlighting a gap this research aims to fill. Cost management itself is a crucial factor for financial stability and competitiveness. Fimyar and Prysiashnenko (2025) demonstrated that effective cost management directly impacts profitability, particularly in the agricultural sector. By introducing new technologies, automating processes, and optimizing business models, cost management serves not only as a necessity but also as a strategic tool for economic growth. This study builds on these findings by exploring how automation integrated into cost management affects the profitability of SMEs, addressing a gap in SME-focused research and providing localized empirical evidence for General Santos City.

## Research Gap

Automation integration in cost management is an accounting system tool that can be either a problem or it can help small and medium-sized enterprises to boost financial performance and profitability. It becomes a problem if the system is lack of support from the expert, performs poorly, and misused. However, when it implemented correctly, it serves SMEs by simplifying tasks, reducing errors, and improving overall operational efficiency. Furthermore, other specific sectors quantify how these technologies affect local business outcomes, even though the literature currently in publication highlights general advantages. Existing literature lacks empirical evidence regarding the specific impact of automation on performance and profitability metrics—such as net income and expense management—within the unique economic landscape of General Santos City. Consequently, this study aims to fill that gap by providing empirical evidence on how automated systems impact the overall financial performance and profitability of small and medium-sized enterprises in General Santos City.

## THEORETICAL FRAMEWORK

This research is anchored in the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use are primary determinants of technology adoption in organizational settings (Davis, 1989). TAM suggests that when business owners and employees believe that automation integration will enhance cost management efficiency and profitability, and when the system is easy to operate, adoption and sustained use are more likely. In the context of small and medium enterprises, these perceptions drive the extent to which automation tools are implemented and utilized to optimize cost control, boost productivity, and improve sales performance. Additionally, the Technology Acceptance Model (TAM) is the basic framework used to directly model how its main parts, perceived usefulness—linked to improving net income growth, expense management, and sales performance—and perceived ease of use—related to how easy the system is to operate—affect the adoption, utilization, and ongoing advancement of automation within small and medium-sized enterprises (SMEs). Supporting this theoretical basis, Tetteh et al. (2025) found that automating financial processes significantly improved operational effectiveness and reduced costs, strengthening companies' financial

positions, especially in competitive markets. Similarly, Acemoglu & Restrepo (2020) reported that automation technologies increased productivity and profitability while also raising important considerations about workforce adaptation and reskilling, highlighting the broader social and economic impacts of automation integration.

### Conceptual Framework

The conceptual framework of this study illustrated the relationship between automation integration in cost management and profitability among small and medium-sized enterprises in General Santos City. Figure 1 shows the conceptual framework, which consists of two variables: the dependent and independent variables. The independent variable concerned automation integration in cost management, and the dependent variable concerned profitability among small and medium-sized enterprises.

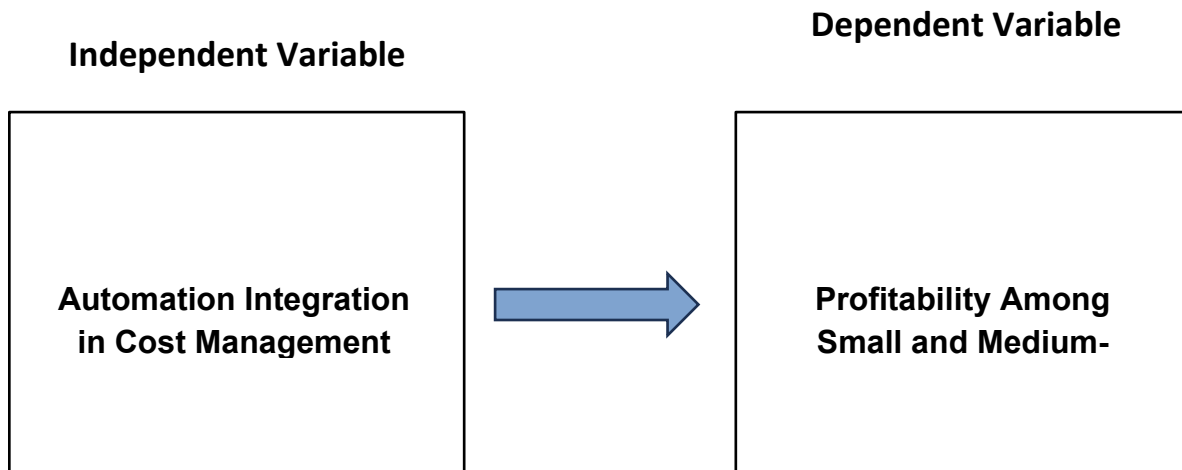


Figure 1. Conceptual Framework

## METHODOLOGY

This chapter outlined the research design, research locale, study respondents, research instruments, data-gathering procedures, and statistical treatment.

