

Modeling The Effects of Supplier and Customer Integration on Business Performance and Competitiveness: The Mediating Role of Internal Integration among Coffee and Tea Shops in Batangas City

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Abstract

This study modeled the effects of supplier and customer integration on the business performance and competitiveness of coffee and tea shops in Batangas City, with internal integration examined as a mediating factor. Anchored in the Resource-Based View, supply chain integration was treated as a strategic capability that supports operational efficiency and competitive advantage. The study aimed to assess the extent of supplier, customer, and internal integration; measure business performance and competitiveness; test direct and mediated effects; determine group differences; and propose strategies for improvement. A quantitative descriptive–correlational design was employed. Using Raosoft sampling, 102 respondents were drawn from 138 registered shops. Data was gathered through a researcher-developed Likert-scale questionnaire and analyzed using descriptive statistics, multiple regression, ANOVA, and Structural Equation Modeling. Results showed high levels of supplier, customer, and internal integration, and business performance and competitiveness were rated to a great extent. Customer integration significantly influenced internal integration and competitiveness, while internal integration predicted business performance. Internal integration partially mediated the effect of customer integration on performance, while supplier integration showed no direct significant effect. ANOVA results indicated significant differences based on firm size and organizational position. Several recommendations are proposed. Coffee and tea shops should develop long-term supplier partnerships supporting joint product development, quality improvement, and sustainability. To strengthen customer retention, loyalty programs must shift toward data-driven, membership-based approaches with personalized rewards. Continued adoption of POS analytics, CRM platforms, and innovative service models can improve efficiency and customer engagement. Since organizational position shapes perceptions of competitiveness, targeted staff training and employee engagement are essential. SMEs may consider forming alliances or cooperatives for collective sourcing and shared logistics. Sustainability and ethical sourcing should be embedded into operations, as ESG-driven practices enhance competitiveness and customer loyalty. Future research may explore mediators such as digital transformation or knowledge sharing and examine moderating effects of changing market and technological conditions.

Keywords: Business Competitiveness; Business Performance; Customer Integration; Internal Integration; Supplier Integration.

1. Introduction

Today's world of economics emphasizes that in a quest to gain a competitive advantage, this is not a task that is done only on a firm level, as in the past, from a microeconomic point of view, but rather in a holistic fashion that minimizes downtime on a whole chain that impacts on the products' quality. Increasing businesses across the whole world means that businesses need sources of innovation in a way that helps them in a competitive world [7]. Supply Chain Integration (SCI) - in this way, coordinating as well as linking activities of people, information, strategies, as well as structures at each point of contact—today is a necessity in a way that integrated chains help move products in a way that meets the needs of customers [28]. Today, in the worldwide food & beverage sector, the effects of digitalization, sustainability needs, and new consumer lifestyle behaviors are changing the dynamics of the entire supply chain [29]. Due to increased demands for customized, premium, and responsibly produced food & beverages, innovation has increased in both developed countries as well as emerging countries [13]. As a result of businesses' increasing geographical spread across the globe, the problem of managing the entire operation from suppliers to customers becomes exponentially tougher [8].

In the Philippines, these worldwide changes are reflected in the fast emergence of coffee and tea shops. Over the past ten years, the number of coffee as well as tea shops has increased exponentially as a result of the dynamic lifestyle, increased affluence, and the emergence of a café culture [17]. There has been a certain explosion in Region IV-A, where Batangas City is found, thanks to the long-standing heritage of Batangas as the birthplace of Kapeng Barako, a certain native coffee type that is the epitome of Batangueño heritage. This is led by the entry of international chains such as Starbucks, thus igniting the emergence of local entrepreneurship, thereby forming a full-grown café culture that comprises a mix of both international and local chain coffee shops, with a certain three-year track record of survival, thus implying penetration in the target clientele comprising of residents, learners, as well as professionals.

Despite this progress, Supply Chain Management (SCM) is found to be one of the important strategies that help in the optimization of operational efficiency, innovation, and response to the marketplace. It has been observed that today, businesses compete not as standalone entities, rather as interlinked entities in a network of joint operational endeavors that involve fast, trustworthy, and valuable service activities [19]. It is in this context that Supply Chain Integration (SCI) becomes a defining factor in this respect that helps in optimizing internal as well as external associations of businesses that act as a prerequisite in achieving superior performance as well as competitiveness [32]. Cafes offering coffee and teas, as important as they are in developing any local economy, continue to struggle with maintaining a competitive edge given the varying needs of the marketplace that require rapid transformation. It has long been found in previous studies that SCI—Supply Integration, Customer Integration, and Internal Integration—was found to be a critical factor in enhancing responsiveness, costs, and innovation [11], [3]. Nevertheless, a great number of coffee shops in Batangas City continue to demonstrate a lack of integration in the overall management of the supply chain in a way that makes it difficult to coordinate between suppliers, employees, as well as customers.

From a conceptual point of view, SCI is not only a transactional activity, as suggested in previous studies, that enables small businesses to utilize a set of competencies in a way that matches external relationships in order to generate sustainable value [18, 10]. Supplier integration and customer integration act as external aspects of this concept in a firm, whereas internal integration is a process that uses such external factors as a means of producing better results [13]. As a result of the intensifying effects of globalization and digitalization, coffee shops and tea shops will need to develop competencies that will not only help them access this integration process in a simple manner, as suggested in previous studies [16], [13] rather than succeed in this process for continued survival. It is apparent that SCI has been studied extensively in recent years; however, the primary empirical studies conducted on this topic tended to target large-scale businesses in developed countries. There is a significant need to address a lack of comprehension of small service-based businesses in a developing nation like the Philippines in relation to the operations of SCI. This is particularly evident in that a small coffee and tea establishment has a set of distinct institutional and logistical difficulties that exclude those of large businesses [6]. This is in addition to the fact that existing studies primarily assessed the positive impacts of both customer and supplier integration on performance, whereas the proposed model will assess the influence of internal integration as a mediator in converting these variables into a form of competency outcomes.

