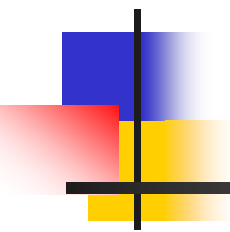


International Taxation and Company Tax Policy in Small Open Economies



George R. Zodrow

Cline Professor of Economics

Rice Scholar, Baker Institute for Public Policy

Rice University



Introduction

- Company tax policy in (approx) small open economies
- Focus on international capital mobility, international tax competition, and international tax avoidance
- Overview
 - Review of international tax literature on these issues
 - General implications for company tax policy
 - Arguments for low source-based taxes on capital
 - Qualifications arguing for higher rates
 - Evaluation of specific reform proposals



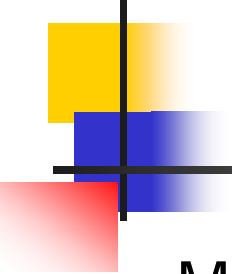
International Capital Mobility

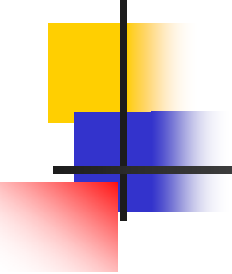
- Many ways to define and measure capital mobility
- Review focuses on three such measures
 - Responsiveness of FDI to taxes
 - Recent estimates of the incidence of corporate income taxes on labor
 - Savings-investment correlations and their implications for capital mobility



Tax Sensitivity of FDI

- Determining effects of taxes on FDI raises many difficult econometric problems (controls for many other factors, which tax rate and how to measure, roles of rents and business public services)
- Nevertheless, general consensus is that the “econometric work of the last fifteen years provides ample evidence of the sensitivity of the level and location of FDI to its tax treatment” (Gordon-Hines, 2002; de Mooij and Ederveen, 2003, 2005)

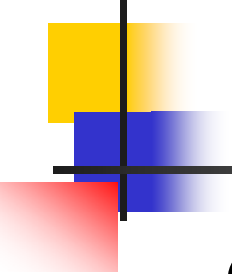
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- Most recent and most careful studies tend to obtain the largest tax elasticity estimates
 - Altshuler, Grubert and Newlon (2001) estimate elasticity of investment with respect to after-tax host country rates of return for U.S. multinationals increased from 1.5 in 1984 to 2.8 in 1992
 - Altshuler and Grubert (2006) find tentative evidence of investment tax elasticities increasing over years 1992, 1998 and 2000

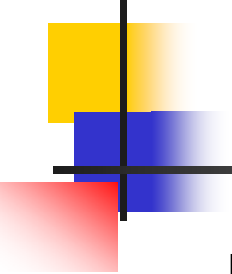
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- An interesting new issue
 - Will investment tax elasticities decline with increased possibilities for income shifting?
 - Limited evidence thus far, but Overesch (forthcoming) estimates that investment is greater in high-tax Germany by firms that can shift income to parent in low-tax country – a 1 percentage point increase in the tax differential increases investment in Germany by nearly one percent

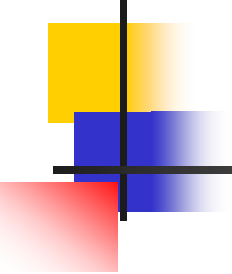


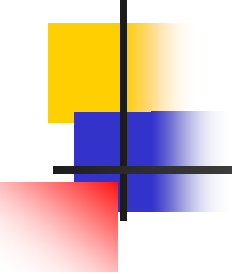
The Incidence of Corporate Taxes

- Theoretical results
 - Perfect capital mobility tends to imply that much of the burden of the corporate income tax is shifted to relatively immobile labor (approximately one minus share of world capital stock – virtually all tax burden in SOE)
 - In multi-sectoral general equilibrium model, labor may bear more than 100% of the burden of the corporate income tax (Harberger, 1995, 2008)