### Research Design

The study utilized a descriptive-correlational research design to examine the relationship between automation integration in cost management and profitability among small and medium-sized enterprises in General Santos City. The correlational approach is appropriate for identifying the relationship between automation integration in cost management and profitability. Quantitative research, as emphasized by Barella et al. (2024), is a systematic process that examines and describes using numerical data. Additionally, this study employed a correlational research design to examine the relationship between automation integration in cost management and profitability among small and medium-sized enterprises in General Santos City. Correlational designs are particularly effective when quantitative design examines relationships between naturally occurring variables without manipulating them, allowing researchers to measure the strength and direction of associations (Fraenkel, Wallen, and Hyun, 2019).

### Respondents of the Study

The respondents of this study were small and medium enterprises located in Barangay Dadiangas East and Barangay Dadiangas West, General Santos City. These small and medium enterprises include trading, service, and hybrid businesses operating within two Barangays. A total of 120 respondents were selected using stratified sampling to ensure that each type of business was proportionately represented. The sample size was determined using the method of Lwanga and Lemeshow (1991) to achieve accurate and representative sampling across the different business categories.

**Table 1. Distribution of Respondents**

Types of Business	Respondents	Sample size
Trading	139	39
Servicing	258	73
Hybrid	25	8
<b>Total</b>	<b>434</b>	<b>120</b>

## Research Instrument

A self-developed survey questionnaire was employed to gather data from the respondents. The instrument was divided into two sections, each corresponding to specific objectives of the study. Prior to distribution, the questionnaire underwent validation by three experts to ensure content clarity, relevance, and alignment with the research variables. A reliability test was conducted, resulting in a Cronbach's alpha of 0.97, indicating excellent internal consistency. This demonstrates that the items are strongly interrelated and that respondents' answers are consistent, providing stable and dependable measurements with minimal random error.

Section I assessed the level of automation integration in cost management. Respondents rated statements using a 5-point Likert scale, where a score of 5 (Strongly Agree) indicated that the business implements a very highly automated cost management system, 4 (Agree) indicated a highly automated system, 3 (Neutral) reflected moderate automation, 2 (Disagree) signified less automation, and 1 (Strongly Disagree) represented the least automated system.

Section II measured the extent of profitability among SMEs. Similarly, respondents rated statements on a 5-point Likert scale. A score of 5 (Very High Extent) indicated that the business always meets profitability targets, 4 (High Extent) reflected frequent achievement of targets, 3 (Moderate Extent) indicated occasional attainment, 2 (Low Extent) denoted rare achievement, and 1 (Very Low Extent) represented the business never meeting its profitability targets.

## Statistical Treatment

The data collected in this study were analyzed using appropriate statistical tools at a 0.05 level of significance. To determine the level of automation integration in cost management and the extent of profitability among SMEs in General Santos City, **mean** scores were computed.

Finally, to examine the significant relationship between automation integration in cost management and profitability, the **Pearson's r Moment Correlation Coefficient** was employed.

## Ethical Considerations

The researchers adhered to ethical principles to ensure respondents' rights and welfare.

**Confidentiality.** All the responses from the respondents are kept confidential. No personal identifying information is collected or included in the study results. All data are stored securely to ensure privacy (Indriasari & Karman, 2023).

**Voluntary Participants.** Participation in this study is voluntary. No respondents are pressured into taking part. They are informed that they can withdraw from the study at any point without any negative consequences (Mumford et al., 2021).

