



Burch Conference, June 2009

Day 1: Tax Norms

Capital Export Neutrality

Capital Import Neutrality

Capital Ownership Neutrality



Background

- Important aspects of modern systems of taxing foreign income date to the early 1960s (for example, U.S. subpart F rules for controlled foreign corporations).
- Similarly, the normative framework used to evaluate international taxation (capital export neutrality/capital import neutrality) dates to the early 1960s.
- It seems that the world has changed since then. Certainly our thinking about how best to tax foreign income – and how best to tax inbound investment - has changed dramatically, most notably (in the case of taxing foreign income) in the last 5-10 years.



Should governments try to tax active foreign income?

- The prior received wisdom is yes; indeed, the question has been why governments have not tried to tax foreign income more heavily than they did.
- Some of the latest thinking comes to opposite conclusions: that countries do best to exempt active foreign income from taxation.
- This makes the distinction between “active” and “passive” income particularly important.



Capital Export Neutrality (CEN)

- CEN is satisfied if the return to capital is taxed the same wherever earned.
- Accrual taxation of foreign income with complete (refundable) foreign tax credits satisfies CEN.
- CEN was thought to promote the efficient allocation of investment (from a global perspective).
- The concept is due to Peggy Musgrave (1963), and has had enormous influence.
- Modern thinking has largely dispensed with CEN as a tax policy norm.



Why was CEN thought to promote efficient investment?

- The idea is that if firms allocate capital to maximize after-tax returns, and they are taxed at the same rate everywhere, then their investments also maximize pre-tax returns, so are undistorted by taxes.
- This is a one-firm-at-a-time view of the world: where should the piece of capital go?
- Countries that adopt policies consistent with CEN in effect act as the world tax police, undoing international tax rate differences with their home country tax policies. The problem, in this view, is that national tax rates differ.



Tax Policy for the National Interest

- Musgrave concept of “National Neutrality”:
- A home country government, acting on its own, has an incentive to tax foreign income permitting only a deduction (not a credit) for foreign taxes paid.
- Why? Because the home country views foreign taxes as costs of doing business, like labor costs, which are always deductible. As a result, countries should want their own firms to equate after-tax foreign returns to pre-tax domestic returns.



Capital Import Neutrality (CIN)

- Another Musgrave notion. CIN is satisfied if the return to capital is taxed the same regardless of the location (and, in some interpretations, identity) of the owner.
- Pure source-basis taxation of income (no residence-based corporate taxation or individual taxation) satisfies CIN.
- Horst (Quarterly Journal of Economics, 1980) interpretation of CIN is that it promotes efficient saving incentives, at the cost of distorting the location of production.
- CIN was out of trend for many years, as it seemed that the taxation of foreign income was an odd place to look for efficient saving incentives.



The empirical content of CEN and NN.

- These frameworks imply that all (!) countries should want to tax foreign income much more heavily than they do.
- In particular, it's a mystery why any country would want to exempt foreign income from taxation, yet most do.
- Could it be that these theories are just wrong?



What is wrong with the older theories

- CEN and NN ignore the *other* investment decisions made when one firm chooses to invest abroad
- The notion is: General Electric is going to put a factory somewhere, it might be the U.S., Canada, or Brazil, and does the tax system give GE the right incentives concerning where to put that capital?
- Critical assumption (of CEN and NN): nothing else changes if GE chooses the U.S. v. Brazil. But this ignores the induced effects on other firms.

What difference does this simple assumption make?

- CEN notion: the tax system gives firms efficient incentives to locate capital. Takes everything else in the economy to be fixed.
- An alternative view of the world: When a US firm invests abroad, the investment decisions of other firms are altered as well.
- It turns out that this consideration changes *everything*.



Take an extreme example...

- Suppose that the location of all property, plant, and equipment is fixed (unaffected by taxes) around the world.
- Then taxation only affects who owns a piece of capital, not whether it exists.
- Since ownership affects productivity, taxes still have the potential to make the economy efficient or inefficient, even in this world.



What happens?

