Seminar on Public Finance

Lecture #9: March 28

Business and Corporate Income Taxation

Corporate Taxation Topics

- Average vs. Marginal Effective Tax Rates
- Depreciation and Investment
  - Policy experiment: does investment stimulus work?
- Financing: Debt vs. Equity
- Treatment of Corporate Tax Losses
  - Policy experiment: does stimulus via refunding to tax losses work?
- Multinational Corporations
  - Policy experiment: did repatriation tax break create jobs?
- Dividend Payouts
  - Policy experiment: did corporations pay out more dividends after the 2003 tax cuts reduced tax on dividends to 15%?
- Corporate Tax Incidence

Rate cuts vs. Accelerated depreciation

- All corporate tax reform packages ultimately come down to these factors.
- If revenue neutrality matters, depreciation MUST be altered if you want to lower tax rates.
- All other "corporate preferences" are much smaller. Might "buy down" the tax rate 3-5 percentage points. See recent JCT analysis.

Debate: Rate Cuts or Accelerated Depreciation?

- Question: if we want to reduce the "double tax" on corporate earnings and spur investment, should we allow more accelerated tax depreciation such as "bonus depreciation" or simply lower the tax rate?
- Treasury: reducing tax rate gives you less "bang for the buck"
  - "Old capital" will benefit, has no impact on investment decisions
  - Rate cuts benefit marginal and inframarginal investment the same, and in same proportion.
  - Expensing also helps all investment, but proportionally much greater for marginal investment: ONLY "normal" return is eliminated.
- Conclusion: If you have limited funds to "spend," then you get more induced investment per dollar of tax cut with more accelerated depreciation than tax cuts.

But a Rate Reduction Can Be Superior

- Lowering the rate reduces the bias in favor of debt (deduction is worth less). Accelerating depreciation does nothing.
- Lowering the rate reduces the bias against corporations. More accelerated depreciation must be offered to all firms, corporate and non-corporate.
- Lower rate reduces the value of tax shelters.
- Lower rates encourages firms to unlock foreign earnings and bring back to US.
- Lower rates help investments that are "intangibles" and are currently expensed such as R&D and computer databases.

Increasing Capital Mobility Matters

- In an international context, a country's statutory tax rate affects location decision (entire firm) while METR affects expansion decision.
- When locating a firm, you care about the tax rate on ALL investment, not just marginal investment. Very lumpy.
- Europe: nearly all countries have lowered their statutory rates and paid for them by offering less generous depreciation allowances (recoup outlays more slowly).
- Lower rates also help combat income shifting between countries:
    - Transfer pricing: high tax country overpays to low tax affiliate
    - Related party debt: high tax county borrows for low tax affiliate
    - Location of intangibles in low tax countries

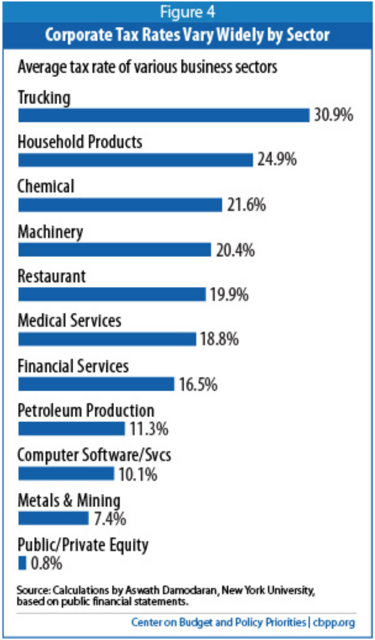


Figure 4
Corporate Tax Rates Vary Widely by Sector
Average tax rate of various business sectors
Trucking
30.9%
Household Products
24.9%
Chemical
21.6%
Machinery
20.4%
Restaurant
19.9%
Medical Services
18.8%
Financial Services
16.5%
Petroleum Production
11.3%
Computer Software/Svcs
10.1%
Metals & Mining
7.4%
Public/Private Equity
0.8%
Source: Calculations by Aswath Damodaran, New York University, based on public financial statements.
Center on Budget and Policy Priorities | cbpp.org

