

SUPPLY CHAIN COLLABORATION MODELS FOR STRENGTHENING LOCAL PRODUCER NETWORKS

Raden Roro Fatmasari¹, Nyoman Dwika Ayu Amrita²

¹Universitas Sangga Buana YPKP, Bandung, Indonesia

²Universitas Ngurah Rai, Denpasar, Indonesia

Correspondence: sarie801@yahoo.com; dwika.ayu@unr.ac.id

Abstract

Background: Supply Chain Collaboration Models for Strengthening Local Producer Networks has practical relevance for community-facing organizations because visible activity does not necessarily translate into durable organizational or stakeholder outcomes. In strengthening local producer networks, managers must coordinate demand information, product standards, inventory, delivery schedules, payment terms, exceptions, and supplier development while responding to expectations from local producers, buyers, logistics providers, cooperative managers, and service partners. A program may expand reach or participation and still underperform when responsibilities are unclear, information is fragmented, or unrealistic standards.

Aims: This article develops a capability-based framework explaining how supply chain collaboration models may contribute to network reliability, producer participation, and availability. It distinguishes simple activity from coordinated capability and identifies boundary conditions that can weaken otherwise positive relationships.

Research Method: The paper uses an integrative conceptual review of established literature relevant to the focal domain, organizational capabilities, stakeholder relationships, and learning. It does not claim primary survey, interview, experimental, or transaction data.

Results and Conclusion: The synthesis identifies four mutually dependent mechanisms: shared demand visibility, joint operating standards, coordinated fulfillment, and relational governance and learning. Their value depends on transparent governance, usable information, proportionate participation requirements, and a review process that converts exceptions into improvement. The article argues that higher activity alone is an inadequate indicator of success because benefits can coexist with hidden workload, exclusion, dependency, or weakened trust.

Contribution: The article contributes a diagnostic framework, linked performance indicators, six propositions for empirical testing, and a five-stage implementation pathway that can be used in resource-constrained community organizations.

Keywords: supply chain collaboration; supply; community development; network reliability

1. INTRODUCTION

Supply Chain Collaboration Models for Strengthening Local Producer Networks addresses a problem that is easy to describe but harder to manage in everyday organizational life. In strengthening local producer networks, supply chain collaboration models is often discussed through visible programs, targets, or communication activities. Those elements matter, yet they do not by themselves explain whether the organization can produce reliable value for the people it serves. The practical test appears in ordinary moments such as delivery coordination, shared catalogues, and returns and exception handling. When information, responsibility, and follow-up are aligned, these moments can strengthen network reliability and producer participation. When they are not, the same initiative may add work without resolving the original problem. This capability-oriented view is consistent with research that distinguishes resources from the routines through which resources are actually used (Christopher, 2016; World Bank, 2022).

The issue is particularly important for community-facing organizations because performance is rarely judged by a single stakeholder or a single metric. Managers may be concerned with cost, continuity, and operational discipline, while customers, members, employees, suppliers, or community partners pay attention to access, fairness, service quality, voice, and the credibility of promises. These perspectives do not always conflict, but they can expose trade-offs that disappear in aggregate reporting. A program that increases reach, for example, can still weaken confidence if it also creates information asymmetry. Similarly, efficiency gains can be short-lived when they depend on hidden work, fragile partner relationships, or knowledge held by one person. The analytical task is therefore to connect organizational outcomes with the conditions under which they are produced.

This article asks how supply chain collaboration models can contribute to network reliability, producer participation, availability in strengthening local producer networks, and which conditions make that relationship more or less credible. It uses an integrative conceptual review that combines established research streams without claiming primary survey, interview, experimental, or transaction data. The contribution is deliberately practical as well as conceptual. The article separates the focal construct from simple activity counts, identifies four operating mechanisms, proposes linked indicators, and develops six propositions for later empirical testing. The intention is not to present publication, adoption, or participation as evidence of success. Instead, the framework focuses on traceable routines, boundary conditions, and decisions that can be examined by future researchers and by managers responsible for implementation.

