

Market Dynamics and Value Chain Efficiency of Coffee Production: Basis for Business Enhancement

Joemil N. Mesola Jr.¹, Joyce C. Decendario²

¹ Graduate Student, Graduate School, La Carlota City College, La Carlota City,
Negros Occidental, Philippines

² Professor, Graduate School, La Carlota College, La Carlota City, Negros Occidental, Philippines

Abstract

Coffee production in the Philippines is characterized by a predominantly smallholder structure, changing consumer demand, uneven access to market information, and persistent constraints in infrastructure and finance. This study examined market dynamics and value chain efficiency in La Carlota City, Negros Occidental, and used the findings to formulate evidence-informed priorities for business enhancement. A descriptive-correlational design was applied to 115 purposively selected stakeholders comprising producers, consumers, and traders/market actors during the first and second quarters of 2026. Data were collected through a researcher-made questionnaire covering stakeholder profile, market dynamics, and value chain efficiency. Five experts assessed content validity using Lawshe's content-validity procedure; a pilot test with 30 respondents yielded Cronbach's alpha coefficients of .936 for both major constructs. Descriptive statistics, Kruskal–Wallis H tests, Mann–Whitney pairwise comparisons, chi-square tests, Gamma correlations, and Spearman's rho were used at $\alpha = .05$. Market dynamics was rated high overall ($M = 3.70$, $SD = 0.52$), driven by high demand and consumer preferences ($M = 4.14$) and market information and producer role ($M = 3.61$), while price stability and fairness remained moderate ($M = 3.35$). Value chain efficiency was moderate overall ($M = 3.19$, $SD = 0.60$), with farm inputs at $M = 3.40$, roads and financing at $M = 2.81$, and technology and training at $M = 3.38$. Stakeholder role, age, experience, and coffee variety were associated with significant differences in value-chain efficiency, whereas sex and farm size were not. Market dynamics varied significantly by sex but not by role, age, experience, farm size, or coffee variety. Most importantly, value chain efficiency was positively associated with market dynamics (Spearman's $\rho = .605$, $p < .001$), indicating that improvements in production support, infrastructure, financing, technology, and training are closely linked with stronger market performance. The study concludes that local coffee competitiveness depends less on isolated production characteristics than on coordinated improvements in the value chain, transparent market institutions, and stakeholder-responsive business support.

Keywords: Coffee Industry; Market Dynamics; Value Chain Efficiency; Smallholders; Business Enhancement

1. Introduction

Coffee plays an important role in Philippine agriculture because it connects farm livelihoods, local enterprises, rural employment, and consumer markets. In La Carlota City, Negros Occidental, coffee production and trade provide economic opportunities for producers and other value chain actors while meeting growing demand from households and local businesses. Yet the sector operates within a difficult environment marked by price uncertainty, unequal bargaining power, uneven market information, input constraints, infrastructure gaps, limited access to finance, and uneven adoption of modern technologies. The source study identifies these issues as a local research problem and argues that market dynamics and value-chain efficiency must be examined together rather than as isolated concerns. [11, 10].

The market side of the problem is multidimensional. Price stability and fairness influence producers' incentives to remain in coffee production, while demand and consumer preferences determine the quality, variety, and volume of coffee that enterprises can profitably market. Market information also matters because timely knowledge of prices, supply, demand, and trading conditions affects bargaining power and producers' capacity to participate in decision-making. The study's review of Philippine and international literature emphasizes that specialty coffee, café culture, quality differentiation, sustainability expectations, and traceability are changing the competitive environment. [3, 15, 36, 29].

The operational side is equally consequential. Value-chain efficiency depends on whether producers can obtain appropriate planting materials and inputs, move coffee through adequate roads and postharvest facilities, access affordable credit, and obtain technology and technical training. The study draws on Porter's value-chain perspective and agricultural value-chain research to frame efficiency as a system-level issue spanning activities from production and processing to distribution and market participation. The Philippine Coffee Industry Roadmap and recent Philippine studies cited in the source manuscript likewise emphasize postharvest upgrading, cooperative participation, financing, infrastructure, and farmer capability development as critical areas. [15, 25, 21].

The research gap addressed by the study is local and integrative. Although national and international literature documents broad constraints in the coffee sector, comparatively little evidence in the source manuscript directly integrates stakeholder characteristics, perceived market dynamics, and perceived value-chain efficiency in a city-level setting in the Philippines. The present article, therefore, focuses on the empirical relationship between these constructs and translates the findings into a business-enhancement agenda. The central premise is that market performance and value-chain efficiency are interdependent: a market cannot become more equitable and competitive if the underlying production and support system remains inefficient, and production improvements are unlikely to generate sustained returns if producers remain weakly positioned in the market. [10, 21].

