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Multidimensional Business Feasibility and Strategic Capability Priorities in a Traditional Food Agroindustry: A DSS-Based Case Study of Suwar-Suwir in Jember, Indonesia

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ABSTRACT

Background: Traditional food agroindustries may possess strong product identity while remaining vulnerable to fragmented marketing, semi-modern production, informal financial recording, and weak integration across business functions.

Aims: This study evaluates the multidimensional feasibility of UD. Sari Rasa, a suwar-suwir agroindustry in Jember, Indonesia, and develops transparent strategic capability priorities from its Decision Support System (DSS) outputs.

Methods: A descriptive quantitative single-case design used DSS-UMKM version 2.0 to assess legal, marketing, production, management and human resources, business environment, and financial dimensions. Primary evidence came from the owner-manager through questionnaires, structured and unstructured interviews, and observation, while company records supported business and financial verification. The analysis retained the original 2021–2022 study period, a 10-year projection horizon, and a 15% discount rate.

Results: Management and human resources showed high feasibility (12/15), whereas marketing (60/80), production (37/50), and business environment (19/24) were classified as moderately feasible. Legal documents recorded in the study period included NPWP, SIUP, and PIRT. Financial outputs indicated feasibility, with a break-even quantity of 5,439.09 units, break-even sales of IDR 181,332,672.91, BCR of 7.23, payback period of 2.28 years, NPV of IDR 5,649,026,135.05, profitability index of 53.06, and IRR of 59.20%.

Conclusion: The enterprise was financially viable, but its development potential depended on closing capability gaps in digital market activation, production standardization, financial recordkeeping, and periodic compliance review. The study contributes a cross-dimensional interpretation that treats financial feasibility as a resource base for capability upgrading rather than as evidence that current practices should remain unchanged.

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INTRODUCTION

Traditional food agroindustries occupy a paradoxical position in contemporary food markets: their cultural authenticity can differentiate them strongly, yet the organizational routines that preserve tradition may also slow modernization. Local products can attract consumers because origin, recognizable ingredients, and perceived authenticity create value, but those advantages do not automatically secure reliable distribution, efficient production, or scalable market access (Vroegindewey et al., 2021). At the same time, digital transformation is reshaping how small firms sense demand, communicate with customers, coordinate resources, and evaluate performance (Verhoef et al., 2021). Evidence from SMEs shows that digital capabilities can improve growth, innovation, and customer-value creation when they are embedded in broader organizational capabilities rather than treated as isolated technologies (Matarazzo et al., 2021; Scuotto et al., 2021). In agri-food settings, digitalization also changes how firms manage process visibility, production agility, and environmental pressures across the value chain (Frau et al., 2022). However, small traditional enterprises frequently operate with limited managerial formalization, making the benefits of modernization uneven and difficult to prioritize. The practical challenge is therefore not simply whether a traditional food business is financially viable, but whether its market, production, human-resource, compliance, and information capabilities are sufficiently aligned to sustain that viability. This tension makes multidimensional business feasibility a strategically relevant problem for mature local-food enterprises.

UD. Sari Rasa, a suwar-suwir producer in Jember, East Java, illustrates this tension in a concrete entrepreneurial setting. During the 2021–2022 study period, the enterprise used approximately 200 kg of cassava tape as daily input, operated two production cycles per day, employed about 30 workers, and served markets extending beyond Jember to other parts of Java and Bali. These characteristics indicate that the firm had moved beyond a micro-scale start-up stage and possessed an established product-market base. Nevertheless, the enterprise was experiencing declining sales amid increasingly aggressive competition, while its financial records were not yet sufficiently detailed or structured for routine managerial control. The DSS assessment also showed that marketing, production, and the business environment remained in medium-feasibility categories even though management and human resources were relatively strong. Such a pattern suggests that commercial continuity can coexist with hidden capability gaps that may become more consequential as competition, channel complexity, and customer expectations intensify. It also means that a favorable financial projection alone may conceal weaknesses in the operating system that generates those financial outcomes. For this reason, the case offers an appropriate setting for examining how multidimensional feasibility evidence can be translated into focused development priorities.

The urgency of this problem has increased because SMEs now compete in environments characterized by rapid technological change, unstable demand, and recurring supply-chain disruptions. Research on SMEs in volatile environments indicates that organizational agility is shaped by digital, relational, and innovation capabilities, which in turn influence performance and the ability to respond to uncertainty (Troise et al., 2022). Studies of entrepreneurial digitalization similarly show that digital platforms can broaden opportunity recognition and market access, but adoption outcomes depend on managerial readiness and organizational context (Chatterjee et al., 2022). During periods of crisis, digital transformation has also been associated with the emergence of resilience as a higher-order capability that enables SMEs to reconfigure resources rather than merely absorb shocks (Khurana et al., 2022). In agri-food supply chains, digital technologies can reduce the performance effects of supply-demand, financial, and transportation risks by improving visibility and coordination (Ali & Govindan, 2023). Broader agri-food evidence further shows that resilience depends on how firms mobilize internal and interorganizational resources when exposed to disruption (Ali et al., 2023). These findings raise the strategic cost of leaving marketing, production, and information systems informal even when a business remains profitable. A structured diagnosis is therefore increasingly necessary to determine where scarce managerial and investment resources should be deployed first.