Anchored on the resource-based view (RBV) theory [5, 30], this study argues that SCI is a dynamic capability that enables coffee and tea stores to utilize external as well as internal resources effectively. This article presents a Structural Equation Model (SEM), which explains the causal as well as moderating relations that exist between supplier integration, customer integration, internal integration, business performance, and business competitiveness. This article situates SCI in the context of the café industry in the Philippines to develop empirical contributions that shed new perspectives on a new emerging theory in the field of supply chains.

Overall, this article is expected to contribute to new practical approaches that will benefit café owners in Batangas City in aiming to heighten integration as well as competition in the burgeoning coffee & tea industry. This study extensively aims to fill the gap in local research about how supply chain integration (SCI) affects small to medium enterprises (SMEs), especially in the food and beverage industry, it strengthens theoretical understanding, and contributes to knowledge, policy, and practice of different stakeholders such as policy makers, educators, practitioners, researchers and the broader academic community to support local economic development.

1.1. Review of literature

Supply Chain Integration involves efficient coordination, collaboration and swift information sharing in areas such as vendor management, procurement, data exchange and the interlinking of various business activities to bring value to the customers [14]. This integration also allows for better communication and collaboration between suppliers and customers, resulting in further cost savings and enhanced customer satisfaction. Ultimately, supply chain integration allows for a more efficient and profitable business model, ensuring the long-term sustainability of the company. Strategic management offers organizations the ability to gain a competitive advantage over competitors. This is achieved through cost reduction, technology improvement, increased understanding and use of technology, and the creation of higher value for customers. The key benefits of supply chain integration are increased customer focus, cross-network competition, greater specialization in scale and scope, and reduced risk of cash flow shortages [21]. In this regard, supply chain integration leads to increase in sales and market share.

Customer Integration (CI), on the other hand, is building and maintaining strong relationships and partnerships with the customers. It includes sharing knowledge, experiences, products, services, and suggestions with customers. Previous studies consistently report that customer integration enhances operational performance and market competitiveness. CI also helps the firms to discern the dynamic demand from customers, and this visibility helps them reduce the redundancy by decreasing inventory holding and stock-outs [13]. The information gained via customer integration is a special resource that helps a firm to gain competitive advantage through meaningful insights into the product. It also reduces the time required in product design and production planning [25]. Frequent changes in customer demand make it challenging for the firm to satisfy their customers [27]. Therefore, it is important for a firm to be in continuous contact with their customers and keep on adding value as per the customer requirements. Customer integration is primarily a strategic outcome of effective Customer Relationship Management (CRM) implementation, which leverages information technology and fosters an innovative organizational culture to maximize customer satisfaction and firm performance [22]. Empirical studies show that customer integration predicts positive business performance as it allows firms to conduct collaborative planning and information sharing.

Moreover, the domain of external integration, including supplier integration refers to an organization's ability to collaborate effectively with its partners within the supply chain to advance inter-organizational strategies including development and implementation of processes, procedures, norms, and behaviors that are integrated, synchronized, and compatible across all involved entities [14]. The successful practice of external integration empowers organizations to derive various benefits, including improved collaboration, reduced costs, and enhanced revenue streams, and thereby contributing to the establishment of a stronger and more resilient supply chain. It extends beyond individual entities and involves harmonizing strategies, sharing information, and jointly pursuing common objectives that could create a formidable force capable of tackling challenges and capitalizing on opportunities within the supply chain ecosystem.

Part of this study to explore the mediating role of the Internal Integration in the coffee and tea shops in Batangas City. Internal Integration (II) is defined as the coordination and collaboration across functions within the organization to ensure smooth operations, timely service, and effective problem solving [14]. In essence, internal integration ensures that an organization's internal operations are well-coordinated and optimized, setting the stage for productive engagement with external partners. By aligning internal processes, organizations can overcome inefficiencies, reduce redundant efforts, and streamline operations and achieve sustainable competitive advantage.

Additionally, business competitiveness is defined as the ability of firms to compete successfully in the business environment based on their productivity and innovation. Business competition between companies, both nationally and internationally, is getting tighter, which encourages SMEs to continue to innovate to produce maximum performance [4]. One way that SMEs can do to win market share is to have a competitive advantage which is a sign that SMEs are different or superior to others. SMEs also need to implement optimal supply chain management. Empirical research examining the relationship between supply chain integration and performance concludes that supply chain integration is directly related to business performance.

The empirical findings from the study [4] show that customer integration positively affects business performance (growth) while internal integration positively affects both business performance (growth) and competitiveness of the small and medium enterprises.

Existing literature strongly suggests that supply chain integration (SCI)—specifically supplier, customer, and internal integration—is crucial for organizational success. However, there is a research gap in understanding how these integration dimensions interact and influence outcomes within the specific context of coffee and tea shops in a regional city like Batangas. Specifically, the mediating role of internal integration—ensuring seamless coordination across a shop's own departments (e.g., procurement, operations, marketing)—in translating external collaborations (with suppliers and customers) into tangible business performance and competitiveness gains has been underexplored in this specific business setting.