2. CONCEPTUAL FOUNDATION

2.1 Shared demand visibility

Shared demand visibility is treated here as an organizational capability rather than a label for a single initiative. It concerns the ability to exchange usable forecasts, inventory signals, and order information at a level partners can act on. That distinction is important in strengthening local producer networks, where decisions about demand information, product standards, inventory, delivery schedules, payment terms, exceptions, and supplier development are distributed across local producers, buyers, logistics providers, cooperative managers, and service partners. A process may look adequate on paper while still breaking down at the handoff between delivery coordination and quality feedback; the weakness only becomes visible when the complete sequence is followed. The literature on capabilities and stakeholder relationships suggests that durable results depend on routines that can be repeated, reviewed, and adjusted, not on isolated activities (Christopher, 2016; Sheffi, 2005). For this reason, the leading evidence is not simply whether the practice exists, but whether forecast and order visibility can be observed consistently and whether it contributes to local value retention without undermining resilience. A boundary condition is opaque demand signals. If that condition persists, more activity can create the appearance of progress while leaving the underlying relationship or operating problem unchanged.

2.2 Joint operating standards

Joint operating standards is treated here as an organizational capability rather than a label for a single initiative. It concerns the ability to agree on product, quality, delivery, and exception rules that are proportionate to partner capability. That distinction is important in strengthening local producer networks, where decisions about demand information, product standards, inventory, delivery schedules, payment terms, exceptions, and supplier development are distributed across local producers, buyers, logistics providers, cooperative managers, and service partners. A process may look adequate on paper while still breaking down at the handoff between joint demand planning and quality feedback; the weakness only becomes visible when the complete sequence is followed. The literature on capabilities and stakeholder relationships suggests that durable results depend on routines that can be repeated, reviewed, and adjusted, not on isolated activities (Sen, 1999; Ivanov, 2020). For this reason, the leading evidence is not simply whether the practice exists, but whether standard adherence can be observed consistently and whether it contributes to producer participation without undermining local value retention. A boundary condition is requirements that exclude small producers. If that condition persists, more activity can create the appearance of progress while leaving the underlying relationship or operating problem unchanged.

2.3 Coordinated fulfillment

Coordinated fulfillment is treated here as an organizational capability rather than a label for a single initiative. It concerns the ability to align schedules, consolidation, handoffs, and returns across the network. That distinction is important in strengthening local producer networks, where decisions about demand information, product standards, inventory, delivery schedules, payment terms, exceptions, and supplier development are distributed across local producers, buyers, logistics providers, cooperative managers, and service partners. A process may look adequate on paper while still breaking down at the handoff between returns and exception handling and joint demand planning; the weakness only becomes visible when the complete sequence is followed. The literature on capabilities and stakeholder relationships suggests that durable results depend on routines that can be repeated, reviewed, and adjusted, not on isolated activities (Sen, 1999; Sheffi, 2005). For this reason, the leading evidence is not simply whether the practice exists, but whether on-time complete fulfillment can be observed consistently and whether it contributes to resilience without undermining local value retention. A boundary condition is fragmented logistics. If that condition persists, more activity can create the appearance of progress while leaving the underlying relationship or operating problem unchanged.

Concept	Diagnostic question	Illustrative evidence
Shared demand visibility	Is forecast and order visibility visible and reliable?	forecast and order visibility; availability and planning quality
Joint operating standards	Is standard adherence visible and reliable?	standard adherence; reliability and lower rework
Coordinated fulfillment	Is on-time complete fulfillment visible and reliable?	on-time complete fulfillment; service and cost performance
Relational governance and learning	Is joint issue closure visible and reliable?	joint issue closure; resilience and partner continuity

Table 1. Diagnostic distinction between activity and coordinated capability.

Taken together, these distinctions keep the analysis focused on how the strategy works rather than on whether it is merely present. For managers, the value of the framework is diagnostic: a weak outcome can be traced back to a specific handoff, information problem, capability gap, or governance condition. For researchers, the same separation reduces the risk of treating adoption, participation, or communication volume as a substitute for the capability itself.

3. REVIEW APPROACH

The manuscript uses an integrative conceptual review. The objective is theory building and managerial clarification rather than estimation of an average causal effect. Sources are used to clarify the meaning of supply chain collaboration models, explain mechanisms that may connect it with network reliability and producer participation, and identify conditions under which the expected relationship may weaken or reverse. The review therefore combines foundational work with later studies that have shaped discussion of capability, stakeholder relationships, organizational learning, and the primary domain of the article. It does not report a database search count or effect size because those procedures were not undertaken.

