



Unpacking the informal midstream: how the informal economy can and should contribute to enhanced food system outcomes

Emma Termeer, Siemen van Berkum, Youri Dijkxhoorn, and Bart de Steenhuijsen Piters



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Worldwide, there is an urgent need to transition towards healthier, more inclusive and sustainable food systems. Informal businesses play a critical role in food supply chains, from food production to consumption. Yet, despite their potential, the role of these businesses is generally not recognised – meaning they are insufficiently included in efforts to improve livelihoods, the environment and the safety and accessibility of healthy food. Traders, street vendors and transporters – known as informal midstream businesses – play a critical role in food systems in the Global South, providing affordable food to low-income households. However, negative impacts relating to these businesses may occur as a result of unregulated activities, e.g., poor working conditions, operating outside of regulation food safety policies, and lack of knowledge around and incentives to enforce adequate hygiene standards. Knowledge on effective approaches to reach out and include informal businesses in enhancing food system outcomes and reducing negative impacts is lacking. This is leading to missed opportunities in achieving zero hunger – Sustainable Development Goal (SGD) 2 and other SDGs. There is a need for improved understanding of the motivations, organisation and governance of informal businesses, so policies and interventions can be adjusted to their realities.

Key words: Informal economy, midstream actors, food systems, SDGs

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Key messages

- Traders, street vendors and transporters – known as informal midstream businesses – play a critical role in food systems in the Global South, providing affordable food to low-income households.
- However, negative impacts relating to these businesses may occur as a result of unregulated activities, e.g., poor working conditions, operating outside of regulation food safety policies, and lack of knowledge around and incentives to enforce adequate hygiene standards.
- Knowledge on effective approaches to reach out and include informal businesses in enhancing food system outcomes and reducing negative impacts is lacking. This is leading to missed opportunities in achieving zero hunger – Sustainable Development Goal (SDG) 2 and other SDGs.
- There is a need for improved understanding of the motivations, organisation and governance of informal businesses, so policies and interventions can be adjusted to their realities.



1 Introduction

Worldwide, there is an urgent need to transition towards healthier, more inclusive and sustainable food systems. Informal businesses play a critical role in food supply chains, from food production to consumption. Yet, despite their potential, the role of these businesses is generally not recognised – meaning they are insufficiently included in efforts to improve livelihoods, the environment and the safety and accessibility of healthy food.

The food system midstream includes all intermediary activities before and after the farm gate, such as the supply of inputs, trading, storing, processing, and distributing food to the consumer.

The informal economy is significant in many regions of the world. Globally, the contribution of informal businesses to national gross domestic product (GDP) is estimated at around 60%.¹ The magnitude of the informal sector in terms of employment, including agriculture, varies across regions, but is largest in Africa – which, in 2016, was estimated at 86%, followed by Asia and the Pacific (68%), the Americas (40%), and Europe and Central Asia (25%).² Given their numbers and significance, it is key for informal economy actors to be included in any transition for improved food system outcomes, as well as to achieve the SDGs.

The role of the midstream in food systems in the Global South is expanding parallel to growing urbanisation, rising incomes, changing diets, and growing demand for value-added products, such as processed foods and foods prepared and consumed outside of the home. Many recent studies investigating food system midstream sectors have made little explicit distinction between formal and informal businesses, or are mainly focused on formal sectors.³ This means the precise contribution of global informal midstream agribusinesses to food system outcomes is unclear. However, food system midstream actors can support many SDGs by contributing to job creation, improved incomes, and enhanced connectivity of food production and consumption.

If governments, investors and development practitioners aspire to have significant, large-scale impact on food system outcomes, perceptions and understanding of informal food system midstream actors need to change. Food systems cannot be made sustainable by only using the power of the formal economy.⁴ This policy paper highlights the key characteristics of the informal midstream and explores how its actors can be effectively involved in food system transformation processes.

