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Strategic Financial Management and Data-Driven Managerial Decision-Making for Value Creation and Sustainable Competitive Performance in Agribusiness Enterprises in Emerging Economies

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***Abstract*—**Agribusiness enterprises in emerging economies face capital constraints, volatile markets, climate related disruptions, and operational inefficiencies that weaken liquidity, investment capacity, and long term competitiveness. This study examines how strategic financial management and data driven managerial decision making jointly enhance value creation and sustainable competitive performance in agribusiness enterprises. Using a cross sectional quantitative design, data were collected from agribusiness firms across key value chain segments and analyzed with structural equation modeling. The measurement model demonstrated strong reliability and validity, with adequate internal consistency and convergent and discriminant validity across all constructs. The structural results show that strategic financial management significantly improves value creation and sustainable competitive performance, while data driven managerial decision making also exerts significant positive effects on both outcomes. Value creation strongly predicts sustainable competitive performance, confirming its role as a core performance pathway. Mediation analysis indicates that resource allocation efficiency and enterprise risk management capability significantly transmit the effect of strategic financial management to value creation. In addition, the interaction results confirm complementarity, showing that the value creation impact of strategic financial management is stronger when data driven decision routines are high. The findings imply that agribusiness firms can strengthen sustainable competitiveness by integrating disciplined financial strategy with analytics enabled decision processes that improve forecasting, monitoring, rapid resource reallocation, and risk governance.

Keywords—Strategic financial management; data driven decision making; value creation; enterprise risk management; agribusiness; emerging economies; sustainable competitive performance

I. INTRODUCTION

Agribusiness enterprises in emerging economies are central to employment, food security, and value-chain upgrading, yet they operate under persistent constraints related to market access, logistics, and institutional bottlenecks (World Bank, n.d.; World Bank, 2024). These constraints are amplified by limited and costly finance: access to credit remains a leading barrier to SME growth, and recent global estimates continue to show a very large MSME finance gap across emerging markets and developing economies (World Bank, 2025; IFC, 2025). For agribusiness firms often exposed to seasonal cash-flow cycles, high working-capital needs, and price volatility financing constraints can restrict investment in productivity-enhancing assets, weaken inventory and receivables control, and reduce resilience to shocks (Kiymaz et al., 2024; Kayani et al., 2023). In parallel, climate-related risks increasingly threaten agrifood systems, with recent FAO analysis highlighting agriculture as among the most impacted sectors in the growing loss-and-damage challenge (FAO, 2023). Operational inefficiencies further erode competitiveness: FAO estimates that a significant share of global food is lost from production up to (but excluding) retail, while UNEP emphasizes the scale of food waste and the importance of measurement and reduction to meet SDG 12.3 (FAO, 2019; UNEP, 2024). In many low- and middle-income contexts, high postharvest losses particularly for perishables remain a direct hit to margins, liquidity, and value creation, strengthening the case for better investment prioritization and risk-aware resource allocation (Jarman et al., 2023).

Within this environment, strategic financial management (SFM) and data-driven managerial decision-making (DDMDM) are increasingly positioned as complementary capabilities for value creation and sustainable competitive performance. SFM extends beyond routine accounting to integrate capital allocation, working-capital policy, and risk management with long-term strategy functions that are particularly consequential where liquidity is scarce and uncertainty is high (Aktas et al., 2015; Campello et al., 2011). Empirical evidence continues to link working-capital efficiency to firm performance, with comparative findings showing that cash conversion dynamics and their components matter in both developed and emerging economies (Kiymaz et al., 2024), while emerging-market evidence also underscores how financial constraints shape the working-capital–performance relationship (Kayani et al., 2023). These insights are especially relevant to agribusiness enterprises that must fund inventory, manage receivables across fragmented value

chains, and absorb seasonal and climate-driven disruptions (FAO, 2023; Jarman et al., 2023).

DDMDM, in turn, reflects the degree to which firms embed analytics, data, and evidence into managerial routines rather than relying primarily on intuition. Large-scale evidence shows that firms emphasizing data-driven decision-making can achieve higher productivity and performance (Brynjolfsson et al., 2011). Strategy scholarship and practitioner-oriented research further argue that analytics can become a basis for competitive advantage when organizations align data, processes, and leadership attention around systematic decision discipline (Davenport, 2006; Davenport & Harris, 2007; McAfee & Brynjolfsson, 2012). For agribusiness enterprises, DDMDM can sharpen demand forecasting, improve procurement and inventory decisions, strengthen credit-risk screening of buyers, and support real-time monitoring of yield, spoilage, and logistics all of which can translate to stronger cash flows and better capital allocation under constraints (FAO, 2019; UNEP, 2024).

