

The Impact of E-Commerce on Small and Medium Enterprises in the Second District of Albay

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DOI: <https://dx.doi.org/10.47772/IJRISS.2025.9010072>

Received: 31 December 2024; Accepted: 04 January 2025; Published: 01 February 2025

ABSTRACT

The development of the internet has radically changed how consumers transact with businesses and make purchases of products and services. This paper aims to comprehensively examine and assess the effects of e-commerce adaption on the local Small and Medium Enterprises (SMEs) sector within the province of Albay. Specifically, it aimed to determine the status of SME in the province of Albay, in terms of Profile of the establishments and E-commerce adoption of the establishments. Also to investigate the impact in the integration of E-commerce into SME operation in Revenue Growth, Market Reach, Cost Efficiency, and Profitability. To identify the factors that hinder e-commerce adoption among SMEs in Albay and propose actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the Province of Albay. A survey questionnaire used as an instrument and applied the descriptive-quantitative design. The study found out that there are identified small and medium enterprises in the mentioned locality based on profile and e-commerce adoption. Specific variables have a positive result regarding the integration of the e-commerce into SMEs in Albay despite of the challenges. Designed actionable and strategies for policymakers to enhance and implement for the SMEs in Albay Province.

Keywords: E-Commerce, Small and Medium Enterprises (SMEs), Second District

INTRODUCTION

The introduction of the internet has drastically changed how people do business with companies and make purchases of goods and services. Online shopping has increased dramatically as a result, enabling customers to purchase goods and services whenever and from anywhere. In response to this demand, e-commerce technology has developed, allowing customers to shop day or night from the comfort of their homes because it is quick, easy to use, and convenient, and internet shopping has become the favored method for consumers looking to save time and money on products (Anderson, 2024).

To mention, Amazon's third quarter net sales increased 13% to \$143.1 billion, compared to \$127.1 billion in 2022. This profitable business model has sparked interest from small businesses, who want to emulate it by allowing online stores to sell products on Amazon's platform (morphnetworks 2024). While eBay is an online trading platform that enables third-party sellers to list their products, offering tools like payment integration and return management, and recommending approved logistics partners (yap growth 2024).

As stated in the article of ECDB (2024), Europe, despite its relatively small geographic size, boasts one of the largest and most dynamic eCommerce markets in the world. Projections indicate steady growth over the coming years, with the market forecast to reach US\$900 billion by 2028. This growth is fueled by high eCommerce penetration in leading economies such as the UK, Germany, and the Netherlands, where rates already surpass 80%. Additionally, smaller but rapidly expanding markets in Southern and Eastern Europe, such as Greece, Portugal, and Poland, present substantial opportunities for future growth.

In Asia online shopping sites are changing the game for small and medium-sized businesses. These sites work as digital markets linking small companies to a huge crowd of customers, both in their own countries and beyond. They make it simple to set up shop online by providing tools and services that smaller businesses might find hard to handle on their own such as ad campaigns trustworthy shipping networks, and even ways to help

customers. This complete package helps smaller companies jump into the digital marketplace more (Tan and Ng, 2021). However, some obstacles remain. Small businesses often have trouble securing funds, and they need to figure out how to navigate online marketplaces. Also, the rules for doing business in different countries can make it hard to grow worldwide. Governments see these problems and are trying to help. They're giving out cash teaching digital skills, and making rules simpler. All this is to help MSMEs make the most of selling online (ADB, 2023).

Southeast Asia has seen a sharp increase in e-commerce, which presents opportunities as well as difficulties for small and medium-sized businesses (SMEs). The region's enterprising small firms have transformed into "Micro Multi-National Enterprises" (MMNEs) because of the ground-breaking capacity of international e-commerce platforms to increase their export potential (eBay report, 2022). Despite the boom in digital platforms and services across Southeast Asia, the World Economic Forum (2022) highlights a concerning reality. However, SMEs have not fully exploited this opportunity. This blunder leads to underlying issues inhibiting SMEs from supporting the digital environment. These challenges may comprise flaws such as inadequate availability of stable internet infrastructure and chances, developing a range of digital skills to the difficulties that e-commerce players underline unpleasant navigating large platforms or counteracting with fierce competition online. Furthermore, missing regulatory spaces and lack of specifically constructed financial support aimed exclusively at digital ventures might add to their strivings in other aspects. If these challenges are not taken into account, Southeast Asia is likely to find itself stuck with a large portion of its economic engine-the lively SME sector - far behind in the digital revolution.

However, Arora, et.al. (2022) when the landscape of e-commerce in Southeast Asia is growing exponentially right now with no sign to slow down any time soon SMEs are standing on a crossroad. The promise of growth abounds, yet this new chapter requires caution. Evolving logistics and supply chains are both challenges as well an opportunity. In order to optimize delivery efficiency, navigate complex regulations and manage inventories across the borders it is necessary for SMEs being ready for adaptation. Adequate infrastructure, training and learning materials must be put in place; digital marketing 2, data analytic as well as the e commerce platform should run optimally for success in the long run, by accepting transformation with appropriate tools and support organization will sit well to not only survive but to prosper in a rapidly changing future Southeast Asia e-commerce environment.

E-commerce has certainly grown to be a recreation changer for SMEs organizations in the Philippines supplying a trans-formative street for increase amid a unexpectedly evolving business panorama the surge in e commerce adoption as suggested through the Department of Trade and Industry (DTI) underscores its pivotal role in boosting the Gross Domestic Product (GDP) by 3.4% in 2020 attaining an impressive USD 12 billion. The number of new e-commerce companies has also increased, from 500,000 in 2020 to over 1 million in 2022, providing further proof of this development However, along with the opportunities, demanding situations have emerged. SMEs face the need to conform to the dynamic digital environment, navigating issues which include cybersecurity, logistics, and virtual fee structures. Additionally, ensuring a seamless on-line client experience and building trust inside the virtual realm come to be vital. As e-commerce maintains to redefine the business landscape inside the Philippines, strategic authorities help and private sector collaborations might be important to foster a conducive environment for SMEs to thrive on this digital generation (Zhenhub, 2023). However, SMEs within the Philippines stumble upon diverse challenges in scaling their e-commerce operations, which includes financing constraints, agility, and digitalization obstacles (First Circle, 2023).

Bacasmas, et. al. (2022) examines the impact of e-commerce adoption on women-led MSMEs in Metro Manila, their awareness of government internationalization efforts, and their readiness to engage in cross-border e-commerce through the Regional Comprehensive Partnership Agreement (RCEP). The COVID-19 pandemic has accelerated e-commerce adoption, enhancing their performance in sales growth, customer base, satisfaction, and process enhancement. However, there is low awareness of existing government programs and RCEP provisions appealing to women-led Micro, Small, and Medium Enterprises (MSMEs). The study reveals a strong interest in cross-border trade under RCEP, and a supportive policy environment could potentially increase their participation in regional trade and the global value chain.

The Philippines government is enhancing e-commerce laws to address the rapid growth of the industry, which

is defined by the Electronic Commerce Act of 2000. The DTI oversees e-commerce development and develops policies to facilitate growth. Online businesses are considered legitimate as brick- and-mortar ones, and even sellers are required to issue electronic receipts. Tax compliance benefits registered businesses, including low-interest loan programs and government-funded small business wage subsidy programs. However, the effectiveness of these legislation in balancing business interests, consumer needs, and potential unintended consequences needs further evaluation. Expanding e-commerce beyond Filipino customers presents opportunities but also requires legal precautions. Essential policies such as Shipping & Delivery, Payment & Return/Refund, Terms & Conditions, Data Protection and Privacy Policy, and Online Advertising Compliance are crucial for navigating the global e-commerce landscape. As e-commerce booms in the Philippines, legal concerns regarding online scams are increasing. Existing laws like Republic Act No. 8792 punish online fraud, but stricter regulations are needed to protect businesses and consumers from threats like data breaches, product liability issues, fake information, identity theft, copyright infringement, online defamation, and domain theft. Strengthening the legal framework is needed to safeguard the integrity and trust within the thriving Philippine e-commerce landscape (Prosperna, 2022).

Philippine E-Commerce Platform (PEP) was launched during the MSME National Summit 2023 where in PEP is the first government omnichannel that was created to promote Filipino businesses and help them expand online. PEP prioritizes Filipino products and onboards businesses officially registered with DTI and other agencies, adding another layer of consumer protection. PEP gives buyers access to a wider range of locally-made products by tapping public sector initiatives such as Go Lokal. PEP is linked to the eGov Super App, the Ph govt's platform (ndc.gov 2023).

Lirag (2022) assess the use of e commerce in product promotion for SMEs in Camarines Sur, Philippines. The research involved 96 SMEs from five districts. The results showed that all had internet access, but only four had websites for product promotion. Half had no plans to establish a website. However, 67 SMEs were already online through social networking sites. Barriers to e commerce adoption included lack of benefits, inadequate financial resources, lack of skill and technical capabilities, and fear of privacy loss. Recommendations included training and skills development for entrepreneurs, enabling policies and infrastructure for widespread internet use, and a proactive awareness campaign to improve information flow for SMEs.

In Legazpi City and Daraga, Albay, Nasser (2022) assesses the competitiveness of micro, small, and medium-sized enterprises in the face of economic disruption. The results of the analysis of the data showed that the MSMEs faced opportunities and problems with an adjectival meaning of “Almost Always” or “Frequently”, implying that they encountered both good and bad things, especially in their operations. The MSMEs encountered best practices and gained knowledge from them. MSMEs need to be resilient, adaptable, and have contingency to overcome these obstacles. Therefore, MSMEs can take advantage of their advantages to be creative by continuously offering their clients cutting-edge and valuable services to enhance their financial performance-even in times of economic instability.

This study attempts to fill the awareness deficit about how the adoption of e-commerce affects the local business environment. While the title implies an emphasis on evaluating the impact of e-commerce on small and medium-sized businesses (SMEs), it is imperative to conduct a thorough analysis of the state of e-commerce integration as it stands today, the difficulties that firms face, and potential areas for improvement. The body of research on the subtle effects on revenue growth, market penetration, cost effectiveness, and overall profitability in the Province of Albay is lacking. By offering practical insights and suggestions that are specific to the peculiarities and difficulties faced by SMEs in Albay, this study aims to address this knowledge gap and help the region's businesses create a more knowledgeable and efficient e-commerce industry.

This study aims to equip the SMEs in the local business industry with tools and know-how to become vigorous online through examining the challenges that hinder the adoption of e-commerce in Albay SMEs. The efforts will lead to increased sales, improved efficiency, as well as the empowerment of women entrepreneurs and contribute to economic growth that is expected when the e-commerce ecosystem is made more vibrant in Albay. It will benefit SMEs, policymakers and government authorities, business associations, local community and consumers, and future researchers with valuable insights to be gleaned for developing effective strategies and support programs.

Objectives of the Study

This paper aims to comprehensively examine and assess the effects of e-commerce adaption on the local Small and Medium Enterprises (SMEs) sector within the province of Albay. This study aims to provide a holistic understanding of how e-commerce influences the economic, technological, and socio-cultural aspects of SMEs in the region, and to draw insights that can inform policy, strategy, and best practices for SMEs development.

Specifically, it aims to:

1. Determine the status of SME in the province of Albay, in terms of:
 - a. Profile of the establishments, and
 - b. E-commerce adoption of the establishments.
2. Investigate the impact in the integration of E-commerce into SME operation, such as:
 - a. Revenue Growth,
 - b. Market Reach,
 - c. Cost Efficiency, and
 - d. Profitability.
3. Identify the factors that hinder e-commerce adoption among SMEs in Albay.
4. Propose actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the Province of Albay.

LITERATURE REVIEW

The quick growth of online shopping has completely changed how businesses operate around the world. In the Philippines small and medium- sized companies are starting to see how powerful internet platforms can be to find new buyers and grow their customer base. This research looks at how online selling affects small and medium-sized businesses in Albay province.

Before digging deep into how Albay's SMEs are doing, it is necessary to look at what other people have already found out. The researcher check out research on how small businesses around the world and in the Philippines are getting into online selling. Furthermore, look at how selling online has changed things for small businesses, like making more money, reaching more customers, saving on costs, and making more profit. Lastly, found out the problems small businesses run into when they start selling online. By understanding the big picture, readers can get a better idea of what chances and challenges Albay's small and medium businesses might face in the world of online selling.

Status of the SMEs

Profile of the Establishment

Small micro businesses are the most vulnerable businesses due to their lack of resources and expertise. Apart from this, according to Macca et al. (2024), micro and small businesses in the food and beverage industry domiciled in different countries in Europe would need to develop various e-commerce implementation competencies for managing e-commerce strategies. Ultimately, these include time management, internal stock management, multichannel management, outsourced management, and marketplace selection. Technologies of the information society are characterized by the possibility of their almost instantaneous implementation. These include distribution management, potential risk of losing control, managing new products, and lack of time, resources, and capacity.

E-commerce is typically a successful trade instrument, particularly for the marketing and sales of internationally diverse goods and services. These businesses can gain a great deal from e-commerce by increasing sales,

decreasing inventory, increasing efficiency, and improving customer satisfaction. E-commerce is being implemented by an increasing number of businesses, along with new market penetration rates and ultimate financial rewards (Yacob, et.al., 2021).

As stated in the study of Pramono et.al (2021) In Indonesia, 90% of the workforce are absorb by the majority from the informal MSMEs. According to the business Law No. 20 of 2008, there are divided into 3 parts of the criteria: Micro, Small and Medium Enterprises (MSME); national economic growth of 50% is coming from the informal sectors. Accordingly, the characteristics of the MSMEs are “low productivity” and much lower than the productivity of the medium-sized enterprises. Therefore, in Indonesia has the largest informal sector business as far as proportion is concerned, the success of increasing the productivity of the informal sector will have a significant effect on the progress of national economic growth.

In the article of Webretailer 2024, there are popular international e-commerce platforms, like Amazon, eBay, AliExpress, Walmart, and Rakuten Ichiba are major global eCommerce companies. Amazon, founded in 1994, is the world's largest retail chain, eBay is the leading consumer-to-consumer marketplace, AliExpress is a B2C marketplace, Walmart operates 10,500 stores and clubs in 19 countries, and Rakuten Ichiba is the second largest eCommerce platform in Japan.

According to the study of Mendoza et.al (2023), micro and small businesses create job possibilities, provide inventive conditions for entrepreneurs to develop new goods and services, and assist people get out of poverty. The participants were largely sole proprietorship with 1 to 9 employees, an estimated asset size of 3,000,000 pesos, and a one to three-year operating period. Business prospects were determined by three factors: human capital (employee entrepreneurial expertise), social capital (communication with family and friends), and financial capital (investment in additional finances for business operations). Human, social, and financial capital has a significant impact on economic potential in micro- and small firms. There was no substantial association between the participants' company profiles and the degree of effect of business opportunity components, with the exception of the number of workers and social capital. MSEs should improve their entrepreneurial knowledge and abilities, build their business networks, and take advantage of financial institutions with cheaper borrowing fees.

In the article of satoden.io the Philippines has cemented its place as a global player in e-commerce, ranking as the 23rd largest market worldwide, outpacing even Switzerland. This milestone highlights the country's growing influence in the digital commerce space. The Philippine e-commerce industry is dominated by Shopee, Lazada, CarouselPH, and Zalora, with Shopee leading with 53.9 million monthly web visits and 3 million Android app downloads. New entrants like Temu PH, TikTok Shop, and SHEIN PH are also making a mark. Electronics and fashion remain the leading revenue drivers, with competition intensifying, ensuring continued growth in the market.

E- commerce adoption of the establishments

Despite its many advantages, minimal is known about how SMEs in Palestine are utilizing e-commerce. The study of Salah and Ayyash (2024) comprehend the adoption variables that SMEs are experiencing and how they affect marketing performance. The technology, organization, and environment (TOE) framework, which incorporates Artificial Intelligence (AI) Integration, Innovation Culture, and Customer Tech-Savviness, serves as the theoretical basis. The findings demonstrate that e-commerce adoption is positively impacted by AI integration, customer savviness, innovative culture, competitive pressure, and business partner pressure. Additionally, SMEs' marketing performance is positively impacted by the use of e-commerce. The study offers managerial and theoretical ramifications for Palestinian SMEs' use of e-commerce.