Corporate Tax Rates in OECD Countries

Country	Top Coporate Rate
United States	35.0
France	34.4
Belgium	33.0
Spain, Mexico, Japan, Australia	30.0
Norway, New Zealand	28.0
Italy	27.5
Sweden	26.3
Portugal, Netherlands, Israel, Denmark, Austria	25.0
Finland	24.5
United Kingdom	24.0
Korea	22.0
Luxembourg, Estonia	21.0
Turkey, Slovenia, Iceland, Greece, Chile	20.0
Slovak Republic	19.0
Poland, Hungary	19.0
Czech Republic	19.0
Canada, Germany	15.0
Ireland	12.5
Switzerland	8.5
OECD Avg	23.4

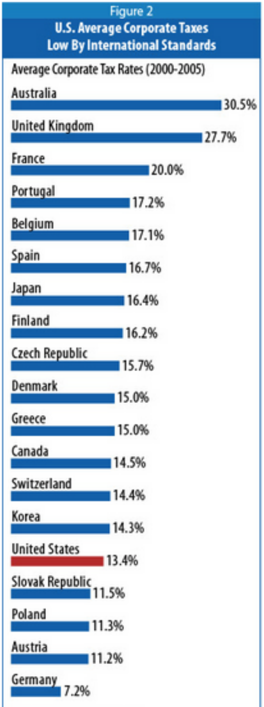


Figure 2
U.S. Average Corporate Taxes
Low By International Standards
Average Corporate Tax Rates (2000-2005)
Australia 30.5%
United Kingdom 27.7%
France 20.0%
Portugal 17.2%
Belgium 17.1%
Spain 16.7%
Japan 16.4%
Finland 16.2%
Czech Republic 15.7%
Denmark 15.0%
Greece 15.0%
Canada 14.5%
Switzerland 14.4%
Korea 14.3%
United States 13.4%
Slovak Republic 11.5%
Poland 11.3%
Austria 11.2%
Germany 7.2%

From: "Corporate Taxpayers & Corporate Tax Dodgers 2008-10", A Joint Project of Citizens for Tax Justice & the Institute on Taxation and Economic Policy.

- Average Effective Tax Rate (AETR) = US tax / US profits
  - Excludes all foreign income
- Examines 280 Fortune 500 firms, look at 2008-10, exclude all firms reporting a loss
- Use "book profits" from 10-K filings with the SEC (GAAP rules, not tax)

- 30 have AETR $<$ 0, 67 have rate from 0 - 10% = **107 firms** $<$ **10% AETR**
- 14 have rate 10% to 17.5%, 98 between 17.5% and 30%, 71 firms have AETR $>$ 30%

- Coincidence? Reports (2004 and 2011) issued immediately following recessions: 2001-03 and 2008-10.
  - Using their measure, AETRs will always be very low during these times.

What is driving the very low rates?

- Very accelerated tax depreciation (mentioned)
  - Reduces taxes now, but increases them in future (deferred tax liability)
  - Purely a timing benefit
  - Book profits (the denominator) does not use the tax measure of depreciation
  - Also, "bonus" depreciation for 2008-2010
- Net Operating Loss Deductions (largely omitted)
  - Tax deductions from past years that reduce taxes.
  - Tax loss that is forced to be carried forward or backwards to offset old taxes.
- Should these firms be treated differently (same investment)?
  - A: 100, 100, 100 = 300
  - B. -100, 200, 200 = 300
- No. The timing should not matter. Overall burden and tax should be the same.
- This is NOT a "tax break" or loophole. HUGE tax losses, but might be profitable on a "book" basis.

Financing Investment: Debt vs. Equity

Basic Corporate Finance

- Corporate finance = how businesses finance investments, manage cash flow
- 2 ways to finance projects
  1. Internally
     - i.e., use retained earnings
  2. Externally
     - with debt (promise to repay principle and interest on loan)
     - with equity (promise to share in future profits)

Debt vs. Equity Financing

- Use of debt finance
  - U.S. tax system allows for the deduction of interest payments, but not dividend payments.
  - Thus, built in bias toward debt financing.
  - If borrowing cost at 6%, after-tax cost is really 6% * (1 - 35%) = 4%.

Debt vs. Equity Financing (2)

- Why is there a distinction between payment of dividends to shareholders and interest to debt holders?
  - Both represent a cost to firms to raise funds.
  - This is an artifact from time when owners and shareholders of firm were the same. Very closely held corporations. As if owners were paying themselves.
  - Debt holders viewed as separate from the corporation.
  - Now, stocks are widely held by many individuals and pension funds, but treatment has not changed.