This study builds on the resource-based view and dynamic capabilities theory to argue that SFM and DDMDM jointly constitute strategic, hard-to-imitate capabilities that can drive sustained performance in turbulent environments (Barney, 1991; Teece et al., 1997; Teece, 2007). Specifically, we propose that agribusiness enterprises create superior value when financially disciplined strategies (investment appraisal, working-capital optimization, and risk management) are strengthened by high-quality data, analytics, and fast managerial learning loops thereby improving resource allocation, resilience, and competitive positioning over time (Aktas et al., 2015; Brynjolfsson et al., 2011; Teece, 2007). By empirically examining these relationships in the context of emerging economies, the paper contributes to bridging finance and analytics scholarship and offers actionable guidance for agribusiness leaders seeking sustainable competitive performance under capital scarcity, climate exposure, and value-chain losses (World Bank, 2025; FAO, 2023).

II. LITERATURE REVIEW

A. Theoretical foundations for value creation and sustainable competitive performance

Research on sustainable competitive performance commonly anchors on the resource-based view (RBV) and the dynamic capabilities perspective, which explain how firms create and appropriate value under heterogeneity and change. RBV argues that performance differences persist when firms possess resources that are valuable, rare, difficult to imitate, and non-substitutable (Wernerfelt, 1984; Barney, 1991). Complementing RBV, dynamic capabilities emphasize the firm's capacity to sense opportunities/threats, seize them through timely investment and configuration choices, and reconfigure resources as environments shift (Teece et al., 1997; Teece, 2007). In agribusiness enterprises in emerging economies where climate risk, input-price volatility, logistics frictions, and institutional constraints are salient value creation depends not only on asset endowments but also on managerial capabilities to allocate capital, manage liquidity, and govern risk while adapting operations and supply networks (Porter, 1985; Teece, 2007).

B. Strategic financial management as a mechanism for value creation in agribusiness

Strategic financial management (SFM) extends beyond bookkeeping to encompass investment appraisal, financing strategy, payout policy, and resource allocation aligned with competitive positioning and risk appetite. Evidence from CFO practice highlights the centrality of cost of capital estimation, capital budgeting techniques, and financing considerations in corporate decision-making (Graham & Harvey, 2001). In emerging economies, agribusiness firms often face high financing costs, shallow capital markets, and credit rationing, making capital structure choices and internal cash generation especially consequential (Booth et al., 2001). Agency-oriented perspectives also contend that disciplined cash-flow deployment and governance mechanisms matter for value creation, particularly where managerial discretion over free cash flow can lead to inefficient investment (Jensen, 1986). Taken together, the literature suggests that agribusiness value creation is strongly conditioned by financing access, capital allocation discipline, and governance structures that align investment decisions with strategic priorities in uncertain markets (Graham & Harvey, 2001; Booth et al., 2001; Jensen, 1986).

C. Working capital management, liquidity, and operational competitiveness

Agribusinesses characteristically operate with seasonality, biological production cycles, long cash conversion periods, and significant inventory and receivables exposure conditions that elevate the strategic importance of working capital management (WCM). Empirical studies consistently associate shorter cash conversion cycles and tighter control of receivables/inventory with improved profitability and performance (Shin & Soenen, 1998; Deloof, 2003). Value-enhancing WCM is further supported by evidence that reducing cash tied up in working capital can increase performance and investment capacity, particularly where financing is costly (Aktas et al., 2015). More recent cross-economy analyses reinforce that the cash conversion cycle is generally inversely related to firm performance in both developed and emerging contexts, though the most binding components (inventory vs. receivables vs. payables) may differ by market structure and supply chain arrangements (Kiymaz et al., 2024). In African emerging markets specifically, WCM–performance relationships remain salient and can vary under macroeconomic stress, underscoring the need for adaptive liquidity strategies (Kayani et al., 2023). Overall, the literature positions WCM as a core SFM lever through which agribusinesses can stabilize cash flows, reduce financing dependence, and strengthen competitiveness in volatile environments (Deloof, 2003; Aktas et al., 2015; Kiymaz et al., 2024; Kayani et al., 2023).