The synthesis was organized around five questions. First, what distinguishes the focal capability from the mere presence of a program or tool? Second, which routines influence decisions about demand information, product standards, inventory, delivery schedules, payment terms, exceptions, and supplier development? Third, how do local producers, buyers, logistics providers, cooperative managers, and service partners experience the handoffs among those routines? Fourth, which indicators can show progress before final outcomes appear? Fifth, what risks could make a seemingly positive intervention produce exclusion, dependency, or hidden cost shifting? These questions keep the review close to observable organizational practice while remaining consistent with the theoretical concern that capabilities are built through coordinated action and learning (Ostrom, 1990; Sen, 1999).

3.1 Analytical procedure

Step	Purpose	Output used in this article
1. Construct separation	Separate visible activity from the underlying capability	Definitions and diagnostic questions
2. Mechanism coding	Identify how value may be produced in recurring work	Four operating mechanisms
3. Dual-outcome mapping	Connect organizational outcomes with stakeholder or community effects	Linked scorecard
4. Boundary analysis	Identify conditions that can weaken or reverse benefits	Risks and six propositions

Table 2. Conceptual synthesis procedure.

3.2 Unit of analysis and boundaries

The unit of analysis is a community-facing organizational system rather than an isolated department. Depending on the title, that system may include a cooperative, social enterprise, foundation, local supplier network, community program, or a set of partners serving the same group. 'Community' should be defined operationally in later empirical work - for example by membership, service area, municipality, producer network, or beneficiary group - rather than assumed from branding. The framework does not require every actor to be locally owned. External technology providers, universities, financial institutions, or specialist partners can add value when their role strengthens local capability and preserves reasonable options for participation and exit.

3.3 Validity and responsible use

Validity in a conceptual article depends on disciplined claims. The framework is therefore presented as a set of propositions and measurement suggestions, not as proof that supply chain collaboration models has already caused the outcomes described. Future studies should specify baselines, comparison periods, contextual changes, and the level at which outcomes are measured. Qualitative evidence is also important because transaction or administrative data can miss informal work, perceived unfairness, exclusion, or changes in bargaining power. Where the final article is developed further, all affiliations, correspondence details, authorship, references, and disclosure requirements should be verified by the named contributors before submission.

3.4 Review implication

The review design deliberately keeps claims close to observable practice. The framework can guide a pilot, interview protocol, case comparison, or survey instrument, but it should not be interpreted as evidence that the proposed relationships already hold in every setting. The next research step is to translate each mechanism into measures that fit the organizational context, then examine whether changes are sustained across more than one operating cycle.

4. AN INTEGRATED CAPABILITY FRAMEWORK

The proposed framework begins with enabling conditions, moves through four operating mechanisms, and ends with linked organizational and community outcomes. The mechanisms are shared demand visibility, joint operating standards, coordinated fulfillment, relational governance and learning. They are separated analytically because an organization can be strong in one and weak in another. A convincing strategy requires the connections among them to work well enough that improvements in one area do not simply transfer cost or risk elsewhere. Governance - especially role clarity, transparent rules, proportionate information access, grievance handling, and the ability to revise a weak arrangement - affects every connection. This structure follows the broader logic of dynamic capabilities and stakeholder management: resources create value when organizations can sense relevant problems, coordinate action, and reconfigure routines as evidence changes (Otley, 1999; Christopher, 2016).

ENABLING CONDITIONS	OPERATING MECHANISMS	OUTCOMES
Clear problem definition; usable information; staff and partner capability; proportionate resources; agreed rules	1. Shared demand visibility 2. Joint operating standards 3. Coordinated fulfillment 4. Relational governance and learning	Organizational: network reliability, producer participation, availability Stakeholder/community: cost discipline, resilience, local value retention
GOVERNANCE CONDITIONS	Transparent terms; accountable roles; data and privacy controls; grievance and review routes	BOUNDARY RISKS: information asymmetry; unbalanced bargaining power; unrealistic standards; late payment

Figure 1. Capability-mechanism-outcome framework proposed by this article.

