

Collection of data on income and other taxes in surveys of U.S. multinational enterprises

Daniel R. Yorgason

U.S. Department of Commerce
Bureau of Economic Analysis

Washington, DC

Paper prepared for the
4th Joint Session of the Working Group on International Investment Statistics and
the Working Party on Globalisation of Industry
Organisation for Economic Co-operation and Development
8 October 2009
Paris, France

Collection of data on income and other taxes in surveys of U.S. multinational enterprises

Daniel R. Yorgason

U.S. Bureau of Economic Analysis

The U.S. Bureau of Economic Analysis (BEA) collects data on corporate income taxes and other taxes on multinational enterprises (MNEs) with a presence in the United States, either as direct investors or direct investment enterprises. These data are collected as part of larger surveys that gather financial and operating information from MNEs, basically, statistics on the activities of multinational enterprises (AMNE statistics). Annual and benchmark surveys of U.S. direct investment abroad (outward) collect tax data from both U.S. parent companies and their foreign affiliates, while annual and benchmark surveys of foreign direct investment in the United States (inward) collect tax data from U.S. affiliates of foreign MNEs. These surveys, which have been collected on a yearly basis since 1982 for outward data and since 1976 for inward data, gather comprehensive financial data on MNEs as well as data on a wide range of activities undertaken by MNEs, such as employment, foreign trade, R&D, value added, and stocks and flows of capital and other assets.

BEA's MNE surveys explicitly collect two type of tax data: income taxes and "taxes other than income and payroll taxes" (also referred to as indirect business taxes). Both types of taxes exclude production royalty payments made to governments for natural resources, as well as payroll taxes. Payroll taxes are included in employee compensation, but they are not separately identified.

Income tax data reported for entities residing in the United States cover provision for federal, state, and local income taxes. For foreign affiliates, income taxes are also reported regardless of the level of government at which they are imposed.

Indirect business taxes include a wide variety of taxes such as sales taxes, value added taxes, and excise taxes; property taxes; import and export duties, license fees, and various other taxes, fines and penalties. Also reported indistinguishably are nontax payments to government, although these are likely quite small compared to the taxes in this category.

Data on corporate income taxes are collected indistinguishably from all other types of income taxes. That is, the survey questions request data on income taxes generally, without regard to whether the income is earned by a corporation or some other type of entity. As with other survey items, income and other tax data are reported on an accrual basis, in which the taxes are recorded in the period in which the tax liability accrues. The actual payment of taxes may occur in other, typically later, periods.

Income tax data collected on the surveys pertain only to income taxes of the country in which the entity in question resides. So, for U.S. parent companies and U.S. affiliates of foreign MNEs, the tax data refer to U.S. income taxes and other U.S. taxes, and for foreign affiliates of U.S. MNEs, the tax data refer to host country taxes. Although the repatriation of income from foreign affiliates may be subject to tax in the United States, this is not reportable on the survey of foreign affiliates—instead it is reportable on the survey of the U.S. parent company.

BEA surveys of MNEs require consolidation of U.S.-resident entities—U.S. parent companies and U.S. affiliates of foreign MNEs—so the tax data collected for each such entity apply to the U.S. enterprise as a whole, regardless of the range of industries spanned by the enterprise. For foreign affiliates, the situation is a bit more complex. Although BEA surveys define entities in a way that can result in a limited amount of consolidation within in a given country, complex ownership structures and different entities operating in different industries can result in multiple foreign affiliates of a single U.S. parent company residing in any given host country. Consequently, in BEA's published tabular data, the foreign affiliates of a given U.S. parent may contribute to multiple industry totals in a given country. For example, the income and other tax payments from French affiliates of a particular U.S. company could contribute separately to totals in the automobile manufacturing industry, the finance industry, and the wholesale trade industry.

BEA data on tax liabilities accrued by MNEs are used for a variety of purposes, both informational and analytical. At the most basic level, data on income taxes, which are reported on the income statement in the MNE surveys, are used to illustrate the

difference between the pre-tax and after-tax net incomes of MNEs as a group or of given subsets of MNEs. For example, in 2006, pre-tax net income for U.S. parents was \$1,011 billion. Income taxes of \$231 billion resulted in after-tax net income of \$780 billion. For U.S. affiliates, income taxes of \$54 billion brought net income from a pre-tax total of \$189 billion to an after-tax total of \$134 billion. For foreign affiliates, income taxes of \$114 billion reduced net income from a pre-tax total of \$781 billion to an after-tax total of \$667 billion.