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- Challenged by Gravelle and Smetters (2006)
 - Capital share larger if capital less than perfectly mobile
 - Capital share larger if imports are imperfect substitutes for domestic corporate goods, but
 - Recent empirical evidence suggests import substitution elasticities are relatively high
 - Randolph (2006) extends G-S model to corporate sector with two goods, one a perfect substitute for imports, and again gets large labor share

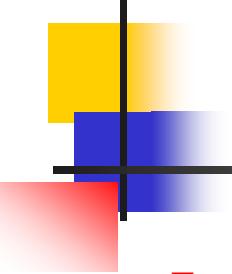
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- Empirical Evidence – Several recent studies argue that CIT differentials are largely reflected in changes in wages
 - Hassett and Mathur (2006)
 - Analyze a sample of 72 countries over 1981-2002
 - Look at five-year averages of manufacturing wages and various tax rate measures
 - Estimate huge elasticities of labor tax burden with respect to CIT rates, that range from 0.5-1.0

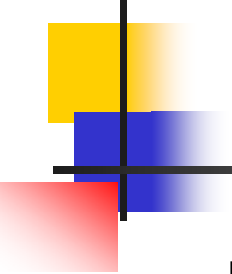
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- But, Gravelle and Hungerford (2007) note
 - effects are far too large to be plausible
 - 25 times over shifting
 - Gravelle and Hungerford (2007) re-estimate with different methods for converting currencies and using annual data
 - Get much smaller results
 - Often statistically insignificant



- Felix (2007)

- Analyzes sample of 19 OECD countries over 1979-2002, with limited data in many cases
- Looks at wages at various skill levels as a function of CIT statutory rates
- Estimates that a 1 percentage point reduction in CIT rate reduces wages by four times as much revenue collected
- Still tremendous overshifting

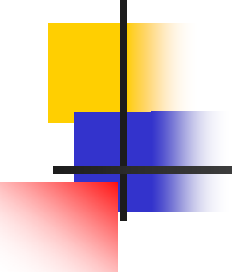
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- Arulampalam, Devereux and Maffini (2008)
 - Analyze firm level data on CIT and wages in France, Italy, Spain and the UK over the period 1993-2003
 - Estimate a wage bargaining model (not focusing on capital flows)
 - Estimate short run burden on labor of 62% and full shifting to labor in the long run
 - Gravelle (2008) notes econometric problems, issues of interpretation, and lack of robustness

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- Results very tentative and uncertain
 - Estimating CIT incidence always difficult
 - Multitude of factors affecting wages, difficult to identify relatively small CIT effect
 - But three papers suggestive of considerable mobility of capital
 - Likely to generate much further research



Savings-Investment Correlations

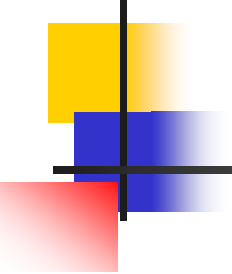
- Seminal paper: Feldstein and Horioka (1980)
 - Estimated “saving retention coefficient” (SRC) – fraction of domestic saving reflected in domestic investment – for 16 OECD countries over 1960-1974
 - Argued that $SRC=1$ for closed economy, but very small for open economy where saving can be invested world-wide to maximize returns
 - Estimated $SRC=0.89$, suggesting that “it is appropriate, at least as an approximation, to study income distribution in general and tax incidence in particular with models that ignore international capital mobility.”

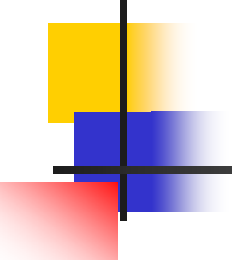
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- Follow-up papers: $SRC=0.60$, and $SRC=0.36$ in EU countries with more integrated capital markets
 - Many empirical studies with similar results
 - Smaller SRCs, but still “Feldstein-Horioka puzzle”
 - Feldstein (1994) attributes to reluctance to bear (or hedge) costly currency risks, uncertainty regarding returns, and political risks, citing home bias literature