Debt vs. Equity Financing (3)

- One of the strongest criticisms of corporate income tax is fact that it distorts economic incentive to issue equity and pay dividends.
- Early literature suggests taxes have little impact on corporate finance decisions. More recent studies find significant effects.
  - See Gordon (2010, National Tax Journal) for good literature review.
- For example, Graham (1996, JOF) finds high tax rate firms issue more debt (here, the interest deduction is worth more).
  - By "high tax rate" we mean they are typically profitable.
- Conversely, low tax rate firms use more leasing.
  - Transfer the "tax shield" of depreciation and interest deductions to firms that can use them (profitable or high tax rate firms)
  - e.g., airline industry where carriers lease planes
- Mooij (2011, IMF Working Paper):
  - a one percentage point higher tax rate increases the debt-asset ratio by between 0.17 and 0.28.
  - Responses are increasing over time, which suggests that debt bias distortions have become more important."

Miscellaneous Points About Debt Financing

- Debt financing produces a significant reduction in METRs
    - For most equipment investment, **borrowing reduces METR by roughly 10 to 20 percentage points** depending on tax life of investment.
- If tax depreciation is very accelerated, METRs can be negative.
    - The tax system actually subsidizes investment.
    - With expensing, tax system should restrict or eliminate deduction for interest payments.
- Some countries disallow full deduction for interest payments.
    - Germany restricts net interest deduction to no more than 30% of net income.
- This is a legitimate deduction. A cost of doing business.

TABLE 3: EFFECTIVE MARGINAL TAX RATES FOR DEBT AND EQUITY FINANCED CORPORATE INVESTMENTS: SELECTED OECD COUNTRIES

Country	Effective Marginal Tax Rate Equipment (Equity)	Effective Marginal Tax Rate Equipment (Debt)	Difference
Australia	31	-23	-54
Austria	27	-14	-41
Belgium	5	-50	-55
Canada	28	-21	-49
Finland	27	-18	-45
France	29	-59	-88
Germany	32	-10	-42
Greece	14	-26	-40
Ireland	15	-4	-19
Italy	38	1	-37
Japan	49	-4	-53
Netherlands	27	-14	-41
Norway	33	-11	-43
Portugal	22	-34	-56
Spain	36	-22	-58
Sweden	24	-24	-48
Switzerland	22	-18	-40
UK	30	-9	-40
United States	37	-60	-97
Average, Excluding U.S. (unweighted)	34	-17	-51
G-7 Average, Excluding U.S. (unweighted)	37	-15	-51

Source: U.S. Department of Treasury, Office of Tax Analysis.

See notes to Table 1: G-7 Statutory and Effective Corporate Tax Rates (in Percent): 2011. Averages are calculated using 2010 gross domestic product (in current U.S. dollars) as weights

Non-Financial Corporate Borrowing - How Much Occurs?

billions of dollars

	Interest Paid	Net Income	Corp Debt	ratio to GDP	Mortgage Debt	Consumer Credit	Total	ratio to GDP
1999	395	379	4,276	0.46	4,416	1,554	5,970	0.64
2000	465	339	4,638	0.47	4,798	1,741	6,539	0.67
2001	451	122	4,834	0.48	5,306	1,892	7,198	0.71
2002	403	97	4,857	0.46	6,010	1,997	8,007	0.76
2003	380	230	4,968	0.45	6,895	2,103	8,998	0.82
2004	381	436	5,171	0.44	7,838	2,220	10,058	0.86
2005	435	1,028	5,472	0.44	8,879	2,321	11,200	0.90
2006	503	873	5,943	0.44	9,868	2,416	12,284	0.92
2007	583	818	6,703	0.48	10,542	2,555	13,097	0.93
2008	534	563	6,955	0.48	10,495	2,594	13,089	0.91
2009	480	330	6,968	0.49	10,348	2,479	12,827	0.91
2010			7,100	0.49	10,100	2,400	12,500	0.86
2011			7,500	0.50	9,930	2,440	12,370	0.82