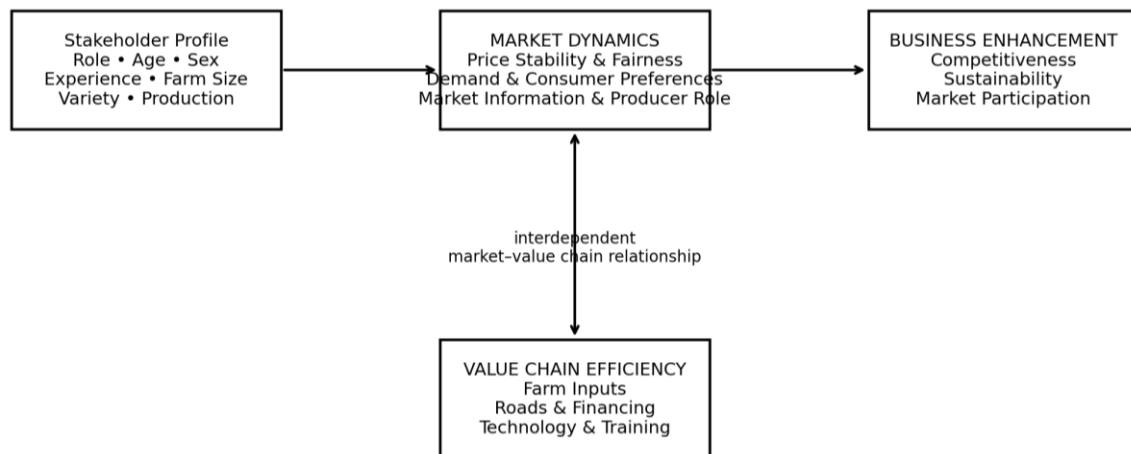
Accordingly, the study sought to answer eight questions: (a) what is the profile of the stakeholders; (b) what is the level of market dynamics; (c) what is the level of value-chain efficiency; (d) whether market dynamics differ across stakeholder profiles; (e) whether value-chain efficiency differs across stakeholder profiles; (f) whether market dynamics is associated with stakeholder profiles; (g) whether value-chain efficiency is associated with stakeholder profiles; and (h) whether value-chain efficiency is associated

with market dynamics. These questions are consolidated in this article into a parsimonious analytical narrative suitable for an international research audience.

2. Conceptual and Theoretical Framing

The study integrates three complementary perspectives. First, supply-and-demand reasoning explains market dynamics as the interaction of supply conditions, demand, price formation, and consumer preferences. Second, Porter's value-chain model provides a lens for examining how activities and support functions contribute to efficiency and competitive advantage. Third, strategic flexibility provides the business perspective: enterprises and institutions must adapt their strategies as market conditions, consumer expectations, technologies, and competitive pressures change. Together, these perspectives imply that business enhancement is not a single intervention but a coordinated response to market and operational conditions. [27, 22, 34].

Figure 1: Integrated conceptual model guiding the study.



As shown in Figure 1, Market dynamics encompass price stability and fairness, demand and consumer preferences, market information, and the producer role. Value-chain efficiency captures farm inputs, roads, financing, and technology and training. Business enhancement is treated as the applied outcome of strengthening these systems through coordinated strategies for competitiveness, sustainability, and market participation.

3. Review of Related Literature

Coffee is a globally traded commodity whose competitiveness increasingly depends on quality differentiation, sustainability, traceability, logistics, and producer upgrading. At the Philippine level, the study notes that local production remains structurally constrained and that smallholders face recurring problems in access to inputs, postharvest facilities, financing, and market information. The literature further suggests that value addition can substantially improve returns, while cooperative participation and shared facilities can help small producers overcome scale disadvantages. [18, 17, 25].

Market dynamics are particularly sensitive to price formation and information asymmetry. Smallholder producers can be disadvantaged when farmgate prices are negotiated under conditions of weak information

or limited collective bargaining. Conversely, direct trading relationships, cooperative marketing, and transparent price information can improve producer participation. The study also points to rising demand for quality, locally sourced, specialty, and ethically produced coffee, creating opportunities for differentiation if local supply can meet quality and consistency requirements. [3, 15, 36, 21].

Value-chain efficiency is similarly multidimensional. Farm inputs determine production potential; roads and postharvest infrastructure determine the cost and quality of movement through the chain; finance determines the capacity to invest; and technology and training determine the ability to adopt improved practices and meet market requirements. The study suggests that technology transfer, certification, digital information systems, and cooperative upgrading can improve competitiveness. Importantly, these interventions are complementary rather than substitutive: better technology has a limited effect if financing and infrastructure are unavailable, and better roads do not automatically improve returns if farmers remain weak in price negotiation. [19, 15, 21]. The literature also supports the examination of heterogeneity among stakeholders. Age and experience can influence technology adoption and perceptions of constraints; role can shape what part of the chain a respondent directly observes; sex can influence access to resources and participation; and production scale and variety can affect market opportunities. The present study contributes by testing these dimensions simultaneously within one local coffee system. [12, 28, 31].

4. Method

4.1 Research Design and Setting

The study employed a descriptive-correlational design. The descriptive component characterized stakeholder profiles and summarized perceptions of market dynamics and value-chain efficiency. The correlational component examined whether statistically detectable differences or associations existed among these variables. The design did not manipulate conditions and therefore does not support causal inference. Data were collected during the first and second quarters of 2026 in La Carlota City, Negros Occidental, Philippines. [13, 32].

4.2 Participants and Sampling

The final sample consisted of 115 purposively selected stakeholders: 71 producers (61.74%), 34 consumers (29.57%), and 10 traders/market actors (8.70%). A complete stakeholder population list was unavailable; consequently, purposive sampling was used to ensure participation of actors directly connected with the local coffee value chain. This sampling strategy strengthens contextual relevance but limits statistical generalizability beyond the study setting. [13, 30, 24].

4.3 Instrument Development, Validity, and Reliability

The researcher-developed questionnaire contained three parts: stakeholder profile, market dynamics, and value-chain efficiency. Market dynamics comprised price stability and fairness, demand and consumer preferences, and market information and producer role. Value-chain efficiency comprised farm inputs, roads, and financing, and technology and training. Responses to the attitudinal items were collected on a five-point agreement scale. Five experts evaluated the instrument using Lawshe's content-validity procedure; the source manuscript reports an average essentiality rating of 1.00 and a total content-validity ratio score of 42 across 42 items. A pilot test involving 30 respondents yielded Cronbach's alpha

coefficients of 0.936 for market dynamics and 0.936 for value-chain efficiency, both indicating excellent internal consistency [10, 8].