The impact of COVID-19 on SMEs in Southeast Asia is a study that examines the effects of the pandemic on SMEs in the region. The study found that SMEs have been disproportionately affected by the pandemic, with many facing significant revenue losses and struggling to access finance. The study also highlights the importance of digitalization in helping SMEs adapt to the new business environment, with many SMEs turning to e-commerce and other digital platforms to reach customers and maintain operations (ADB, 2020).

The report "Redesigning for the Digital Economy" provides a thorough examination of the advantages and

disadvantages of digitalization, highlighting the necessity of cross-sector cooperation to guarantee a successful digital transition. It draws attention to the part that governments play in putting digital plans and policies into practice, especially when it comes to creating digital economies and the effects they have on industries like SMEs. The paper highlights the significance of digital platforms in propelling economic expansion, generating employment opportunities, and bolstering local enterprises, particularly in the Philippines. It offers information about how the digital world is changing, how online platforms have the ability to revolutionize the economy, and how the e-commerce sector is expected to expand. In order to fully realize the promise of the digital economy, the paper emphasizes the significance of strategic planning and teamwork (Ey, 2021).

Digitalization has transformed how SMEs in the Philippines operate, leaving no choice except to adapt if they want to be competitive. In a study of Lim (2022), it was observed that innovation has three key dimensions pertaining to product, process, and mapping activities. Concerning these activities, the study found that SMEs spend less on formal research and development; generate fewer patented or non-patented inventions; and deliver less formal training to employees. There is a negative covariance between innovation and R&D expenditures, thus, “the state should conceive national policy interventions that promote and develop a culture of innovation in the Philippines, specifically for SMEs,” the study suggested.

One of the many benefits of e-commerce is its worldwide reach, which enables small firms to access new markets and increase conversion rates.

Online retailers are open year-round, unlike traditional ones, so clients may buy goods whenever and wherever they choose. Because it is available around-the-clock, e-commerce is essential for businesses, especially small and medium-sized ones, as it greatly boosts sales. Therefore, e-commerce gives companies a global platform to expand their reach, increase conversions, and see growth (Anderson, 2024).

E-commerce offers a powerful toolkit for small businesses, unlocking a world of advantages. From lower operational costs compared to physical stores to the potential for reaching an international audience, the growth potential is significant. Online platforms facilitate customer acquisition through search engine visibility and social media recommendations, while also providing valuable data on buying habits for personalized experiences. Additionally, online stores leverage customer advocacy and enable wider reach through targeted marketing, maximizing return on investment and paving the way for sustainable growth. Overall, e-commerce empowers small businesses to compete effectively in the digital landscape and thrive in today's connected world (van Gelder, 2024).

Globally, the financial and sustainability performance of MSMEs has been greatly affected by the COVID-19 epidemic. The goal was to investigate how MSMEs' financial and sustainability performance was impacted by digital marketing and e-commerce platforms. The results demonstrated a strong correlation between e-commerce and MSMEs' pandemic-related financial performance and sustainability. The financial performance of MSMEs was significantly impacted by digital marketing methods as well. The sustainability of MSMEs and DM methods, however, did not significantly correlate. The association between the adoption of e-commerce and sustainability performance was mediated by MSMEs' financial performance. These results add to the body of knowledge on technology adoption and emphasize the significance of digital marketing and commerce for the long-term survival and success of MSMEs (Gao, et.al., 2023).

Numerous SMEs in Malaysia are still trailing behind when it comes to using the internet and optimizing their online marketing strategies. The compatibility, intricacy, and trainability were found to have a major impact on the adoption of internet marketing in a study conducted on 89 SMEs in Malaysia. The adoption of online marketing was unaffected by relative advantage or observability, though. Further research on the factors influencing SMEs' adoption of online marketing is necessary, as the study concluded that compatibility was the most significant factor driving SMEs to adopt internet marketing highlights. The effectiveness and efficiency of SMEs in the global economy may benefit from this (Nordin, et.al., 2023).

For SMEs, digital marketing is quickly becoming an essential tool for engaging with customers and launching aggressive promotions. The demand for sustainable tactics is fueling this trend. According to Bruce, et.al. (2023) subjective standards and perceived behavior control were more important in influencing intention to utilize

digital marketing than opinions about it. Actual behavioral use of digital marketing was positively influenced by subjective standards. They also discovered a favorable correlation, especially in developing nations, between digital marketing and the sustainable expansion of SMEs. This underscores the significance of taking into account multiple elements that impact managers' behavioral inclinations when implementing digital platforms to promote sustainable growth. Future adopters may find the information useful in formulating their sustainability plans.

Adams (2022) investigates the e-commerce adoption tactics used by traditional small retail business executives to support the long-term sustainability of their enterprises. Five business executives from Atlanta, Georgia, who effectively incorporated e-commerce tactics into their conventional organizational structure were the subjects of the study. Semi-structured interviews and corporate documents were the sources of the data. Three topics emerged: e-commerce adoption tactics, implementation issues experienced by small business owners, and solutions developed to sustain business sustainability. Understanding internet consumerism and the technologies required to thoroughly run a business on an online platform is significant advice. The potential for new web-based jobs to be created for young people in the community is one of the implications for positive social development.

SMEs in the UK are vital to the economy, but because of internal knowledge gaps and funding constraints, they frequently find it difficult to implement new technologies. For SMEs, inventory optimization is an important objective, but it is not their main concern. Product restocking and forecasting are two aspects of Inventory Management (IM), which makes sure the appropriate inventory is there at the right time, location, and quantity. Building upon efficient Inventory Control (IC), IM models presuppose that physical stock availability equals informational system quantity. SMEs must maintain optimal inventory levels to stay fiercely competitive and revenue growth is positively correlated with these levels. Reduced storage expenses, lower inventory levels, faster order processing, and higher inventory turnover all help with this. Increased customer satisfaction from optimized inventory also results in more income (Drakeley and Perrera, 2022).

The moderating effects of business size on CRM adoption in Palestinian SMEs are examined in study of Salah, et.al. (2021). Compatibility, IT infrastructure, complexity, relative advantage, security, top management support, customer pressure, and competitive pressure are just a few of the characteristics that are examined in this research using a quantitative methodology. A survey was created to gather information from 420 Palestinian SMEs, and 331 people answered it. Both the measurement and the structural models were evaluated using the Partial Least Square- Structural Equation Model (PLS-SEM). Determinant factors were found using the Technology, Organization, and Environment (TOE) framework and the Diffusion of Innovation Theory (DOI). The results demonstrate that compatibility, top management support, customer pressure, and IT infrastructure issues are all highly impacted by the size of the company.

Sharma's (2023) study suggests that e-commerce can increase sales for small firms. It demonstrates that, among other advantages, small firms using e-commerce may sell more and be more competitive. The difficulties in implementing e-commerce, however, should not be taken lightly; in order to meet these difficulties, SMEs will need to make investments in knowledge and resources. The research results also imply that e-commerce is a supplement to traditional selling methods rather than their replacement. When a small business uses e-commerce, it may still reach clients through traditional methods and take advantage of the extra sales channels that e-commerce offers.

The advent of e-commerce in recent times has resulted in a paradigm change in international markets. This innovative structure, which is dependent on technical advancement, has ushered in a new era of trade. Digital marketplaces are being used by organizations more than ever to remain competitive and relevant. All of a sudden, they purchase things online as part of their everyday lives. The internet is the perfect medium for customers in the present day because of its accessibility, adaptability, and convenience. Almost all industries are dominated by small and medium-sized businesses that provide sustainability, revenue, and jobs. However, these firms have not yet used e-commerce extensively (Costa and Castro, 2021).

Harwood, et.al (2022) investigates the influence of the hospitality industry on the US economy, focusing on its positive contributions to economic growth. The survey established that the hospitality sector is a major economic

growth driver, under which it accounts for nearly 5% of the global GDP and 8% of employment. The industry is fundamentally a cyclical one, meaning it will be affected by the state of the economy. The most widely recognized socio-economic impacts of the hospitality sector include huge employment capacities, improved living standards, and greater tax revenues to the state and local governments, as well as growth in local retail sales. It suggests the design of frameworks and policies to boost the persisting of the hospitality industry mind and the administration of the United States of America to make sure that sociopolitical and macroeconomic stability is in place through the tourism sector. The study suggests some frameworks and measures to enhance the hospitality sector and the US government has to ensure political and macroeconomic stability to promote the tourism sector.

By the year 2024, the Bureau of Labor Statistics states that approximately 8.3 million jobs must be created by the US economy from 2021 to 2031, with approximately 1.9 million jobs in leisure and hospitality. This rapid rise, which is the highest of all the sectors, is mainly due to the recovery period after the coronavirus. A sector that was seventh in total employment in 2021, demanded by 8.9% of the job market, had a huge job loss in 2020, due to the safety requirements and the government's order to close their businesses. The company was only able to recover about a fourth of the jobs that had been lost during the pandemic by 2021. The top 20 fastest-growing sectors are leisure and hospitality, where the most rapid is that of event promoters, agents, and managers, which is 3.4% per annum. Some of the other sectors that are growing are amusement parks and arcades and performing arts. The growth in the sector lying leisure and hospitality will be contributed by the growing mindset of the people to undertake recreation. The food services and drinking places industry is expected to have the biggest job rise with a forecasted addition of nearly 1.3 million jobs from 2021 to 2031.

The hotel and tourism industry can provide vocational stability to the staff of the retail industry. Skill transferability between hospitality and retail is also high, since both industries are involved in the customer service training, creative problem-solving and presentation skills. Among these abilities, sales presentation, and promotional skills are the most important in these two fields. The career of an individual who is quick to solve problems, and promptly handles pressure and dissatisfaction is a one-way route to success. The sector is expected to experience a strong upward trend after the pandemic with playing sectors like event promotion, amusement parks, and performing arts taking the lead in the growth of the industry. The food service and drinking place sector have been projected to see the largest one going forward and their net growth is expected to hit around 1.3 million jobs by 2031. Restaurant cooks will be the most highly valued with a high 460,000 number of new jobs. Retail has become more virtual because of the transition to online services even though this trend is not likely to be replicated in hospitality. Though e-booking can be used to get hotel stays, and event centers, physical event spaces will still be needed. Moreover, if people prefer online shopping to buying from the local stores then many of the local jobs may be lost like Amazon facilities or closed retail stores. In spite of the problems, the fact that the hospitality industry is booming after the pandemic may make it a better choice for career development. The hospitality industry is on the rise because of the quality of life that the people want. That is the reason why there is an increase in the growth of all businesses pertaining to hospitality, including travel services and restaurants (Watkins, 20).

The study of Anukam and Nwawume (2024) is expected to contribute to the improvement of the academic practice and to offer useful implications to the managers from the e-commerce adopting small and medium businesses in Rivers State, Nigeria. The results published in the study give evidence that the decision to implement a new technology occurs at the primary level, while marketing communication capabilities are of absolute importance at the advanced stage. Besides firm resources, the researcher additionally argues that the adoption of technology can also be influenced by social and mobility factors. Thus, the adoption process should be treated as a series of stages and not just like a process that: you use (online) or do not use (offline).

Digitalization is a breakthrough in the lives of small and medium-sized enterprises as it can be seen as the process of being aware of the fast digital footprints appearing today and the world dealing with them. Through its strategic management approaches, SMEs are to harness digital technologies to bring growth and stronger customer engagement, to reduce operational costs as well as to secure their IT environments. Advanced technology facilitates speed as well as quality for the customer; it also gives broader access to great many people besides the metro cities and allows automation tools to save resources and give personalized services. Global e-commerce platforms offer information to that extent, data analytic helps them come to better choices, digital

marketing activities help them reach and involve people in other forms, and cybersecurity procedures protect sensitive data (Sakinah, 2024).

Impact of the Integration of E-Commerce

E-commerce has been instrumental in changing the operations of SMEs, providing it with capabilities for growth and competition that have hitherto never been achieved. The section critically examines the previous research carried out on the impact of e-commerce on the operations of an SME. It discusses the various effects of e-commerce on revenue generation, market reach, operation efficiency, and competitiveness of the SMEs. From this perspective, this section helps policymakers, business associations, support organizations, and future researchers understand the challenges and opportunities presented to SMEs in adopting e-commerce. It also casts light on what fosters the success of e-commerce implementation and potential barriers that SMEs may face in implementing e-commerce, which will help stakeholders formulate targeted strategies to promote an effective e-commerce ecosystem.

Revenue Growth

The growth of technology in the digital age has prompted more collaborations in businesses of varying industries, such as the e-commerce sector. First and foremost, the process of e-commerce is the channel through which the vast majority of companies nowadays get their goods and services available on the global market. Because the market continually changes, companies constantly have to come up with promotions or a good marketing strategy to be successful in e-commerce. The finding of the study demonstrated that promotional deals are crucial to enhancing the conversion ratio of online transactions in the realm of e-commerce. Companies can effectively prevent this type of challenge on the online platform by providing more and better features to the system user, hence, the user will have more fun and thus more traffic. They were the most successful as they could offer such results as higher traffic, engagement, and conversion when using a combination of techniques and strategies (Purnomo, 2023).

According to Makad (2021), there are many advantages for SMEs when they implement an e-commerce business model. First off, it increases revenue significantly by enabling firms to access a wider global audience. The "Purchase Funnel" is utilized by e-commerce to increase prospects throughout the awareness stage and ultimately increase conversions. Second, by enabling customers to purchase whenever and wherever they choose, the approach improves the customer experience. Cutting-edge resources like live chat and virtual change rooms improve client interaction and boost the effectiveness of service. Thirdly, by doing away with traditional advertising channels and allowing for the automation of numerous operational activities, e-commerce lowers marketing and distribution expenses. By minimizing costs associated with having a physical store, economies of scale are attained, allowing for scalability with little effort. Fourthly, it is difficult to duplicate purchase habits, demographics, and engagement levels in physical stores; instead, e-commerce platforms provide comprehensive visitor tracking and analytics. Last but not least, the e-commerce model speeds up time to market by streamlining supply chains and streamlining operations, which enables goods to reach consumers faster. The option to compare prices and shop 24/7 emphasizes how the digital storefront improves accessibility, convenience of use, and offers a continuous purchasing experience. When these benefits are taken into account, SMEs can view the e-commerce business model as a revolutionary force that gives them a competitive edge in the ever-changing market environment.

In addition, Montenegro (2021) emphasizes that small businesses could consider selling online as a means of building their brand and connecting with customers in addition to generating more income. But for small businesses to succeed, making the switch from traditional business models to an online presence is difficult and demands careful planning, resources, and strategy.

E-commerce influences the SME operation in many dimensions, but more importantly, it has a direct bearing on the revenue growth. Expansion of market reach and increasing sales take place both locally as well as globally through technology and social media. Since internet usage and social media adoption are on the rise, companies can leverage these to expand reach at relatively low promotional costs. While this brings about more and more advantages pertaining to increasing sales and market share, several other advantages come related with e-

commerce to SMEs. Cost savings, new business opportunities, and relations with the dealers and affiliates represent some of the advantages to these organizations. Statistical evidence supports the significant positive impact of e-commerce on the growth of revenue for SMEs (Sudibyo, et.al., 2023).

E-commerce may make it a more potent tool for SMEs in growing their markets and revenue increase. ICT enables businesses to make customer contact more effective without geographical constraints of reaching customers across different areas. In return, SMEs can broaden the range of goods and services in order to meet the wide choice of preferences and needs of customers. Moreover, the e-commerce platform is likely to provide a fast and efficient experience for the consumer who is more liable to bring back purchase transactions or even referrals. Therefore, the successful implementation of the e-commerce strategy by SMEs will pave the way for an enormous increase in sales and revenues to a greater extent than their traditional brick and mortar versions (Alraja, et.al., 2022; and Hossain, et.al., 2023).

Wide research also debunks that Information and Communication Technology (ICT) promotes the development of businesses, especially for SMEs that have ventured into the e-commerce arena (Kyakulumbye & Pather, 2021). It creates value and impacts the business not only in its communicative role but as a multilateral business growth engine. It efficiently communicates with its customers through the online live chat and social media engagement and email marketing, thereby creating satisfied customers who make repeat purchases. E-commerce platforms overcome geographical constraints, allowing access to a much larger customer base than that provided by a single country's national market or even the global market at large.

