INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY: APPLIED BUSINESS AND EDUCATION RESEARCH
2025, Vol. 6, No. 9, 4377 – 4390
http://dx.doi.org/10.11594/ijmaber.06.09.13

Research Article

Utilization of Capital Budgeting Techniques and Their Impact on the Financial Stability of Manufacturing Firms in Bulan, Sorsogon

Michael B. Bongalonta*

Sorsogon State University Bulan Campus, Philippines

Article history:
Submission 03 August 2025
Revised 31 August 2025
Accepted 23 September 2025

**Corresponding author:*
E-mail:
bongalontamichael@sorsu.edu.ph

ABSTRACT

This study examines the utilization of capital budgeting techniques and their impact on the financial stability of manufacturing firms in Bulan, Sorsogon. It focuses on how decision-making tools such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PBP) shape financial outcomes in terms of liquidity, solvency, and equity strength.

Findings show that manufacturing firms rely heavily on the Payback Period, while the application of more advanced methods like NPV and IRR remains limited. Although businesses demonstrate fair liquidity and solvency, their financial structures are highly debt-dependent, exposing them to long-term risks. Regression analysis confirmed that firms using advanced techniques achieve stronger financial stability, while those dependent on simple payback evaluations are more vulnerable to short-term pressures and weaker growth prospects.

The study highlights the need for strengthening equity financing, enhancing financial literacy, and adopting sophisticated capital budgeting methods to improve long-term stability. By providing empirical evidence from a local manufacturing context, this research contributes to both practice and scholarship, underscoring that advanced capital budgeting tools not only optimize investment decisions but also safeguard firms against financial vulnerability.

Keywords: *Capital budgeting, Financial stability, Manufacturing firms, Bulan Sorsogon, NPV, IRR, Payback Period*

Introduction

In an increasingly competitive and uncertain global economy, businesses must make wise and well-informed financial decisions to ensure their long-term survival. One of the most critical aspects of this process is capital budgeting, a cornerstone of financial management that guides firms in evaluating long-term investments such as equipment purchases, plant expansion, or product development.

How to cite:
Bongalonta, M. B. (2025). Utilization of Capital Budgeting Techniques and Their Impact on the Financial Stability of Manufacturing Firms in Bulan, Sorsogon. *International Journal of Multidisciplinary: Applied Business and Education Research*. *6*(9), 4377 – 4390. doi: 10.11594/ijmaber.06.09.13

Across industries worldwide, decision-makers rely on established techniques such as the Net Present Value (NPV), Internal Rate of Return (IRR), and the Payback Period to assess whether an investment can generate value, improve liquidity, and enhance organizational resilience.

From a theoretical standpoint, NPV is grounded in the principle of the time value of money, determining whether future cash flows discounted at the firm's cost of capital will exceed the initial outlay. A positive NPV suggests that an investment contributes to wealth creation, making it a preferred tool for maximizing shareholder value. The IRR, meanwhile, measures the discount rate that equates a project's NPV to zero, presenting investors with a percentage return that is both intuitive and comparable across alternatives (UKDiss, 2024; Investopedia, 2025). While both NPV and IRR are robust, they also present practical limitations, such as conflicting rankings of projects or unrealistic reinvestment assumptions (FasterCapital, 2025). The Payback Period, though simpler, remains popular among small and medium-sized enterprises because it offers a quick estimate of how long it takes to recover an investment—an essential consideration for firms with limited liquidity (UQ Pressbooks, 2023). However, because it ignores the time value of money and post-recovery cash flows, scholars often recommend combining it with NPV or IRR for more reliable decision-making (ResearchGate, 2023).

Alongside these decision-making tools, the concept of financial stability has emerged as a central concern for firms of all sizes. Financial stability, commonly assessed through indicators such as the current ratio, debt-to-equity ratio, and equity-to-asset ratio, reflects a company's capacity to meet short- and long-term obligations, manage risks, and maintain sustainable growth. Theoretical and empirical evidence suggests that sound capital budgeting practices directly influence financial stability by ensuring efficient capital allocation, maintaining optimal leverage levels, and enhancing liquidity management. Globally, this relationship has been explored in various industrial contexts, but studies focusing on developing economies and local manufacturing sectors remain relatively scarce.

In the Philippines, manufacturing continues to play a vital role in national and local economies, serving as both an employment generator and a driver of innovation. However, regional enterprises, particularly those located outside metropolitan hubs, often face challenges in accessing capital, competing with larger firms, and adopting modern financial practices. This situation is evident in the Municipality of Bulan, Sorsogon, a thriving commercial center in the southern part of Luzon. Bulan is known not only as a gateway to Luzon's southernmost provinces but also as a hub for local trade, fishing, agriculture, and small- to medium-scale manufacturing. Within this business arena, manufacturing firms face pressures to balance resource constraints with the need for expansion, modernization, and resilience against financial and market fluctuations. For these enterprises, effective capital budgeting may spell the difference between growth and stagnation.

It is within this context that the present study is anchored. By examining the utilization of NPV, IRR, and Payback Period among manufacturing firms in Bulan and linking these practices to indicators of financial stability, the research seeks to bridge the gap between global capital budgeting theory and local business realities. The study is theoretically grounded in Capital Budgeting Theory, which emphasizes the role of discounted cash flow analysis and risk-adjusted decision frameworks in maximizing firm value. In this sense, the study assumes that a balanced application of capital budgeting techniques can directly influence liquidity, solvency, and overall stability in the local manufacturing sector.