¹ **International Labour Organization (ILO)**. (2018). Women and men in the informal economy: a statistical picture (third edition) / International Labour Office – Geneva: ILO; **Ohnsorge, F., and Yu, S.** (eds.) (2021). The Long Shadow of Informality: Challenges and Policies. Advance Edition. The World Bank. Licence: Creative Commons Attribution CC BY 3.0 IGO

² **ILO**. (2018). Women and men in the informal economy: a statistical picture (third edition) / International Labour Office – Geneva: ILO

³ For example, see **Dolislager, M., et al.** (2020). Youth and adult agrifood system employment in developing regions: Rural (Peri-urban to hinterland) vs urban. *Journal of Development Studies*, Sept. 14. <https://doi.org/10.1080/00220388.2020.1808198>; **International Fund for Agricultural Development (IFAD)**. (2021). Transforming food systems for rural prosperity. Rural Development Report 2021, Rome, Italy; **Reardon, T.** (2015). The hidden middle: the quiet revolution in the midstream of agrifood value chains in developing countries. *Oxford Review of Economic Policy*, 31 (1): 45-63; and **Reardon, T., Liverpool-Tasie, L.S. O., and Minten, B.** (2021). Quiet revolution by SMEs in the midstream of value chains in developing regions: wholesale markets, wholesalers, logistics, and processing. *Food Security*. <https://doi.org/10.1007/s12571-021-01224-1>.

⁴ **Vorley, W.** (2013). Meeting small-scale farmers in their markets: understanding and improving the institutions and governance of informal agrifood trade. IIED, Hivos, Mainumby. London, The Hague, La Paz.

2 What is the informal economy?

The informal economy is comprised of all forms of 'informal employment': employment without contracts or social protection, both inside and outside informal enterprises, including self-employment in small unregistered enterprises and wage employment in unprotected jobs. Workers in the informal economy often have no legal recognition or protection because the employment relationship is not formally acknowledged. There are degrees to which a business can be considered informal: legal, fiscal and labour informality, and businesses can either be informal across all dimensions or just one or two (Table 1).

Table 1 Degrees of informality and associated questions.⁵

Legal informality	Is the business officially registered?
Fiscal informality	Does the business pay taxes, own a bank account, and maintain bookkeeping?
Labor informality	Does the business offer contracts and benefits to employees?

The prevalent perception of the informal economy is largely negative, because informal businesses are associated with low productivity, poor labour conditions, poverty, and inequality. Governments have no control over how informal businesses operate, which means they cannot enforce safe and fair labour conditions and food safety regulations. As such, informal workers can be vulnerable to illegal practices or human rights' violations. Combined with low and irregular earnings, this makes them vulnerable to health and other livelihood shocks. Informality also creates an unequal competitive environment for formal businesses, especially those that are already financially constrained. Because the cost of operations is significantly lower for informal businesses, they can out-compete even the most innovative and productive formal firms. Furthermore, the large proportion of informal economy in Africa, Asia and the Americas also means governments are missing out on significant tax revenues.

However, negative perceptions do not take into account contextual factors and why businesses operate informally in the first place. There are broadly four theoretical explanations that help in understanding why the informal economy exists (Table 2). One common element is that the informal sector is a counterpart to the formal sector, as they are undeniably linked: the scale and scope of the informal economy may indicate that the state's service provision for businesses is lacking or too complex, or that there are other issues preventing people from finding employment in the formal economy. The question then becomes whether we should strive to eradicate informality, or target issues relating to the informal sector through increased economic development, improved governance, and enhanced public services in general.

⁵ Marusic, A., Nielsen, W., Ghossein, T., and Solf, S. (2020). Re-thinking the approach to informal business: typologies, evidence and future exploration. The World Bank Group. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/34814/Re-thinking-the-Approach-to-Informal-Businesses-Typologies-Evidence-and-Future-Exploration.pdf?sequence=1&isAllowed=y>. (Accessed: 20/01/22).

Table 2 Views on the role of informal businesses in the economy.⁶

Exclusion	Businesses are excluded from state benefits due to high entry costs (for example, burdensome entry regulations) and therefore forced to operate informally.
Exit	Businesses voluntarily choose to operate informally after assessing the costs and benefits of formalisation. This may relate to the poor quality of state service provision.
Dualist	The formal economy is not established enough to employ the whole population. The informal sector houses the 'overflow' of workers and businesses.
Structuralist	Informal businesses and workers provide low-cost inputs and flexibility to the formal sector and are therefore key for the formal sector to function.



