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ORGANIC FOOD SYSTEMS AND POVERTY

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Abstract

This article examines whether organic food systems reduce poverty or instead reproduce it through new forms of market exclusion. The central argument is that the relationship is conditional, asymmetric, and position-dependent within the food system. On the production side, organic farming and certification can raise farm-gate prices, increase household income, and, under some conditions, reduce multidimensional poverty among smallholders. On the consumption side, however, organic food is usually sold through premium channels, which can place it beyond the reach of poor households whose food choices are constrained by already-fragile purchasing power. Methodologically, the article adopts a structured conceptual review that integrates recent peer-reviewed studies with policy and statistical evidence from Food and Agriculture Organization[1], the World Bank[2], IFOAM - Organics International[3], and Research Institute of Organic Agriculture FiBL[4]. The synthesis is organized around three mechanisms: the income channel, the price channel, and the access channel. The evidence suggests that organic systems can be pro-poor for organized producers who capture premiums, obtain extension support, and access reliable markets, but they can be exclusionary for consumers and marginal producers when certification costs, labor requirements, lower yields during transition, and retail markups are high. The article’s contribution is to connect producer welfare, consumer affordability, and agrifood-system governance in one framework, showing that the key policy question is not whether organic food is “good” or “bad” for poverty, but under

what institutional conditions sustainability can be made socially inclusive. [5]

Keywords: organic food systems, poverty, food security, certification, affordability, sustainable diets, agricultural development

Introduction

Agrifood systems are not only chains of production and exchange; they are also distributive structures that determine who can produce food profitably, who can access nutritious diets, and who remains vulnerable to hunger. FAO[6] defines agrifood systems as the interconnected activities and actors involved in getting food from field to fork, while the World Bank definition of food security emphasizes physical and economic access, utilization, and stability. That definitional pairing matters because global hunger and diet unaffordability remain severe. Around 733 million people faced hunger in 2023, while more than one-third of the world's population could not afford a healthy diet in 2022; in parallel, the World Bank estimates that almost 700 million people still live in extreme poverty. These figures make clear that the poverty–food nexus is fundamentally about access, not only aggregate production. [7]

Organic agriculture sits uneasily inside this landscape. FAO describes it as an integrated management system that promotes biodiversity, ecological processes, and the renunciation of synthetic fertilizers and pesticides, while IFOAM defines it as a production system that sustains the health of soils, ecosystems, and people. Globally, organic agriculture is now practiced in almost 190 countries, with nearly 99 million hectares under organic management, at least 4.3 million farmers, and organic food and drink sales surpassing 136 billion euros in 2023. Organic agriculture therefore cannot be dismissed as a marginal niche. It is now a significant, globally traded component of contemporary agrifood systems. [8]

Yet the expansion of organic systems creates a structural paradox for development economics. Organic foods are marketed as healthier, safer, and more

sustainable, and many consumers are willing to pay at least some premium for those attributes. At the same time, high price remains the most persistent barrier to purchase, and poor households already struggle to afford even the least-cost healthy diet available in local markets. In low-income settings, this means the very food system most visibly associated with sustainability may become least accessible to the people most exposed to malnutrition and food insecurity. The question is therefore not merely whether organic agriculture has environmental merit, but whether it can be reconciled with distributional justice. [9]

The existing literature has not fully resolved this question because it is fragmented. One stream examines consumer demand, willingness to pay, and price barriers. Another examines certification, farm profitability, and producer welfare. A third discusses food security more broadly. What remains underdeveloped is an integrated account of how organic food systems affect poverty simultaneously through production, prices, and access. This article addresses that gap by asking three questions: when does organic production reduce poverty among producers; when does organic consumption intensify exclusion among consumers; and what policies can align ecological sustainability with social inclusion across the food system? [10]

