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The Role of Market Access, Supply Chain Efficiency, and Institutional Support in Enhancing the Agribusiness Performance of Smallholder Farmers

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Abstract

Smallholder farmers produce a large share of the food consumed in low- and middle-income countries, yet many remain trapped in low productivity, thin margins and weak bargaining positions. Market access, supply chain efficiency and institutional support are widely promoted as levers for improving their agribusiness performance, but these factors are usually studied in isolation. This article synthesises how these three factors jointly shape smallholder performance and under which conditions their effects hold. A systematic literature review following an adapted PRISMA 2020 protocol was conducted on 25 peer-reviewed publications (2021–2026) with active DOIs, covering Asia, Africa and multi-country contexts, and analysed through qualitative thematic synthesis. The findings show that market access raises prices, sales and incentives to invest, supply chain efficiency reduces transaction costs and marketing margins, and institutional support through cooperatives, extension services, subsidies and partnerships builds the capabilities farmers need to use both. The evidence further indicates that institutions often act as the transmission mechanism through which market and supply chain improvements reach farm-level productivity, income and viability. Their effects are, however, conditioned by market power asymmetries, contract enforcement, trust and farmer heterogeneity. The study proposes an integrated framework and policy priorities for inclusive, institution-centred agribusiness development.

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INTRODUCTION

Smallholder farmers occupy a paradoxical position in contemporary food systems. They cultivate a large share of the world's farmland in low- and middle-income countries and supply much of the food consumed domestically, yet they are among the poorest and most vulnerable economic actors in those countries. Over the past three decades, agri-food value chains have been transformed by urbanisation, rising incomes, supermarket expansion, processing investment and new logistics technologies. These value chains now account for a large share of employment, value addition and investment in developing economies, and they have become key channels for technology transfer (Barrett et al., 2022). Whether smallholders benefit from this transformation, however, depends heavily on their ability to reach markets on fair terms, move products efficiently and draw on supportive institutions.

The agribusiness performance of smallholders, understood here as productivity, income, marketing efficiency, economic viability and sustainability, is shaped by constraints at every stage of the chain. Smallholder agri-entrepreneurs face limited access to finance, inputs, information, infrastructure and markets, together with weak skills and fragmented organisation (Raza et al., 2024). These constraints raise transaction costs, depress farm-gate prices, increase post-harvest losses and discourage investment in productivity-enhancing technologies. In Indonesia, for example, copra farmers in Buton Regency continue to face low bargaining power, weak institutions and limited technology adoption despite the commercial importance of coconut (Zarliani et al., 2026). Similar patterns appear in coconut chains in North Sulawesi (Pakasi et al., 2026), small-scale layer farming (Prabowo et al., 2025) and citrus value chains in Pakistan, where linking smallholders to high-value markets remains a central development challenge (Naseer et al., 2023).

Three groups of factors are repeatedly identified as levers for improving smallholder performance. The first is **market access**, which refers to the ability of farmers to sell their output through remunerative and reliable channels, including contract farming, modern retail, export chains and traditional markets. Recent evidence links contract farming to improved market access (Assefa et al., 2025), and mixed-methods research shows that integrating smallholders into sustainability-oriented value chains is associated with better market access (Ali et al., 2026). The second is **supply chain efficiency**, which concerns how efficiently products, information and payments move from farm to consumer. It covers marketing channels and margins, logistics, coordination and pricing mechanisms (Hanafie & Bandera, 2025; Meena et al., 2026). The third is **institutional support**, which includes cooperatives, farmer groups, extension and agribusiness support services, subsidies, partnerships and the wider regulatory and normative environment (Christian et al., 2024; Okello, 2025; Osei et al., 2024; Zakayo et al., 2026).