Without a clear understanding of this mechanism, business owners may misallocate resources, focusing only on external partnerships without strengthening the essential internal structures needed to capitalize on them. This study seeks to bridge this gap, providing actionable insights for local entrepreneurs. The findings of this research will provide a data-driven framework for coffee and tea shop owners in Batangas City to strategically align their supply chain practices. By highlighting the vital role of internal integration, the study will guide businesses to prioritize efficient in-house processes as the foundation for leveraging external relationships.

1.2. Objectives of the study

The general objective is to study the Effect of Supplier and Customer integration on Business Performance and Competitiveness of Coffee and Tea Shops in Batangas City mediated by internal integration. Specifically:

To identify the business profile of the respondents in terms of years of operation, firm size and type of organization.

To determine the extent of supplier, customer, and internal integration on their operations.

To describe business performance and business competitiveness.

To determine the significant effect of supplier integration on business performance and business competitiveness.

To determine the significant mediating effect of internal integration on the relationship between supplier and customer integration, and business performance and competitiveness,

To identify the significant differences in the assessment of business performance and competitiveness when grouped according to business profile.

To propose supply chain integration strategies to enhance business performance and competitiveness based on the results of the study.

1.3. Hypotheses of the study

The following hypotheses were formulated to guide the study:

Ho1: Supplier integration and customer integration do not have a significant effect on business performance and business competitiveness.

Ho2: Internal integration does not significantly mediate the effect of supplier and customer integration on business performance and business competitiveness.

Ho3: There are no significant differences in the assessment of business performance and competitiveness when grouped according to business profile.

2. Methodology

This study employed a quantitative descriptive-correlational research design to examine the effect of Customer and Supplier Integration on business performance and competitiveness, as mediated by internal integration, specifically within coffee and tea shops in Batangas City. A sample of 102 coffee and tea shops was randomly drawn from a population of 138 businesses via Raosoft Calculator (determined using a 95% confidence level and 5% margin of error) [24], and data were collected via a researcher-developed survey questionnaire utilizing a five-point Likert scale to measure agreement levels. The survey covered firmographic profiles and variables related to internal and external supply chain integration. Survey forms were distributed and discussed via personal visits and online google form. Quantitative data were analyzed using descriptive statistics (frequency, percentage, weighted mean, standard deviation) and inferential statistics. Initial testing for predictors involved Multiple Regression Analysis, preceded by checking for assumptions of linearity, homoscedasticity, and normality. The central hypothesis regarding the mediating role of internal integration was tested using Structural Equation Modeling (SEM). The SEM analysis employed Maximum Likelihood (ML) estimation with a Huber-White robust standard error and the Yuan-Bentler scaled statistic to estimate the direct and total effects of Supplier Integration (SI) and Customer Integration (CI) on business Performance (BP) and Competitiveness (BC). This rigorous modeling approach, validated through various model fit indices, ensured the accurate estimation of parameters and the assessment of the proposed theoretical model. All research procedures adhered to ethical standards, including obtaining voluntary and informed consent, and ensuring confidentiality and anonymity.

3. Results

This section highlights the descriptive and inferential results obtained from the analysis conducted in this research, and the subsequent interpretations of those results in accordance with the proposed framework of this study. It first addresses the descriptive results that illustrate the characteristics of businesses in the studied coffee and tea shops as well as the levels of external integration, measured in terms

of extent of integration of the supplying party, target party, and internal integration of the studied businesses. It then continues with the inferential results that investigated the relations between various components of integration, businesses' performance, as well as businesses' competitiveness. Regression analysis, in combination with SEM techniques, assisted in proving the proposed causal relations between internal integration factors as mediators in this study, offering both direct and indirect estimations of impacts. Each result is accordingly discussed in the context of proposed theoretical predictions, in addition to empirical studies offered in earlier literature on this topic, highlighting how the external integration mechanisms impact enhanced internal procedures, as well as performance capabilities of businesses that eventually ensure businesses' competitiveness.

Table 1: Distribution of Respondents in Terms of Their Profile

	Frequency	Percentage
Years of Operations		
Below 1 year	25	24.50%
1 - 5 years	62	60.80%
6 - 10 years	5	4.90%
11 years and above	10	9.80%
Firms' Size		
1 - 9 (Micro)	79	77.50%
10 - 99 (Small)	17	16.70%
100 - 199 (Medium)	2	2.00%
200 or more (Large)	4	3.90%
Types of Business Organization		
Sole Proprietorship	65	63.70%
Partnership	20	19.60%
Corporation	17	16.70%
Position in the Company		
Owner	17	16.70%
Store Manager	20	19.60%
Store Personnel	54	52.90%
Others	11	10.80%
Information System		
Manual	28	27.50%
POS	72	70.60%
ERP	2	2.00%
Average Number of Customers		
<50 Customers	28	27.50%
>50 Customers	72	70.60%

Table 1 presents the typical respondents as a micro-sized sole proprietorship (employing fewer than 10 people) that has been in operation for a short time, 1 to 5 years (60.80%). The majority of the respondents who completed the survey were store personnel (52.90%). Their information technology is focused on basic transaction processing, with a strong reliance on Point of Sale (POS) systems (70.60%). Despite their small size and young age, these shops appear to be moderately successful in attracting customers, with the vast majority (70.60%) serving more than 50 customers on average.

