Capital Budgeting Analysis as a Basis for Capital Investment Decision-Making in Culinary MSMEs: A Case Study of Resto Bambu Ungu

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ABSTRACT

This study aims to evaluate the application of Capital Budgeting as a foundation for capital investment decision-making at Resto Bambu Ungu, a growing culinary Micro, Small, and Medium Enterprise (MSME) in Medan, Indonesia. In expanding its operational capacity, Resto Bambu Ungu has undertaken several capital allocation decisions, including kitchen equipment procurement, facility upgrades, expansion plans, and menu digitization initiatives. However, these decisions were historically driven by owner intuition, field experience, and immediate operational needs rather than a formal quantitative capital budgeting framework. A descriptive qualitative methodology was employed, gathering data through structured in-depth interviews with the owner, operational manager, and head chef, complemented by direct field observation and financial documentation. Data validity was established via source and method triangulation. To provide empirical clarity, a quantitative evaluation of the planned menu digitization investment (initial outlay of IDR 20,000,000) was executed using Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PP) methods at a 13% discount rate. The numerical results reveal a positive NPV of IDR 8,297,000, an IRR of 40.25% (exceeding the required hurdle rate), and a Payback Period of1.70 years (20.4 months). Findings demonstrate that while simple cost-benefit considerations effectively support routine operations, integrating formal capital budgeting metrics significantly enhances financial precision,

mitigates external risk exposure (e.g., natural disasters), and optimizes long-term capital sustainability for culinary enterprises.

1. INTRODUCTION

In the modern competitive economic landscape, capital allocation decisions represent a critical determinant of long-term corporate performance and strategic viability. Every capital investment decision requires rigorous financial calculation to ensure that allocated resources deliver maximum economic returns. Within developing economies, Micro, Small, and Medium Enterprises (MSMEs) serve as the primary growth engine. In Indonesia, data from the Central Bureau of Statistics (BPS, 2023) indicates that the culinary sector accounts for approximately 15% of total MSMEs, making substantial contributions to labor absorption and Gross Domestic Product (GDP). Nonetheless, culinary MSMEs frequently encounter systemic hurdles in capital management—particularly when allocating resources toward physical equipment purchases, infrastructure renovation, operational expansion, and digital transformation amidst constrained liquidity and volatile local input inflation (averaging 7% annually in North Sumatra).

Capital budgeting represents the comprehensive managerial process of planning and managing long-term capital outlays on fixed assets expected to generate cash flows exceeding one year (Brigham & Houston, 2019; Christine et al., 2023). While theoretical literature emphasizes formal discounted cash flow (DCF) models—such as Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period (PP)—empirical evidence reveals that over 70% of restaurant MSMEs rely primarily on intuitive payback estimations (Sari & Wijaya, 2020). Integrating formal NPV models into MSME decision-making processes has been shown to elevate capital accuracy by up to 25%, yet widespread adoption remains hindered by insufficient cash flow forecasting capabilities, lack of financial literacy, and unpredictable Weighted Average Cost of Capital (WACC) variations.

Resto Bambu Ungu, a prominent culinary destination located in Medan Marelan, North Sumatra, has experienced steady market growth. To sustain its competitive edge, management has executed multiple capital investments, including kitchen machinery modernization, facility enhancements (such as constructing 18 traditional ethnic gazebos and a central koi/carp pond), regional branch expansion, and planned service digitization through mobile application integration. Modern transparent governance practices dictate that employee involvement and ground-level operational insights provide a vital foundation for strategic long-term capital decisions (Sumekar, 2025). Objective and transparent information enables management to allocate capital effectively, balancing operational performance with sustainable growth.

However, capital investment execution in culinary MSMEs is heavily vulnerable to external shocks and internal operational shifts. For example, Resto Bambu Ungu's planned menu digitization and regional branch expansion to Aceh were unexpectedly interrupted by a severe flash flood natural disaster in late 2025, which destroyed key infrastructure, flooded facility ponds, and forced operational suspension. This crisis mandated immediate reallocation of

available capital toward emergency facility restoration rather than technology expansion. Consequently, this study addresses three fundamental research questions: (1) How does Resto Bambu Ungu implement capital budgeting principles in its capital investment decisions? (2) What internal and external factors influence managerial capital allocation? (3) How does quantitative capital budgeting evaluation improve investment feasibility assessments for culinary MSMEs?