Beyond facilitating comparisons between pre-tax and after-tax net income, the income tax data can be used to compute the average burden of taxes borne by MNEs. The standard measure used in this context is the effective average income tax rate: the total income tax liability of individual entity, or of a group of entities, divided by the corresponding pre-tax net income. Effective average income tax rates typically differ both from effective marginal income tax rates—the actual tax rate applicable to the next unit of income received—and from statutory marginal income tax rates—legally mandated tax rates on the next unit of income—for a number of reasons including factors such as deductions, credits and movement through tax brackets. For instance, income earned by U.S. parent companies from equity investments in foreign affiliates is in most cases reportable on BEA surveys, but is subject to U.S. taxes only if that income is repatriated. Thus, a parent company that repatriates all its share of an affiliate’s net income would likely face a higher effective tax rate than one that repatriates some or none of that income.

Effective average income tax rates, computed from MNE income and income tax data and expressed as percentages, are shown for selected aggregations of MNEs in tables 1-3. (Data for both U.S. affiliates and foreign affiliates applies only to majority-owned affiliates.) At highly aggregated levels, these rates show relatively little year-to-year variation (table 1). Effective rates in the United States are much higher than the average for foreign affiliates. In addition, rates for U.S. affiliates in manufacturing (about 34 percent) have generally been considerably higher than those for by U.S. parents in manufacturing (about 20 percent), perhaps reflecting a different mix of manufacturing industries or systematically different sources of income. However, the difference

between non-manufacturing U.S. affiliates and non-manufacturing U.S. parents is much smaller.

At levels of greater disaggregation, differences between rates for U.S. parents and U.S. affiliates are much more pronounced, as are differences between rates in individual industries. For example the rates in retail trade were more than twice as high in 2006 as rates in real estate (table 2). In part, the additional variation in this table as compared to table 1 reflects the thinness of the data in some industries. Individual entity effective rates can vary sharply, both from year to year and from one another, so if a given aggregation is not sufficiently dense, continuity from one year to the next may be lacking and differences in a single year “snapshot” may not accurately reflect real long term differences. One other reason for the variation in this table, and particularly for the high rates shown for U.S. affiliates in retail trade and “professional, scientific, and technical services” is that the calculations do not exclude entities with losses. Such loss-generating entities—whose distribution will vary across industries, time, and type of entity—have the effect of raising the measured effective tax rate, as they pay no income tax, but reduce the value of the item (net income) against which income taxes are scaled. This illustrates the problems of calculating effective tax rates from tabular data covering multiple business entities.

Although in aggregate the effective average income tax rates for foreign affiliates (about 14 percent) is only half that for U.S. affiliates and is much lower than that for their U.S. parents, the range of effective rates across both regions and countries is quite broad (table 3, first column). Rates in Africa and the Middle East were higher than U.S. rates, while rates in certain European countries and most countries in “Other Western Hemisphere” were below 10 percent. Given the wide differences in rates between countries, it would be surprising if decisions about the location of foreign direct investment were not influenced by these differences in tax regimes.

One weakness of the measure of the effective average income tax rate—a weakness that can be largely corrected with other data collected on BEA surveys—is particularly relevant for the foreign affiliate data. Specifically, it is that the indirect

ownership of affiliates can cause part of net income (the denominator in the measure) to be double counted. For example, if a U.S. parent owns all of foreign affiliate *A*, which in turn owns all of foreign affiliate *B*, then the profits of *B* will be counted once for itself and (at least the after-tax portion) once as they contribute to *A*'s income. However, given the taxation structure in most countries, these profits will not be taxed "in full," and may not be taxed at all, by the government of affiliate *A*. Thus, the ratio measuring the effective tax rate will be lower than if affiliate *B* were not indirectly owned.

A rough idea of the significance of double counting can be seen by comparing the second column in table 3 to the first column. In the second column, income obtained from equity investments (most, but not all, of this from investments in other foreign affiliates) is excluded from the denominator in the effective average income tax rate calculation. This alternative metric produces much higher estimates of the effective rates, twice as high in aggregate and much higher than that for some countries. For example, the alternative measure is twelve times higher than the conventional measure for the Netherlands.

As with income tax data, data on the other taxes reported on BEA's MNE surveys—the indirect business taxes—are used in a variety of ways. One key use is in the calculation made by BEA of MNE value added. BEA computes value added by summing up all costs incurred (except for intermediate inputs) and the profits earned in production. Indirect business taxes are one of the cost categories used in this calculation.

In the United States, indirect business taxes accrued by MNEs in 2006 were less than income taxes accrued: 26 percent less for U.S. parents and 5 percent less for U.S. affiliates. For foreign affiliates, in contrast, indirect business taxes were 45 percent higher than income taxes. One of the reasons for the higher relative importance of indirect business taxes for foreign affiliates than for U.S. parents is that the effective income tax rate is lower for foreign affiliates than for U.S. parents, as discussed previously.