Each of these levers has generated a substantial literature, but the three are usually examined separately. Market access studies tend to focus on channel choice or contract participation. Supply chain studies emphasise margins, logistics and coordination. Institutional studies concentrate on cooperative membership or extension services. This fragmentation is problematic because the three factors are

interdependent in practice. A new market channel offers little benefit if transport and transaction costs absorb the price premium, and an efficient supply chain may bypass farmers who lack the organisation or capabilities to meet buyer requirements. Institutions such as cooperatives and support services often mediate whether market and supply chain opportunities translate into farm-level gains. In Buton, for instance, supply chain efficiency and market demand significantly influenced copra farmers' outcomes only when mediated by institutional strength and technology use (Zarliani et al., 2026). In Tanzania, the relationship between supply chain capabilities and smallholders' on-farm economic viability was shaped by subsidy schemes and dynamic pricing (Israel & Siwandeti, 2024).

The literature also contains important cautions. Linking smallholders to modern value chains does not automatically improve their position. Traditional markets continue to play a vital role for Thai smallholders even as value chains modernise (Ørtenblad et al., 2023), and smallholder value creation often occurs through networks of relationships rather than a single linear chain (Schoneveld & Weng, 2023). Contract farming can raise yields and incomes, yet farmers may still distrust buyers and wish to exit when information is incomplete and transparency is lacking (Ruml & Qaim, 2021). Vertical coordination in contract farming is also shaped by market power, which affects how gains are distributed between farmers and processors (Rachapila et al., 2026). These findings suggest that the performance effects of market access and supply chain improvements are conditional rather than automatic. They also imply that agribusiness performance should be assessed in multiple dimensions. Productivity and income capture only part of the picture. Marketing efficiency, farmers' share of the final price, economic viability over time and environmental sustainability are equally relevant, and interventions may improve one dimension while worsening another. A framework that links the three factors to several performance dimensions is therefore needed to evaluate trade-offs as well as gains.

Recent systematic reviews have begun to integrate parts of this agenda. Chasaya et al. (2026) review inclusive agri-entrepreneurship and supply chain development for smallholder integration. De Silva et al. (2026) frame farmer development as a form of supplier development and supply chain capability building. Zakayo et al. (2026) review the role of agricultural cooperatives in production and marketing in developing countries, and Raza et al. (2024) synthesise the constraints facing smallholder agri-entrepreneurs. Meta-analytic evidence shows that agricultural cooperative membership is associated with higher yields in developing countries on average, although effects vary across contexts (Ma et al., 2023). None of these studies, however, brings market access, supply chain efficiency and institutional support together in a single analytical framework that also explains how they interact and when they fail.

Empirical studies published in 2025–2026 make such an integration both possible and timely. New evidence from Indonesia (Pakasi et al., 2026; Prabowo et al., 2025; Zarliani et al., 2026), Nigeria (Ayanwale et al., 2026), Thailand (Rachapila et al., 2026) and Kenya (Okello, 2025) tests how specific interventions such as mediated partnerships, innovation platforms, support services and closed-loop supply chain models affect farmer outcomes. In Southwestern Nigeria, for instance, participants in the MICROVEG project achieved a marketing efficiency of 170%

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compared with 120% for non-participants, gains interpreted through a transaction cost lens (Ayanwale et al., 2026). Studies on cocoa farms and rural agribusinesses show that market orientation, institutional support and institutional pressures shape innovativeness, entrepreneurial opportunity and performance (Aini et al., 2026; Osei et al., 2024). Such studies offer the empirical detail needed to identify the mechanisms behind aggregate patterns. The broader role of agricultural value chains in food security and economic development is also increasingly recognised ("The Role of Agricultural Value Chains," 2025).

Against this background, this article addresses two research questions. (1) How do market access, supply chain efficiency and institutional support individually and jointly contribute to the agribusiness performance of smallholder farmers? (2) Which mechanisms and conditions determine whether these contributions materialise? To answer them, the study systematically reviews and thematically synthesises 25 peer-reviewed publications from 2021–2026 covering Asia, Africa and multi-country contexts.

The novelty of this article lies in four contributions. First, it integrates three streams of research that are usually analysed separately into a single framework linking market access, supply chain efficiency and institutional support to multiple dimensions of agribusiness performance. Second, it identifies institutions as the central transmission mechanism. Rather than treating institutional support as one factor among many, the synthesis shows how cooperatives, support services, subsidies and partnerships convert market and supply chain opportunities into farm-level productivity, income and viability. Third, it treats conditionality as an explicit analytical object by documenting how market power, contract enforcement, trust and farmer heterogeneity moderate performance outcomes. Fourth, it incorporates the most recent evidence, including ten studies published in 2026, and gives particular attention to Indonesian smallholder commodities such as copra, coconut, layer poultry and cocoa, which remain under-represented in the international literature. The article thereby moves the debate from whether these factors matter to how they work together, and offers concrete priorities for agribusiness policy and practice.