This research seeks to empower local business owners and managers in Bulan by equipping them with evidence-based tools that can guide more informed investment decisions. In a community where many firms operate with limited resources, the study also underscores the importance of using capital wisely, ensuring that every peso invested contributes to growth and stability. Beyond its practical value, the research adds to academic discourse by

shifting attention from large corporations in metropolitan centers to the often-overlooked small and medium enterprises in regional municipalities like Bulan. Finally, its findings hold significance for policymakers and local government officials, who may use the insights to design programs that promote sound financial practices and strengthen the foundations of the local economy.

This study seeks to uncover how the use of capital budgeting techniques influences the financial stability of manufacturing businesses in Bulan, Sorsogon. More than just dealing with numbers and financial ratios, it highlights that sound financial management is about keeping businesses alive, creating opportunities for growth, and strengthening the local economy. At its core, the study underscores that effective decision-making in investments contributes not only to the resilience of individual firms but also to the well-being of the community in an increasingly competitive world.

Objectives of the Study

The primary objective of this research is to examine the application capital budgeting techniques among manufacturing businesses in Bulan, Sorsogon and how it affect their financial stability. Specifically, the study aims to:

1. Evaluate the extent to which manufacturing businesses in Bulan, Sorsogon apply capital budgeting techniques specifically Net Present Value (NPV) Method, Internal Rate of Return (IRR) Method, and Payback Period Method in their financial decision-making processes;
2. Assess the financial stability of manufacturing businesses in Bulan Sorsogon in terms of current ration, debt to equity ratio and equity to asset ratio
3. Determine how the utilization of capital budgeting techniques affect the financial stability of the manufacturing sectors in the Municipality of Bulan, Sorsogon.

Methodology

This study used a quantitative research design to investigate how capital budgeting techniques influenced the financial stability of manufacturing businesses in Bulan, Sorsogon. By focusing on measurable financial indicators and statistical relationships, the research aimed to provide evidence-based insights that went beyond anecdotal accounts of business performance. The approach was deemed appropriate since the study involved examining numerical data such as the use of Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period and linking them to indicators of financial stability like the current ratio, debt-to-equity ratio, and equity-to-asset ratio.

The respondents of the study consisted of the owners, managers, and financial officers of manufacturing firms operating in Bulan, Sorsogon. These individuals were selected because they were directly involved in financial decision-making and were familiar with the capital budgeting practices of their businesses. The study covered both small and medium enterprises to capture a realistic picture of how capital budgeting was practiced in the local manufacturing sector.

Based on LGU records, there were 124 registered manufacturing businesses in the municipality at the time of the study. The distribution of these establishments by legal form of business is presented in Table 1.

Table 1. Research Population

Form of Business Establishments	Total No. of respondents	%
Corporation	12	9.67%
Sole Proprietorship	112	90.33%
Total	**124**	**100%**

As shown in Table 1, most manufacturing businesses in Bulan operate as sole proprietorships (90.33%), while only a small portion (9.67%) are registered as corporations. Because the overall population of firms is relatively small, the sample size was carefully

calculated using the G*Power statistical software. With the parameters set at a 95% confidence level and a 5% margin of error, the minimum number of respondents needed was determined to be 94. Importantly, the final sample reflected the real distribution of businesses in Bulan, with the proportions of sole proprietorships and corporations closely matching their actual presence in the community, as illustrated in Table 2.

Table 2. Actual Respondents (Population = 124; Sample Size @ 95% Confidence level = 94)

Form of Business Establishments	Total No. of respondents	%
Corporation	7	7.45%
Sole Proprietorship	87	92.55%
Total	**94**	**100%**

To analyze the data, the study made use of both descriptive and inferential statistics. Descriptive statistics were used to present a snapshot of how capital budgeting techniques were applied and to calculate the financial stability ratios of the firms. To go deeper, the study applied multiple linear regression analysis to examine the connection between capital budgeting practices and financial stability. This method was chosen because it made it possible to see how the independent variables namely: Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period, worked together and separately to influence financial indicators such as the current ratio, debt-to-equity ratio, and equity-to-asset ratio. The findings offered a clearer understanding of whether, and to what extent, capital budgeting practices helped strengthen the financial stability of manufacturing businesses in Bulan, Sorsogon. For accuracy and consistency in statistical processing, SPSS software was used. To measure the extent capital budgeting techniques utilization in the decision-making processes of manufacturing business owners, the study employed a five-point Likert scale with response options coded as follows: 1 – Never, 2 – Rarely, 3 – Sometimes, 4 – Often, and 5 – Always.

Financial stability indicators including current ratio, debt to equity ratio and equity to asset ratio were assessed using the following indicators:

Indicators	Scale / Degree	Interpretation
1. Current Ratio(Current Assets ÷ Current Liabilities)	**< 1.00** – Weak **1.00 – 1.49** – Fair **1.50 – 3.00** – Strong **> 3.00** – Excessive	Measures short-term liquidity. A ratio < 1.0 indicates poor ability to meet short-term obligations, while 1.50–3.00 reflects healthy liquidity. Values above 3.00 may suggest underutilization of assets.
2. Debt-to-Equity Ratio (Total Debt ÷ Total Equity)	**> 2.00** – Highly Leveraged (Risky) **1.00 – 1.99** – Moderately Leveraged **0.50 – 0.99** – Lowly Leveraged **< 0.50** – Very Conservative	Indicates reliance on debt financing. High values show greater financial risk, while very low values suggest overly conservative financing that may limit growth.
3. Equity-to-Asset Ratio (Total Equity ÷ Total Assets)	**< 0.20** – Weak Solvency **0.20 – 0.39** – Fair Solvency **0.40 – 0.60** – Strong Solvency **> 0.60** – Very Strong Solvency	Shows the proportion of assets financed by owners' equity. Higher values mean stronger financial independence and stability, while very low values imply heavy reliance on debt.