Many Alternative Explanations for FH

- Alternative Econometric Specifications
 - In general, more recent studies get smaller saving retention coefficients
 - Coakley, Fuertes and Spagnolo (2004) get $SRC=0.68$ with FH methodology (12 OECD countries, 1980-2000), but when correct for country heterogeneity and cross-section dependence, get $SRC=0$
 - Suggest “FH puzzle is history”

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- Alternative explanation – high S-I correlations reflect policy decision to avoid large trade imbalances (Summers, 1988; Obstfeld (1995) supports as best explanation)
 - Summers shows that endogenous government budget deficit that responds to offset trade imbalance explains 3/4 of S-I correlation
 - But could reflect traditional crowding out as deficits reduce private investment (Feldstein-Bacchetta, 1981)

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- Alternative explanation: huge time series macro literature
 - high S-I correlations reflect long run intertemporal budget constraint, as can't run deficits indefinitely
 - So, expect $SRC=1$ in the long run (FH result)
 - $SRC < 1$ in the short/intermediate run reflects capital mobility that allows deviations of S and I
 - Most recently, Pelgrin and Schich (2008) examine 20 OECD countries over 1960-1999 in dynamic model and find LR intertemporal constraint is binding, but SR deviations have increased – more K mobility



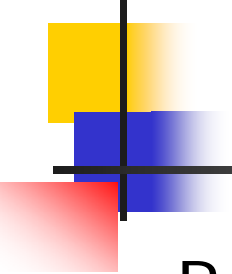
Conclusion on Capital Mobility

- Evidence on tax sensitivity suggests considerable capital mobility
- Recent CIT incidence studies much more tentative, but suggestive of capital mobility
- FH literature suggests increasing capital mobility, with many explanations for remaining S-I correlations
- Harberger (1980): May not have perfect capital mobility, but high, especially in smaller countries, and increasing – crucial factor in setting tax policy



Is There Evidence of Tax Competition?

- Changes in corporate tax rates
 - Weighted average statutory tax rates in OECD dropped from about 50% in early 1980s to high 30's in 2004 (Devereux and Sorensen, 2006)
 - Smaller reductions in marginal and average effective tax rates, partly due to base-broadening
 - Revenues/GDP roughly constant
 - Larger drops in smaller, developing, open countries (smaller drops in "core" w/ agglomeration economies)

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- Reaction functions – do tax reductions by neighboring countries result in own tax reduction?
 - Devereux-Lockwood-Redoano (2008) find strategic interaction in statutory tax rates among group of 10 OECD nations (1 percentage point reduction in average rate reduces own STR by 0.7 percentage points)
 - Find weaker evidence for tax competition in METRs
 - Argue that tax competition in STR is dominant form
 - Consistent with several other studies



Conclusions on Tax Competition

- Tax Rates and Reaction Functions
 - Evidence suggestive of tax competition in STRs and ATRs, especially on rents, but less on METRs
 - Suggests tax competition most fierce for paper profits, and firm-specific economic rents that generate important externalities (tech transfer)
- Will rate reductions continue with base broadening options largely exhausted?



International Tax Avoidance

- Much evidence of significant and increasing tax avoidance activities by MNCs
 - Profits high in low-tax countries
 - Interest deductions in high-tax countries
 - Non-deductible dividends paid from low-tax countries
 - Intangibles allocated to low-tax countries
 - Increasing intra-firm trade facilitates transfer pricing
 - Increasing income shifting over time (Altshuler and Grubert, 2006) – new form of tax competition



- Most striking results

- Bartelsman and Beetsma (2003)

- Find significant income shifting via transfer pricing in response to national tax differentials
- Revenue increase due to unilateral tax increase is reduced by 65% due to such income shifting

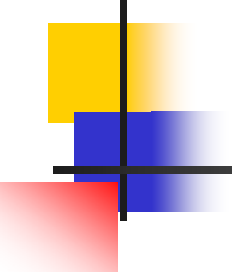
- Huizinga and Laeven (2008) estimate elasticity of corporate tax base to STR in Europe is -0.45 due to profit shifting