Corporate Tax Losses

Treatment of Corporate Tax Losses

- Corporations receive "asymmetric" treatment of tax losses. They remit tax when profitable, but most do not receive an immediate refund if they incur a tax loss.
  - Under a "pure" income tax, the gov't would pay firms a refund on their tax loss.
  - It is simply negative income, no different than profits.
- Instead, firms must carry losses (1) backwards to offset prior taxes paid (and claim a refund, "carrybacks") or (2) forward in time to offset taxable income (loss carryforwards).
  - After 1997, firms could "carryback" two years, and forward 20 years.
  - No country allows immediate refunds for losses. Possible reasons include potential fraud and huge negative impact on receipts.
  - 2005: -$217 billion
  - 2006: -$225 billion
  - 2007: -$318 billion
  - 2008: -$690 billion
  - 2009: -$596 billion

TABLE 2

DISPOSITION OF NET OPERATING LOSSES

(billions of dollars)

Tax Year	NOL	CB Refund	Used as Carryforward Deduction, Number of Years Until Used											Final NOL Disposition		
			1	2	3	4	5	6	7	8	9	10	11	Used (1)	Lost (2)	Remain
1993	71.0	10.4	2.8	6.4	3.7	5.4	2.3	1.7	2.2	1.2	0.8	0.6	0.9	38.3	21.3	11.4
1994	64.4	11.7	3.9	2.5	3.1	2.5	1.8	1.9	1.4	1.1	0.7	1.0		31.8	19.0	13.6
1995	73.3	12.1	2.1	3.0	2.0	2.3	1.7	2.2	1.4	1.4	1.3			29.5	26.5	17.2
1996	80.5	12.9	2.1	2.6	3.1	3.7	1.9	1.8	1.5	1.8				31.2	31.4	17.9
1997	97.1	15.7	2.6	3.2	5.3	2.2	1.9	1.6	1.5					34.0	39.4	23.6
1998	141.9	18.9	5.8	7.9	3.7	3.2	3.9	3.5						46.8	53.3	41.7
1999	180.6	20.8	11.1	5.6	3.9	5.4	6.8							53.6	55.8	71.2
2000	245.5	26.0	5.4	5.4	5.9	8.8								51.6	67.4	126.5
2001	370.3	88.1	8.0	8.3	7.6									112.0	66.3	192.0
2002	365.9	66.3	5.1	11.4										82.7	57.7	225.4
2003	243.1	28.0	5.6											33.6	17.2	192.4
2004	188.3	13.7												13.7	0.0	174.6
Utilization of Pre-Existing NOL Stocks																
Pre-1993	262.7 (3)		27.3	25.3	25.7	19.6	17.7	11.1	9.0	7.0	4.7	2.5	1.8	153.2	91.6	17.9
New Firms	162.7 (4)		14.0	16.5	11.9	13.1	7.0	4.8	2.7	2.0	0.7	0.5	0.2	73.4	46.7	42.6

(1) Sum of carryback refunds and loss carryforward deductions.
(2) Stocks of NOLs that disappear due to firm expiration or a merger/acquisition.
(3) Pre-existing NOL stock brought forward into tax year 1993. Carryback refunds are not observable.
(4) Pre-existing NOL stock for firms that first appear in our dataset after tax year 1993. Carryback refunds are not observable.

TABLE 3

INDUSTRY UTILIZATION OF NET OPERATING LOSSES

(billions of dollars)

	Reported Tax Loss			Share Used (1)			Average Vintage (2)		
	1993	1996	1999	1993	1996	1999	1993	1996	1999
All Firms	71.0	80.5	180.6	51%	39%	40%	2.6	2.4	3.0
Non-Durable Man	7.3	7.5	16.8	66%	64%	53%	2.6	2.1	3.1
Durable Man	11.6	12.7	30.4	62%	50%	44%	3.2	2.1	3.0
Wholesale-Retail	7.4	12.7	21.3	53%	32%	29%	3.1	3.0	3.4
Information	5.0	9.3	40.6	76%	50%	40%	3.4	3.0	2.7
Financial	19.0	15.4	26.8	39%	30%	50%	1.4	1.6	3.2
Professional Services	1.7	4.0	13.7	30%	30%	16%	3.0	2.8	4.4
Utilities	2.2	2.6	3.0	36%	54%	75%	0.7	2.8	1.5
Transportation	4.6	2.5	4.3	50%	26%	45%	3.2	2.0	2.5
All Other (3)	12.1	13.8	23.7	44%	25%	30%	2.0	3.0	2.9

(1) Percentage of NOLs used during eight-year window that follows tax loss.