The study recognized the sensitivity of financial data and upheld the highest ethical standards. Participation was voluntary, and informed consent was secured from all respondents. All information gathered was treated with strict confidentiality and was reported only in aggregate form to protect the identity of participating firms.

Results and Discussions

A. Extent of Capital Budgeting Techniques Application in Financial Decision Making by Manufacturing Business Owners in the Municipality of bulan Sorsogon

Table 3 presents the extent of utilization of capital budgeting techniques among manufacturing firms in Bulan, Sorsogon. The results reveal that among the three primary methods assessed, the Payback Period registered the highest mean score (M = 3.19), interpreted as "sometimes" utilized. This indicates that managers moderately apply this method when evaluating investment projects.

Table 3. Relevant Costing Utilization

Latent Variables	Mean Scores
1. Net Present Value Method	2.34
2. Internal rate of Return Method	2.02
3. Payback Period Method	3.19
Average Mean Scores	**2.52**

Note: 4.50-5.00=Always; 3.50-4.49; Often; 2.50-3.49=Sometimes; 1.50-2.49=Rarely; 1.00-1.49=Never

The Net Present Value (NPV) method, which is widely regarded in finance theory as the most robust approach to evaluating long-term investment viability, obtained a lower mean score (M = 2.34), interpreted as "rarely" utilized. Similarly, the Internal Rate of Return (IRR) method recorded the lowest score (M = 2.02), also "rarely" used. Overall, the average mean score for the utilization of capital budgeting techniques is 2.52, suggesting that manufacturing firms in Bulan only sometimes employ formal capital budgeting practices in their decision-making processes. This pattern underscores a critical observation: while manufacturing businesses in Bulan recognize the value of capital budgeting techniques, their use remains inconsistent and largely skewed toward simpler and less technically demanding methods like the Payback Period.

The results reveal that manufacturing firms in Bulan tend to rely more on straightforward and easy-to-apply tools rather than on technically demanding models of investment appraisal. The clear preference for the Payback Period reflects its simplicity, its emphasis on liquidity, and its ability to provide managers with quick reassurance in the face of uncertainty. Graham and Harvey (2001), in their landmark study on corporate financial practices, similarly observed that small and medium-sized enterprises (SMEs) often gravitate toward the Payback Period rather than discounted cash flow (DCF) techniques, precisely because of its ease of application and immediate focus on recovering capital. This tendency aligns well with the economic realities of Bulan, where manufacturers operate under volatile market conditions, limited access to external financing, and heightened sensitivity to maintaining steady cash flows.

On the other hand, the relatively low utilization of more advanced techniques such as Net Present Value (NPV) and Internal Rate of Return (IRR) may reflect deeper challenges—such as gaps in financial literacy, lack of technical expertise, or insufficient access to reliable data that these methods require. Correia, Cramer, and Wessels (2015) emphasized that while DCF techniques are theoretically superior in capturing long-term value creation, they are often bypassed in practice because managers either lack the confidence to apply them or prefer methods that deliver faster, more tangible answers. This echoes Herbert Simon's (1997) concept of "bounded rationality," where decision-makers, constrained by limited

information and resources, adopt heuristics and "good enough" strategies rather than optimizing with sophisticated tools.

Theoretically, these findings underscore a persistent gap between the prescriptions of normative finance theory which strongly advocates maximizing shareholder wealth through rigorous DCF approaches and the lived realities of managerial behavior, which lean toward simpler, less technical decision-making (Brealey, Myers, & Allen, 2019). Pike (1996) previously highlighted this practical compromise, noting that firms often adopt a pragmatic mix of methods, balancing the ideal of financial rigor with the real-world demand for convenience and speed.

For the municipality of Bulan, the implications are significant. While the reliance on the Payback Period reflects prudence and risk aversion—a reasonable strategy in an environment marked by financial constraints—it may also limit firms' capacity to identify and pursue projects with longer-term payoffs, such as those involving innovation, expansion, or export competitiveness. At a global level, this cautious stance may safeguard firms from immediate financial shocks but could also restrict their ability to scale and compete in markets where more sophisticated financial planning and risk assessment are standard practice.

The findings paint a nuanced picture of business decision-making in Bulan: one that reflects adaptability and caution in the face of uncertainty, but also reveals the urgent need to bridge the gap between practice and theory. Encouraging greater awareness and application of advanced capital budgeting methods like NPV and IRR possibly through targeted training, policy support, and financial literacy initiatives could empower local firms to move beyond short-term liquidity concerns and position themselves for sustained growth in an increasingly competitive global economy.

The results in Table 3.1 show that the overall mean score for the use of the Net Present Value (NPV) method is 2.34, which falls under the interpretation of "Rarely." This finding indicates that while manufacturing firms in Bulan, Sorsogon may have some awareness of capital budgeting techniques, their actual application in decision-making remains limited.