4.1 Shared demand visibility

The operational value of shared demand visibility becomes visible when it is connected with recurring cases such as shared catalogues, local sourcing, and the exceptions that follow them. Managers need enough structure to make responsibilities clear, but not so much procedure that frontline judgment becomes impossible. In a community setting, the same rule can affect groups differently, so reviews should ask who can participate, who carries the cost of compliance, and who receives useful information. A practical indicator is forecast and order visibility; it gives an early signal before broader outcomes such as cost discipline or network reliability become visible. Where the indicator deteriorates, the first response should be diagnosis rather than expansion. Common explanations include unbalanced bargaining power, unclear ownership, or a mismatch between formal requirements and available capability. This diagnostic use of evidence is consistent with the wider argument that learning and adaptation are central to sustained performance (Wieland & Wallenburg, 2013).

4.2 Joint operating standards

The operational value of joint operating standards becomes visible when it is connected with recurring cases such as delivery coordination, quality feedback, and the exceptions that follow them. Managers need enough structure to make responsibilities clear, but not so much procedure that frontline judgment becomes impossible. In a community setting, the same rule can affect groups differently, so reviews should ask who can participate, who carries the cost of compliance, and who receives useful information. A practical indicator is standard adherence; it gives an early signal before broader outcomes such as producer participation or cost discipline become visible. Where the indicator deteriorates, the first response should be diagnosis rather than expansion. Common explanations include information asymmetry, unclear ownership, or a mismatch between formal requirements and available capability. This diagnostic use of evidence is consistent with the wider argument that learning and adaptation are central to sustained performance (Sen, 1999).

4.5 Governance conditions

Governance connects the four mechanisms. Clear roles, understandable terms, proportionate information access, and a credible route for questions or grievances make it easier to identify where responsibility sits when a process fails. Governance is especially important in strengthening local producer networks because organizations often depend on partners or community actors who do not control the overall system. A workable design therefore makes escalation, review, correction, and exit visible before problems become disputes.

4.3 Coordinated fulfillment

The operational value of coordinated fulfillment becomes visible when it is connected with recurring cases such as delivery coordination, local sourcing, and the exceptions that follow them. Managers need enough structure to make responsibilities clear, but not so much procedure that frontline judgment becomes impossible. In a community setting, the same rule can affect groups differently, so reviews should ask who can participate, who carries the cost of compliance, and who receives useful information. A practical indicator is on-time complete fulfillment; it gives an early signal before broader outcomes such as availability or resilience become visible. Where the indicator deteriorates, the first response should be diagnosis rather than expansion. Common explanations include information asymmetry, unclear ownership, or a mismatch between formal requirements and available capability. This diagnostic use of evidence is consistent with the wider argument that learning and adaptation are central to sustained performance (Freeman, 1984).

4.4 Relational governance and learning

The operational value of relational governance and learning becomes visible when it is connected with recurring cases such as local sourcing, delivery coordination, and the exceptions that follow them. Managers need enough structure to make responsibilities clear, but not so much procedure that frontline judgment becomes impossible. In a community setting, the same rule can affect groups differently, so reviews should ask who can participate, who carries the cost of compliance, and who receives useful information. A practical indicator is joint issue closure; it gives an early signal before broader outcomes such as local value retention or network reliability become visible. Where the indicator deteriorates, the first response should be diagnosis rather than expansion. Common explanations include late payment, unclear ownership, or a mismatch between formal requirements and available capability. This diagnostic use of evidence is consistent with the wider argument that learning and adaptation are central to sustained performance (Sen, 1999).

5. LOCAL PRODUCER PARTICIPATION AND NETWORK RELIABILITY

5.1 Participation and access

A community-oriented application should be evaluated through participation as well as output. In strengthening local producer networks, the people most affected by a decision may not have the same time, information, confidence, or bargaining power. A process that works smoothly for experienced users can be difficult for a new member, a small supplier, a volunteer, or an enterprise with limited digital capability. For that reason, managers should examine who can complete local sourcing or joint demand planning without informal assistance, who drops out, and which requirements create unnecessary barriers. Inclusion does not mean lowering legitimate quality, safety, or financial standards. It means making expectations understandable, proportionate, and accompanied by a feasible route to compliance.

