Activating Ambidexterity through Strategic Agility and Resilience: An Organizational Development Perspective in Agribusiness Supply Chains

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Abstract: This study seeks to substantiate the assertion that organizational performance in agribusiness supply chains can be improved through the activation of dynamic internal capabilities. Adopting a capability-based framework, the research examines the sequential role of ambidexterity, strategic agility, and resilience in enhancing supply chain performance. A quantitative explanatory design was employed using Covariance-Based Structural Equation Modeling (CB-SEM), with data collected through structured questionnaires from 143 millennial coffee farmers in West Java, Indonesia.
Background: Supply chains in smallholder agribusinesses such as those managed by millennial coffee farmers in West Java face increasing uncertainty due to climate volatility, market fragmentation, and operational constraints. These challenges demand the development of dynamic internal capabilities to enhance supply chain performance. Purpose: This study aims to examine how ambidexterity capability, defined as the simultaneous pursuit of exploration and exploitation, contributes to supply chain performance through the mediating roles of strategic agility and supply chain resilience.Objectives: A quantitative explanatory approach using Covariance-Based Structural Equation Modeling (CB-SEM) was applied to analyze data from 143 millennial coffee farmers. Findings: Results show that ambidexterity significantly enhances strategic agility, which subsequently improves resilience and supply chain performance. The direct effect of ambidexterity on resilience was not significant, confirming agility's role as a critical mediating capability. The model demonstrates good fit and explains 49.6% of the variance in performance.Conclusion: This research highlights that internal capabilities must be activated sequentially from ambidexterity through agility and resilience to yield meaningful supply chain outcomes. Practical implications emphasize the importance of agility-building strategies to strengthen resilience and support superior performance in agricultural supply chains.

Keywords: Ambidexterity Capability; Strategic Agility; Supply Chain Resilience; Supply Chain Performance; Millennial Coffee Farmers;

Introduction

Modern supply chains are increasingly challenged by global disruptions, climate volatility, and rapidly shifting market demands, with particularly acute implications for smallholder farming systems in developing regions. These challenges are particularly acute in the agricultural sector, where the ability to adapt quickly and operate efficiently determines the long-term sustainability and competitiveness of supply chain actors. A strategic and contextual transition is needed to connect these global disruptions with the lived realities of rural farmers, particularly in emerging economies like Indonesia. In such a context, enhancing supply chain performance (SCP) demands not only robust operational capabilities but also dynamic strategic behavior, especially in smallholder-driven systems like those of millennial coffee farmers in West Java, Indonesia.

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Despite their recognized potential, millennial coffee farmers continue to struggle with persistent issues such as low bargaining power, fragmented coordination, poor infrastructure, and vulnerability to environmental disruptions. As a result, performance outcomes across the supply chain remain suboptimal. Data from the Central Bureau of Statistics (BPS, 2023) highlight that over 96% of Indonesian coffee farmers operate on less than one hectare of land, a constraint that limits their capacity to innovate, collaborate, or scale operations. As the new generation of agricultural actors, millennial farmers are expected to drive transformation in supply chains, yet they often lack access to institutional support and strategic capability development. Consequently, enhancing supply chain performance in this sector requires a more integrated, capability-based strategy that strengthens internal capacities while fostering system-wide adaptability.

This study argues that ambidexterity capability the ability to simultaneously explore new opportunities and exploit existing resources serves as a strategic foundation for building higher-order capabilities. Drawing on the Dynamic Capabilities (DC) framework (Teece, 2007), this research posits that ambidexterity enables firms and farmers to develop strategic agility, allowing them to reconfigure processes, shift strategies, and respond rapidly to external changes. Strategic agility, in turn, fosters supply chain resilience, equipping actors to absorb shocks, recover from disruptions, and maintain performance stability. This sequential pathway ultimately leads to the improvement of supply chain performance, measured in terms of cost efficiency, responsiveness, quality, and customer satisfaction.

While each of these constructs ambidexterity, agility, resilience, and performance—has been independently explored in prior literature, there is limited empirical research that integrates them into a cohesive, testable model, especially in the context of smallholder agriculture in developing economies. Existing studies tend to focus on isolated relationships, such as ambidexterity and innovation (Raisch & Birkinshaw, 2008), or agility and resilience in industrial supply chains (Ivanov & Dolgui, 2020), without examining their cumulative mediating roles. Moreover, most frameworks have been developed in corporate settings, offering limited contextual relevance for resource-constrained, cooperative-based systems like those found in rural Indonesia.