- Clausing (2003) – transfer prices respond to CIT rates



General CIT Policy Implications


- The “zero tax argument”
 - SOE faces fixed r with perfectly mobile int'l capital, so should not have source-based tax on capital income, since burden including efficiency costs fully borne by local factors
 - Extends to mobile investments that earn firm specific economic rents
 - AETR's and thus STR's, as well as EMTR's (Devereux and Griffith, 2003)
 - Often most highly prized investments

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- Argument for lower STRs reinforced by income shifting concerns
 - Implies base broadening, rate reducing reform may be desirable even if EMTRs increase
 - To limit transfer pricing (Haufler-Schelderup, 2000)
 - To limit debt reallocation (Fuest-Hemmelgarn, 2005)
 - To attract high profitability, high mobility MNCs (Becker-Fuest, 2005)
 - May even want to subsidize capital to offset informational problems or imp comp in K goods market



Qualifications To Low Tax Arguments

- SOE assumptions not satisfied (Gravelle-Smetters)
 - Imperfectly mobile capital
 - Imperfectly substitutable imported goods
- Taxation of location specific economic rents is efficient and politically desirable, especially if rents accrue to foreigners (Wildasin, 2003)
 - Huizinga-Nicodème (2006) find an increase in share of foreign ownership by one %-point results in increase of 0.43 %-points in average CIT rate

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- Personal Income Tax Backstop Argument
 - Traditional argument for rate alignment to limit sheltering of labor income in corporate form
 - Potential for income shifting is significant
 - In US, Gordon-Slemrod (2000) estimate a 1 point reduction in PIT-CIT differential increases labor income by 3.4%
 - de Mooij and Nicodème (2008) estimate between 12-21 percent of CIT revenues in their sample of EU countries reflects income shifting



- Importance of backstop argument depends on

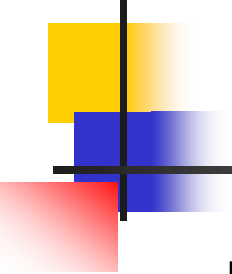
- Size of PIT-CIT differential
- Whether and how eventual distributions are taxed
 - compare CIT+PIT tax at lower rates and with deferral to labor income tax rate (unless effective accrual taxation of capital gains)
- Compliance of small companies

- Also, potential for tax avoidance may reduce the negative impact of high CIT rates on investment, relieving downward pressure on rates



- Treasury transfer effect

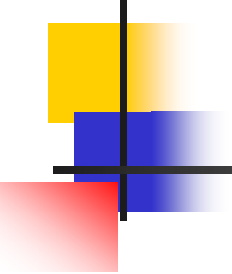
- May provide no-cost source of revenue from FTC-granting countries (US, UK, Japan) since increase in host country taxes offset by home country taxes
- But,
 - Does not apply to MNCs from territorial countries
 - Many firms with excess FTC's
 - FTC's not granted currently, but when repatriated
 - may imply home country tax irrelevant for RE

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- Political realities may make high company tax rates inevitable
 - But increasing awareness of international tax competition and capital mobility



Specific Company Tax Reform Options

- Overview
 - Balancing competing factors is inherently difficult
 - No reason to expect $CIT = 0$, given some immobility of capital, location specific rents, need for backstop, and political concerns
 - Also unlikely that taxes on capital and labor income will be identical, given mobility of capital especially long-run, competition for investment, especially with firm specific rents, and potential for income shifting by MNC's

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- Countries will balance competing forces
 - Outcome depends on specific circumstances
 - Policies revisited continually as circumstances change
 - New Zealand Treasury (2008) briefing:
 - Numerous factors prevent unrestricted race to the bottom in corporate tax rates
 - Nevertheless, international competition for mobile capital puts downward pressure on corporate income tax rates



