

## **The diffusion of technology and contractual practices among African manufacturing firms**

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### **Abstract:**

Technological progress and reduced transaction costs are often argued to be important for growth in the non-farm sector in Africa. Problems related to imperfect information and market failures are widespread in the continent. In response, African firms rely heavily on relationships and the sharing of information within networks in order to cut costs and improve business performance. One concern is that, in such a business environment, the diffusion of technology and new ideas on how to do business may be localized, i.e. slower between networks than within. The welfare cost, in terms of lost efficiency, of slow diffusion between networks is potentially large, especially if networks are small. In this paper we document empirical patterns of technology usage and contractual practices amongst manufacturers in Ethiopia and the Sudan. Under the null hypothesis that diffusion is non-localized, the degree to which decisions and outcomes related to technology usage and contractual practices are correlated between firms is independent of whether firms are close in a business network sense. To test this hypothesis we construct network variables using novel data on whether any two firms in our sample do business with each other; whether they buy inputs from the same supplier or from suppliers in the same geographical region; and whether they sell final goods to the same customers or to buyers in the same geographical region. We then investigate whether there is any evidence that technology usage and contractual practices are more strongly correlated between firms that are part of the same network than between firms that are not. Preliminary results suggest that technology usage and contractual practices are localized for several variables, for example how to use IT (e-mail or web-based marketing) and how to source inputs (by means of direct import or not).