Literature and Theory

Poverty and food insecurity are related not because the world lacks enough food in aggregate, but because households differ radically in command over food. The World Bank's four-dimensional framework makes economic access central to food security, and recent global statistics reinforce that point: healthy diets remain unaffordable for billions, while low-income countries face the highest shares of diet unaffordability. In SOFI 2024 reporting, more than 2.8 billion people could not afford a healthy diet in 2022, and the burden was especially intense in low-income countries. In this sense, poverty is not an external variable to the food system; it is one of the

mechanisms through which the food system sorts populations into secure and insecure eaters. [11]

The literature on organic food systems adds a second layer to this access problem. Reviews of organic-food demand consistently find that consumers associate organic products with health, safety, quality, and environmental protection, but they also identify price as the major perceived barrier to purchase. Studies of willingness to pay show substantial variation by product and market, yet the central pattern is stable: organic demand is premium-sensitive, and observed market premiums often exceed what consumers are prepared to pay. This is why market expansion has been strongest where purchasing power is high, retail infrastructure is dense, and consumers can treat sustainability as an attribute choice rather than a budget constraint. [12]

Producer-side evidence is more ambivalent than either critics or advocates often admit. Organic production can increase profitability even with somewhat lower yields when premiums are present and market access is stable. Crowder and Reganold's global meta-analysis found that organic agriculture was significantly more profitable than conventional agriculture when actual premiums were applied, despite lower yields and somewhat higher labor costs. Reganold and Wachter similarly concluded that organic systems generally produce lower yields than conventional systems, even as they may offer advantages in economic viability and environmental performance. The key implication is that organic production is not intrinsically anti-poor or pro-poor; its welfare effects depend on whether producers can reliably capture value from certification and differentiated markets. [13]

That conditionality is especially clear in smallholder settings. Evidence from Kenya[14] showed that certified organic producers were less likely to be multidimensionally poor than comparable nonparticipants, suggesting that certification can operate as a rural asset-upgrading mechanism when producers are integrated into

remunerative value chains. By contrast, evidence from Ethiopia[15] found sharply heterogeneous effects across certification types in coffee: Rainforest Alliance and combined Fairtrade-Organic certification were associated with higher incomes and lower poverty, but organic certification alone reduced incomes mainly because yield losses were not offset by sufficient benefits. A broader meta-analysis of sustainability standards found average price gains of 20–30 percent and household income gains of 16–22 percent, but also emphasized strong heterogeneity across contexts, products, and supply-chain arrangements. The implication is decisive: "organic" is not a uniform treatment. [16]

This article interprets those patterns through three theoretical lenses. The first is the capability approach associated with Amartya Sen[17], under which poverty is understood not simply as low income but as deprivation of substantive freedoms or capabilities. From this perspective, organic systems are desirable only if they expand real freedoms: producers' freedom to earn secure livelihoods, consumers' freedom to access nutritious diets, and communities' freedom to sustain ecological resources over time. The second is structural transformation theory, which emphasizes the role of agriculture in poverty reduction and the movement toward higher-value production, market integration, and agribusiness development. World Development research shows that growth in agriculture is, on average, more poverty reducing than equivalent growth outside agriculture, while World Bank work on agricultural structural transformation highlights the importance of productivity growth, changing crop composition, and commercialization. The third is the food-systems approach, which refuses to isolate production from processing, distribution, retail, consumption, and waste. Together, these frameworks imply that organic food can alleviate poverty only when it raises capabilities across the system rather than merely creating a high-value niche within it. [18]

Methodology

This article adopts a structured conceptual-review design rather than an original panel-data estimation or a formal PRISMA-style systematic review. The reason is substantive rather than procedural. The question at stake is not only whether organic agriculture "works" in the average causal sense, but how distinct mechanisms operate on different social groups located at different points of the food system. A conceptual synthesis is therefore appropriate because it allows producer studies, consumer studies, and international policy statistics to be read together instead of artificially separated into unrelated literatures. The evidence base used here draws primarily on peer-reviewed work published since 2015, supplemented by official statistics and policy material from FAO, the World Bank, FiBL, and IFOAM where these provide the most current global data on poverty, diet affordability, organic area, and certification systems. [19]

