STRENGTHENING THE HIDDEN MIDDLE: POLICY LESSONS FROM THE GLOBAL RESEARCH ON MIDSTREAM TRANSFORMATION[1]

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The *Hidden Middle*—the segment of agrifood systems that connects farmers to consumers through aggregation, storage, logistics, and processing—has long been overlooked in both research and policy. Yet this is where most value addition, employment, and efficiency gains actually occur. When midstream actors function well, food systems are more resilient, markets are more stable, and small producers gain predictable access to buyers and inputs. When they do not, costs rise, losses increase, and opportunities for inclusive growth dissipate.

Over the past decade, a growing body of literature has sought to understand and strengthen this midstream segment. The systematic review underlying this Policy Brief analyzed more than 550 publications authored by 17 leading scholars,[2] extracting and classifying over 3,500 policy recommendations. The analysis reveals a remarkable level of coherence among authors: despite differences in discipline or geography, the research community converges on a shared "theory of change" for the Hidden Middle. The literature emphasizes that midstream transformation cannot be achieved through isolated interventions, but rather through bundled interventions that reduce costs, lower risks, and enable coordination across firms, markets, and territories.

INCATA: Linked Farms and Enterprises for Inclusive Agricultural Transformation in Africa and Asia

Project funded by the Gates Foundation and implemented by Rimisp, MSU, IFPRI-Asia and Tegemeo Institute

Project objective

The INCATA initiative examines the relationship between commercial small-scale producers (cSSPs) and micro, small, and medium enterprises (MSMEs) in the hidden middle of agrifood value chains to explain how it underpins and contributes to an inclusive agricultural transformation.

Work streams

The project works around two work streams, (i) LSMS-ISA data analyses for six African countries, and (ii) Horticulture and aquaculture value chain analyses in Kenya (led by Tegemeo Institute) and in Odisha, India (led by IFPRI), and aims to answer four research questions:

Research questions

1. What are the prevailing patterns of commercialization among small-scale producers (SSPs) and the key policy- and non-policy-related factors that shape their engagement with "hidden-middle" MSMEs?
2. Which cSSPs and MSMEs succeed in raising incomes, investing, adopting new technologies, and accessing larger or higher-value markets during the transformation process—and why do others lag?
3. To what extent does a greater commercialization of SSPs and the expansion of MSMEs translate into poverty reduction and advances in women's economic empowerment (WEE)?
4. **Which investments and policies have the most significant potential to accelerate the symbiotic co-development of cSSPs and MSMEs?**

[1] Policy brief based on the INCATA working document: Espinoza, Trivelli & Fuica (2025) "The Hidden Middle of Agrifood Systems: A Systematic Review of Leading Authors and Policy Recommendations".

[2] Bart Minten, James Thurlow, Thomas Reardon, Xinshen Diao, Johan Swinnen, Lenis Saweda O. Liverpool-Tasie, Karl Pauw, Rob Vos, Miet Maertens, Christopher Barrett, Seneshaw Tamru, Thomas S. Jayne, David Tschirley, Luc Christiaensen, Benjamin Davis, Michael Dolislager, Julio A. Berdegué.

A SHARED AGENDA ACROSS THE GLOBAL RESEARCH LITERATURE

Across this growing body of research, clear patterns of convergence emerge. Despite differences in context, authors consistently emphasize that effective midstream transformation requires bundled interventions rather than isolated projects. Financial access, infrastructure upgrading, compliance capabilities, digital coordination, and institutional strengthening are not independent pillars but interlocking components of the same system. When sequenced coherently, they reinforce one another—mobilizing investment, lowering operational risks, and expanding the participation of small and medium enterprises across the agrifood chain.

Building on this analytical synthesis, the findings from the research corpus can be organized into five mutually reinforcing policy bundles that together articulate a comprehensive agenda for strengthening the Hidden Middle. These bundles integrate financial, physical, regulatory, informational, and institutional dimensions of transformation, reflecting both the logic of the literature and the cumulative experience of development programs.