A multidimensional feasibility approach is particularly useful because business development decisions in agroindustry are interdependent rather than separable. Expanding digital marketing can increase demand but may also expose production bottlenecks, inconsistent packaging, weak inventory control, or inadequate financial monitoring. Conversely, investing in machinery without reliable demand information can create underutilized capacity and weaken cash-flow discipline. The dynamic-capabilities framework explains this interdependence through the firm's ability to integrate, build, and reconfigure internal and external competences as conditions change (Teece et al., 1997), while recent SME research operationalizes this logic through sensing, learning, agility, and reconfiguration (Matarazzo et al., 2021; Troise et al., 2022). Resource-orchestration theory further emphasizes managerial actions that structure, bundle, and leverage resources (Sirmon et al., 2011), and agri-food evidence shows that performance under disruption depends on how supply, production, logistics, and relationship resources are coordinated rather than on the strength of any single function (Ardekani et al., 2023). A Decision Support System (DSS) can support this logic by organizing heterogeneous financial and non-financial information into a consistent decision structure. For SMEs with limited analytical capacity, such a framework can make trade-offs visible and direct attention toward capability gaps that are otherwise obscured by day-to-day operations. The research rationale is therefore to use DSS not as a substitute for managerial judgment, but as an evidence structure that connects feasibility status with strategic capability development.

Recent literature broadly supports the proposition that SME competitiveness increasingly depends on the combination of digital market capability, organizational agility, and disciplined resource allocation. Digital platform capability has been shown to enhance agility in emerging-market manufacturing SMEs through human, organizational, and relational capital (Ahmed et al., 2022), while Indonesian evidence links social-media marketing adoption with improved MSME performance (Tatik & Setiawan, 2025). At

the firm level, digital transformation can create customer value when SMEs develop sensing and learning capabilities rather than simply adopting new tools (Matarazzo et al., 2021). Large-sample evidence also demonstrates that individual digital capabilities contribute to SME growth and innovation, reinforcing the importance of internal capability formation (Scuotto et al., 2021). From a risk perspective, Industry 4.0 adoption may reduce exposure to operational disruptions in agri-food supply chains, although technology adoption also creates implementation risks for resource-constrained SMEs in emerging economies (Ali & Govindan, 2023; Tamvada et al., 2022). Decision frameworks have therefore become important for prioritizing technology and financing choices where SMEs face competing objectives and limited resources (Soni et al., 2022). In food production, digital technologies can support agility and cleaner operations, but their value remains contingent on managerial interpretation and customer-related capabilities (Frau et al., 2022). Collectively, these studies show that competitiveness is multidimensional and capability-based, providing a strong theoretical basis for integrated feasibility assessment.

Despite these advances, three limitations remain in the literature relevant to traditional food agroindustries. First, much of the recent high-impact research explains digitalization, resilience, or agility as separate performance mechanisms, whereas small food enterprises must make decisions across legal, marketing, production, human-resource, supply, and financial domains at the same time (Ahmed et al., 2022; Khurana et al., 2022; Troise et al., 2022). Second, agri-food supply-chain studies frequently examine medium or large samples and emphasize disruption resilience, sustainability, or technology adoption, leaving less evidence on how a mature single enterprise can translate multidimensional operating data into an actionable development sequence (Ali et al., 2023; Ardekani et al., 2023; Zscheischler et al., 2022). Third, DSS-based feasibility studies in Indonesian agroindustry commonly establish whether a business is feasible, but the boundary between software-generated classifications and author-derived strategic recommendations is often insufficiently explicit (Abror et al., 2025; Rahmadhani Dynasti et al., 2025). This creates a research gap because a positive financial conclusion may be reported without explaining how weaker non-financial capabilities condition future competitiveness. It also limits reproducibility when scoring logic, data provenance, and financial assumptions are not clearly separated from interpretation. The gap is especially important for traditional products, where local identity can sustain demand while informal managerial routines continue to constrain scaling. A more transparent case-based assessment is therefore needed to connect DSS outputs, strategic capability theory, and concrete managerial priorities without overstating what the underlying data can support.

Accordingly, this study aims to evaluate the multidimensional business feasibility of UD. Sari Rasa using DSS-UMKM version 2.0 and to formulate strategic capability priorities from the resulting legal, marketing, production, management and human-resource, business-environment, and financial evidence. The study retains the original 2021–2022 enterprise data so that the reported findings remain traceable to the completed case analysis, while all present-day implications are explicitly treated as requiring revalidation. Theoretically, the study extends feasibility analysis by interpreting uneven cross-dimensional scores through dynamic-capability and resource-orchestration perspectives, thereby distinguishing current viability from the capabilities required to sustain that viability. Methodologically, it clarifies which outputs are generated by the DSS and which development priorities are interpretive syntheses derived after the software assessment. Empirically, it provides a detailed case of a mature Indonesian traditional-food enterprise whose strong financial position coexists with medium-level market and production capabilities. Practically, it shows how financial strength can be directed toward digital market activation, production standardization, structured bookkeeping, and periodic compliance review rather than indiscriminate expansion. In this way, the paper positions multidimensional DSS analysis as a disciplined bridge between business-feasibility diagnosis and entrepreneurship-oriented capability development

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METHOD

2.1 Research Design

This study employed a descriptive quantitative single-case design to evaluate the multidimensional feasibility of a traditional food agroindustry and to interpret the resulting gaps as strategic capability priorities. A case design was appropriate because the research question concerned the integrated condition of one established enterprise rather than population-level causal estimation, while the quantitative component was provided by DSS scores and

financial-feasibility indicators. The unit of analysis was UD. Sari Rasa as an operating agroindustrial enterprise, and the analytical domains were legal compliance, marketing, production, management and human resources, business environment, and finance. DSS-UMKM version 2.0 was used as the structured decision environment because the original study had already organized the enterprise data through this system. The present article therefore reports a transparent re-analysis and scholarly interpretation of those outputs rather than introducing new field measurements after the original study period. This design preserves the empirical integrity of the case while allowing the findings to be interpreted using contemporary SME, supply-chain, and capability literature.