⁶ Based on **Perry, G.E., et al.** (2007). *Informality: exit and exclusion*. Washington, DC: World Bank.; **Marusic, A., Nielsen, W., Ghossein, T., and Solf, S.** (2020). *Re-thinking the approach to informal business: typologies, evidence and future exploration*. The World Bank Group. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/34814/Re-thinking-the-Approach-to-Informal-Businesses-Typologies-Evidence-and-Future-Exploration.pdf?sequence=1&isAllowed=y>. (Accessed: 20/01/22); and **Young, G. and Crush, J.** (2019). *Governing the informal food sector in cities of the Global South*. Discussion paper no 30. Hungry Cities Partnership. April 2019. Available at: <https://hungrycities.net/publication/hcp-discussion-paper-no-30-governing-informal-food-sector-cities-global-south/>. (Accessed: 15/01/22).

3 Who are informal economic actors?

The fact the formal and informal economies are intertwined highlights the uneasy relationship between governments and informal economic actors. Governments naturally have a preference for a large formal sector, as it generates tax revenues and businesses can be held accountable for evading or violating laws and regulations. Governments also fight informality because of their assumption that countries with large informal sectors tend to grow below their potential. Informal firms typically remain small, with low productivity, limited access to finance, and no social protection, while informality is also associated with gender inequality.⁷

Government and street vendors in Namibia

Although street vendors are traditionally seen to have less power than formally registered firms, they may show collective action. In Windhoek, Namibia, the informal food sector plays a significant role in making healthier foods available and affordable to the urban poor. To contain and control the informal practices, the government decided on the enclosure of informal food vendors in several strategic locations in the city. To avoid rent payments at those locations, street vendors responded by coordinating a clustering outside of the designated market spaces, which disrupted the authorities' enclose-and-contain model. They thereby forced the acknowledgement of their right to operate in city spaces outside of those formally approved. Ultimately, the Namibian government has had to acknowledge the importance of the informal food sector to the urban poor and tolerate informal practices across the city.⁸

A common assumption is that businesses make a rational cost-benefit analysis in their decision to become formal or informal. This is why governments attempt to regulate the informal sector through interventions such as cutting costs and simplifying procedures to create lower entry barriers, thereby increasing the benefits of formalising and the level of enforcement and audits. Despite these interventions, informality among small-scale firms remains widespread,⁹ indicating that entry barriers are not the only reason that businesses choose to operate informally.

The motivations for business informality are heterogeneous – ranging from a need for income to the inability to find formal employment and the appeal of running their own business. A typical distinction in motivations is that between *survivalists* and *growth-oriented entrepreneurs*: both types of entrepreneur follow particular business development pathways and require a different approach to reach and support these.

⁷ **Ohnsorge, F., and Yu, S.** (eds.) (2021). The long shadow of informality: challenges and policies. Advance Edition. World Bank. License: Creative Commons Attribution CC BY 3.0 IGO

⁸ **Kazembe, L.N., Nickanor, N., and Crush, J.** (2019). Informalized containment: food markets and the governance of the informal food sector in Windhoek, Namibia. *Environment and Urbanization*. <https://doi.org/10.1177/0956247819867091>

⁹ **Bruhn, M. and McKenzie, D.** (2013). Entry regulation and formalization of microenterprises in developing countries. Policy Research Working Paper No. 6507. World Bank, Washington, DC. Available at: <https://openknowledge.worldbank.org/handle/10986/15866>. (Accessed: 22/01/22); and **Floridi, A., Demena, B.A., and Wagner, N.** (2020). Shedding light on the shadows of informality: A meta-analysis of formalization interventions targeted at informal firms. *Labour Economics*, 67, 101925.

Table 3 Typology of informal entrepreneurship.¹⁰

Survivalists	Growth-oriented
Necessity-driven	Opportunity-driven
Ease of entry	Barriers to entry
Female majority	Male majority
Maximising security	Willingness to take risks
Diversification strategies	Specialisation
Family networks	Business networks
Sharing generated income	Accumulate (part of) generated income

The informal economy manifests a considerable degree of governance, self-organisation and structure. Informal regulation originates from a variety of non-state actors and informal institutions, such as powerful entrepreneurs and religious leaders, but also trade unions and associations. ‘Hybrid governance’ is a more accurate depiction of actual economic governance, whereby the state has no exclusive regulatory authority over economic activities, and non-state institutional arrangements provide a form of economic order.¹¹ For example, informal midstream actor networks or associations are important governance structures that provide vital functions – such as market regulation, service provision (water, security, electricity), finance (joint investments), and resource allocation. In addition, social networks facilitate community cohesion and solidarity among group members.