**Non-maleficence.** The study did not cause harm to the respondents (Hasim et al., 2025).

**Respect for Privacy.** Respondents' privacy is respected throughout the study. The survey is anonymous, and the information collected is used only for research purposes (Dym et al., 2020).

**Presentation, Interpretation, And Analysis Of Data**

**Level of Automation Integration in Cost Management**

This section presents how small and medium-sized enterprises of Barangay Dadiangas East and West, General Santos City, experienced automation integration in cost management, with particular focus on adoption, utilization, and advancement.

**Table 2. Level of Automation Integration in Cost Management in terms of Adoption**

Adoption	Mean	Description
The business uses accounting software to manage financial transactions and costs.	4.49	Strongly Agree
Automated tools are used for invoices and expenses.	4.10	Agree
Inventory and cost of goods sold are managed through automation.	4.02	Agree
Budgeting and forecasting use automated system management practices.	4.01	Agree
The business invests in new automation technologies for cost management.	3.96	Agree
<b>General Weighted Mean</b>	<b>4.12</b>	<b>Agree</b>

Legend: 4.20-5.00 Strongly Agree; 3.40-4.19 Agree; 2.60-3.39 Neutral; 1.80-2.59 Disagree; 1.00-1.79 Strongly Disagree

Table 2 presents the level of automation integration in cost management in terms of adoption, with a general weighted mean of 4.12, which falls under the “Agree” category. Among the indicators, the highest-rated item is “The business uses accounting software to manage financial transactions and costs” (M = 4.49, Strongly Agree). The lowest-rated item is “The business invests in new automation technologies for cost management” (M = 3.96, Agree). This indicates that while SMEs are adopting automation, there is still room for further investment in advanced technologies. These findings align with previous studies by Kim (2020) noted that adopting automated cost management systems can significantly improve monitoring of financial activities, reduce errors, and increase efficiency. Similarly, Padmanabhan and Khandelwal (2024) highlighted that integrating automation in management accounting enhances efficiency, accuracy, and supports more strategic decision-making.

**Table 3. Level of Automation Integration in Cost Management in terms of Utilization**

Utilization	Mean	Description
1. Automated systems analyze cost data across departments or projects.	4.42	Strongly Agree
2. Real-time cost reports and dashboards are generated automatically.	4.04	Agree
3. Payroll and employee-related costs are managed by automated tools.	3.90	Agree
4. Cost systems are integrated with other operations like sales and production.	4.03	Agree
5. Most cost management tasks are automated from procurement to reconciliation.	3.93	Agree
<b>General Weighted Mean</b>	<b>4.06</b>	<b>Agree</b>

Legend: 4.20-5.00 Strongly Agree; 3.40-4.19 Agree; 2.60-3.39 Neutral; 1.80-2.59 Disagree; 1.00-1.79 Strongly Disagree

Table 3 presents the level of automation integration in cost management in terms of utilization, with a general weighted mean of 4.06 (Agree). The highest-rated item is “Automated systems analyze cost data across departments or projects” (M = 4.42, Strongly Agree), while the lowest is “Payroll and employee-related costs are managed by automated tools” (M = 3.90, Agree), indicating that although SMEs are leveraging automation effectively in core cost analysis, there is still potential for broader integration across other operational areas. These findings are consistent with previous studies by Fatimah (2022) noted that automation is ineffective if

employees lack the competence to use it. Kumar (2024) emphasized that prioritizing automation in accounting processes ensures alignment with higher utilization in cost management, leading to improved efficiency. Furthermore, Novichenko et al. (2024) found that automation enhances decision-making and supports long-term business growth.

**Table 4.** Level of Automation Integration in Cost Management in terms of Advancement

	<b>Advancement</b>	<b>Mean</b>	<b>Description</b>
1.	Advancement analytics identify cost-saving opportunities.	4.12	Agree
2.	Software process automation handles repetitive cost tasks.	3.95	Agree
3.	Automated systems provide predictive insights into future costs.	3.91	Agree
4.	Artificial intelligence or machines optimize purchasing and supply chain expenses.	3.92	Agree
5.	Automation detects anomalies and inefficiencies in spending.	4.01	Agree
<b>General Weighted Mean</b>		<b>3.98</b>	<b>Agree</b>

