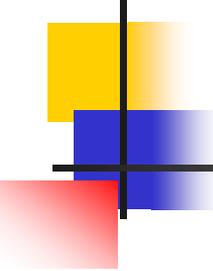


The Dynamic economic effects of a US corporate income tax Rate Reduction

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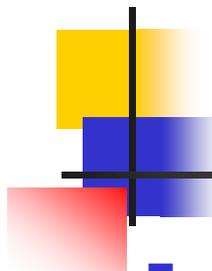
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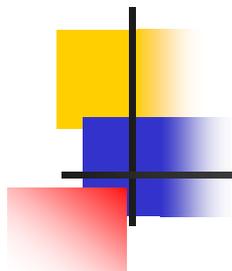
Overview

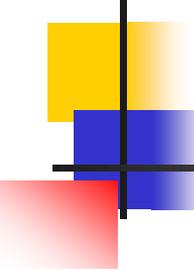
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- Modeling the Effects of a Corporate Income Tax Rate Reduction
- Simulation Results
- Conclusions



Introduction

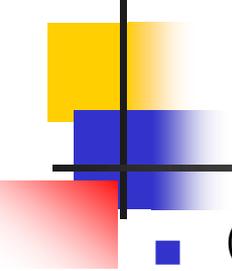
- US corporate income tax system has not been changed significantly since TRA86
- While most countries have dramatically reduced their statutory corporate income tax rates below US rate
- US statutory corporate income tax rate is now one of the highest in the world, sparking concerns about the ability of the US to compete in the world economy
- Prompted calls for reform, from changes in the corporate income tax system to replacing the income tax system with a consumption-based tax

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- This paper focuses on a reduction in the statutory corporate income tax rate financed with the elimination of a wide range of business tax expenditures designed to make the entire package revenue neutral in a dynamic sense
 - Use a dynamic computational general equilibrium (CGE) model with overlapping generations (OLG) to estimate effects of reforms on
 - Growth in GDP, saving, investment, labor supply
 - Intragenerational and intergenerational welfare



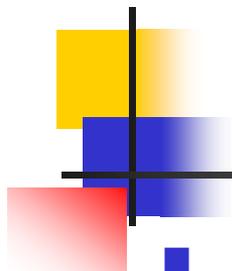
The Case for a Corporate Rate Cut

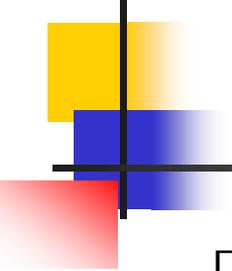
- Policymakers and economists have long advocated base broadening rate lowering (BBRL) reforms
- Such reforms are generally desirable because
 - Promote economic growth and economic efficiency in resource allocation
 - Simplify tax administration and compliance
 - Reduce incentives for tax evasion and tax avoidance
 - Create both the perception and the reality of a fairer tax system

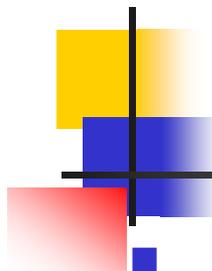


- Corporate tax distortions

- Decisions regarding asset mix and thus I across ind
- Method of finance – debt vs. equity
- Organizational form
- Mix of retentions – dividends vs. share repurchases
- Reduces savings and investment, as well as K, labor productivity and wage growth
- For equity financed I distortions increased to extent that ETR is increased by double taxation

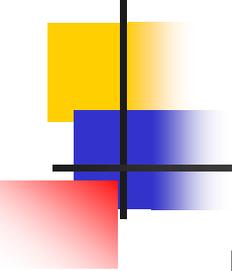
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- International issues are more important given
 - increased international capital mobility
 - more aggressive international tax competition and income shifting
 - In 2005 US statutory tax rate was 39.3%, the G-7 average rate was 36.3% and the IFS 19-country average rate was 31.4%
 - Ongoing process of globalization implies that tax system increasingly has important effects on the competitiveness and decisions of US multinationals

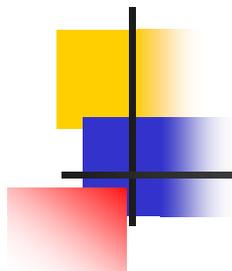
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- Do high corporate tax rates reduce foreign direct investment (FDI)?
 - recent surveys by Gordon and Hines (2002) and de Mooij and Ederveen (2003, 2005) conclude that FDI is responsive to effective tax rates, with investment elasticities in the neighborhood or in excess of one
 - more recent study tends to obtain the largest estimates (Altshuler and Grubert, 2006)
 - What direction should reform take? We focus on reform of existing system