Table 2: Extent of Supplier Integration to the Operation

Items	Mean	SD	Interpretation
Joint Planning	3.8	0.744	Great Extent
Information Sharing	3.72	1.038	Great Extent
Collaborative Improvement and Innovation	3.12	1.284	Moderately Extent
Strategic Partnership Orientation	3.86	1.044	Great Extent
Communication with Supplier	3.75	0.979	Great Extent
Cost Coordination	4.25	0.696	Great Extent
Technological Connectivity	4.16	3.24	Great Extent
Relationship Commitment	3.65	1.059	Great Extent
Delivery Reliability	4.02	0.923	Great Extent
Supplier Feedback Mechanism	3.95	0.872	Great Extent
Overall	3.55	1.021	Great Extent

Table 2 reveals supplier integration is practiced to a great extent, indicated by an overall mean score of 3.55 (SD = 1.021). The highest level of integration is observed in customer integration to cost coordination (Mean = 4.25), underscoring a strong focus on collaborative cost reduction across the supply chain. Technological connectivity also demonstrates a high degree of integration (Mean = 4.16), suggesting significant linkage between the ordering and inventory systems of the businesses and their primary suppliers, though the notably high standard deviation (SD = 3.24) points to a wide variation in the completeness of these system integrations. Furthermore, delivery reliability (Mean = 4.02) and a supplier feedback mechanism (Mean = 3.95) are highly valued, demonstrating a focus on operational consistency and active two-way process improvements. Conversely, collaborative improvement and innovation received the lowest mean score (3.12), falling into the "moderately extent" category. This suggests that while suppliers are integrated into planning and cost-cutting, frequent collaboration on product quality and the development of new offerings remains a challenge for the surveyed SMEs, a finding supported by the high standard deviation (SD = 1.284) that indicates a clear split between businesses that collaborate frequently and those that rarely do.

Table 3: Extent of Customer Integration to the Operation

Items	Mean	SD	Interpretation
Customer Feedback Utilization	4.34	0.489	Great Extent
Co-design Participation	4.64	0.593	Very Great Extent
Customer Data Analytics	4.00	0.985	Great Extent
Digital Engagement	4.51	0.686	Very Great Extent
Collaborative Innovation	4.46	0.713	Great Extent
Customer Relationship Commitment	4.09	0.945	Great Extent

Service Personalization	4.74	0.562	Very Great Extent
Transparency to Customers	4.41	0.788	Great Extent
Customer Retention Program	3.78	1.183	Great Extent
Service Recovery	4.31	0.856	Great Extent
Overall	4.46	0.624	Great Extent

Table 3 shows that customer integration within operational processes reveals a high level of practice, with an overall mean of 4.46 indicating a great extent of integration. Three key items reached an exceptionally high level (Very Great Extent, mean > 4.51): Service Personalization (mean = 4.74) reflects a highly tailored customer relationship approach; Co-design Participation (mean = 4.64) suggests active customer involvement in designing the shop environment; and Digital Engagement (mean = 4.51) confirms the effective use of digital channels to foster ongoing relationships. These consistent high scores across all items demonstrate that the coffee and tea shops in Batangas City are highly successful in integrating customers through a well-rounded and cohesive strategy, though they should continue to monitor variable aspects such as loyalty program effectiveness and data analysis to maintain a high-quality experience.

Table 4: Extent of Internal Integration to the Operation

Items	Mean	SD	Interpretation
Information Sharing	4.31	0.682	Great Extent
Cross-functional Collaboration	4.54	0.767	Very Great Extent
Process Alignment	4.45	0.804	Great Extent
Strategic Goal Alignment	4.38	0.718	Great Extent
Internal Communication	4.33	0.86	Great Extent
Work Coordination	4.31	0.867	Great Extent
Employee Empowerment	4.3	0.842	Great Extent
Team Cohesion	3.84	1.214	Great Extent
Performance Communication	4.34	0.814	Great Extent
Standardized Service Execution	4.33	0.8	Great Extent
Overall	4.26	0.832	Great Extent

Table 4 presents a Great Extent in internal integration among Coffee and Tea Shops in Batangas City obtaining an overall mean of 4.26 (SD = 0.832). Among the indicators, the highest mean was noted in Cross-functional collaboration (mean = 4.54) which reflects a very great extent in interpretation. Other indicators such as Process alignment with a mean of 4.45 suggest customer service is well aligned and coordinated. Strategic goal alignment also gained a high mean value of 4.38, showing that the price shops maintain synchronized operations and consistent information flow through utilization of technology/system. Overall, the findings suggest that the shops have established a strong internal framework where employees collaborate effectively to adopt holistic and process-oriented approaches. This level of internal integration supports operational effectiveness, promotes teamwork and enhances the overall quality of service delivery crucial for maintaining a consistent brand experience across all touchpoints, which is the global expectation for retail food service. [36]

Table 5: Description of Respondents' Business Performance

Items	Mean	SD	Interpretation
Overall Profitability	4.06	0.545	Great Extent
Market share Growth	3.9	0.96	Great Extent
Sales Growth	3.94	0.877	Great Extent
Overall Customer Satisfaction	3.83	0.833	Great Extent
Business Operations Efficiency	4.34	0.652	Great Extent
Return of Investment	4.23	0.676	Great Extent
Well-positioned for future growth and sustainability	3.87	0.864	Great Extent
External Challenges Preparedness	4.27	0.706	Great Extent
Effective Continuity Plan	4.11	0.77	Great Extent
Coping with Customer Demand	3.9	0.682	Great Extent
Overall	4.15	0.801	Great Extent

Table 5 shows that the analysis of business performance (overall mean = 4.15, SD = 0.801) indicates that businesses perceive themselves to be performing to a Great Extent across all areas. This high performance is anchored in Operational Excellence, evidenced by high mean results in efficiency in business operations (mean = 4.34) and preparedness for external challenges (mean = 4.27), which includes a focus on Business Continuity Plan (BCP) (mean = 4.11) and strategic risk management. This operational success is translating into strong Financial Health, confirmed by positive returns in overall profitability (mean = 4.06) and return on investment (mean = 4.23). Furthermore, the high scores for sales growth (mean = 3.94) and customer satisfaction (mean = 3.83) suggest that the strong internal alignment and operational competence are successfully driving favorable external market results and customer loyalty.