Table 1. Five Policy Bundles for Strengthening the Hidden Middle

Policy Bundle	Core Instruments / Interventions	Intended Outcomes	Indicative Metrics (KPIs)
1. Finance for Midstream Upgrading	• Dedicated credit lines, guarantees, blended finance • Asset-based lending (cold storage, processing equipment, quality control) • Working capital and trade finance for MSMEs	Increased investment in midstream assets; risk sharing with private lenders; MSME access to affordable finance	• Volume of midstream credit/guarantees utilized • Number of enterprises upgrading assets • Cost of capital vs. baseline
2. Logistics & Processing Backbone	• Cold chain and warehousing • Reliable energy for processing • Market modernization and connectivity • Continuity protocols for essential logistics	Reduced losses and transaction costs; improved reliability and food safety; continuity in crises	• Post-harvest loss rates • Cold-chain uptime (%) • Road travel time or logistics cost per ton-km
3. Standards, Compliance & Traceability Enablement	• Harmonization of SPS/TBT standards • Testing, certification and metrology infrastructure • Financing for compliance and traceability adoption	Expanded market access; higher compliance rates; enhanced product quality	• # MSMEs certified • Inspection turnaround time • Certification renewal rate
4. Information & Coordination Platforms	• Market intelligence, MIS, dashboards • B2B and logistics booking systems • Contract facilitation and digital traceability	Lower search/coordination costs; improved reliability; better data for finance and policy	• % transactions through platforms- Contract fulfillment rates • Variance in wholesale prices
5. Business Environment, Skills & Inclusion	• Simplified licensing, progressive formalization • Midstream-specific training and certification • Supplier development and inclusion of women/youth MSMEs	Greater enterprise formality and capability; more inclusive and competitive value chains	• # firms registered/ formalized • Training completion rates • % women/youth-led MSMEs integrated

As summarized in Table 1, these bundles represent the most recurrent and consistently endorsed strategies identified across more than 3,500 policy recommendations. Together, they outline the dominant pathways through which the global research community envisions the upgrading, coordination, and inclusiveness of midstream actors within agrifood systems:

METHODOLOGY

The systematic review underlying this Policy Brief analyzed more than 550 publications authored and 17 leading scholars, 1 extracting and classifying over 3,500 policy recommendations.

1.Finance for midstream upgrading. The literature is emphatic that finance must translate directly into adoption and use of midstream assets—not merely expand liquidity. Targeted credit lines, partial guarantees, and blended-finance mechanisms are the preferred instruments, provided they are tailored to the realities of logistics, storage, and processing MSMEs. Successful approaches align repayment terms with asset life cycles, use risk-sharing mechanisms to crowd in private lenders, and support the creation of viable business models for service provision. Finance becomes transformative when it is tied to tangible outcomes: operational cold storage, certified facilities, or functioning quality-control systems that raise throughput and reliability.

2.Logistics and processing backbone. A reliable logistical and processing infrastructure is the physical foundation of the Hidden Middle. The most cited recommendations call for upgrading storage capacity, cold chains, and energy supply for processing, along with improved road connectivity and wholesale market modernization. These investments lower transaction costs, reduce post-harvest losses, and enable economies of scale. The literature further highlights the need for explicit business continuity protocols that classify logistics and markets as essential services during crises—a lesson reinforced by the COVID-19 pandemic. Without this backbone, upstream and downstream policies alike are less effective.

3.Standards, compliance, and traceability enablement. Standards and food safety are consistently described not as constraints, but as engines of competitiveness—provided that compliance is feasible. Harmonization of standards (sanitary and phytosanitary measures, technical barriers to trade, quality norms) should therefore be accompanied by strong national and regional capacities for testing, inspection, and certification, together with technical assistance and financing for compliance costs. Authors warn that rule-setting alone risks reinforcing exclusion unless it is paired with support for implementation. Financing compliance through credit or matching grants, and integrating traceability and e-certification where returns justify the cost, are central recommendations across studies

4.Information and coordination platforms. Efficient midstream markets depend on transparent information and coordination. The evidence highlights the importance of digital platforms that share data on prices, volumes, logistics slots, and quality grades. These systems reduce search and negotiation costs, mitigate opportunism, and stabilize supply flows. They also create digital footprints—records of reliability, quality, and performance—that lenders and buyers can use to extend finance and contracts. While many digitalization initiatives remain at pilot scale, the literature is clear that information systems are a precondition for the financial and logistical integration of MSMEs into modern supply chains.