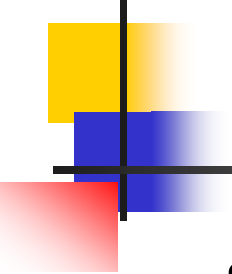
Base Broadening, Rate Reducing Reform

- Traditional arguments
 - Reduces wide variety of distortions (allocation of investment, organizational form, finance, payouts)
 - Based on economic principle (rather than reflecting political favoritism)
- Arguments reinforced by concerns regarding
 - Attracting FDI with firm specific economic rents
 - International tax avoidance



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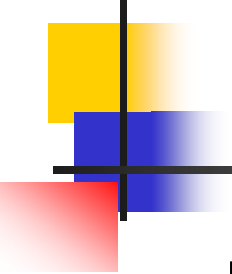
- Reduces taxation of location specific economic rents and other immobile capital (unless offset with other taxes)
- Costly as extends benefit to “old” capital (but could use transition rules)
- Little effect on EMTR’s, incentives for marginal I
- Increases incentive for labor income shifting, with importance depending on factors noted above

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- Some limited scope for base broadening in New Zealand (IRD, 2008, Treasury, 2008 briefings)
 - On balance, desirable to return to broad base with lower rates
 - Arguments also apply to PIT reform, especially on wage income, given high labor mobility in New Zealand especially of skilled labor, and to reduce labor income shifting problems



Further Base Broadening

- Comprehensive business income tax (CBIT)
 - Broaden base by denying interest deductibility, providing for uniform taxation of debt and equity finance investments
 - Eliminate or greatly reduce individual taxation of capital income
 - Should be able to reduce rates, since interest often untaxed at level of bondholder
 - Lower taxation of investments generating firm specific rents, and reduce avoidance incentives

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- But,
 - Harsh treatment of debt unattractive to MNCs, as
 - Shifts taxation of interest income from individual to corporate level
 - Small effect on EMTR's
 - Denial of deductions for interest expense implies no credibility in US
 - Transition problems for highly leveraged firms
 - Not especially attractive option



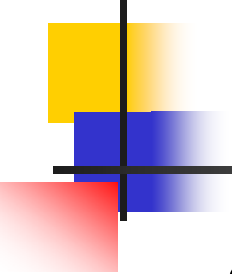
Increase PIT Share of K-Income Taxes

- International considerations suggest that shifting tax on capital income from business level to individual level is desirable (Altshuler and Grubert, 2008)
- Keep combined capital income tax burden on domestic investors constant, while lowering tax rate on internationally mobile capital, investments with firm specific rents, and reduce incentives for MNC income shifting
- But, reduce taxation of location specific foreign rents, and need capital gains tax



CIT Reductions and Higher C, L Taxes

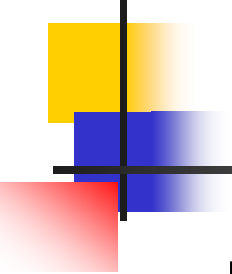
- Further reductions may be desirable if focused on attracting FDI, especially with firm specific rents, and reducing incentives for income shifting
- Approach discussed by NZ Treasury and IRD, partly due to negative growth effects of CIT, and relatively high capital income tax burden in NZ
- Could shift to additional indirect consumption taxation, perhaps with some expenditure offset for distributional effects

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- Or shift to higher tax on labor income
 - Will attract mobile capital, including investments with firm specific rents, and reduce incentives for MNC income shifting
 - But lowers taxes on location specific rents and creates incentives for labor income shifting, which can be limited with special provisions, or



The Dual Income Tax Option

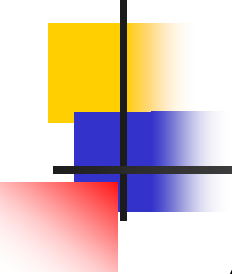
- Nordic dual income tax taxes capital income at a flat rate equal to the lowest tax rate on labor income which is subject to progressive tax (Sorensen)
 - Interest and dividends taxed at firm level (but in practice, hard to tax interest)
 - Capital gains adjusted for retained earnings
 - Income of proprietorships and closely held companies split into capital income component using imputed rate of return and residual labor income component

