

Chapter 3

Supply-side constraints

Stringent quality and safety norms limit access to major importing markets for many LDC fish exporters, given poor processing facilities and procurement methods and a lack of testing and certification of products throughout the value chain. Related high costs reflect general limitations in the business environment in LDCs, as well as sector-specific problems. The combination of poor human capital, deficient infrastructure, limited access to finance and weak administrative capacities restricts LDC capabilities in developing industrial standard fishery sectors. Such supply-side barriers prevent both coordination between actors along the value chain and the development of competent supply chains that can compete with those in leading exporting countries. Moreover, the prevalence of artisanal fisheries in LDCs means that operations are difficult to monitor and regulate, and are less likely to adhere to international standards. The substantial share of unregistered fishers in artisanal fisheries also often leads to violations of regulations on IUU fishing. Operations that register with authorities are often unable to attain a scale at which they can adopt internationally accepted best practices at acceptable costs, due to the high fixed costs involved. Other problems include unhygienic practices, a lack of ancillary support services, high input costs and a lack of physical infrastructure. For example, in Indonesia (a non-LDC developing country), artisanal fishers report the need for improved packaging and lower fuel and finance costs in order to learn and adapt new skills and technology, and firms report poor quality logistics infrastructure as an important cost driver (Lord et al., 2010). Such problems are generally more acute in LDCs.

Deficient transportation and storage

Inefficient transportation is a major constraint to fishery exports. Distance is the greatest determinant of transportation costs; efficient and cheap transport is crucial for exporters. The lack of paved roads in LDCs – on aggregate, 20.8 per cent of roads are paved, compared with 46.9 per cent in all developing countries – contributes to inconsistent delivery schedules and substantial fuel costs, even for transport over small distances (World Bank, 2017a). The lack of investment in and maintenance of roads is compounded by excessive bureaucracy at customs and border checkpoints, resulting in costs and delays for LDC fish exporters (Biggs, 2011). Exporters in sub-Saharan Africa are particularly disadvantaged because their internal transport costs – transporting exports from production and processing areas to ports of departure – are often greater than the costs of transport between countries. Equally important, the lack of access to cold-storage facilities at landing areas in LDCs severely limits the ability of artisanal fishers to participate in distribution chains that supply to developed countries. The lack of refrigeration means that LDCs cannot participate in the rising share of frozen and processed fish exports in world trade. Traditional processing and preservation techniques employed by artisanal fishers in the absence of refrigeration – such as the smoking of fish using kilns with firewood, charcoal or gas as sources of fuel among fishing communities in sub-Saharan Africa – can increase the concentration of harmful chemicals to limits above those specified by international regulations (Akande et al., 2011).

High electricity costs

Intermittent electricity supply and the costs of operating back-up generators in the event of power shortages make up a significant share of operating costs for small and medium-sized firms in LDCs. This restricts the number of fish processing businesses to a few large oligopolistic firms in the industrial sector. Moreover, frequent outages add friction to the supply chain – making processing operations less efficient – and the cost of running generators is generally much higher than of using electricity from the grid. In sub-Saharan Africa, the cost of operating generators can be up to three to five times greater than obtaining electricity from national distribution networks (Biggs, 2007). In 2013, on average across all LDCs, 21 per cent of electricity generated was lost in transmission and distribution; transmission and distribution losses in Cambodia, for example, accounted for 28 per cent of the total output generated, while the corresponding share for most leading non-LDC exporters was around 6 per cent (World Bank, 2017a).

Lack of access to finance

Processing firms must operate on a large scale in order to lower costs of compliance with developed country standards. However, access to credit is limited for small and medium-sized fishery enterprises in LDCs because of underdeveloped financial systems, inhibiting investment to expand and upgrade facilities (see table 11). Financial markets in most LDCs are characterized by high real interest rates and high collateral requirements, and banks are reluctant to lend to agribusiness ventures (Biggs, 2011).

Table 11. Domestic credit to the private sector, 2015

(Percentage of gross domestic product)

Five selected least developed countries	Bangladesh	43.9
	Cambodia	63.1
	Comoros	27.0
	Sierra Leone	5.2
	Uganda	14.6
Top five exporters	China	152.6
	Norway	138.4
	United States	189.0
	Viet Nam	111.9
	India	52.2

Source: World Bank, 2017a.

Financial systems are particularly inaccessible to low-income artisanal fishers, who often do not have sufficient registered assets to provide suitable collateral to banks. Working capital is difficult to obtain, and fishers often have to borrow from customers at high cost. For example, fishers operating on Lake Victoria often enter into advance payment arrangements with traders (Masette, 2011). The resultant pressure on fishers to meet contracted fish deliveries and repay traders can compromise catch quality. More generally, prepayments create a debt and poverty trap for fishers.

Resource management and data collection

Without accurate information on the number of fishers and incomes, as well as trends and data on current fish stocks, Governments in LDCs find it difficult to evaluate the impact of different production and export upgrading strategies (Josupeit, 2011). Wild fish are a common resource and sustainable catch levels can only be secured if Governments regulate the intensity of fishing activities. The relevant authorities in LDCs should collect data on the stocks of different species in order to monitor the impact of their policies. For example, the recognition by the Government of the importance of statistics on the fishery and aquaculture sector has been a major factor in China's rise as a leading global fish exporter. Monthly, mid-year and annual data are collected under multiple statistical indicators, and special institutes are commissioned to use the latest technology to verify the numbers of different species (FAO, 2012b). Regulators also collect data on wholesale market prices and both aquaculture and capture production by species, fishing area, fishing vessel, fishing gear and farming method, among other indicators. Such data collection systems would allow LDC Governments to evaluate their fishery resources and target policies accordingly.