

Measures of Sustainability among Small and Medium Retail Enterprises: An Exploratory Factor Analysis

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Abstract

This paper aimed to develop a multidimensional framework of sustainability among small and medium retail enterprises (SMREs) in Davao City. The study employed a quantitative, non-experimental research design employing Exploratory Factor Analysis (EFA). An initial face to face interview from 12 key informants who are business owners, managers and personnels from Department of Trade and Industry and Business Bureau of Davao City were the respondents to gather relevant factors. Out of the responses collected and augmented by related literature and studies, a total of 54 items were developed to compose the data collection tool administered to 231 SMREs in Davao City. Using Exploratory Factor Analysis, 29 items remained in the model to compose the six constructs after 7 rotations and iterations, making them the final factors measuring sustainability among SMREs in Davao City. Using thematic analysis, constructs were generated to include customer feedback and responsiveness, strong customer service and support, financial management and budgeting, market research and understanding customer needs, exercise religious faith to God and strong leadership and management. Notably, a new factor exercise of religious faith to God was found in the result of the study. Understanding the underlying structures of sustainability in SMREs can serve as strategic framework and a prioritization guide to ensure business continuity, economic resilience, and long-term sustainable growth.

Keywords: business administration, sustainability, sme's, retail enterprise, exploratory factor analysis, Davao City, Philippines

1. Introduction

The introduction of the paper Small and Medium Enterprises (SMEs) play a vital role in global economic growth (Chipambwa, Moalosi, Rapitsenyane, & Molwane, 2023, p. 1). Fundamental to long-term operational success in this sector is the concept of sustainability. As defined by Doane and MacGillivray (2001, p. 1.1.2), sustainability centers on lengthy survival across three core pillars: environmental, social, and economic. When integrated, these pillars mark a better process for future generations, ensuring that humans live peacefully with nature while meeting long-term needs (Chipambwa et al., 2023, p. 3; Saygili, Uye Akcan, & Ozturkoglu, 2023, p. 1). In the entrepreneurial literature, business sustainability is often used interchangeably with terms such as business survival,

growth, viability, and long-term success (Mohamad & Chin, 2018, p. 891; Ghoniyah, Amilahaq, & Hartono, 2024, p. 1).

Despite their macroeconomic importance, SMEs face severe operational and financial barriers that threaten their survival. Globally, manufacturing SMEs encounter substantial hurdles in accessing energy-efficient resources and infrastructure investments, primarily due to a lack of finance (Chipambwa et al., 2023, p. 1). Furthermore, small and medium-sized entrepreneurs face a persistent lack of financial analysis, particularly when making critical decisions about reinvesting profits in sustainable projects (Jegadeeswari, Sudarvel, & Velmurugan, 2020, as cited in Karyna, 2024, p. 87). These vulnerabilities are equally evident at the local level. A recent study on SME performance in the Davao Region, Philippines, revealed that failing to retain satisfied customers results in significantly higher costs of acquiring new ones, placing an additional financial strain on small businesses (Roxas, 2023, p. 62).

To navigate these specific challenges, entrepreneurs need intellectual knowledge of sustainability. Having a solid understanding of sustainable practices allows business leaders to anticipate and address unforeseen situations and maintain resilience when a business faces decline (Doane & MacGillivray, 2001, as cited in Bachtiar & Ramli, 2023, p. 55; Buzzao & Rizzi, 2023, p. 1353).

While a vast body of research has investigated the sustainability of SMEs across various general industry sectors, very few studies have focused specifically on the retail industry in Davao City, Philippines. Furthermore, there is a scarcity of empirical research utilizing Exploratory Factor Analysis (EFA) to uncover the underlying factors affecting small and medium retail enterprises in this local context.

Analyzing the factor structure of sustainability reveals how small and medium enterprises (SMEs) maintain long-term viability, acknowledging that sustainable practices vary by location. Driving this success requires prioritizing customer satisfaction through targeted strategies, such as Net Promoter Surveys by engaging through mystery shopping, social media reviews, and affordable reward programs (Khojeh et al., 2013, as cited by Roxas, 2023, p. 62; Eger & Mičák, 2017, as cited by Eger & Suchánek, 2020, p. 165; Agnihotri et al., 2016, as cited in Roxas, 2023, p. 62; Nalzaró & Montaña, 2023, pp. 17, 21). Beyond driving sales growth and local survival, strong customer satisfaction is directly linked to social sustainability and overall operational efficiency (Dora et al., 2013, as cited in Roxas, 2023, p. 62; Mascarinas & Karl, 2023, p. 5; Masocha, 2019, p. 1). Consequently, SMEs must adopt customer-oriented market research, Customer Relationship Management (CRM) technology, and dynamic, value-based pricing strategies to adapt to market shifts and maintain a competitive edge (Maurya et al., 2015; Mohamad et al., 2014, & Nguyen & Waring, 2013, as cited in Roxas, 2023, pp. 61–62; Toles, 2020, pp. 83, 103; Watson, 2020, p. 83).