- If other countries exempt foreign income from taxation, but the United States taxes foreign income while providing foreign tax credits, then the ownership of capital assets will be distorted by creating clienteles.
- American investors will invest in high-tax locations, foreign investors in low-tax locations.
- This is inefficient. Global output is reduced.
- But: if the United States were to exempt foreign income from taxation, we're back to efficiency.



Newer Welfare Principles

- Capital Ownership Neutrality (CON): Tax systems exhibit CON if they do not distort the ownership of capital assets.
- National Ownership Neutrality (NON): Tax systems exhibit NON if they promote the profitability of domestic firms.
- Conformity among tax systems produces CON, while exempting foreign income from domestic taxation produces NON.



What about national welfare?

- Countries maximize their own welfare by *exempting* foreign income from taxation, more or less no matter what others do.
- Why? Because countries benefit when their companies invest in a way that maximizes total after-tax returns.
- In a world of shifting ownership, the United States does not lose tax revenue when an American company invests abroad, since its domestic investment is replaced by new inbound FDI.



Policy conflicts

- Thus, in a NON world, countries maximize their welfare by exempting foreign income from taxation. Everyone should want to do this.
- Similarly, world welfare is maximized by everyone adopting the same system.
- So, while conflicts are possible, they ultimately may not materialize, if every country adopts policies that are in its interest.
- This is completely different from what we get from CEN/NN.



An ownership metaphor: A residence-based VAT.

- Consider an expanded approach to taxing the foreign operations of a multinational firm.
- A foreign affiliate pays VAT to its host country.
- Then: the parent company ALSO owes VAT on its foreign sales to the country of residence.
 - No deferral.
 - Possibility (A): credit for VAT paid to foreign government.
 - Possibility (B): no credits, but foreign tax payments are deducted from taxable value added.



What if VATs were imposed on a residence basis?

- **Worldwide efficiency.**
 - Worldwide taxation of value added implies that differing VAT rates do not distort the location of sales, and any accompanying economic activities.
- **National advantage.**
 - Value added should be allocated so that the (after-foreign tax) return is the same at home and abroad.
 - This is satisfied if you tax domestic and (after-foreign tax) foreign value added at the same rates.



There is nothing special about VATs.

- The same analysis, more or less exactly, applies to:
 - Excise taxes (except to control externalities) on alcohol, tobacco, gasoline, and other products.
 - Sales taxes (which are much like VATs)
 - Property taxes (where should property be allocated?)
 - Stamp duties (why tax this stuff in the first place?)
 - Most other taxes.
- So, should all taxes be levied on a residence basis? And if not, then why are income taxes?



The consequences of worldwide value added taxation

- What would happen under such taxation? Obviously, there would be a huge sell-off (though not entirely) of foreign business operations.
- The same outcomes would arise in response to residence-based excise taxation, sales taxation, property taxation, stamp taxes, and other taxes.
- This is why they make no sense.
- Well, the same thing happens with residence-based income taxation. The only difference is that the effects with income taxation are slightly less transparent.



What happened to the other efficiency conditions: isn't capital mobile?

- What happens if capital is mobile in response to tax rate differences so that ownership isn't the only thing that matters?
- This is an important question, though...
- First, most FDI is acquisitions of existing businesses so that “flows” are still largely about changes in control
- Second, to the degree that capital is mobile, there is substitution: if General Electric invests in Brazil rather than Ohio, that creates an opening for Honda to invest in Ohio, and a Brazilian company to invest in Japan.



Is that just a little too glib?

- Well yes. The economic importance of ownership, and its responsiveness to tax differences, does not remove the problem that tax rate differences distort the location and volume of investment.
- There are several potential distortions introduced by tax differences, of which ownership is one set; the problem is that, as long as the underlying tax rates differ, not all can be addressed with the same policies.
- (Note that this takes tax rate differences to be random and distortionary, which may not be right. For example, in a related context it may make sense that the UK has a higher gas tax than the US, and therefore a mistake to call the differences distortionary.)



What is the globally efficient system?