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- But,
 - Many problems with imputation method, especially for closely held companies (Sorensen, 2005)
 - Attacked in Norway by using a shareholder-level tax for closely held companies that exempts normal returns but taxes above normal returns at individual labor income tax rates
 - A viable option for effecting lower tax on capital income, and design features limit labor income shifting (with capital gains tax)



Consumption-Based Tax Reforms

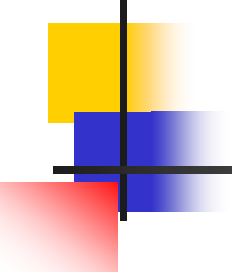
- If wish to reduce taxation of mobile capital to exempt normal returns and eliminate marginal disincentives for investment and saving, can adopt one of many consumption-based direct taxes approaches
- Consumption tax extends exemption of normal returns to individual level, while taxing rents at STR
- Huge literature on the relative merits of income and consumption-based direct taxes (Auerbach, 2008; Banks and Diamond, 2008; Zodrow, 2007)

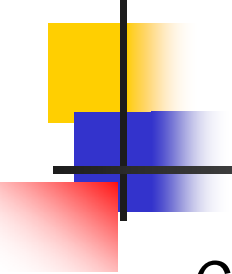
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- Consumption-based taxes have advantage of
 - Exempting normal returns to attract mobile capital, provide favorable treatment of domestic S, I
 - Taxing location specific rents at statutory rate
 - Maintaining a backstop to the PIT, with CIT rate typically roughly aligned with top PIT rate
 - Stimulate domestic personal saving (although size of effects subject of much debate)
 - Satisfy political demands for a company tax

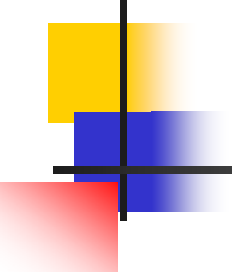


■ But,

- Taxes mobile and highly desirable investments that generate firm specific rents at statutory rate, which may be high given generous expensing
- High rate also keeps incentives for tax avoidance
- Most approaches use cash flow tax at business level, which would not be creditable in the US
- Creates new tax avoidance opportunities
- Formidable transition problems, though mitigated by a variety of factors (Gravelle, 2002; Zodrow, 2002) ⁴⁶

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- If adopted, ACE approach seems preferable
 - Allows an additional deduction for equity financed investment equal to product of equity and risk-free rate of return
 - Errors in measuring depreciation canceled by offsetting errors in measuring equity book value
 - Attains all the advantages of consumption tax, but similar to income tax, so fewer transition problems, fewer new tax avoidance schemes, no problems with rate changes, and would be creditable in the US

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- Could reduce revenue cost by limiting new deduction to new investment (Griffith, Hines, Sorensen, 2008)
 - Added complexity due to loss of expensing (compared to cash flow approaches) largely illusory
 - Errors in depreciation accounting self correcting
 - Income accounting required for financial purposes
 - Expensing increases gains to avoidance schemes
 - Expensing increases likelihood of negative business tax bases and associated problems

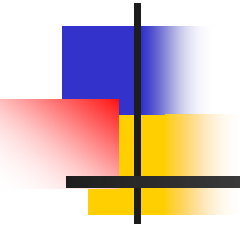
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- If some taxation of capital income deemed desirable, international considerations suggest should be at the individual level
 - US: proposed “Growth and Investment Tax” with business cash flow treatment and flat tax on capital income individual level
 - UK: proposed ACE tax coupled with individual tax on capital income (Griffith, Hines, Sorensen, 2008, in Mirrlees Review chapter)



Conclusion

- Complications introduced by international capital mobility, international tax competition, and international tax avoidance make setting tax policy in a small open economy exceedingly difficult
- Choice among reform options depends on relative weights attached to different goals, primarily:
 - Attracting FDI, normal and with firm specific rents, and reducing incentives for avoidance, **vs.**
 - Taxing immobile capital, including location specific rents and providing backstop to PIT

The End





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