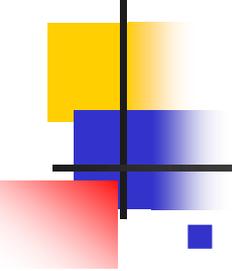


Rate Reduction vs. Tax Incentives

- Investment incentive approach is often touted as **having more “bang for the buck”** in that the revenue cost per dollar of induced investment is lower than with a rate reduction
 - revenue losses are comparatively small because the new tax incentives apply only to new I
 - EMTR applied to normal returns is reduced, while above normal returns taxed at the statutory rate
 - differential between personal and corporate income tax rates, creates incentives for income shifting

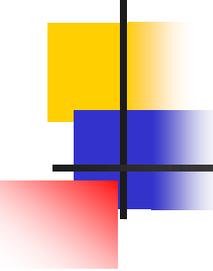
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- Neubig (2007) investment incentives (II) lower the taxation of normal returns, while rate reduction (RR) applies to both normal and above-normal returns
 - Are above normal returns location or firm specific?
 - Location specific rents related to immobile K
 - Firm specific rents related to highly mobile K
 - RR – increase I in projects earning firm specific rent
 - II have relatively little value to firms generating specific above normal returns

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- Devereux and Griffith (2003) argue in this case, the AETR is key tax factor affecting investment
 - They show a 1 percentage point increase in the AETR reduces the probabilities of a US firm producing there by 0.5-1.3 percentage points
 - Altshuler, Grubert and Newlon (2001) estimate an elasticity of FDI w.r.t. the cost of capital of 2.7
 - Altshuler and Grubert (2006) obtain an estimate of 4.0
 - Auerbach (2006) finds profit dispersion in the US has increased significantly in recent years



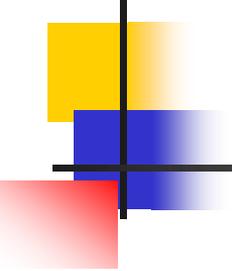
- Other advantages for rate reductions

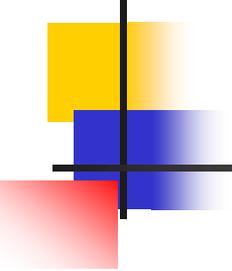
- High statutory corporate tax rate encourages multinational firms to use transfer pricing and other legal tax planning strategies
- Research and development expenses and other intangible inputs are increasingly mobile
- Bartlesman and Beetsma (2003) find that the revenue increase from a unilateral increase in the statutory tax rate is on average reduced by roughly 65% due to income shifting solely in the form of transfer pricing – others show similar results

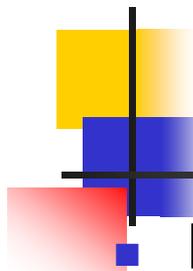


Modeling the Effects of a Corporate Income Tax Rate Reduction

- Use an OLG-CGE model
 - Far-sighted consumers planning consumption, saving, labor supply over lifecycle
 - Change saving when rates of return change
 - Change labor supply when wages change
 - Overlapping generations structure
 - Allows examination of intergenerational redistributions
 - Important for consumption tax reforms

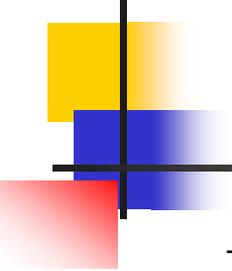
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- Model includes 2 corporate, non-corporate, owner housing, and rental housing sectors
 - Explicitly calculates reform-induced changes in all asset values during the transition to a new equilibrium
 - time path of investment demands in all production sectors is modeled explicitly, taking into account capital stock adjustment costs

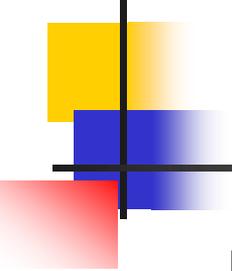
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- Extend model to include
 - Base broadening by eliminating tax preferences
 - Potential for income shifting
 - Imperfectly competitive component of corporate sector earning above normal returns (firm-specific economic rents)
 - Includes international capital flows

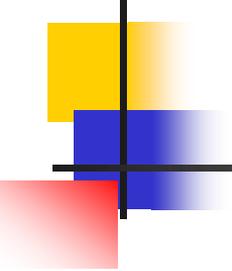


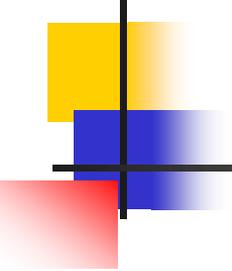
Simulation Results

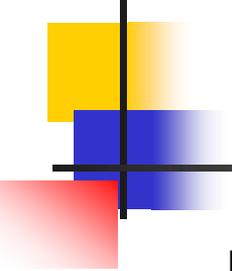
- Benchmark case pure BBRR reform, eliminate tax expenditures (TE) for corporate, non-corporate and rental housing firms
 - Revenues used to lower corporate rate only
 - Corporate TE reduced \$81.7 billion, \$21.1 non-corporate
 - Corporate rate declines from 35% to 25.6%, and to 19.7% in the long run
 - GDP increases by 0.08% 2 years after reform, but then declines by 0.01% after 5 years, by 0.14% after 10 years, and by 0.56% in the long run.