Consequently, it unlocks sources of revenue and customer segments inaccessible to SMEs using traditional brick-and-mortar operations. ICT allows SMEs to collect valuable information on customer preferences, trends, and competitor activity in order to optimize marketing campaigns, develop a customized offering, and even discover profitable business opportunities. All this increases efficiency and cuts costs as it streamlines various business processes, such as inventory management, customer service, as well as marketing. These online platforms help with such responsibilities by automating some tasks in a bid to minimize human mistakes and enable effective resource distribution. Thus, cost saving means that all this investment can be used in marketing and product development. E-commerce will enhance the convenience and ease with which shoppers patronize their brand, thus boosting brand loyalty, word of mouth, and revenue generation. The growth experienced and profits realized by firms adopting ICT are twice that of firms that have not adopted it (Hossain et al., 2023).

The study of Setyowati et al. (2024) in the context of reasons that influence SMEs towards e-commerce adoption. Applying Integrated Model of E-commerce Adoption in SMEs (IMAES), while discussing factors influencing a company's determinant to adopt online commerce, forms the primary dimensions of this paper. Some of the major positive motivators identified in this regard are the increase in sales because of a larger customer base (buyer behavior), competition strength in terms of entering online markets, and general ease of use and perceived benefits derived from usage of the e-commerce platform. Other significant factors include organizational readiness to adopt digitalized practices and a culture of innovation. Interesting to note is that despite the deterrents involved, such as risk perception associated with online security and the perceived complexity of establishing and running an e-commerce store, the study concludes quite in favor of the persuasive effect of adopting an e-commerce on the performance of a business. A successful SME will be one that reveals superior growth in efficiency, profitability, and effectiveness in marketing. The study concludes by further stressing stakeholder collaboration, which in turn suggests that collaboration between the business owners, the employees, and the support organizations outside of the firm may play a crucial role in overcoming the adoption challenges and maximizing the revenue-generating potential of e-commerce.

A study by Mensah et al. (2023) explored the factors influencing e-commerce adoption by SMEs in China. Their findings revealed some interesting nuances. While a positive business environment encouraged SMEs to believe in the potential benefits of e-commerce (performance expectancy), it did not directly translate into adoption. Conversely, knowledge about e-commerce, even if not directly impacting the perceived benefits, significantly influenced the decision to adopt. This means that whether or not campaigns or sources of information are in place, or how well informed a country or its organizations may be about e-commerce and its potential benefits, much of the uptake also depends on internal organization as well as technological capabilities. The technology itself was not a motivator for e-commerce adoption directly but rather served to reinforce perceived benefits.

Finally, the results confirm that SMEs are more likely to adopt e-commerce if they believe it will improve their performance. For policymakers and support organizations, these findings have important implications. If they focus on developing a supportive business environment, encouraging knowledge of e-commerce, and enhancing internal abilities, they would empower the SMEs to make informed decisions regarding the adoption of e-commerce and, ultimately, reap its benefits.

The Philippines is poised to become a major player in the e-commerce market in Southeast Asia. There are a few key factors driving this upward trend. First, the rising economy of the country combined with improved telecommunications infrastructure and rising internet penetration. Half the population had already begun availing online shopping as early as in January 2020, and this is predicted to progress and increase to 54.7 million by 2024. The COVID-19 pandemic has induced a digital change within people that ultimately affects consumers through pressure to get absorbed on both sides into the platforms. To better utilize the current economic scheme, Filipino SMEs need affordable, dependable logistics services for importing raw materials and the proper distribution of products. Mass shipment can benefit huge firms with the cheap shipping services; small-scale operations of such large firms become burdensome issues to SMEs. Cheap but reliable logistics services on small packages can help the government be able to make SMEs save even more and increase productivity, which means investing more on innovation (Pua, 2023). The study of Pascual (2023) makes meaningful contributions toward a better comprehension of the Philippine small business's digital transformation strategies and the impact of those on business performance. The research investigates the incidence of digital marketing, e-commerce, and digital product/service innovation as a means to delineate this broader global phenomenon of digitalization at the regional level. The role of digitally literate support from technology providers as well as access to resources underlies the study as making a difference in the strategies' success. It further confirms, along with other features, the salutary effects of the digital transformation undertaken on business performance in terms of revenue growth. These outcomes contribute to the growing body of evidence on the benefits of digitalization for small businesses and lay grounds for further research on specific factors responsible for successful digital transformation in the Philippines.

Market Reach

In Kenya, Thiongo (2024) deals in the e-commerce sector the concomitant influence of e-commerce and digital marketing on SMEs' internationalization. The study finds that social media is the most preferred method by 90% of SMEs to "increase their reach. 70% of them incline towards the use of SEO to enhance visibility, and the remaining 60% prefer email marketing", which is a summary of the activities conducted by SMEs with respect to their marketing capacities, the study reveals. Research also shows real data about the big opportunities to impress small and mid-size digital marketing to SMEs. It is not to be surprised if 80% of businesses have witnessed an increase in their sales. They have done brand building through marketing, with the stemming sales results. Fluctuations and changes that have taken place in the world should not deter the companies that have decided to use this tool of marketing.

To better understand their target audience, develop more successful marketing tactics, and provide high-quality content, firms must conduct online market research. In order to make wise selections, it aids in identifying their beliefs, emotions, and thoughts. By lowering friction and raising satisfaction, an understanding of customer behavior can enhance the usability and customer experience of websites. Online market research can also reveal untapped company prospects, including those related to cross-border sales, subscription services, innovative product development, and business models. Businesses can increase their success and find untapped opportunities by devoting time and resources to e-commerce research (Regan, 2024).

Leteltech (2023) with e-commerce platforms, businesses are benefiting greatly from a paradigm shift in the business environment. The most important of them is the global reach that these platforms provide, which removes geographical restrictions and allows companies to interact with clients anywhere in the world without having to open physical locations everywhere. This increases market penetration while also lowering overhead expenses associated with traditional brick-and-mortar retailers by decreasing the need for a large physical infrastructure. E-commerce platforms also democratize market access, enabling small and medium-sized businesses to fight on an even playing field with larger firms. These platforms' personalization features, which are powered by artificial intelligence and data analytics, allow for customized shopping experiences by making

product recommendations based on browsing history and user preferences. Furthermore, the ease of buying from anywhere at any time has spurred the expansion of online retail, which has resulted in a drop in conventional purchasing techniques. E-commerce platforms also revolutionize the way business's function and engage with customers by streamlining supply chain management, increasing inventory efficiency, and facilitating just-in-time production.

Chen, et.al. (2023) presented in their study that SME 1 has made remarkable success in marketing capabilities. Its third generation puts a focus on cross-border e-commerce and applies different marketing strategies according to the different regions. SME 2 is from a traditional industry, so it has a fixed customer base, and also encounters competition; however, currently it is at a transitional point. SME 3 has a professional marketing planning team to promote products, hoping that through product particularity and its advantages, it can create market value. SME 4 persists in observing the consumption patterns of modern customers and turning traditional foods into a new style to penetrate the young market. The results from sales have been better with the owner's domestic market marketing strategies through direct-sale stores, department stores, and airport stations. However, the owner considers that online marketing must be combined with local trends for his product to be more acceptable overseas. In order to attract customers and bring traffic into physical stores, SME 5 made use of virtual and real integration methods like fan groups and Line@. Because of the characteristics of their products, they are also provided on major domestic platforms, but have earned popularity over the internet. The marketing plans for SME 1 and SME 2 are still under draft and determination.

Cost Efficiency

According to Boating, et.al. (2021), the majority of Ghanaian SMEs had embraced e-commerce in some capacity. SMEs in Ghana also choose to implement and utilize e-commerce based on a number of factors, including perceived advantages and disadvantages, IT expertise of owners and management, estimated danger and protection, and perceived suitability with the company's current infrastructure, cultural backgrounds, and beliefs. The study found that high web traffic, the expense of managing and sustaining e-commerce operations, service reliability issues, connectivity failures, and uncertainty surrounding the application of economies of scale and scope in partnership with strategic networks, the preservation of spotless ethical conduct by retail e-commerce firms, and the inclusion of protection and privacy policy statements on electronic platforms of firms are significant obstacles impeding e-commerce adoption among SMEs in Ghana.

The growth of e-commerce has lately turned the environment into a battlefield for either the new entrants or veteran companies, who are under the threat that has their business model transformed. E-Commerce is seen by employers as a platform for the attainment of perfect customer and supplier relationships, as well as, running business operations online. To the extent that it is closely aligned with the e-commerce market, a research by Ndrejoni et al. (2024) in Tirana identify the key issues influencing SMEs adoption of e-commerce. Some of the key factors were the business growth, cost reduction, increase in profitability, operations optimization, business value creation, and customer relationship development which were achieved with the bonuses acquired from cost reduction in distribution and promotion, sharing information, finding new markets, project practice in IT, and the satisfaction of customers.

Financial literacy is a key factor in making sensible and cautious financial decisions. However, a global research indicated that the majority of the world's population lacks financial literacy. This study was done using these principles to assess the degree of financial literacy among 40 MSME company owners in the Municipality of San Jose, Negros Oriental, Philippines. The survey found that MSME firm owners have high levels of debt management, savings account use, and understanding on how to cut expenditure. On the other side, MSME firm owners must enhance their entire personal financial management, long-term planning, disaster preparedness, and risk management. The study suggests developing a thorough financial training program, discussing best practices, and providing opportunities for financial consultations. Improving financial literacy can help microbusiness owners better manage their finances, reduce financial stress, and increase the chances of their business's success. (Bancoro, 2023).

Profitability

E-commerce profitability is the difference between revenue and expenses from online sales, and it measures an

online business's ability to regularly turn a profit through digital transactions and operations. Sales volume, average order value, customer acquisition and retention, and gross profit margin are important variables that affect the profitability of e-commerce. Strategies that can improve profitability include targeted marketing efforts, efficient inventory management, and customized customer experiences. E-commerce profitability calculations are essential for monitoring the company's financial situation, revealing revenue streams, and facilitating better decision-making. It also helps in pinpointing areas that require improvement, like raising prices, cutting down on product costs, or improving marketing efficacy. Additionally, the profitability of e-commerce helps with strategic business decisions, better pricing selections, industry comparisons, and acts as a metric to draw in creditors and investors. Comprehending and maximizing e-commerce profitability is crucial for long-term expansion, tactical planning, and proving the company's financial stability to outside parties (Simplicity, 2023).

In the analysis of Indonesia's e-commerce sector, Sudarman, et.al. (2024) questions whether or not social customer relationship management (SCRM) is directly linked to customer loyalty and consumer retention. They express that SCRM builds customer satisfaction and loyalty and is helpful in the focus of the customer loyalty. They further delve into the factor of different generations and how their connection is connected to the CRM-customer retention relationship. The outcomes demonstrate that SCRM weaves itself as a supportive way of heightening client satisfaction and making committed online purchases, with this in turn permitting the store's profitability and loyalty. A point that constantly rings and demands visibility is the contrast in their perspectives and behavioral traits of diverse groups in these digital times.

A recent study conducted by Ibrahim et al. (2024) investigated the profitability of SMEs in Indonesia. They applied a measure called "return on assets ratio" to analyze their financial performance. On the other side, the study pointed out that the average Indonesian SME generates only a 1.1% return on assets, which is quite low. By the same trend, the study also showed that larger SMEs are generally more profitable. Besides, the study contradicted the widely held belief that older SMEs would be more profitable than younger ones.

PI or profitability index is a simple yet effective financial tool to determine the viability of an investment or a project by analyzing the difference between present worth of the respective cash flow and price tag of the investment. It reveals that at higher PI, there is a possibility of receiving more returns than the actual amount invested. The performance indicator (PI) includes Gross Profit Rate and Return on Sales in order to show how successful a SMEs owner is in making and selling his or her goods. Consequently, a high GPR indicates better control over expenditure. Based on the PI computations for SMEs in Sorsogon City, the study found high performance on the Gross Profit Ratio (GPR) and the Return on Sales (ROS). A high or relative GPR of 21 percent demonstrates that cost control and possibly even pricing strategies may be competitive. On the flow dependency, the study made an ROS of 7 while the impact on social justice-based policy attained a score of 4. This is 35% means that each of those SMEs is earning PHP 7 for every PHP 100 of sales revenue. 35 by net profit, this shows that most of them are prudent in the manner they handle their resources and expenditures. This implies that SMEs affected in Sorsogon City are operating at a very good profitability level, which could be testified to the ability to control costs of productions and its revenues. The information given here could be helpful for the evaluation of the financial situation of such enterprises and also would be helpful for investors and stockholders in the moments of investment of new projects or expansion of the already existing ones (Sy, 2024).

Factors that hinder e-commerce adoption among SMEs

Distachain (2023) praised the positives while discussing the downsides of e-commerce incorporated into the SMEs. It specifically mentions that e-commerce technologies can reach further markets, improve supply chain management, and reduce costs. Nonetheless, it also argues with the fact that the challenges of coping with technological difference, changing the business model, and solving some technical problems are there as well. They look with optimism at the transformation of e-commerce in SMEs, grounded on the evidence that happened in Canada of their increased revenue and decreased costs. It as well expresses the possibility for developing countries such as North Macedonia, where it is consensus over the usage of ICT for organizational performance to grow in the future. Thus, SMEs will transform by e-commerce, for example, the technology they use to increase business efficiency, productivity, and competitiveness. This part shows that it is crucial to derive data-

based strategic plans and that the quest for new winds should drive SMEs to undergo the digital revolution that leads to their prosperity and growth.

In the speedy changing financial system, SMEs have encountered difficulties, inclusive of a decline in demand and profits in the course of the epidemic. Even with government help in 2020, SMEs will retain to confront obstacles down the road. They account for round half of profits within the UK non-public area and 60% of jobs globally, making up a giant bite of the global financial system. SMEs want to locate ways to bolster their brand positioning and gain a competitive aspect if you want to prosper. Keeping up with digitization offers a hassle due to the fact maximum groups have become increasingly computerized. Tools and structures together with cloud computing, e-trade selling competencies, and virtual advertising processes are on hand and low- priced for SMEs. Another trouble going through SMEs is worldwide enlargement due to the fact that they often lack the investment important to go into new markets. SMEs can evaluate the economic and regulatory ramifications of an expansion, customize their goods and services to goal regions, and perform in-intensity market research before going international. For SMEs to have a in a position personnel capable of fostering innovation, productiveness, and expansion, talent acquisition is essential. By utilizing legal tech services and software in conjunction with lawyers, SMEs can take care of criminal matters and probably store as much as £8.6 billion yearly (Warner, 2023).

The growth of the e-commerce sector has been instrumental in the simultaneous rise of cyberattacks, which, in turn, has prompted the security of online platforms. The personal information of customers and employees is a matter of high sensitivity, organizations are required to give the top priority to data protection to secure their financial stability and maintain customers' trust. Violations of the Data Protection Act might result in profound impacts, for instance, losses in the financial department as well as damages to the public's confidence. The adoption of blockchain could be one of the potential solutions to these problems in the e-commerce field. Blockchain as one of the potential measures that helps to accuracy in fraud detection and investigation by writing the transactions, and the related data in an immutable and clear ledger. This initiative traces the transactions and consequently thwarts the occurrence of fraudulent activities. By means of blockchain cryptocurrency, the transactions are recorded featuring the sender's address, recipient's address, amount transferred, and timestamp hence every token purchase is then assured of a trustworthy and verifiable record of all transaction information (Albshaier, et.al., 2024).

SME business owners struggle with the application of e-commerce strategies when promoting their products. The use of e-commerce methods and solutions, however, is the way through which these businesses might care much for their customers and therefore, they can truly win in the end. One very clear way is for Small and Medium Business Enterprises (SMEs) business owners to use “social media” and create websites to introduce their products and generate more client satisfaction and very good sales. The positive effects of the release of this human being’s intellect would mean having the chance to contribute to employment, promotion of rural areas, provision of social amenities, and welfare (Amalga, 2020).