Legend: 4.20-5.00 Strongly Agree; 3.40-4.19 Agree; 2.60-3.39 Neutral; 1.80-2.59 Disagree; 1.00-1.79 Strongly Disagree

Table 4 presents the level of automation integration in cost management in terms of advancement, with a general weighted mean of 3.98 (Agree). The highest-rated item is “Advancement analytics identify cost-saving opportunities” (M = 4.12, Agree). The lowest-rated item is “Automated systems provide predictive insights for future costs” (M = 3.91, Agree). Overall, this indicates that while SMEs adopt current automation tools, they are less proactive in leveraging predictive analytics for financial forecasting. These findings align with previous studies, like Chakravarthi et al. (2024), who emphasized that advances in automation enhance safety, productivity, and sustainability in business workflows. Chowdhry et al. (2020) highlighted automation as a source of competitive advantage in dynamic markets, while Kumar (2024) noted that successful implementation requires strategic planning and effective change management.

**Table 5.** Extent of Profitability in terms of Net Income Growth

	<b>Net Income Growth</b>	<b>Mean</b>	<b>Description</b>
1.	The business’s net profit margin has consistently improved over the past three years.	4.36	Very highly extent
2.	The business is satisfied with its current net profitability compare to competitors.	4.06	Highly extent
3.	Net income growth has been significant and sustainable over the last year.	3.90	Highly extent
4.	The business consistently meets its target net profit goals.	4.03	Highly extent
5.	Overall financial health, as reflected by its net profits, is strong.	3.99	Highly extent
<b>General Weighted Mean</b>		<b>4.07</b>	<b>Highly extent</b>

Legend: 4.20-5.00 Very highly Extent; 3.40-4.19 Highly Extent; 2.60-3.39 Moderately Extent; 1.80-2.59 Low Extent; 1.00-1.79 Very Low Extent

Table 5 presents the extent of profitability in terms of net income growth, with a general weighted mean of 4.07 (Highly Extent). The highest-rated item is “The business’s net profit margin has consistently improved over the past three years” (M = 4.36, Very Highly Extent). The lowest-rated item is “Net income growth has been significant and sustainable over the last year” (M = 3.90, Highly Extent). Overall, SMEs in General Santos City are experiencing positive trends in net income. As emphasized by Gunanto and Preda (2023), effective management of net income is crucial, and automation helps SMEs generate actionable financial data to support strategic decisions. Similarly, Budiyanata (2021) noted that net income growth serves as a direct indicator of a

company’s financial performance following automation integration, while Sukharev (2020) highlighted that leveraging automation maximizes net income, minimizes risk, and improves resource allocation.

**Table 6.** Extent of Profitability in terms of Expense Management

Expense Management	Mean	Description
1. The business has reduced operating expenses as a percentage of revenue in the past year.	4.40	Very Highly Extent
2. Unnecessary costs are effectively identified and eliminated across departments.	3.76	Highly Extent
3. The cost of goods sold is well managed, improving gross profit margins.	3.99	Highly Extent
4. Financial losses or errors from poor expense tracking have been significantly reduced.	3.85	Highly Extent
5. Variables are effectively controlled, maintaining healthy margins despite sales fluctuations.	3.98	Highly Extent
<b>General Weighted Mean</b>	<b>4.00</b>	<b>Highly Extent</b>

Legend: 4.20-5.00 Very highly Extent; 3.40-4.19 Highly Extent; 2.60-3.39 Moderately Extent; 1.80-2.59 Low Extent; 1.00-1.79 Very Low Extent

Table 6 presents the extent of profitability in terms of expense management, with a general weighted mean of 4.00 (Highly Extent). The highest-rated item is “The business has reduced operating expenses as a percentage of revenue in the past year” (M = 4.40, Very Highly Extent), indicating effective optimization of operational efficiency while generating revenue. The lowest-rated item is “Unnecessary costs are effectively identified and eliminated across departments” (M = 3.85, Highly Extent). Overall, SMEs in General Santos City demonstrate strong capacity for cost control. As cited by Salih et al. (2023), it was emphasized that automating expense management improves cost savings, working capital efficiency, and overall profitability. However, Soni et al. (2025) noted that challenges such as staff training and initial investment costs may limit SMEs’ full adoption of automated expense-tracking and reporting systems.