METHODS

2.1 Research design

This study used a systematic literature review (SLR) design combined with qualitative thematic synthesis. An SLR was appropriate because the research questions concern mechanisms, interactions and conditions across a heterogeneous body of evidence, rather than a pooled effect size. The included studies ranged from structural equation models and impact evaluations to case studies, meta-analyses and systematic reviews, which made statistical meta-analysis unsuitable. The procedure was adapted from the PRISMA 2020 reporting guideline and comprised four stages: identification, screening and eligibility, supplementary search, and inclusion and synthesis (Figure 1).

2.2 Data sources and search strategy

Records were identified on 13 November 2026 using the Consensus academic search engine, which indexes peer-reviewed literature from major scholarly

databases. Two parallel queries were run, one in Indonesian ("Peran Akses Pasar, Efisiensi Rantai Pasok dan Dukungan Kelembagaan dalam Meningkatkan Kinerja Agribisnis Petani Kecil") and one in English ("The Role of Market Access, Supply Chain Efficiency, and Institutional Support in Enhancing the Agribusiness Performance of Smallholder Farmers"). The bilingual strategy captured literature relevant across language framings, including studies on Indonesian commodities. The results were exported in RIS format, yielding 14 and 17 records respectively, for a total of 31 records.

2.3 Eligibility criteria and screening

Records were de-duplicated by matching DOI and title, which removed 9 duplicates and left 22 unique records. Each record was screened against five inclusion criteria: (a) peer-reviewed journal article; (b) published between 2021 and 2026, consistent with the five-year recency requirement; (c) an active, resolvable DOI; (d) a focus on smallholder or small-scale farmers or agribusinesses; and (e) substantive engagement with market access, supply chain or value chain efficiency, or institutional support in relation to farm or agribusiness performance. Grey literature without DOIs, studies of large commercial farms only and publications before 2021 were excluded. All 22 unique records met the criteria and were retained.

2.4 Supplementary search

To strengthen the evidence base with high-impact syntheses and causal evidence not captured by the Consensus exports, a targeted supplementary search was conducted using Google Scholar–indexed sources and citation tracking from the included reviews. Three additional publications that met all criteria and whose DOIs were verified as active were added: a review of agri-food value chain transformation in low- and middle-income countries (Barrett et al., 2022), a mixed-methods study of smallholder dissatisfaction with contract farming in Ghana (Ruml & Qaim, 2021) and a meta-analysis of the yield effects of cooperative membership in developing countries (Ma et al., 2023). The final corpus therefore comprised 25 publications.

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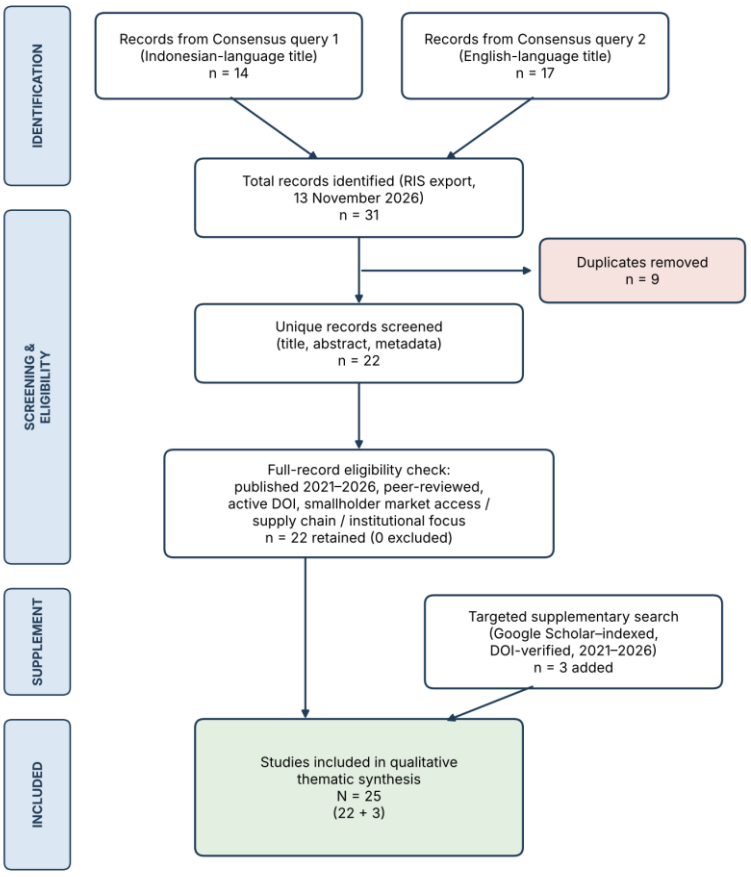