To address this research gap, the present study develops a sequential capability-based model that begins with ambidexterity and culminates in performance mediated through strategic agility and resilience. The model is grounded in a synthesis of four theoretical perspectives: Resource-Based View (RBV), Dynamic Capabilities (DC), Relational View (RV), and Contingency Theory (CT). These frameworks collectively provide a robust conceptual basis for understanding how internal capabilities are activated, transformed, and translated into measurable supply chain outcomes.

Through a quantitative survey of 143 millennial coffee farmers in West Java and using Covariance-Based Structural Equation Modeling (CB-SEM), this research empirically validates the proposed model. The findings are expected to contribute both theoretically by extending the literature on dynamic supply chain capabilities and practically by informing strategy formulation for improving supply chain resilience and performance in the agribusiness sector. This study not only extends theoretical understanding of sequential capability pathways in supply chain management but also offers practical implications for strengthening inclusive agribusiness systems in rural Indonesia.

Literature Review

Ambidexterity Capability

Ambidexterity Capability (AC) refers to an organization’s ability to simultaneously pursue exploration which includes experimentation, innovation, and the search for new markets and exploitation, which focuses on efficiency, resource optimization, and process refinement (March, 1991; Raisch & Birkinshaw, 2008). This dual capability enables organizations to innovate while maintaining operational excellence. From the perspective of the Resource-Based View (RBV), ambidexterity is considered a valuable, rare, inimitable, and non-substitutable resource that contributes to sustained competitive advantage (Barney, 1991). Organizations with ambidextrous capabilities can respond effectively to short-term operational demands while simultaneously investing in long-term innovation. The Dynamic Capabilities (DC) framework further elaborates ambidexterity as a foundational resource that supports the organization’s ability to sense, seize, and transform resources in alignment with environmental changes (Teece, 2007; Teece et al., 1997)

Strategic Agility in Supply Chain

Strategic Agility in Supply Chain (SASC) is defined as an organization's capacity to continuously and rapidly adapt its strategies and operations in response to environmental turbulence, technological disruptions, and market shifts (Doz & Kosonen, 2010). It encompasses three critical components: sensing external changes, seizing strategic opportunities, and transforming internal resources to support adaptive execution. Closely aligned with the Dynamic Capabilities approach, strategic agility enables organizations to remain responsive, forward-looking, and resilient in competitive environments. Scholars such as (Eckstein et al. (2015) and Swafford et al. (2006) argue that agility acts as a mediator between internal capabilities and the organization's ability to achieve flexibility and responsiveness in the supply chain. In this sense, strategic agility serves as a necessary transitional mechanism between ambidexterity and downstream resilience.

Supply Chain Resilience (SCR)

Supply Chain Resilience (SCR) is the ability of a supply chain to anticipate, absorb, and recover from disruptions while continuing to maintain performance and deliver value (Ponomarov & Holcomb, 2009; Wieland & Wallenburg, 2013). Resilience includes both proactive capabilities such as risk anticipation and preparedness and reactive capacities such as recovery and adaptation after disruption. In contexts like agribusiness supply chains, where actors face high levels of uncertainty due to climate change, infrastructure limitations, and fluctuating prices, resilience becomes crucial. Strategic agility plays a foundational role in enabling resilience, as only agile organizations can quickly reconfigure supply chain structures and decision-making processes to mitigate and overcome disruptions (Ivanov & Dolgui, 2020; Roshani et al., 2024).

Supply Chain Performance

Supply Chain Performance (SCP) refers to the outcome of supply chain management practices and is typically evaluated using metrics such as cost efficiency, delivery speed, operational flexibility, risk management, and customer satisfaction (Gunasekaran et al., 2004; Li et al., 2006). It represents the ultimate goal of capability development in supply chains. According to Beamon (1999), supply chain performance should be assessed not only by efficiency and speed but also by the supply chain's ability to generate value and maintain continuity. Within a capability-based model, performance is considered the end result of a coordinated progression: from ambidexterity capability, through strategic agility, and reinforced by supply chain resilience. Together, these constructs form a sequential capability-building pathway that transforms internal strength (ambidexterity) into market-facing performance outcomes.