**Table 7.** Extent of Profitability in terms of Sales Performance

Sales Performance	Mean	Description
1. The business has achieved steady revenue growth over the last three years.	4.06	Highly Extent
2. Sales targets for new customer acquisition are consistently met or exceeded.	3.88	Highly Extent
3. Pricing strategies effectively maximize both sales volume and all revenue.	3.98	Highly Extent
4. Market expansion has led to improved sales performance.	4.05	Highly Extent
5. Market share has increased, contributing to overall revenue growth.	3.98	Highly Extent
<b>General Weighted Mean</b>	<b>3.99</b>	<b>Highly Extent</b>

Legend: 4.20-5.00 Very highly Extent; 3.40-4.19 Highly Extent; 2.60-3.39 Moderately Extent; 1.80-2.59 Low Extent; 1.00-1.79 Very Low Extent

Table 7 presents the extent of profitability in terms of sales performance, with a general weighted mean of 3.99 (Highly Extent). The highest-rated item is “The business has achieved steady revenue growth over the last three years” (M = 4.06, Highly Extent), indicating a solid competitive advantage and sustainable financial foundation. The lowest-rated item is “Sales targets for new customer acquisition are consistently met or exceeded” (M = 3.88, Highly Extent). Overall, SMEs in General Santos City demonstrate strong revenue growth and market reach. These findings are supported by previous studies by Sy and Alona (2024) emphasized that effective sales and marketing strategies are critical for customer satisfaction and financial success. Garduce et al. (2024) noted that pricing tactics and the ability to meet daily sales goals directly influence profitability, while Zahara et al.

(2023) highlighted the importance of leveraging digital resources, such as digital marketing, to reach customers effectively, foster real-time interactions, and enhance overall sales performance.

### Relationship between Automation Integration in Cost Management and Profitability

This section discusses the significant relationship between automation integration in cost management and profitability among SMEs in General Santos City.

**Table 8.** Correlation Results Between Automation Integration in Cost Management and Profitability

Variables	r	p-value	Decision	Interpretation
Automation Integration in Cost Management and Profitability	0.7023	.00001*	Rejected	Significant

\*Significance level at 0.05

Table 8 shows the correlation between automation integration in cost management and profitability. The analysis reveals a positive, moderate relationship with a computed r-value of 0.7023 and a p-value of 0.00001, which is less than the significance level of 0.05. This indicates that as SMEs increase their integration of automation in cost management, their profitability tends to improve. The null hypothesis, which proposed no relationship between the variables, is therefore rejected, confirming a statistically significant association between automation and financial performance. These findings align with Clifort (2025) emphasized that computerized accounting systems enable SMEs to gain deeper insights into financial performance and evaluate key profitability metrics. Similarly, Hernández et al. (2024) highlighted that automation has become a core mechanism for boosting SME profitability, while Maslak et al. (2023) noted that SMEs actively applying automation in expense management are more likely to achieve higher profitability. Overall, the results suggest that automation integration in cost management is a significant factor in enhancing SMEs' financial success.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. The study revealed that SMEs in General Santos City generally adopt, utilize, and advance automation in cost management, with respondents rating it as "Agree." While automation is effectively applied in core cost analysis, there is still room for broader integration and greater use of predictive analytics to enhance financial forecasting and operational efficiency.
2. The study found that SMEs in General Santos City achieve high levels of profitability, with respondents describing net income growth, expense management, and sales performance as "Highly Extent." Overall, SMEs show positive net income trends, strong cost control, and robust revenue growth, indicating a healthy financial performance and competitive market position.
3. There is a significant relationship between automation integration in cost management and profitability among small and medium-sized enterprises in General Santos City.

### RECOMMENDATIONS

Based on the findings of the study, the following recommendations were proposed:

1. The business owners should prioritize investment in automation technology to achieve the dual goals of expanding the customer base and streamlining operations.
2. Employees should maximize the return on ownership's technology investment by actively engaging in upskilling programs to master the advanced functionalities of automated systems.

3. Future researchers may use this research as a reference for integrating automation into cost management and profitability in small and medium-sized enterprises.

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