4.4 Data Collection and Ethics

Permission to conduct the study was obtained through formal institutional and local government channels. Respondents were informed that participation was voluntary and that responses would be treated confidentially. Completed questionnaires were collected after administration. The source manuscript also contains ethics committee certification and statistical analysis certification in its appendices. No personally identifying respondent-level results are reported in this article. [32].

4.5 Data Analysis

Frequencies and percentages were used to describe the respondent profile. Means and standard deviations summarized the Likert-scale constructs. Since normality assumptions were not met, nonparametric procedures were used. Kruskal–Wallis H tests assessed differences among profile groups, with Mann–Whitney U pairwise comparisons following significant omnibus results. Chi-square tests of independence were used for categorical associations, whereas Gamma correlation was used for ordinal profile variables. Spearman's rank-order correlation assessed the association between the two principal constructs. Statistical decisions were based on $\alpha = .05$. [32].

5. Results

5.1 Stakeholder Profile

The respondent profile shows a strongly producer-centered local coffee system. Producers constituted nearly two-thirds of the sample, while consumers represented roughly three in ten respondents, and traders/market actors fewer than one in ten. The age distribution was comparatively broad, with the largest groups aged 31–40 and 21–30 years. Females represented 54.78% of the sample. Experience was mixed, combining newer entrants with long-serving participants. Farm holdings were predominantly small, Robusta was the dominant reported variety, and annual production was concentrated below 500 kg.

Table 1: Frequency and percentage distribution of respondents (N = 115).

Profile dimension	Category	n	%
Role	Producers	71	61.74%
	Consumers	34	29.57%
	Traders/market actors	10	8.70%
Age	Below 20	1	0.87%
	21–30	26	22.61%
	31–40	27	23.48%
	41–50	22	19.13%
	51–60	19	16.52%
	61+	20	17.39%
Sex	Male	51	44.35%
	Female	63	54.78%
	Prefer not to say	1	0.87%
Experience	<5 years	30	26.09%

Profile dimension	Category	n	%
	6–10 years	17	14.78%
	11–20 years	21	18.26%
	21–30 years	16	13.91%
	>30 years	16	13.91%
	No answer	15	13.04%
Farm size	<1 ha	51	44.35%
	1–3 ha	38	33.04%
	4–6 ha	1	0.87%
	7–10 ha	1	0.87%
	No answer	24	20.87%
Variety	Arabica	5	4.35%
	Robusta	68	59.13%
	Liberica	2	1.74%
	Blend	18	15.65%
	No answer	22	19.13%
Annual production	<500 kg	64	55.65%
	501–1,000 kg	20	17.39%
	1,001–2,000 kg	3	2.61%
	2,001–5,000 kg	4	3.48%
	No answer	24	20.87%

The dominance of producers and small farms is analytically important. It indicates that the local system is not simply a retail market problem; it is fundamentally a production and producer-participation problem. The concentration of respondents below one hectare and below 500 kg annual output also means that policies and business strategies designed for larger commercial farms may not translate directly to the dominant local production structure. [23, 26].

5.2 Market Dynamics

Table 2: Perceived level of market dynamics.

Dimension	M	SD	Interpretation
Price stability and fairness	3.35	0.63	Moderate
Demand and consumer preferences	4.14	0.65	High
Market information and producer role	3.61	0.80	High
Overall market dynamics	3.70	0.52	High

Market dynamics were rated high overall ($M = 3.70$, $SD = 0.52$), but the aggregate result masks an important internal imbalance. Demand and consumer preferences were strongly positive ($M = 4.14$, $SD =$

0.65), while market information and producer role were also high ($M = 3.61$, $SD = 0.80$). By contrast, price stability and fairness were only moderately perceived ($M = 3.35$, $SD = 0.63$). Thus, the local market appears demand-positive but institutionally less secure on price formation and equitable returns.

At the item level, the strongest market indicators were promotional activities ($M = 4.28$), coffee quality as a determinant of buyer choice ($M = 4.25$), and increasing household consumption ($M = 4.18$). The weakest elements within market dynamics were producer input into market decisions ($M = 3.09$), producers' receipt of timely price updates ($M = 3.39$), and the perceived manageability of annual price changes ($M = 3.27$). The pattern suggests that demand creation is ahead of producer bargaining and market-governance capacity.