2.2 Study Site and Period

The research was conducted at UD. Sari Rasa in Jember, East Java, Indonesia, an established producer of suwar-suwir and other local processed foods. Field data were collected over approximately six months, covering October to December 2021 and February to April 2022. The enterprise context included cassava-tape processing, semi-technological production activities, labor-intensive handling, packaging, distribution through agents and partnerships, and sales to markets within and outside Jember. All operational, legal, and market-status statements in this article refer to the conditions documented during that study period. Because regulations, licensing formats, market channels, input prices, and competitive conditions may have changed since 2022, the article does not treat the historical observations as evidence of current compliance or present-day market status. Current managerial implementation should therefore begin with a new verification of legal documents, market conditions, and operating assumptions.

2.3 Population, Participant, and Sampling

The analytical population consisted of the business processes, records, and managerial information required to characterize UD. Sari Rasa across the six DSS dimensions. The key participant was the owner-manager, selected through purposive sampling because this person had direct knowledge of the enterprise's establishment, production routines, labor arrangements, marketing channels, financing, and historical performance. Inclusion required comprehensive decision authority and access to the operational and financial information needed by the DSS, whereas individuals without cross-functional knowledge of the enterprise were not treated as primary respondents. The study did not aim to estimate attitudes or latent constructs across a population of employees; consequently, a large respondent sample was neither the analytical objective nor a requirement of the case design. Observations and company documents were used to corroborate information that could be checked independently of the owner-manager's account. This sampling logic strengthens information relevance but also creates a single-informant limitation that is explicitly considered when interpreting the results.

2.4 Instruments and Measures

Data collection used the DSS-UMKM version 2.0 questionnaire structure together with structured and unstructured interview guides, an observation sheet, and company documentation. DSS-UMKM version 2.0 has been applied in Indonesian agroindustry research as an integrated feasibility tool covering legal, marketing, production, management and human resources, environmental/business-context, and financial dimensions (Agustien et al., 2021). The legal dimension recorded the availability of business and product-related documents, including NPWP, SIUP, and PIRT in the study period. Marketing indicators covered product, price, distribution, segmentation and positioning, market share, and promotion; production indicators covered location, technology, facilities and equipment, labor, production process, and capacity. Management and human-resource indicators covered organizational form, business profile, and compensation, while the dimension previously labeled 'environmental' in the DSS output was reported in this article as 'business environment' because its observed items concerned competition and raw-material conditions rather than ecological performance. Financial inputs were processed by the DSS to generate break-even point, Net Present Value, Internal Rate of Return, Benefit-Cost Ratio, Profitability Index, and Payback Period over the original projection horizon. The use of these complementary instruments allowed the study to combine categorical feasibility evidence, observed operational conditions, and financial outputs within one case-level diagnostic framework.

2.5 Validity, Reliability, and Data Quality Assurance

The DSS instrument in this study functioned as a multidimensional formative business-assessment tool rather than a reflective psychometric scale, so internal-consistency coefficients such as Cronbach's alpha were not methodologically appropriate for the single key-informant design. Content adequacy was supported by the predefined DSS domains, which correspond to conventional business-feasibility areas and have been used in comparable Indonesian agroindustry assessments (Abror et al., 2025; Rahmadhani Dynasti et al., 2025). Data credibility was strengthened through source triangulation: owner responses were compared with direct observation and available company documents for items that could be independently checked. Financial and production figures were also reviewed for unit consistency before being entered or reported, and the manuscript distinguishes raw case evidence from post-DSS managerial interpretation. The original legacy study materials did not report a separate pilot

test, inter-rater coefficient, Cronbach's alpha, or a retained table of the software's category cut-off thresholds; these statistics are therefore not reconstructed retrospectively. This reporting choice prioritizes methodological transparency and prevents the introduction of unverified validation statistics into the final manuscript.

2.6 Data Collection Procedure

Data collection proceeded sequentially from case familiarization to structured DSS input. The researcher first documented the business profile, production activities, market reach, organizational arrangements, and financing pattern through direct observation and initial interviews. The owner-manager then completed open- and closed-ended questions corresponding to the legal, marketing, production, management and human-resource, business-environment, and financial domains, with follow-up questioning used when an answer required operational clarification. Relevant company records were reviewed to support business-profile, legal, and financial entries, after which the information was cross-checked for internal consistency and prepared for DSS processing. The verified inputs were entered into DSS-UMKM version 2.0, which generated dimension scores or feasibility labels and the financial indicators used in this article. Finally, the software outputs were separated from the authors' interpretive synthesis so that strategic priorities could be traced back to specific observed weaknesses rather than presented as automated DSS recommendations.