Table 6: Level of Respondents' Business Competitiveness

Items	Mean	SD	Interpretation
Market Attraction	4.34	0.524	Great Extent
Market Position	4.4	0.649	Great Extent
Brand Recognition and Reputation	4.25	0.696	Great Extent
Social Sustainability	4.33	0.708	Great Extent
Social Responsibility	4.38	0.676	Great Extent
Innovation and Continuous Improvement	4.3	0.671	Great Extent
Employee Motivation	4.34	0.79	Great Extent
Pricing Strategy	4.47	0.699	Great Extent
Competitive Innovation Solutions	4.25	0.852	Great Extent
Adaptability	4.37	0.596	Great Extent
Overall	4.29	0.683	Great Extent

Table 6 shows how the respondents perceive business competitiveness (overall mean = 4.29, SD = 0.683) which reveals a Great Extent of confidence in their competitive standing. The highest-rated factor is Pricing Strategy (mean = 4.47), indicating that effective price

competitiveness is perceived as the strongest driver of success. This is supported by strong scores in Market Position (mean = 4.40) and Attraction (mean = 4.34), reflecting confidence in their unique selling proposition and customer loyalty. Forward-looking practices also score highly, with Adaptability and Innovation (mean = 4.37) and Continuous Improvement (mean = 4.30) suggesting a business environment that values flexibility. Furthermore, Sustainability and Social Responsibility (mean = 4.33 and 4.38, respectively) highlight the perceived value of ethical practices, while Employee Motivation (mean = 4.34) is seen as a significant internal contributor. Overall, the results suggest that current strategies across marketing, operations, and internal culture are viewed as effectively supporting their ability to compete in the global market.

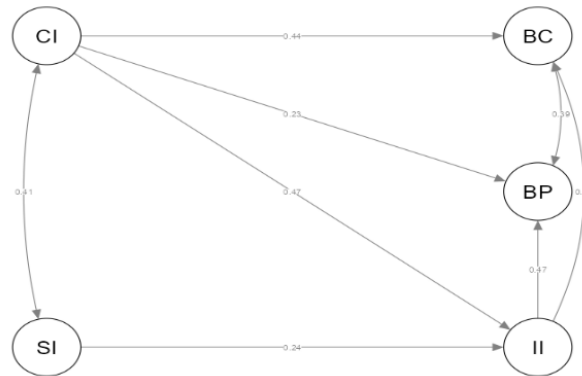


Fig. 1: Structural Equation for the Trimmed Mediation Model.

Table 7: Structural Equation Modeling Results for the Trimmed Mediation Model (N = 102)

Dependent Variable	Predictor	B	SE (Robust)	β	z	p	Decision to Ho	Interpretation
Internal Integration (II)	Supplier Integration (SI)	0.224	0.124	0.243	1.8	0.072	Failed to Reject	Not Significant
	Customer Integration (CI)	0.658	0.124	0.472	5.3	< .001	Reject	Significant
Business Performance (BP)	Internal Integration (II)	0.374	0.111	0.47	3.4	< .001	Reject	Significant
	Customer Integration (CI)	0.251	0.13	0.226	1.9	0.054	Failed to Reject	Not Significant
Business Competitiveness (BC)	Internal Integration (II)	0.253	0.134	0.329	1.9	0.059	Failed to Reject	Not Significant
	Customer Integration (CI)	0.466	0.125	0.436	3.7	< .001	Reject	Significant

Note. B = unstandardized coefficient; SE = standard error; β = standardized coefficient; CI = confidence interval. Model fit: $\chi^2(2) = 1.81$, $p = .405$; SRMR = .016; RMSEA = .000 (90% CI [0, .19]); CFI ≈ 1.00 ; TLI ≈ 1.00 . R^2 : II = .38; BP = .39; BC = .47.

This table shows that Supplier Integration has no significant effect on the Internal Integration while Customer Integration has significant effect on the Internal Integration. The Internal Integration has a significant effect on the Business performance but not on the Business Competitiveness of the Coffee and Tea Shops. It also shows that Customer Integration has no significant effect on Business Competitiveness but has a significant effect on the Business competitiveness of the shops. Overall, these findings show that Customer Integration has direct contribution to Internal Integration and in Business competitiveness.