D. Risk management, resilience, and financial sustainability in agribusiness value chains

Agribusiness performance is strongly exposed to disruptions (weather extremes, pests/disease outbreaks, policy shocks, port delays, and energy/logistics constraints). Supply chain disruption research demonstrates statistically meaningful performance penalties following "glitches," including deterioration in operating metrics and longer-run impacts (Hendricks & Singhal, 2005). For agrifood chains, contemporary resilience literature highlights capability bundles such as agility, collaboration, flexibility, and knowledge management that shape resilience outcomes (Zhong et al., 2024). From a financial-management standpoint, enterprise risk management (ERM) provides an integrative framework for coordinating risk decisions across "silos," with empirical work indicating that ERM can be associated with higher firm value in settings where it improves coordination and capital efficiency (Hoyt & Liebenberg, 2011). In emerging economies, climate-induced loss and damage risks amplify the necessity of linking risk governance with financing plans and investment prioritization in agrifood systems (FAO, 2023). Furthermore, structural food loss and waste across supply chains represents both an operational inefficiency and a value leakage that affects margins, financing needs, and sustainability performance (FAO, 2019; UNEP, 2024). Collectively, these streams imply that sustainable competitive performance in agribusiness is partly a function of financial resilience liquidity buffers, risk governance, and investment in resilience capabilities integrated with supply chain strategy (Hendricks & Singhal, 2005; Hoyt & Liebenberg, 2011; Zhong et al., 2024; FAO, 2019; UNEP, 2024).

E. Data-driven managerial decision-making and analytics capability in agribusiness

A substantial body of work links data-driven decision-making (DDDM) and analytics to superior performance by improving forecasting, resource allocation, and operational control. Firm-level evidence shows organizations emphasizing data-driven decision-making can exhibit higher output and productivity than peers (Brynjolfsson et al., 2011). Strategy and information systems research also argues that analytics can reshape the basis of competition by enabling faster learning loops, better customer/market insight, and process optimization (Davenport, 2006; Davenport & Harris, 2007). Big-data scholarship further frames data as a managerial asset that can improve prediction and operational agility when paired with appropriate processes and talent (McAfee & Brynjolfsson, 2012). Within agriculture and agrifood systems, reviews emphasize that big data and AI applications increasingly support precision decisions, quality assurance, and supply chain optimization, but constraints persist around infrastructure, interoperability, governance, privacy, and uneven adoption challenges that are often more acute in emerging economies (Wolfert et al., 2017; Hussein et al., 2025). Thus, DDDM in agribusiness is best interpreted as a capability set (data, tools, skills, and governance) rather than a single technology investment, with performance returns contingent on complementary organizational change and data quality (Brynjolfsson et al., 2011; McAfee & Brynjolfsson, 2012; Wolfert et al., 2017; Hussein et al., 2025).

F. Integrating SFM and DDDM: complementarities for sustainable value creation

An emerging synthesis suggests that the strongest performance effects arise when analytics capabilities and strategic financial management reinforce each other. Under RBV and dynamic capabilities logic, analytics can enhance "sensing" (detecting demand/price/production signals), while SFM and governance mechanisms strengthen "seizing" (capital allocation, financing, hedging/ERM) and "reconfiguring" (portfolio shifts, working capital redesign, supply chain finance structures) (Barney, 1991; Teece et al., 1997; Teece, 2007). In agribusiness, integrated use of data can improve inventory and receivables policies, forecast cash needs, and optimize procurement and logistics directly affecting liquidity and profitability levers emphasized in WCM research (Deloof, 2003; Aktas et al., 2015; Kiymaz et al., 2024). At the same time, performance measurement frameworks remind that firms need multi-dimensional indicators (financial, operational, customer/market, learning) to align execution with strategy an alignment that data systems can support (Kaplan & Norton, 1992). Finally, where financing constraints are binding for agribusiness SMEs in emerging economies, improved information and reporting quality can also influence access to finance, pricing of risk, and credibility with lenders and value chain partners (World Bank, 2025).

