

## **How would formulary apportionment work?**

Under the current global system, multinational firms determine their profits separately in each tax jurisdiction in which they operate. A system that apportioned profits by formula would allocate a firm's worldwide income across countries based on its sales, assets, and payroll in each jurisdiction.

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## **HOW IT WORKS**

Under formulary apportionment, a multinational corporation would allocate its profits across countries based on its sales, payroll, and capital base in each jurisdiction. It would pay domestic corporate taxes on the share of its worldwide income that is allocated to each jurisdiction. An alternative would base a corporation's taxes only on the fraction of its worldwide sales destined for domestic consumers, a so-called "destination-based" corporate profits tax.

Many states in the United States use a formulary apportionment system to determine their taxable share of US-source corporate profits. The formulas have been historically based on a weighted average of the shares of sales, payroll, and assets in the state. But recently, some states have shifted to a sales-only apportionment system in order to remove any incentive to shift employees or facilities to other jurisdictions.

The adoption of formulary apportionment by states was motivated by the widespread perception that states are so highly integrated economically that it is impractical to try to determine how much of a firm's income is earned by an affiliate in one state and how much by an affiliate in another.

## **ADVANTAGES OF FORMULARY APPORTIONMENT**

Formulary apportionment would remove the current artificial incentive for multinationals to shift reported income to low-tax locations because tax liabilities would be allocated by a measure (or measures) of their real economic activity in each location. These measures are far more difficult to manipulate for tax purposes than the division of profits among separate entities within a firm.

Formulary apportionment would also reduce the tax system's complexity and the administrative burden it imposes on firms. Firms would no longer have to allocate income or expenses across countries for tax purposes. There would no longer be a need for controlled foreign corporation rules because all profits assigned to foreign activities would be exempt. For this reason, there would

also no longer be a need for foreign tax credits, so firms would have no incentive to manage profit repatriation to maximize the availability of offsetting tax credits. Because intra-firm transactions would not affect the measure of domestic profits, there would be no need for transfer-pricing rules for intra-firm transactions, which would remove a major source of dispute between corporations and tax authorities.

The United States and other high-tax countries would gain substantial revenue under formulary apportionment because firms' shares of real economic activity in these countries typically exceed the shares of income they now report as originating there. The move to formulary apportionment could therefore be made revenue-neutral by substantially reducing corporate tax rates. Moreover, because it would make a multinational corporation's tax liability independent of both its legal residence and its legal form (for example, branch or subsidiary), formulary apportionment would also remove any incentive for corporate inversions in which firms from two countries merge to move around their tax liabilities.

## **PROBLEMS AND DISADVANTAGES**

Formulary apportionment would require an agreement among the major economies to scrap the current separate-entity system and to agree on how to allocate corporate income among jurisdictions. It would also require agreement on common accounting methods for measuring corporate profits.

A unilateral move by the United States to formulary apportionment would result in double taxation of some income of multinationals and exemption of other income. That's because different countries would use radically different methods of allocating income among jurisdictions.

A formulary apportionment system would introduce new boundary problems between high-tax and low-tax activities. While the current separate-entity system creates incentives to shift reported profits among separate firms within a multinational corporation, formulary apportionment provides incentives to shift profits between multinationals and separately owned firms. For example, if physical assets are one of the determinants of the location of a multinationals' profits, a firm might well have an incentive to contract out its manufacturing to independently owned firms in high-tax jurisdictions instead of establishing a manufacturing subsidiary within the firm.

Formulary apportionment does not provide an answer to how to locate a firm's intangible assets, which are a significant share of the value of some of the leading multinationals, especially in the high-tech and pharmaceutical sectors.

Some analysts and commentators favor sales- or destination-based allocation of corporate profits because firms are least likely to reduce sales in a jurisdiction simply to reduce tax liability. A problem with a sales-based allocation, however, is that multinationals can then avoid tax on the profits from their intangible assets by selling their products to independent distributors in low-tax countries, who would then resell them throughout the world. Although rules could be written to prevent abuses of this type, they would be cumbersome and hard to enforce because most of the output of multinationals is sold primarily to other companies in complex supply chains rather than directly to final consumers.

### Further Reading

Altshuler, Rosanne, and Harry Grubert. 2010. "[Formula Apportionment: Is it Better than the Current System and are there Better Alternatives?](#)" *National Tax Journal* 63 (4): 1145–84.

Avi-Yonah, Reuven S., and Kimberly A. Clausing. 2007. [Reforming Corporate Taxation in a Global Economy: A Proposal to Adopt Formulary Apportionment](#). Discussion paper. Washington, DC: The Hamilton Project.

Graetz, Michael, and Rachael Doud. 2013. "[Technological Innovation, International Competition, and the Challenges of International Income Taxation](#)." *Columbia Law Review* 113 (3): 347–446.