Image 1. Flow diagram of the literature identification, screening and inclusion process (adapted from PRISMA 2020). Source: Author's elaboration (2026).

2.5 Data extraction and synthesis

A structured extraction matrix was used to record, for each study, the authors and year, country and commodity, design and analytical method, the independent factors examined (market access, supply chain efficiency, institutional support), the performance outcomes measured, and the mechanisms and moderating conditions reported. Synthesis proceeded in three steps. First, findings were coded inductively. Second, codes were grouped deductively under the three factors and five performance dimensions: productivity, income, marketing efficiency, economic viability and sustainability. Third, cross-cutting codes on mediation and moderation were analysed to identify transmission mechanisms and enabling or constraining conditions. Interpretation drew on transaction cost economics, the structure–conduct–performance perspective and institutional theory, which are the frameworks most frequently used in the included studies.

2.6 Quality considerations and limitations

The corpus combines articles from high-impact international journals with articles from regional and emerging journals. Regional journals were retained because they often provide the only available evidence on specific commodities and localities, particularly in Indonesia. Greater interpretive weight was given to findings supported by causal designs, meta-analyses or corroboration across several studies, while findings from single descriptive studies were treated as illustrative.

The main limitations are the reliance on one primary search engine, the modest corpus size and the possible omission of relevant non-indexed literature. The bilingual search and supplementary citation tracking partly mitigate these limitations.

RESULTS AND DISCUSSION

3.1 Characteristics of the included studies

The 25 publications span 2021–2026, and the field has grown markedly: one study appeared in 2021, one in 2022, four in 2023, four in 2024, five in 2025 and ten in 2026. Geographically, three studies focus on Indonesia (copra, coconut and layer poultry), three on other Asian countries (Thailand and Pakistan), six on Africa (Ghana, Kenya, Nigeria, South Africa and Tanzania), and thirteen take a global, multi-country or unspecified perspective. By design, fourteen are empirical studies, using methods such as PLS-SEM, moderated mediation analysis, endogenous switching regression, impact evaluation and case studies, while eleven are systematic reviews, meta-analyses or conceptual reviews. Table 1 summarises the corpus.

The included studies also differ in how they conceptualise performance. Empirical studies most often measure productivity or yield, household or farm income, marketing efficiency and farmers' share, and on-farm economic viability, while reviews also consider competitiveness, food security and sustainability. The most common theoretical lenses are transaction cost economics, which explains why coordination and intermediation costs depress farm-gate prices; the structure–conduct–performance perspective, which links market structure to farmer outcomes; and institutional theory, which explains how formal rules and informal norms shape farmers' opportunities. This diversity of measures and lenses is itself a reason to synthesise findings within a common framework.