5.2 Trust, response, and capability

Trust is built through accumulated evidence rather than a single message. Stakeholders compare what the organization says with what happens when something goes wrong. Returns and exception handling is especially revealing because it tests whether responsibilities remain clear under pressure. A credible response acknowledges the issue, explains the next step, assigns ownership, and returns with an outcome or a reasoned revision. Repeated silence, unexplained exceptions, or unbalanced bargaining power can outweigh the effect of positive communication. Relationship research therefore treats trust as an outcome of reliable exchanges and perceived integrity, not simply familiarity (ILO, 2013).

5.3 Capability accumulation and value distribution

Capability accumulation is another important boundary. An intervention can raise short-term activity while leaving local actors dependent on an external operator, consultant, platform, or unusually capable employee. A stronger design uses recurring work such as quality feedback to build transferable knowledge. People should gradually be able to execute the task, interpret exceptions, and improve the process without continuous rescue. This is where organizational learning becomes visible: lessons are retained in routines, decision rules, documentation, and shared understanding rather than disappearing when a project ends or staff change (Ostrom, 1990; ILO, 2013). Finally, value distribution deserves explicit attention. Growth in volume, participation, or visibility does not automatically mean that the arrangement is sustainable for every party. Reviews should consider who receives the benefit, who absorbs coordination time, which costs are reimbursed, whether margins or workloads remain viable, and whether participants retain meaningful options. The relevant question is not whether all parties receive identical value, but whether the arrangement is transparent enough to judge trade-offs and whether weaker actors have a credible way to raise concerns. This distributional view is particularly important when the intended outcomes include network reliability, producer participation, and availability.

Domain	Leading indicator	Outcome indicator	Failure signal
Shared demand visibility	forecast and order visibility	availability and planning quality	opaque demand signals
Joint operating standards	standard adherence	reliability and lower rework	requirements that exclude small producers
Coordinated fulfillment	on-time complete fulfillment	service and cost performance	fragmented logistics
Relational governance and learning	joint issue closure	resilience and partner continuity	dependency or unilateral cost transfer

Table 3. Illustrative indicators and failure signals.

6. PERFORMANCE AND ACCOUNTABILITY ARCHITECTURE

6.1 Linked outcomes rather than activity counts

Measurement should be organized as a linked scorecard rather than a collection of activity counts. Activity measures remain useful for diagnosis, but they can produce misleading conclusions when separated from outcomes. The number of people trained, messages posted, partners onboarded, or transactions processed says little about quality if the organization cannot show what happened to network reliability, producer participation, or the burden placed on staff and partners. A linked scorecard therefore combines a small number of leading indicators, service or operating outcomes, resource measures, learning indicators, and a community-facing measure. The design principle is simple: each metric should support a decision that somebody is expected to make.

6.2 Operational and resource discipline

Process measures are strongest when their denominator is explicit. For example, success in shared catalogues should be defined against eligible or initiated cases rather than only against completed cases. Otherwise, people who abandon the process disappear from the measure. Financial and workload measures should also include exception handling, rework, support time, and channel-specific costs where they are material. These details matter in community organizations because hidden work is often absorbed by committed employees or partners. A strategy can look efficient while relying on unpaid coordination or repeated manual correction. Balanced performance systems were developed partly to avoid this kind of narrow optimization (ILO, 2013; Cao & Zhang, 2011).

6.3 Learning and stakeholder outcomes

Learning measures ask whether evidence changes routines. Useful signals include the time from a recurring problem to a verified correction, the proportion of review actions that are completed, the number of repeated exceptions after a change, and whether frontline or stakeholder feedback is closed with an explained response. These measures are particularly relevant to quality feedback, returns and exception handling, and joint demand planning, where the value of information depends on follow-through. Baselines should be documented before significant changes are introduced. If prices, staffing, target groups, geography, or service promises change at the same time, later performance should not be attributed solely to the focal intervention.

Layer	Metric	Definition	Decision supported
Participation	Eligible completion rate	Completed eligible cases / initiated eligible cases	Where do people or partners drop out?
Service / process	Standard adherence	Cases meeting the stated operating rule / cases checked	Which handoff needs correction?
Capability	Forecast and order visibility	Verified cases in which the intended routine is performed independently	Is capability becoming repeatable?
Resource	Exception cost and workload	Time and direct cost used for rework, support, and unresolved exceptions	Is the arrangement economically and operationally sustainable?
Learning	Issue-to-change cycle time	Median time from recurring issue to verified process change	Is evidence producing learning?
Outcome	Network reliability	Defined outcome measure appropriate to strengthening local producer networks	Is the focal strategy producing its intended result?