Recent studies have moved beyond static efficiency metrics and begun to explore how dynamic capabilities, including ambidexterity and agility, foster resilience and adaptive performance in supply chains (Ivanov & Dolgui, 2020; Queiroz et al., 2022). In volatile industries such as agriculture, energy, or high-tech organizations that simultaneously balance innovation and operational discipline tend to be more agile, more resilient, and better performing. Shuo Shan et al. (2023) emphasized the role of ambidexterity in developing strategic agility, which enhances real-time reconfiguration and alignment with uncertain market signals. Likewise, Aslam et al. (2018) showed that strategic agility mediates the relationship between ambidexterity and supply chain flexibility in manufacturing firms. Meanwhile, Hamidu et al. (2023) and Roshani et al. (2024) extended this discussion to the resilience domain, linking agile supply chain structures with faster recovery from disruptions such as COVID-19, climate-related events, and supply shortages. Despite these developments, most empirical models focus on pairwise relationships without constructing a full-chain capability model from ambidexterity to supply chain performance. This highlights the novelty and theoretical contribution of the current study.

Hypothesis Development

In dynamic and uncertain business environments—particularly in agribusiness—organizations need to develop strategic capabilities that enable both stability and adaptability. Ambidexterity capability, defined as the simultaneous pursuit of exploration and exploitation (March, 1991; Raisch & Birkinshaw, 2008), is a key resource within the RBV framework (Barney, 1991) and a foundation for sensing, seizing, and transforming under the DC perspective (Teece, 2007). This capability enhances responsiveness and adaptation, especially when channeled through strategic agility (Aoki & Wilhelm, 2017; Kristal et al., 2010). Strategic agility, a dynamic capability itself, enables organizations to flexibly reorient strategy and resources in real-time (Doz & Kosonen, 2010). It acts as a critical antecedent of supply chain resilience, which is vital in sectors facing external shocks, such as agriculture (Ponomarov & Holcomb, 2009). Resilient supply chains can maintain functionality under stress and achieve continuity and service reliability (Beamon, 1999).

Despite abundant studies on each capability, few have integrated them into a full pathway model from ambidexterity to performance. This study proposes that ambidexterity drives strategic agility, which enhances resilience, leading to improved supply chain performance. The research hypotheses are:

H1: Ambidexterity capability has a positive effect on strategic agility.

H2: Strategic agility has a positive effect on supply chain resilience.

H3: Supply chain resilience has a positive effect on supply chain performance.

H4: Strategic agility mediates the effect of ambidexterity capability on supply chain resilience.

H5: Supply chain resilience mediates the effect of strategic agility on supply chain performance.