5.Business environment, skills, and inclusion. Finally, midstream transformation requires an enabling institutional environment. Simplified regulations, streamlined licensing, and progressive formalization schemes are necessary to lower entry barriers and compliance costs. Equally important are workforce and managerial skills specific to logistics, processing, and quality assurance. Supplier-development programs, often built around lead firms or cooperatives, are recommended to connect MSMEs to larger value chains while promoting inclusion of women and youth entrepreneurs. In the research corpus, inclusion is not treated as a separate target but as an integral dimension of competitiveness: a system that excludes small actors is inherently less resilient.

HOW THESE BUNDLES INTERACT AND EVOLVE

One of the strongest insights from the literature is that these policy areas are mutually reinforcing. Finance without infrastructure has no outlet; infrastructure without compliance support excludes smaller firms; standards without information systems are unenforceable; and all four lose effectiveness without capable, formal, and connected enterprises. Authors therefore recommend sequencing interventions in a way that reflects these dependencies: beginning with the logistical backbone and dedicated finance, adding compliance enablement as facilities and equipment come online, embedding information and coordination mechanisms to consolidate efficiency, and sustaining gains through skills development, inclusion, and regulatory simplification.

Case-based analyses show that projects achieving lasting impact are those that link investment, capability, and coordination within a coherent framework. For example, programs that finance cold storage in tandem with training and quality certification see higher utilization rates and faster repayment than infrastructure-only projects. Similarly, logistics hubs or agro-industrial parks that build in shared services, transparent booking systems, and MSME working-capital mechanisms are far more inclusive and financially sustainable.

DESIGN FEATURES OF EFFECTIVE INTERVENTIONS

The literature identifies several characteristics that differentiate successful midstream programs:

- **Outcome-linked finance.** Disbursements should be contingent on measurable adoption outcomes—equipment installed, facilities certified, compliance achieved.
- **Public goods provision.** Governments must fund what markets cannot: laboratory operations, inspection services, and reliable market information.
- **Embedded MSME access rules.** Physical infrastructure should include shared facilities and transparent allocation to prevent capture by a few large firms.
- **Risk infrastructure through data.** Simple digital records—temperature logs, quality tests, on-time deliveries—can de-risk finance and attract private investment.
- **Integrated sequencing.** Policy bundles should be designed to unlock each other, not operate in isolation.

MONITORING WHAT MATTERS

Beyond activity counts, the literature calls for tracking concrete midstream performance indicators. These include reductions in logistics costs per ton-kilometer, storage and transport losses, cold-chain uptime, and improvements in certification rates, credit access, and MSME participation in structured markets. Indicators should also capture inclusion (share of women- and youth-led firms integrated into midstream functions) and coordination efficiency (contract compliance rates, variance in wholesale prices, transaction times). Such metrics reveal whether midstream systems are truly becoming more efficient, inclusive, and resilient.

MANAGING RISKS AND TRADE-OFFS

The research community recognizes key risks that can undermine midstream reforms and offers strategies to mitigate them. Overly concessional finance may crowd out private lenders unless targeting and sunset clauses are built in. Infrastructure investments risk underutilization if access and working capital are not secured in parallel. Standards can become barriers when compliance support is absent, and digital initiatives can fail if they do not yield verifiable cost savings. The lesson is consistent: each policy instrument must be paired with the complementary measures that make it work.

POLICY IMPLICATIONS AND WAY FORWARD

The accumulated evidence suggests that governments and development partners should move from recognition to prioritization of the Hidden Middle. Midstream functions must be treated as a distinct policy and investment domain—central to competitiveness, not peripheral to production. Integrating the five bundles into coordinated programs offers a clear pathway:

- Invest first in the backbone—finance and infrastructure—while ensuring that design includes compliance and access mechanisms.
- Consolidate gains through standards enablement and information systems that improve transparency and coordination.
- Embed formalization, skills, and inclusion to sustain transformation and expand its benefits across regions and actors.

Ultimately, the literature's message is both practical and systemic: to strengthen the Hidden Middle is to strengthen the food system. Efficient, connected, and inclusive midstream enterprises are the missing link between agricultural productivity and broad-based development. Policies that finance, equip, and empower them—while ensuring rules, data, and coordination—offer one of the most direct routes to more resilient, equitable, and competitive agrifood economies.