Table 4. Minimum linked scorecard for a pilot or field study.

Measurement should begin with a baseline and a clearly stated boundary. If the organization changes prices, staffing, target groups, service channels, or partner rules at the same time, later outcomes should not be attributed to supply chain collaboration models alone. A short narrative review of major contextual changes should accompany the scorecard so that numbers remain interpretable and hidden trade-offs are easier to detect.

7. PROPOSITIONS FOR EMPIRICAL TESTING

The framework leads to six propositions. They are stated as testable expectations rather than confirmed findings. Each proposition includes a condition that future research should measure rather than assume.

Proposition 1 - Shared demand visibility

Stronger shared demand visibility will be positively associated with network reliability because it helps the organization exchange usable forecasts, inventory signals, and order information at a level partners can act on. The relationship should weaken when opaque demand signals, when roles are unclear, or when the cost of compliance is shifted to actors with the least capacity. Future studies can test the proposition by combining forecast and order visibility with outcome measures collected over more than one review cycle.

Proposition 2 - Joint operating standards

Stronger joint operating standards will be positively associated with producer participation because it helps the organization agree on product, quality, delivery, and exception rules that are proportionate to partner capability. The relationship should weaken when requirements that exclude small producers, when roles are unclear, or when the cost of compliance is shifted to actors with the least capacity. Future studies can test the proposition by combining standard adherence with outcome measures collected over more than one review cycle.

Proposition 3 - Coordinated fulfillment

Stronger coordinated fulfillment will be positively associated with availability because it helps the organization align schedules, consolidation, handoffs, and returns across the network. The relationship should weaken when fragmented logistics, when roles are unclear, or when the cost of compliance is shifted to actors with the least capacity. Future studies can test the proposition by combining on-time complete fulfillment with outcome measures collected over more than one review cycle.

Proposition 4 - Relational governance and learning

Stronger relational governance and learning will be positively associated with cost discipline because it helps the organization use transparent terms, fair problem solving, and joint review to strengthen the network over time. The relationship should weaken when dependency or unilateral cost transfer, when roles are unclear, or when the cost of compliance is shifted to actors with the least capacity. Future studies can test the proposition by combining joint issue closure with outcome measures collected over more than one review cycle.

Proposition 5 - Governance quality as a moderator

Transparent rules, clear decision rights, proportionate information access, and credible grievance or review mechanisms will strengthen the relationship between supply chain collaboration models and network reliability. Where governance is unilateral or opaque, activity can increase while trust, local capability, or value retention deteriorates. Governance should therefore be measured as a moderator rather than treated as an unobserved background condition.

Proposition 6 - Learning and inclusion

The expected benefits of supply chain collaboration models will be more durable when organizations preserve assisted pathways, review who is excluded, and convert evidence from implementation into routine change. A design that improves average speed for already-capable participants may still reduce inclusion if it removes alternatives or creates barriers for lower-readiness groups. Learning and inclusion are therefore expected to shape both reach and long-term adaptability.

Proposition	Primary mechanism	Expected organizational outcome	Boundary / moderator
P1	Shared demand visibility	network reliability	opaque demand signals
P2	Joint operating standards	producer participation	requirements that exclude small producers
P3	Coordinated fulfillment	availability	fragmented logistics
P4	Relational governance and learning	cost discipline	dependency or unilateral cost transfer
P5	Governance quality	network reliability	role clarity, information access, grievance and exit
P6	Learning and inclusion	local value retention	readiness, alternative pathways, review discipline

Table 5. Summary of propositions and measurement direction.

A multilevel design is appropriate because process reliability can change within weeks, while trust, capability, retention, or resilience may require months to become visible. Researchers should preregister primary outcomes where feasible, document concurrent organizational changes, and avoid selecting only the indicators that improved after implementation. Qualitative evidence from users, employees, partners, and community actors can help explain why the same intervention produces different results across settings.

8. A STAGED IMPLEMENTATION PATHWAY

Resource-constrained organizations should not begin with a large technology, communication, or restructuring commitment. A staged pathway allows managers to make assumptions visible, protect scarce resources, and learn before expanding scope.