GunaputraWardhana (2022) Online purchasing and selling, or e-commerce, has several advantages for businesses of all kinds. It increases worldwide reach, lowers expenses, permits round-the-clock operations, and expedites procedures. Consumers benefit from quicker deliveries, better service, and information access. Businesses may now make well-informed decisions at the right moment, and geography is no longer as restrictive. Particularly benefited are SMEs, which are able to overcome resource constraints and obtain access to international markets. However, adoption is influenced by elements including perceived utility, simplicity of use, and trust. The environment surrounding e-commerce is also influenced by more general social, legal, economic, political, and technological issues (SLEPT). To get the best results, managers must continuously watch these "waves of change" and modify their plans in response, paying particular attention to legal and technological advancements. E-commerce, when used wisely and deliberately, may lead to more revenue growth, expanded markets, and more efficient operations for enterprises.

The e-commerce sector has been making headlines with its remarkable growth all over the world thanks to its convenience and accessibility this, in turn, has made shopping online become more popular. Nevertheless, the business is confronted with some challenges including technical limitations, return policies as well as counterfeit

products. In order to make it a reality, it is important to find out its advantages and drawbacks and discuss the ways of doing the latter. The results of the research indicated that affordable advertising and marketing, product diversity, and global reach are the main advantages of e-commerce. On the other hand, technological innovations, return and refund policies, and counterfeit products are the major problems. Overcoming these challenges by means of government compliance checks, establishing more meaningful relationships with delivery partners, and adopting stronger data privacy and security policies can be the reason e-commerce sector is successful (Gupta, et.al., 2023).

Logistical challenges concerning archipelago also affect the growth of e-commerce in the Philippines. Because of the different territories and islands, delivery time may be slow and costly to transport. To address these issues, the government has been establishing programs to connect the three parts of the country, namely: Luzon, Visayas, and Mindanao. These are also critical for furthering cross-border trade and facilitating the growth of SMEs across borders. Inadequate policies and regulations in the logistics industry could discourage private investments and innovation. Current regulatory frameworks should henceforth be audited to ensure these frameworks can promote the development of e-commerce by targeting specific needs of small parcel delivery providers. In this regard, the government may spur the private sector in giving impetus to change in the logistics sector through regulation simplification and an enabling business environment. Legal and regulatory frameworks must also keep pace with the changes in the face of e-commerce. These include security and safety of electronic transactions, rights for consumers, and ensuring goods move smoothly. The government can create an enabling environment for e-commerce businesses by developing advanced data management capabilities and by supporting the different business models (Pua, 2023).

According to Capistrano et.al (2023), despite rising usage of information and communication technologies (ICTs) to meet increased demand for online services, some organizations are still unable to take advantage of all the benefits. This is mostly due to varying levels of ICT adoption and awareness for what ICTs can achieve. The data were analyzed from the 997 respondents using structural equation modeling (SEM) across websites and mobile apps, and retail, banking, food services and tourism booking organizations in the Philippines. It was revealed that there is a positive influence of self-efficacy and motivations as well as interesting insights regarding the factors influencing attitudes and intentions using e-commerce platforms.

Strategies on Enhancing E-commerce Adoption among SMEs

E-commerce growth has, if anything, laid the foundation for a phenomenon that is global in nature, where almost all the governments and trade associations in the world today are acknowledging the significance of the role that SMEs have to play in the digital marketplace. Some further schemes and activity plans have been instituted in a bid to make SMEs use e-commerce tools and hence optimize this potential-reality gap.

First, digitalization programs. Many governments are rolling out programs that are aiming to equip SMEs with digital skills, which are indispensable for e-commerce. Such programs could involve training on online marketing, website development, and even data analytics. For example, the World Bank's Digital Transformation for SMEs Program, which provides access to resources and training for SMEs in developing countries in order to take up digital technologies and related applications to offer solutions in e-commerce (World Bank Group, 2022).

Second is financial support. Some governments are aware of the financial constraints the SMEs have in opening e-commerce sites and hence come up with grants, subsidies, or access to low-interest loans to support such e-commerce businesses. For example, Singapore's implementation of the Go Digital Grant provides SMEs with an incentive fund for the adoption of e-commerce solutions, such as website development and digital marketing campaigns (InfoComm Media Development Authority, 2024).

Third, regulatory reforms. Governments are making attempts to rationalize regulations and make the setting more e-commerce friendly. This could range from simplifying the tax regime for online businesses to developing guidelines on data privacy. To illustrate, the European Union's Strategy on the Digital Single Market is set on the ambition of removing barriers to e-commerce within the EU and creating an online business environment

with a harmonized regulatory regime, which will in return lead to increased efficiency in the use of resources (European Commission, 2022).

Fourth, e-commerce platforms. Many industries associations work with e-commerce platforms to offer discounted fees or preferential access to tools and resources for SMEs, for example, the Netpreneur Program of Alibaba Group have provided the training and resources to perfectly suit the success of SMEs on their own global e-commerce platform (Alibaba Business School, 2017).

Fifth, mentorship and networking. Industry associations can provide SMEs with mentors and entrepreneurs with experience who can guide and support the small entrepreneurs in handling the e-commerce landscape. For instance, the Small Business Retailing Council by the National Retail Federation can provide opportunities for networking and learning infrastructures to small retailers interested in venturing into e-commerce (NRF, 2024).

Finally, knowledge sharing and advocacy. Industry associations may as well conduct research and prepare reports on the trends, best practices of e-commerce for SMEs. Besides, be involved in advocating for the embarking governments to formulate the policies that favor the development of SME e-commerce. For instance, the International Trade Centre's eco-monitor is a portal offering reports, data, and resources on worldwide e-commerce trends hoping to aid developing countries (United Nation Trade & Development, 2024). Those are but a few examples, and the specific initiatives and programs may vary from country to country or region. However, this is very much the trend across all countries-governments and industry associations have been putting in the effort to close that digital divide and make SMEs large and small better able to ride the e-commerce wave.

Hopstack (2023) delves into different order fulfilment costs and some of the ways in which these costs can be minimized. It underscores the notion that fostering awareness of these costs and being proficient in these costs is the rudiment of increasing the level of profitability and efficiency. They spell out the verification that order fulfillment costs consist of which types, the setup fees incumbents, labor costs, inventory costs, kitting fees, machine costs, material costs, shipping/freight costs, software costs, and fixed costs, which are the main types of those costs. On the other hand, it also gives away eight main strategies to reduce these listed costs, such as worker productivity improvement, automating the trivial operations, multi-carrier shipping and freight, non-linear cost scaling, layout and space optimization, optimizing packaging, inventory optimization, and channel diversification and inventory distribution.

Moreover, Hopstack (2024) presents methods that are critical for firms interested in gaining improvement in their procedures and customer satisfaction. The treatment of the topic of speed, which means streamlining processes, reducing the time of the order cycle, and delivering the order on time, is the most important. They point out that in order to identify areas such as fulfillment costs, order cycle times, and labor productivity, companies need to be able to measure key performance indicators (KPIs). They also mention ways of improving the order fulfillment process and these are rearranging the warehouse area for more space, introducing real-time inventory systems, simplifying the order picking process, effective packaging and shipping, making use of technology to track orders, as well as, establishing efficient communication means. The study says that with the help of the recommendations, companies could be more efficient and make a happy customer because of their higher priority.

A study in 2022 by the Philippine Institute for Development Studies (PIDS) indicates that it is industry bodies, as much as the Association of South East Asian Nation-Business Advisory Council (ASEAN-BAC), that have been keen to work closely with governments in moving towards higher e-commerce utilization by small and medium-sized enterprises across Southeast Asia. These cooperation arrangements are likely to be in two areas. One is the development of e-commerce guidelines, such that the ASEAN-BAC collaborates with governments and comes up with clear and easily accessible guidelines in the e-commerce space for SMEs. These guidelines may concern issues such as data privacy, consumer protection, and online payment regulations. Second, training programs. With the observed gap in the digital skills of these SMEs, the role that ASEAN-BAC can be involved in would be to create or give prominence to training programs that will equip the SMEs with knowledge and tools that help them effectively operate in a competitive e-market. Such programs could include aspects in

marketing, online sales, logistics, and customer service for the digital era.

The rapid growth of e-commerce in the Philippines brings immense opportunities to SMEs in terms of expanding their markets and customer base.

Despite this, there exist a number of constraints to adopting e-commerce solutions among SMEs, like digital skills, access to finance, and regulations. Government initiatives and programs by industry associations are therefore very important in helping the adoption of e-commerce among SMEs.

In 2022, the Philippine government rolled out an "E-Commerce Philippines 2022 Roadmap" under the DTI. The roadmap envisions the increase in e-commerce's contribution to the country's GDP by making an enabling environment for online businesses and the government acting to unlock the potentials of e-commerce towards driving national economic growth. In particular, the Department would like to increase the adoption of e-commerce among the SMEs by acknowledging the SMEs as the backbone of the Philippine economy. DTI is working hard to ensure that e-commerce is made accessible and deemed helpful for the SMEs. Furthermore, the DTI fully understands that for e-commerce to really take off, a clear and stable regulatory environment is necessary. The same year witnessed the issuance of Joint Administrative Order 22-01, which reiterated regulations for online businesses that ensure a level playing field and uphold ethical business practices to protect consumers against fraudulent online transactions. This will foster consumer trust and confidence in the e-commerce platforms, thus encouraging wider adoption (ITA, 2024).

Aside from the roadmap, the DTI had implemented the Big Brother-Small Brother Digitalization Project to support MSME digitalization. This project focuses on helping the bigger one's mentor and assist SMEs in getting their acts together toward digital transformation. It involves digitalizing their supply chains, which is key in the success of e-commerce (Crismundo, 2023). The Department of Information and Communications Technology (DICT) is considering a customized e-commerce platform for MSME development. These may bring about some benefits in the integration or establishment of SMEs to an e-commerce platform in various aspects, specifically giving them easier access to the large customer base online and decreasing the cost associated with creating and maintaining an independent e-commerce platform, and integration to the important e-commerce tools in marketing and logistics services (YCPS Marketing & Communication Group, 2022). Government initiatives, coupled with increasing interest in e-commerce, pave the way for SMEs in the Philippines to reap profits from online sales and hence become major players in the country's digital economy.

Theoretical Framework

This research utilized the Diffusion of Innovations Theory by Everett Rogers (1962) to ascertain the current state of SMEs in the province of Albay about the respondents' profile and e-commerce adoption. This theory describes how innovations, new ideas, and new technologies make their way through society and are embraced. In the context of researching how new technologies-like e-commerce-are adopted by certain communities or groups, this is especially pertinent. This theory can help understand the demographic and psychographic characteristics of the respondents. It considers factors such as innovativeness, which categorizes individuals based on their willingness to adopt new technologies. By examining the profiles of respondents, it identified the types of businesses, number of years in operation, and number of years SMEs in Albay adopted e-commerce. It also aids in analyzing what aspects of e-commerce contribute to the business and what motivates them to adopt it. Readers can obtain a thorough grasp of the current situation of SMEs in Albay by using the theory, which will illuminate the traits of these companies as well as the variables impacting their adoption of e-commerce.

Using this data to create focused marketing and support plans for e-commerce projects across the province can be very beneficial. Relating Diffusion of Innovations Theory to the Status of SMEs in Albay in objective 1, which involves profiling SMEs in Albay, provides a baseline understanding of the current status of these businesses. By examining the status of the SMEs in terms of profile of the establishments and e-commerce adoption, it can identify specific areas where the Diffusion of Innovations Theory can be applied.

The Social Cognitive Theory by Alber Bandura (1986) places a strong emphasis on how modeling, imitation, and observational learning influence behavior. It implies that people pick up knowledge by watching other

people and the results of their activities, which affects how they make decisions for themselves. This theory was used to investigate the impact in the integration of e-commerce into SME operation such as revenue growth, market reach, cost efficiency, and profitability, objective number 2.

The Resource-Based View (RBV) Theory, developed by Jay Barney in 1991, emphasizes the company's assets and abilities as sources of competitive advantage. It implies that resources that are scarce, valuable, unique, and non-replaceable provide a long-term competitive edge. By analyzing the internal resources and skills of SMEs in Albay and how these characteristics affect the adoption of e-commerce, this theory was applied to identify the factors that hinder e-commerce adoption among SMEs in Albay. It aids in locating the precise resources that either support or obstruct e-commerce integration.

DiMaggio and Powell's Institutional Theory, published in 1983, investigates how organizations adapt to the norms, regulations, and institutional constraints present in their surroundings. It highlights how external factors affect the architecture and behaviors of organizations. By examining the external institutional pressures that SMEs in Albay experience concerning adopting e-commerce, this theory was applied in objective number 4, proposing an actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the province of Albay. Understanding how laws, rules, and social norms affect the e-commerce ecosystem is helpful, and it can assist guide suggestions and tactics for support groups and legislators.

Drawing on the insights of the Diffusion of Innovations Theory, Social Cognitive Theory, Resource-Based View, and Institutional Theory, this study proposes the J-E-F-F Theory to analyze the impact of e-commerce on SMEs. J stands for Justification. This dimension is based on the Diffusion of Innovations Theory and the Resource-Based View. It tries to investigate the factors that impel SMEs toward the adoption of e-commerce. This also includes the perceived benefits by taking into consideration how SMEs look forward to knowing the effects of e-commerce on the improvement of revenues, market reach, cost efficiency, and profitability. The resource fit which analyzes how existing internal resources and capabilities adhering to the RBV Theory and hindrances affecting justification for e-commerce adoption. The second dimension is 'E', which means Environment. Insight from Social Cognitive Theory and Institutional Theory will enter here. This will allow an exploration of the external context that shapes SME decisions about e-commerce adoption, including observational learning investigating how SMEs learn from observing other firms' use of e-commerce, bringing out the experience (Social Cognitive Theory), and institutional pressures analyzing how government regulations, social norms, and industry expectations influence SME adoption of e-commerce. F for Facilitation. This dimension recognizes that most e-commerce adoptions may need external support, which goes beyond these underlying theories used but very essential to a comprehensive framework. This would include government initiatives, analysis of programs and policies designed to support SME digitization and e-commerce adoption, and programs of industry associations that examine the possibility of how the industry association could provide training, resources, and mentorship for SMEs exploring e-commerce. While the last F stands for Fit. Like Justification (J), this dimension focuses on getting a good fit, but on a continuing basis. It emphasizes that the continuing need for adjustment and improvement of strategies in electronic commerce. Finally, monitoring and evaluation-this requires the regular effective review of the e-commerce strategy and making adaptations to it through the use of data and changing market conditions-and upskilling and reskilling, where one ought to ensure that the workforce is imbued with the requisite digital skills to navigate an evolving e-commerce environment. This theory is incorporated to objective number 3 in which the factors that hinders in adoption of e-commerce were discussed.

The benefits of J-E-F-F Theory are holistic approach, actionable insight, dynamic framework. The framework considers both the internal and external factors that impact SMEs' adoption of e-commerce. In analyzing this J-E-F-F Theory, researchers and policy maker articulation develops a specific strategy to support e-commerce adoption by SMEs and admits that e-commerce strategies are never fixed but require continuous adjustment for improvement in order to attain a long-term effect. Although inspired by a myriad of available theories, the J-E-F-F Framework has managed to stand out as offering a better and more comprehensive lens on the e-commerce impacts on SMEs. Looking into the justifications of adoption, the influence of the external environment, the need for facilitation, and fit adjustments as the events unfold, this framework can, therefore, also turn out to be a guiding principle in future researches and practical applications toward supporting the e-commerce journey of SMEs.