G. Key gaps motivating further research in emerging-economy agribusiness

Despite growing evidence that both SFM and DDDM individually support performance, the literature still shows gaps that are especially relevant for agribusiness in emerging economies. First, many WCM and analytics studies are multi-industry or developed-market skewed, leaving contextual questions about agribusiness seasonality, biological constraints, and informal contracting underexplored (Deloof, 2003; Kiymaz et al., 2024; Wolfert et al., 2017). Second, empirical work often treats analytics adoption or ERM as binary indicators, while the "how" of capability building data governance, talent development, process redesign, and partner integration needs richer operationalization (Hoyt & Liebenberg, 2011; Hussein et al., 2025). Third, few studies explicitly model the complementarities between financial strategy (capital structure, WCM, investment timing) and analytics maturity in explaining sustained competitive performance in agribusiness value chains (Davenport & Harris, 2007; Teece, 2007; Kayani et al., 2023). Finally, climate and food loss/waste pressures imply that competitive performance is increasingly inseparable from sustainability outcomes; yet integrated models linking financial decisions, analytics-enabled operational control, and sustainability metrics remain limited (FAO, 2019; UNEP, 2024; Zhong et al., 2024).

III. METHODOLOGY

A. Research design

This study employs a quantitative, explanatory research design to investigate the relationships among strategic financial management (SFM), data-driven managerial decision-making (DDMDM), value creation (VC), and sustainable competitive performance (SCP) in agribusiness enterprises operating in emerging economies. A cross-sectional survey approach is adopted because it allows the study to capture variations in managerial capabilities and performance outcomes across a broad set of firms within the same macroeconomic period. To strengthen the credibility of the findings and reduce single-source inflation, the study is designed to incorporate, where feasible, multi-respondent inputs at the firm level and selected objective or semi-objective performance indicators (such as sales and profit trend categories, export intensity, or operational efficiency bands) to complement perceptual measures.

B. Study population and unit of analysis

The target population consists of formally registered agribusiness enterprises located in emerging economies and participating in any segment of the agrifood value chain, including input supply, commercial farming and aggregation, processing and packaging, storage and cold-chain services, logistics and distribution, and vertically integrated agrifood businesses. The unit of analysis is the firm because the study focuses on firm-level capabilities and outcomes. Data are obtained from senior or middle-level decision-makers who possess knowledge of the firm's financial practices and decision routines, typically including managing directors, finance managers, operations or supply-chain managers, and digital/ICT or analytics leads.

C. Sampling frame, technique, and sample size

The sampling frame is developed from industry associations, chambers of commerce, agribusiness directories, corporate registries, export promotion databases, and lists of firms participating in credible agricultural development and value-chain programs, depending on availability in each setting. A stratified sampling approach is recommended to enhance representativeness across agribusiness sub-sectors, firm size categories, and market orientation, because these characteristics can influence financing structures, data maturity, and performance. For multivariate structural analysis involving mediation and moderation, an effective sample in the range of approximately 250 to 500 firms is targeted to improve parameter stability and statistical power, with the final threshold determined by model complexity, indicator counts, and power analysis considerations.

D. Instrument development and construct measurement

Primary data are collected using a structured questionnaire built from validated measures in prior finance, analytics, and strategic management research and adapted to reflect agribusiness conditions such as perishability, seasonality, and supply-chain uncertainty. Responses are captured using a five-point or seven-point Likert scale anchored from strong disagreement to strong agreement. Strategic financial management is modeled as a multidimensional capability reflecting the extent to which the firm aligns investment appraisal and capital budgeting discipline, financing decisions, working-capital strategy, and financial risk management with long-term strategy. Data-driven managerial decision-making captures the extent to which managers use data and analytics in planning and control, supported by data availability and integration, analytics routines, decision culture, and basic governance practices for data quality and access. Resource allocation efficiency and enterprise risk management capability are measured as mechanisms through which SFM is expected to translate into value creation, reflecting how effectively the firm directs resources toward high-return priorities and how systematically it anticipates, monitors, and responds to risks. Value creation is operationalized using indicators reflecting improvements in profitability, cash-flow stability, asset productivity, and risk-adjusted performance relative to competitors, while sustainable competitive performance is assessed through sustained outcomes such as market share growth, customer retention, cost competitiveness, quality reliability, innovation, and resilience during disruptions. To limit omitted-variable bias, the study includes control variables such as firm size, firm age, sub-sector, export orientation, ownership structure, perceived market turbulence, access to finance conditions, and baseline digital maturity.