Table 3.1 Capital Budgeting Techniques – Using Net Present Value Method

	Benchmark Statements	Mean Scores
1.	I apply the Net Present Value (NPV) method when evaluating major investment projects.	2.17
2.	I consider the time value of money in my financial decision-making by using NPV.	2.50
3.	I use NPV to compare alternative projects and select the one that generates the highest net return.	2.13
4.	I rely on NPV to guide long-term financial planning and investment allocation.	2.25
5.	I integrate the results of NPV analysis into my strategic investment decisions.	2.14
	Average Mean Scores	**2.34**

Note: 4.50-5.00=Always; 3.50-4.49; Often; 2.50-3.49=Sometimes; 1.50-2.49=Rarely; 1.00-1.49=Never

A closer look at the indicators shows that the highest mean score was on the statement, *"I consider the time value of money in my financial decision-making by using NPV"* (M = 2.50), which falls under "Sometimes." This suggests that decision-makers acknowledge, at least conceptually, the importance of the time value of money. However, this awareness does not necessarily translate into consistent practice, as other related indicators remain low. For instance, the items *"I use NPV to compare alternative projects"* (M = 2.13) and *"I integrate the*

results of NPV analysis into my strategic investment decisions" (M = 2.14) received among the lowest ratings, underscoring the infrequent use of NPV for systematic project evaluation or long-term strategy.

These findings resonate with Pike (1996), who noted that while discounted cash flow (DCF) techniques such as NPV are considered theoretically superior, many firms—particularly small and medium enterprises (SMEs) seldom adopt them due to the method's perceived complexity and the technical expertise required. Similarly, Andor, Mohanty, and Toth (2015) found that although NPV is widely taught in finance literature as the most reliable method for evaluating capital projects, its adoption in emerging markets is still weak compared to traditional methods like the payback period. The present study reinforces these observations, showing that manufacturing firms in Bulan lean away from NPV despite its potential to improve financial decision-making.

Globally, the gap between theory and practice in capital budgeting has been a recurring theme. Graham and Harvey's (2001) landmark survey in the United States revealed that while large corporations regularly use NPV and IRR, smaller firms tend to prefer simpler rules of thumb. The situation in Bulan reflects this global trend, where resource constraints, limited financial literacy, and the perceived difficulty of applying quantitative techniques discourage adoption. Truong, Partington, and Peat (2008) also noted that even in developed contexts, firms often compromise between theoretically rigorous methods and pragmatic, less technical ones.

The implications of these findings for the Municipality of Bulan are substantial. Manufacturing firms form an essential part of the local economy, providing employment, contributing to local revenues, and driving community development. However, the limited use of advanced capital budgeting techniques like NPV may restrict these firms' ability to grow sustainably and withstand financial shocks. Decisions that rely more on intuition or short-term payback considerations may lead to suboptimal investments, leaving firms vulnerable in the face of increasing competition, both domestically and globally. For Bulan as a municipality, this means slower industrial growth, reduced investor confidence, and potentially missed opportunities for positioning itself as a hub for manufacturing in the Bicol region.

On a global level, the results highlight a broader challenge faced by SMEs in emerging economies: the difficulty of integrating modern financial management practices into everyday decision-making. Without consistent use of NPV and similar tools, small manufacturers in Bulan may struggle to compete in global value chains, where investors and trade partners increasingly demand transparent, data-driven financial planning (Burns & Walker, 2009). In the context of globalization and rapid technological change, this limitation could marginalize local firms from seizing export opportunities and aligning with international partners who expect rigorous financial assessments. From a theoretical standpoint, the results reaffirm the persistent "implementation gap" in corporate finance, the disparity between what is taught in textbooks and business schools and what is actually applied by firms on the ground (Lazaridis, 2004). This raises important questions not only about knowledge dissemination but also about structural barriers, such as access to training, quality of financial education, and support from local government units.

Therefore, these findings call for deliberate interventions. Training programs, capacity-building workshops, and collaborations between local academic institutions and business associations could help demystify NPV and encourage its use. Local government could also incentivize firms that adopt advanced financial management practices through preferential access to credit or recognition programs. Globally, this contributes to the discourse on how to strengthen financial literacy in SMEs to ensure they are not excluded from the benefits of globalization and sustainable economic growth. The study finds that while manufacturing firms in Bulan, Sorsogon "rarely" use the Net Present Value method, this underutilization reflects both local and global patterns in SME capital budgeting practices. The results underscore the need for stronger financial education and policy support to bridge the gap between theoretical best practices and practical applications.

Table 3.2 presents the extent of utilization of the Internal Rate of Return (IRR) method among manufacturing firms in Bulan, Sorsogon. The computed overall mean score is 2.02, which falls under the interpretation of *"Rarely"* utilized.