Achieving economic sustainability is the most debated pillar of the triple bottom line that depends heavily on efficient financial management, cost optimization, and proactive cash flow monitoring to avoid insolvency (Doane & MacGillivray, 2001, p. 4; Montaña & Gurrea, 2023, p. 20). Successful SMEs maximize profits, liquidity, and resource efficiency through strategic cost savings, sound working capital management, and balanced scorecards to track operational income (Chipambwa et al., 2023, p. 1; Nalzaró & Montaña, 2023, p. 14; Kristanti et al., 2019, as cited by Nguyen & Nguyen, 2025, p. 1; Dvorakova & Vallisova, 2015, as cited by Moolkham, 2024, p1). Moreover, strong leadership, technical competency, and goal-oriented management are crucial for sustaining operations across regional market variations (Gamad, 2019, as cited by Kopczewska, 2021, p1; Velmurugan et al., 2023, p. 12; Nalzaró & Montaña, 2023, p.13-14;). Ultimately, aligning IT governance with infrastructure and investing in

supportive HR policies fosters high employee satisfaction, securing the loyal human capital essential for enduring business productivity (Ajibade & Mutula, 2021, pp. 237–238; Fulmer & Ployhart, 2014, & Dobre, 2013, as cited in Roxas, 2023, p. 65; Obiekwe, 2016, as cited in Roxas, 2023, p. 63). The findings of Wisker, Muniapan, & Rosinaitė (2019, p. 161) state that SMEs in the North Island of New Zealand are committed to religiosity and to their business responsibility to execute the brand promise, thus attaining favorable effects on business performance. These results align with broader empirical evidence demonstrating that executive religiosity and faith-driven organizational values strengthen corporate social responsibility and product commitment (Dimic, Fatmy & Vähämaa, 2024, p. 1). Religiosity strengthened the relationships among entrepreneurial orientation, market orientation, and SME performance (Sefnedi, 2023, p. 298). The results of the study confirm that religiosity significantly and positively influences social capital (e.g., structural, cognitive, and relational), which has a significant and positive effect on employees' performance, thus attaining organizational sustainability (Suryadi, Dyan & Muis, Mahlia & Taba, Muh & Hakim, Wardani, 2023, p. 12).

The theoretical framework of this study is anchored in the theory of "Wealth Maximization" by Brigham and Houston (2012), which explains that an organization's limited resources should be leveraged to generate long-term profits. SME owners and managers must use their resources efficiently and effectively to generate short-term profits and maximize their wealth over the long term. It also elaborates that for an SME to sustain itself, limited capital must be used efficiently and effectively to generate gradually increasing income and expand long-term wealth.

The study is also anchored in the "Sustainability Balance Scorecard system" of Kaplan and Norton (1997). It is a tool for an organization to manage the demands of relevant stakeholders and to translate strategies into action. For example, from a financial perspective, management and accounting systems are included to depict financial performance; these are value drivers that are important to the organization's future profitability. Another example of human resources being a fundamental strategic factor of success suggests a perspective for learning and development that tries to describe all staff and organizational related aspects.

In addition, the theory of triple bottom line theory by Ahmic, et.al., (2016, p.886) which touches the three pillars of business: economic, environmental and social, proposes that in order to attain sustainable business development, present generations needs must be met without compromising the ability of future generations through implementing significant indicators such as gender equality in employment, ethnic diversity in the company, system or programs for workers protection, safety at work, employees and managers training & development, sponsorship in education and skills training organization to attain sustainable business performance.

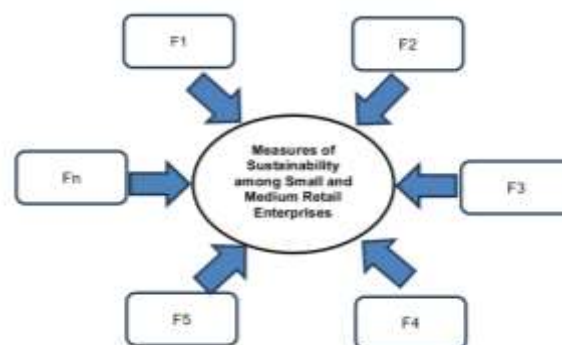


Figure 1: The conceptual framework of the study

The conceptual framework of the study is a schematic model that exhibits multiple measures of sustainability in Davao City. Furthermore, the measurements are labeled as Factor 1... n describe the determinant factors of the latent constructs. At the center is the primary variable, surrounded by the hypothesized determinants.

The independent variable is sustainability, often defined as achieving balance in three dimensions: environmentally, socially, and economically in a certain geographic area, specifically small and medium retail enterprises in Davao City.

The primary objective of this study is to determine factors affecting the sustainability among small and medium retail enterprise in Davao City. Specifically, the study sought to answer the following research questions: to identify factors of sustainability among small and medium retail enterprise, to determine factor structure of the measures of sustainability among small and medium retail enterprise and to develop a framework of sustainability among small and medium retail enterprise. Moreover, the study assumes that sustainability among small and medium retail enterprise in Davao City is multi-dimensional and is a function of factors F1, F2, F3, ... n.

