

***Taxpayer Responses to Competitive Tax Policies and Tax Policy Responses to Competitive Taxpayers:
Recent Evidence***

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Background

- The average effective tax rate faced by U.S. MNCs on income earned abroad has fallen.
 - This trend has been documented in previous work (for example, Grubert, Randolph, and Rousslang, *National Tax Journal*, 1996).
 - The most recent evidence from Treasury tax files is for the year 2000.
 - In table 1, we show the global average effective tax rate faced by U.S. manufacturing subsidiaries over the past two decades.

Graph of Table 1

Average Effective Tax Rates, 1980-2000

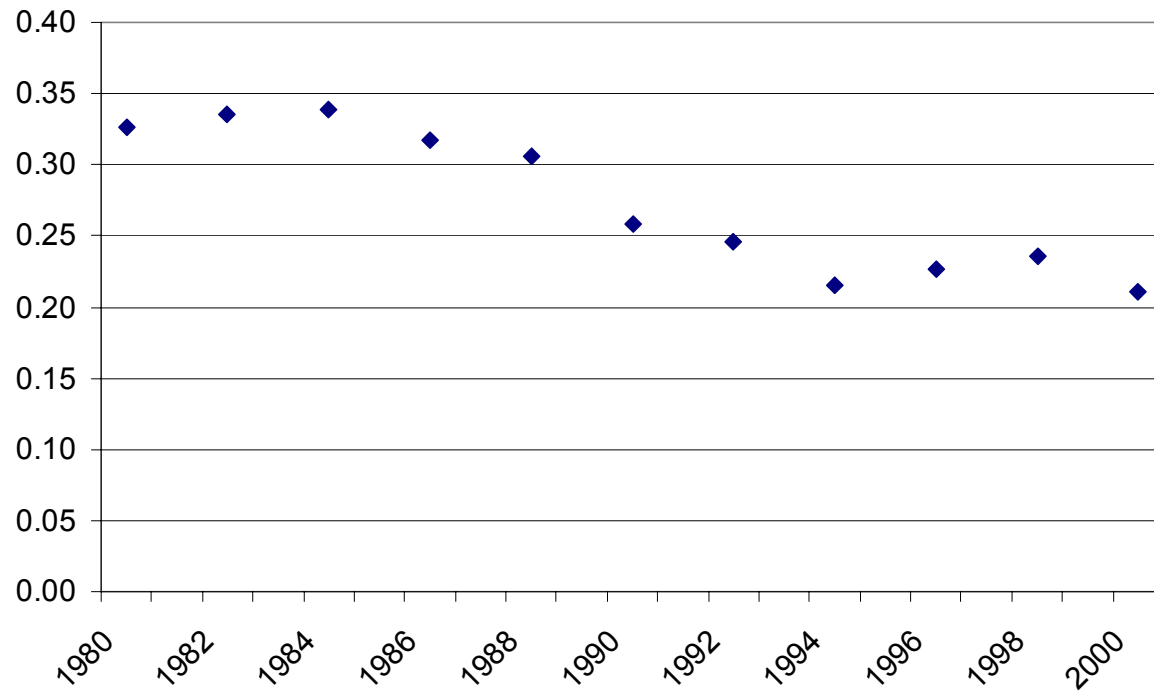


Table 1:
Average Effective Tax Rates in Manufacturing for 58 Countries

Year	Average Effective Tax Rate	Standard Deviation
1980	0.33	0.85
1982	0.34	0.98
1984	0.34	1.03
1986	0.32	1.05
1988	0.31	1.09
1990	0.26	0.89
1992	0.25	0.86
1994	0.22	0.72
1996	0.23	0.79
1998	0.24	0.77
2000	0.21	0.67

Background (continued)

- The location decisions of U.S. MNCs have become more sensitive to differences in host country effective tax rates.
 - Real capital held in manufacturing subsidiaries is more mobile.
 - Altshuler, Grubert, and Newlon (2001) document this change for the period 1984-1992.
- There is evidence that countries engage in tax competition to attract certain types of companies (Grubert 2003).

Three questions related to tax competition

- What explains the decreases in country average effective tax rates since 1992?
 - Tax competition by countries responding to changes in their market share?
 - Tax minimizing behavior on the part of companies?
- Have the bonuses and penalties offered by countries to different types of firms changed over time?
- Has the role of taxes in the location decisions of U.S. manufacturers continued to increase in the 1990s?

Do changes in capital share explain the recent decreases in average effective tax rates (AETRs)?

- Focus on the patterns of declines in effective tax rates across countries.
- Before proceeding, it is important to discuss the ability of companies to use “hybrid” structures to lower effective tax rates.

Hybrids

- An entity that is incorporated from the host country point of view and a branch from the U.S. point of view (reverse structures also possible).
- Setting up hybrids simplified by check the box regulations passed in Dec. 1996 and effective Jan. 1, 1997.
- Some facts about the Cayman Islands:
 - AETR for manufacturing companies incorporated in Cayman Islands = 6% in 2000
 - Real capital in Cayman Islands has increased by more than 500 percent between 1992 and 2000.
 - This capital stock represents about 70 percent of real capital reported in Irish manufacturing CFCs of U.S. parents in 2000.

Do changes in capital share explain recent decreases in country average effective tax rates?

- Simple regression analysis of country level data.
- Look at changes in rates between **1992 and 1998** and **1992 and 2000** separately.
- Is **country** behavior or **company** behavior responsible for declines in AETRs?