5.3 Value Chain Efficiency

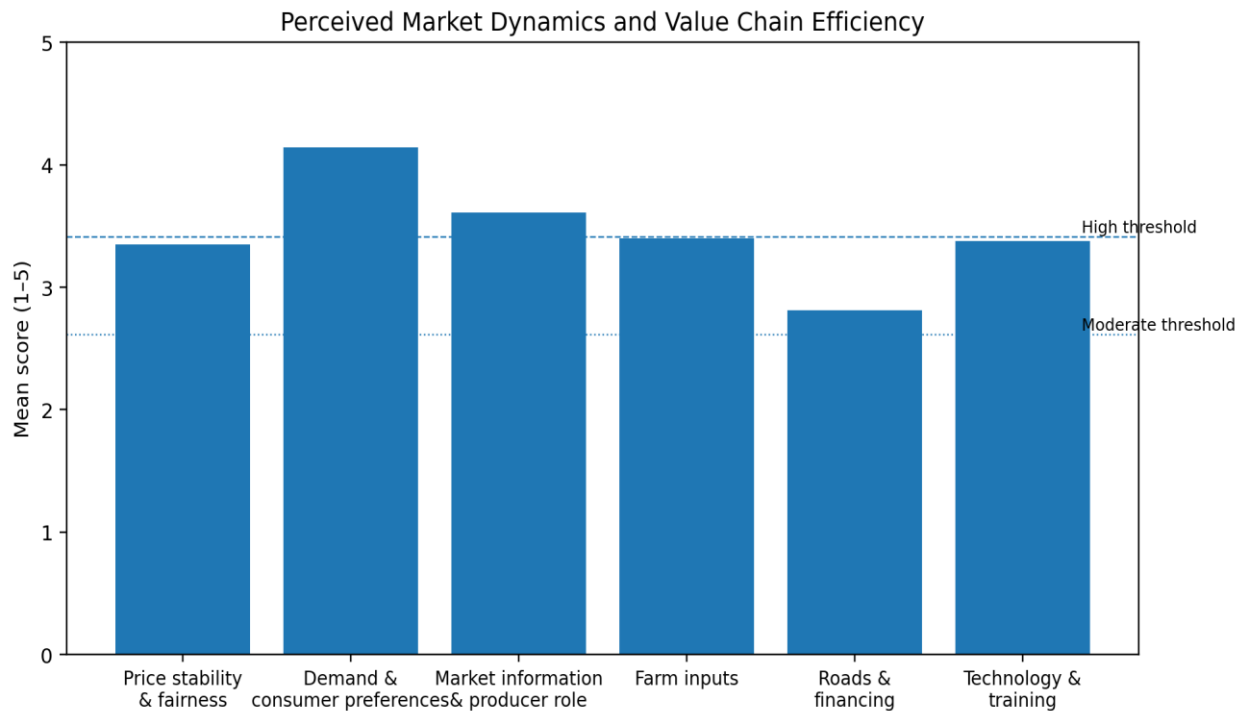
Table 3: Perceived level of value-chain efficiency.

Dimension	M	SD	Interpretation
Farm inputs	3.40	0.84	Moderate
Roads and financing	2.81	0.97	Moderate
Technology and training	3.38	0.67	Moderate
Overall value-chain efficiency	3.19	0.60	Moderate

Value-chain efficiency was moderate overall ($M = 3.19$, $SD = 0.60$). Farm inputs were also moderate ($M = 3.40$, $SD = 0.84$), with organic inputs and guidance on input use receiving relatively stronger ratings. Technology and training were moderate ($M = 3.38$, $SD = 0.67$), supported by relatively favorable assessments of new technology and certification's contribution to competitiveness. Roads and financing were the weakest dimension ($M = 2.81$, $SD = 0.97$), with access to loans or credit ($M = 2.43$) and affordable and reliable transport services ($M = 2.52$) among the most constrained indicators. Certification access was likewise low ($M = 2.38$).

Figure 2 makes the central structural tension visible: demand-side indicators are comparatively strong, whereas the enabling conditions that allow producers to convert demand into stable income are weaker. The weakest scores among the six principal dimensions were for roads and financing, followed by technology, training, and farm inputs. This pattern is consistent with the study's conclusion that competitiveness is constrained less by lack of demand than by the capacity to produce, move, finance, upgrade, and negotiate coffee effectively. [11, 21].

Figure 2: Mean scores for the principal market-dynamics and value-chain-efficiency dimensions.



5.4 Differences in Market Dynamics Across Stakeholder Profiles

Table 4: Group differences in market dynamics reported in the source study.

Profile variable	Test statistic	p	Conclusion
Role	H = 0.447	p = .800	Not significant
Age	H = 11.038	p = .051	Not significant; borderline
Sex	H = 7.558	p = .023	Significant
Experience	Not significant in the reported omnibus result	—	Not significant
Farm size	H = 2.643	p = .619	Not significant
Coffee variety	H = 3.651	p = .455	Not significant
Annual production	H = 0.202	p = .059	Not significant

Market-dynamics perceptions were statistically similar across stakeholder roles, farm-size categories, and coffee varieties. Age approached but did not cross the .05 threshold ($H = 11.038$, $p = .051$). Sex was the only profile variable with a statistically significant omnibus difference ($H = 7.558$, $p = .023$), and the source manuscript reports that the male–female pairwise comparison was significant ($p = .018$). This result indicates that market experiences are not uniformly perceived across sexes, even though most structural characteristics did not produce significant differences.

5.5 Differences in Value-Chain Efficiency Across Stakeholder Profiles

Table 5: Group differences in value-chain efficiency.

Profile variable	Test statistic	p	Conclusion
Role	H = 17.600	p < .001	Significant
Age	H = 17.340	p = .004	Significant
Sex	H = 0.389	p = .823	Not significant
Experience	H = 18.783	p = .002	Significant
Farm size	H = 6.937	p = .139	Not significant
Coffee variety	H = 16.321	p = .003	Significant
Annual production	H = 0.446	p < 0.001	Significant

Value-chain efficiency displayed substantially greater heterogeneity than market dynamics. Stakeholder role was significant (H = 17.600, p < .001), consumers viewed efficiency more positively than producers, and traders occupied an intermediate position. Age was significant (H = 17.340, p = .004), with younger respondents generally more favorable toward efficiency than middle-aged groups. Experience was also significant (H = 18.783, p = .002), and pairwise comparisons indicated that respondents with less than five years of experience differed from several longer-experience groups. Coffee variety was significant (H = 16.321, p = .003), with Arabica and Liberica groups reporting more favorable perceptions of efficiency than Robusta growers. Sex and farm size were not significant. The findings suggest that value-chain efficiency is experienced at the point of participation. Producers directly encounter input, financing, infrastructure, and technical constraints, whereas consumers mainly observe downstream outcomes such as availability, quality, and price. Similarly, newer and younger participants may be more exposed to training and technology programs, while long-serving participants may judge the system against the accumulated experience of persistent structural constraints.