Table 8: Indirect and Total Effects

Path	B	SE	β	z	p	Decision to Ho	Interpretation
<i>Indirect Effect</i>							
SI \rightarrow II \rightarrow BP	0.084	0.037	0.114	2.27	0.023	Reject	Significant
CI \rightarrow II \rightarrow BP	0.246	0.083	0.222	2.95	0.003	Reject	Significant
SI \rightarrow II \rightarrow BC	0.057	0.029	0.08	1.94	0.052	Failed to Reject	Not Significant
CI \rightarrow II \rightarrow BC	0.166	0.087	0.155	1.92	0.055	Failed to Reject	Not Significant
<i>Total Effect</i>							
CI \rightarrow BP	0.497	0.111	0.447	4.48	< .001	Reject	Significant
CI \rightarrow BC	0.632	0.101	0.591	6.29	< .001	Reject	Significant

Note. Positive and significant indirect effects for Supplier Integration (SI) support full mediation via Internal Integration (II). Customer Integration (CI) shows significant direct and indirect effects, indicating partial mediation.

The results of Table 8 indicate that Internal Integration (II) plays a significant mediating role between Supplier Integration (SI) and Business Performance (BP). The indirect effect of SI on BP through II is positive and significant ($\beta = 0.114$, $p = 0.023$), suggesting full mediation, meaning SI improves BP primarily by enhancing II. In contrast, the indirect effect of SI on Business Competitiveness (BC) via II is not significant ($\beta = 0.08$, $p = 0.052$), indicating that II does not mediate this relationship. For Customer Integration (CI), the indirect effect on BP through II is significant ($\beta = 0.222$, $p = 0.003$), and the total effect is also significant ($\beta = 0.447$, $p < .001$), pointing to partial mediation: CI influences BP both directly and indirectly via II. However, the indirect effect of CI on BC through II is not significant ($\beta = 0.155$, $p = 0.055$), even though the total effect is strong ($\beta = 0.591$, $p < .001$), suggesting that II does not mediate CI's effect on BC. Overall, these findings highlight that II is a crucial mechanism for translating SI into improved BP, while CI exerts substantial direct influence on both BP and BC.

Table 9: Years of Operation

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	1.298	3	97	0.28	Not significant
Customer Integration	0.74	3	97	0.531	Not significant
Internal Integration	0.418	3	97	0.741	Not significant

Business Performance	1.078	3	97	0.362	Not significant
Business Competitiveness	0.627	3	97	0.599	Not significant

Note: $p < 0.05$ = Significant, p value > 0.05 = not significant

The analysis indicates that none of the tested variables show a statistically significant difference across the firm years of operation as the p -values for all variables are greater than the conventional significance level of 0.05. Firm Age is not a significant predictor or factor that distinguishes the mean levels of supply chain integration (supplier, customer, internal), business performance or business competitiveness within the sampled firms.

Table 10: Firm Size

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	0.477	3	97	0.699	Not Significant
Customer Integration	1.178	3	97	0.322	Not Significant
Internal Integration	1.18	3	97	0.322	Not Significant
Business Performance	3.436	3	97	0.02	Significant
Business Competitiveness	3.459	3	97	0.019	Significant

Note: $p < 0.05$ = Significant, p value > 0.05 = not significant.

The analysis reveals a statistically significant difference in business performance and business competitiveness as the p -value is less than the conventional significance level of 0.05 suggesting that firm size affects business performance and the level of competitiveness perceived by firms differs statistically depending on their size. While firm size affects these two mentioned variables, it does not appear to be a differentiating factor for the average reported levels of Supplier, Customer and Internal Integration.

Table 11: Type of Business Organization

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	1.192	2	98	0.308	Not Significant
Customer Integration	1.391	2	98	0.254	Not Significant
Internal Integration	1.808	2	98	0.169	Not Significant
Business Performance	0.13	2	98	0.878	Not Significant
Business Competitiveness	1.99	2	98	0.142	Not Significant

Note: $p < 0.05$ = Significant, p value > 0.05 = not significant.

The type of business organization does not appear to be a significant factor influencing the level of supply chain integration (supplier, customer, internal) or the resulting business performance and business competitiveness.

Table 12: Position in the Company

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	2.7	3	97	0.05	Significant
Customer Integration	1.55	3	97	0.206	Not Significant
Internal Integration	3.16	3	97	0.028	Significant
Business Performance	1.18	3	97	0.323	Not Significant
Business Competitiveness	2.7	3	97	0.05	Significant

Note: $p < 0.05$ = Significant, p value > 0.05 = not significant.

The findings strongly suggest that an individual's position in the company is a relevant factor influencing perceptions of internal and supplier-facing aspects of the supply chain as well as the overall perceived business competitiveness, however the lack of significant difference for customer integration and business performance is noteworthy. This may be due to the nature of their role - for instance, employees in operational roles might have a better view of internal and supplier integration than those purely administrative roles.

Table 13: Information System

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	0.758	2	98	0.471	Not Significant
Customer Integration	0.617	2	98	0.542	Not Significant
Internal Integration	1.953	2	98	0.147	Not Significant

Business Performance	0.55	2	98	0.579	Not Significant
Business Competitiveness	0.146	2	98	0.864	Not Significant

Note: $p < 0.05$ = Significant, $p \text{ value} > 0.05$ = not significant.

The analysis shows that the information system used by sampled coffee and tea shops does not significantly differentiate the mean levels of supply chain integration (supplier, customer, internal), business performance and business competitiveness.

Table 14: Average Number of Customers

<i>One-Way ANOVA (Fisher's)</i>					
	F	df1	df2	p	Interpretation
Supplier Integration	0.0299	1	99	0.863	Not Significant
Customer Integration	0.3023	1	99	0.584	Not Significant
Internal Integration	0.5612	1	99	0.456	Not Significant
Business Performance	1.4845	1	99	0.226	Not Significant
Business Competitiveness	1.0232	1	99	0.314	Not Significant

Note: $p < 0.05$ = Significant, $p \text{ value} > 0.05$ = not significant.