2.7 DSS-UMKM Analysis and Decision Rules

DSS-UMKM version 2.0 generated executive assessments for the non-financial dimensions and calculated the financial-feasibility indicators. For marketing, production, management and human resources, and business environment, the article reports both the original obtained score and the corresponding maximum score, together with the feasibility category returned by the software. The legal dimension is reported as document-based feasibility because the retained output documented the existence of NPWP, SIUP, and PIRT but did not preserve a numerical legal score. The software assigned high, medium, or low feasibility categories, consistent with published DSS-UMKM applications that report color-coded high, medium, and low feasibility outputs (Agustien et al., 2021); however, the numerical threshold table itself was not retained in the legacy study material available for this article, so no unverified cut-off values are recreated. Normalized percentages shown in Figure 2 are therefore descriptive visual aids only and are not used to override the original DSS classifications. Strategic priorities were derived after the DSS stage by examining (a) the dimensions below high feasibility, (b) the specific sub-indicators that remained moderate, (c) their cross-functional consequences, and (d) whether the enterprise's financial position could realistically support corrective action.

2.8 Financial Feasibility Analysis

The original DSS financial projection used a 10-year horizon and a 15% discount rate and produced BEP quantity, BEP sales, BCR, Payback Period, NPV, PI, and IRR. The 10-year horizon is consistent with the standard projection period reported in a comparable DSS-UMKM agroindustry application, while the 15% discount rate is retained here strictly as the original case assumption rather than treated as a universally valid current rate (Agustien et al., 2021). For transparent reporting, these outputs are interpreted using standard financial definitions: BEP quantity identifies the sales volume required to cover fixed and variable costs, NPV discounts projected net cash flows to present value, IRR is the discount rate that sets NPV to zero, BCR compares the present value of benefits with the present value of costs, PI relates the present value of future cash inflows to initial investment, and Payback Period estimates the time required to recover the initial outlay. The retained case file did not include the complete year-by-year cash-flow schedule or all assumptions concerning inflation, depreciation, tax, residual value, and growth, so the reported DSS outputs were not retrospectively recomputed. Instead, the manuscript presents the formulas below to make the interpretation explicit and treats revalidation from the source cash-flow schedule as necessary before current investment decisions. This approach directly addresses the distinction between faithfully reporting historical DSS outputs and claiming independent replication of calculations for which the underlying annual cash flows are unavailable. A sensitivity analysis was not reconstructed because the complete annual cash-flow series was unavailable; it should therefore be conducted in a future reassessment using updated selling prices, raw-material costs, production volumes, and discount rates.

$$BEP\_Q = FC / (P - VC)$$

$$BEP\_Sales = FC / [1 - (VC / S)]$$

$$NPV = \Sigma[t = 1 \ldots n]\, CF\_t / (1 + r)\text{^}t - I_0$$

$$BCR = PV(Benefits) / PV(Costs)$$

$$PI = PV(Future\ Cash\ Inflows) / I_0$$

$$0 = \Sigma[t = 1 \ldots n]\, CF\_t / (1 + IRR)\text{^}t - I_0$$

$$PP = n + (Unrecovered\ Investment\ at\ year\ n\ /\ Cash\ Flow\ in\ year\ n + 1)$$

In the equations, FC denotes fixed cost, P denotes selling price per unit, VC denotes variable cost per unit (or total variable cost where specified), S denotes sales revenue, CF_t denotes net cash flow in period t, r denotes the discount rate, I_0 denotes initial investment, n denotes the final projection period, and PV denotes present value. The equations clarify interpretation only; they do not reconstruct the unavailable historical annual cash-flow schedule.

2.9 Research Procedure

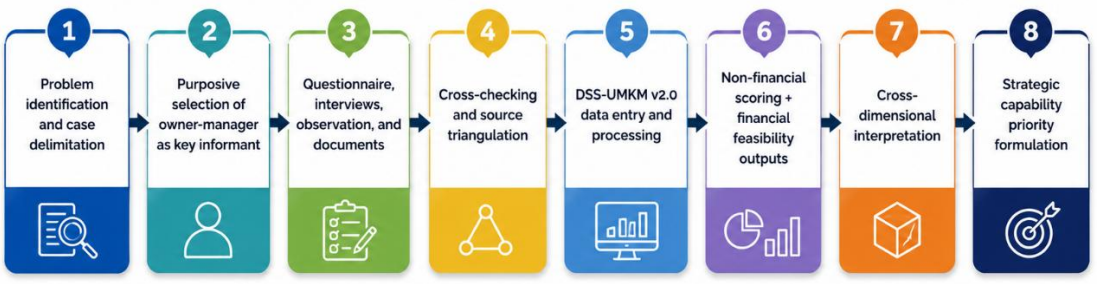

Figure 1. Research flowchart

Figure 1 summarizes the analytical sequence from case delimitation and purposive participant selection to triangulated data collection, DSS processing, and strategic interpretation. The separation between software output and post-analysis priority formulation is deliberate because the final development priorities are an interpretive synthesis rather than an automated ranking generated by DSS-UMKM version 2.0. This procedural separation improves auditability and responds to the need for clearer methodological reproducibility in case-based feasibility studies.