This study has potential global significance, as it presents original results in the field of sustainability, and its findings would be considered a reference for existing small and medium retail enterprises in Davao City. The result may help existing and aspiring small- and medium-sized business entrepreneurs in Davao City improve their performance by adopting the most significant indicators that drive job creation and economic growth in their communities. In a global context, religious faith is at odds with secular sustainability models. Davao's faith-based approach is value-driven, prioritizing spiritual and ethical goals over profit. Faith-based initiatives focus on moral transformation, while the triple bottom line model of sustainability prioritizes structural reforms like ethical policies and sustainable supply chains. In the context of environmentalism, religious faith views nature as sacred, while triple-bottom-line approaches to sustainability treat it as a practical business necessity. In the economic context, faith often challenges market principles, while the triple bottom line aims to reshape capitalism internally. In Davao, bayanihan transforms religious faith into collective action. Through interfaith aid, traditions, and disaster response, Davaoenos show that true spirituality flourishes in unity and service when lived together. The study is highly relevant to the United Nations Sustainable Development Goals (UNSDGs), particularly in addressing the "Triple Bottom Line". Sustainability measurement in SMEs typically uses the Triple Bottom Line (TBL) framework, which evaluates performance across three dimensions that mirror the UN's objectives: Economic: ensuring long-term survival, profitability, and sound financial management. This aligns with the UN's goal of poverty alleviation and economic stability.

The study will be useful to government agencies such as the Department of Trade and Industry, the Business Bureau of the city local units, and the City Investments Office in determining the extent to which their existing policies affect, and whether there are new significant results that can be added or eliminated. Finally, this study will benefit future researchers who will conduct a similar problem. It will provide insights and a substantial body of literature on the business sustainability of small and medium retail enterprises.

2. Methods

This section details the study's research design, instruments, procedures, and participants.

Study Participants: The qualitative phase of the study serves as a preliminary investigation centered on

gathering in-depth insights from primary stakeholders. This phase used face-to-face interviews with a small sample of 12 key informants, selected through stratified random sampling across relevant subgroups. These informants included selected business owners alongside official representatives from the Department of Trade and Industry and the Davao City Business Bureau. Their input provided key qualitative context grounded in Davao City's specific socioeconomic landscape, sustainable development objectives, and local business environment.

The quantitative phase comprises the study's main data gathering stage, focusing on measurable enterprise data and statistical validation. For this main survey, the sample consisted of 231 registered owners and managers of small and medium retail enterprises in Davao City, categorized according to the criteria of Republic Act No. 9501 (Magna Carta for Micro, Small, and Medium Enterprises of 2008). A stratified random sampling technique was employed during the preliminary study and data gathering stage to divide the population into relevant subgroups before randomly selecting representative samples from each stratum (Acharya, Prakash, Saxena, & Nigam, 2013, p. 331). Participants were chosen using stratified random sampling to ensure representation across enterprise strata. Although the sample size falls below the recommended 300-participant threshold (Comrey & Lee, 1992, as cited in Pearce & Young, 2013, p. 80), the phase incorporates factor analysis, which yielded statistically significant factor loadings, effectively mitigating the sample size constraint.

The study focuses on Davao City, aligning with the city's socioeconomic landscape and sustainable development objectives (City Government of Davao, n.d.). As Davao City's mission touches the triple bottom line theory of business sustainability, a strong drive to continue and expand business is both interesting and challenging for small and medium enterprises. As cited in the website of City government of Davao, the city's interest is to sustain the gains of its people to have a social equality among gender and culture, continue to engage in a market driven economic activities within the context of balanced ecology, and equity-led development and maintain an ecologically balanced environment through ridge-to-reef approach, proper solid waste management, preservation of natural environment, promotion of renewable energy, and adoption of low carbon and eco-friendly technologies.

The study excluded non-retail businesses, non-managerial personnel, and individuals who declined to participate or submitted incomplete data without any penalty or adverse consequence imposed.

Materials and Instrument: The qualitative phase of this research focused on gathering primary insights to inform instrument development. Data were extracted through in-depth interviews conducted with key stakeholders, including business owners, managerial-level employees from small and medium retail enterprises, and officials from governing bodies such as the Department of Trade and Industry (DTI) and the Business Bureau of Davao City. The responses obtained from these qualitative interviews served as the foundational basis for formulating the subsequent survey questionnaire.

The quantitative phase centered on the validation, structuring, and deployment of the research instrument. Following its formulation, the questionnaire underwent rigorous content validation using the Content Validity Ratio (CVR), evaluated by a panel of five expert validators—four internal and one external—from the faculty of the College of Business Administration at the University of Southeastern Philippines, Davao City. The validated survey instrument employed a 5-point Likert scale to measure item necessity for sustainability: a mean range of 4 designated the item as "highly essential" (highly important for sustainability); 3 as "essential" (important for sustainability); 2 as "less essential" (less important for sustainability); and 1 as "not essential" (not important for sustainability).