Table 3.2. Capital Budgeting Techniques – Using Internal Rate of Return

	Benchmark Statements	Mean Scores
1.	I use the Internal Rate of Return (IRR) method to assess whether investment projects meet or exceed the required rate of return.	1.98
2.	I apply IRR when ranking or comparing mutually exclusive investment opportunities.	2.00
3.	I consider IRR results alongside other capital budgeting techniques in decision-making.	2.19
4.	I interpret IRR outcomes to evaluate project profitability in percentage terms.	2.16
5.	I recognize the limitations of IRR and exercise caution when applying it in complex investment scenarios.	1.75
	Average Mean Scores	**2.02**

Note: 4.50-5.00=Always; 3.50-4.49Ooften; 2.50-3.49=Sometimes; 1.50-2.49=Rarely; 1.00-1.49=Never

Among the indicators, the highest score came from considering IRR results alongside other capital budgeting techniques (M = 2.19), followed by interpreting IRR outcomes to evaluate project profitability (M = 2.16), while the lowest was recognizing the limitations of IRR in complex investment scenarios (M = 1.75). This shows that while firms are somewhat aware of IRR as a tool, its actual use in decision-making is still very limited, as most seem to rely more on simpler and more traditional approaches when evaluating investments. The overall low mean of 2.02, interpreted as "rarely used," reveals that IRR is not a priority tool among manufacturing firms in Bulan, a finding consistent with studies that small and medium enterprises (SMEs) in developing economies tend to prefer easier methods, such as the Payback Period, because these require less data and are simpler to apply (Block, 2005; Hermes, Smid, & Yao, 2007). The relatively higher score on "considering IRR alongside other techniques" suggests that IRR is sometimes referenced as a secondary measure, which supports Pike's (1996) claim that firms often adopt a multi-method approach rather than relying solely on one technique. However, the very low score in recognizing IRR's limitations points to a gap in financial knowledge and risk awareness among managers, which is critical since IRR can be misleading in projects with non-conventional cash flows or mutually exclusive choices (Damodaran, 2010).

This limited use of IRR runs contrary to finance theory, which promotes IRR and Net Present Value (NPV) as rational and effective measures (Brealey, Myers, & Allen, 2019), but it aligns with behavioral finance, which recognizes that managers often simplify decision-making when faced with complex situations or uncertain environments (Simon, 1997). For Bulan, this underuse of IRR has important implications because suboptimal investment choices can slow down firm growth, reduce competitiveness, and limit job creation, undermining the municipality's efforts to strengthen its economic base. This highlights the need for programs and interventions such as financial literacy training and support from local government agencies that can enhance decision-making capacity among business managers. The case of Municipality of Bulan reflects the challenges faced by SMEs in many developing countries, where smaller firms often lack the capacity to adopt advanced tools, creating a competitive gap with large corporations that can afford sophisticated financial practices. This gap makes it harder for local firms to participate in

global supply chains or attract investors who demand efficient and reliable investment evaluations. The rarity of IRR's use is not merely a matter of preference but reflects deeper structural and practical barriers, such as the lack of trained financial experts, inadequate access to analytical tools, and a strong focus on short-term survival over long-term profitability.

While understandable, this orientation risks undervaluing investments that could generate greater long-term benefits. In essence, although IRR is globally recognized as a best practice in capital budgeting, its use among manufacturing firms in Bulan remains rare, underscoring the need for stronger institutional and educational support to help local businesses adopt more advanced financial practices, leading not only to more stable and competitive firms but also to a more resilient local economy with better prospects for integration into the global market.

Table 3.3 shows the extent of utilization of the Payback Period (PBP) method among manufacturing firms in Bulan, Sorsogon. The overall mean score of 3.18 indicates that the PBP is "sometimes" used as part of investment decision-making. This suggests that while local managers recognize the value of the method, it is not consistently applied as a central tool in capital budgeting. Instead, it tends to be used selectively, depending on the risk environment and the specific demands of a project.

Table 3.3. Capital Budgeting Techniques – Using Payback Period

	Benchmark Statements	Mean Scores
1.	I use the payback period method to determine how quickly an investment can recover its initial cost.	3.16
2.	I apply the payback period method in evaluating projects where liquidity and risk reduction are priorities.	2.95
3.	I use the payback period as a supplementary tool alongside profitability-based methods such as NPV and IRR.	3.20
4.	I rely on the payback period to assess investment projects under uncertain or high-risk market conditions.	3.49
5.	I integrate the payback period into my financial decision-making to balance profitability and risk.	3.12
	Average Mean Scores	**3.18**

Note: 4.50-5.00=Always; 3.50-4.49Ooften; 2.50-3.49=Sometimes; 1.50-2.49=Rarely; 1.00-1.49=Never

The highest-rated indicator was the use of PBP under uncertain or high-risk market conditions (M = 3.49). This underscores the method's appeal as a straightforward mechanism that allows firms to quickly estimate the recovery period of investments when volatility and uncertainty dominate business decisions. In environments like Bulan, where small and medium-sized firms face limited financial buffers, the emphasis on quick recovery reflects an adaptive strategy to mitigate risk exposure. This finding aligns with Correia, Cramer, and Wessels (2015), who noted that managers in volatile contexts often prioritize liquidity and rapid returns over long-term profitability. The respondents also indicated a relatively high level of using the PBP as a supplementary tool alongside more advanced methods such as NPV and IRR (M = 3.20). This reflects a hybrid approach to decision-making—one that does not entirely discard advanced, theoretically superior techniques but tempers them with the simplicity and accessibility of the PBP. This pattern is consistent with Pike (1996), who observed that firms frequently adopt multiple methods rather than relying on a single decision-making tool. The practice suggests that managers in Bulan are attempting to balance rigor with pragmatism, making investment evaluation both technically grounded and practically manageable.