(2) Average age of NOLs used during eight-year window that follows tax loss.

(3) Includes Health, Accommodation and Food Services, Other Services, Agriculture, Mining and Cor

Impact of Tax Loss Asymmetry

- Due to this treatment, roughly two-thirds of losses are actually "used" or claimed.
  - For losses that are used, firms require an average of 3 years to use them, so real value is eroded.
  - Significant variation across industries. Violates equity principles.
- Asymmetry has a number of negative consequences:
  - Discriminates against cyclical firms
  - Discriminates against new firms with high levels of loss
  - Discriminates against the corporate form because "pass through" entities (partnerships, sole props, s corporations) are largely able to use losses immediately
    - As a result, many start-ups avoid C corporate form, but may convert later when they are profitable

Implications of Tax Loss Asymmetry for Investment

- In general, loss asymmetry **increases marginal effective tax rates on investment**.
- Firms want to use all deductions as quickly as possible. Anything that prevents that outcome increases their "effective tax rate" on investment or lowers their return.
- How does a firm that pays no tax suffer? Isn't their tax rate $= 0$?
- Recall: under accelerated depreciation, the deduction exceeds the income from the investment.
- On net, the income from the project is negative, and you should receive a refund under a true income tax.
- Instead, perhaps firm can use to offset taxable income from another investment.

Business Stimulus and Corporate Tax Losses: Recent Example

JOINT COMMITTEE ON TAXATION
November 3, 2009
JCX-45-09

ESTIMATED REVENUE EFFECTS OF CERTAIN REVENUE PROVISIONS CONTAINED IN THE "WORKER, HOMEOWNERSHIP, AND BUSINESS ASSISTANCE ACT OF 2009"

Fiscal Years 2010 - 2019

[Millions of Dollars]

Provision	Effective	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010-14	2010-19
A. Extension and Modification of First-Time Homebuyer Credit (sunset 4/30/10)	[1]	-9,960	-2,755	678	668	473	30	24	11	4	3	-10,895	-10,823
B. Increase Carryback Period to Five Years for Net Operating Losses Arising in Either 2008 or 2009	[2]	-33,197	5,870	5,202	3,808	2,673	1,877	1,319	928	653	461	-15,645	-10,407
C. Exclude From Gross Income Qualified Military Base Realignment and Closure Fringe	pma 2/17/09	-119	-41	-15	-12	-11	-11	-8	-8	-8	-9	-199	-243
D. Delay in Application of Worldwide Allocation of Interest Until 2018	tyba 12/31/10	---	494	1,362	3,077	3,200	3,328	3,361	3,475	1,826	---	8,133	20,123
E. Modification of Penalty for Failure to File Partnership or S Corporation Returns													
1. Increase the penalty for failure to file partnership return by $106 to $195	tyba 12/31/09	---	---	2	39	92	95	98	102	105	109	134	642
2. Increase the penalty for failure to file an S Corporation return by $106 to $195	tyba 12/31/09	---	---	2	36	84	87	90	93	96	99	122	587
F. Expansion of Electronic Filing by Return Preparers	rfa 12/31/10	*Negligible Revenue Effect*											
G. Increase the Required Corporate Estimated Tax Payments Factor for Corporations with Assets of at Least $1 Billion for Payments Due in July, August, and September 2014 by 33 Percentage Points	DOE	---	---	---	---	18,298	-18,298	---	---	---	---	18,298	---
NET TOTAL		**-43,276**	**3,568**	**7,231**	**7,616**	**24,809**	**-12,892**	**4,884**	**4,601**	**2,676**	**663**	**-52**	**-121**

Joint Committee on Taxation

NOTE: Details may not add to totals due to rounding.