The synthesis is organized around three channels. The income channel asks whether organic farming and certification improve producer welfare through higher prices, lower input costs, or stronger market organization. The price channel asks whether organic foods widen consumption inequality through retail premiums that exclude poor households. The access channel asks whether certification, geography, information, retail structure, and social protection influence who can actually participate in organic food systems as producers or consumers. This tripartite design makes it possible to move beyond the false binary in which organic food must be judged either pro-poor or anti-poor. In practice, the answer differs by channel and by social position within the same system. [20]

Because the article does not estimate new causal effects, it should not be read as a claim about a single global treatment effect of organic agriculture. It is instead an analytic integration of the best available evidence, used to identify regularities, contradictions, and policy-relevant conditions. That choice increases interpretive

breadth but also means that unresolved gaps in the underlying literature, especially on food-security outcomes and domestic organic markets in low-income countries, remain important limitations. [21]

Analysis and Discussion

The first mechanism is the income channel. Here the strongest evidence in favor of organic systems comes from certification-linked producer gains. In Kenya, certified organic participation was associated with a lower probability of multidimensional poverty. In the broader meta-analysis of sustainability standards, certified farmers received roughly 20–30 percent higher prices and 16–22 percent higher household incomes on average. More generally, organic farming can substitute management knowledge and ecological processes for purchased agrochemicals, which may lower some input costs and improve profitability where price premiums are real and persistent. These findings help explain why organic agriculture is often embraced by development agencies and NGOs as a pathway to rural upgrading in export-oriented smallholder sectors. [22]

But income gains are neither automatic nor evenly distributed. The Ethiopian coffee evidence is particularly instructive because it shows that not all sustainability standards work the same way: double Fairtrade-Organic certification improved welfare, while organic certification alone reduced incomes because yield losses dominated. Recent evidence from Benin[23] is even more cautionary. There, organic farming among smallholder cotton producers was associated with lower experienced food security, slightly lower dietary diversity, and lower household income, with the income problem linked to lower cotton income and incomplete compensation through food crops. These cases matter because they reveal the mechanism often hidden under aggregate pro-organic rhetoric: premiums help only when they are large enough, stable enough, and actually captured by producers after certification and commercialization