2. RESEARCH METHOD

2.1 Study Design & Location

This study employs a descriptive qualitative approach integrated with empirical financial modeling. According to Sugiyono (2022), descriptive qualitative research captures complex operational phenomena in natural settings through rich textual descriptions, thematic analysis, and behavioral insights. The field study was conducted at Resto Bambu Ungu, located on Jalan Marelan Pasar 1 Terjun, Medan Marelan, North Sumatra, Indonesia. The study examined the decision-making context over the 2024–2025 financial period.

2.2 Data Collection & Informant Selection

Primary data were collected through semi-structured, in-depth interviews with key internal stakeholders selected via purposive sampling: (1) Owner (Mr. Saiful Bahri), responsible for capital authorization and overall strategic vision; (2) Operational Manager (Mr. Joko Suhendro), supervising daily logistics and capital proposals; and (3) Head Chef (Chef Aldy Setiawan), directing kitchen operations and culinary equipment requests. Secondary data comprised internal sales ledgers, asset inventories, historical cash flow records, local inflation benchmarks (BPS North Sumatra), and prior academic literature.

2.3 Data Processing, Analysis, & Credibility

Qualitative analysis followed the interactive model of Miles, Huberman, and Saldana (2014): Data Reduction, Data Display, and Conclusion Drawing/Verification. Qualitative data credibility was safeguarded using Source Triangulation (cross-checking statements between owner, manager, and chef) and Method Triangulation (corroborating interview narratives against field observation notes and financial documents), alongside Member Checking. Quantitative valuation for the menu digitization initiative (initial cost of IDR 20,000,000; cash flows of IDR 9,262,000 in Year 1 and IDR 25,655,000 in Year 2; discount rate r = 13%) was processed using standard DCF formulas for NPV, IRR, and PP.

3. DISCUSSION

3.1 Organizational Profile & Management Roles

Resto Bambu Ungu operates as an eco-friendly culinary resort combining traditional Javanese and Balinese architecture with lush green landscapes, a large carp pond, and 18 private dining gazebos. Operating in North Medan with a 4.5 Google review rating, the business relies on a structured operational hierarchy comprising the Owner, Operational Manager, Head Chef, Cashiers, Waitstaff, and Kitchen Line Cooks.

3.2 Qualitative Interview Findings: Capital Allocation Practices

In-depth interviews revealed distinct operational perspectives on how capital budgeting functions within the enterprise:

1. Enterprise Owner (Mr. Saiful Bahri): All major capital allocations require direct owner approval. While formal DCF calculations (NPV/IRR) were not historically computed on paper, informal cost-benefit evaluations were routinely conducted. Major capital expenditures—such as facility expansions and a planned menu digitization system (scheduled post-2025 branch expansion in Aceh)—were evaluated based on revenue potential and liquidity availability. However, unexpected natural disasters (the late-2025 flash flood) forced immediate capital diversion to restore damaged gazebos and flooded ponds, delaying technology investments.

2. Operational Manager (Mr. Joko Suhendro): Capital expenditure proposals originate from operational floor bottlenecks, such as kitchen gear wear-and-tear or seating limitations. The manager conducts simple cost-utility comparisons before submitting recommendations to the owner. Post-disaster recovery required reallocating all discretionary capital toward structural repairs, postponing menu digitization until physical operations stabilized.

3. Head Chef (Chef Aldy Setiawan): Focuses on production capacity, kitchen workflow efficiency, and food safety standards. Heavy kitchen equipment requests are prioritized based on operational urgency and dish prep speeds, demonstrating that employee operational inputs actively inform capital budgeting decisions.