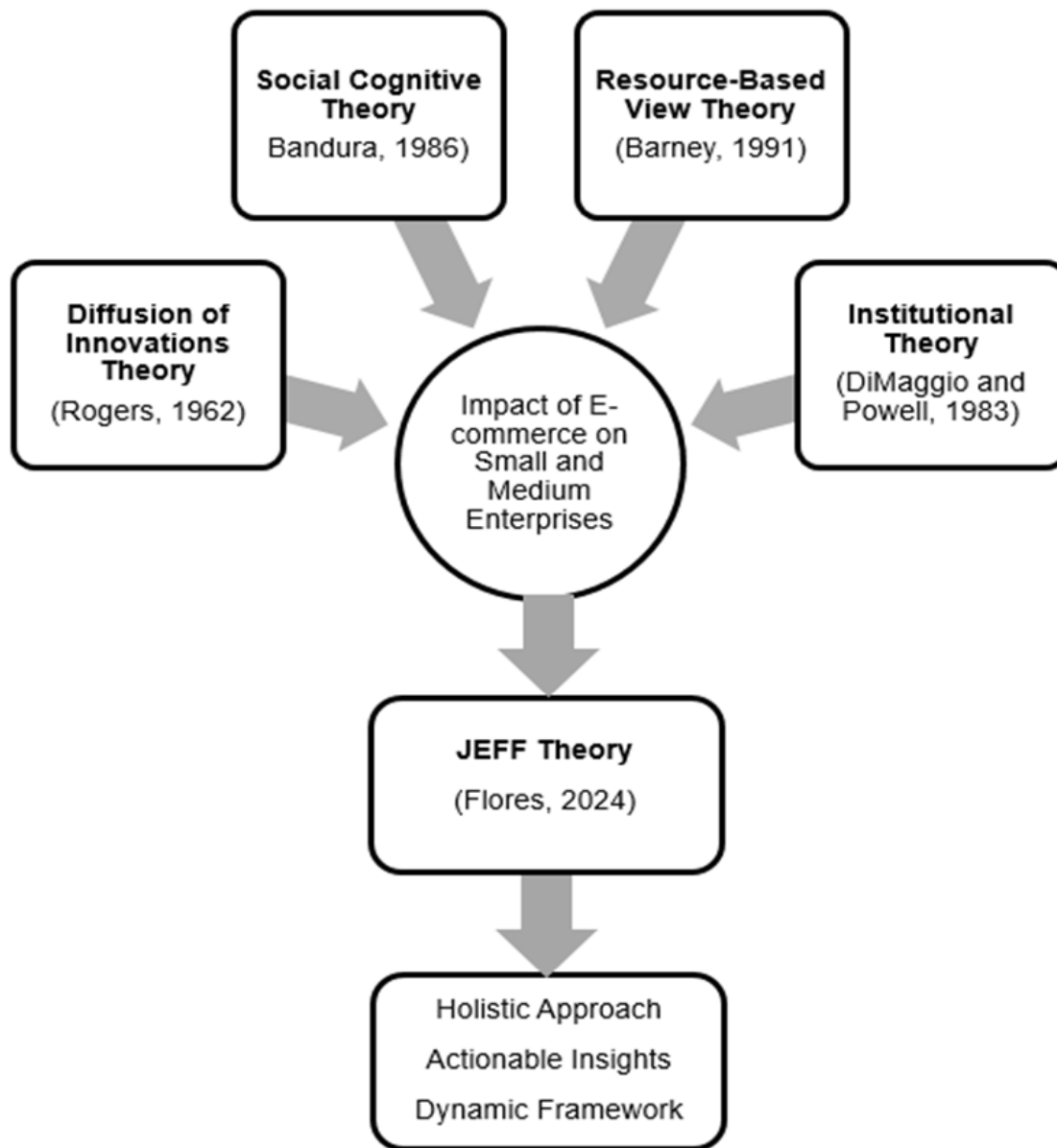


Figure 1. Theoretical Paradigm

Conceptual Framework

This study applied the Context, Input, Process, and Product (CIPP) Model by Daniel Stufflebeam, a thorough evaluation framework for determining and enhancing the efficacy of educational interventions and programs. The concept is flexible enough to be applied in a variety of situations, including business and organizational settings, even though it has historically been utilized in education.

The context was the impact of e-commerce on SMEs in the province of Albay. E-commerce for SMEs in Albay is timely as digital transformation is changing the business landscape worldwide. But for SMEs in rural and developing areas, this shift poses unique challenges. In Albay, SMEs face obstacles that prevent them from fully harnessing the potential of e-commerce. This context evaluation aims to address these pressing needs by looking into the specific situation of SMEs in Albay. The study identifies the gaps between the opportunities of e-commerce and the reality of local businesses. By understanding the socio-economic, infrastructural and technological context, this research sets the stage for a focused look into how digital commerce can be a tool for local growth.

Albay Province, with its immense natural resources and cultural legacy, is an important factor for Small and Medium Enterprises (SMEs). However, the province suffers socio-economic and technological hurdles, such as

natural catastrophes, poverty, and a lack of access to financial institutions. Despite progress, infrastructure development remains a major concern, especially in rural regions. E-commerce infrastructure is still being developed, and internet access is restricted, particularly in rural regions. The government has created measures to assist SMEs, but further help is required. Lack of information make it difficult to obtain finance. Internet security and trusts may be also be hampered in adoption of the e-commerce by the SMEs. To provide better conditions for SMEs in Albay, a thorough investigation of these issues is needed to create a conducive environment.

The inputs were to determine the status of SMEs in the province of Albay in terms of the profile of the respondents and e-commerce adoption of the respondents, investigate the impact of the integration of e-commerce into SMEs operations such as revenue growth, market reach, cost efficiency, and profitability, and identify the factors that hinder e-commerce adoption among SMEs in Albay. The input evaluation looks into the resources, strategies, and plans to integrate e-commerce into SMEs in Albay. This phase focuses on three main inputs. First, SMEs. This is to understand the baseline conditions including the technological readiness and digital practices of SMEs in the region. Second, the impact of e-commerce integration. The research will look into how e-commerce affects different dimensions of SME performance such as revenue growth, market reach, cost efficiency and profitability. These indicators will show the tangible benefits of e-commerce adoption and will provide a clear picture of its role in scaling businesses. Third, barriers to adoption. The study will identify the factors that hinder e-commerce integration such as lack of digital skills, poor internet infrastructure and financial constraints. By knowing these barriers, policymakers and support organizations can develop interventions that are relevant to the local context.

The study highlights the importance of digital skills for SMEs in Albay, including basic computer skills, proficiency in operating computers, software, and internet navigation. It emphasizes online safety, SEO, social media marketing, payment gateway integration, and inventory management. This comprehensive understanding can help develop evidence-based recommendations for digital transformation.

The processes were formulation of the survey questionnaire, testing of the survey questionnaire for validity, data gathering, tabulation, analysis, and interpretation of the data gathered. The process evaluation involves the detailed steps taken to conduct the study to ensure the research is methodologically sound and relevant. This phase includes the following. First, the formulation of a survey questionnaire. A survey was designed to gather comprehensive data on SME e-commerce practices, challenges, and impacts. The questionnaire was tested for validity, reliability, and cultural relevance to the Albay context. Second, testing for validity. The survey was pilot-tested to ensure that the questions capture the intended information. Adjustments were made based on pilot feedback to improve clarity and accuracy. Data was collected through surveys distributed to SME owners and managers across various industries in Albay. The sample covered a wide range of businesses to capture the diversity of the local SME sector. Fourth, tabulation, analysis, and interpretation. Once the data was collected, it was tabulated and analyzed to conclude. The interpretation phase linked the results to the broader context to provide insights into how e-commerce affects SME performance.

The product evaluation was the proposed actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the Province of Albay. This offers an insightful plan of action for creating an atmosphere that is favorable for SMEs to prosper in the changing global scene of digital commerce by tying the findings to concrete initiatives.

E-commerce adoption by SMEs in Albay can lead to positive outcomes such as increased sales, increased revenue, and access to domestic and international markets. Online platforms also help build brand awareness, streamline operations, reduce overhead costs, and create jobs. However, actual outcomes may vary depending on industry, SME size, and digital literacy. Stakeholders can make informed decisions about strategies and policies, such as providing training programs, investing in internet connectivity, offering financial incentives, providing mentorship, and creating a supportive regulatory environment. By understanding these challenges and opportunities, policymakers and stakeholders can work together to create a thriving digital economy in Albay.

By using the CIPP model in this study gives us a clear and complete way to see how e-commerce affects small and medium-sized businesses (SMEs) in Albay. This information will be really helpful for people who want to

help SMEs grow in a world that's quickly becoming more digital.

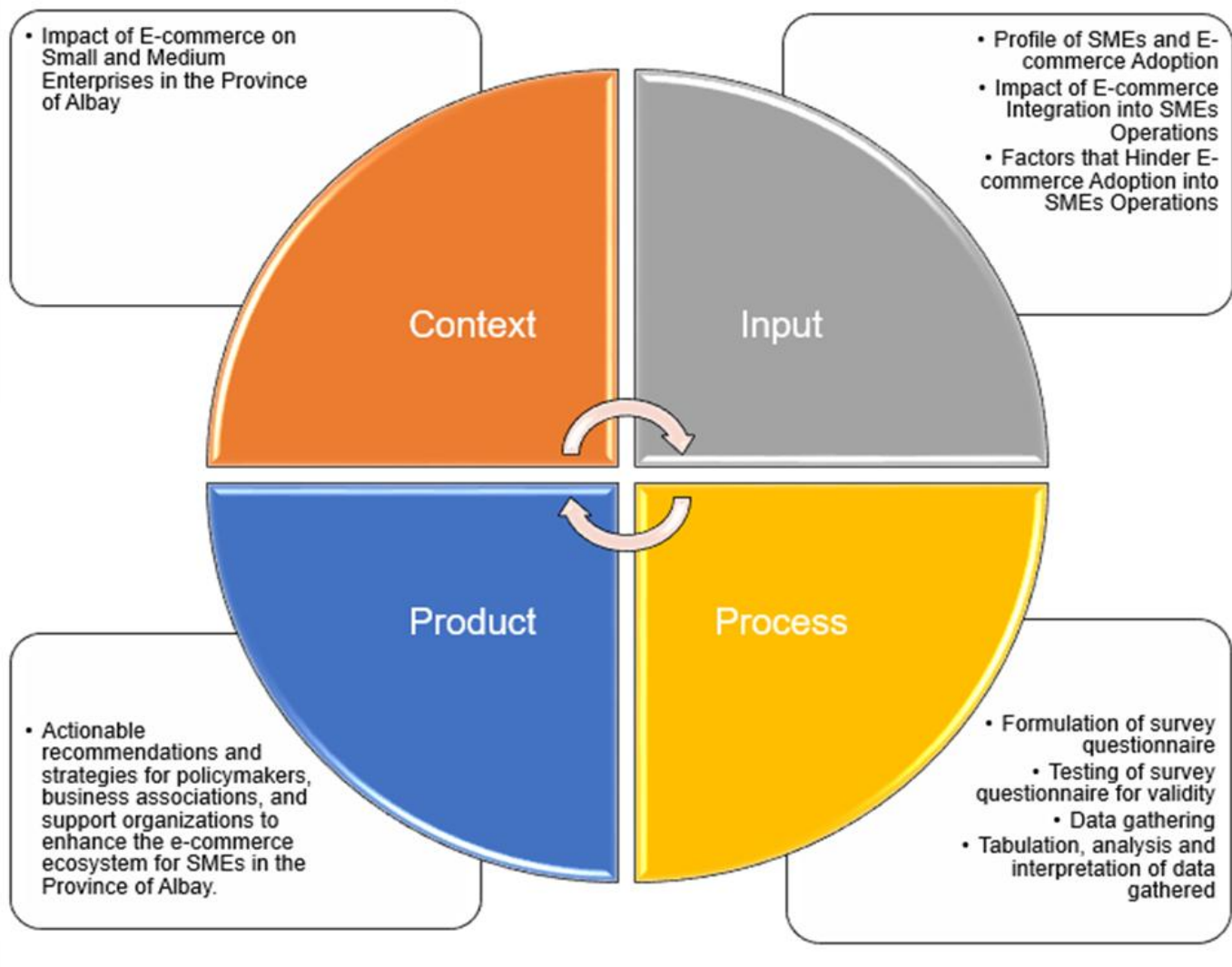


Figure 2. Conceptual Paradigm

Scope and Delimitation

This study aimed to comprehensively examine and assess the effects of e-commerce adaption on the local SMEs sector within the province of Albay. It provides a holistic understanding of how e-commerce influences the economic, technological, and socio-cultural aspects of SMEs in the region, and to draw insights that can inform policy, strategy, and best practices for SMEs development. Specifically, aimed to determine the status of SME in the province of Albay, in terms of profile of the establishments and e-commerce adoption of the establishments; investigate the impact in the integration of e-commerce into SME operation, such as revenue growth, market reach, cost efficiency, and profitability; identify the factors that hinder e-commerce adoption among SMEs in Albay; and proposed actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the Province of Albay. The respondents of the study were managers and employees of selected SMEs in the province of Albay. The research was a two-year period, from 2023 to 2024.

This study is specifically focused on the impact of e-commerce adoption on SMEs in the province of Albay. It does not look at other parts of the region or different types of businesses. The study is limited to managers and employees of selected SMEs in Albay. It does not include individuals from other organizations or institutions. The research is confined to the geographical boundaries of the province of Albay. Findings may not be generalizable to other regions or countries. The study covers a two-year period, from 2023 to 2024. Data collected beyond this timeframe may not be included in the analysis.

Significance of the Study

The effective communication and utilization of research findings for the improvement of the SME ecosystem in the Province of Albay is contingent upon a recognition of the research's value to different stakeholders. The researcher identified the following:

Small and Medium Enterprises. The importance of this study lies in its firsthand examination of how e-commerce affects Albay's SMEs. The results offer practical suggestions for enhancing their sustainability, income production, and competitiveness in the digital era. SMEs can improve their E-commerce adoption, overcome obstacles, and maximize their growth strategies by utilizing the suggested solutions.

The findings of this study offer a wealth of opportunities for SMEs in Albay to enhance their operations, expand their market reach, and ultimately drive growth and profitability. SMEs can leverage the study's insights to develop tailored e-commerce strategies that align with their specific needs and goals. By implementing the recommendations outlined in the study, SMEs in Albay can position themselves to thrive in the digital age, increase their competitiveness, and contribute to the economic growth of the region.

Policymakers and Government Authorities. This study has substantial implications for Albay government officials and policymakers. The study provides useful information for policymakers to consider when assisting SMEs in implementing e-commerce. Having a clear understanding of the obstacles and effects facilitates the development of focused policies that support the development of technological entrepreneurship, economic expansion, and employment opportunities.

This study can help Albay policymakers create a conducive environment for SME growth and e-commerce adoption by identifying critical investment areas like digital infrastructure, training programs, and financial incentives. It can also advocate for policies promoting e-commerce, such as tax incentives and improved digital infrastructure, contributing to the province's economic development.

Department of Information and Communication Technology (DICT). Understanding the needs and gaps of SMEs in the existing infrastructure, DICT can develop a dedicated e-commerce platform that will provide relevant training programs to better equip these businesses toward online success. The research may also give impetus to how initiatives aimed at improving the internet connectivity and digital infrastructures within Albay shall be developed.

The study can assist the DICT in identifying areas for improvement in digital infrastructure, such as internet connectivity, digital literacy training, and cybersecurity. It can also help allocate budgets effectively, facilitate collaboration between government agencies, private sector organizations, and academic institutions, and design targeted training programs to enhance digital skills. This will accelerate Albay's digital transformation.

Department of Trade and Industry (DTI). The research provides important insights into the DTI's refining of support programs on SMEs going into e-commerce. The assessment of factors that prevent non-adoption, in some sense, would allow DTI to design financial aid, mentorship programs, and regulations that address more specific issues of SMEs. In the same breath, the research can guide assessment of the effectiveness of existing initiatives and formulation of new policies toward encouraging e-commerce adoption and streamlining its adoption process for SMEs. This research therefore enables the DICT and DTI to help SMEs unlock the potentials of e-commerce for the growth of the digital economy of the Philippines with constructive data.

The Department of Trade and Industry (DTI) can significantly benefit from the findings of this study by leveraging them to refine its policies, programs, and initiatives aimed at supporting SME development and e-commerce adoption in Albay and other regions.

Support Organizations and Development Agencies. This study is important for businesses that assist and develop SMEs, like business development centers, training facilities, and incubators. It gives them the knowledge they need to create more specialized mentorship programs, capacity-building projects, and resources that address the obstacles to the adoption of e-commerce that have been recognized.

This study can help support organizations and development agencies in Albay improve their programs and initiatives, contributing to the province's economic growth. It can identify SMEs' specific needs and challenges, design targeted interventions, facilitate collaboration, provide a baseline for monitoring progress, and advocate for policies promoting SME development and e-commerce adoption.

Local Community and Consumers. The study has significance for the local community and customers, notwithstanding its indirect effects. A strong SME sector supports the local economy by boosting the availability of goods and services on digital platforms and possibly generating new job opportunities. A highly competitive and diversified market benefits customers.