Table 1. Characteristics of the 25 included studies (ordered by year)

No	Author(s) (Year)	Context	Design / method	Main focus
1	Ruml & Qaim (2021)	Ghana	Mixed methods	Contract benefits, mistrust and dropout
2	Barrett et al. (2022)	LMICs (global)	Review	Agri-food value chain revolutions
3	Ma et al. (2023)	Developing countries	Meta-analysis	Yield effects of cooperative membership
4	Naseer et al. (2023)	Pakistan (citrus)	Empirical study	Linking smallholders to high-value markets
5	Ørtenblad et al. (2023)	Thailand	Empirical case study	Traditional markets in modernising chains
6	Schoneveld & Weng (2023)	Global	Conceptual	Value network approach to value creation
7	Christian et al. (2024)	Eastern Cape, South Africa	Case study	Cooperatives and value chain participation
8	Israel & Siwandeti (2024)	Tanzania (n = 467)	Moderated mediation	Supply chain capabilities and viability
9	Osei et al. (2024)	Ghana	Survey / quantitative	Institutional pressures and agribusiness performance
10	Raza et al. (2024)	Developing countries	Systematic review	Smallholder agri-entrepreneurship constraints
11	Assefa et al. (2025)	Multi-country	Systematic review & meta-regression	Market access and contract farming

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12	Hanafie & Bandera (2025)	Multi-context	Review	Marketing channel implications
13	Okello (2025)	Rural Kenya	Multinomial ESR	Agribusiness support services, productivity, income
14	Prabowo et al. (2025)	Indonesia (layer poultry)	Empirical study	Mediated partnerships and viability
15	"Role of Agricultural Value Chains" (2025)	Multi-context	Review	Value chains, food security, development
16	Aini et al. (2026)	Cocoa farms	Quantitative (mediation)	Market orientation, institutional support, innovativeness
17	Ali et al. (2026)	Smallholder value chains	Mixed methods	Value chain integration and market access
18	Ayanwale et al. (2026)	Southwestern Nigeria	Impact evaluation	MICROVEG and marketing efficiency
19	Chasaya et al. (2026)	Multi-country	Systematic review	Inclusive agri-entrepreneurship and supply chains
20	De Silva et al. (2026)	Developing economies	Systematic review	Farmer development as supplier development
21	Meena et al. (2026)	Multi-context	Review	Value chains, efficiency, income, competitiveness
22	Pakasi et al. (2026)	North Sulawesi, Indonesia	Empirical study	Coconut supply chains and closed-loop models
23	Rachapila et al. (2026)	Thailand (tomato)	Multi-dimensional assessment	Vertical coordination and market power
24	Zakayo et al. (2026)	Developing countries	Systematic review	Cooperatives in production and marketing
25	Zarliani et al. (2026)	Buton, Indonesia (copra)	Mixed methods, PLS-SEM	Supply chain, institutions, technology, welfare

Source: Author's synthesis of the included studies (2026).

3.2 Market access and smallholder performance

Market access emerges as a necessary but insufficient condition for improved performance. Contract farming is the most frequently studied access mechanism. Assefa et al. (2025) use systematic review and meta-regression to examine the nexus between market access and contract farming, and their findings support contract farming as an instrument for linking smallholders to markets. Ali et al. (2026) find that integrating smallholders into sustainability-oriented value chains is associated with improved market access. Access to high-value markets also matters for diversification and upgrading, as shown in the Pakistani citrus sector, where moving beyond subsistence requires linking farmers to higher-value buyers and building a sustainable supply chain (Naseer et al., 2023).

However, access does not guarantee benefits. Ruml and Qaim (2021) show that Ghanaian smallholders in a resource-providing contract scheme achieved higher yields and incomes, yet most regretted participating because insufficient information and perceived opportunism by the company generated mistrust. In Thailand, processing tomato contracts illustrate how vertical coordination interacts with market power to shape performance (Rachapila et al., 2026), while the persistence of traditional markets shows that smallholders benefit from keeping multiple channels open rather than depending on a single modern buyer (Ørtenblad et al., 2023). The value network perspective of Schoneveld and Weng (2023) reinforces this point: smallholders create and capture value through diverse relationships with buyers, input suppliers, service providers and peers, not only

through one linear chain. Marketing channel choice therefore remains a core determinant of farmers' share of the final price (Hanafie & Bandera, 2025).

Indonesian evidence illustrates these dynamics in a commodity context. In Lawele Village, Buton Regency, a mixed-methods study combining a survey of 70 copra farmers and three collectors with cost and flow analysis and PLS-SEM found that farmers' market position is constrained by low bargaining power and weak institutions (Zarliani et al., 2026). Market demand alone did not translate into better farmer outcomes; its effect depended on institutional strength and technology adoption. This finding is important for Indonesian smallholder commodities, where village collectors and inter-island traders often dominate marketing, because it suggests that improving market access requires organisational as well as physical connections to buyers.

