

CDIA: WHAT ROLE DO DIFFERENCES IN TECHNOLOGY PLAY IN VERTICAL AND HORIZONTAL DIRECT INVESTMENT?

by $skilldiff \times tech$, is negative, meaning that the closer the recipient country's technology is to the world average, the more vertical direct investment it receives; thus, better technology has an amplifying effect. The last term, $skilldiff \times gdpdiff$ is small and statistically insignificant, as it is in Ihrig (2005). Unfortunately, when the sample is split, none of the results for the emerging market economies are significant, and the results for the last three variables of the advanced economies sample—those that capture the vertical direct investment motive—are not significant either. Nonetheless, though they cannot be relied upon, they do suggest that the sample for advanced economies follows the same pattern as the full sample: supportive of vertical direct investment from Canada but not horizontal.

Interpretation

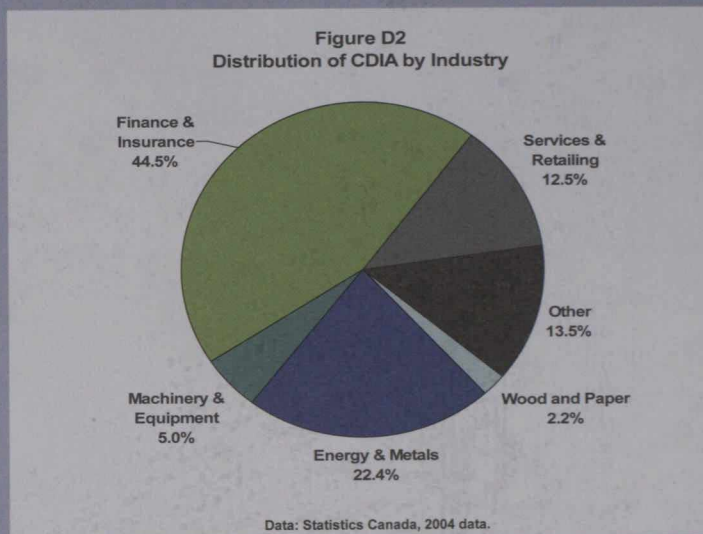
As mentioned earlier, it is from one perspective surprising that the results for Canada differ from those for the U.S. However, the U.S. is the world's dominant economic power, and home to numerous large firms engaging in foreign direct investment—that is, multinational enterprises. Ihrig's findings of support for U.S. horizontal direct investment therefore understandable, as larger firms are more likely to have the resources to duplicate production abroad.

But what about Canada's case? Why does the evidence point towards vertical rather than horizontal direct investment?

First, consider the distribution of Canada's foreign direct investment by industry, as shown in Figure D2. CDIA is dominated by the Finance and Insurance category, which comprises nearly half (45 per cent) of the stock of CDIA. Investments in Energy and Metals follow at 22 per cent, reflecting the importance of resource-seeking direct investment. These two categories alone comprise two-thirds of all CDIA, and both fit with the motive for vertical direct investment. Certainly not all CDIA in these categories is vertical, but the vertical logic fits: firms seeking to optimize production across different countries can locate business processes such as finance and insurance overseas, or choose to invest in raw materials such as energy and metals that they require for their businesses.⁵

Secondly, lower transportation costs, the rapid and continuing development of information and communications technology, and lower trade and investment barriers, have helped drive the international fragmentation of production and thus the growth of global value chains worldwide. In this context, finding support for CDIA being motivated vertically rather than horizontally makes sense, as Canadian firms work to stay abreast of global competition by fitting into and making use of global value chains. But how do the different technology levels found across countries fit into these decisions?

If technology is thought of as another factor of production similar to the standard ones, then the motive for vertical direct investment would say that firms seek differences in labour, capital, and technology, when deciding where to invest. The results found here do not support that view for Canada. Instead of technology differences amplifying the effect of $skilldiff$ on CDIA, it is having technology closer to the world average that is linked to more CDIA. Thus the suggestion is that Canadian firms look for differences in labour and capital, but similarities



⁵ Although differences in skilled labour are not a perfect proxy for country differences in other endowments such as natural resources, a lower abundance of skilled labour would make it more difficult to exploit those endowments, and thus increase the likelihood of investment in those fields.