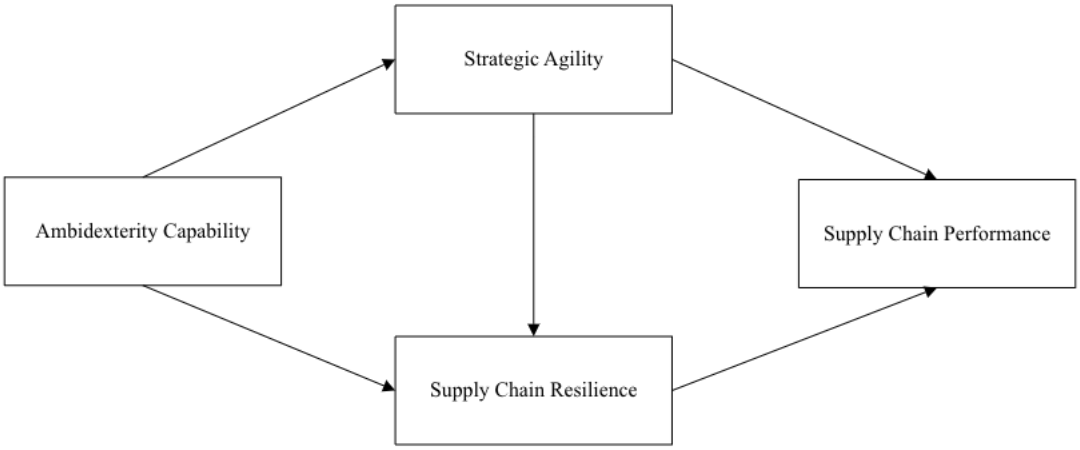

Figure 1 Conceptual framework

Method

This study adopts a quantitative explanatory research design aimed at empirically testing the causal relationships among constructs defined in the theoretical framework. A quantitative approach is chosen as it allows for the collection of measurable and statistically analyzable numerical data, thereby enabling rigorous assessment of the interdependence between variables. The research is cross-sectional in nature, involving a one-time data collection to represent the current state of the target population, which comprises millennial coffee farmers in West Java who are active members of farmer groups or agribusiness cooperatives. The sample is selected using purposive sampling based on the following inclusion criteria: individuals aged between 18 and 40 years, having a minimum of two years of experience in coffee cultivation, and actively participating in supply chain activities. The minimum sample size follows the rule of thumb by Hair et al. (2010), recommending five to ten times the number of observed indicators in the Structural Equation Modeling (SEM) framework.

Primary data is collected using a structured questionnaire, which applies a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The measurement items are developed from prior validated constructs and adapted to the empirical context of the study. Specifically, the construct of Ambidexterity Capability is measured through two dimensions: adaptability (market evaluation, regulatory responsiveness, supplier flexibility, and recovery speed) and alignment (production planning consistency, production-distribution coordination, production equipment efficiency, and employee participation in innovation). The construct of Strategic Agility in Supply Chain is operationalized through four dimensions: market sensing, agility, flexibility, and supplier partnership, which together reflect an organization's responsiveness to market and operational volatility. Supply Chain Resilience is conceptualized through three interrelated dimensions: readiness (risk identification and mitigation), response (emergency actions and operational adaptability), and recovery (restoration capabilities and continuous improvement). The construct of Supply Chain Value Realization is measured using four dimensions: customer orientation, information-based decision making, partnership-driven collaboration, and innovation and knowledge implementation. Lastly, Supply Chain Performance is assessed across four dimensions: cost efficiency, stock management and productivity, customer responsiveness, and risk management.

Prior to full deployment, the questionnaire undergoes expert validation and pilot testing to ensure face validity, clarity, and internal consistency. The collected data is analyzed using Covariance-Based Structural Equation Modeling (CB-SEM). The analysis encompasses several key stages: assessment of normality, reliability testing (Cronbach's Alpha and Composite Reliability), evaluation of convergent and discriminant validity (using AVE and Fornell-Larcker criteria), and goodness-of-fit indices (including CFI, TLI, RMSEA, and Chi-square/df). Mediation effects are further examined using the bias-corrected bootstrapping technique to assess the significance of indirect pathways between variables.

In support of editorial clarity and consistency, ChatGPT an AI language model developed by OpenAI was utilized solely as a redactional tool to assist in reviewing grammar, structure, and phrasing. All intellectual content, analysis, and interpretations remain solely the responsibility of the authors, This methodological framework ensures that the research achieves both internal validity and analytical robustness, providing reliable evidence on how ambidexterity capability through the mechanisms of strategic agility, resilience, and value realization impacts overall supply chain performance in the agribusiness context.

Results And Discussion

Results

To ensure the robustness of the measurement model, this study employed Covariance-Based Structural Equation Modeling (CB-SEM) to evaluate the reliability and validity of the constructs. Three statistical indicators were used: Cronbach's Alpha and Composite Reliability (CR) for assessing internal consistency, and Average Variance Extracted (AVE) for testing convergent validity. The following table summarizes the results of the construct reliability and validity assessment:

Table 1 Construct Reliability and Validity

	Cronbach's alpha (standardized)	Composite reliability (rho_c)	Average variance extracted (AVE)
AC	0.971	0.971	0.848
SASC	0.910	0.910	0.562
SCP	0.958	0.958	0.693
SCR	0.969	0.969	0.837

All constructs reported Cronbach's Alpha values well above the recommended threshold of 0.70, indicating excellent internal consistency (Hair et al., 2025). In particular, Ambidexterity Capability (AC) and Supply Chain Resilience (SCR) exhibited the highest alpha values (0.971 and 0.969), which reflects a high degree of homogeneity among their measurement items. Similarly, all constructs demonstrated Composite Reliability (CR) values above 0.90, exceeding the minimum requirement of 0.70 as proposed by Hair et al. (2019). This confirms the strong reliability of the constructs in representing their respective latent variables.