This study highlights the positive impact of SMEs in Albay, highlighting job creation, reduced unemployment, and improved economic well-being. E-commerce offers a wider range of products and services, empowering individuals and communities to start businesses and create social impact. It also allows consumers to shop online, promoting digital technologies and overall well-being.

Researcher and Future Researchers. This study is beneficial to the academic community because it adds to the body of knowledge already available on the effects of e-commerce in a particular geographic setting. The results can serve as a foundation for additional research, and the insights gained can influence scholarly discourse on the relationship between technology and SMEs development.

The study can also identify research gaps, highlight emerging trends in e-commerce and digital innovation, and provide insights into effective methodologies. It can inform policymakers and encourage collaboration across disciplines, paving the way for future contributions to the field of e-commerce and digital innovation in Albay.

Definition of Terms

To understand the terms used in this study, here are the definitions translated to conceptual and operational terms:

Impact. The force of impression of one thing on another (Merriam-Webster Dictionary). In the study, "impact" refers to the measurable changes or consequences experienced by Small and Medium Enterprises (SMEs) in the Province of Albay as a result of the integration of E-commerce into their operations.

E-Commerce (electronic commerce). Commerce conducted via the internet (Merriam-Webster Dictionary). In the study, "E-commerce" specifically refers to the digital transactions, online trading, and electronic business activities conducted by SMEs in Albay, encompassing activities such as online purchasing, sales, and electronic financial transactions.

Small and Medium Enterprises (SMEs). Small-size enterprises are those having 10-99 employees with an asset of more than 3 million but not over to 15 million and medium-size enterprises has 100-199 employees with more than 15 million but not greater than 100 million asset (SERP-P, 2024). In the study, "SMEs" are operationally defined as businesses in the Province of Albay with a specified range of employees and revenue, in accordance with the regional or national definitions of small and medium enterprises.

Status. The condition or state of affairs at a particular time (Merriam-Webster Dictionary). In the study, "status" operationally refers to the current situation or condition of SMEs in Albay, specifically focusing on aspects such as business size, revenue, and level of engagement in E-commerce.

Profile. A summary or representation of essential information, characteristics, or qualities of an individual, group, or thing (Merriam-Webster Dictionary).

In the study, "profile" operationally refers to the composite representation of demographic and business-related characteristics of respondents, including but not limited to business size, industry, and E-commerce engagement.

Adoption. The act of taking up or accepting something, such as a new idea, method, or technology (Merriam-

Webster Dictionary). In the study, "adoption" operationally refers to the extent to which SMEs in Albay have embraced and integrated E-commerce into their business operations.

Investigate. To carry out a systematic inquiry, examination, or exploration to gather information and facts (Merriam-Webster Dictionary). In the study, "investigate" operationally involves conducting a comprehensive inquiry into the various aspects of E-commerce integration among SMEs in Albay, including factors influencing adoption, impacts, and hindrances.

Revenue Growth. The increase in a company's total revenue over time (Paddle.com, 2024). In the study, "revenue growth" operationally refers to the measurable increase in income or earnings experienced by SMEs in Albay as a direct result of adopting and integrating E-commerce into their business operations.

Market Reach. The estimated number of potential customers that you can reach with your message or an entire campaign (Ketchup Marketing, 2023). In the study, "market reach" operationally refers to the expanded geographical or demographic scope and accessibility of SMEs' products or services facilitated by E-commerce integration.

Cost Efficiency. The ability to achieve the highest level of output with the least amount of input or resources (Thompson, 2023). In the study, "cost efficiency" operationally refers to the optimization of resource utilization and reduction of operational expenses by SMEs in Albay through the effective adoption and implementation of E-commerce practices.

Profitability. The ability of a business to generate earnings in excess of its costs over a specific period (Merriam-Webster Dictionary). In the study, "profitability" operationally refers to the overall financial success and viability of SMEs in Albay as influenced by the integration of E-commerce, measured by the generation of profits.

Integration. The act or process of combining or coordinating different components into a unified whole (Merriam-Webster Dictionary). In the study, "integration" operationally refers to the assimilation and seamless incorporation of E-commerce practices into the day-to-day operations and business strategies of SMEs in Albay.

METHODOLOGY

In order to ensure a strong and methodologically sound approach to addressing the research objectives, this section thoroughly describes the research design, research instrument, data gathering procedures, respondents, sampling technique, study site, and data analysis plan used in this study.

Research Design

This study applied the descriptive-quantitative design to determine the impact of e-commerce to small and medium enterprises in the 2nd district of Albay. According to Sirisilla (2023), a descriptive research design is a tool that researchers and scholars can use to get information about a specific population or topic. These types of studies give a complete picture of the characteristics and behavior of a single group or individual. Descriptive research provides meaningful insights for future explorations, while utilizing observation as well as data collection regarding some topic enables researchers to better understand a particular issue.

Moreover, events that have an impact on a certain set of people-the sample population-are observed using quantitative research methodologies. This kind of research involves gathering a variety of numerical data using different techniques, then statistically analyzing the data to aggregate, compare, or illustrate links between the data. Formalized observations, experiments, and questionnaires are examples of quantitative research approaches (Sreekumar, 2023).

Therefore, this study utilized the descriptive-quantitative research design because it described the current status of SMEs which was included in the survey questionnaire, investigate the impact of e-commerce, identify the factors hindering e-commerce adaptation, and used numerical data in presenting the results of the survey from the respondents.

Research Instrument

To obtain the necessary information from the key informants of this study, the researcher devised a survey questionnaire used as an instrument for data gathering. Part 1 determined the status of SMEs in the province of Albay in terms of profile of the business establishment and adopted e-commerce. Using open-ended questions in the SME profile allowed participants to give thorough details about their businesses including type of business and years in operation. This approach helped gather valuable information about the various traits of SMEs in Albay. For the e-commerce adoption questions, checklists were used, which provided a clear and quick way for participants to show which e-commerce strategies or platforms they were using. This method made it easier to analyze and compare data across different SMEs. Frequency and percentage analysis were suitable for summarizing the data from Part 1. This helped the researcher identify the most common traits of SMEs in Albay and how widely different e-commerce strategies were adopted. In part 2, investigate the impact in the integration of e-commerce into SMEs operation, the researcher utilized the 4-point likert scale, where:

Table A Likert Scale

Scale	Adjectival Interpretation
4	Excellent
3	Good
2	Fair
1	Poor

Moreover, frequency, weighted mean and ranking was also implemented.

Part 3, identification of factors that hinders the e-commerce adaptation were ranked from 1 (highest) to 10 (lowest) based on their experiences.

Based on the data gathered, the researcher proposed an actionable recommendations and strategies for policymakers, business associations, and support organizations to enhance the e-commerce ecosystem for SMEs in the Province of Albay.

Data Gathering Procedures

Permission was sought from the Local Government Unit of Daraga, Albay and the City Government of Ligao (refer to Annex A) for the total number of Small and Medium Enterprises registered from the Business Center of the abovementioned LGU before undertaking the data collection. Every participant in the research provided informed consent and the thesis professor approved a letter that was provided. This included comprehensive details about objectives, methods, and benefits of the research. Participants were advised that their participation in the study was completely optional and that they may withdraw at any time, and they were encouraged to ask questions and express any reservations they may have about it.

The confidentiality of the data and ethical conduct were ensured by strict adherence to the following standards; the researcher developed and assessed the survey questionnaire to ensure reliability and consistency. The managers and supervisors of the chosen small and medium-sized businesses in the province of Albay, namely in Legazpi City, Ligao City, and the municipality of Daraga, whom are classified as SMEs, were interviewed by the researcher. Data privacy and security laws were followed in the collection, storing, and analysis of the data. The confidentiality of participant identities was maintained during the whole process of gathering and analyzing data. Every study activity was carried out in accordance with the applicable ethical standards and laws.

The study's data collection phase ran for one month. This period of time made it possible to gather enough data to meet the goals of the study. The instruments' collected data was taken out and totaled for analysis. In order to evaluate the data and respond to the study objectives, statistical techniques were used. The results were assessed

and interpreted in accordance with the objective of the study and the available literature of previous research.

Respondents of the Study

The respondents of the study were the managers or supervisor of an SMEs in the province of Albay. They were chosen based on the qualifications and criteria, for managers, these individuals are at the forefront of e-commerce adoption within their businesses. They can provide insights into the motivations, challenges, and outcomes of e-commerce implementation. For the supervisor they are the individual in a position of authority within an organization who oversees and directs the work of a specific group of employees or a department. The primary role of a supervisor is to ensure that the tasks and activities within their area of responsibility are carried out effectively and efficiently. Supervisors are responsible for managing the day-to-day operations, providing guidance to their team members, and ensuring that organizational goals are met at the team or department level. So, which means they are fit to answer all the concern, queries and needed data in connection to the study.

Managers and supervisors from other SMEs as well as employees are not included as respondents in the said study to delimit the study.

Table B. Respondents of the Study

Small Enterprises	Medium Enterprises	Managers	Supervisors	Total No. of Respondents
1 – Ligao	1 – Ligao	30	30	60
4 – Legazpi	4 – Legazpi			
3 - Daraga	2 – Daraga			

Sampling Technique

Purposive sampling is a strategy for selecting research participants based on specified features or attributes. In this study, the researcher employed the aforementioned approach, which allows researchers to focus on select groups or persons with the most relevant knowledge or experiences connected to the research issue. The study used the purposive sampling technique, also known as judgmental or selective sampling, which is a non-random sampling technique in which researchers select specific people, cases, or components based on predetermined standards that support the study's goals. The study's respondents contributed primary sources, while secondary data were acquired from books, websites, journals, articles, and other online reference resources. Library trips will also be made to broaden understanding of the chosen topic and obtain more pertinent and useful material.

Study Site

Ligao City has been attempting to expand its economy beyond agriculture. This includes marketing campaigns aimed at drawing in investors and companies, which could help create a more varied SME environment. Local crafts, eco-tourism services, and agriculture-related businesses might be the focus of SMEs in Ligao City. Opportunities for different kinds of SMEs may arise as the city strives for economic diversification.

Daraga is ideally situated in the Philippine province of Albay, in the Bicol Region. It is well-known for being close to Legazpi City, which makes it a crucial component of the local economy. Daraga is home to businesses and educational facilities that are essential to the local economy. Businesses and schools coexisting gives SMEs that serve both commercial and educational needs opportunity. SMEs in Daraga that offer services like lodging, regional crafts, and dining places are probably going to benefit from the tourism sector. Additionally, SMEs that provide educational services and resources may prosper due to the presence of educational institutions in the vicinity.

Being the regional core of the Bicol Region, Legazpi City is a center for government, business, and education. The city's status as a hub for trade and commerce has contributed to its economic prosperity. Its infrastructure and accessibility make it a desirable site for businesses. Legazpi City's commercial and educational establishments are what make the city's business climate vibrant. There's a good chance that the city's business

areas are home to a wide range of SMEs meeting different customer needs. Legazpi City's reputation as a center of trade and commerce may be advantageous to SMEs there. Given the city's strong economy, firms in the retail, hospitality, and service sectors are probably going to prosper. The Yawa River and Kawa- Kawa Hills are two of the city's many natural assets, which make it a promising destination for ecotourism. SMEs in the hospitality and tourism industries now have prospects as a result.

Data Analysis

The study utilized the descriptive data analysis as it described the results of the data gathering. Statistical analysis was also implemented such as frequency and percentage distribution, weighted mean, and ranking.

Frequency distribution is a general way to organize raw data of a quantitative variable. It illustrates how different values of a variable are distributed and their corresponding frequencies. It can calculate various measures to analyze the data in the given frequency distribution. This was used

Percentage distribution is one in which the specific frequencies of each class are given as a percentage of the total frequency, which is equivalent to 100. **Assign Weights** - Assign weights to each Likert scale point based on the degree of agreement or disagreement. In this study, it refers to excellent, good, fair, and poor.

Assign Numeric Values - Represent each Likert scale response with a corresponding numeric value. In this study it was number 1, 2, 3, and 4 since it used 4-point Likert scale.

Calculate Weighted Scores - Multiply each respondent's Likert scale response by the assigned weight. This gives you a weighted score for each response.

Sum the Weighted Scores - Sum up all the weighted scores across all respondents.

Calculate Weighted Mean - Divide the total sum of weighted scores by the total number of respondents to calculate the weighted mean.

The formula for calculating the weighted mean is:

$$\text{Weighted Mean} = \frac{\sum (\text{Weight} \times \text{Response Value})}{\text{Number of indicators}}$$

With this approach it allows researchers to give more importance to responses that indicate stronger agreement or disagreement, providing a nuanced analysis of the Likert scale data.

RESULTS AND DISCUSSION

This section presented the results of the survey and its analysis. The survey's findings offer a thorough examination of the operational effects, adoption rates, and difficulties of SMEs in the Province of Albay encountered when it comes to e-commerce. The study provides a thorough grasp of the intricate dynamics surrounding e-commerce integration by quantifying numerical data as well as interpretation. The findings provide important insights into the current and potential futures of SMEs in the digital age, laying the groundwork for well-informed decision-making.

I. Status of SMEs in the Province of Albay

To assess the current status of Small and Medium Enterprises (SMEs) in the Province of Albay, the researcher gathered data on the profile of the establishments such as type of business and years of its operation in the industry. By understanding these characteristics, readers can gain valuable insights into the structure and dynamics of the SME sector in Albay. The SMEs includes the retail, hospitality industry, merchandizing business and insurance that operates within the Municipality of Daraga and city of Legazpi and Ligao.

Table 1. a. presented the profile of the respondents in terms of type of business and years of operation. Based on

the result of the data gathering, 43.33% of the respondents have been involved in the hospitality industry, followed by retail business with 33.33%. The merchandising business has 20% while insurance has the least representation at 3.33%.

Table 1.a. Profile of the Establishments

Type of Business	Frequency	Percentage
Small Enterprise:		
Retail	20	33.33
Hospitality Industry	26	43.33
Medium Enterprise:		
Merchandising Business	12	20
Insurance	2	3.33
Total	60	100
Years of Operation	Frequency	Percentage
1-10 Years	12	20
11-20 Years	32	53.33
21-30 Years	0	0.00
31-40 Years	0	0.00
41-50 Years	12	20
51-60 Years	0	0.00
61-70 Years	4	6.67
71-80 Years	0	0.00
81-90 Years	0	0.00
Total	60	100

During the years of operation, the majority, which is 53.33%, have been running their businesses for 11-20 years, demonstrating a strong presence of well-established companies. There are also a significant number of establishments 20% that have been in operation for 1-10 years and 41-50 years, suggesting a mix of new and long-standing businesses. The percentage of firms in business for 61-70 years is just 6.67%, which means that old firms are modestly participating in a green and growing economy.

The results revealed that hospitality industry is the most popular sector among all those who were surveyed followed by retail business. This could be because people find it easy to set up shops online as compared to other sectors or, alternatively, there is a growing preference for online shopping among consumers. Further, the insurance industry shows either less e-commerce penetration in this sector or fewer organizations in this field. In years of operation, it demonstrates that this province has witnessed the maturing and long business venture in many of the establishments. However, starting with the contemporary business world indicates continued economic development, and possibilities for expansion are present.

The literature on the role that the hospitality and retail sectors play in influencing the growth of an economy and

job creation has undergone significant evolution, especially in the face of recent world events. Most studies denote that these sectors are quite vital for economic recovery and the creation of jobs within regions with high tourist attractions or having substantial numbers of consumers. Harwood, et.al (2022) denotes that the hospitality industry drives economic growth. In fact, one such study referred to the tourism sector as an area which represents around 5% of worldwide GDP and approximately 8% of all job creation. The tourism industry is very vulnerable to economic cycles, yet it is among the major sources of earnings in so many countries.

According to the Bureau of Labor Statistics (2024), this industry is projected to account for approximately 1.9 million jobs added by 2031-23.1 percent of all new jobs over the projection period. Similar study to Watkins (2024), this growth was attributed to the recovery from COVID-19; food services and drinking places is projected to account for the majority of this growth, adding nearly 1.3 million jobs. The retail sector is important in the context of the economy. The potential of shift from traditional retail to hospitality is increasingly becoming a familiar scenario because both sectors are concerned with public service and inventory management. The hospitality industry has a prospective future because current trends are people are tending to experience- based consumption over material goods, which has been considerably highlighted in several studies. Some consumers would prefer to spend their money on experiences they'll always remember instead of durable tangible goods.