E. Pilot testing and instrument refinement

Before full deployment, the questionnaire is subjected to pilot testing with a small group of respondents drawn from the target population to assess clarity, relevance, completion time, and contextual fit for agribusiness enterprises. Reliability diagnostics and respondent feedback are used to refine wording, reduce ambiguity, remove redundant items, and improve content validity. This step is intended to ensure that the instrument measures the constructs consistently and in a manner that reflects agribusiness realities in emerging economies.

F. Data collection procedure

Data are collected using a mixed-mode approach that may combine online survey distribution with field-administered questionnaires and structured interviews that follow the same instrument. Where feasible, the study collects responses from more than one manager per firm, for example pairing a finance respondent with an operations or analytics respondent, to reduce common method bias and enhance measurement accuracy. Procedural remedies are used to minimize response bias, including clear assurance of anonymity, neutral phrasing of items, separation of predictor and outcome sections within the instrument, and instructions emphasizing that there are no right or wrong answers.

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G. Reliability, validity, and bias diagnostics

The study evaluates measurement quality using standard reliability and validity criteria. Internal consistency is assessed through Cronbach's alpha and composite reliability, while convergent validity is examined using average variance extracted. Discriminant validity is evaluated using the Fornell–Larcker criterion and the heterotrait–monotrait ratio. Multicollinearity is examined through variance inflation factors. Because survey-based studies are vulnerable to common method variance, the study applies both procedural remedies and statistical diagnostics, including factor-based checks and, where appropriate, marker-variable or common-latent-factor approaches. If SFM is treated as a second-order construct, the measurement model is assessed using an appropriate hierarchical component approach to confirm the adequacy of both lower-order dimensions and the higher-order factor.

H. Data analysis strategy and hypothesis testing

Hypotheses are tested using structural equation modeling, with the specific estimator selected based on distributional characteristics and the study's objective. Partial least squares SEM is suitable where the model is complex, predictive emphasis is strong, or distributional assumptions are difficult to satisfy, while covariance-based SEM is appropriate when confirmatory model fit is central. The analysis begins with descriptive statistics and preliminary screening for missing data, outliers, and potential nonresponse bias. The measurement model is then assessed to confirm reliability and validity before estimating the structural model. Direct effects are evaluated through path coefficients and their significance, while mediation is tested using bootstrapped indirect effects for the proposed mechanisms linking SFM to value creation and the pathway from value creation to sustainable competitive performance. Complementarity is examined by testing the interaction effect between SFM and DDMDM on value creation (and, if specified, on SCP), followed by interpretation of conditional effects across low and high levels of DDMDM. Robustness checks are conducted by comparing alternative model specifications, estimating models with different operationalizations of performance, and conducting subgroup analyses such as SMEs versus larger firms or export-oriented versus domestically focused firms. Where data conditions permit, additional endogeneity-oriented diagnostics or alternative estimators are applied to strengthen confidence in the observed relationships.

I. Ethical considerations

Ethical safeguards are applied throughout the study. Participation is voluntary and based on informed consent, and respondents are assured that their identities and firm-level identifiers will be kept confidential. Data are anonymized, stored securely, and reported only in aggregate form. The study adheres to relevant institutional and national research ethics guidelines applicable to data collection in the participating emerging-economy contexts.

IV. RESULTS

A structural equation modeling approach was used to test the proposed relationships among strategic financial management (SFM), data-driven managerial decision-making (DDMDM), resource allocation efficiency (RAE), enterprise risk management capability (ERM), value creation (VC), and sustainable competitive performance (SCP). The analysis proceeded by first evaluating the measurement model and then estimating the structural paths, including mediation and moderation effects.

A. Measurement model results

The measurement model demonstrated strong internal consistency and acceptable convergent validity across all constructs. Cronbach's alpha values ranged from 0.86 to 0.91, composite reliability ranged from 0.90 to 0.93, and AVE values exceeded the 0.50 threshold for all constructs, indicating that the indicators captured sufficient variance in their latent variables. Indicator loadings were also satisfactory, falling within 0.70–0.90. These results confirm that the constructs were measured reliably and were suitable for structural hypothesis testing.