The Average Variance Extracted (AVE) for all constructs also surpassed the minimum acceptable threshold of 0.50 (Fornell & Larcker, 1981), supporting the convergent validity of the measurement model. The AVE values for AC (0.848) and SCR (0.837) suggest that a large proportion of variance is captured by the latent variables rather than by measurement error. Although the AVE for Strategic Agility in Supply Chain (SASC) is relatively lower (0.562), it still meets the acceptability criterion. According to Henseler et al. (2015), constructs with AVE slightly above 0.50 are still considered valid when supported by strong CR and factor loadings, particularly in complex social science models. The measurement model demonstrates satisfactory levels of reliability and convergent validity, thereby providing a solid foundation for testing the structural relationships in the subsequent CB-SEM analysis.

Table 2 R Square

	R-Square
SASC	0.200
SCP	0.496
SCR	0.129

In this study, the R-squared (R^2) value was used to assess the explanatory power of the structural model within the Covariance-Based Structural Equation Modeling (CB-SEM) framework. The R^2 coefficients in Table 2 indicate the proportion of variance in the endogenous constructs that can be explained by their respective predictors in the model (Hair et al., 2025). As shown in Table 2, the Strategic Agility in Supply Chains (SASC) construct has an R^2 value of 0.200, indicating that 20% of its variance is explained by the Ambidexterity (AC) variable. This level of explanatory power is considered weak, implying that other contextual factors such as technological readiness, organizational learning, or market turbulence may also significantly influence strategic agility and should be included in future models. The Supply Chain Performance (SCP) construct demonstrated the highest explanatory power with an R^2 value of 0.496, meaning that nearly 50% of its variance can be explained by the antecedent constructs (SASC, SCR, and SCVR). According to Chin (1998) and Hair et al. (2019), this R^2 level can be considered moderate, indicating that the model has adequate ability to capture the determinants of supply chain performance. This also supports the theoretical assumption that an agile, resilient, and value-oriented supply chain significantly improves overall performance. Meanwhile, the Supply Chain Resilience (SCR) construct demonstrated an R^2 value of 0.129, indicating that only 12.9% of its variance is explained by the model's predictors. This is considered weak and suggests that supply chain resilience is likely influenced by other factors not covered in this study, such as regulatory support, infrastructure stability, or regional characteristics of the agricultural sector.

Table 3 Goodness of Fit (GoF)

	Estimated model	**Null model**
ChiSqr/df	1.172	10.643
RMSEA	0.035	0.260
SRMR	0.047	n/a
NFI	0.899	n/a
TLI	0.982	n/a
CFI	0.984	n/a

The evaluation of the model's Goodness of Fit (GoF) is a crucial step in confirming how well the estimated structural model represents the observed data. As shown in the table 3, the Chi-Square/df ratio is 1.172, which is well below the accepted threshold of 2.0, indicating excellent model fit (Hair et al., 2025; Kline, 2023). Furthermore, the Root Mean Square Error of Approximation (RMSEA) is 0.035, suggesting a close fit between the hypothesized model and the population covariance matrix. Values below 0.05 are generally considered indicative of a very good fit. The Standardized Root Mean Square Residual (SRMR) is reported at 0.047, which also indicates strong fit, as values below 0.08 are desirable and suggest that the residuals between observed and predicted correlations are acceptably low. For incremental fit indices, the model yields a Comparative Fit Index (CFI) of 0.984 and a Tucker-Lewis Index (TLI) of 0.982. Both values surpass the commonly accepted cutoff of 0.90, reflecting an excellent improvement over the null model and strong evidence of model fit (Byrne, 2010). Although the Normed Fit Index (NFI) is slightly below the ideal threshold at 0.899, it still approaches acceptable levels, indicating a nearly substantial improvement from the null model. Taken together, these indicators demonstrate that the model fits the data well and provides a robust basis for testing the hypothesized causal relationships among the constructs.