RESULTS AND DISCUSION

Results

3.1 Multidimensional Feasibility Profile

The DSS assessment showed that UD. Sari Rasa was feasible for continued development, but the strength of that feasibility differed across business dimensions. Management and human resources achieved the strongest non-financial result, with a score of 12 out of 15 and a high-feasibility classification. Marketing scored 60 out of 80, production scored 37 out of 50, and business environment scored 19 out of 24, with all three classified as moderately feasible. The legal output recorded NPWP, SIUP, and PIRT documents during the study period and therefore supported a feasible legal status for the historical assessment. Financial outputs were also classified as feasible and provided the strongest quantitative basis for investment capacity. Taken together, the results indicated a viable enterprise whose main constraints concerned capability depth rather than basic business survival.

Table 1. Multidimensional DSS feasibility profile of UD. Sari Rasa

Dimension	DSS result	Feasibility	Strategic interpretation
Legal	NPWP, SIUP, PIRT recorded	Feasible	Maintain and periodically revalidate business and product compliance
Marketing	60/80	Medium	Strengthen digital promotion, direct channels, retention, and market tracking
Production	37/50	Medium	Upgrade equipment selectively, standardize process, packaging, and capacity control
Management & HR	12/15	High	Preserve organizational strengths while formalizing compensation and routines
Business environment	19/24	Medium	Secure raw-material continuity and strengthen differentiation against competitors
Financial	All major indicators feasible	High/Feasible	Use financial capacity to fund targeted capability upgrading

Table 1 shows that the enterprise did not have a uniformly high capability profile despite its overall feasibility. The medium marketing score was mainly associated with moderate performance in price, distribution, market share, and promotion rather than product quality or positioning. The medium

production score reflected remaining limitations in facilities, labor, process consistency, and production capacity even though location and technology were relatively strong. The management and human-resource dimension provided an organizational base for improvement, but compensation remained a weaker component within that otherwise strong score. The business-environment result indicated generally stable raw-material conditions and manageable competition, while still leaving room for stronger differentiation and supply continuity. The pattern therefore supports a development strategy that targets specific operational and market gaps rather than treating the enterprise as uniformly weak or uniformly strong.

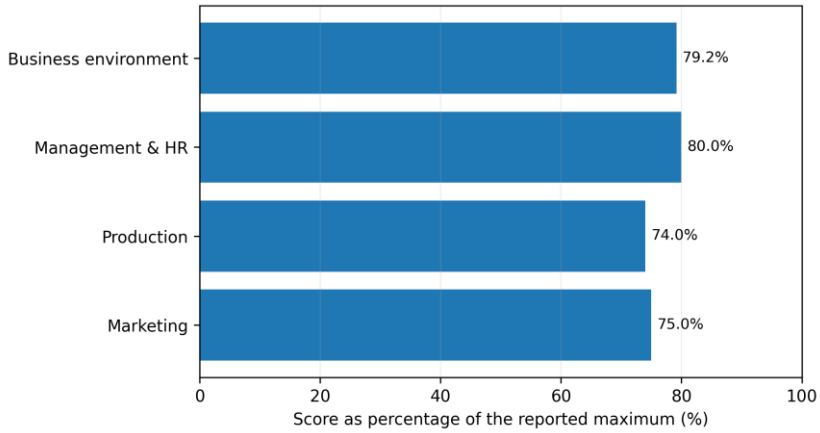

Figure 2. Descriptive normalized profile of scored non-financial dimensions

Figure 2 converts each reported score to a percentage of its stated maximum solely to make the relative magnitudes easier to compare visually. Management and human resources reached 80.0%, business environment 79.2%, marketing 75.0%, and production 74.0%. The narrow numerical spread illustrates why the original DSS category labels must be retained rather than replaced by ad hoc percentage thresholds. In particular, the business-environment score remained in the software's medium category even though its normalized percentage was close to the management and human-resource score. The figure does not include the legal dimension because no numerical legal score was retained, and it does not combine the financial dimension because its outputs use different units and decision rules. Accordingly, the visualization should be read as a descriptive comparison rather than a new classification model.

3.2 Marketing and Market Development

Marketing achieved 60 out of 80 and remained in the medium-feasibility category. Product performance was strong at 17 out of 19, while segmentation and positioning reached 6 out of 6, indicating that the enterprise had a recognized offering and a reasonably clear target-market position. Price scored 12 out of 16, distribution 9 out of 13, market share 6 out of 9, and promotion 10 out of 15, showing that market activation was weaker than product-level readiness. The enterprise already sold through agents and partnerships to markets in Java and Bali, but promotion relied heavily on Instagram and tourism-related referrals. This structure allowed geographic reach without establishing a fully integrated direct-to-consumer sales system or routine channel-performance monitoring. The marketing evidence therefore identified digital activation, channel diversification, customer retention, and sales tracking as the most immediate commercial capability gaps.

3.3 Production, Technology, and Supply Continuity

Production obtained 37 out of 50 and was classified as moderately feasible. Business location scored 3 out of 3 and technology 10 out of 12, while facilities and equipment scored 2 out of 3, labor 11 out of 16, production process 7 out of 9, and capacity 4 out of 6. Annual suwar-suwir output was reported at approximately 60 tons, and the enterprise combined labor-intensive and semi-technological activities in processing and packaging. The historical profile also reported approximately 200 kg of cassava tape as daily input and two production cycles per day, although the retained material did not contain a full conversion-yield schedule linking daily input to annual finished-product output. The operational evidence therefore supports the existence of a functioning production system but does not justify assuming that all capacity and yield relationships were fully optimized. Priority production issues were selective equipment

improvement, process standardization, packaging consistency, labor capability, and routine reconciliation of input, yield, output, and demand data.

