

sets for our sample of U.S. and Japanese firms. The cumulative density for Japanese firms dominates that for the U.S. in the sense of first-degree stochastic dominance, so that Japanese firms carry more net accounts receivable (i.e. hold larger stakes in the production chain). Our model attributes the higher working capital to the greater role of smaller firms and longer production chains in Japan. Our preliminary observations suggest that this is a promising hypothesis to explore further in more systematic empirical studies what reconstruct the web of manufacturing relationships.

5 Working Capital

So far, we have taken for granted that firms in the production chain can find enough working capital to finance the initial costs of production (the “triangle” of costs), and to build up accounts receivable. However, the lack of working capital will be a constraint on setting up multi-layered production hierarchies, even if such a production hierarchy has positive net present value. The constraint will bind especially hard for firms in developing countries.

External finance is unlikely to fill the gap, given the difficulties in raising finance from outside sources. Some evidence for developed countries is provided by Berger and Udell (1995) for the United States, Voordeckers and Steijvers (2005) for Belgium and Poutziouris et al. (2005) for the United Kingdom. However, the constraint on raising outside finance is especially important in emerging market countries, where the factors that limit financing of firms in advanced countries can be expected to bite much harder. From their survey of firms in India, Allen et al. (2005) note the overwhelming importance of funding from family and close friends for firms that are in their expansion stages. More to the point, the constraints on raising outside finance can be expected to bind particularly hard for the purpose of raising