[Legend and Footnotes for JCX-45-09 appear on the following page]

Business "Stimulus" and Corporate Losses

- Another way to encourage investment is to allow firms to immediately use their tax losses. "Open up" the carryback window.
    - For 2000-01, the five-year carryback increased refunds by roughly \$25 billion. For 2008-09 losses, roughly \$40-\$45 billion.
- Corporate loss carryback rules: largely timing, but there is a cost
    - A much higher cost in NPV terms, but that is not counted.
    - 10-year cost is -\$10.4 billion, really -\$13.6 billion in NPV at 5%.
- But, is it "stimulative"?
    - Very front-loaded. Money out the door very quickly.
    - Likely has only a minor effect on investment. Relatively small reduction in METR. Might give funds to cash strapped firms for investment.
    - Does it "save" jobs? Is it good counter-cyclical policy?
- CBO testimony January 2009: "loss carryback" multiplier impact on GDP is only 0.0 - 0.4 for every \$1 in additional refunds.

CBO: Options for Responding to Short-Term Weakness (2008)
Table 1

Policy	Cost Effective	Lag From Enactment to Stimulus	Uncertainty About Effects	Comments
Cut in Corporate Rates	Small	Long	Small	Corp rate reductions have only limited effect on new investment and may take time to affect business investment.
Incentives for New Investment	Medium	Medium	Large	Most of stimulus appears to come at the end of the period of incentive. The last time such incentives were tried, the results were not encouraging.
Extending Operating Loss CB Period	Small	Medium	Large	These provision have little effect by themselves, although improved cash flow may have some effect on firms facing difficulty in accessing outside capital.

Taxation of Foreign Source Income

Taxation of Multinational Corporations

- There are basically two ways to treat foreign source income (income generated outside US):
    1. **Territorial** income earned by foreign subsidiaries is not taxed (controlled foreign corporation or CFC, owned by US corporation but incorporated in another country), no incentive to keep profits overseas
    2. **Worldwide** subsidiary income is taxed when "repatriated" (some exceptions, such as passive income under Subpart F), but a credit is allowed for foreign taxes paid, home country gets "first dibs", US picks up the residual
- Really, the US does not use a pure worldwide system since deferral is allowed, and some of it is permanent.
- Nearly all countries use a territorial system. That treatment, plus relatively high US corporate income tax rate, makes US an outlier.

Table 1					
U.S. Corporate Tax Rate Is Second-Highest in OECD Ranking, 2000-2009					
		Rank in		Rank in	% Change
Country	2000	2000	2009	2009	in Rate
Japan	42.0%	3	40.7%	1	-3.1%
United States (b)	40.0%	7	40.0%	2	0.0%
Belgium	40.2%	5	34.0%	3	-15.4%
France	36.7%	10	33.3%	4	-9.3%
Canada	44.6%	2	33.0%	5	-26.0%
Italy (c)	41.3%	4	31.4%	6	-24.0%
Australia	36.0%	11	30.0%	7	-16.7%
Spain	35.0%	14	30.0%	8	-14.3%
New Zealand	33.0%	16	30.0%	9	-9.1%
Germany	51.6%	1	29.4%	10	-42.9%
Luxembourg	37.5%	8	28.6%	11	-23.7%
Mexico	35.0%	12	28.0%	12	-20.0%
United Kingdom	30.0%	23	28.0%	13	-6.7%
Norway	28.0%	26	28.0%	14	0.0%
Sweden	28.0%	27	26.3%	15	-6.1%
Finland	29.0%	24	26.0%	16	-10.3%
Netherlands	35.0%	13	25.5%	17	-27.1%
Greece	40.0%	6	25.0%	18	-37.5%
Portugal	37.4%	9	25.0%	19	-33.2%
Austria	34.0%	15	25.0%	20	-26.5%
Denmark	32.0%	18	25.0%	21	-21.9%
Korea	30.8%	20	24.2%	22	-21.4%
Switzerland	25.1%	28	21.2%	23	-15.7%
Turkey	33.0%	17	20.0%	24	-39.4%
Czech Republic	31.0%	19	20.0%	25	-35.5%
Poland	30.0%	22	19.0%	26	-36.7%
Slovak Republic	29.0%	25	19.0%	27	-34.5%
Hungary	18.0%	30	16.0%	28	-11.1%
Iceland	30.0%	21	15.0%	29	-50.0%
Ireland	24.0%	29	12.5%	30	-47.9%
Unweighted OECD Avg	33.9%		26.3%		-22.4%
Unweighted G7 Avg	40.9%		33.7%		-17.6%