Table 4. Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
AC --> SASC	0.448	0.442	0.078	5.733	0.000
AC -> SCP	0.222	0.214	0.078	2.856	0.004
AC -> SCR	0.081	0.082	0.087	0.932	0.352
SASC -> SCP	0.479	0.483	0.064	7.534	0.000
SASC -> SCR	0.316	0.316	0.093	3.398	0.001
SCR -> SCP	0.194	0.198	0.065	2.968	0.003

The structural path analysis in Table 4. reveals several statistically significant relationships. The path from Ambidexterity (AC) to Strategic Agility in the Supply Chain (SASC) is highly significant, with a path coefficient (β) of 0.448, a t-statistic of 5.733, and a p-value of 0.000 ($p < 0.01$), indicating a strong positive effect. Similarly, the path from AC to Supply Chain Performance (SCP) shows a significant effect (β = 0.222, t = 2.856, p = 0.004), indicating that ambidexterity contributes directly to performance outcomes.

Conversely, the path from AC to Supply Chain Resilience (SCR) is not statistically significant (β = 0.081, t = 0.932, p = 0.352), indicating that ambidexterity alone does not directly enhance resilience. Meanwhile, SASC on SCP showed the strongest influence in the model (β = 0.479, t = 7.534, p = 0.000), which confirms that strategic agility plays a central role in improving performance. In addition, SASC significantly influenced SCR (β = 0.316, t = 3.398, p = 0.001), and SCR significantly influenced SCP (β = 0.194, t = 2.968, p = 0.003). All significant paths exceeded the critical t-value (≥1.96 for $p < 0.05$), which validated their relevance in the structural equation model.

Table 5. Specific Indirect Effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
AC -> SASC -> SCP	0.214	0.213	0.048	4.511	0.000
AC -> SASC -> SCR	0.141	0.142	0.054	2.598	0.010
AC -> SCR -> SCP	0.016	0.017	0.019	0.818	0.413
AC -> SASC -> SCR -> SCP	0.027	0.027	0.013	2.060	0.040
SASC -> SCR -> SCP	0.061	0.062	0.026	2.313	0.021

The indirect effects analysis in Table 5 reveals several significant mediation paths that clarify the structural dynamics beween the constructs. The mediating role of Strategic Agility in the Supply Chain (SASC) is strongly supported by the path from Ambidexterity (AC) to Supply Chain Performance (SCP), which exhibits a standardized coefficient (β) of 0.214, with a t-statistic of 4.511

and a p-value of 0.000. This indicates a strong and statistically significant mediation effect ($p < 0.01$), indicating that agility serves as an important pathway through which ambidexterity improves performance. Similarly, the indirect effect of AC on Supply Chain Resilience (SCR) through SASC is also statistically significant ($\beta = 0.141$, $t = 2.598$, $p = 0.010$), indicating that SASC mediates the influence of ambidexterity on organizational resilience. In contrast, the direct mediation path AC → SCR → SCP was insignificant ($\beta = 0.016$, $t = 0.818$, $p = 0.413$), indicating that without agility as an antecedent, the effect of ambidexterity on resilience-driven performance is negligible.

The serial mediation path AC → SASC → SCR → SCP yielded a significant but small effect ($\beta = 0.027$, $t = 2.060$, $p = 0.040$), suggesting a cumulative effect across multiple capability layers, although the magnitude remained modest. Furthermore, the serial mediation path SASC → SCR → SCP ($\beta = 0.061$, $t = 2.313$, $p = 0.021$) confirmed that agility not only enhances resilience but also indirectly contributes to performance through increased resilience capacity. These findings validate the important role of agility as a direct and sequential mediator in translating ambidextrous capabilities into operational performance, aligning with previous studies emphasizing the agility-resilience-performance relationship (Aslam et al., 2020; Dubey et al., 2018).

Discussion

Ambidexterity Has a Positive Impact on Strategic Agility

Empirical findings indicate that ambidexterity, defined as the ability to balance exploratory (innovation, experimentation) and exploitative (efficiency, optimization) strategies, has a positive effect on strategic agility. This is consistent with Dynamic Capabilities Theory (Teece et al., 1997) and aligns with previous empirical research by O’Reilly & Tushman (2013), which emphasized the role of ambidexterity in enabling firms to adapt in volatile environments. In the context of millennial coffee farmers in West Java, this finding is particularly relevant. These millennial coffee farmers are often required to innovate with sustainable agricultural practices while simultaneously increasing yield efficiency. Their ability to manage digital marketing channels (exploration) while optimizing production through traditional knowledge (exploitation) enhances their responsiveness and agility in the face of market fluctuations and climate uncertainty.