Findings from different studies, support the statement that hospitality and retail industries are key in terms of economic growth and employment. The post-pandemic recovery process is very likely to continue increasing the importance of such industries, which will make them imperative in economies, especially those reliant on tourism and consumer interaction. While old ones guarantee stability and continuity with no risk of job loss, newly established ones bring novelty and competitive spirit. This fact duality constitutes a general resilience and adaptability strength of an economy in its capability to answer changes and challenges of the market. The diverse age distribution of establishments in a business ecosystem is a good omen for health in that system. This will balance the economic atmosphere, where the combination of old and new firms goes together with stability and innovation. It is such diversity that permits vigorous dynamics in the exchange of ideas and practices, raising overall economic performance and resilience.

Table 1.b E-Commerce Adoption

Adopted E-Commerce Strategy	Frequency	Percentage
Online Sales	18	30
Online Marketing	12	20
Inventory Management	16	26.67
Customer Relationship Management	14	23.33
Total	60	100.00
Average Year SMEs Started E-Commerce	17	
Motivated SMEs to Adopt E-Commerce	Frequency	Percentage
Expanding Customer Reach	27	45
Reducing Operational Costs	12	20
Competing with Larger Businesses	11	18.33
Improving Customer Experience	10	16.67
Total	60	100

The result on the above-mentioned table shows that 30% of SMEs in Albay Province have adopted e-commerce strategies, with inventory management being the most common. 23.33% use customer relationship management,

while 20% use online marketing. The adoption of e-commerce has been gradual, with the top priorities being expanding customer reach, reducing costs, competing with larger businesses, and providing better customer experience. This indicates that SMEs in Albay are leveraging digital technologies to enhance their operations and competitiveness.

E-commerce adoption by SMEs in Albay Province is viewed to be one of the fast-growing ways towards digitalization. Online sales and online inventory management are found to be the dominant activities that would hopefully enhance the customer base and reach, showcase products or services, and carry out effective promotions. From the adoption of online marketing to customer relationship management, one may note that the areas of operational efficiencies and customer satisfaction emerge as major areas of concern. Hence, the average year when e-commerce was started among SMEs follows the broader global trend of increased digitalization and would indicate that Albay SMEs follow industry developments. The most common driver for adopting e-commerce, increasing customer reach, reflects the capacity of the digital channels to unlock newer growth opportunities. The strategic focus on reducing operational costs and competing with larger businesses also speaks volumes about the importance of e-commerce among the SMEs. This means companies are conscious of how digital platforms can enhance ease of doing business, personalization of engagement, access, and end-to-end customer experience.

The findings of Anukam and Nwawume's (2024) study on SMEs in Rivers State, Nigeria are largely consistent with data presented in Table 1.b on the SMEs in Albay province. The gradual adoption, as shown by the average year of adoption, shows that management decisions and strategic plans are highly important for the adoption of e-commerce among SMEs in Albay. Also, the prevalence of online sales and marketing strategies would have shown that the SMEs in Albay do recognize the importance of digital marketing in order to reach a wider audience and drive sales. Adaptation to different e-commerce strategies, though implicit in the table, would connote that enabling resources such as technology and human capital support the digital transformation of SMEs in Albay. Moreover, the constantly changing nature of the SME landscape in Albay itself justifies the continuity of e-commerce adoption, wherein the SMEs have adopted constant innovation of digital technologies in their respective businesses.

In addition, Sakinah's (2024) study on SMEs in the era of digitalization shows support to the findings in Table 1.b. Some e-commerce strategies that SMEs in Albay adopt to enhance operational efficiencies and reduce costs include inventory management and customer relationship management. It also means that different online sales and marketing strategies are proliferating among SMEs in Albay to enhance customer experience and reach a bigger market. These findings cumulatively indicate that e-commerce influences the SMEs in Albay positively through the ability to streamline operations, good customer service, and wider markets reached.

Therefore, the findings presented in Table 1.b are consistent with the broader trends identified, e-commerce strategies are adopted by the SMEs in Albay for various management factors, marketing capabilities, firm resources, and continuous adaptation of developments along the digital curve. These are the factors which will allow the SMEs to successfully exploit the e-commerce opportunity and realize their business goals.

II. Impact in Integration of E-commerce into SMEs operation

E-commerce integration in SMEs is crucial for competitiveness in the digital economy. It's a strategic necessity for growth and sustainability. Key indicators include sales volume, customer acquisition, retention, pricing, product launches, order value, marketing effectiveness, and online traffic.

Indicators	4		3		2		1		Total		AI
	f	WM	f	WM	f	WM	f	WM	f	WM	
Sales Volume	41	2.73	16	0.80	2	0.07	1	0.02	60	3.62	E
Customer acquisition rate	42	2.80	18	0.90	0	0.00	0	0.00	60	3.70	E

Customer retention rate	50	3.33	10	0.50	0	0.00	0	0.00	60	3.83	E
Pricing strategy	35	2.33	25	1.25	0	0.00	0	0.00	60	3.58	E
New product or service launches	38	2.53	22	1.10	0	0.00	0	0.00	60	3.63	E
Average order value	41	2.73	19	0.95	0	0.00	0	0.00	60	3.68	E
Marketing and advertising effectiveness	55	3.67	5	0.25	0	0.00	0	0.00	60	3.92	E
Online traffic and conversion rates	11	0.73	49	2.45	0	0.00	0	0.00	60	3.18	E
Average Weighted Mean									3.64	E	

Legend: 3.50-4.49 (Excellent), 2.50-3.49, (Good), 1.50-2.49 (Fair), 1.00-1.49 (Poor)

The outcomes displayed in Table 2.a. elucidate the perceived effects of integrating e-commerce into SMEs' operations, particularly with regard to revenue development. The weighted mean scores offer a quantitative assessment of the respondents' opinions and shed light on the relative merits of different e-commerce strategy components. Presumably, SMEs in the Province of Albay understand the critical role that effective marketing and advertising play in boosting revenue growth through e-commerce channels. "Marketing and advertising effectiveness" stood out as the most influential factor, achieving the highest weighted mean of 3.92 with an adjectival interpretation of "Excellent." The high ratings suggests that companies using effective marketing methods are seeing real, noticeable benefits, such as higher conversion rates, brand awareness, and consumer engagement.

Although it scored lower than the other factors, "online traffic and conversion rates" still indicates a positive perception among respondents regarding the impact of these factors on revenue growth, as evidenced by the lowest weighted mean of 3.18, also interpreted as "Excellent." Marketing and advertising effectiveness significantly impacts business operations, leading to increased conversion rates, brand awareness, and improved consumer engagement. It fosters long-term brand loyalty and recognition. Despite lower scores, online traffic and conversion rates are crucial for revenue growth. Businesses must continually assess and refine their marketing efforts to create targeted campaigns, resulting in sustained growth and profitability.

The comparatively low score can encourage additional research into the particular difficulties or potential areas for development in this e-commerce integration element. Small and medium-sized businesses (SMEs) may want to investigate methods for increasing internet traffic and conversion rates. These methods could include user experience enhancements, targeted marketing, or website changes. The overall weighted average for revenue growth across all factors is 3.64, which is consistent with an adjectival interpretation of "Excellent." This thorough evaluation shows that Albay's SMEs have a generally positive opinion of the overall effect of e-commerce integration on revenue growth. For the SME sector in the Province of Albay to see steady and robust revenue growth, these findings highlight the significance of a comprehensive approach to e-commerce initiatives, stressing not only marketing effectiveness but also the optimization of web traffic and conversion rates.

In general, the growth of revenue generated by SMEs in Albay province looks impressive, as understood from the sales performance, customer management, and marketing efforts generated through the data. Performances that are really strong in sales volume and average order value indicate focuses on revenue generation and increasing the spending ability of customers. Positive customer acquisition and retention rate scores hint at the ability of SMEs to attract and retain customers, which is very important for their long-term success. The good overall performance notwithstanding, the struggles by the SMEs with regard to online traffic and conversion rates insinuate that their digital marketing strategies still have areas that need tinkering with. This may include further optimization of website content, improving search engine optimization, and use of social media to attract and engage visitors online. In a nutshell, the data in Table 2.a offers very useful insights into the revenue growth performance of SMEs in Albay province. The satisfaction from positive results for many key indicators is

promising for the outlook of the SME sector; on the other hand, poor results in online traffic and conversion rates call for sustained efforts in enhancing digital marketing capabilities.

The e-commerce business is demonstrating excellent performance across all revenue growth metrics, indicating a strong market presence and successful sales strategies. This performance provides insights for future enhancement, ensuring ongoing growth and competitiveness.

A study on digital marketing strategies for e-commerce by Purnomo (2023) concurs with the findings interpreted in Table 2.a. The weighted mean score is high in "Marketing and advertising effectiveness", meaning that the SMEs understand in Albay that revenues they increase come from proper digital marketing strategies highlighted by Purnomo himself. Besides, in Table 2.a, where emphasis is given to "online traffic and conversion rates," just echoes the emphasis brought about by Purnomo on increasing these factors to increase sales. In summary, it would appear that most SMEs in Albay are quite aware that for e-commerce, the approach needs to be holistic, marrying effective marketing with optimized online presence for maximum revenue growth.

Table 2.b Market Reach

Indicators	4		3		2		1		Total		AI
	f	WM	f	WM	f	WM	f	WM	f	WM	
Website Traffic	18	1.20	42	2.10	0	0.00	0	0.00	60	3.30	G
Conversion Rate	23	1.53	37	1.85	0	0.00	0	0.00	60	3.38	G
Social Media Followers and Engagement	22	1.47	38	1.90	0	0.00	0	0.00	60	3.37	G
Online Advertising Effectiveness	23	1.53	37	1.85	0	0.00	0	0.00	60	3.38	G
Market Presence	20	1.33	39	1.95	0	0.00	1	0.02	60	3.30	G
Customer Review and Rating	10	0.67	42	2.10	8	0.27	0	0.00	60	3.03	G
Customer Retention Rate	10	0.67	45	2.25	5	0.17	0	0.00	60	3.08	G
Average Weighted Mean										3.26	G

Legend: 3.50-4.49 (Excellent), 2.50-3.49, (Good), 1.50-2.49 (Fair), 1.00-1.49 (Poor)

The results shown in Table 2.b. provide a thorough analysis of the effects of e-commerce integration on the operations of SMEs, with a particular emphasis on market reach. The weighted mean scores offer a numerical representation of the respondents' opinions regarding the relative merits of different elements in the context of expanding market reach using e-commerce tactics.

The result shows that "Online Advertising Effectiveness" and "Conversion Rate" emerged as the most influential factors achieving the highest weighted mean of 3.38 with an adjectival interpretation of "Good." However, "Customer Review and Rating" had the lowest weighted mean (3.03), which was still read as "Good." Although this component scored somewhat lower, it still shows that respondents had a positive opinion of the influence of customer reviews and ratings on market reach. Overall, SMEs in Albay have a generally positive perception of the overall impact of e-commerce integration on expanding market reach, as evidenced by the average weighted mean for market reach across all factors of 3.26, which aligns with an adjectival interpretation of "Good." These results highlight the necessity for SMEs to keep improving their online advertising, customer review, and conversion rate strategies in order to expand their market reach and strengthen their position as competitors in

the digital space.

Table 2.b shows the perceived impact of e-commerce integration on the market reach of SMEs in Albay province. It can be observed from this analysis that, in general, respondents perceived e-commerce as a positive tool in helping to expand their market reach, though a number of influential factors were identified to drive this perception. The most critical driving components were "Online Advertising Effectiveness" and "Conversion Rate." This would go to suggest that the SMEs indeed are aware of the need to drive a successful online advertising campaign in order to fully utilize their website to convert browsers into paying customers. The SMEs will be able to enhance their visibility significantly and increase their sales through spending on focused advertising and creating an easy-to-navigate online user experience. Customer Review and Rating received the lowest score; however, participants still rated this area positively. It reflects that SMEs consider that feedback from customers will attract new customers and also build up trust in the customer base. If SMEs actively manage their online reputation and also encourage reviews from customers, then they can make positive feedback work in their favor to build up a credible and visible platform. The overall weighted mean market reach for all factors is 3.26, falling in the "good" category. This could imply that, in general, SMEs in Albay view the overall impact of e-commerce integration in the expansion of market reach positively.

The result is all Good, this implies that the e-commerce platform has a good market reach, attracting visitors and optimizing sales. High social media engagement and well-targeted advertising campaigns increase traffic and sales. The brand's recognition among competitors and positive reviews boosts its reputation. A decent retention rate indicates customer satisfaction, indicating effective customer relationship management. The platform's performance across various indicators contributes to sustained growth and competitiveness in the e-commerce landscape, highlighting areas for improvement and affirming current successes.

Thiongo's (2024) study on e-commerce and digital marketing supports the result in Table 2.b on increasing market reach for Albay SMEs. Though he mentioned the utilization of social media and SEO, which were not measured, the high scores in "Online Advertising Effectiveness" and "Conversion Rate" do suggest the usage of digital marketing tactics. While this is so, the lower score for "Customer Review and Rating" compared to the emphasis on social CRM by Adriel et al. (2024) suggests room for enhancement in nurturing online customer engagement and loyalty that would eventually be beneficial to market reach. Overall, the positive perception of e-commerce's impact on market reach calls into attention a continuous improvement in various digital marketing strategies that would help Albay SMEs survive online competition.

Table 2.c. presents data on the cost efficiency indicator of Small and Medium-sized Enterprises (SMEs) in Albay province. The indicators assessed include shipping and fulfilment costs, operational efficiency, marketing costs, net profit margin, return on investment, customer lifetime value, average order value, cost per acquisition, return rate, payment processing costs, payment processing fees, and fraud prevention costs.

Indicators	4		3		2		1		Total		AI
	f	WM	f	WM	f	WM	f	WM	f	WM	
Shipping and Fulfillment Cost	32	2.13	28	1.40	0	0.00	0	0.00	60	3.53	E
Operational Efficiency	37	2.47	23	1.15	0	0.00	0	0.00	60	3.62	E
Marketing Cost	25	1.67	32	1.60	3	0.10	0	0.00	60	3.37	G
Net Profit Margin	23	1.53	37	1.85	0	0.00	0	0.00	60	3.38	G
Return on Investment	23	1.53	37	1.85	0	0.00	0	0.00	60	3.38	G
Customer Lifetime Value	39	2.60	21	1.05	0	0.00	0	0.00	60	3.65	E

Average Order Value	31	2.07	29	1.45	0	0.00	0	0.00	60	3.52	E
Cost per Acquisition	31	2.07	29	1.45	0	0.00	0	0.00	60	3.52	E
Return Rate	15	1.00	42	2.10	3	0.10	0	0.00	60	3.20	G
Payment Processing Cost	10	0.67	47	2.35	3	0.10	0	0.00	60	3.12	G
Payment Processing Fee	17	1.13	42	2.10	1	0.03	0	0.00	60	3.27	G
Fraud Prevention Cost	47	3.13	13	0.65	0	0.00	0	0.00	60	3.78	E
Average Weighted Mean										3.44	G

Legend: 3.50-4.49 (Excellent), 2.50-3.49, (Good), 1.50-2.49 (Fair), 1.00-1.49 (Poor)

The inferences drawn from Table 2.c. convey a thorough grasp of the ways in which cost efficiency is impacted by the incorporation of e-commerce into SMEs' operations. SMEs in the Province of Albay place a high value on investing in robust measures to prevent fraud, indicating a recognition of the potential risks associated with online transactions, according to the weighted mean scores, which show that respondents consider "Fraud Prevention Cost" as the most significant factor. This factor obtained the highest weighted mean of 3.78 and an adjectival interpretation of "Excellent." However, "Payment Processing Cost" had the lowest weighted mean of 3.12, which was read as "Good." Despite this factor's lower score, respondents' perceptions of the effectiveness of payment processing costs are still favorable. A generally good attitude for the cost efficiency impact of e-commerce integration is shown by the overall average weighted mean for cost efficiency across all parameters, which is 3.44 and aligns with an adjectival meaning of "Good."