3.4 Management, Human Resources, and Business Environment

Management and human resources recorded 12 out of 15 and represented the strongest non-financial dimension in the DSS profile. Organizational form scored 5 out of 5 and business profile 5 out of 6, whereas compensation scored 2 out of 3. The enterprise had operated since 2011 and employed approximately 30 workers in the recorded business profile, giving it an established organizational base rather than a newly formed structure. The result nevertheless did not by itself establish formal organizational maturity because the assessment did not include a separate maturity model or longitudinal capability index. The business-environment dimension scored 19 out of 24, with competition at 9 out of 11 and raw-material conditions at 10 out of 13. These results support strengthening formal routines, compensation practices, raw-material continuity, and competitive differentiation while preserving the organizational strengths already present.

3.5 Financial Feasibility and Investment Capacity

The financial outputs provided the strongest numerical evidence that the enterprise could support continued development under the original projection assumptions. Initial investment was recorded at IDR 95,960,000, while the break-even quantity was 5,439.09 units and break-even sales were IDR 181,332,672.91. BCR reached 7.23 and the payback period was 2.28 years, both supporting feasibility within the 10-year projection horizon. NPV was IDR 5,649,026,135.05, PI was 53.06, and IRR reached 59.20%, substantially above the 15% discount rate used in the DSS analysis. The retained data did not define the physical package represented by one BEP 'unit', so the break-even quantity should be operationalized in the enterprise's current package size before managerial use. The magnitude of NPV, BCR, and PI also warrants direct revalidation against the original annual cash-flow schedule before any new investment decision is made.

Table 2. Financial feasibility indicators from the DSS-UMKM analysis

Indicator	Result	Interpretation
Initial investment	IDR 95,960,000	Investment base reported in the DSS projection
BEP quantity	5,439.09 units	Volume required to cover total costs; package unit requires operational definition
BEP sales	IDR 181,332,672.91	Minimum sales revenue required to cover total costs
BCR	7.23	> 1, financially feasible under the original assumptions
Payback Period	2.28 years	Within the 10-year projection horizon
NPV	IDR 5,649,026,135.05	Positive, financially feasible
Profitability Index	53.06	> 1, financially feasible; magnitude should be revalidated
IRR	59.20%	Above the 15% discount rate

Table 2 shows that every reported financial indicator met its conventional feasibility direction under the original DSS settings. The positive NPV and IRR above the discount rate supported investment viability over the assumed projection horizon. The BCR and PI also indicated a large margin between projected benefits and the investment base, although those magnitudes cannot be independently audited without the original annual cash-flow table. The relatively short payback period suggested that the initial investment could be recovered well within the 10-year horizon. These financial results provide a plausible resource base for targeted capability improvement but should not be interpreted as a guarantee of future performance. Their strongest managerial value is therefore to support staged investment after the underlying prices, costs, volumes, and cash-flow assumptions have been updated and stress-tested.

3.6 Strategic Capability Priorities

The cross-dimensional synthesis produced four strategic capability priorities that were formulated after, rather than automatically by, the DSS assessment. The first priority is structured financial recording because reliable real-time records are necessary to validate the unusually strong investment indicators

and to support future sensitivity analysis. The second priority is digital market activation through regular content, marketplace integration, direct-customer mechanisms, channel analytics, and retention routines because marketing remained only moderately feasible. The third priority is selective production and packaging improvement tied to measurable bottlenecks in processing time, defects, labor productivity, input-output yield, and demand rather than broad capacity expansion. The fourth priority is periodic compliance and supply review because the legal documents and raw-material conditions reported in the study reflect the 2021–2022 period and may not represent current requirements or risks. These priorities convert the feasibility profile into a transparent managerial sequence while preserving the distinction between historical DSS output and author-derived strategic interpretation.

Table 3. Author-derived strategic capability priorities based on the DSS evidence

Priority	Evidence base	Immediate action	Decision logic
1. Financial information discipline	Strong financial outputs but incomplete structured recordkeeping	Create routine sales, cost, margin, cash-flow, and investment records	Improves verifiability and prevents investment decisions based on stale projections
2. Digital market activation	Marketing 60/80; promotion, distribution, and market share moderate	Integrate social media, marketplace, direct-customer retention, and channel analytics	Strengthens demand sensing before capacity expansion
3. Production and packaging control	Production 37/50; facilities, labor, process, capacity moderate	Upgrade selectively around measured bottlenecks and standardize process/yield records	Links investment to throughput, quality, and demand
4. Compliance and supply review	Historical legal documents; business environment 19/24	Revalidate permits/product compliance and monitor raw-material continuity	Reduces regulatory and supply risk in current operations

Table 3 is intentionally presented as an author-derived decision layer rather than a software ranking. Each priority is anchored in a documented score, observed weakness, or limitation of the retained historical data. Financial-recording improvement is placed first because the reliability of subsequent investment decisions depends on the quality of current cash-flow information. Marketing activation precedes major capacity expansion because stronger demand information can reduce the risk of investing in production that the market does not absorb. Production improvement is therefore framed as selective and evidence-based, while compliance and supply review operate as recurring controls across all development stages. This sequence provides a practical interpretation of feasibility without claiming that DSS-UMKM itself generated the final ranking.