5.6 Associations Between Stakeholder Profiles and the Two Core Constructs

Table 6: Reported associations between stakeholder profiles and market dynamics/value-chain efficiency.

Association	Statistic	p	Interpretation
Market dynamics × role	$\chi^2/H = 0.447$	p = .800	Not significant
Market dynamics × age	H = 11.038	p = .051	Not significant
Market dynamics × sex	H = 7.558	p = .023	Significant
Market dynamics × farm size	G = 0.100	p = .106	Not significant
Market dynamics × coffee variety	$\chi^2 = 15.200$	p = .055	Not significant
Market dynamics × annual production	G = 0.202	p = .059	Not significant

Association	Statistic	p	Interpretation
Value-chain efficiency × role	$\chi^2 = 24.695$	$p < .001$	Significant
Value-chain efficiency × experience	$G = 0.352$	$p < .001$	Significant
Value-chain efficiency × farm size	$G = 0.335$	$p = .003$	Significant
Value-chain efficiency × coffee variety	$\chi^2 = 32.664$	$p = .001$	Significant

The association analysis reinforces the contrast between the two constructs. Market dynamics were largely a shared system-level experience, with sex the principal statistically significant profile association. Value-chain efficiency, by contrast, was associated with several participation characteristics, particularly role, experience, farm size, and variety in the detailed relationship tests. As shown in Table 6, there is a significant Gamma association between value-chain efficiency and farm size ($G = 0.335$, $p = .003$), even though the separate group-difference test in Table 5 reports a non-significant Kruskal–Wallis result ($H = 6.937$, $p = .139$). These tests answer different statistical questions—association versus distributional group difference—and should not automatically be treated as contradictory. Nevertheless, the direction and substantive interpretation should be verified against the raw data before journal submission.

5.7 Relationship Between Value-Chain Efficiency and Market Dynamics

Table 7: Association between value-chain efficiency and market dynamics (N = 115).

Variables	Statistic	p	Interpretation
Value-chain efficiency × market dynamics	Spearman's $\rho = .605$	$p < .001$	Significant positive association

The most consequential result of the study is the positive association between value-chain efficiency and market dynamics. Spearman's rho was .605 ($p < .001$), indicating a moderately strong positive monotonic relationship. The finding means that respondents who reported stronger value-chain conditions also tended to report more favorable market conditions. The result is associational rather than causal: the design does not establish that improving one construct will necessarily cause a specific increase in the other. Nevertheless, the strength and statistical significance of the association provide empirical support for integrated interventions.

Substantively, the result is coherent with the structure of the sector. A farmer who can obtain quality inputs, reliably transport coffee, secure financing, access training, and adopt useful technologies is better positioned to maintain quality, meet buyer requirements, participate in higher-value channels, and negotiate from a stronger position. Conversely, poor roads, inadequate financing, or limited access to technology can prevent producers from converting rising demand into improved economic returns. The

local market, therefore, functions as a coupled system in which production-side capacity and market-side performance reinforce one another. [10, 21, 36].

6. Discussion

The findings point to a coffee economy with an encouraging market opportunity but an incomplete enabling environment. The high overall market-dynamics rating is driven primarily by demand, quality, promotion, and changing consumer interest. This is strategically important. A weak-demand market would require demand creation as the first priority; this study instead suggests that demand already exists. The more pressing problem is converting that demand into equitable and sustainable value for producers. [11, 14]. The moderate rating for price stability and fairness is therefore not a minor issue. It represents a bottleneck between market attractiveness and producer welfare. The weakest price-related item was the manageability of annual price changes, while producer input into market decisions also remained relatively low. This pattern suggests that the local coffee sector may be experiencing an information-and-governance gap: consumers can express strong demand, but producers may not have the equivalent power to shape prices, negotiate terms, or capture the value created downstream. [3, 15, 21].

The value-chain results sharpen this interpretation. Roads and financing were the weakest principal dimension. This matters because physical infrastructure and finance are enabling assets that affect virtually every other part of the chain. Poor transport raises transaction costs and may compromise quality; inadequate drying, milling, and storage facilities limit value addition; lack of credit constrains input purchase and equipment investment; and weak financing makes it difficult for producers to respond when demand creates a market opportunity. In this sense, infrastructure and finance are not merely operational details—they are strategic determinants of competitiveness. [15, 21, 25].