Design and Procedure: The qualitative phase of the study served as an exploratory foundation focused on domain generation and construct naming. Before quantitative testing began, thematic analysis was first employed to identify and generate the initial constructs or domains of sustainability relevant to small and medium retail enterprises in Davao City. Following the administration of the survey and the extraction of statistical factors, thematic analysis was applied a second time to qualitatively interpret and name the newly extracted sustainability dimensions based on the grouped items.

The quantitative phase employed a non-experimental research design and included exploratory factor analysis (EFA). Factor analysis refers to a broader family of statistical methods sharing similar methodologies and functionalities rather than a single, isolated technique; specifically, these procedures investigate the underlying correlations among observed variables measured via survey items (Beavers, Lounsbury, Richards, Huck, Skolits, & Esquivel, 2013, p.1). By linking these variables to latent constructs, factor analysis condenses data into a smaller, more manageable set of factors, facilitating easier interpretation and saving operational time (Yong & Pearce, 2013, p. 92). As a complex, multi-step technique widely applied across the social sciences (Costello & Osborne, 2005, p.1), EFA generates linear combinations of data through a series of mathematical iterations. Each iteration reveals deeper structural relationships, continuously refining the construct until it reaches a solution that is mathematically and theoretically constrained (Beavers et al., 2013, p. 12).

Data collection began after the survey instrument was validated by internal and external evaluators and approved by UMER. Upon obtaining the Dean's endorsement letter noted by the Research Adviser, official requests were sent to small and medium retail establishments in Davao City. Questionnaires were then administered face-to-face and online via Google Forms to business owners and managers. Finally, the collected valid responses were compiled and submitted to the school statistician for analysis and interpretation.

To evaluate the business sustainability measures of Davao City SMEs, an Exploratory Factor Analysis (EFA) was conducted. Sampling adequacy and data factorability were verified using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity. Factors were identified using the Kaiser criterion (eigenvalue ≥ 1.0) and Cattell's Scree Plot, followed by VARIMAX rotation to simplify factor loadings. Finally, Thematic Analysis was applied to name the extracted sustainability dimensions.

About the ethical considerations, the study strictly adhered to the ethical standards set by the University of Mindanao Ethics Review Committee (UMERC). Written permission and proper authorization were secured from business owners, local authorities (Business Bureau of Davao City, DTI), UM Graduate School advisers, and the respondents before data collection began. Participation was completely voluntary. Respondents were informed of the study's purpose, which is to predict sustainability measures among small and medium retail enterprises in Davao City. They retained the right to withdraw at any time without penalty. Informed consent was obtained, and participants were advised that they could skip any questions that caused discomfort. The study posed minimal physical, psychological, or socioeconomic risks.

Nevertheless, a risk management plan was established to address potential emergencies. Respondents were also briefed on the study's benefits, which aim to support both their businesses and policy development. All procedures complied with the Data Privacy Act of 2012, upholding transparency, purpose, and proportionality. Participant identities remained optional. Any collected personal information was kept strictly confidential and accessible only to the researcher. Physical survey questionnaires were stored in a locked cabinet with a single key. Data will be retained only until final

publication or as long as necessary, after which paper copies will be permanently destroyed using a paper shredder. The study maintained high standards of academic honesty without data falsification or misrepresentation. All literature from credible journals was accurately represented and cited in accordance with the Harvard referencing format. To ensure originality and proper grammar, the paper was screened using Turnitin and Grammarly. There were no financial, academic, or personal conflicts of interest that could compromise participant welfare or the validity of the research. The panel of experts validated all the presented information. Finally, authorship guidelines were strictly followed: the researcher and the research adviser (as co-author) collaboratively designed the study, gathered and analyzed data, and refined the manuscript for publication. In every chapter of the paper, the researcher ensures that the adviser is properly informed and consulted on the content; likewise, the researcher always seeks the adviser's comments and suggestions to improve the paper further.

3. Results And Discussions

The findings and analysis of the data gathered are presented in this chapter. Exploratory Factor Analysis (EFA) was used to evaluate survey questionnaire data. Results are presented in the following order: measures of sampling adequacy and sphericity, rotated component matrix, extracted factors measuring sustainability among small and medium retail enterprise in Davao City, latent roots criterion of the extracted factors, Cattell-Scree Plot and framework developed from the study's findings. Moreover, a discussion is provided to clarify and explain the findings.

Measures of Sampling Adequacy and Sphericity

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity are both provided in Table 1. A statistical technique called Kaiser-Meyer-Olkin (KMO) uses the value to evaluate whether the sample size is sufficient for factor analysis (Cerny & Kaiser, 1977, as cited by Shrestha, 2021, p. 1). The determinant score is calculated to inspect the multicollinearity among the variables. Kaiser (1974) described KMO values > .90 as marvelous, .80s as meritorious, in the .70s as middling, in the .60s as mediocre, in the .50s as miserable, and less than .5 as unacceptable. The results of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity indicate that the dataset is highly suitable for factor analysis. The KMO value is 0.916, which falls within the "marvelous" range according to Kaiser's classification. This suggests that the sampling is more than adequate and that the correlation patterns are sufficiently compact to yield distinct and reliable factors. Thus, it only makes sense to conduct a factor analysis to measure sustainability among small and medium retail enterprises in Davao City.