Ghanian market queens

In Ghana, ‘market queens’ are women traders who oversee, protect and promote the market space to the public and government. Market queens have a level of authority inside and outside the markets, as they have traditionally dominated the Ghanaian trading scene. As for their position relating to the government, one market queen, cited in Hendriks (2017), stated: ‘When the formal market stopped employing, we employ. When government deploys, we employ.’¹² These market associations are particularly crucial to women traders as they offer savings, insurance and credit services, and provide an informal safety net for market traders.



¹⁰ Berner, E., Gomez, G., and Knorrings, P. (2012). ‘Helping a large number of people become a little less poor’: the logic of survival entrepreneurs. *European Journal of Development Research*, 24, 382-396. doi:10.1057/ejdr.2011.61

¹¹ Schoofs, S. (2015). Making sense of informal economies in fragile contexts: issues, dilemmas and questions. CRU Policy Brief, Clingendael Institute, The Hague, Netherlands.

¹² Hendriks, T. (2017). Collaboration and competition: market queens, trade unions and collective action of informal workers in Ghana’s Makola Market. *Interface*, 9(2), 162-187.

4 How does the informal midstream impact food system outcomes?

Food and nutrition security

Informal businesses play a key role in providing consumers with food and nutrition security by positively influencing the availability, access, use, and stability of nutritious food, especially for low-income households. The income that households generate from informal employment improves their purchasing power and food accessibility. In addition, informal businesses in food supply chains are often located in street markets, where low-income households tend to purchase food.

Although informal food markets play a vital role in the livelihoods of the poor in developing countries, the conditions under which they operate raise concerns about food safety and quality. Case studies conducted in Sub-Saharan Africa show that most foodstuffs of animal origin and fresh fruits and vegetables (which are of most concern from the point of view of foodborne illness) are sold in informal (street) markets, by farmers/traders who have little or no knowledge of food safety regulations.¹³

Positive contributions of the informal midstream to food security

Healthy diets. A Tanzanian study showed that a greater presence of informal vegetable sellers within a 500-m radius of a household was associated with a higher probability of vegetable purchases and a lower consumption of carbohydrates.¹⁴ From a review of 23 mainly African studies, it was concluded that street food contributes significantly to energy and protein intake and that its 'use should be encouraged', provided they are 'healthy traditional foods'.¹⁵

Reducing food loss and waste. Nigeria is faced with high post-harvest losses due to large transportation distances, and lack of processing and marketing infrastructure. A new packaging form for tomatoes was introduced (reusable plastic crates) involving all informal midstream actors. This revealed that, although food losses were still present, the use of plastic crates resulted in reduced amounts and less quality decay compared to traditional raffia baskets.¹⁶

Livelihoods and employment

In Africa, the informal economy is the largest employer, with most midstream businesses engaged in trade, retail, processing, and food services. Most interactions between smallholders and the value chain take place with small- and medium-sized enterprises (SMEs), which provide smallholder farmers with yield-enhancing inputs and sales in more distant markets, while reducing transaction costs and risks. SMEs also offer smallholders many additional services often associated with larger companies – such as credit, logistics, information, training, and input provision – mainly through informal (non-contractual) arrangements.¹⁷ Interactions with midstream firms benefit farmers through increased productivity and enabling innovation.

¹³ **Randolph, D.** (2021). Food safety in formal & informal markets and food systems transformation. Background paper to IFAD Rural Development Report 2021; **Grace, D., Dipeolu, M., and Alonso, S.** (2019). Improving food safety in the informal sector: nine years later. *Infection Ecology & Epidemiology*, 9:1, DOI: 10.1080/20008686.2019.1579613; **Roesel, K., and Grace, D.** (eds) (2015). Food safety and informal market. Animal products in SSA. International Livestock Research Institute, Nairobi, Kenya.