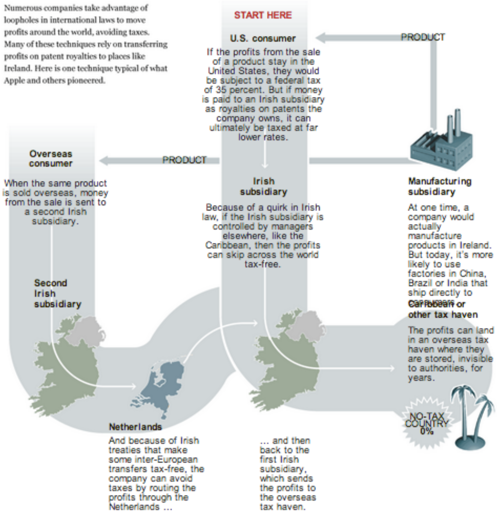
Taxation of Foreign Source Income					
billions of dollars					
	Foreign Source Income	Tax Liability	Foreign Tax Credit	Residual	Net Rate
1996	152	53	40	13	8.5%
1997	163	57	42	15	9.1%
1998	153	54	37	16	10.6%
1999	176	62	38	23	13.2%
2000	193	67	49	19	9.8%
2001	174	61	41	20	11.4%
2002	164	57	42	15	9.4%
2003	208	73	50	23	11.0%
2004	249	87	57	30	12.2%
2005	683		82		
2006	355	124	78	46	13.0%
2007	402	141	87	54	13.4%
2008	447	156	100	56	12.5%
2009	441	154	94	60	13.7%

Taxation of Multinational Corporations

- Corporate Tax Avoidance: Profit Shifting To "Tax Havens" (country with low or no tax rate that is deemed uncooperative)
  1. Allocation of Debt and "Earnings Stripping"
     - "parent" firm in the high tax country borrows from "subsidiary" in low tax country;
     - Deductions worth more at US rate of 35%
     - Income earned by foreign subsidiary taxed at lower rate (possibly 0%) and may never by "repatriated"
     - Much evidence that US multinationals allocate significantly more interest expense to high tax jurisdictions
  2. Transfer Pricing
     - prices charged for goods and services sold between affiliates should be "arms length" pricing (as if done with an unrelated party)
     - US firm is overcharged for products or inputs, reduces their tax profits, while subsidiary gets unusually high profits and might not be taxed
     - relatively easy to manipulate prices, difficult to audit
     - For certain products, there are no markets (especially intangibles, e.g. patents)

Income shifting

Double Irish Dutch Sandwhich:



Would a Territorial System Solve Problems?

- Probably not. Solves some but new ones created.
- Problems Solved:
    - A territorial system eliminates incentive to keep income earned overseas.
    - Puts subsidiaries of US firms on more level playing field vs. competitors. Would face the same tax rate on income earned in foreign country.
    - Simplification - eliminates most of foreign tax credit rules. These are extremely complicated.
- New problems:
    - <u>Increases</u> incentives to shift profits overseas since there is no US tax on those amounts (esp. if US maintain high tax rates)
    - Increases pressure on transfer pricing rules.
    - Would it encourage more investment overseas at the expense of investment in US? Unclear.

Tax Policy: Repatriation Tax Holiday

- American Jobs Creation Act of 2004 allows a temporary rate of 5.25 percent on repatriations of dividends from foreign subsidiaries. Effective rate is really closer to 4.0 percent.
  - So, if dividends are from Ireland, tax equal to 12.5% + 4.0% = 16.5%
- Firms repatriate roughly $360 billion in dividends in 2005 out of $900 billion in unrepatriated overseas income.
  - Average from 2000-04 was $60 billion per year.
- To take advantage, firms had to devise a plan to show how the repatriated amounts would be re-invested in US. Could not be used for share repurchases, dividends payouts or higher executive compensation. Intention was to create jobs.
  - Many studies find that funds used for share repurchases.
  - Nearly impossible to track. Monies are fungible.
  - Some firms repatriating the largest amounts have mass layoffs (Pfizer).

Tax Policy: Repatriation Tax Holiday

- For 2008, roughly $1 trillion in overseas profits that are unrepatriated. For 2010, roughly $1.3 trillion.
- Should we have another holiday?
- Perverse incentives.
- Firms might begin to expect holidays so they might (1) repatriate less in anticipation and (2) attempt to shift more profits overseas.
- Similar to state tax amnesty programs.
- Treasury department did not support repatriation holiday.