Technology and training were moderate rather than high. The strongest item in this domain concerned the contribution of certification to competitiveness, while access to certification itself was low. This difference is revealing: stakeholders recognize the value of upgrading, but the institutional pathway for achieving it remains incomplete. The same pattern appears in technology. Respondents recognized that new technology can improve production, yet access to equipment and consistent extension support remained less favorable. The policy implication is that awareness alone is insufficient; capability development must be accompanied by affordable access and institutional support. [15, 18, 21]. Stakeholder heterogeneity is another important contribution. The significant role effect for value-chain efficiency indicates that the chain should not be managed as if every actor experiences it in the same way. Producers see the system from the input and production end; traders observe coordination, negotiation, and logistics; consumers observe the downstream consequences. A business-enhancement strategy that relies only on consumer feedback risks overlooking upstream constraints, while a producer-only strategy may overlook changing demand and quality expectations. The findings on age and experience suggest a generational dimension to upgrading. Younger participants appear more receptive to modern technology, training, and cooperative-led initiatives, while more experienced participants may evaluate efficiency against a longer history of infrastructure, finance, and market constraints. The appropriate response is not to replace older practices wholesale but to create intergenerational learning mechanisms: experienced producers can transfer local knowledge and production wisdom, while younger participants can accelerate digital, certification, and market-linkage practices. The significant relationship between value-chain efficiency

and market dynamics provides the strongest basis for an integrated business strategy. The finding supports moving beyond isolated projects such as distributing seedlings or conducting one-time training. A more credible strategy would combine infrastructure, finance, inputs, technology, information, market linkage, and product differentiation. This is consistent with the study's theoretical framing: competitive advantage is created by coordinated value-creating activities, while strategic flexibility enables enterprises and institutions to adapt those activities to changing market conditions. [21, 25].

7. Evidence-Informed Business Enhancement Agenda

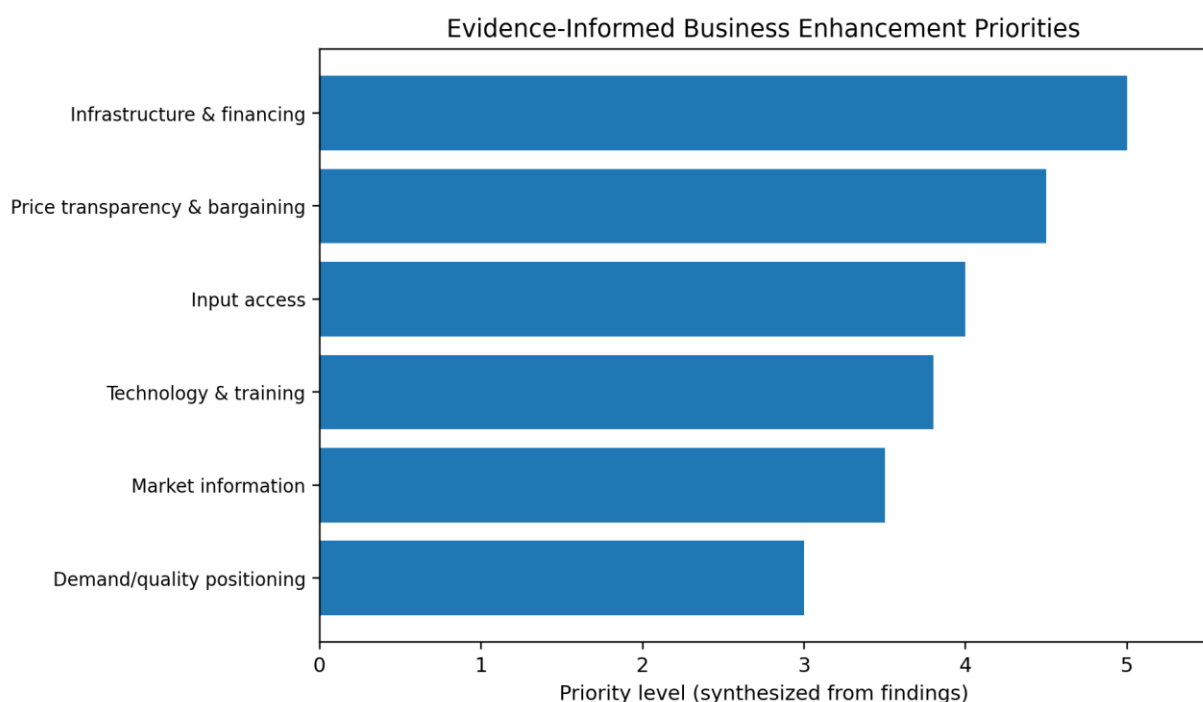
The following agenda translates the empirical results into actionable priorities. It is presented as an analytical synthesis of the study findings rather than as an additional statistical result.

Table 8: Evidence-informed business enhancement priorities derived from the study.

Priority	Intervention	Priority level	Core actions	Potential implementers
1	Rural infrastructure and postharvest upgrading	High	Improve farm-to-market access; expand shared drying, milling, and storage facilities; reduce transport losses and transaction costs.	Local government, cooperatives, national agencies, and private processors
2	Inclusive agricultural finance	High	Develop accessible credit, cooperative financing, and microfinance products tailored to smallholder cash flows and seasonal production.	Financial institutions, cooperatives, LGU, and development agencies
3	Transparent market information	High	Establish regular price bulletins, buyer requirements, demand updates, and producer-oriented negotiation mechanisms.	Cooperatives, LGU, traders, producer groups
4	Input and planting-material systems	High	Improve the availability and affordability of certified planting materials, fertilizers, and appropriate organic inputs; strengthen guidance on input use.	Agriculture offices, cooperatives, input suppliers

Priority	Intervention	Priority level	Core actions	Potential implementers
5	Technology, training, and certification	High	Expand practical training, equipment access, certification assistance, and extension support; link training to measurable adoption.	Extension agencies, cooperatives, processors, NGOs
6	Quality and market differentiation	Medium–High	Develop local branding, quality protocols, traceability, specialty-market linkages, and café/restaurant partnerships.	Producers, processors, retailers, LGU, private sector
7	Stakeholder governance	Medium–High	Strengthen cooperative participation, producer representation, and multi-stakeholder planning to improve bargaining power and coordination.	Producer groups, traders, consumers, LGU

Figure 3: Synthesized business-enhancement priorities based on the empirical pattern of constraints and opportunities. Priority levels are analytical, not independently measured variables.