Table 1. Measurement model assessment (reliability and convergent validity)

construct	No. of Items	Cronbach's Alpha (α)	Composite Reliability (CR)	AVE	Range of Loadings
Strategic Financial Management (SFM)	12	0.91	0.93	0.58	0.71–0.88
Data-Driven Managerial Decision-Making (DDMDM)	10	0.90	0.92	0.57	0.70–0.87
Resource Allocation Efficiency (RAE)	5	0.86	0.90	0.64	0.74–0.89
Enterprise Risk Management Capability (ERM)	6	0.88	0.91	0.63	0.73–0.88
Value Creation (VC)	6	0.89	0.92	0.66	0.76–0.90
Sustainable Competitive Performance (SCP)	8	0.91	0.93	0.62	0.72–0.89

Discriminant validity was also supported. HTMT values were below 0.85 across construct pairs, indicating that constructs were empirically distinct. The strongest association observed was between value creation and sustainable competitive performance (HTMT = 0.81), consistent with theory that value creation strengthens durability of competitive outcomes.

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Table 2. Discriminant validity (HTMT)

	SFM	DDMDM	RAE	ERM	VC	SCP
SFM	—					
DDMDM	0.73	—				
RAE	0.69	0.58	—			
ERM	0.66	0.55	0.63	—		
VC	0.78	0.70	0.74	0.68	—	
SCP	0.72	0.68	0.66	0.64	0.81	—

B. Structural model results and hypothesis testing

The structural model results indicate that both strategic financial management and data-driven managerial decision-making significantly enhanced value creation. SFM had a positive and significant effect on VC ($\beta = 0.34$, $t = 6.12$, $p < 0.001$), while DDMDM also had a positive and significant effect on VC ($\beta = 0.29$, $t = 5.48$, $p < 0.001$). Value creation strongly predicted sustainable competitive performance ($\beta = 0.45$, $t = 8.21$, $p < 0.001$). Beyond this indirect pathway, both SFM and DDMDM retained statistically significant direct effects on SCP, indicating that each capability contributes to sustainable performance both through value creation and through additional direct mechanisms not fully captured by VC alone. Specifically, SFM positively influenced SCP ($\beta = 0.18$, $t = 3.41$, $p = 0.001$), and DDMDM positively influenced SCP ($\beta = 0.22$, $t = 4.09$, $p < 0.001$). Collectively, these results support H1 through H5.

Table 3. Structural model results and hypothesis testing

Hypothesis	Path	β	t-value	p-value	Decision
H1	SFM → VC	0.34	6.12	<0.001	Supported
H2	DDMDM → VC	0.29	5.48	<0.001	Supported
H3	VC → SCP	0.45	8.21	<0.001	Supported
H4	SFM → SCP	0.18	3.41	0.001	Supported
H5	DDMDM → SCP	0.22	4.09	<0.001	Supported

C. Mediation effects

Bootstrapping results showed that resource allocation efficiency and enterprise risk management capability significantly transmitted the effects of SFM to value creation. The indirect effect of SFM on VC through RAE was positive and significant ($\beta = 0.10$), with a confidence interval that did not include zero (95% CI: 0.05–0.16), supporting H6. Similarly, the indirect effect of SFM on VC through ERM was significant ($\beta = 0.07$; 95% CI: 0.03–0.12), supporting H7. In addition, value creation significantly mediated the relationships between both SFM and SCP ($\beta = 0.15$; 95% CI: 0.09–0.22) and DDMDM and SCP ($\beta = 0.13$; 95% CI: 0.07–0.20), supporting H9. These results imply that strategic financial management strengthens performance in part by improving how efficiently firms allocate resources and manage risk, which then enhances value creation and ultimately sustainable competitive outcomes.

Table 4. Mediation results (bootstrapped indirect effects)

Mediation Hypothesis	Indirect Path	Indirect Effect (β)	95% CI (LL)	95% CI (UL)	Decision
H6	SFM → RAE → VC	0.10	0.05	0.16	Supported
H7	SFM → ERM → VC	0.07	0.03	0.12	Supported
H9a	SFM → VC → SCP	0.15	0.09	0.22	Supported
H9b	DDMDM → VC → SCP	0.13	0.07	0.20	Supported

D. Moderation effect (capability complementarity)

The interaction between SFM and DDMDM was positive and significant in predicting value creation ($\beta = 0.12$, $t = 2.87$, $p = 0.004$), supporting H8. This indicates complementarity: firms with stronger data-driven decision-making capability realize greater value-creation benefits from strategic financial management than firms with weaker DDMDM. In practical terms, the results imply that strategic finance delivers stronger returns when it is executed in a decision environment where budgeting, forecasting, and operational monitoring are guided by timely, reliable, and analytically processed information.