Table 1. Measures of Sampling Adequacy and Sphericity

Measurement	Value
Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy	.916
Bartlett’s Test of Sphericity Approx. Chi-Square	4544.754
df	406
Sig.	.000

Additionally, Bartlett's Test of Sphericity was conducted to assess the statistical significance of relationships among all survey items, confirming that the correlation matrix was suitable for factor extraction (Effendi et al., 2019, as cited in Tomé-Fernández, Leyva & Moreno, 2020, p. 10). Bartlett's

Test of Sphericity is statistically significant, with an approximate chi-square value of 4544.754, degrees of freedom of 406, and a p-value of .000. This significance indicates that the correlation matrix is not an identity matrix, meaning that there are significant relationships among the variables. Therefore, factor analysis is the most suitable technique to identify the variables that measure sustainability among small and medium retail enterprises in Davao City. Together, these results strongly support proceeding with factor analysis on the dataset.

Rotated Component Matrix

The results of data reduction analysis on a total of 54 original items are shown in Table 2. Principal Component Analysis was employed since specific items measured common factors. Moreover, factor rotation increases a variable's loading on a single factor. It simplifies interpretation by breaking down the factor matrix's rows and columns (Hair et al., 1998, as cited in Howard & O'Sullivan, 2025, p. 19). Principal Component Analysis was used for extraction, while Varimax with Kaiser Normalization was used for rotation.

Based on extracted factors, six latent constructs were identified: (1) Customer feedback and responsiveness, (2) Strong customer service and support, (3) Financial management and budgeting, (4) Market research and understanding customer needs (5) Exercise religious faith to God, and (6) Strong leadership and management.

Table 2. Rotated Component Matrix						
	Component					
	1	2	3	4	5	6
1						.699
2						.723
5						.661
13		.656				
14		.655				
15		.812				
16		.719				
17		.643				
19	.646					
20	.531					
21	.762					
22	.685					
23	.690					
24	.742					
25	.721					
34			.751			
35			.835			
36			.625			
39			.554			
40			.588			
43				.582		
44				.704		
45				.645		
46				.647		
47				.697		

51					.630	
52					.839	
53					.831	
54					.775	

After applying the rotation method, twenty-nine (29) items met the criteria for factor status after seven (7) iterations. Moreover, items with factor loadings greater than 0.5 are categorized as factors (Balasundaram, 2009, as cited in Marôco, 2024, p. 984). The study excluded the 25 items that were suppressed because they did not meet the threshold and did not strongly correlate with any factor. Also, items were eliminated due to low communality; they did not fit well with the factor solution. After considering the commonality of the objects placed into their respective factors, the factors are then categorized. While the results indicate that advertising media for promotions significantly impact sustainability, there remains a notable research gap concerning how these traditional practices integrate with digital platforms like social media and online delivery apps in the post-pandemic Davao market. There is a need for more study in Traditional versus Digital promotion. The result might not apply to online-only businesses.

Extracted factors that were retained after applying the extraction and retention techniques to measure sustainability among small and medium retail enterprises in Davao City. Items that exceed the criteria of > 0.50 are deemed qualified. Meanwhile, factor loadings with 0.50 and below were eliminated. The determined underlying constructs were then subjected to thematic analysis. Thematic analysis is best utilized when the researcher looks for patterns, or in this case, to categorize the theme of each factor in the sustainability of SMREs (Braun & Clarke, 2022, p.3).

Table 3. Extracted Factors Measuring Sustainability among Small and Medium Retail Enterprise in Davao City

Item	Extracted Dimensions	Loading
	Factor 1 - Customer feedback and responsiveness	
	<i>Sustainability is measured by</i>	
19	Conduct customer feedback surveys to evaluate service interactions and gather insights about agent performance.	0.646
20	Administration of customer satisfaction score surveys to assess customers' store or site visit experiences.	0.531
21	Implementation of customer effort score surveys to gauge the ease of finding desired items in-store or online.	0.762
22	Utilization of net promoter score surveys to measure customer likelihood of recommending the product or store to others.	0.685
23	Monitoring of customer loyalty through loyalty rewards card programs.	0.690
24	Incorporation of open-ended survey questions to allow customers to express feedback in their own words.	0.742
25	Customers share challenges through suggestion	0.721
	Factor 2 - Strong customer service and support	
13	The customer service representative ensures each customer feels valued and appreciated.	0.656

