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Business groups, foreign direct investment, and capital goods trade: The import behavior of Japanese affiliates

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ABSTRACT

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We examine the impact of buyer–supplier relationships within business groups on capital goods trade by taking into account potential simultaneous effects of business group ties on foreign direct investment. We posit that (1) foreign affiliates of business group firms have a greater propensity to import capital goods from the home country, increasing home country exports; (2) if the establishment of overseas affiliates by business group firms attracts foreign direct investment by their capital goods suppliers, business group ties are localized and the 'trade creating' impact of business group ties may disappear or even be reversed. Empirical analysis of capital goods imports by 1790 manufacturing affiliates operated abroad by Japanese multinational firms, combined with information on linkages with machinery suppliers within horizontal and vertical business groups, provides broad support for these predictions. Our findings suggest that it may be incorrect to infer from the absence of a simple relationship between business group ties and trade that such ties are unimportant; instead, intra-group ties may be replicated abroad through foreign direct investment. *J. Japanese Int. Economies* **26** (2) (2012) 187–200. University of Leuven, Belgium; UNU-MERIT, The

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1. Introduction

There has been substantial interest in the influence of inter-firm ties within business groups on international trade flows (see e.g. Rauch, 2001). Studies have suggested a trade creating impact of business networks through intra-group dissemination of information on overseas business opportunities, easier contract enforcement within business groups, and cross border replication of vertical trade relationships (e.g. Combes et al., 2005; Rauch, 1996; Belderbos and Sleuwaegen, 1998; Greaney, 2003). In the context of Japanese business groups (*keiretsu*) the emphasis has in contrast been on the potential trade *reducing* effects, in particular of trade with firms outside the business group. Spencer and Qiu (2001) show that network ties within business groups can indeed reduce imports, but that this effect can derive from efficiency enhancing behavior in buyer–supplier relationships. Buyers and sellers in vertical trade relationships may prefer to invest in rent creating relationship-specific investments to improve transaction efficiency. The sunk nature of these investments creates switching costs and reduced purchases from unrelated – and thus-foreign suppliers.[1]

Business group ties do not only affect trade, they also influence foreign direct investment (FDI) decisions. Prior investments by member firms in a location may create informational externalities and reduce uncertainty concerning the cost and benefits of investment locations to other firms within the group. Investments may also lead to agglomeration externalities through the local provision of specialized intermediates and services and by inducing training of specialized labor. There is ample evidence supporting the notion that these factors cause Japanese business group members to cluster their foreign investments abroad (Belderbos and Carree, 2002; Head et al., 1995; Belderbos and Sleuwaegen, 1996; Blonigen et al., 2005; Martin et al., 1999; Smith and Florida, 1994; Henisz and Delios, 2001; Belderbos et al., 2011).

Although the (potential) impact of business group ties on both trade and FDI has been established, prior empirical research has not taken FDI and trade into account simultaneously.[2] In this paper, we demonstrate that the trade and FDI effects of business group ties are intrinsically linked, and that this interrelation can lead to ambiguous effects of business group ties on trade. We extend the analysis of the trade effects of business groups by focusing on the import behavior of the foreign affiliates of Japanese firms. Empirically, we assess how existing relationships of firms with machinery suppliers within vertical and horizontal Japanese business groups (*keiretsu*) influence the import trade behavior of the firms' foreign affiliates, while we take into account that business group ties can at the same time induce FDI by the machinery suppliers. Foreign affiliates of business group firms are likely to exhibit a greater dependence on imports from Japan due to existing long-term trade relationships with intra-group machinery suppliers in Japan. However, when the machinery producers of the business group follow their client firm in relocating manufacturing operations abroad, imports are substituted for by machinery purchases from the overseas plants of the group machinery suppliers, and the positive impact on imports of business group ties may disappear. This is not because network ties are not important, but because network ties are replicated abroad. In an analysis of capital goods trade by 1790 overseas manufacturing affiliates of Japanese multinational firms, drawing on unpublished data from an official survey conducted by the Ministry of Economics Trade and Industry (METI), we find broad support for these arguments.

We examine affiliates' imports of capital goods, i.e. manufacturing machinery. From several perspectives, we see this as an interesting focus to examine the role of business group ties on trade. Capital goods exports have been responsible for an increasing share of Japan's trade surplus, partly due to the investment needs of Japanese multinationals' foreign affiliates. The main vertical and horizontal

[1] Head et al. (2004) apply this model to an empirical analysis of US auto parts exports to Japan, and confirm a negative impact of established ties within vertical business groups (keiretsu) on Japanese car parts imports.

[2] A partial exception in terms of theory is Greaney (2003). Extending the analysis of business ties to foreign direct investment in a two country model, her findings suggest that the country with a stronger presence of business groups will exhibit larger outward investments with foreign affiliates engaged in exports to Japan.