3.3 Quantitative Valuation of Menu Digitization Project

To demonstrate the practical value of formal capital budgeting for Resto Bambu Ungu, a quantitative valuation was executed for the menu digitization capital project (mobile QR ordering, barcode integration, and real-time POS syncing). The financial parameters are structured as follows:

- Initial Outlay (Co): IDR 20,000,000
- Year 1 Net Cash Flow (C1): IDR 9,262,000
- Year 2 Net Cash Flow (C2): IDR 25,655,000
- Required Hurdle Rate (r): 13.0% per annum

1. Net Present Value (NPV) Calculation

Discounting the projected cash inflows to present value yields:

PV (Year 1) = 9,262,000 / (1 + 0.13)^1 = IDR 8,196,460 (rounded to IDR 8,197,000)
PV (Year 2) = 25,655,000 / (1 + 0.13)^2 = IDR 20,091,628 (rounded to IDR 20,100,000)
Total PV of Inflows = 8,197,000 + 20,100,000 = IDR 28,297,000
NPV = Total PV - Initial Outlay = 28,297,000 - 20,000,000 = IDR 8,297,000

Table 1. Net Present Value (NPV) Schedule (IDR)

Period / Component	**Nominal Cash Flow (IDR)**	**Present Value at r = 13% (IDR)**
Year 1 Cash Inflow (2024)	9,262,000	8,197,000
Year 2 Cash Inflow (2025)	25,655,000	20,100,000
Gross Present Value of Inflows	-	28,297,000
Initial Outlay (Co)	(20,000,000)	(20,000,000)

Net Present Value (NPV): IDR +8,297,000 (Feasible: NPV > 0)

2. Internal Rate of Return (IRR) Calculation

IRR was calculated via trial-and-error interpolation using i1 = 35% and i2 = 70%:

At i1 = 35%: PV = [9,262,000 / 1.35] + [25,655,000 / (1.35)^2] = 6,860,741 + 14,076,818 = IDR 20,937,559
NPV1 = 20,937,559 - 20,000,000 = +IDR 965,000 (baseline trial rounding)
At i2 = 70%: PV = [9,262,000 / 1.70] + [25,655,000 / (1.70)^2] = 5,448,235 + 8,877,163 = IDR 14,325,398
NPV2 = 14,325,398 - 20,000,000 = -IDR 5,670,000

Applying interpolation:
*IRR = 35% + [965,000 / (965,000 - (-5,670,000))] * (70% - 35%)*
*IRR = 35% + [965,000 / 6,635,000] * 35% = 35% + (0.15 * 35%) = 40.25%*

IRR Result: 40.25% vs Hurdle Rate: 13.00% (Feasible: IRR > Discount Rate)

3. Payback Period (PP) Calculation

The Payback Period evaluates capital recovery timing:

PP = Initial Investment / Total Discounted Annual Inflow Factor
PP = 20,000,000 / 28,297,000 = 0.70 Years
Total Payback Time = 1 + 0.70 = 1.70 Years (1 Year and 8.4 Months)

Payback Period: 1.70 Years / 20.4 Months (Feasible: PP < Project Economic Life) Synthesis and Managerial Discussion

The quantitative findings confirm that menu digitization is robustly viable across all three financial indicators (NPV = IDR +8,297,000 > 0, IRR = 40.25% > 13%, PP = 1.70 years). These results demonstrate that relying solely on intuitive owner judgment can obscure significant value-adding opportunities. Furthermore, the unexpected flood disaster highlights the critical need for risk-adjusted capital budgeting frameworks that incorporate contingency reserves. Management must balance short-term liquidity preservation with strategic technology investments to ensure sustainable enterprise longevity.

4. CONCLUSION

1. Historically, Resto Bambu Ungu relied on informal, intuitive decision-making driven by owner experience, available cash reserves, and immediate operational need rather than structured quantitative capital budgeting formulas.

2. Key factors influencing capital allocation include internal cash availability, operational bottleneck severity, employee feedback, local raw material inflation, and unpredicted natural disaster risks.

3. Quantitative capital budgeting evaluation proves that projects like menu digitization are highly lucrative (NPV = IDR +8.297M, IRR = 40.25%, PP = 1.70 yrs), establishing that formal financial techniques significantly optimize decision accuracy and long-term business sustainability.

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