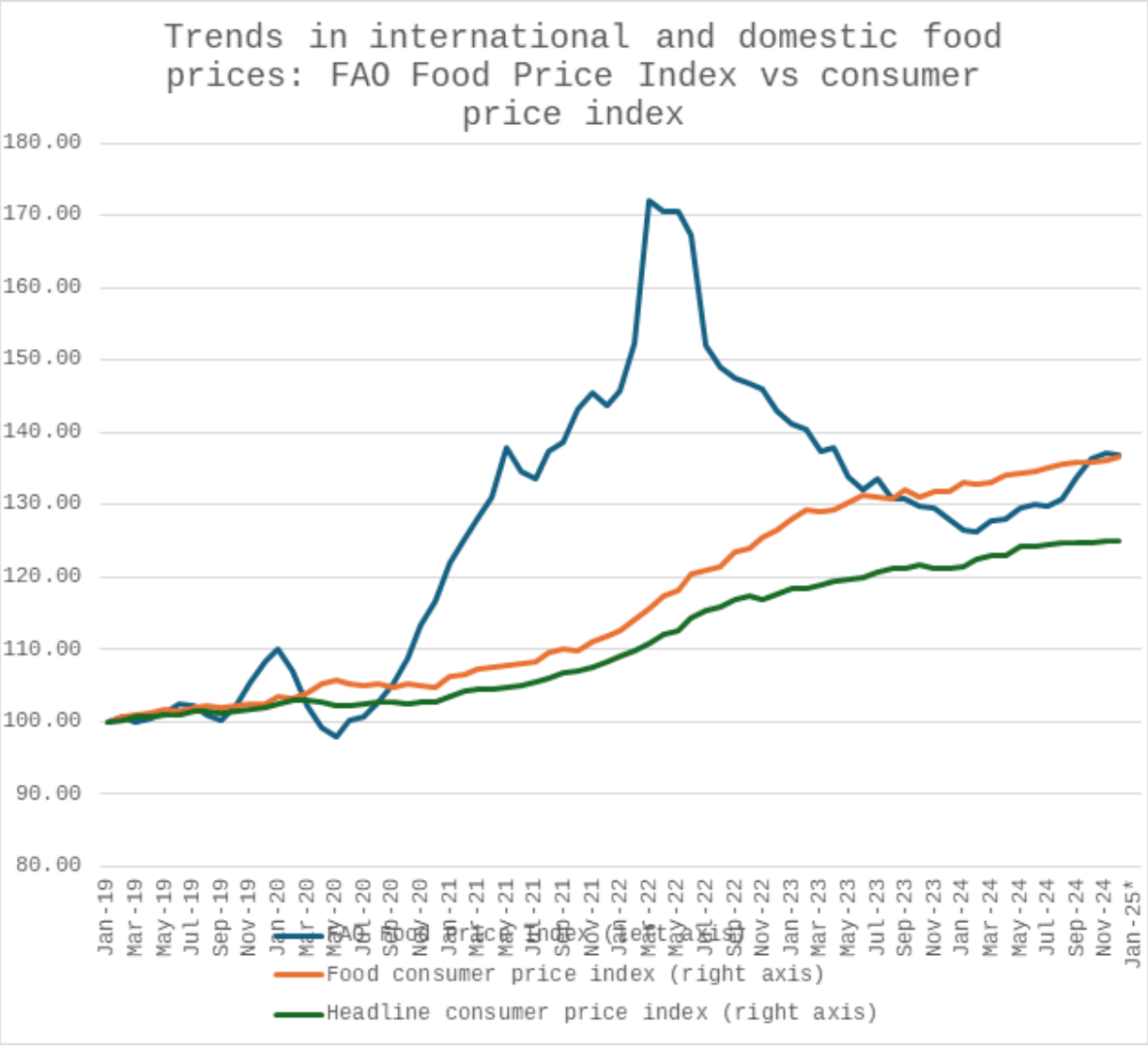
costs. When that condition fails, organic farming can deepen rather than relieve vulnerability. [24]

A further constraint is labor. Organic systems often require more labor for composting, weeding, pest management, and documentation. Crowder and Reganold found that labor costs were significantly higher under organic farming, and research from Bhutan[25] shows that labor exchange and social networks can be crucial for whether smallholders can sustain organic practices. Where family labor is stretched, hired labor is costly, or women's unpaid work absorbs the adjustment burden, the income channel weakens even if output prices rise. From a capability perspective, this matters because a nominal increase in gross revenue is not the same thing as an expansion of substantive well-being once labor time, risk, and control over income are taken seriously. [26]

The second mechanism is the price channel. Organic food is a premium good in most contemporary markets. Consumer-side reviews repeatedly identify high price as the main obstacle to purchase, and low-income consumers report that healthy and sustainable foods are simply too expensive to become part of routine consumption. The problem is not merely perceptual. In the Polish market study, actual premiums for organic foods ranged from 35 percent to more than 270 percent, while only a small minority of consumers were willing to pay more than 40 percent. The review by Aschemann-Witzel and Zielke likewise concluded that price is the major barrier to demand, with income explaining only part of the story. When healthy diets are already unaffordable for billions, adding an organic premium to the least-cost healthy basket is likely to intensify exclusion unless incomes or subsidies rise correspondingly. [27]