¹⁴ **Ambikapathi, R., Shively, G., Leyna, G., et al.** (2021). Informal food environment is associated with household vegetable purchase patterns and dietary intake in the DECIDE study: Empirical evidence from food vendor mapping in peri-urban Dar es Salaam, Tanzania. *Global Food Security* (28), 100474

¹⁵ **Steyn, N.P., et al.** (2013). Nutritional contribution of street foods to the diet of people in developing countries: a systematic review. *Public Health Nutrition*, 17(6):1363-1374

¹⁶ **Kok, M.G., Groot, J.J., Dastoum, S., Plaisier, C., Dijkxhoorn, Y., and Wagenberg, C.P.A.** (2019). A measurement tool on food losses and waste: applied in a tomato value chain in Nigeria. Wageningen Food & Biobased Research Report 1906. <https://doi.org/10.18174/470201>

¹⁷ **Liverpool-Tasie, L.S.O., Wineman, A., Young, S., Tambo, J., Vargas, C., Reardon, T., Adjognon, G.S., Porciello, J., Gathoni, N., Bizikova, L., Galiè, A., and Celestin, A.** (2020). A scoping review of market links between value chain actors and small-scale producers in developing regions. *Nature Sustainability*. October. <https://doi.org/10.1038/s41893-020-00621-2>



The provision of these services – primarily by small traders, processors and cooperatives, but also by larger parties running a formal agribusiness – contribute to farmers’ livelihoods through technology adoption and productivity growth.

However, a flip side of informality arises when trust levels between value chain actors, such as traders and producers, is low, which results in actors not keeping to agreements. In addition, employees’ working conditions in informal companies are unregulated, meaning they can face exploitation, intimidation and other human rights’ violations.

Environmental sustainability

Smallholders can directly and indirectly impact the environment. Direct effects arise from technological choices – for example, in how efficiently they use energy sources like gas and electricity. Informal SMEs also influence the environment via their actions on farmers and/or other businesses. For example, traders and/or input suppliers can stimulate agricultural commercialisation, which can lead to more intensive input use and potentially result in environmental damage.¹⁸

¹⁸ For examples, see **Reardon, T., Liverpool-Tasie, L.S. O., and Minten, B.** (2021). Quiet Revolution by SMEs in the midstream of value chains in developing regions: wholesale markets, wholesalers, logistics, and processing. *Food Security*. <https://doi.org/10.1007/s12571-021-01224-1>

At the same time, input suppliers can provide information and training to farmers on wise use of crop protection products and animal feed. However, there is very little empirical evidence on the environmental impacts of informal agri-food SMEs. A preliminary conclusion is that environmental impacts of informal SMEs are context-specific and ambiguous, may be positive or negative, and that business informality makes it challenging for governments to steer the sector through environmental protection regulations or price (e.g. subsidy or tax) incentives.

A normative assessment framework to identify the potential contribution of the informal midstream to food system outcomes

There are two sides to informal businesses: they provide income opportunities and employment for unskilled workers and affordable food to low-income households. On the other hand, informal businesses are a source of economic insecurity and can distribute unsafe and unhealthy foods. To understand these two sides and identify the potential contributions of informal midstream businesses to food system outcomes, a normative assessment framework can help distinguish 'the good, the bad and the ugly' (see Figure 1).

	Examples of negative impacts on food system outcomes	Examples of positive impacts on food system outcomes
Livelihoods	Poor workers' conditions, insecure jobs, low wages, discrimination, and harassment	Good workers' conditions, job security, living wages, fair pricing, anti-discrimination, and harassment protocols
Environment	Environmental pollution, CO2 emission, resource depletion, loss of biodiversity	Environmental protection, CO2 emission reduction, resource and biodiversity restoration
Food and nutrition	Contaminated foods, unhealthy foods, high food prices, irregular food availability	Safe, healthy, affordable and available foods

Figure 1 A normative framework to assess the potential contribution of informal businesses to enhanced food system outcomes

Source: Authors' own.