Since that Fraud Prevention Costs gained the highest ratings, this means that businesses are taking a proactive stance to protect their financial interests and uphold the confidence of stakeholders and customers by placing a strong premium on exceptional performance. Conversely, Payment Processing Cost gained the lowest rating suggests that SMEs are tolerate the costs related to accepting online payments, which may suggest that they recognize the significance of smooth payment procedures in improving customer happiness and overall business productivity. The results highlight the need of strategic investments in areas like fraud protection and careful financial management in order to balance cost-effectiveness and optimize the benefits of e-commerce adoption. The findings, taken together, demonstrate the varied viewpoints of Albay's SMEs on the financial effects of e-commerce integration. The emphasis on superior fraud protection procedures and the recognition of efficient payment processing highlights the strategic decisions companies are making to guarantee economical operations in the digital environment. The evaluation's conclusions can help SMEs optimize their financial plans for long-term success in their e-commerce ventures.

The e-commerce platform demonstrates strong cost efficiency across various indicators, with several metrics rated as Excellent and others as Good. This implies that the e-commerce platform shows strong cost efficiency through effective logistics management, streamlined processes, customer retention strategies, upselling, cross-selling, and fraud prevention. Its profit margin, solid ROI, manageable return rate, reasonable payment processing costs, and low fees position the business for success.

A study of Albshaier, et. al. (2024) on blockchain technology for e-commerce security corresponds to the result shown in Table 2.c, which is the cost efficiency for SMEs in Albay, where the weighted mean for "Fraud Prevention Cost" is high. This would mean that the SMEs recognize the probable risks related to online transactions and, therefore, establish robust security measures to prevent fraud. In turn, this corresponds to the fact that blockchain can enhance security by recording transparent transactions. Although "Payment Processing Cost" received a lower score, it still resulted in positive perception. Generally, the positive average weighted mean on cost efficiency indicates that e-commerce benefits outweigh security concerns for Albay SMEs; there is still room for further optimization of payment processing costs.

Table 2.d. Cost profitability indicators of SMEs in Albay Province. This indicator evaluated the gross profit

margin, which is the amount by which revenue from sales of products and services exceeds the cost of goods sold, which is considered as the direct costs attributable to the production of the goods sold.

Table 2. dCost Profitability

Indicators	4		3		2		1		Total		AI
	f	WM	f	WM	f	WM	f	WM	f	WM	
GrossProfit Margin	42	2.80	18	0.90	0	0.00	0	0.00	60	3.70	E

Legend: 3.50-4.49 (Excellent), 2.50-3.49, (Good), 1.50-2.49 (Fair), 1.00-1.49 (Poor)

Table 2.d. provides insightful information about how e-commerce integration affects SMEs' cost-profitability operations, with a particular emphasis on "Gross Profit Margin." The weighted mean of 3.70, along with an adjectival interpretation of "Excellent," highlights the positive impact that e-commerce has on SMEs' gross profit margins in the Province of Albay. It is possible that variables like more sales, effective cost control, and streamlined procedures made possible by e-commerce platforms are to blame for this discovery, which indicates that companies involved in e-commerce are witnessing a remarkable improvement in their gross profit margins.

A high gross profit margin indicates the success of the company's core operations and highlights the beneficial impact that e-commerce income has on SMEs' overall financial health. The "Excellent" rating suggests that Albay enterprises are not only taking advantage of chances to increase profitability through efficient e-commerce methods, but are also successfully avoiding any downsides. This understanding underscores the revolutionary potential of e-commerce in promoting financial success and sustainability for SMEs in the region, making it imperative for governments, support groups, and businesses themselves. It highlights how e-commerce integration has improved the cost-profitability of SMEs in Albay, especially when it comes to the gross profit margin. This is a major advancement for companies operating in the province and demonstrates how e-commerce tactics can improve bottom line results. For SMEs to maintain and maximize their profitability in the changing digital world, it will be essential to comprehend and further capitalize on the variables that contributed to this great gross profit margin.

The findings of the research, as shown in Table 2.d, support the wider trends which Ndrejoni et al. have presented in 2024. This positive effect of e-commerce on gross profit margin within Albay SMEs is an indication of increased sales, improved efficiencies, and enhanced value of the businesses concerned. Thus, the study findings suggest the underlying importance of the adoption of e-commerce to SMEs interested in improving their financial performance and also hoping to be successful during these digital times.

III. Factors that Hinder the E-Commerce Adoption among SMEs in Albay

The proliferation of e-commerce has transformed the business landscapes, offering Small and Medium Enterprises (SMEs) unprecedented opportunities for growth and expansion. Despite these benefits, many SMEs in Albay continue to face barriers that hinder their adoption of e-commerce.

Table 3 Factors that Hinders the E-commerce Adoption among SMEs

Indicators	Rank
Lack of digital skills	4
Resistance of change	7
Limited access to technology	8
Data security concerns	3

Market saturation	9
Customer trusts	6
Digital marketing competition	2
Payment processing	5
Cybersecurity risks	1
Cultural and Language barriers	10

Table 3 provides a comprehensive presentation of the various factors that hinder e-commerce adoption among Small and Medium Enterprise (SMEs) in Albay. The indicators were Lack of digital skills, Resistance of change, Limited access to technology, Data security concerns, Market saturation, Digital marketing competition, Payment processing, Cybersecurity risks and Cultural and Language barriers and are ranked on a scale of 1 to 10 with being the most hindering and 10 being the least hindering. Cybersecurity Risks as the most hindering factor or rank 1 while Cultural language barrier ranked last as the least hindering factor or rank 10.

As analysis to the result, the most hindering factor is the Cyber Security Risks, data security and privacy in which a very significant concerns for SMEs in Albay. With increasing cyber threats and the need to comply with the data protection regulations, SMEs may be hesitant to invest in e-commerce due to fears of potential data breaches and the associated reputational and financial risks. This concern of the SMEs is the same as the Data Security concerns. Digital Marketing competition, businesses are competing for visibility, customer attention and sales in as increasingly crowded and complex market.

SMEs have limited resources or budget compared to large corporations to which limits the ability to invest in paid advertising content creation, digital marketing channels ad well-established brands to have a strong online presence. With new platforms, strategies and tactics emerging regularly, SMEs may struggle to keep up with the rapid changes, which may result to ineffective marketing strategies.

Lack of digital skills and Payment Processing are factors concerning to lack of knowledge and skills among SMEs when it comes to digital tools, platforms and technologies. Limited digital literacy can hinder e-commerce adoption as SMEs may struggle to create and manage an online presence, manage digital marketing campaigns, and utilize other essential e-commerce tools.

Customer trusts, is a critical factor that can hinder the adoption of e-commerce among the SMEs. Trust play a significant role in the decision-making process of customers when they are considering purchasing products or services. A lack of trust can deter potential customers from conducting transactions, which in turn can negatively impact the success of SMEs e-commerce efforts. Resistance of change, adopting new technologies and adapting to digital transformation can be challenging process for SMEs, particularly for those that have been operating traditionally for an extended period. SMEs may be concerned about the cost associated with adopting e-commerce, may also have limited understanding of the benefits and opportunities that e-commerce can offer the businesses. SMEs with a culture of resistance to change may struggle to successfully implement and manage an e-commerce.

Limited access to technology, this factor may face challenges in accessing the necessary tools, infrastructure and expertise to implement and manage an e-commerce platform effectively. E-commerce platform can be expensive, may lack of in-house technical expert, and may not have access to necessary infrastructure such as high-speed internet connection to efficiently operate an e-commerce.

Market saturation in highly competitive markets, SMEs may struggle to differentiate themselves from larger, well-established competitors, which can make it difficult to succeed in the e-commerce. Because of intense competition SMEs should standout and attract customers in digital space, customer loyalty for they have to establish their own customer base, pricing pressure as they compete with other businesses for customers, and

limited market share opportunities, this can discourage SMEs from investing in e-commerce as they may perceive the potential return on investment.

The last in rank is the Cultural and Language barriers, a challenging for SMEs to communicate effectively with customers, provide a satisfactory user experience and navigate the complexities of international trade. Language barriers can make it difficult for SMEs to communicate effectively when it comes to providing customer support, processing orders and resolving issues. Adopting products, services and marketing materials to suit cultural norms and preferences of different markets can be a complex and time-consuming process. Another is each country may have different laws and regulations governing e-commerce

Business owners of SMEs struggle with the application of e-commerce, however according to Amaglo (2020), SMEs use of “social media” and create websites to introduce the products can generate more client satisfaction and very good sales. This is supported by Gupta et.al (2023) that accordingly, overcoming the challenges and adopting stronger data privacy and security policies can be attain the e-commerce sector successful.

IV. Propose Actionable Recommendations and Strategies for Policymakers, Business Associations, and Support Organizations to Enhance the e- Commerce Ecosystem for SMEs in the Province of Albay

Based on the results of the research on how e-commerce affects SMEs in the Province of Albay, policymakers, business associations, and support organizations may implement a number of practical suggestions and tactics to improve the e-commerce ecosystem for SMEs:

Actionable Recommendations	Strategies
Capacity Building and Training Programs	Create and execute training courses on the uptake and optimization of e-commerce. Give SMEs access to materials and workshops that will improve their digital skills, with a focus on customer relationship management, website administration, and efficient online marketing.
Financial Support Initiatives	Provide financial assistance programs, such grants or low-interest loans, that are designed especially to help SMEs who want to invest in e-commerce infrastructure. Businesses may be encouraged to embrace and improve their digital capabilities via financial incentives.
Collaborative Marketing Initiatives	Encourage combined promotional campaigns and cross-selling opportunities among SMEs by facilitating their collaborative marketing endeavors. Business organizations can be very helpful in establishing collaborations that take use of SMEs' combined strength to expand their market reach.
Cybersecurity Awareness and Support	Offer SMEs cybersecurity awareness workshops and assistance, emphasizing fraud avoidance. In order to foster confidence between businesses and consumers, policymakers can work with cybersecurity professionals to provide information and advice on securing online transactions.
Customized Support for Specific Industries	Customize support programs to meet the demands of your industry. Acknowledging the underrepresentation of the insurance industry in e-commerce, undertake focused efforts to tackle the particular obstacles and prospects encountered by this domain.
Establishment of an E-Commerce Hub	Establish a centralized platform or hub for e-commerce that acts as a resource for small and medium-sized enterprises. Businesses looking to improve their online presence can benefit from this hub's tools, templates, and advice on a range of e-commerce-related topics.

Data Analytics and Insights Sharing	SMEs may be encouraged to share ideas and data analytics. Forums or platforms where companies may share knowledge on effective e-commerce tactics, industry trends, and customer behavior can be facilitated by business associations and support organizations.
Incentives for Innovation and New Product Launches	Offer incentives to encourage SMEs to develop and use online platforms to introduce new goods and services. Legislators should think about tax breaks or recognition initiatives to entice companies to expand and change up what they offer.
Regular Industry Surveys and Feedback Mechanisms	Conduct surveys on a regular basis to get SMEs' opinions about their experiences and difficulties with e-commerce. Utilize this input to modify and customize support programs so they continue to be applicable and efficient in meeting the changing demands of companies.
Partnerships with E-commerce Platforms	Develop partnerships with well-known e-commerce sites to give SMEs access to a larger clientele. Provide SMEs with advantageous terms and conditions to facilitate the integration of their goods and services into well-known online marketplaces.

Through the implementation of these proposals, support organizations, business groups, and legislators can help establish a more favorable and encouraging e-commerce environment for SMEs in the Province of Albay, thereby promoting their expansion and competitiveness in the online market. As Costa and Castro (2021) indicated that considering the unique needs of SMEs, certain policymakers' proposals were modified to serve as advocates. As e-commerce becomes more and more prevalent in the future, these companies will need to compete with one another for adoption and exploitation. Vital for economic recovery, it plays a significant role in preserving the dynamism of the corporate environment.

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. The study reveals a strong concentration on the profile of the respondents in the hospitality industry, highlighting its significant role in the current economic landscape. With establishments operating for 11-20 years, these businesses have valuable insights into customer preferences and market dynamics. As the industry adapts to online engagement and digital transformation, there is potential for growth and innovation. The study emphasizes the need for ongoing adaptation and investment in adoption of e-commerce for SMEs in Albay Province. The primary motivation for adopting the e-commerce of the SMEs in the Province of Albay is to expand the market research competitive with the larger businesses and to provide customer satisfaction. The findings indicated that SMEs have successfully adopted e-commerce with the most prevalent practices. Furthermore, the adoption of e-commerce by SMEs has a significant shift towards digitalization and online selling as a dominant activity. With the result, it was suggested that continued investment in e-commerce will be essential to SMEs nowadays. This trend appears to be the desire for a greater customer reach, to adopt marketing strategies and technologies that will facilitate broader consumer bases.
2. The study demonstrates the significant impact of e-commerce integration on SMEs in Albay, particularly in terms of revenue growth and market reach.

Effective marketing and advertising are identified as key drivers of success, while cost efficiency and fraud prevention are also highlighted as important considerations.

In Albay Province, through e-commerce emphasizes the importance of effective marketing and advertising in driving revenue growth for the SMEs. Despite of the challengers, SMEs still view positively and suggesting a potential benefits in recognition of e-commerce. Marketing strategy is the

most influential contributing factor to brand awareness, revenue growth and improve consumer engagement. Cost efficiency in the Province of Albay reveals that SMEs prioritize prevention measures in terms of cyber security, however, it tolerates costs associated with the online payment processing for a smooth transaction or procedures. The study emphasizes that there is a need for a strategic investment in adopting e-commerce for the fraud protection or cybersecurity and financial management, improve cost efficiency and profitability. There is also a need for balancing the sustainable growth and digital platform advantages. The result of the study emphasizes the need for strategic investment to protect the SMEs in adopting e-commerce especially financial transaction to balance cost effectiveness. The SMEs in Albay Province prioritize the fraud protection and efficient payment transaction as key strategies in cost- efficiency. It shows a proactive approach to safeguard the financial interests and maintaining the confidence of the stakeholders in adopting e-commerce. However, it tolerates the cost of online transaction, prioritizing the customer satisfaction and operational over cost reduction.

The result on the impact of e-commerce on the gross-profit margin on SMEs in the Province of Albay was interpreted as Excellent, this indicates that e-commerce has improved and increased in sales, enhanced the cost control and procedure. The excellent rating emphasizes that SMEs in Albay Province are not only maximizing profitability through efficient e-commerce methods but also avoiding downsides. The wider trends present the importance of e-commerce adoption for SMEs in improving their financial performance and success in the digital world.

3. The study identifies factors that hinders e-commerce adoption among SMEs in Albay, including marketing costs and payment processing challenges. Addressing these barriers is essential for creating a more favorable environment for e-commerce adoption.
4. The study offers actionable recommendations for policymakers, business associations, and support groups to promote e-commerce adoption and support SMEs in Albay. These recommendations include financial assistance, capacity building, industry-specific interventions, and joint marketing campaigns. By implementing these strategies, stakeholders can actively contribute to the growth and sustainability of SMEs in the region.

RECOMMENDATIONS

Based on the presented conclusions, the following recommendations were drawn:

1. Policymakers and business support groups may conduct regular surveys and evaluations to monitor the evolving profile of SMEs in Albay province. This will enable them to identify emerging trends and tailor their support programs accordingly.
2. SMEs may be encouraged to invest in comprehensive e-commerce strategies, with a focus on effective marketing and advertising. Support groups can provide training and resources to help SMEs improve their digital marketing capabilities. Governments can incentivize e-commerce adoption through targeted financial assistance and support programs.
3. Industry forums and workshops may be established to foster collaboration and knowledge exchange among SMEs regarding e-commerce best practices. These platforms can facilitate discussions, share experiences, and identify common challenges and solutions. DTI, LGU and other support groups may conduct in-depth research on the unique challenges faced by SMEs in Albay, particularly in terms of marketing costs and payment processing. This research can inform the development of targeted interventions, such as training programs or financial incentives, to help SMEs overcome these obstacles.
4. A consolidated online marketplace may be established to serve as a one-stop resource for Albay's SMEs. This platform can provide tools, templates, and guidance for successful e-commerce adoption. Policymakers should collaborate with e-commerce platforms to negotiate favorable terms for SMEs and facilitate their integration into the online marketplace.

The recommendations may be regularly reviewed and updated to ensure their continued relevance in the rapidly

evolving digital landscape and changing needs of SMEs. By implementing these recommendations, policymakers and support groups can create a more favorable environment for e-commerce adoption and help SMEs in Albay province thrive in the digital age.

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