

research laboratory in Kenya and Twiga Foods, a business-to-business logistics platform that helps farmers distribute bananas, tomatoes, onions and potatoes to 2,600 kiosks across Kenya and that uses machine-learning algorithms and blockchain technology to extend microloans to small businesses via mobile phones. Having piloted the platform with 220 small food retailers across Kenya over an eight-week period, the trial saw customers increase their order size by 30 per cent. The platform is expected to be rolled out across Africa by the end of 2018 (Wass, 2018a). Blockchain enthusiasts see in Blockchain an opportunity to promote financial inclusiveness in countries with large unbanked populations (International Finance Corporation, 2017).

As noted in Section 3.1, Blockchain could potentially improve the efficiency of export procedures and help to administer single windows in a more effective way, by allowing all authorized parties to interact in real time and in a fully transparent and secure manner; by reducing the volume of communications among parties, given that every transaction is time-stamped* and recorded on the blockchain in a near immutable way and is visible to all concerned; by improving the traceability of transactions; and by making it possible to automate certain processes via the use of smart contracts. If deployed appropriately at a cost that justifies the benefits, Blockchain could contribute to the implementation of the TFA and make participation in international trade easier for MSMEs. The ICC estimates that the TFA could increase MSMEs' exports by up to 80 per cent in some developing economies (International Chamber of Commerce, 2017b).

Blockchain could not only make it easier for MSMEs to interact with customs authorities, but also with consumers and businesses along the supply chain, by reducing transaction costs, thereby enabling MSMEs to grow their exports. As a recent report by the European Parliament noted, MSMEs could be one of the greatest beneficiaries of Blockchain (European Parliament, 2018).

Blockchain offers opportunities to track the origins of products more easily (see Section 4.1(a)), and this may also help small producers from developing countries to prove the quality of their products and to negotiate fair prices. In fact, Oxfam announced in August 2018 that it had started a pilot using the technology to help Cambodia's rice farmers receive a better price for their crops. Small farmers often lack power and information for negotiating with middlemen, traders and companies on price and other conditions. The BlocRice application aims at enhancing transparency and traceability along the supply chain to empower Cambodian rice farmers in their price negotiations and in finding buyers.¹¹ In the same spirit, Blockchain could help small producers to defend their traditional knowledge and IP rights.

E-procurement is also widely advocated as an effective tool to encourage the participation of MSMEs in public procurement tenders. Blockchain technology could improve the efficiency of tender processes and reduce costs for smaller suppliers to participate in government procurement markets.