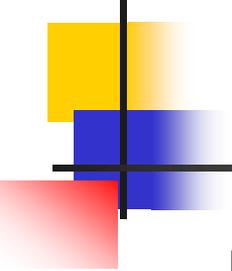
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- This reflects classic problem with BBRR reform of corporate income tax
 - Reducing the statutory tax rate and eliminating TEs has offsetting effects on the incentives for new investment
 - Investment decreases by 2.6% 2 years after reform, by 2.7% after 5 years, by 2.8% after 10 years, and by 3.0% in the long run
 - K declines by 2.4 percent in the long run, wages and labor supply declines by 0.06% in the long run

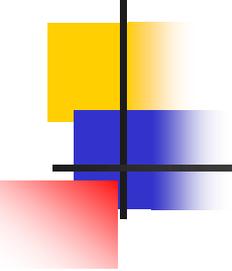
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- Negative macroeconomic effects are exacerbated when an imperfectly competitive sector is added to the model
 - Corporate rate reduction applies to above-normal returns further driving down revenues and thus limiting the potential for rate reduction
 - In this case, the corporate tax rate initially falls to 26.0 percent (rather than 25.6 percent), and in the long run to 21.9 percent (rather than 19.7 percent)

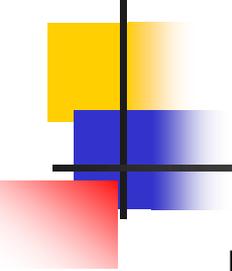
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- GDP falls by 0.30% after 10 years (rather than 0.14%), and by 0.84% in LR (rather than 0.56%)
 - Investment falls by 3.1% after 10 years (rather than 2.8%) and by 3.5% in LR (rather than 3.0%)

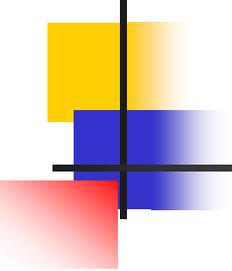
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- Allowing for an elastic supply of foreign capital might increase the amount of reform-induced investment
 - However, the net effect of the reform on after-tax interest rates is very small
 - Thus changes in capital flows, which are assumed to be determined by differences in relative after-tax interest rates, are very small
 - Opening up the economy has virtually no effect on the results

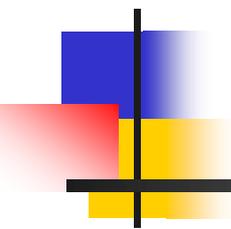
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- More positive, but modest, results occur when reform-induced reductions in income shifting are added to the model
 - Investment falls by 2.5% (rather than 2.8%) after 5 years, by 2.8% (rather than 3.1%) after 10 years, and by 3.0% (rather than 3.5%) in LR
 - GDP falls by 0.04% (rather than 0.12%) after 5 years, by 0.20% (rather than 0.30%) after 10 years, and by 0.63% (rather than 0.84%) in LR
 - The long run corporate tax rate is 20.3%

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- For the sake of comparison with Treasury results we make the questionable assumption that all tax expenditures other than accelerated depreciation have no effects on marginal investment decisions
 - Unsurprisingly, the effects are much more positive
 - GDP increases by 0.41% after ten years, and by 0.52% in the long run
 - Corporate tax rate declines to 17.0% in the LR

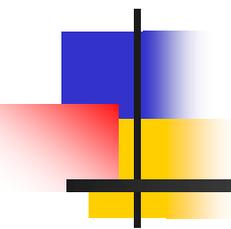
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- In another simulation we reduce the corporate income tax rate to 25 percent in the LR and order the elimination of tax expenditures so that investment incentives, including accelerated **depreciation, are “stacked” last**
 - Accelerated depreciation is maintained and only 20 percent of remaining investment incentives are cut in the corporate sector

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- Macroeconomic effects of this reform are considerably more favorable
 - GDP increases by 0.09% after 2 years, by 0.20% after five years, by 0.31% after 10 years, and by 0.62% in the long run

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- Generally get declines in investment of about 3-4% and declines in GDP of about 0.5-1.0%
 - Very small effects on cost of capital as rate reduction offset by base broadening
 - Little new investment, including foreign investment
 - Attracts some FDI to imperfectly competitive sector
 - BUT, lose revenues from old capital, including capital in imperfectly competitive sector



Thank You



Last Revised:

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