Stage	Core work	Minimum evidence before progression
1. Diagnose	Map one important problem, affected groups, responsibilities, exceptions, and current costs	Baseline; named problem owner; clear boundary
2. Standardize	Align definitions, roles, information, service rules, and escalation	Test cases reconcile; staff and partners can explain the process
3. Pilot	Apply the framework to a limited group, geography, service, or partner set	Reliable completion; transparent resource use; no unresolved critical risk
4. Learn	Review user, employee, partner, financial, and inclusion evidence	Documented corrections; unresolved risks assigned
5. Scale	Expand only elements that remain reliable, affordable, and beneficial	Capacity, governance, support, privacy, and monitoring controls ready

Table 6. Five-stage implementation pathway.

8.1 Choosing a manageable pilot

A useful pilot begins with a visible problem, a bounded group, and evidence that can be collected without excessive burden. In this domain, a pilot might focus on quality feedback, one service or product category, one partner cluster, or a recurring exception such as delivery coordination. The scope should state what will not be attempted. A small pilot is valuable because it exposes assumptions about roles, information, workload, and stakeholder response before the organization commits scarce resources at scale.

8.2 Governance before expansion

Before expansion, participants should agree on ownership of records, decision authority, service or quality rules, financial responsibilities, communication, privacy, complaint escalation, and exit. The rules need to be understandable to the people expected to use them. If a central operator can change access conditions, fees, rankings, or service requirements, the process and notice period should be explicit. Governance does not eliminate disagreement, but it prevents ordinary disagreements from becoming avoidable uncertainty.

8.3 Capability building through operating work

Training is most useful when attached to recurring work. People can learn through completing returns and exception handling, reviewing an exception, explaining a decision, or interpreting a scorecard. Coaching should gradually reduce dependency rather than create a permanent need for external assistance. Completion certificates or attendance records are weak evidence on their own. The stronger test is whether participants can execute the task, diagnose a problem, and make a justified improvement using the available information (World Bank, 2022).

8.4 Scale, redesign, pause, or discontinue

At each review gate, management should make an explicit decision: scale, redesign, pause, or discontinue. Scale is justified only when reliability, workload, resource economics, stakeholder participation, and governance controls meet stated thresholds. Redesign is appropriate when local sourcing generates repeated exceptions or when the intended beneficiaries remain peripheral to the process. A pause can protect users and the organization when data integrity, safety, or capacity is uncertain. Discontinuation can also be responsible when a model cannot meet its promises at acceptable cost and risk.

For smaller organizations, the review rhythm can remain simple: a short operational review each week or month, a periodic partner or stakeholder scorecard, and a more deliberate governance review before major expansion. The discipline of closing actions and revisiting assumptions is more important than dashboard sophistication.

9. DISCUSSION

9.1 Theoretical implications

The framework reframes supply chain collaboration models as an organizational capability rather than a stand-alone initiative. Its contribution arises from the coordination of shared demand visibility, joint operating standards, coordinated fulfillment, and relational governance and learning. This helps explain why the same visible practice can produce different results across organizations. Technology, communication, training, or partnership arrangements are inputs. They become consequential only when responsibilities, information, incentives, and follow-up are connected well enough to support repeatable decisions. The finding is conceptual rather than empirical, but it offers a clearer set of mechanisms for later testing (ICA, 2015; Sheffi, 2005).

9.2 Managerial implications

The theoretical implication is that the dependent variable should be broader than adoption or output. Outcomes such as network reliability, producer participation, and availability need to be considered alongside process quality, local capability, and distributional effects. The framework also treats governance as a moderator. Similar resources can produce different results when one arrangement gives participants usable information and voice while another concentrates decisions and leaves weaker actors to absorb uncertainty. This view is compatible with stakeholder and capability perspectives, which emphasize both relationships and the organization of action (Christopher, 2016; Gronroos, 1984).

9.3 Implications for community and partner institutions

For managers, the most useful starting exercise is to map one complete case from the first signal to the final response. The map should show who receives information, who makes a decision, who performs the work, where exceptions are recorded, and what the user or stakeholder sees. Breaks in this sequence usually point to a more specific problem than a general call for 'better strategy.' If information is reliable but action is slow, decision rights may be the bottleneck. If activity is high but complaints repeat, the issue may be learning. If outcomes improve while partner burden rises, the economics and governance of the arrangement need review.