- If in fact economic conditions do not differ among countries, then the efficient tax system is one in which all tax rates are the same (and no extra tax is imposed on foreign income).
- Most of our theories say that this equal tax rate on corporate income should be zero, of course, but that's another matter.
- If it is not possible to coordinate tax rates this way, then governments face tradeoffs between efficient ownership, efficient saving, and efficient investment location and magnitudes.



Individual investors only

- Investors equalise post-tax rates of return from available investments
- If CEN holds, then pre-tax rates of return also equal: production efficiency
 - But post-tax rates of return differ amongst individuals
 - Distortions to savings decisions
- If CIN holds, then post-tax rates of return same across individuals
 - But pre-tax rates of return will differ
 - Distortions to investment decisions



Individuals and companies

- Suppose individuals invest in companies, ie. domestic and international portfolio investment
 - Taxed on a residence basis (ie. CEN holds for individuals)
 - The pre-personal tax rate = post-corporation tax rate of return common across all companies
- Companies use the funds to undertake domestic and international direct investment
 - But face a given post-tax required rate of return



Corporate investment

- Suppose companies all taxed on residence basis – so “direct” CEN holds
- If tax rates differ across countries, then the required pre-tax rates of return also differ
 - Production efficiency does not hold
 - Advantage to companies from low tax countries
 - Welfare loss if companies in higher taxed countries are more efficient
- Pre-tax rates of return only the same if all companies face same tax rates



Trade

- Suppose US company and UK company compete in third market – France
- Companies have same required post-tax rates of return, but US has higher tax rate
 - Competitive advantage to UK firm, which may be less productive
- Again, full harmonization of tax rates required for global optimality



National Optimality

- Non-taxation of outbound investment optimal if aggregate outbound investment and domestic investment are independent
 - More precisely, zero marginal effective tax rate is optimal: could be achieved by taxing economic rent of outbound investment
- In practice, outbound and domestic investment could be positively or negatively related



What is basis of residence-based corporation tax?

- **Individuals** face a residence-based tax on worldwide income
- Individual income could be sheltered through corporation
- But this justifies taxing worldwide income of a **corporation** only if the corporation is wholly-owned by domestic residents



Why does a territorial system only apply to equity financed investment?

Outbound investment

- Financed by equity is taxed abroad
- Financed by debt is taxed at home

A true territorial system would not tax interest received from foreign subsidiaries, and would not give relief for interest paid to foreign subsidiaries



How important is ownership?

- Ownership changes can have radical effects on business decision making, performance, and productivity.
- This is evidenced in the market for takeovers and the different takeover premia that bidders are able to offer for the same assets.
- Foreign direct investment is located where new ownership is likely to enhance productivity, *not* in places where capital is scarce.



Implications of ownership for tax design

- What about the specifics of international tax design? For example, should the home country limit the deductibility of general expenses such as interest costs or general administrative expenses, if some of the firm's income is earned abroad and exempt from home country taxation?
- The theory implies that these expenses should not be limited, if the rest of the tax system is optimized. Why?
- The first point is that limiting domestic expenses based on where a firm has assets or income effectively subjects foreign income to taxation. But it still seems wrong to permit complete interest deductions while exempting foreign income....



More implications

- ...except that it is a mistake to think in terms of one investment at a time.
- If an American firm borrows at home to invest abroad (rather than invest at home), it thereby leaves an opportunity for another firm – American or foreign – to invest in the U.S.
- The argument for limiting domestic interest deductions in the case of foreign investment is identical to the argument for CEN: it is the point that a country prefers investment in itself rather than investment abroad.
- But for the same reason the theory implies that it is a mistake to subject foreign income to home country tax.



Should any foreign income be subject to home country taxation?

- Yes: passive income.
- Think about a firm that issues debt in its home country, invests the proceeds as equity in a foreign subsidiary, and uses the capital in the foreign subsidiary to buy the debt.
 - If the interest payments are deductible in the home country, then the foreign interest income must be includable.
 - This example generalizes to related investments. Foreign passive interest receipts are akin to negative interest payments, and should be treated accordingly.
- How does one distinguish “passive” from “active” foreign investment? We get back to ownership: “active” investments are those for which ownership matters.



What about income from related party transactions?