This point becomes sharper when placed in the context of global food inflation. The World Bank reports that, between the last quarter of 2025 and the first quarter of 2026, food inflation increased in low-income countries even as it eased elsewhere, and

real food inflation exceeded overall inflation in a majority of countries with available data. Historical analysis of food price shocks also shows that rising food prices tend to raise poverty, reduce nutrition, and worsen undernourishment. Organic markets are not the sole drivers of those dynamics, but their premium structure means they sit on top of a preexisting affordability crisis. In distributional terms, poor households are not deciding between conventional strawberries and organic strawberries. They are often deciding between a monotonous energy-sufficient diet and a minimally diverse healthy one. Under those conditions, the price channel makes organic consumption structurally regressive unless countervailed by public policy. [28]



The third mechanism is the access channel. Here the problem is broader than price alone. Low-income consumers face simultaneous constraints of time, transport, product availability, information, and risk. Hough and Contarini argue that low-income consumers generally find healthy and sustainable diets too expensive and prioritize satiation, children's preferences, and avoiding waste. That insight is consistent with wider work on nutritional inequality showing that differences in demand, knowledge, and budget constraints matter powerfully even where retail access improves. In other words, access is not reducible to shelf presence. A sustainable product can exist physically in a market and still be inaccessible in any meaningful capability sense. [29]

Access constraints also operate on the producer side through certification. Third-party organic certification is often bureaucratic and expensive, and FAO explicitly notes that it can be beyond the reach of smallholder ecological farmers serving local markets. That is why Participatory Guarantee Systems have become so important in the debate. IFOAM defines PGS as locally focused quality assurance systems built on stakeholder participation, trust, social networks, and knowledge exchange, while recent case-study research characterizes them as more accessible for smallholders in low-income contexts. Evidence from Chile and wider Latin America shows both the promise and the institutional challenges of these systems: they can lower entry barriers and strengthen local producer–consumer ties, but they still require organizational capacity, time, and supportive regulation. Even so, they point toward a crucial conclusion: the poverty effects of organic systems are mediated not simply by farming practices but by the architecture of certification and market governance. [30]

Taken together, the three channels suggest that the familiar question "Is organic food pro-poor or pro-rich?" is too crude. Organic food systems can be pro-poor for producers and pro-rich for consumers at the same time. They can reduce poverty among connected farmers while excluding land-poor producers who cannot certify, and they can improve ecological conditions without expanding nutritional access for

urban low-income households. This dual effect is not an anomaly; it is the normal outcome of a food system that rewards sustainability through premiums rather than treating it as a public good. Once organic value is monetized through niche markets, those who can pay help finance the transition, but those who cannot pay are also excluded from its direct consumption benefits. [31]

Seen through structural transformation, the implications are equally sharp. Growth in agriculture tends to be especially poverty reducing, and higher-value agricultural commercialization can help rural households escape low-productivity traps. Yet structural transformation only becomes inclusive when productivity, infrastructure, market organization, and public goods move together. Organic production can function as one form of higher-value diversification, but if it relies on unstable premiums, weak extension, and selective certification, it risks becoming an enclave of moralized consumption rather than a vehicle of broad-based rural transformation. The food-systems perspective therefore pushes the analysis beyond farm-level adoption to the political economy of who captures value along the chain. [32]

Policy Implications

The first policy implication is that support for organic systems should focus on inclusive productivity rather than premium-market expansion alone. If governments subsidize conversion without addressing yield risks, knowledge gaps, labor bottlenecks, and transition financing, poorer farmers are least likely to benefit. The empirical literature suggests that premiums are often the decisive factor behind positive profit outcomes. That means policies should help producers survive the conversion period, improve agronomic capability, and bargain for stable prices, rather than assuming that certification by itself creates welfare gains. Public investment in extension, soil fertility management, storage, farmer organization, and rural infrastructure is likely to do more for poverty reduction than symbolic support for organic labels. [33]