Discussion

The central finding is that business feasibility and strategic capability are not equivalent conditions: UD. Sari Rasa was financially viable while several market and operating dimensions remained only moderately feasible. This pattern is consistent with the dynamic-capabilities framework, which distinguishes the possession of resources from the ability to integrate and reconfigure competences as competitive conditions change (Teece et al., 1997). Matarazzo et al. (2021) show that digital transformation creates value in SMEs when it is supported by sensing and learning capabilities, while Troise et al. (2022) demonstrate that agility converts digital, relational, and innovation capabilities into performance. The present case extends that logic to feasibility assessment by showing that strong projected returns can coexist with incomplete routines for market activation, production control, and structured financial recording. It also complements Khurana et al. (2022), who conceptualize resilience as a higher-order capability emerging from digital transformation, because the case suggests that resilience-oriented upgrading should begin before financial distress appears. The implication is that feasibility should be interpreted as a resource base for reconfiguration rather than as evidence that existing routines are sufficient. This distinction provides the paper's main conceptual contribution by connecting a conventional feasibility diagnosis with capability development.

The medium marketing score indicates that the enterprise's primary market problem was not product identity but the system used to activate and learn from demand. Strong product and positioning scores suggest that suwar-suwir already possessed recognizable market value, whereas weaker promotion, distribution, and market-share indicators reveal limits in reach, conversion, and feedback. This interpretation aligns with Tatik and Setiawan (2025), who find that social-media marketing contributes to Indonesian MSME performance, and with Chatterjee et al. (2022), who show that digitalization can expand entrepreneurial opportunities when firms have the capacity to use digital platforms effectively. It also resonates with Vroegindewey et al. (2021), whose processed-food evidence demonstrates that local attributes can create market value but still depend on packaging, certification, and information flows across the value chain. The present case adds a critical qualification: occasional platform presence is not the same as a digital marketing capability because the latter requires regular content, direct-customer mechanisms, retention, and channel analytics. A plausible causal mechanism is that weak market information constrains demand forecasting, which then makes production and investment planning less precise. For that reason, digital market activation should be treated as a demand-sensing capability that informs the rest of the business system rather than as a stand-alone promotional activity.

The production result similarly suggests that technology availability alone does not establish scalable operational capability. Although location and technology scored relatively well, moderate results for facilities, labor, process, and capacity indicate that the production system still depended on operational coordination that was not fully formalized. Frau et al. (2022) show that digital technologies improve agri-food outcomes when they are combined with agility and managerial interpretation, while Ali and Govindan (2023) find that digital transformation can mitigate operational risks in agri-food supply chains. The UD. Sari Rasa case supports these studies but extends them by showing why equipment investment should be conditioned on bottleneck evidence, yield consistency, labor capability, packaging quality, and reliable demand signals. The absence of a retained input-output conversion schedule also cautions against interpreting the reported annual output as a complete productivity measure, because throughput cannot be meaningfully assessed without reconciling raw-material input, processing yield, operating days, and package size. This is particularly important for traditional food SMEs, where informal process knowledge can sustain day-to-day production while masking variation that becomes costly at larger scale. The practical implication is a staged modernization pathway in which measurement and process standardization precede or accompany new capacity investment.

The high management and human-resource score, together with a medium business-environment result, reveals a second important asymmetry: organizational continuity was stronger than the firm's formal adaptation mechanisms. An enterprise operating since 2011 with around 30 workers has accumulated routines and tacit knowledge, but such longevity should not be conflated with organizational maturity unless routines for compensation, information use, supplier management, and continuous improvement are also explicit. Ahmed et al. (2022) demonstrate that intellectual capital mediates the relationship between digital platform capability and SME agility, suggesting that human, organizational, and relational resources must work together. Ali et al. (2023) likewise show that agri-food supply-chain resilience depends on social capital and network conditions rather than on internal resources alone. In this case, stable raw-material conditions and manageable competition provide room for development, yet they can also encourage complacency if the firm assumes that historical supplier and market relationships will remain stable. The reframing of the DSS 'environmental' dimension as 'business environment' is therefore conceptually important because the measured items concern competitive and supply conditions, not ecological sustainability. The broader implication is that established SMEs should convert tacit organizational experience into explicit routines that strengthen supplier continuity, workforce incentives, and competitive responsiveness.

The financial findings provide substantial evidence of investment capacity, but they also illustrate why critical discussion is necessary when unusually strong feasibility ratios are produced from legacy projections. Under the original assumptions, positive NPV, an IRR far above the discount rate, BCR above one, PI above one, and a short payback period all point in the same direction, so the qualitative conclusion of financial feasibility is internally consistent. Resource-orchestration theory emphasizes that competitive advantage depends on how managers structure, bundle, and leverage resources rather than on resource possession alone (Sirmon et al., 2011); consistent agri-food evidence suggests that financial slack becomes

strategically valuable when investments are sequenced toward capabilities that support sustainable performance (Ardekani et al., 2023). Soni et al. (2022) similarly emphasize structured decision frameworks for SME technology and financing choices, while Tamvada et al. (2022) caution that technology adoption can expose emerging-economy SMEs to implementation risks. The very large NPV, BCR, and PI in this case should therefore be read as historical DSS outputs requiring renewed cash-flow validation rather than as precise forecasts of current value. A sensitivity analysis using updated sales prices, tape costs, wage rates, output volumes, and discount rates could reveal whether the conclusion remains robust under less favorable scenarios. This critical treatment modifies conventional feasibility logic by making verification quality and scenario resilience part of the investment decision rather than treating a single projected return as decisive.