- The question is whether related-party interest, factoring, or other income should be thought of as “passive” or “active” from the standpoint of taxing foreign income.
- Theory points to the role of ownership: to the degree that ownership is important, the underlying income is active. This suggests the use of look-through rules.
- More generally, it is not in a country’s interest to discourage foreign tax reduction, whether it takes the form of location of investment, or financing of that investment.
- Many controlled company regimes look suspect from this standpoint. They seem to be motivated by CEN-type thinking.



Tax revenue

- What if governments are concerned about tax revenue (and every government is concerned about tax revenue)?
- Exempting foreign income from taxation enhances revenue, and makes revenue sources less risky, to the extent that the policy rationalizes business activity and contributes to productivity.
- There is a false dichotomy between efficiency and revenue: efficient policies raise the most tax revenue for a given economic cost. It is not risky to exempt active foreign income from taxation; the risky move is to try to tax portions of active foreign income, and thereby depress productivity and therefore tax collections.



Foreign investment and domestic economic activity.

- The ownership paradigm is closely related to the question of what happens to domestic activity when firms invest abroad. What do we know empirically?
- Intuitively, it seems that foreign investment comes at the expense of domestic investment, but in fact it could go either way.
 - Foreign could substitute for domestic (intuitive).
 - Foreign operations contribute to productivity and profitability, thereby increasing the demand for domestic operations.
- It is important even to express the question carefully: the issue is what happens when the cost of foreign operations falls?
- The older evidence offered mixed answers.
- There has been a recent accumulation of stronger evidence – from the US, Germany, Australia, the UK, elsewhere – pointing rather uniformly to the answer that foreign operations generally contribute to demand for domestic operations.



More on foreign investment and domestic economic activity.

- One of the issues is that foreign and domestic activities are jointly selected, so merely looking at the data it's not clear which causes the other.
- More specifically, both may be functions of the same underlying economic conditions. For example, a pharmaceutical company discovers a new blockbuster drug, and subsequently expands both its domestic and foreign operations.
- That said, the firm-level data indicate that, on average, there is a strong positive association of foreign changes (sales, investment, and employment) and domestic changes (data from Desai, Foley and Hines, "Domestic effects of the foreign activities of US multinationals," *American Economic Journal: Economic Policy*, February 2009, 1 (1), 181-203.