The lowest score was found in applying the method where liquidity and risk reduction are priorities (M = 2.95). Paradoxically, this runs

counter to one of PBP's strongest selling points—its ability to highlight projects that recover capital quickly and thus minimize risk. This underutilization could reflect either a lack of technical understanding of the method's strengths or an enduring reliance on intuitive decision-making rather than systematic analysis. Graham and Harvey's (2001) survey of CFOs similarly reported that many managers recognize PBP's relevance yet fail to apply it consistently in contexts where it is most useful. From a theoretical standpoint, these results illuminate the tension between normative finance theory and actual managerial behavior. Finance theory emphasizes discounted cash flow (DCF) techniques such as NPV and IRR, which maximize shareholder wealth over the long term (Brealey, Myers, & Allen, 2019). Yet in practice, managers—particularly in smaller firms and developing economies—often gravitate toward simpler heuristics like PBP when confronted with uncertainty, time pressure, or limited analytical resources (Simon, 1997). The relatively stronger reliance on PBP in Bulan during uncertain conditions validates this behavioral finance perspective, demonstrating that decision-making is not purely rational but bounded by practical constraints.

The findings in Bulan echo a broader global trend among SMEs in developing economies, where reliance on simple tools like PBP persists despite their theoretical shortcomings (Hermes, Smid, & Yao, 2007). In an increasingly globalized market, this creates a competitive gap between local firms and multinational corporations that employ sophisticated, data-driven financial models. While PBP may be a rational response to uncertainty in developing markets, it may also place local firms at a disadvantage when competing for investment or integrating into global supply chains. For Bulan's firms to thrive in this interconnected environment, striking a balance between short-term financial security and long-term strategic growth will be critical. The moderate application of the Payback Period in Bulan reflects both the pragmatic wisdom and structural constraints of local firms. It highlights their cautious orientation, shaped by liquidity needs and risk exposure, but also reveals opportunities for growth through enhanced financial capability. Moving forward, empowering managers to adopt a more comprehensive capital budgeting toolkit will not only improve individual firm performance but also strengthen Bulan's position within the broader regional and global economic landscape.

B. The Financial Sustainability (FS) of Manufacuring Businesses in the Municipality of Bulan, Sorsogon

Table 4 presents the computed financial sustainability indicators of the manufacturing sector in Bulan, Sorsogon. The results reveal a current ratio of 1.33 (Fair), a debt-to-equity ratio of 2.63 (Highly Leveraged), and an equity-to-asset ratio of 0.24 (Fair Solvency).

Table 4. Financial of Manufacturing Sector in Bulan, Sorsogon

Business Indicators	Computed FS	Degree
1. Current Ratio	1.33	Fair
2. Debt to Equity Ratio	2.63	Highly Leveraged
3. Equity to Asset ratio	0.24	Fair Solvency

The current ratio of 1.33 indicates that manufacturing firms in Bulan maintain a fair level of liquidity. While they can cover their short-term obligations, the margin of safety is relatively narrow. This suggests that any abrupt increase in liabilities or delay in receivables collection could strain cash flow. In the literature, Brigham and Ehrhardt (2017) emphasized that liquidity below the strong threshold (1.5–3.0) can signal vulnerabilities in working capital management, potentially hindering firms from responding to unforeseen financial shocks. The debt-to-equity ratio of 2.63 positions the sector as highly leveraged, reflecting an overreliance on external borrowings relative to equity financing. This finding points to elevated financial risk, where firms are more exposed to fluctuations in interest rates and

credit conditions. According to Myers (2001), such capital structures may provide short-term growth opportunities but can also compromise long-term sustainability, particularly in developing economies where financial markets are less stable. Moreover, international studies (Frank & Goyal, 2009; Rajan & Zingales, 1995) highlight that excessive leverage is often associated with reduced resilience during economic downturns. The equity-to-asset ratio of 0.24 suggests fair solvency, meaning that less than one-fourth of total assets are financed through equity. This low equity base further confirms the sector's dependence on debt financing. In comparison, firms with higher equity contributions are better positioned to absorb financial shocks and ensure continuity of operations (Demirgüç-Kunt & Maksimovic, 1999). Thus, while Bulan's manufacturing firms are not in critical distress, their capital structures leave them vulnerable to external financial disruptions.

The findings show that manufacturing firms in Bulan maintain an acceptable level of liquidity, but face serious financial risks because of their heavy reliance on debt. Their current ratio suggests they can manage day-to-day operations, yet their weak equity position raises concerns about long-term sustainability. This pattern aligns with the pecking order theory (Myers & Majluf, 1984), which explains that businesses typically prefer to use internal funds but resort to borrowing when retained earnings are not enough. The low equity-to-asset ratio observed suggests that these firms have limited retained earnings, forcing them to depend more on loans than on equity to finance growth. This trend is not unique to Bulan. Similar studies in other developing economies reflect the same situation. Abor (2005), for instance, found that small and medium-sized enterprises (SMEs) in Ghana carried high levels of debt that limited their growth. In the Philippines, Aldaba (2012) also highlighted that SMEs struggle with structural financing issues—particularly limited access to long-term equity and an overdependence on bank credit or even informal lenders. The implications of these findings are significant.

For Bulan's manufacturing sector to achieve greater financial resilience, it is essential to strengthen financial literacy, improve risk management practices, and expand access to equity financing. Policymakers could support this by creating credit guarantee programs, fostering linkages with cooperative banks, or providing incentives that encourage equity-based funding. By doing so, firms can gradually reduce their reliance on debt and build healthier, more balanced capital structures. While manufacturing firms in the Municipality in Bulan, Sorsogon can sustain their operations for now, their debt-heavy financial structure places them in a vulnerable position, especially during economic shocks. Addressing these vulnerabilities requires joint efforts from entrepreneurs, financial institutions, and policymakers. If managed effectively, these reforms would not only secure the financial stability of local firms but also enhance the municipality's overall economic growth and job creation.