The agenda follows a sequencing logic. Infrastructure and financing should receive early attention because they enable producers to adopt inputs and technologies. Market information and producer representation should proceed in parallel because physical productivity without bargaining capacity may simply increase the volume of coffee sold under the same unequal terms. Technology, training, and certification should then convert these improved resources into quality and market differentiation. Finally, branding, specialty-market linkages, and stakeholder governance can help retain more value locally. [11, 21].

8. Conclusion

The study demonstrates that the local coffee industry in La Carlota City has favorable demand conditions but operates with moderate value-chain efficiency and persistent weaknesses in price fairness, infrastructure, finance, access to certification, and technical support. The sector is predominantly smallholder- and producer-driven, with Robusta as the dominant variety and low annual production volumes reported by most respondents. These structural characteristics should shape the design of business and policy interventions.

The most important analytical conclusion is that market dynamics and value-chain efficiency are closely linked. The positive association between the two constructs ($\rho = .605$, $p < .001$) indicates that strengthening production and support systems is inseparable from strengthening market performance. The study therefore supports an integrated competitiveness model in which infrastructure, financing, inputs, technology, training, market information, and producer participation are treated as mutually reinforcing components.

The findings also caution against one-size-fits-all interventions. Market-dynamics perceptions were broadly shared across most stakeholder categories, suggesting systemic constraints. Value-chain efficiency, in contrast, varied across role, age, experience, and variety, indicating that interventions should be responsive to how stakeholders participate in the chain. A locally grounded business-enhancement strategy should therefore combine system-wide reforms with targeted support for particular groups.

9. Implications for Practice and Policy

For local government and public agencies, the evidence supports prioritizing rural infrastructure, shared postharvest facilities, financing mechanisms, extension services, and market information systems. For cooperatives, the findings highlight the value of collective purchasing, shared processing, price information, negotiation, and certification assistance. For private businesses, the high demand ratings indicate opportunities in quality differentiation, local sourcing, café and restaurant partnerships, branding, and traceability. For producers, the results suggest that collective action and value addition may be more sustainable than relying solely on volume. [10, 21, 15].

For researchers, the study offers a baseline for longitudinal and comparative work. Future research should test whether improvements in infrastructure, financing, certification, and training produce measurable changes in farm income, productivity, quality, price realization, and market participation. Future studies should also use probability sampling where a reliable population frame is available, collect objective production and price records alongside perception measures, and test multivariate models that can distinguish the independent contributions of stakeholder and institutional factors. [32, 30].

10. Limitations

Several limitations should be considered when interpreting the results. First, the study used purposive rather than probability sampling because a complete list of stakeholders was unavailable. The findings are therefore context-specific and should not be generalized statistically to all Philippine coffee stakeholders. Second, the principal constructs were measured through self-reported perceptions, which may be affected by recall, expectations, or respondent position in the value chain. Third, the cross-sectional design permits association but not causal inference. Fourth, the study focused on selected indicators and did not directly measure international trade shocks, weather variability, actual farm profitability, transaction costs, or longitudinal changes in prices and productivity. Finally, the source manuscript contains a small number of narrative/statistical inconsistencies; the article resolves these conservatively by prioritizing the detailed reported test statistics and explicitly flagging the issues that require verification.

11. Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this research. The study was conducted independently, and no financial, commercial, institutional, or personal interest influenced the research design, data collection, analysis, interpretation of findings, or preparation of the manuscript.

12. Acknowledgement

The researcher extends his profound gratitude to Dr. Trudy C. Cerbo, Dr. Ma. Quincy D. Dones, and Dr. Rex R. Jalando-on, for the guidance and encouragement that they gave him in the course of conducting this study. Appreciation is also accorded to the Sitio Mansibanga Livestock Raisers Association (SMALRA) and the panel of validators whose valuable inputs helped improve the study. Lastly, he is deeply thankful to his family who supported him all throughout his academic pursuit.

13. Author's Biography

Joemil N. Mesola Jr. is a Master of Business Administration candidate at La Carlota City College, Graduate School, La Carlota City, Negros Occidental, Philippines. His research focuses on market dynamics and value chain efficiency in the coffee industry, aiming to promote sustainable agribusiness practices and strengthen local economic development. He currently serves as Community Affairs Officer II at the Public Employment Service Office - LGU La Carlota City, with prior experience in project development, legislative documentation, and financial management. He holds Career Service Professional Eligibility and brings strong competencies in community organizing, project proposal writing, and legislative processes.

Dr. Joyce C. Decendario is an esteemed faculty member at La Carlota City College Graduate School in La Carlota City, Negros Occidental, Philippines. She is presently working as Faculty Adviser, Graduate School, and Dean, College of Business and Management, where she guides her students in graduate and undergraduate courses in business administration, management accounting, and public administration. As a co-author, she ensures the rigor of the academic process and provides methodological guidance for the research output.