The analysis reveals that there are no statistically significant differences in the average number of customers among coffee and tea shops with respect to the variables assessed, namely supplier integration, customer integration, internal integration, business performance, and business competitiveness.

4. Discussions

The results revealed that most coffee and tea shops in Batangas City have been operating for one to five years, are micro-enterprises, and are primarily sole proprietorships. The majority use POS systems and serve over fifty customers daily, reflecting a young but dynamic café sector with a progressive inclination toward digitalization and structured management [14], [9]. From a Resource-Based View (RBV), these firms leverage limited tangible resources such as their information system and intangible resources such as their organizational culture or employee skillsets to develop operational capabilities that support efficiency and business performance [5], [26]. The firms' internal resources and capabilities are the primary drivers of their sustainable competitive advantage.

Supplier integration supports operational efficiency and cost management, yet it does not significantly influence internal integration [12], [23]. Low scores in collaboration and joint innovation indicate that supplier relationships remain largely transactional given that coffee and tea shops' supply chain is generally less complex, affecting only the cost of goods sold, not the entire operation. For example, the delivery of standardized primary raw materials such as coffee beans, tea leaves, milk and pastries will not change the manner of serving the customers (e.g. how baristas interact or prepare drinks), it will not change the manner of promoting the product (e.g. marketing campaigns remain focused on the final product experience, not the raw material source) and it will not change the new flavor to offer (unless the supplier is a specialized partner for unique, new ingredients, which is not the case for standardized commodities). The key focus for the shops is operational stability, price and timely delivery which can be secured through basic contractual or information integration with suppliers. Therefore, the lack of necessity for strategic depth as shop's internal integration is centered on efficient preparation and service of standardized inputs, the complex and strategic collaboration required to significantly impact internal processes like joint innovation on a unique complex component is simply not necessary or value-adding. Capability-building literature posits that external partnerships enhance higher-order internal capabilities only when relational depth, shared systems, and strategic alignment are present [26]. In this context, suppliers sustain operational stability but do not contribute to innovation or long-term capabilities and while supplier relationships matter, the immediate impact on other business units and ultimately on the bottom line depends more on how effectively shops use the supplier input rather than on how deeply they collaborate with suppliers. This non-significant finding challenges some prior SCI studies that suggest a direct link between supplier integration and internal capability development highlighting that operational collaboration alone may be insufficient for capability building in micro-enterprises [15]. Technology adoption, such as POS systems and digital platforms, could act as an external moderator, strengthening coordination and information sharing with suppliers, which may, in turn, amplify the strategic contribution of supplier integration [5], [9].

Customer integration emerges as a primary driver of internal coordination and business competitiveness. Practices such as personalization, co-creation of services, and frequent engagement indicate that cafés rely on close customer relationships as a key strategic resource [1], [25]. The significant link between customer integration and internal integration demonstrates that customer knowledge informs operational decisions, enhances responsiveness, and supports continuous improvement [11], [25]. However, limited systematic analytics suggest that these enterprises predominantly rely on interpersonal knowledge, representing an opportunity for capability enhancement. They must rapidly translate their customer knowledge (e.g. sudden preference for a new drink or a shift in service expectation) into coordinated operational decisions such as inventory adjustment, menu update and employee training before the market shifts again. Technology adoption further reinforces this relationship. High POS adoption (70.6%) streamlines operations, manages inventory, and tracks customer behavior, while digital engagement (mean = 4.51) facilitates feedback collection and participation in service design [20], [22]. These technological capabilities and market volatility act as enablers, translating external customer inputs into coordinated internal processes, consistent with RBV and capability-building principles [5], [26].

Overall, the findings suggest that small cafés can strengthen performance and competitiveness by focusing on internal integration, leveraging customer-driven insights, and strategically adopting technology. The significant mediation of internal integration specifically shows that customer knowledge must first be translated into coordinated internal processes before it can yield competitive advantage. The non-significant effect of supplier integration emphasizes that operational collaboration alone may not suffice for capability development. Deepening strategic supplier partnerships, systematically incorporating customer knowledge, and strengthening internal processes provide a pathway for sustaining competitive advantage in a dynamic market. While global comparisons are limited due to data constraints, the findings align with prior studies on SMEs in developing contexts, where customer-centric practices and internal coordination are critical for performance [14], [9].

5. Conclusions

Based on the survey results analyzed through statistical methods, the findings revealed the following:

