Taking Account...

BEA paper looks at trade in services in I-O models

The degree to which services are imported from different geographic regions plays an important role in regional input-output (I-O) models.

To estimate the economy-wide effects that result from the initial change in economic activity, regional I-O models produce multipliers for each local industry that can be affected by the initial change in economic activity. If some of the services used as intermediate inputs are provided by industries outside a region, the impacts will be smaller; that is, the value of the multipliers associated with the local industries that use imported services will be smaller as new rounds of spending in the economy diminish more quickly.

In a recent paper, Ledia Guci and Charles Ian Mead, economists at the Bureau of Economic Analysis, review the literature on the tradability of services for insights that may improve the design of economic impact studies based on regional I-O models.

Because a comprehensive set of statistics on U.S. interregional services trade does not exist, regional I-O models built to cover different regional economies must rely on assumptions to identify service imports from other regions. Some regional I-O models base these assumptions on an industry's share of local earnings to the industry's share of national earnings. Other models make more general sets of assumptions about the supply of services to an initially affected industry.

Little consensus emerges from the existing literature. Yet some practical conclusions can be drawn. Despite disagreement on the tradability rankings of services, there are a handful of services—such as maintenance and repair, waste management, and landscaping—that are consistently classified as nontradable; that is, they are unlikely to be provided from another location. In contrast, a wide range of financial services and professional services may easily be provided from distant locations and are considered highly tradable.

The paper notes that within services industries that are classified as nontradable, there are services that can be tradable—for example, banking is often classified as a nontradable industry, but financial investment services are often classified as highly tradable.

Some characteristics of a particular service, such as the degree to which production can be segmented into different tasks that can be performed offsite, may be relevant when making assumptions about whether the service is produced by or purchased from other businesses within a region.

A bill-of-goods approach can be used to improve the results of regional impact studies. This method replaces assumptions in the model with more location- and industry-specific information.

In the absence of such information on interregional service trade, good judgment can help when making assumptions on whether a particular service is supplied locally. Factors to consider are the production process, service delivery, and barriers to trade for the particular region, industry, and study application.

The paper provides insights into how these factors affect the results of a regional impact study. A multiunit firm is more likely to import services than a single establishment, leading to an overall smaller effect on the regional economy. A higher overall effect may be more appropriate for services provided in a highly regulated state. Technological change can quickly erode the multiplier effects for industries if it changes the delivery methods.

These insights stress the importance of understanding the local economy and making conservative assumptions when using the bill-of-goods method. Many traditionally nontradable services have likely become much more tradable due to enhanced technology. For example, a local architectural firm may be hired by a business, but much of the work may be completed outside the area. In this case, the most conservative assumption that can be made when the bill-of-goods method is used is that the service is produced outside the region.