Taken together, the findings position this study within the global literature on SME digital transformation and agri-food resilience while addressing a gap that large-sample studies cannot fully resolve. Prior research establishes that digital capabilities, agility, resilience, and resource orchestration influence SME and supply-chain performance (Ahmed et al., 2022; Ali et al., 2023; Khurana et al., 2022; Verhoef et al., 2021), but those studies generally do not show how a small traditional enterprise should sequence action when different business dimensions display uneven feasibility. The present case contributes a transparent cross-dimensional logic in which strong finance is treated as an enabling resource, marketing as a demand-sensing capability, production as a reconfiguration target, and compliance plus supply review as recurring controls. It also clarifies the boundary between DSS output and managerial interpretation, a distinction that is often blurred in case-based decision-support studies. The result is not a universal ranking model, because priorities remain contingent on the case and the quality of available data, but it is a replicable reasoning process that other agroindustries can apply to their own DSS evidence. This perspective fills the identified gap by moving the analytical question from 'Is the business feasible?' to 'Which capabilities must be strengthened so that feasibility remains defensible under changing conditions?' In that sense, the study extends feasibility analysis from a static acceptance decision toward a capability-oriented entrepreneurship and supply-chain management framework.

Implications

The study contributes theoretically by distinguishing financial viability from strategic capability readiness and demonstrating how both can be integrated through a multidimensional DSS framework, where feasibility dimensions are interpreted as interdependent capabilities rather than isolated checklist categories. Within this perspective, marketing functions as a sensing mechanism, production and organizational routines represent reconfiguration capacity, financial strength provides deployable resources, and compliance and supplier conditions define the boundaries within which these capabilities can operate. This interpretation also provides a conceptual bridge between entrepreneurship-oriented strategic diagnosis and supply-chain-oriented operational coordination in traditional food SMEs. From a managerial perspective, UD. Sari Rasa should use its financial capacity selectively rather than expanding all functions simultaneously by first strengthening digital bookkeeping and cash-flow monitoring so that NPV, IRR, BCR, PI, and payback estimates can be updated using current data, followed by improvements in measurable digital marketing channels, customer retention, marketplace integration, and channel-conversion metrics to enhance demand visibility. Production investments should then be directed toward identified bottlenecks, packaging defects, yield variation, labor productivity, and order patterns, supported by standardized operating records to evaluate whether technological upgrades generate actual performance improvements. Legal and product compliance should also be revalidated against current requirements, while raw-material continuity needs to be monitored periodically because the original evidence is historical. Overall, this staged approach reduces the risk that attractive financial projections encourage capacity expansion unsupported by current demand, reliable operational information, or regulatory conditions, while future research may examine whether cross-dimensional capability balance predicts enterprise performance more effectively than a simple feasible–not-feasible conclusion.

Limitations And Future Research

Several limitations define the boundaries of the study's conclusions. First, the research is a single-case assessment centered on one owner-manager, which increases information relevance but limits statistical

generalizability and creates potential single-informant bias. Second, the enterprise data were collected in 2021–2022, so legal status, market structure, supplier conditions, and cost assumptions require current revalidation. Third, the retained legacy materials did not include the DSS category cut-off table, complete annual financial cash-flow schedule, or a defined physical package for the BEP quantity unit, preventing full independent replication of all software calculations. Fourth, the study did not conduct a prospective sensitivity analysis, so the robustness of NPV, IRR, BCR, PI, and payback period under adverse changes in price, input cost, output, or discount rate remains unknown. Fifth, the business-environment measure captured competition and raw materials rather than ecological sustainability, so the study should not be interpreted as an environmental-performance assessment. Future research should update the enterprise database, involve multiple informants and comparable firms, preserve full DSS scoring rules and cash-flow schedules, conduct scenario analysis, and test whether the proposed capability-priority logic predicts subsequent improvements in sales, productivity, and supply-chain resilience.

CONCLUSION

The DSS-UMKM assessment indicates that UD. Sari Rasa was feasible for continued development during the 2021–2022 study period, with particularly strong financial results and a high management and human-resource score. At the same time, medium feasibility in marketing, production, and business environment reveals capability gaps that a binary feasibility conclusion would overlook. The final interpretation therefore prioritizes structured financial recording, digital market activation, selective production and packaging improvement, and periodic compliance and supply review. This sequence treats the strong financial position as a resource for capability upgrading rather than as justification for indiscriminate expansion. The study's main contribution is to distinguish clearly between DSS-generated feasibility outputs and author-derived strategic priorities while connecting those priorities to contemporary capability and supply-chain reasoning. Because the case relies on historical single-firm data and incomplete legacy financial detail, its managerial recommendations should be implemented only after current data and assumptions have been revalidated. Even with that limitation, the study demonstrates how multidimensional feasibility analysis can support a more disciplined transition from traditional enterprise viability toward adaptive, evidence-based business development.

AUTHOR CONTRIBUTION STATEMENT

Al Gore Alfarizi was responsible for conceptualization, data collection, formal analysis, investigation, interpretation, preparation of the original research material, and revision of the manuscript. The author is responsible for the accuracy and integrity of the reported study data and for distinguishing the original DSS outputs from the strategic interpretations developed in this article.

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