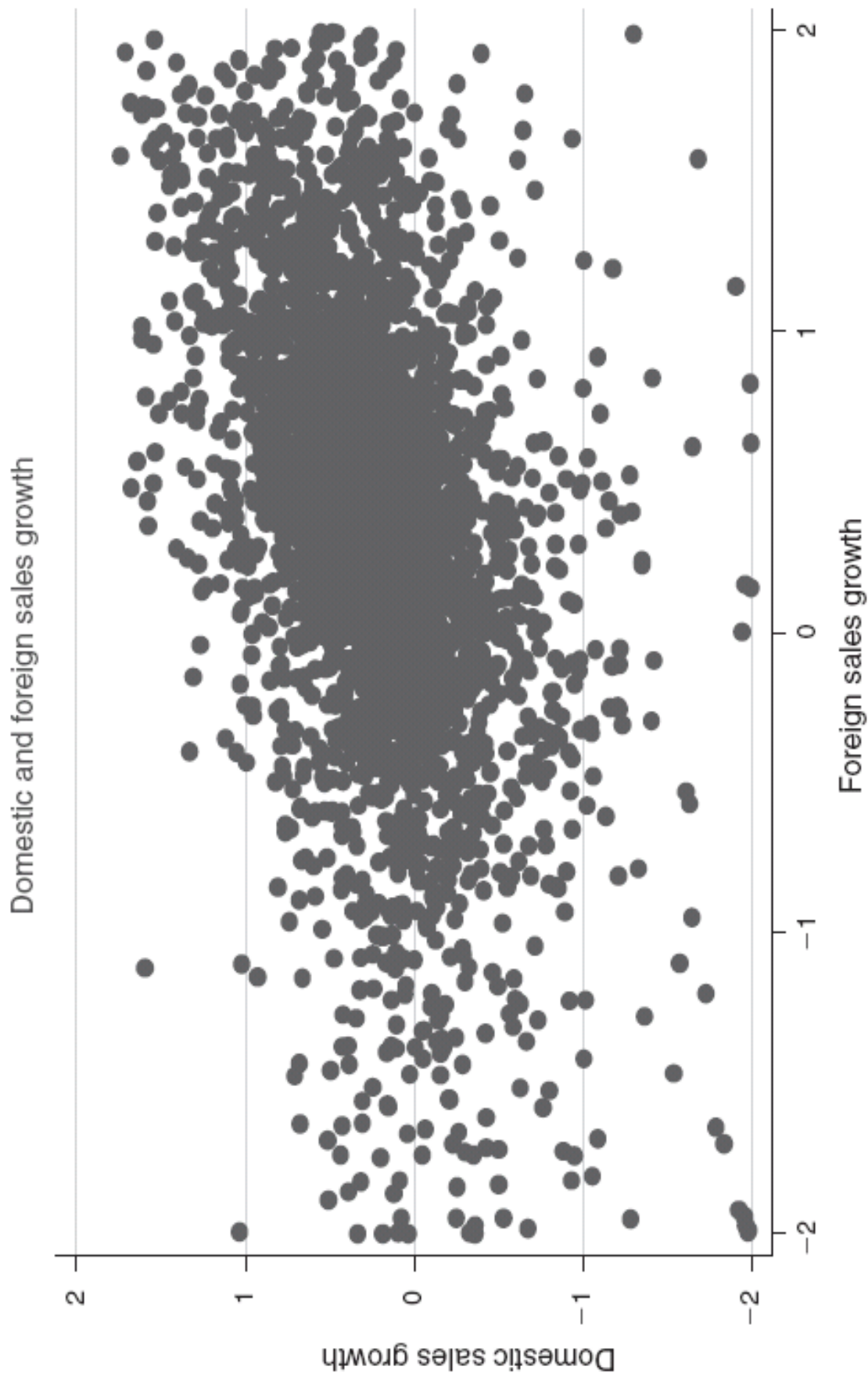


FIGURE 1. DOMESTIC AND FOREIGN SALES GROWTH OF MULTINATIONAL FIRMS, 1982-2004



What about the endogeneity issue?

- The way to address this is to examine the impact of randomly distributed changes in foreign operations – or, failing that, changes in foreign operations that are not necessarily related to domestic operations.
- Desai, Foley and Hines use changes in foreign GDP growth rates. Firm 1 invests in the UK in 1982, while Firm 2 invests in France. The British economy grows faster than the French economy in the following 22 years. By 2004 the data predict that Firm 1 will have more FDI than will Firm 2, and what Desai, Foley and Hines do is ask what happens to the domestic operations of Firms 1 and 2: which one experiences faster growth?
- Note that this relies on the idea that foreign GDP growth predicts FDI levels, which is strongly supported by the data.

TABLE 3—FOREIGN GDP GROWTH AND CHANGES IN FOREIGN INPUT USE

| <i>Dependent variable:</i> | (1) | (2) | (3) | (4) |
|---------------------------------|------------------------|----------------------|--|---------------------------|
| | Foreign net PPE growth | Foreign asset growth | Foreign employment compensation growth | Foreign employment growth |
| Constant | -0.4615 (0.1203) | -0.2567 (0.0986) | -0.5229 (0.0577) | 0.0224 (0.5342) |
| Parent weighted GDP growth rate | 1.4755 (0.2888) | 1.1723 (0.2368) | 1.1402 (0.2711) | 0.6746 (0.2536) |
| Period/industry fixed effects? | Y | Y | Y | Y |
| Observations | 2,844 | 3,137 | 2,842 | 2,834 |
| R ² | 0.0720 | 0.0897 | 0.0715 | 0.0478 |

Notes: The dependent variables are foreign growth rates of net property, plant and equipment (PPE) (column 1), assets (column 2), employment compensation (column 3), and employment (column 4). Foreign growth rates are ratios of changes in activity between benchmark years to averages of the beginning and end of period values. Parent weighted GDP growth rates are the weighted changes between benchmark periods, in GDP per capita of affiliate host countries, divided by averages of beginning and end of period values. Values of real GDP per capita in current prices are taken from Heston, Summers, and Aten (2006). Country weights used for each parent company equal beginning of period net PPE levels in each country. All regressions are OLS specifications that include period/industry fixed effects. Heteroskedasticity-consistent standard errors that correct for clustering at the parent level appear in parentheses.