3.3 Supply chain efficiency and smallholder performance

Supply chain efficiency affects performance mainly by reducing transaction costs, marketing margins and losses, and by improving coordination and price discovery. Reviews of agricultural value chains highlight its links to farmer income, market competitiveness, food security and economic development (Meena et al., 2026; "The Role of Agricultural Value Chains," 2025). The MICROVEG intervention in Nigeria provides direct evidence: by addressing coordination and transaction cost constraints in underutilised indigenous vegetable chains, it raised participants' marketing efficiency to 170%, compared with 120% for non-participants (Ayanwale et al., 2026). In North Sulawesi, Pakasi et al. (2026) examine how coconut agribusiness supply chains could be reorganised into closed-loop models that capture more value from by-products.

Efficiency gains, however, depend on farmers' own supply chain capabilities and on the wider policy environment. Using data from 467 smallholders of staple foods across five regions of Tanzania, Israel and Siwandeti (2024) show that agricultural supply chain capabilities, subsidy schemes and dynamic pricing interact to influence on-farm economic viability. De Silva et al. (2026) argue that building such capabilities should be treated as supplier development, in which buyers and support agencies invest systematically in farmers' skills, quality management and reliability. The structure–conduct–performance results from Buton (Zarliani et al., 2026) further suggest that efficiency improvements in the chain reach farmers only when local institutions and technology adoption are strong enough to transmit them. The authors interpret this as empirical support for the structure–conduct–performance perspective, in which institutional arrangements and technology function as critical links between market structure and farmer welfare, and they call for policies that combine institutional strengthening, cooperative-managed technology and transparent market systems.

3.4 Institutional support and smallholder performance

Institutional support is the most consistently positive factor in the corpus and the one most often found to mediate the effects of the other two. Cooperatives are central. Christian et al. (2024) show that cooperatives improve smallholder participation in agri-food value chains in South Africa's Eastern Cape, and Zakayo et al. (2026) find that agricultural cooperatives in developing countries strengthen both production and marketing. Meta-analytic evidence indicates that cooperative

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membership is associated with higher yields on average, although the size of the effect varies across studies and contexts (Ma et al., 2023). Agribusiness support services also matter. In rural Kenya, Okello (2025) evaluates their effects on smallholder productivity and income using multinomial endogenous switching regression, which accounts for self-selection into different service combinations.

Partnerships and the institutional environment complete the picture. Prabowo et al. (2025) show that mediated partnerships help bridge gaps in small-scale layer farming by improving viability, productivity and sustainability. In Ghana, regulatory, normative and cognitive institutional pressures shape rural agribusiness entrepreneurial opportunities and performance (Osei et al., 2024). Research on cocoa farms indicates that market orientation and institutional support drive performance partly through farmer innovativeness (Aini et al., 2026). Taken together, these findings support the conclusion that institutions do not simply add to market and supply chain effects; they enable them. Table 2 summarises the mechanisms and outcomes associated with each factor.

Institutional support is not uniformly effective, however. The heterogeneity in cooperative yield effects reported in meta-analytic evidence (Ma et al., 2023) suggests that governance quality, member participation, scale and the services offered matter as much as membership itself. Reviews of smallholder agri-entrepreneurship similarly note that institutions can reproduce exclusion when they are dominated by better-off farmers or when services are poorly targeted (Raza et al., 2024). Effective institutional support therefore depends on design: transparent governance, services that match farmers' actual constraints, and linkages to buyers and financial providers.