Because they are a mix of several different types of payments, there is no obvious measure of firm activity with which to compare indirect business taxes, such as there was

for income taxes. However, it is informative for many situations to scale these indirect business taxes by value added. Using this measure, indirect business taxes again seem of greater magnitude for foreign affiliates than for U.S. parents or U.S. affiliates. Indirect business taxes in 2006 were 7 percent of value added for U.S. parents, 8 percent for U.S. affiliates, and 16 percent for foreign affiliates.

BEA's data on corporate income taxes and other business taxes have been used in a number of academic studies. Often researchers make use of the published tabular data that break down taxes by industry, and, for the foreign affiliate and U.S. affiliate data, by country and industry. A recent series of studies by a trio of prominent U.S. researchers is notable in that it makes use of the underlying microdata rather than the published aggregates. Under a program wherein selected "special sworn" outside researchers are permitted access to the microdata in BEA's surveys, Mihir A. Desai, C. Fritz Foley, and James R. Hines, Jr. used the tax data along with other operations data for U.S. parents and foreign affiliates to examine a variety of issues related to taxation. Much of their work is summarized in "Research Spotlight: Taxation and Multinational Activity: New Evidence, New Interpretations," an article in the *Survey of Current Business* in February 2006 (volume 86, number 2, pages 16-22).

Among other things, Desai, Foley, and Hines note in one study that the U.S. *worldwide* tax system reduces the incentive for U.S. MNEs to locate operating affiliates in low-tax jurisdictions compared to a counterfactual scenario in which the United States were to use a *territorial* tax system such as those used by much of the rest of the world. However, this study shows that indirect ownership of these affiliates restores much of this incentive, as profits that would otherwise be taxed upon repatriation to the United States are often kept abroad at a top-level affiliate to use in financing affiliates further down the chain of ownership. In a second study, they find that the presence of a nearby "tax haven" country can actually increase, rather than reduce, demand for foreign investment in a given country. The presence of the tax haven "indirectly reduc[es] tax burdens on income earned in high-tax countries" and "enhance[s] the profitability of operations in those countries."

Two more of their studies summarized in the *Survey of Current Business* article focus, in part, on the effect income taxes have on the use of capital. One of these demonstrates that higher income tax rates are associated with greater levels of debt financing in raising capital for foreign affiliates. In addition, debt financing provided by parent firms, as opposed to external financing, is particularly responsive to changes in host country tax rates. The second of these studies compares the effects of income taxes and indirect business taxes. Whereas most work has looked at the effects of income taxes, they find that in many respects other taxes have quantitatively similar effects on the behavior of foreign affiliates. However, in contrast to income taxes, indirect taxes do not appear to affect capital-labor ratios or profit rates.

Table 1: Effective average income tax rates for MNEs, 2004-2007
[Percent]

	2004	2005	2006	2007 ¹
U.S. parents				
All industries	24.8	23.8	22.8	26.8
Manufacturing	20.2	21.1	20.1	28.0
Non-manufacturing	29.6	26.2	24.9	25.7
U.S. affiliates of foreign (non-U.S.) enterprises				
All industries	33.2	30.3	28.8	n.a.
Manufacturing	35.4	34.3	33.5	n.a.
Non-manufacturing	31.8	27.8	26.3	n.a.
Foreign affiliates				
All countries	14.1	14.4	14.6	14.3
Europe	11.5	12.1	11.8	11.6
Non-Europe	17.4	17.4	17.9	17.6

n.a. Not available

1. Data from 2007 are preliminary; revised statistics will be published in 2010.

Table 2: Effective average income tax rates for U.S. parents and U.S. affiliates, by industry, 2006
[Percent]

Industry	U.S. parents	U.S. affiliates
All industries	23	29
Mining	21	26
Utilities	26	33
Manufacturing	20	34
Wholesale trade	26	28
Retail trade	34	50
Information	28	8
Finance (except depository institutions) and insurance	27	33
Real estate and rental and leasing	14	17
Professional, scientific, and technical services	16	60
All other industries	19	17

Table 3: Effective average income tax rates for foreign affiliates, by region and selected country, 2006
[Percent]

By region	Conventional measure	Excluding income from equity investments
All countries	15	30
Canada and Mexico	16	27
Europe	12	31
Latin America (except Mexico) and Other Western Hemisphere	8	20
Africa	47	57
Middle East	32	49
Asia and Pacific	20	26
By country		
Over 30 percent		
Norway	63	70
Japan	42	45
Greece	32	38
Italy	30	45
15 to 25 percent		
United Kingdom	23	40
Germany	22	35
Denmark	18	39
Spain	17	35
Under 10 percent		
Portugal	9	25
Ireland	5	7
Netherlands	4	51
Switzerland	3	11