



Beyond Circularity: Building Indonesia's Co-Economy

Cindy Aristiana

Arizona State University, Tempe, Arizona, USA

Sampoerna University, Jakarta, Indonesia

Type of Article: Commentary

JEL Classification: Q01, Q53, Q13, D02

Article Info: Received 9 Jul 2026; Revised 13 Jul 2026; Accepted 17 Jul 2026

Article Correspondence: caristia@asu.edu

Recommended Citation: Aristiana, C. (2026). Beyond Circularity: Building Indonesia's Co-Economy. *Journal of Business, Management, and Social Studies*, 6(1), 28–31.

INTRODUCTION

Indonesia has spent the last decade promoting the circular economy as a pathway toward sustainable development. The concept is well established: reduce waste, recycle materials, and keep resources circulating for as long as possible.

The challenge is substantial. A Bappenas study estimated that Indonesia generated approximately 23–48 million tons of food loss and waste annually between 2000 and 2019 (Nara, 2022). However, the circular economy alone does not answer a more fundamental strategic question: Who creates the value? Waste does not become a valuable resource simply because new technologies exist. Value emerges when governments, businesses, communities, technology providers, and end users coordinate their activities effectively. The primary challenge, therefore, is not technological innovation alone, but ecosystem orchestration.

This is where the concept of the Co-Economy provides a useful strategic perspective. The Co-Economy can be defined as an economic system in which multiple interdependent actors intentionally coordinate their capabilities, incentives, governance mechanisms, and resource flows to create shared and economically sustainable value. Unlike traditional business models, where firms primarily compete as independent organizations, the Co-Economy recognizes that competitive advantage can emerge from the quality of collaboration across an ecosystem.

The concept builds upon, but is not identical to, established ecosystem theory. Moore (1993) introduced the idea of businesses evolving within networks of customers, suppliers, and other partners, while Adner (2017) emphasized the alignment of interdependent actors required for a value proposition to materialize. Jacobides, Cennamo, and Gawer (2018) further highlighted the importance of complementarities among



ecosystem participants. While ecosystem theory explains how interdependent actors create value, the Co-Economy emphasizes the intentional alignment of economic incentives, governance, and resource flows so that environmental and social outcomes can become economically self-sustaining. In this sense, collaboration is not merely desirable; it becomes part of the economic architecture itself.

THE BUMDES-SPPG-FARMER ECOSYSTEM FRAMEWORK

Indonesia may be particularly well positioned to experiment with this model. The country already possesses many of the institutional building blocks required for ecosystem-based value creation, including village-owned enterprises, or BUMDes (Badan Usaha Milik Desa), farmers, MSMEs, government procurement programs, and expanding digital infrastructure. As of January 2026, the Ministry of Villages' information system recorded 71,149 *BUM Desa* and *BUM Desa Bersama* nationally, demonstrating the scale of Indonesia's decentralized institutional network (BUMDES Pandan Wangi, 2026).

The challenge, however, is not simply the presence of participants. It is whether effective ecosystem governance can align them. A promising illustration is the potential BUMDes–SPPG–farmer ecosystem. SPPG, or *Satuan Pelayanan Pemenuhan Gizi*, refers to the operational units responsible for preparing and distributing meals under Indonesia's government nutrition program.

In this proposed ecosystem, organic food waste generated through food preparation and consumption could be biologically processed into bio-stimulants and soil enhancers before being returned to farmers, whose agricultural products can subsequently re-enter the food supply system.

Viewed through a platform ecosystem lens, this represents more than conventional waste management. Rather than operating as a linear supply chain, the model could function as a multi-actor ecosystem in which each participant contributes complementary capabilities. SPPGs provide a recurring source of organic material. BUMDes can serve as decentralized processing and coordination hubs. Farmers contribute agricultural expertise and production capacity. Technology providers enable traceability, monitoring, and information sharing. Financial institutions can support investment and working capital. No single organization needs to own the complete value chain. Instead, value can be co-created through coordinated participation.

This is where BUMDes could assume a more strategic role. Rather than operating solely as producers or owners of village assets, capable BUMDes could become local ecosystem orchestrators responsible for coordinating farmers, processors, public agencies, financial institutions, and technology providers. Their role would shift from owning capabilities to orchestrating complementary capabilities.

INSTITUTIONAL REALITIES, RISKS, AND NETWORK FRICTION

This opportunity, while significant, should be viewed realistically rather than romanticized. The existence of a large BUMDes network does not automatically create a functioning ecosystem. Capacity varies significantly, and local institutions may face limited managerial and digital capabilities, capital constraints, political interference, and weak governance. Without transparent decision-making and clear accountability, ecosystem orchestration could create opportunities for elite capture rather than shared value.