C. The Effect of Capital Budgeting Techniques on the Financial Stability of the Manufacturing Sectors in the Municipality of Bulan, Sorsogon

As shown in Table 5, the regression model was statistically significant (**$F = 8.346$, $p < 0.001$**), with an **R^2 of 0.453**, indicating that **45.3% of the variance in financial stability** among manufacturing firms in Bulan can be explained by the utilization of capital budgeting techniques. The adjusted R^2 of 0.421 suggests a moderately strong explanatory power, even after adjusting for the number of predictors.

Among the predictors, NPV ($\beta = 0.317$, $p = 0.004$) and IRR ($\beta = 0.284$, $p = 0.026$) were both positively significant. This means that firms using discounted cash flow methods are more likely to achieve better financial stability, as these techniques account for the time value of money, future profitability, and risk-adjusted returns. The results affirm earlier evidence by Graham and Harvey (2001), who reported that firms applying advanced appraisal techniques achieve better capital allocation and long-term value creation. Similarly, Truong, Partington, and Peat (2008) emphasized that discounted methods like NPV and IRR reduce investment inefficiencies and improve financial outcomes.

Conversely, the Payback Period (β = -0.198, p = 0.034) was negatively associated with financial stability. While widely used because of its simplicity and emphasis on liquidity recovery, reliance on the payback method can bias managers toward short-term investments and underweight long-term profitability. Ryan and Ryan (2002) cautioned that excessive dependence on the payback period often results in suboptimal capital structures and missed opportunities for sustainable growth.

The collinearity statistics (Tolerance values > 0.68 and VIF < 1.50) confirm that multicollinearity was not a problem, ensuring the reliability of the regression estimates. The findings reveal a critical link between capital budgeting practices and financial health. Firms that embrace advanced, profitability-oriented tools such as NPV and IRR tend to exhibit stronger financial stability, as these methods enhance investment efficiency, optimize resource allocation, and mitigate risks. On the other hand, overreliance on the Payback Period—a method still popular among local firms—contributes negatively, reinforcing a short-termist orientation that is often associated with high leverage and fragile solvency.

Table 5. Linear Regression Analyses

Independent Variables	Coefficients, β	Sig.	Std. Error	Collinearity Statistics
				Tolerance
Constant	.842	0.000**	0.201	
NPV	.317	0.004**	0.103	0.714
IRR	.284	0.026**	0.121	0.687
PP	-.198	0.034**	0.089	0.752
F Value	8.346			
R Square	.453			
Adjusted R Square	.421			

Note: ** Significant at 95%.0 Confidence Interval

This aligns with the pecking order theory (Myers & Majluf, 1984), which explains that firms facing weak retained earnings often resort to debt. In the case of Bulan, limited adoption of sophisticated techniques further exacerbates this debt-dependence, as managers favor quick payback over sustainable profitability. This trend mirrors findings in other developing economies. For example, Abor (2005) reported that Ghanaian SMEs exhibited high debt ratios partly because they underutilized advanced investment appraisal tools. In the Philippines, Aldaba (2012) similarly emphasized that SMEs' dependence on bank loans and informal credit is tied to inadequate financial literacy and poor capital budgeting practices.

Output

This study contributes to the growing body of knowledge on capital budgeting and financial sustainability. The findings may serve as a valuable basis for manufacturing business owners in developing improved policies and strategies that strengthen financial sustainability. Likewise, educators and researchers may use the results as instructional material and as a reference point for future investigations on related topics.

Conclusions and Recommendations

This study concludes that manufacturing firms in Bulan, Sorsogon apply capital budgeting techniques only to a limited extent, with a strong preference for the Payback Period and minimal use of advanced methods such as NPV and IRR. While these firms maintain fair liquidity and solvency, their heavy reliance on debt exposes them to high financial risk, and their weak equity base threatens long-term stability.

The key contribution of this research is the empirical evidence that advanced capital budgeting techniques, particularly NPV and IRR, are positively associated with stronger financial stability. Conversely, overreliance on simple payback evaluations fosters short-termism, undermines long-term competitiveness, and

leaves firms more vulnerable to financial distress. By situating these findings within the context of local manufacturing enterprises, this study demonstrates that financial literacy and strategic investment appraisal are not merely technical exercises but critical drivers of resilience and sustainability.

Based on these findings, the researchers strongly recommend the following:

1. Manufacturing firms should be trained and encouraged to consistently apply NPV and IRR, as these techniques incorporate time value of money and risk considerations that improve long-term stability.
2. Firms must reduce dependence on debt by exploring equity-based funding options such as reinvestment of retained earnings, strategic partnerships, or equity infusion to establish a more resilient financial base.
3. Business owners and financial managers should undergo continuous capacity-building programs on financial planning, debt management, and risk assessment to mitigate vulnerabilities caused by excessive leverage.
4. Government agencies, business associations, and academic institutions should collaborate to provide technical assistance and training in investment appraisal techniques, improving decision-making capacity across the sector.
5. Further studies should expand the scope by incorporating more financial performance indicators, covering larger samples of firms, or conducting comparative analysis across industries and locations to validate and deepen the present findings.