Table 2. Mechanisms and performance outcomes associated with each factor

Factor	Key mechanisms	Performance outcomes	Key sources
Market access	Contract farming; high-value and export channels; diversified channel portfolios; market information	Higher prices and sales; investment incentives; income (conditional on trust and terms)	Ruml & Qaim (2021); Naseer et al. (2023); Ørtenblad et al. (2023); Assefa et al. (2025); Ali et al. (2026)
Supply chain efficiency	Lower transaction costs and margins; coordination; logistics; dynamic pricing; by-product use	Marketing efficiency; farmer price share; economic viability; reduced losses	Israel & Siwandeti (2024); Ayanwale et al. (2026); Meena et al. (2026); Pakasi et al. (2026)
Institutional support	Cooperatives and farmer groups; extension and support services; subsidies; mediated partnerships; enabling regulation	Productivity and yield; income; innovativeness; viability and sustainability	Christian et al. (2024); Osei et al. (2024); Prabowo et al. (2025); Ma et al. (2023); Okello (2025); Aini et al. (2026); Zakayo et al. (2026)
Interaction effects	Institutions mediate market and chain effects; subsidies and pricing moderate capability effects	Joint gains in productivity and welfare	Israel & Siwandeti (2024); Zarliani et al. (2026)

Source: Author's synthesis of the included studies (2026).

3.5 Integrated framework and moderating conditions

The synthesis supports an integrated framework (Figure 2) in which market access, supply chain efficiency and institutional support are interdependent inputs whose effects on performance pass through four transmission mechanisms:

bargaining power, capability building, trust and coordination, and technology adoption. Market access without bargaining power leaves farmers as price takers. Supply chain efficiency without capability building bypasses farmers who cannot meet quality and volume requirements. Contracts without trust tend to break down, and technology without institutional support is rarely adopted. Institutions are central because they supply many of these mechanisms at once by aggregating volume, sharing information, providing services, negotiating contracts and channelling subsidies (Christian et al., 2024; Israel & Siwandeti, 2024; Zarliani et al., 2026). The framework also highlights feedback between the three inputs: stronger institutions improve market access by aggregating supply, and better market access in turn makes investment in supply chain efficiency more attractive for both farmers and buyers.

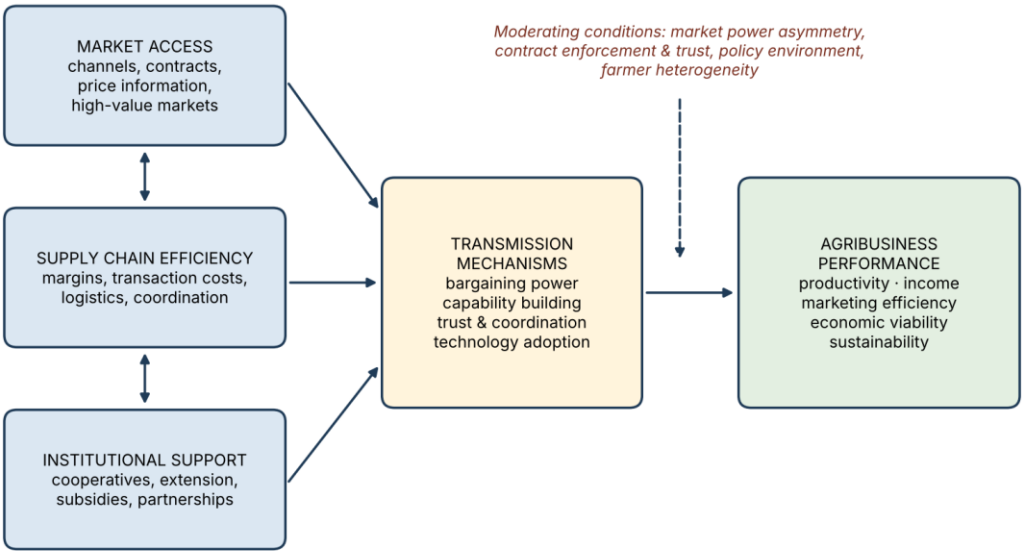


Image 2. Integrated framework linking market access, supply chain efficiency and institutional support to smallholder agribusiness performance. Source: Author's synthesis (2026).

Four moderating conditions determine whether the framework yields positive outcomes (Table 3). First, market power asymmetries between farmers and buyers or processors shape how coordination gains are distributed (Rachapila et al., 2026). Second, contract enforcement and trust affect participation and retention in modern chains (Ruml & Qaim, 2021; Assefa et al., 2025). Third, the policy environment, including subsidies, pricing mechanisms and regulatory institutions, can amplify or dampen the effects of capabilities (Israel & Siwandeti, 2024; Osei et al., 2024). Fourth, farmer heterogeneity in assets, skills, gender and scale means that the same intervention can benefit some farmers while excluding others (Chasaya et al., 2026; Raza et al., 2024).