The model also faces a more fundamental resilience problem: dependence on a single source of supply or demand. If the ecosystem relies exclusively on waste generated by a government nutrition program, changes in policy, procurement, budgets, or administrative priorities could destabilize the entire system. A



resilient Co-Economy therefore requires diversification. BUMDes should gradually integrate additional organic waste sources, such as traditional markets, food businesses, farms, and local institutions, while farmers should not depend on a single buyer.

Economic value must also be distributed fairly. Collaboration alone does not guarantee sustainability. If one participant captures most of the financial gains while farmers absorb higher costs or operational risks, participation will eventually decline. The ecosystem therefore requires transparent pricing, clear margin-sharing mechanisms, measurable product performance, and rules governing who bears costs and who captures value. Fair value distribution is not a social addition to the model; it is a requirement for ecosystem stability.

The model also demonstrates how network effects can emerge beyond purely digital platforms, although physical ecosystems face greater logistical friction. As more farmers participate, demand for agricultural inputs can increase and processing volumes can improve economies of scale. Greater volume may, in turn, attract technology, logistics, financing, and processing partners. This creates a cross-side network effect: participation on one side of the ecosystem increases the value of participation on another. Unlike digital platforms, however, these effects are not virtually costless to scale. Transportation, storage, processing capacity, quality control, and geographic distance can increase complexity as the ecosystem expands. Digital infrastructure therefore acts as an enabler rather than the ecosystem itself. IoT monitoring, interoperable data systems, and traceability platforms can reduce information asymmetry and coordination costs, but they cannot eliminate physical and institutional constraints.

These risks illustrate why ecosystem governance matters. Misaligned incentives, free-rider behavior, unequal value distribution, data ownership disputes, weak technology adoption, and dependence on government procurement can all undermine participation. The Co-Economy should therefore not be understood as an argument that collaboration automatically creates value. Collaboration creates value only when the architecture of participation is designed well.

STRATEGIC ACTION PATHWAYS FOR STAKEHOLDERS

Indonesia does not need to replicate Silicon Valley's digital platforms to apply ecosystem principles. Its comparative opportunity may lie in orchestrating physical ecosystems across agriculture, food systems, fisheries, waste management, renewable energy, and rural development. In these contexts, technology is not the primary source of competitive advantage. The greater advantage may come from the ability to coordinate fragmented actors around a shared value proposition.

For policymakers, success metrics should move beyond isolated output targets, such as tons of waste diverted, toward measures of ecosystem health: sustained cross-sector partnerships, participant retention, equitable value distribution, diversified resource flows, and ecosystem resilience. For BUMDes leaders, the strategic shift is from asset ownership toward capability orchestration. Their priorities should include building trust, diversifying ecosystem participants, developing managerial capabilities, implementing transparent financial mechanisms, and ensuring that farmers receive a fair share of the value created. For technology providers, the objective should not be to create another proprietary digital silo. Open architectures, interoperable systems, transparent data governance, and practical tools suited to local capabilities are more valuable to a distributed rural ecosystem. For investors and business leaders, evaluating ecosystem resilience, governance quality, and partner interdependence may become as important as assessing the capabilities of individual organizations. The transition toward a Co-Economy represents



more than an environmental strategy. It reflects a fundamental shift in how organizations create and sustain value. The circular economy asks how resources can remain in circulation. The Co-Economy asks how the actors responsible for that circulation can be organized, incentivized, and governed so that participation remains economically sustainable. The BUMDes–SPPG–farmer model illustrates a promising opportunity for Indonesia, but its success should not be assumed. It depends on resilient resource flows, capable local institutions, fair value distribution, transparent governance, and complementary partnerships. BUMDes may provide an important institutional foundation, but only those with sufficient capabilities and accountability can effectively become ecosystem orchestrators. Ultimately, Indonesia’s competitive advantage may not be determined solely by how efficiently individual organizations operate, but by how effectively interdependent actors create value together. In the emerging Co-Economy, the greatest resource is not waste. It is well-orchestrated collaboration.

REFERENCES

- Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of Management*, 43(1), 39–58. <https://doi.org/10.1177/0149206316678451>
- BUMDES Pandan Wangi. (2026, January 10). Ada berapa BUMDES se Indonesia. <https://bumdespandanwangi.com/ada-berapa-bumdes-se-indonesia/>
- Jacobides, M. G., Cennamo, C., & Gawer, A. (2018). Towards a theory of ecosystems. *Strategic Management Journal*, 39(8), 2255–2276. <https://doi.org/10.1002/smj.2904>
- Moore, J. F. (1993). Predators and prey: A new ecology of competition. *Harvard Business Review*, 71(3), 75–86.
- Nara, N. (2022). Indonesia’s Food Waste Equivalent to Rp 330 Trillion (US\$22.4 Million) Per Year. <https://www.kompas.id/artikel/indonesias-food-waste-equivalent-to-rp-330-trillion-us224-million-per-year>