Table 2A: Explaining changes in country AETRs, 1992 - 1998

- Dependent variable = AETR in 1992 – AETR in 1998
 - If positive then AETR has fallen.
- Explanatory variables:
 - Percent change in U.S. manufacturing capital between 1984 and 1992
 - “Initial” level of country’s effective tax rate (1990)
 - Dummy for small countries
 - Variables to test whether differences in mobility across countries are driving tax changes
 - Regional dummy variables

Table 2A: Explaining changes in country AETRs, 1992 - 1998

- Results suggestive of a tax competition story.
- Countries losing market share relative to their neighbors cut their effective tax rates the most.
- Countries with relatively high AETRs in 1990 cut their rates more than the average.
- Small countries, which may face the most elastic supply of capital, cut their rates more than the average.
- Countries seem to be responding to pressure from their competitors in the market for capital rather than to increases in capital mobility.

Table 2B: Explaining changes in country AETRs, 1992 - 2000

- Does **company** rather than **country** behavior explain the patterns of declines in AETRs in recent years?
- Add statutory tax rate to analysis:
 - Statutory tax rate indicates incentives for company tax-planning at the margin.
 - Effective tax rate captures country responses.
(Countries with high statutory rates and low ETRs would not feel pressure to lower ETRs to attract investment.)

Table 2B: Explaining changes in AETRs, 1992 – 2000

Note:

- Statutory tax rate plays no role in explaining decreases in AETRs over the 1992-1998 period.

Results

- Once we add 2000 to the analysis:
 - Change in capital share no longer explain differences in declines in AETRs.
 - Initial effective tax rate no longer plays any role.
 - Statutory tax rate has greater explanatory power.
 - Suggests we look more carefully at 1998-2000 changes.

Table 3: Explaining changes in AETRs, 1998-2000

- Although preliminary, our results suggest that company behavior, not tax competition, explains the most recent changes in AETRs.
 - “Initial” effective tax rate does not explain changes in AETRs.
 - Differences in statutory tax rates seem to drive decreases in AETRs over this period.
 - Differences in changes in capital share play no role in explaining decreases in AETRs.
 - No difference in pattern of declines for small countries.

Have the bonuses and penalties offered by countries to different types of firms changed?

- Grubert (2003) argues: If governments are engaged in tax competition, it should be observable at the subsidiary level as well as at the government level.
 - Governments would distinguish between different types of foreign investors when setting tax burdens.
 - Tests for this behavior using subsidiary level for 1996

Have the bonuses and penalties offered by countries to different types of firms changed?

- We look back at the 1984 tax files to determine whether government tax-setting behavior has changed.
- Results (table 4)
 - Countries were already rewarding more mobile companies and those that were perceived to be more beneficial to the local economy with lower ETRs in 1984.
 - Countries rewarded companies with relatively large sales to related parties in 1984 and 1996. However, the coefficient on sales in 1984 is not statistically significant at conventional levels.

Have the bonuses and penalties offered by countries to different types of firms changed?

- Results continued (table 4)
 - Purchases are only statistically significant in the 1996 data. Purchases seem to have little or no impact in 1984.
 - Large companies seemed to have gained more bargaining power between 1984 and 1996.

Manufacturing CFCs transactions with related parties have increased very dramatically

- Table 5 shows
 - share of total sales accounted for by sales to other affiliates has more than quadrupled between 1984 and 1996.
 - share of total sales accounted for by purchases from other affiliates more than doubled
- This increase in importance in transactions with offshore affiliates is consistent with increased sensitivity of investment to tax considerations.

Did capital mobility continue to increase after 1992?

- We estimate the “tax elasticity” for 1992 and 2000.
- “Tax elasticity” gives the percent change in real manufacturing assets held in CFCs in a country due to a percent change in the after-tax return in that country.
- Data is from manufacturing CFCs of U.S. manufacturing parents.
- Altshuler, Grubert, and Newlon (2001) found that this estimate of tax sensitivity almost doubled between 1984 and 1992.
- The data suggest that U.S. manufacturers have become more sensitive to differences in local tax rates across countries since 1992.

The location of intangible assets

- Low-tax countries are becoming much more important destinations for U.S. produced intangible assets.
- Important since U.S. direct investment abroad is strongly motivated by the exploitation of intangible assets like patents and trademarks.
 - Part of return paid out in deductible royalties
 - A significant part is retained making low-tax jurisdictions favorable locations.

The location of intangible assets

- Data from BEA Benchmark Surveys of U.S. Investment Abroad in 1994 and 1999 show:
 - Share of total affiliate royalties accounted for by Ireland and Singapore doubled.
 - Share of total royalties paid by subsidiaries in these locations increased from 9% to 21%.
 - Share of royalties paid to the U.S. parent in these locations increased from 8% to 20%.
 - Royalties paid by Irish affiliates > royalties paid by German or U.K affiliates.
 - Royalties paid by Singapore affiliates are only 25% lower than royalties paid by Japanese affiliates.

Preliminary Conclusions

- Evolution of country effective tax rates between 1992-1998 seems to be driven by tax competition.
- Countries may not need tax competition to lower effective tax rates abroad. The evolution of AETRs between 1998 and 2000 seems to be driven by company responses.
- Countries were already rewarding more mobile companies and those perceived to be more beneficial to the local economy in 1984.
- Manufacturing subsidiaries' transactions with related parties have increased dramatically.

Preliminary Conclusions

- The data suggest that U.S. manufacturers have become more sensitive to differences in host country taxes.
- Low-tax countries have become much more important destinations for U.S. produced intangible assets.