Endnotes

- 1. See https://www.agridigital.io/
- 2. See https://www.provenance.org/case-studies/co-op
- 3. See http://www.carrefour.com/news/4-new-food-quality-commitments
- 4. See https://www.provenance.org/case-studies/martine-jarlgaard
- 5. Discussion with Walmart officials.
- 6. See https://www.provenance.org/tracking-tuna-on-the-blockchain
- 7. See https://www.provenance.org/case-studies/fairfood
- 8. See http://www.ics-shipping.org/shipping-facts/shipping-and-world-trade

9. National and international organizations having conducted surveys of firms focused on MSMEs include those undertaken by the International Trade Centre (ITC), the US International Trade Commission (USITC), the European Commission, the World Bank, the OECD and the WTO. For a recent synthesis of barriers faced by MSMEs, see WTO (2016c).

10. See https://www.fasttracktrade.co

11. See https://cambodia.oxfam.org/what-we-do-resilience/blockchain-livelihoods-organic-cambodian-rice-blocrice-project

- 12. See https://sustainabledevelopment.un.org/sdg9
- 13. See https://blockchain.info/de/charts/transactions-per-second?timespan=1year

14. See https://etherscan.io/chart/tx. Ethereum's block limit is accounted for differently than through pure block size – as is the case for Bitcoin. Each Ethereum transaction is assigned a fixed amount of "gas". "Gas" is the execution fee for every operation made on Ethereum. Its price is expressed in ether and is decided by the miners. Each Ethereum block has a "gas limit". The block gas limit is determined by algorithm and vote by miners, and differs from block to block. The "gas limit" for each block determines how many transactions fit the block. In theory, both Bitcoin and Ethereum have a transaction capacity over 1,000 transactions per second.

15. For a detailed and relatively non-technical presentation of proposed solutions, see https://hackernoon.com/blockchains-dont-scale-not-today-at-least-but-there-s-hope-2cb43946551a

16. See, for example, "Future of Blockchain: Will Hashgraph make Blockchain obsolete?", *TechStartup blog*, 14 March 2018. Available at: https://techstartups.com/2018/03/14/future-of-blockchain-will-hashgraph-make-blockchain-obsolete/ Accessed on 8 May 2018.

17. For a technical note on chain interoperability solutions, see Buterin (2016).

18. See https://sawtooth.hyperledger.org/docs/core/releases/1.0/introduction.html and https:// www.hyperledger.org/projects/hyperledger-burrow