5 Incentivising the informal midstream to enhance food system outcomes

To improve food system performance, it is necessary to work with and for the informal economy, which implies that governments will have to recognise informal economic activities. Policies aimed at improving the effectiveness of the informal food economy need to be evidence-based rather than perception-based, so that interventions can target areas where negative impacts prevail over positive contributions. However, to date, there is little empirical evidence of policy measures and interventions that incentivise positive contributions. Nonetheless, it is possible to use any available evidence to propose areas of attention in designing policies and interventions.

Businesses are more efficient when they operate in a well-established enabling environment; for example, with functioning roads, market infrastructure, energy supply, and information and communication technology (ICT) services. For example, the use of mobile phones among midstream actors has been associated with stable price setting and reduction of food waste, because of improved flows of information.¹⁹ The proliferation of ICT technologies also contributes to the financial inclusion of the informal sector in low- and middle-income countries through mobile money, credit and savings.²⁰ Resilience and efficiency among informal midstream businesses can also be enhanced through targeted and context-specific policies and interventions addressing the digital divide. The potential to incentivise positive behaviour through digital means is promising.

To support workers' livelihoods, policies should ensure productive social safety nets and economic integration programs for the poor, and social insurance combined with productivity-enhancing measures for non-poor individuals working in the informal economy.²¹ To reach these actors, interventions require data to identify informal workers and firms, their locations and characteristics. Having access to data on informal businesses is not only useful to support their economic performance through tailor-made interventions, but also in providing them with social protection in times of shocks and crises, such as the COVID-19 pandemic.

In the absence of government support, private actors in the informal economy support each other. Networks of midstream actors can be a source of social and financial protection in times of need. Network members can also inspire each other to adopt innovations or adhere to certain quality standards. Understanding the relations in these networks is key to stimulating the improvement of food system outcomes. These value chain actors should be seen as government allies in providing essential rural services.²²

¹⁹ **Jensen, R.** (2007). The digital provide: information (technology), market performance, and welfare in the South Indian Fisheries Sector. *The Quarterly Journal of Economics*, 122 (3): 879-924. <https://www.jstor.org/stable/25098864>

²⁰ **Jacolin, L., Massil, J.K., and Noah, A.** (2021). Informal sector and mobile financial services in emerging and developing countries: Does financial innovation matter? *The World Economy*. <https://doi.org/10.1111/twec.13093>

²¹ **Guyen, M., Jain, H., and Joubert, C.** (2021). Social protection for the informal economy: operational lessons for developing countries in Africa and beyond. ©World Bank. License: CC BY 3.0 IGO.

²² **Liverpool-Tasie, L.S.O., Wineman, A., Young, S., Tambo, J., Vargas, C., Reardon, T., Adjognon, G.S., Porciello, J., Gathoni, N., Bizikova, L., Galiè, A., and Celestin, A.** (2020). A scoping review of market links between value chain actors and small-scale producers in developing regions. *Nature Sustainability*. October. <https://doi.org/10.1038/s41893-020-00621-2>

6 Recommendations and next steps in research

Informal midstream businesses play a crucial role in the functioning and performance of food systems, but there is little empirically validated literature on their contribution. Given their importance, especially in the Global South, informal midstream businesses should be considered as critical actors. Recommendations for policy makers are as follows:

- **Informal actors must be taken seriously in the development of food system transformation agendas.** The crucial role that the informal sector plays in delivering food system outcomes must be acknowledged in order to enhance these outcomes through effective interventions.
- **For interventions to be effective, there must be a good understanding of the self-organisation of informal businesses.** It needs to be considered how informal midstream businesses make the market work for them. What currently works successfully can provide insight into how the informal sector is dealing with challenges, such as access to credit and market information, and how knowledge is developed and exchanged between businesses.

Based on the analysis conducted in this paper, further investigation into the following topics is highly recommended:

1. Literature on effective approaches, methods and tools to reach the informal midstream is limited. The motivation, organisation and governance of informal businesses needs to be much better understood if effective measures and incentives to reduce negative impacts and increase positive contributions to food system outcomes are to be deployed.
2. Literature cites different informality definitions and characterisations. It is therefore recommended to look more systematically at the typologies of informality in food systems to define what it is and why it persists.
3. As informal businesses are not officially registered, reliable data on their numbers, areas of economic interest and performance are generally unavailable. It would be valuable to collect such data.



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