

Taking Account...

BEA study explores MNE knowledge flows

Recent research has explored the connection between the transfer of knowledge from U.S. parents to their foreign subsidiaries and the flow of products between the two entities.

A new study by Marilyn Ibarra-Caton, an economist at the Bureau of Economic Analysis (BEA), adds significantly to the economic literature on this timely topic by examining whether shared production between parents and subsidiaries is associated with more assistance in the form of headquarter services.

Ibarra-Caton's study focuses on the composition of headquarter services and the cross-industry differences in how the level of vertical integration of subsidiaries within multinational enterprises (MNEs) affects the provision of specific headquarter services.

In general, the results show that the relationship is complex. Overall, there is substantial heterogeneity both across countries and within industries in the types of knowledge flows provided by U.S. parents to their subsidiaries.

The paper finds that product outflows from vertically integrated foreign subsidiaries to the parent are positively correlated with knowledge flows from the parent to the subsidiary.

More specifically, the evidence suggests that vertically integrated foreign subsidiaries

receiving technical assistance in the form of research and development services from the headquarter are more likely to transfer finished products back to the headquarter.

If a subsidiary can generate a competitive advantage through strong headquarter-subsidiary relationships in these high-value services, the advantage is likely to improve the cost efficiency of the firm's global operations.

The study also suggests that subsidiaries that operate to meet the demands of the local market exhibit low knowledge flows from, and low product flows to, the parent because of the greater autonomy of the subsidiary to source inputs locally.

The level of interdependence between the headquarters and the subsidiaries is measured by the subsidiaries' level of integration in the firm's global value chain.

The most relevant headquarter services for this study are knowledge-intensive intangible services such as intellectual property research, research, development and testing, market research, engineering and design.

These types of headquarter services may be viewed as complementary to the production activities of vertically integrated foreign subsidiaries.

Ibarra-Caton's research is also notable for the breadth of the data it used. Ibarra-Caton used confidential business survey data collected by BEA on in-

trafirm sales and purchases of inputs by foreign subsidiaries over 2006–2011. These data cover the universe of U.S. multinational enterprises and U.S. trade in services and are granulated by many types of headquarter services.

Knowledge flows in fact were measured for 12 headquarter service types: accounting, advertising, computer and data processing, database and other information, industrial engineering, education and testing, engineering, rights related to industrial processes (industrial processes), legal, maintenance, management, and research and development.

This approach stands in contrast to the approach of other studies, which generally have relied on highly aggregated measures of knowledge flows.

The study will help BEA assess the quality of reporting of intrafirm trade in services and to understand the effects of production sharing within multinational enterprises on the U.S. economy.

(This summary was prepared by the SURVEY OF CURRENT BUSINESS staff in conjunction with the paper's author. The paper is available on the [BEA Web site](#).)

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