14	Strong understanding of the subject matter displayed by the customer service representative.	0.655
15	Service agents adeptly address all customer concerns.	0.812
16	Dedication of service agents in resolving customer issues effectively.	0.719
17	Customer service agents receive adequate training to handle various customer queries	0.643
Factor 3 - Financial management and budgeting		
34	Identification financial goals to cover costs of goods sold, expenses, and reinvestment of profits.	0.751
35	Proficient interpretations of profit and loss statements.	0.835
36	Utilization of historical data to inform financial improvement plans.	0.625
39	Utilization of computerized systems to track receivables, facilitating working capital needs.	0.554
40	Establishment of cash reserves from retained earnings and minimizes reliance on loans.	0.588
Factor 4 - Market research and understanding customer needs		
43	Focus on reaching the appropriate audience through targeted marketing efforts.	0.582
44	Segmentation of markets based on customer wants, needs, and key characteristics.	0.704
45	Analysis of customer buying behavior.	0.645
46	Building of brand awareness through company logos and marketing campaigns.	0.647
47	Determination of target markets by prioritizing cost-effective marketing endeavors.	0.697
Factor 5 - Exercise religious faith to God		
51	Integration faith-led values into business management practices.	0.630
52	Influence of religion on business, particularly in sales.	0.839
53	Contribution of religion to social capital within the business.	0.831
54	Engagement of religious leaders on business owners and	0.775
Factor 6 - Strong leadership and management		
1	Employee proficient technical skills in utilizing computerized inventory systems to effectively maintain and control stock levels.	0.699
2	Listening session among employees, gathering valuable feedback to address and resolve pertinent issues.	0.723
5	Recognition and appreciation by rewarding employees who excel in their roles.	0.661

Based on extracted factors, six latent constructs were identified: (1) Customer feedback and responsiveness, (2) Strong customer service and support, (3) Financial management and budgeting, (4) Market research and understanding customer needs, (5) Exercise religious faith to God, and (6) Strong leadership and management.

A high loading (0.762 & 0.742) of implementation of customer survey questions allows customers to express their feedback freely (Q21 & Q24). This was embodied in the use of surveys as a tool to attain a high level of customer satisfaction. The scale was largely captured through survey questions that

allowed customers to provide feedback. This loading is validated in a study of the retail industry in a Northern European Market, where the Research Excellence Survey was adapted to continuously collect customer feedback and create action plans to improve the customer experience, thus achieving sustainability (Nahia 2023, p. 23). Another literature revealed that customer-oriented communication and customer feedback via the Net Promoter Score Survey was adapted by engaging mystery shopping technique to frontline sales employees to gather information in selected retail industries in the Czech Republic, which attains good business performance (Eger & Mičík, 2017, as cited by Eger & Suchánek, 2020, p. 165).

The high loading of exercise religious faith to God, particularly the high loading (0.839) of influence of religion on business, particularly in sales (Q52). The theme of this loading describes the effect of religious faith on the sustainability of SMREs. The findings may also be reflected in the socio-cultural fabric of Davao City. The city has been a gateway for various tribes and, as the entry point to other ASEAN countries, is the center of Mindanao's economic development (City Government of Davao, 2018). It can also be understood through the dominance of Catholic Institutions and Non-Catholic churches in Davao City; its role in education and social services reinforces religious faith. Faith-based organizations also integrate religious faith and development work, which becomes a driver of social transformation in the community. A study investigates the influence of religion on the development of religion- and symbol-based marketing strategies, which shape consumer behavior and purchasing decisions. Specifically, it explores consumer responses to religious marketing within the context of Christianity in the Philippines. The findings suggest that marketing managers can leverage these insights to tailor product and service positioning for religion-based consumer segments, thereby enhancing sales (Singh, Pasco, & Dash, 2021, p. 1).

The high loading 0.839 of implementation of financial management in question 35, particularly proficient interpretations of profit and loss statements, is fundamental to effective financial management. A P&L statement is a core financial document that provides a comprehensive overview of a company's profitability over a specific period. It is important in data synthesis, strategic decision-making, and performance evaluation—the loading .751 in the reinvestment of profits in the right projects that contribute to increasing capital. The resource-based theory is a strategic management framework that emphasizes the importance of a firm's resources and capabilities in achieving sustainable competitive advantage. It integrates the firm's strong tangible resources, such as financial assets, technology, and access to financing, which are connected to some theories. These resources were linked to the findings of various studies: Physical assets, such as investing in renewable energy and infrastructure, were resources to reduce long-term costs, as noted in an SME in Zimbabwe (Chipambwa et al., 2023, p. 2).

Human capital, as a firm's resource, was depicted in the study by Jegadeeswari, Sudarvel, & Velmurugan (2020, p. 5503), where skilled SME entrepreneurs optimize their financial management by investing in projects that yield high returns. By reducing goods that meet strong customer demand, they can ensure long-term business sustainability. The innovative capacity of entrepreneurs was also noted in the study. Access to capital is vital for innovative, high-growth, and start-up SMEs, and the rising use of alternative debt financing is relevant to all SMEs in the Davao Region during the pandemic. Proper monitoring of bank financing and other lending institutions to cover cash flows since it entails high interest and may lead to bankruptcy and financial distress (Montaño & Gurra, 2023, p. 20).

Latent Roots Criterion of the Extracted Factors

Presented in Table 4 is the latent root criterion, showing that only six (6) factors for the measures of sus-

tainability among small and medium retail enterprises in Davao City can be extracted from the data set submitted for factor analysis after 7 iterations.