9.4 Limitations and research agenda

Several limitations remain. This article is a conceptual synthesis and does not estimate causal effects. The framework may require adjustment across sectors, organizational forms, regions, and levels of resource availability. Constructs such as trust, participation, capability, and resilience also develop over different time horizons. Future research could combine longitudinal administrative data with interviews, process observation, and stakeholder panels; compare alternative governance arrangements; and test whether early indicators predict later outcomes. Researchers should also report who benefits and who bears cost, because average improvement can conceal exclusion or dependency.

9.5 Research design implications

Future empirical work can use phased implementation, matched cases, longitudinal panels, or mixed methods depending on data access and the maturity of the intervention. The strongest designs will distinguish inputs, operating mechanisms, intermediate learning outcomes, and final outcomes rather than collapsing them into a single success measure. Reporting negative or null results is equally important because it clarifies which conditions limit the usefulness of supply chain collaboration models.

9.6 Measurement and institutional implications

Institutions that fund, regulate, or support community-facing organizations should avoid rewarding activity counts alone. Evaluation is stronger when it asks whether the operating mechanism is reliable, whether stakeholders can understand and question the arrangement, and whether the organization can show how evidence changed a decision. These questions are especially important where public legitimacy or community benefit is part of the stated purpose. They also make comparison across cases more meaningful because the analysis is based on process quality as well as headline output.

For practitioners, the framework can be used as a periodic diagnostic rather than a one-time audit. A review can begin with the four mechanisms, identify the weakest handoff, assign one correction, and then examine whether the change improves both operating performance and stakeholder experience. This rhythm keeps improvement close to day-to-day work and reduces the temptation to respond to every problem with a new program, platform, or policy.

10. CONCLUSION

Supply Chain Collaboration Models for Strengthening Local Producer Networks is best understood as a problem of coordinated capability. The focal strategy becomes credible when organizations can connect shared demand visibility, joint operating standards, coordinated fulfillment, and relational governance and learning to decisions that people can observe and review. Under those conditions, the strategy has a plausible pathway toward network reliability, producer participation, and availability. Without them, visible activity can expand while the underlying service, relationship, or capability remains fragile.

The practical starting point is deliberately modest: one important problem, one clearly defined group, a baseline, named responsibilities, and a small number of indicators that support real decisions. Managers can then standardize what needs consistency, preserve judgment where cases differ, learn from exceptions, and scale only what remains reliable and fair. The framework and propositions developed here are intended to make that process testable. They do not replace empirical evidence, but they give future studies and organizational pilots a disciplined way to ask what changed, for whom, through which mechanism, and under what conditions.

REFERENCES

- Cao, M., & Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management*, 29(3), 163-180.
- Christopher, M. (2016). *Logistics & Supply Chain Management* (5th ed.). Pearson.
- Deming, W. E. (1986). *Out of the Crisis*. MIT Press.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10-11), 1105-1121.
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman.
- Gronroos, C. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- International Co-operative Alliance. (2015). *Guidance Notes to the Co-operative Principles*. International Co-operative Alliance.
- International Labour Office. (2013). *Resilience in a Downturn: The Power of Financial Cooperatives*. International Labour Office.
- Ivanov, D. (2020). Predicting the impacts of epidemic outbreaks on global supply chains: A simulation-based analysis on the coronavirus outbreak. *Transportation Research Part E: Logistics and Transportation Review*, 136, 101922.
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 70(1), 71-79.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: A literature review and research agenda. *International Journal of Operations & Production Management*, 15(4), 80-116.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.
- Otley, D. (1999). Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), 363-382.
- Putnam, R. D. (1993). *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press.
- Scholten, K., & Schilder, S. (2015). The role of collaboration in supply chain resilience. *Supply Chain Management: An International Journal*, 20(4), 471-484.
- Sen, A. (1999). *Development as Freedom*. Oxford University Press.
- Sheffi, Y. (2005). *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage*. MIT Press.
- Wieland, A., & Wallenburg, C. M. (2013). The influence of relational competencies on supply chain resilience: A relational view. *International Journal of Physical Distribution & Logistics Management*, 43(4), 300-320.
- World Bank. (2022). *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19*. World Bank.