

Firm Globalization, Intangible Assets, and the Measurement of National Output and Trade

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As has been pointed out by tax authorities and others, a firm operating in several countries is often able to reduce its tax burden by shifting the nominal location of its activities from high-tax to low-tax jurisdictions. That is particularly easy if much of the income of the firm is based on the earnings from intangible assets. Some examples are described in Lipsey (2010) and many papers on the problems and strategies of tax authorities. The purpose of this paper is to assess the consequences of tax avoidance and other corporate strategies, as well as the ambiguities in assessing the location of intangible assets, on the measurement of national product, the location of production of individual products, the direction of trade, and the competitiveness of firms and countries.

The fundamental problem posed by intangible assets is that they do not have a clear geographical location. They may be owned by an entity that has a definite location, such as a firm headquarters or a branch of a firm, but if the firm is multinational, they may be used in production by other parts of the firm located in different countries. There may or may not be substantial costs of transmission, and the nominal owner of the asset may or may not charge the other units for the use of the asset. If the asset is a patent or a copyright, the use by others units may be obvious, but if it is a technique of production, management or distribution, it may be impossible to identify. If ownership of the asset is transferred from a unit in one country to one in another country, the subsequent

production from that asset is attributed to the recipient country. Much has been written about how this ambiguity is used to avoid or reduce taxation on corporate earnings, but the ambiguity would remain if there were no corporate taxes. The reason for the assignment might be not only tax minimization but also safety from regulation or other interferences by host country governments. The consequences from the ambiguities in the location of production include ambiguities in the size and composition of national outputs of the countries in which the multinational firm operates, the host country's productivity, the size of exports and imports and the current account, the host and home countries' competitiveness and their comparative advantages in trade.

Since the U.S. data for multinational firms are more detailed than those of other countries, the paper will begin with them. We will attempt, first, to estimate how much of U.S. firms' output in host countries is associated with affiliate holdings of intangible assets or with financial assets that can be moved among affiliates by the parent company. This is not an amount that can be found in a questionnaire response, but must be estimated by comparing firm and affiliate behavior in different locations with average firm and affiliate behavior. We will use these deviations to estimate distortions in the output and trade of affiliates and their parents and therefore also of host countries and the United States. Another source of information is the comparison between U.S. affiliate reports of their trade with the reports issued by their host countries, following the comparison for the insurance industry in Lipsey (2010).

Since most countries do not collect information on their firms' operations abroad, it is possible to carry out similar calculations for only a few. Both Germany and Japan have surveyed their firms' foreign operations, and it should be possible to make some

parallel calculations for them, although the Japanese data are short on detailed balance sheet information and the German data are short on foreign affiliate operations data.

Reference

Lipsev, Robert E., (2010) "Measuring the Location of Production in a World of Intangible Productive Assets, FDI, and Intrafirm Trade, Review of Income and Wealth, forthcoming.