References

1. ACDI/VOCA, "Coffee value chain development project report", 2024, ACDI/VOCA.
2. ACDI/VOCA, "PhilCAFE program evaluation: Enhancing coffee productivity and farmer incomes in Luzon, Visayas, and Mindanao", 2024, ACDI/VOCA.
3. Asian Development Bank, "Agricultural value chain financing in Asia: Enabling inclusive growth", 2021, ADB.
4. J. Campbell, M. Reyes, "Market competitiveness and stakeholder participation in Philippine agriculture", 2023, *Journal of Agribusiness and Rural Development*, 15(2), 45–62.
5. J. Campbell, R. Smith, "Reliability and validity in agricultural business research: Applications and challenges", 2023, *Journal of Applied Business and Economics*, 25(3), 112–128.
6. RM. Castillo, JP. Santos, C. Villanueva, "Cooperative participation and value chain efficiency in Calabarzon's coffee sector", 2024, *Philippine Journal of Agrarian Studies*, 12(1), 55–72.
7. ZM. Catacutan, M. Ulep, "Analysis of the asymmetries and trends of determinants of farmgate prices of coffee in the Philippines", 2021, *Philippine Coffee Journal*, 2(1), 18–31.
<https://www.researchgate.net/publication/362345298>
8. Consainsights, "Coffee market dynamics and consumer preferences in Southeast Asia", 2024, Consainsights Research Report.
9. R. Cuevas, "Coffee production and market competitiveness in the Philippines", 2023, *Philippine Journal of Agricultural Economics*, 34(1), 77–95.
10. Department of Agriculture, "Annual report on agricultural commodities", 2022, Department of Agriculture.
11. Department of Agriculture–Bureau of Agricultural Research, "Philippine Coffee Industry Roadmap 2021–2025", 2021, Department of Agriculture.
12. D'Souza, A, "Demographic influences on agricultural productivity: Evidence from Southeast Asia", 2025, *International Journal of Development Studies*, 29(3), 201–219.
13. Etikan, I, "Comparison of convenience sampling and purposive sampling", 2021, *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
<https://doi.org/10.11648/j.ajtas.20210501.11>
14. Euromonitor International, "Coffee market trends in the Philippines: Premiumization and café culture expansion", 2026, Euromonitor International.
15. FAO, "Sustainable coffee production and certification standards", 2022, Food and Agriculture Organization of the United Nations.
16. M. Gapas, "Coffee production and consumption trends in the Philippines: Challenges and opportunities", 2021, *Journal of Rural Development and Agribusiness*, 7(3), 88–104.
17. Global Market Insights, "Coffee value chain efficiency and technology adoption: Global trends 2026", 2026, Global Market Insights.
18. International Coffee Organization, "Annual report on coffee certification and market trends", 2023, ICO.
19. R. Kaplinsky, "A handbook for value chain research", 2022, Institute of Development Studies.
<https://hdl.handle.net/10779/ids.32676570>
20. Ken Research, "Philippine coffee market outlook to 2026", 2026, Ken Research.

21. EM. Medalla, PR. Cruz, R. Santos, "Enhancing value chain efficiency in Philippine agriculture: Lessons from coffee", 2026, PIDS Discussion Paper Series, 2026-12.
<https://doi.org/10.62986/dp2026.02>
22. I. Miroshnychenko, A. De Massis, "Strategic flexibility in family firms: A review and future research agenda", 2021, Journal of Family Business Strategy, 12(3), 100–112.
<https://doi.org/10.1016/j.jfbs.2021.100412>
23. P. Nemenzo-Calica, J. Reyes, "Smallholder coffee farms and cooperative development in the Philippines", 2025, Journal of Rural Development Studies, 19(2), 55–72.
24. LA. Palinkas, SM. Horwitz, CA. Green, JP. Wisdom, N. Duan, "Purposeful sampling for qualitative data collection and analysis in mixed method implementation research", 2022, Administration and Policy in Mental Health, 42(5), 533–544. <https://doi.org/10.1007/s10488-013-0528-y>
25. People in Need, "Sustainable coffee value chain practices in Southeast Asia", 2023, People in Need.
26. Philippine Statistics Authority, "Coffee production statistics in the Philippines, 2023", 2023, PSA.
27. M. Porter, "Competitive advantage: Creating and sustaining superior performance", 2021, Free Press. (Original work published 1985).
28. AR. Quisumbing, H. Malapit, "Measuring women's empowerment in agriculture: Innovations and evidence", 2023, Global Food Security, 38, 100707.
<https://doi.org/10.1016/j.gfs.2023.100707>
29. Rappler, "Philippine coffee industry faces shifting consumer demand", 2025, March 10, Rappler.
<https://www.rappler.com>
30. Robinson, T, "Socio-economic profiling in agricultural research: Methods and applications", 2021, Journal of Rural Studies, 39(2), 88–104.
31. RT. Salapa, L. Gomez, "Experience and innovation in Philippine coffee farming", 2024, Asian Journal of Agribusiness, 12(3), 144–160.
32. M. Saunders, P. Lewis, "Research methods for business students (9th ed.)", 2025, Pearson Education Limited.
33. P. Saunders, R. Tan, "Age and productivity in agricultural enterprises", 2025, Asian Journal of Business and Economics, 17(1), 33–49.
34. Singh, R, "Strategic flexibility and dynamic market adaptation: A thematic review", 2026, Journal of Business Strategy, 47(2), 115–130. <https://doi.org/10.1016/j.jbusstr.2026.02.005>
35. GN. Tan, "A business-model approach on strategic flexibility of firms in a shifting value chain: The case of coffee processors in Cavite, Philippines", 2021, Global Journal of Flexible Systems Management, 22(1), 17–28. <https://doi.org/10.1007/s40171-020-00255-5>
36. World Bank, "Agricultural competitiveness and market access in developing economies", 2022, World Bank Publications.
37. Worldmetrics, "Philippine coffee industry report: Consumption and growth trends", 2026, Worldmetrics Research.