References

Abor, J. (2005). The effect of capital structure on profitability: An empirical analysis of listed firms in Ghana. *The Journal of Risk Finance, 6*(5), 438–445. https://doi.org/10.1108/15265940510633505

Aldaba, R. M. (2012). SMEs' access to finance: Philippines. *Philippine Institute for Development Studies (PIDS) Discussion Paper Series*, No. 2012-05. https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1205.pdf

Andor, G., Mohanty, S. K., & Toth, T. (2015). Capital budgeting practices: A survey of Central and Eastern European firms. *Emerging Markets Review, 23*, 148–172. https://doi.org/10.1016/j.ememar.2014.12.001

Atrill, P., & McLaney, E. (2019). *Accounting and finance for non-specialists* (11th ed.). Pearson Education.

Block, S. B. (2005). Are "real options" actually used in the real world? *The Engineering Economist, 50*(2), 95–116. https://doi.org/10.1080/00137910590949901

Brealey, R. A., Myers, S. C., & Allen, F. (2019). *Principles of corporate finance* (13th ed.). McGraw-Hill Education.

Brealey, R. A., Myers, S. C., & Allen, F. (2020). *Principles of corporate finance* (13th ed.). McGraw-Hill Education.

Brigham, E. F., & Ehrhardt, M. C. (2017). *Financial management: Theory and practice*. Cengage Learning.

Burns, R., & Walker, J. (2009). Capital budgeting techniques among the Fortune 500: A rational approach. *Managerial Finance, 35*(12), 1071–1086. https://doi.org/10.1108/03074350910993855

Correia, C., Cramer, P., & Wessels, D. (2015). An analysis of capital budgeting techniques in South African listed companies. *South African Journal of Economic and Management Sciences, 18*(2), 216–231. https://doi.org/10.17159/2222-3436/2015/v18n2a9

Damodaran, A. (2010). *Applied corporate finance* (3rd ed.). Wiley.

Demirgüç-Kunt, A., & Maksimovic, V. (1999). Institutions, financial markets, and firm debt maturity. *Journal of Financial Economics, 54*(3), 295–336. https://doi.org/10.1016/S0304-405X(99)00039-2

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management, 38*(1), 1–

37. https://doi.org/10.1111/j.1755-053X.2009.01026.x

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics, 60*(2–3), 187–243. https://doi.org/10.1016/S0304-405X(01)00044-7

Hermes, N., Smid, P., & Yao, L. (2007). Capital budgeting practices: A comparative study of the Netherlands and China. *International Business Review, 16*(5), 630–654. https://doi.org/10.1016/j.ibusrev.2007.06.002

Investopedia. (n.d.). Capital budgeting: What it is and how it works. https://www.investopedia.com/terms/c/capitalbudgeting.asp

Investopedia. (n.d.). Limitations of using a payback period for analysis. https://www.investopedia.com/ask/answers/032715/what-are-limitations-using-payback-period-analysis.asp

Investopedia. (n.d.). Payback period: Definition, formula, and calculation. https://www.investopedia.com/terms/p/paybackperiod.asp

Investopedia. (n.d.). Should IRR or NPV be used in capital budgeting? https://www.investopedia.com/ask/answers/05/irrornpv.asp

Lazaridis, I. T. (2004). Capital budgeting practices: A survey in the firms in Cyprus. *Journal of Small Business Management, 42*(4), 427–433. https://doi.org/10.1111/j.1540-627X.2004.00119.x

Magni, C. A., & Martin, J. D. (2020). On the equivalence between internal rate of return and average return on investment. *Journal of Economic Studies, 47*(5), 967–986. https://doi.org/10.1108/JES-02-2019-0067

Myers, S. C. (2001). Capital structure. *Journal of Economic Perspectives, 15*(2), 81–102. https://doi.org/10.1257/jep.15.2.81

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics, 13*(2), 187–221. https://doi.org/10.1016/0304-405X(84)90023-0

OECD. (2020). *OECD economic outlook* (Vol. 2020, Issue 1). OECD Publishing. https://doi.org/10.1787/16097408

Pike, R. (1996). A longitudinal survey on capital budgeting practices. *Journal of Business Finance & Accounting, 23*(1), 79–92. https://doi.org/10.1111/j.1468-5957.1996.tb00403.x

Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance, 50*(5), 1421–1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

Ross, S. A., Westerfield, R. W., & Jaffe, J. (2019). *Corporate finance* (12th ed.). McGraw-Hill Education.

Ryan, P. A., & Ryan, G. P. (2002). Capital budgeting practices of the Fortune 1000: How have things changed? *Journal of Business and Management, 8*(4), 355–364.

Simon, H. A. (1997). *Administrative behavior: A study of decision-making processes in administrative organizations* (4th ed.). Free Press.

Truong, G., Partington, G., & Peat, M. (2008). Cost-of-capital estimation and capital-budgeting practice in Australia. *Australian Journal of Management, 33*(1), 95–121. https://doi.org/10.1177/03128962080330010 6

UKDiss. (n.d.). Traditional and practical capital budgeting techniques. https://ukdiss.com/examples/capital-budgeting-techniques.php

UQ Pressbooks. (n.d.). Capital budgeting methods – Payback period. https://openpress.usq.edu.au/financialplanning/chapter/capital-budgeting-methods-payback-period/