- 1) The results revealed that most of the coffee and tea shops in Batangas City have been operating from 1-5 years, are micro-enterprises and are primarily sole proprietorships.
- 2) The findings collectively demonstrate that the coffee and tea shops in Batangas City maintain solid integration practices across all three dimensions, namely customer, internal and supplier integrations.
- 3) The study shows that coffee and tea shops in Batangas City demonstrate strong business performance, characterized by profitability, operational efficiency and preparedness in handling external challenges. Similarly, the shops possess a high level of competitive advantage by effectively competing on price and continuously adapting to market trends. Their emphasis on innovation, sustainability and operational efficiency enhances their ability to attract and retain customers.
- 4) The Structural Equation Modelling (SEM) results showed that Supplier Integration has no significant effect on business performance and competitiveness. The reason for a non-significant direct effect from an external factor like Supplier Integration is that its influence is indirect or fully mediated by internal integration. This means that maintaining a close relationship with suppliers does not automatically lead to higher productivity, profitability or stronger market positioning unless they are effectively processed or utilized internally by those coffee and tea shops in Batangas City.
- 5) The analysis shows that internal integration significantly mediates the effect of supplier and customer integration on business performance. This study means that well-coordinated internal processes enhance the positive influence of supplier and customer relationships on how effectively the business performs. However, internal integration does not significantly mediate the relationship between supplier integration and customer integration with business competitiveness. The result also suggests that while internal coordination improves operational performance, it does not directly strengthen the competitive position of the shops in the market. In summary, internal integration serves as a significant mediator for business performance but not for business competitiveness.
- 6) The results of the analysis show that there are no significant differences in how respondents assessed their business performance and competitiveness when grouped according to years of operation, type of business organization, information system and average no. of customers. This means that these characteristics do not greatly influence how business owners and employees view the overall performance and competitiveness of their shops. However, the findings indicate that firm size has a significant impact on both business performance and business competitiveness. Moreover, there is no significant difference observed in customer integration and business performance across positions. This could be due to their roles, for example, those involved in operations might have more direct involvement and awareness of internal and supplier processes compared to employees in administrative roles, leading to different levels of understanding and perception.
- 7) Based on the results of the study, it is concluded that supply chain integration strategies for coffee and tea shops in Batangas City should prioritize strong internal integration to enhance business performance. While supplier and customer integration are important, their positive effects on performance are realized primarily when internal processes are well-coordinated and efficiently managed. Strategies should focus on streamlining operations, improving information flow, and fostering collaboration across departments to fully leverage supplier and customer relationships. Additionally, firm size should be considered when designing these strategies, as it significantly influences both business performance and competitiveness. Implementing these supply chain integration strategies will enable shops to improve operational efficiency, profitability, and maintain a sustainable competitive advantage in the market.

6. Recommendations

Based on the findings, the following can be recommended:

- 1) Coffee and tea shops should extend supplier relationships beyond transactional exchanges toward strategic partnerships that emphasize long-term value creation. This includes joint product development, quality enhancement, and sustainability initiatives. Establishing trust-based relationships can lead to greater innovation in sourcing efficiency, diversification of product offerings, and reduced operational costs across the supply chain.
- 2) To improve customer retention and competitive advantage, coffee and tea shop enterprises should redesign their loyalty programs with a data-driven approach aligned with global best practices shifting from simple transaction-based loyalty (e.g. buy 1, get 1 free) to relationship-based loyalty (membership structures) which is a necessity in the saturated, experience-driven global coffee and tea market. Implementing tiered membership structures and personalized rewards, such as early access to new blends or exclusive experiences, can increase engagement and loyalty. The use of automated communication platforms and customer analytics can further enable tailored interactions. Collecting direct and cross-cultural customer feedback is essential to understanding reward preferences across diverse markets, ensuring that customer integration strategies remain globally relevant.
- 3) Coffee and tea shops should continue to use technological tools to enhance business performance. This includes implementing Point of Sale (POS) systems with data analytics capabilities, integrating inventory management software and Customer Relationship Management (CRM) platforms to personalize offerings. This would help businesses to optimize accounting operations, strategize continuous product and service innovation. The call for continuous innovation in product offerings is essential for staying relevant in the fast-moving global specialty beverage market. This innovation should be guided by market research and leveraging customer data gathered through integrated systems. The strategy should involve not just new flavors (product innovation) but also new ways of delivering the service (service model innovation), such as subscription boxes, experiential in-store technology (e.g. digital ordering, interactive menus), unique packaging solutions or adapting global market trend shift to changing health consciousness.
- 4) Given that the organizational position significantly influences perception of supply chain integration and competitiveness, coffee and tea shops should adopt targeted training. This should ensure that employees, particularly front-line staff, understand their contribution to the broader business strategy, sustainability goals and customer experience. Global chains can implement cross-location learning programs to share best practices. Human capital is a final competitive advantage. This underscores a universal truth in the service industry that globally employee engagement in service roles directly correlates with service quality, customer satisfaction, and ultimately, financial performance.
- 5) Since firm size was found to significantly affect business performance and competitiveness, micro and small medium enterprises should consider forming cooperatives or strategic alliances. These collaborations enable collective sourcing, shared logistics, and joint marketing initiatives improving bargaining power and reducing costs. Globally, such models can help SMEs integrate into international supply chains and compete with larger corporations.

- 6) Sustainability and ethics are global competitive levers, the widespread acceptance of ESG (Environmental, Social, and Governance) principles among businesses such as coffee and tea shops increasingly favor them for clear ethical sourcing and social responsibility commitments. The perception that these practices improve competitiveness highlights a global trend where purpose-driven branding is an effective tool for attracting and retaining high-value customers [20]. Coffee and tea shops should consider integrating sustainability and social responsibility into every aspect of their operations. The study found that these practices strongly contribute to competitiveness [33]. To achieve this, businesses should consider adopting eco-friendly packaging, implementing ethical and locally focused sourcing, and taking steps toward reducing carbon footprint reduction. Supporting local farming communities and engaging in community development programs can further enhance brand reputation and customer loyalty. By embedding sustainability and social responsibility into their supply chain, coffee and tea businesses can create long-term value while contributing positively to the environment and society.

While this study confirmed internal integration as a key mediator, future research should explore knowledge sharing, digital transformation and process agility as mediators of performance between supplier/customer and business outcomes. Additionally, external environmental factors such as market volatility, technological advancements, and cultural variations should be examined as moderating variables influencing the integration- performance relationship in different regions.

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