What does the evidence say?

- Using the predicted values of foreign direct investment from the first stage equations, it is then possible (in the second stage equations) to measure the impact of FDI on domestic operations.
- The results imply that 10% greater foreign investment is associated with 2.6% greater domestic investment, and 10% greater foreign employment (measured in \$\$ of compensation) is associated with 3.7% greater domestic employment.
- What is the mechanism? 10% greater foreign sales growth is associated with 5% greater domestic R&D spending and 6.6% greater domestic exports to foreign affiliates.

TABLE 5—EFFECTS OF FOREIGN FACTORS ON DOMESTIC FACTOR DEMAND: IV SPECIFICATIONS

| <i>Dependent variable:</i> | | | | |
|---|----------------------------|--------------------------|--|----------------------------------|
| | (1) | (2) | (3) | (4) |
| | Domestic net PPE growth | Domestic asset growth | Domestic employment compensation growth | Domestic employment growth |
| Constant | 1.0018 (0.0181) | 0.5452 (0.0292) | 0.1754 (0.0746) | -0.0131 (0.0052) |
| Foreign net PPE growth | 0.2578 (0.1184) | | | |
| Foreign asset growth | | 0.2387 (0.1260) | | |
| Foreign employment compensation growth | | | 0.3692 (0.1456) | |
| Foreign employment growth | | | | 0.6550 (0.2771) |
| IV with parent weighted GDP growth? | Y | Y | Y | Y |
| Period/industry fixed effects? | Y | Y | Y | Y |
| Observations | 2,844 | 3,137 | 2,842 | 2,834 |

TABLE 6—FOREIGN GROWTH, DOMESTIC R&D, AND DOMESTIC EXPORTS

| <i>Dependent variable:</i> | Parent R&D growth | | Growth of parent exports to affiliates | |
|-------------------------------------|--------------------|--------------------|--|--------------------|
| | (1) | (2) | (3) | (4) |
| Constant | 1.1877 (0.0335) | 1.0017 (0.2439) | -0.1009 (0.2328) | 1.7494 (0.0911) |
| Foreign sales growth | 0.3225 (0.0318) | 0.4991 (0.2316) | 0.6642 (0.0373) | 0.6473 (0.2525) |
| IV with parent weighted GDP growth? | N | Y | N | Y |
| Period/industry fixed effects? | Y | Y | Y | Y |
| Observations | 2,616 | 2,616 | 2,140 | 2,140 |
| R^2 | 0.1145 | | 0.2184 | |



How reliable is this evidence?

- The use of two-stage equations like this relies on what is known as the “exclusion restriction.” In this case, the exclusion is that foreign GDP growth does not directly affect domestic operations, but does so only indirectly by encouraging foreign direct investment.
- It’s usually not possible to test exclusion restrictions directly, though indirect tests are available.
- In this case, it’s possible to measure exchange rate effects and parent company exports to unrelated parties, and control for them directly, thereby controlling for some of the potential problems.
- Virtually all empirical work relies on some kind of assumptions and approximations, but the key thing is that some are better than others. If something makes sense, it is probably also a sound empirical approach.



Where are we on the paradigms?

- While there is considerable controversy, it would be safe to say that matters are currently in a state of flux.
- The older certainty about the desirability of Capital Export Neutrality has disappeared (except perhaps in Washington DC).
- The notion that domestic economic activity is good means that foreign economic activity is bad is also largely discredited.
- Really the issue is whether, by failing to tax foreign activity heavily, governments somehow either abet tax avoidance or indirectly subsidize foreign activity, given the potential difference between foreign and domestic tax rates. Some of these issues are empirical, others conceptual, and there is not a consensus right now.