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Table 3. Moderating conditions shaping smallholder agribusiness performance

Condition	Enabling factors	Constraining factors	Key sources
Market power	Collective bargaining; multiple buyers and channels; traditional markets as fallback	Buyer concentration; oligopsony; dependence on a single processor	Ørtenblad et al. (2023); Schoneveld & Weng (2023); Rachapila et al. (2026)
Contract enforcement & trust	Transparent terms; fair weighing and grading; information sharing	Opportunism; incomplete information; weak enforcement	Ruml & Qaim (2021); Assefa et al. (2025)
Policy environment	Targeted subsidies; supportive regulation; public investment in infrastructure	Poorly targeted subsidies; unstable pricing; restrictive institutions	Israel & Siwandeti (2024); Osei et al. (2024); Barrett et al. (2022)
Farmer heterogeneity	Capability building; inclusive targeting; supplier development	Asset, skill, scale and gender gaps that exclude weaker farmers	Raza et al. (2024); Chasaya et al. (2026); De Silva et al. (2026)

Source: Author's synthesis of the included studies (2026).

3.6 Discussion and implications

The findings have three implications. First, policy should treat market access, supply chain efficiency and institutional support as a package rather than as separate programmes. Market linkage projects that ignore logistics and institutions, or cooperative programmes that ignore buyers' requirements, are likely to underperform. Second, the central role of institutions suggests that public investment should prioritise strengthening farmer organisations, agribusiness support services and multi-stakeholder partnerships. Third, the moderating conditions point to the importance of governance, including transparent contracts, fair pricing mechanisms and safeguards against buyer opportunism, so that efficiency gains are shared with farmers.

For Indonesia, the evidence from copra in Buton, coconut in North Sulawesi and layer poultry partnerships suggests concrete priorities. These include revitalising cooperatives and farmer groups as collective marketing and technology hubs, integrating village-level collectors into transparent and efficient supply chains, using partnership schemes with clear and enforceable terms, and developing processing and by-product value chains that keep more value in rural areas (Pakasi et al., 2026; Prabowo et al., 2025; Zarliani et al., 2026). Future research should use longitudinal and quasi-experimental designs to test the integrated framework directly and to compare commodities and regions within Indonesia.

The synthesis also reveals several evidence gaps. Few studies estimate the joint effects of all three factors within one empirical model, and the moderating role of market power is rarely measured directly. Outcome indicators are inconsistent across studies, which makes comparison difficult. Gender, youth and the poorest farmers receive limited attention, as do digital marketplaces and information platforms, which are reshaping market access in many countries. Finally, the interaction between supply chain organisation and climate or price shocks is under-studied, even though resilience to such shocks is increasingly central to smallholder viability. Addressing these gaps would allow more precise and inclusive policy design.

CONCLUSIONS

This review of 25 peer-reviewed publications from 2021–2026 shows that market access, supply chain efficiency and institutional support each contribute to the agribusiness performance of smallholder farmers, but that their effects are interdependent. Market access raises prices and incentives to invest. Supply chain efficiency reduces transaction costs, margins and losses. Institutional support through cooperatives, support services, subsidies and partnerships builds the capabilities, bargaining power and trust needed to turn these opportunities into higher productivity, income, marketing efficiency and economic viability.

The synthesis identifies institutions as the main transmission mechanism linking market and supply chain conditions to farm-level outcomes. It also shows that the benefits of integration are conditioned by market power, contract enforcement and trust, the policy environment and farmer heterogeneity. Policies should therefore combine market linkage, supply chain upgrading and institutional strengthening in integrated programmes, with strong governance safeguards to ensure that smallholders share fairly in the gains. Future studies should empirically test the proposed framework across commodities and regions, particularly in Indonesia and other emerging economies, using consistent multi-dimensional performance indicators that capture income, efficiency, viability and sustainability together.

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