Strategic Agility Positively Impacts Supply Chain Resilience

This study confirms that strategic agility, characterized by rapid sensing, timely decision-making, and adaptive resource allocation, enhances supply chain resilience. Agility enables farmers to adapt quickly to disruptions, whether due to weather anomalies, fertilizer shortages, or price shocks. Among millennial coffee farmers in West Java, who typically operate with limited institutional support but high digital literacy, agility is a core strategic behavior. The ability to leverage digital information (e.g., weather forecasts, price updates, e-commerce trends) to reconfigure farming or distribution decisions supports resilience capabilities, consistent with previous literature (Dubey et al., 2018; Gligor et al., 2013)

Supply Chain Resilience Positively Impacts Supply Chain Performance

The data demonstrate a positive relationship between resilience and performance, corroborating the theories of Christopher & Peck (2004) and Ponomarov & Holcomb (2009). For millennial coffee farmers in West Java, supply chain performance often depends on their ability to maintain operations during crises, such as pandemic-era mobility restrictions or sudden export delays. Those with stronger networks, diversified market channels, and adaptive production techniques are more likely to maintain income, meet buyer expectations, and reduce post-harvest losses. Therefore, resilience serves as a competitive differentiator that supports the economic viability of smallholder farming.

Strategic Agility Mediates the Effect of Ambidexterity on Supply Chain Resilience

The mediation analysis confirms that ambidexterity contributes to resilience indirectly through strategic agility. This finding supports the layered capabilities model proposed in the Dynamic Capabilities literature (Teece et al., 1997), where agility is a critical link in transforming internal capabilities into tangible adaptive responses. In practice, millennial farmers in West Java who exhibit high levels of ambidexterity are not necessarily resilient unless they also demonstrate agility in reallocating resources, switching suppliers, or changing market strategies in response to shocks.

Supply Chain Resilience Mediates the Effect of Strategic Agility on Supply Chain Performance

This study shows that resilience mediates the relationship between agility and performance. While agility facilitates short-term response, resilience ensures the continuity and resilience of supply chain functioning under stress. Among millennial farmers, this suggests that being agile, such as reacting to price declines by switching to local buyers, is not sufficient. Their success depends on whether such responses are supported by structural resilience, such as access to credit, group collaboration, or cooperative storage facilities. This confirms previous research highlighting the need for policy and institutional support to strengthen farmer resilience as a means to improve overall supply chain performance (Chowdhury et al., 2019; Wieland & Wallenburg, 2013).

This study investigates the impact of ambidexterity capability (AC) on supply chain performance (SCP) through the mediating roles of strategic agility in the supply chain (SASC) and supply chain resilience (SCR), focusing on the context of millennial coffee farmers in West Java, Indonesia. The findings confirm that AC significantly enhances SASC, which in turn positively affects both SCR and SCP. However, the direct effect of AC on SCR was not statistically significant, indicating that agility plays a critical role in translating ambidextrous capabilities into resilience and performance outcomes. Furthermore, strategic agility and supply chain resilience were found to sequentially mediate the relationship between AC and SCP.

This study contributes to the supply chain literature by presenting a novel serial mediation model that has not been previously tested in the agricultural supply chain context, particularly among young farmers in developing countries. The originality of this research lies in demonstrating how internal dynamic capabilities (AC) must be operationalized through agile strategic decisions (SASC) and organizational resilience (SCR) to produce superior supply chain outcomes (SCP). In doing so, it bridges gaps in the literature on dynamic capabilities and supply chain strategy, especially within the underexplored context of millennial-driven agriculture.

The practical implication of this study suggests that capacity-building programs for millennial farmers should not only emphasize innovation and adaptability but also strengthen agility and resilience mechanisms. Strategic agility through market sensing, flexibility, and supplier partnerships emerges as a central lever to strengthen resilience and drive performance. This study is not without limitations. The sample is geographically concentrated in West Java and limited to millennial coffee farmers who have participated in government-led export readiness training programs, which may affect the generalizability of the findings to other regions or farmer segments. Moreover, the use of cross-sectional data limits causal interpretation, and the measurement scales, although adapted from validated literature, may benefit from further contextual refinement in agricultural environments.

Future research should explore boundary conditions such as digital readiness, institutional support, or the role of cooperatives in moderating these relationships. Longitudinal studies or multi-level modeling approaches could also be employed to deepen causal inferences and validate the robustness of the model across different agri-based sectors.

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