The rotated component matrix from the factor analysis reveals a more balanced distribution of explained variance across six components, enhancing the interpretability of the factor structure. After rotation, the first component is customer feedback and responsiveness accounts for 15.09% of the total variance, followed by strong customer service and support with 12.67%, the third is financial management and budgeting with 12.09%, the fourth is market research and understanding customer needs with 11.08%, the fifth is exercise religious faith to God with 10.93%, and the sixth is strong leadership and management with 7.81%. Collectively, these six components explain 69.67% of the total variance in the dataset. This even spread of variance across components suggests that each factor contributes meaningfully to the overall structure, supporting a robust and interpretable factor solution. Rotation has effectively clarified the underlying dimensions by reducing the dominance of the first component and allowing other components to emerge more distinctly.

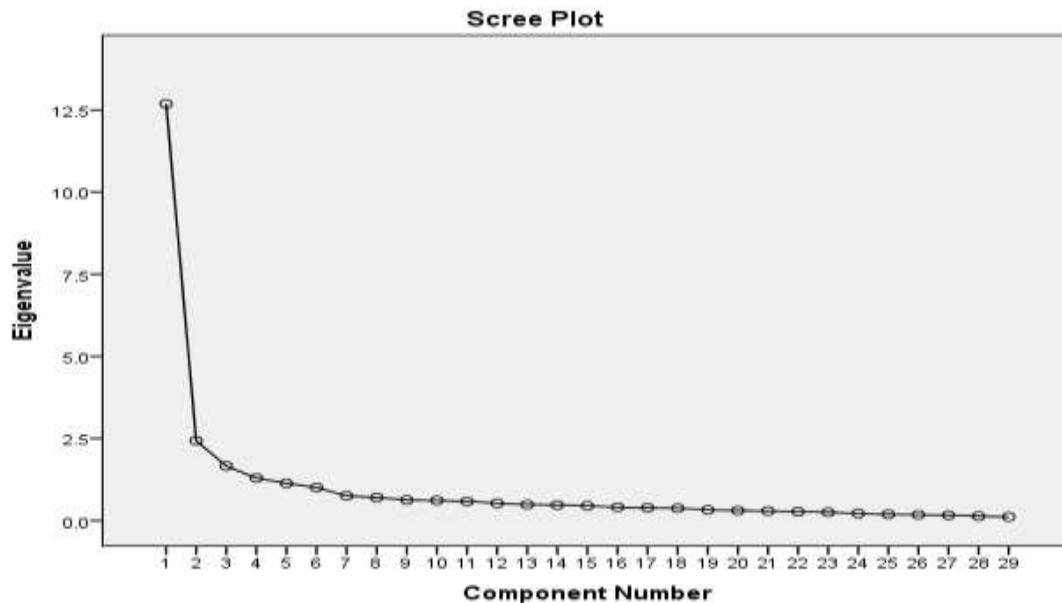
The variables comprising the unaccounted variance (30.33%) were omitted to focus on meaningful latent constructs. Only justifiable and interpretable factors are included rather than explaining all variabilities. For example, effective business planning and strategy, as well as elements of innovation and adaptability to market changes. For future research, it is proposed to capture other factors, such as adapting to digital transformation, to address customer service and support, feedback, and faster response times for customers. It is also suggested to adopt information technology systems, such as inventory management for retail SMEs and accounting systems for financial reporting, which improve the decision-making of owners or managers, thereby enhancing business performance and ultimately achieving the three pillars of sustainability.

Table 4. Latent Roots Criterion of the Extracted Factors

Factors	Initialized Eigenvalue	Percentage of Variance	Cumulative Variance%
Customer feedback and responsiveness	4.377	15.093	15.093
Strong customer service and support	3.675	12.671	27.764
Financial management and budgeting	3.507	12.094	39.858
Market research and understanding customer needs	3.212	11.076	50.934
Exercise Religious Faith to God	3.168	10.925	61.860
Strong leadership and management	2.264	7.808	69.667

The latent root criterion can be used to assess the outcome of exploratory factor analysis by examining the sum of the explained variances. By calculating the eigenvalues of the elements and their individual variances, the total variance explained is obtained.

Table 5. Cattell-Scree Plot



Based on the provided scree plot, the inflection point indicates a steep decline from Component 1 to Component 2. The slope then begins to flatten considerably after Component 2, with a more gradual decline observed. The "elbow" or inflection point is most clearly visible at Component 2. The slope of the curve flattens out significantly after Component 2. While there is still a very slight downward trend, the curve becomes much less steep, suggesting that subsequent components contribute much less to the total variance. The Kaiser Criterion suggests retaining components with an eigenvalue of 1 or greater. Looking at the plot, the eigenvalues drop below 1 after Component 6. Therefore, based on the Kaiser criterion, six factors should be retained because they have eigenvalues of 1 or greater. This finding is consistent with the assertion that the Kaiser criterion supports the 6 factors.

Multidimensional Framework of Sustainability among Small and Medium Retail Enterprise in Davao City

A thematic framework, shown in Figure 2, depicts the six (6) structures of sustainability measures among small and medium retail enterprises in Davao City. These factors include the breakdown of factors, customer feedback and responsiveness, strong customer service and support, financial management and budgeting, market research and understanding customer needs, exercising religious faith in God, and strong leadership and management.