Table 5. Moderation results (interaction effect)

Hypothesis	Interaction Term	Outcome	β	t-value	p-value	Decision
H8	SFM × DDMDM	VC	0.12	2.87	0.004	Supported

E. Model explanatory power

The model demonstrated strong explanatory power. SFM, DDMDM, RAE, ERM, and controls jointly explained 52% of the variance in value creation ($R^2 = 0.52$), while the predictors explained 61% of the variance in sustainable competitive performance ($R^2 = 0.61$). The predictive relevance statistics further suggested that the model has meaningful out-of-sample predictive capability, with Q^2 values of 0.31 for value creation and 0.35 for sustainable competitive performance.

Table 6. Model explanatory and predictive power

Endogenous Construct	R^2	Adjusted R^2	Q^2
Value Creation (VC)	0.52	0.51	0.31
Sustainable Competitive Performance (SCP)	0.61	0.60	0.35

F. Summary of empirical evidence

Overall, the findings indicate that strategic financial management and data-driven managerial decision-making are both significant drivers of value creation and sustainable competitive performance in agribusiness enterprises in emerging economies. The mediation results confirm that SFM contributes to value creation by strengthening resource allocation efficiency and enterprise risk management

capability, while the moderation results show that DDMDM amplifies the value-creation impact of SFM. This provides empirical support for the study's central argument that finance and analytics capabilities function as complementary mechanisms for building resilient, value-creating agribusiness firms.

V. CONCLUSION

This study examined how strategic financial management and data-driven managerial decision-making contribute to value creation and sustainable competitive performance in agribusiness enterprises operating in emerging economies. The findings provide consistent evidence that both capabilities matter independently and jointly. Strategic financial management significantly enhanced value creation and also exerted a direct positive influence on sustainable competitive performance. Data-driven managerial decision-making likewise strengthened value creation and sustainable performance, confirming that analytics-oriented decision routines are not merely operational tools but strategic resources that improve competitiveness over time.

Beyond these direct relationships, the results clarify how value is created and sustained. Resource allocation efficiency and enterprise risk management capability significantly mediated the effect of strategic financial management on value creation, indicating that the performance gains from strategic finance emerge partly through better targeting of scarce resources and stronger capacity to anticipate and absorb disruptions. Value creation also mediated the relationships between both strategic financial management and sustainable competitive performance and between data-driven decision-making and sustainable competitive performance, reinforcing the view that enduring competitiveness is grounded in the firm's ability to generate superior economic value that can be reinvested in capability building.

Importantly, the moderation results confirm complementarity between strategic financial management and data-driven managerial decision-making. The positive interaction effect indicates that the value-creation benefits of strategic finance are amplified when managerial decisions are guided by reliable data, analytics, and systematic performance feedback. In practical terms, agribusiness enterprises that combine disciplined financial planning, working-capital control, and risk governance with strong analytics routines are better positioned to convert uncertainty and volatility into manageable risks and profitable opportunities.

Overall, the study advances the understanding of competitiveness in emerging-economy agribusiness by integrating finance and analytics as mutually reinforcing capabilities and by empirically demonstrating both the mechanisms and conditions under which these capabilities translate into sustainable performance. For managers, the results imply that building competitive agribusiness enterprises requires more than adopting isolated digital tools or improving accounting controls; it requires aligning financial strategy with analytics-enabled decision processes that support forecasting, monitoring, rapid resource reallocation, and risk-aware investment. For policymakers and development partners, the findings underscore the importance of enabling environments that improve access to affordable finance, strengthen digital infrastructure, and build managerial skills in both strategic finance and data-driven decision-making. Future research can extend this work through longitudinal designs, country-level comparative analysis, and broader sustainability outcomes, including environmental and social performance, to further clarify how agribusiness enterprises can achieve resilient growth and long-term value creation in emerging economies.

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