The second implication is that certification policy is central to distributional outcomes. Where third-party certification remains the only recognized route, smallholders producing for domestic markets are structurally disadvantaged. Inclusive systems therefore require more support for group certification, internal control systems, and Participatory Guarantee Systems, accompanied by legal recognition, technical assistance, and transparent local governance. The point is not to weaken standards, but to reduce fixed transaction costs so that poorer producers can access differentiated markets without being priced out of them. If organic credibility depends on expensive compliance architectures that only large or well-connected actors can navigate, then organic expansion will reproduce the very inequalities it claims to soften. [34]

The third implication concerns consumers. Affordability cannot be solved through market moralism. Asking poor households to absorb sustainability premiums in the middle of a food-affordability crisis is neither realistic nor equitable. Consumer-side inclusion requires social protection and procurement tools that lower the effective cost of nutritious, sustainably produced foods. School feeding, hospital procurement, municipal markets, targeted food vouchers, and cash transfers indexed to food inflation are more promising than generic awareness campaigns. The World Bank's diet-affordability work shows that access to healthy diets is measurable, and that measure should become part of sustainable-food policy evaluation. If organic policy does not improve diet affordability for poor households, it should not be described as inclusive. [35]

The fourth implication is evaluative. Organic policy has too often been judged by hectares certified, sales value, or export performance. Those indicators matter, but they are insufficient for poverty analysis. A pro-poor evaluation framework should track at least five outcomes simultaneously: farmer net income, multidimensional poverty, affordability of healthy diets, dietary quality among low-income consumers, and the gendered distribution of labor burdens during conversion and compliance.

Without such metrics, it is possible for an organic strategy to look successful environmentally and commercially while failing developmentally. A capability-based food-systems perspective requires exactly this broader evaluative lens. [36]

Conclusion

The relationship between organic food systems and poverty is best understood as conditional, not categorical. Organic production can reduce poverty for some producers by raising prices, improving net returns, strengthening organization, and connecting farmers to higher-value markets. But those gains are highly uneven and often depend on premiums, institutional support, and local labor arrangements. At the same time, organic food is usually marketed through price structures that exclude poor consumers from routine access, especially in a world where billions still cannot afford the least-cost healthy diet. The core paradox is therefore real: the same system can generate rural upgrading for some producers while entrenching consumption inequality for poor households. [37]

This article's main contribution is to show that producer-side and consumer-side findings should not be read as contradictory. They are different manifestations of the same system. Once sustainability is rewarded through differentiated pricing, the distributive outcome depends on who captures the premium, who bears the costs of transition and certification, and whether policy treats ecological production as a public good or a private luxury. Organic food systems are thus neither inherently emancipatory nor inherently exclusionary. They become pro-poor only when capabilities expand on both sides of the market: when producers can participate on fair terms and when consumers are not priced out of nutritional quality. [38]

Open questions and limitations. The current evidence base remains stronger on income outcomes than on direct food-security and nutrition outcomes, and the literature is still biased toward certified export chains and better-known cash crops.

More causal research is needed on domestic organic markets, on urban low-income consumers, on gendered labor effects, and on whether inclusive certification models can scale without eroding trust. A particularly important unresolved question is whether organic systems can deliver affordability gains without abandoning the premium logic on which many producer benefits currently depend. That is the central research frontier for a genuinely inclusive politics of sustainable food. [21]

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26. Suitable Scopus Q1 targets for this manuscript include *Food Policy*, *World Development*, *Global Food Security*, *Ecological Economics*, and *Journal of Rural Studies*. A concise contribution statement would read as follows: this article advances the literature by integrating producer welfare, consumer affordability, and certification governance into a single food-systems framework, showing that

organic food systems are poverty-reducing only under specific institutional conditions. Three alternative titles are “Organic Agriculture and Poverty Reduction,” “Sustainable Food, Unequal Access,” and “Who Benefits from Organic Food Systems?”

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