The researcher thematically analyzed these factor structures to identify the best constructs that best explain the clustered components. These six measures significantly influence sustainability.

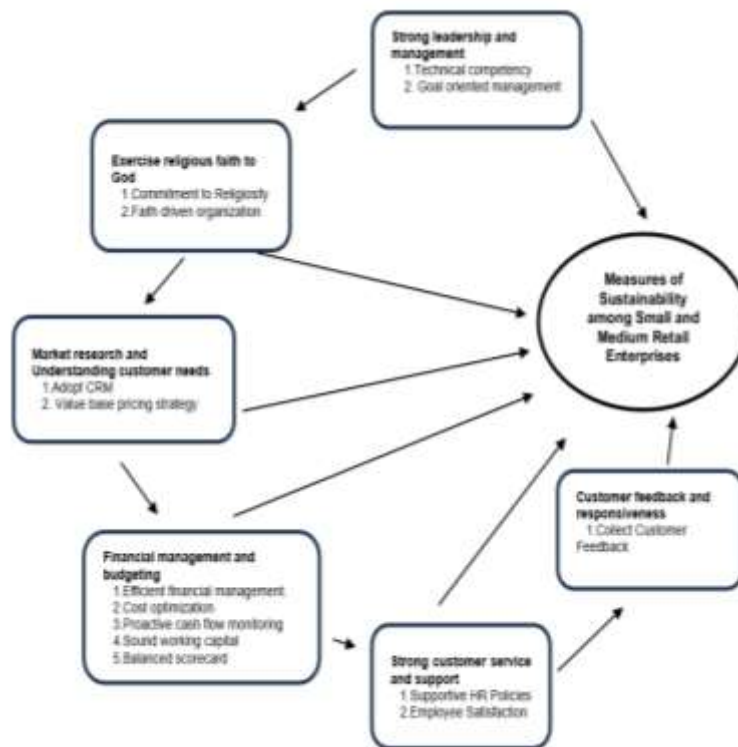


Figure 2. Thematic Framework on measures of sustainability among small and medium retail enterprises

The Measures of Sustainability among Small and Medium Retail Enterprises in Davao City model integrates six key components into a cohesive ecosystem. Each factor doesn't just contribute individually but actively interacts with and reinforces others, creating a significant, multidimensional foundation for long-term viability. This synergy is critical because a breakdown in one area, such as poor financial management or a lack of religious faith or ethical values, can weaken the entire structure, regardless of success elsewhere.

First, Strong Leadership and management provide the unifying vision that establishes the enterprise's mission and direction. Effective leaders make critical strategic decisions, such as a large investment in technology, which can empower the workforce and improve performance across the board. The model also recognizes that in Davao City, Religious Faith is a powerful, non-traditional measure. Far more than just personal belief, this factor functions as a dynamic source of core ethics, instilling integrity, resilience, and a deep commitment to community. This strong ethical foundation naturally guides leadership decisions, fostering transparency and a service-first mentality that permeates the entire business. These foundational components then drive the critical operational drivers of success: Market Research, Financial Management, and Budgeting. Market Research identifies specific customer needs, which directly inform how leadership allocates the budget, enabling strategic investments such as developing a new, in-demand product. This is essential for long-term sustainability as businesses must meet market demand efficiently. All of these strategic and financial elements must culminate in the tangible touchpoints where the business meets the customer: Strong Customer Service and Support, Customer Feedback, and Customer Responsiveness.

These customer-facing factors are standard for the entire system. Excellent service and responsive changes create loyal customers, ensuring a consistent revenue stream that, in turn, reinforces the

company's financial stability. Conversely, poor customer service or ignored feedback, perhaps due to a breakdown in leadership or ethical values, will negate even the best laid financial plans. Therefore, the Sustainability Measures in Davao City are inherently interconnected: they are the six essential pillars that, when balanced, create a synergistic and thriving small to medium-sized retail enterprise.

4. Conclusions and Recommendation

Six important and multidimensional factors, which contribute to the sustainability of small and medium retail enterprises (SMREs) in Davao City were determined from this study, namely, customer feedback and responsiveness, customer service and support, financial management and budgeting, market research and knowledge of customer needs, having faith in religion, and effective leadership and management. Confirmatory factor analysis has revealed that all six factors together constitute an excellent framework for sustainable operation of businesses. Although there were some variables with high correlation, the whole model proved to be quite stable and predictable.

In order to increase their competitiveness, small and medium retail enterprises have to consider customer feedback tools like Net Promoter Score (NPS) survey, which will give useful recommendations for increasing customer loyalty and productivity of operations. Local authorities should create training programs in financial management of business with special emphasis on accounting, cash flow management, and risk management. The framework for sustainability needs further development through inclusion of digital marketing and online delivery logistics.

Thus, the findings of this study present a data-driven and culturally relevant framework for sustainable growth of local retail enterprises.

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