- For excellent article on this and a behind the scenes look at revenue scoring for this proposal, see "A Revenue Estimate Case Study: The Repatriation Holiday Revisted" by Kleinbard and Driessen.
  - Scored as a net negative receipts impact.

Dividend Policy

Retained Earnings versus Dividends

- Corporate profits may be
  1. Retained by the firm (retained earnings)
  2. Paid to stockholders (dividends)
  3. Used to repurchase shares (thereby raising the value of those that remain)

Retained Earnings versus Dividends (2)

- Recent legislation has moved toward eliminating the double taxation of dividends.
  - The President proposed in 2003 that all dividends be excluded from individuals income to the extent that corporations paid tax.
    - Too complicated.
  - Instead Congress passed a reduction in the tax rate. Maximum tax rate on dividends received is now 15% at the individual level.

Retained Earnings versus Dividends

- Retained earnings increase the value of the corporation, and this increase should be reflected in the stock price.
- These increased capital gains are not taxed until those gains are realized. (Gain from "inside build-up".) Also, gains rates are generally lower.
- Thus, tax system creates incentives for firms to retain earnings rather than pay them out in dividends.
  - The "Dividend Puzzle." - observation that firms payout dividends and issue equity at same time
  - Why do this? Not tax advantaged.
  - Some ideas: signaling, clienteles

Taxation and Corporate Dividends

- Under a classical system of taxation, dividends are tax disfavored relative to retained earnings or share repurchases, both of which should increase capital gains all else constant.
- Historical dividend payout ratios (dividends/net income):
  - 1940s: 59%
  - 1950-60s: 54-56%
  - 1970-90s: 46-48%
  - 2000s: 32%
- Note : NIPA ratios much higher (such as Economic Report of President), roughly two-thirds

Taxation and Corporate Dividends (2)

- It has been a puzzle why do firms pay dividends at a tax penalty.
  - Why not just repurchase shares?
  - One justification is that it is a signal of a firms financial strength
  - Marginal tax rates of investors vary some firms “specialize” in attracting low marginal tax rate investors (i.e., retirees), known as the clientele effect.
  - Several econometric studies have found that when the opportunity cost of retained earnings decreases, dividend payments go down. Thus, tax system increases amount of retained earnings.

Taxation and Corporate Dividends (3)

- Because we can't explain why dividends are paid, it is difficult to predict what impact a change in the taxation of dividends will have on dividend payments.
- Similar to corporate investment, different views of the role of taxes on dividend payout decisions have different policy implications for evaluating the current tax system and possible integration (i.e., eliminating the double tax) alternatives.

Taxation and Corporate Dividends(4)

- **Key**: Does the taxation of dividends at the individual level matter to the firm and does it affect their marginal investment decision?
  - If not, then integration is less important.
  - For now, ignore debt finance.
  - Assume marginal project financed with equity or retained earnings.
- Is it good policy to reduce dividend tax and encourage payouts?
  - May have important allocation effects (don't want to "lock-in" retained earnings)

Competing Views of Dividend Taxation

- When does the taxation of dividends at individual level have an impact on marginal investments financed with equity?
  - Theories will assume that marginal projects are financed with equity, and not debt.
  - Clearly true for firms that do not borrow.
  - Likely true for many others since cost is probably lower (market frictions to borrow raise costs, even with the tax deduction).

Competing Views of Dividend Taxation (2)

- Agree: dividend taxation reduces the return to investment financed with new share issues.
- Disagree: Do dividend taxes at the individual level impose a tax penalty (relative to capital gains rates) on investments financed with retained earnings?
  - Traditional View: Yes.
  - New View: No.
    - Those taxes do not affect the firm's financing or payout decisions.
    - The fact that they are higher than gains taxes does not matter.
- Most "equity" finance takes the form of retained earnings, so view matters for the impact of dividend policy.

Three Views of Dividend Taxation

1. 'Tax Irrelevance" view
   - Marginal shareholder is tax-exempt or a taxable investor who ignores or can offset incremental taxes (Auerbach and Hassett, 2006).
   - Implication: dividend tax reduction has no impact on equity value or firm's dividend policy.
2. Traditional view
   - Some reason why firms pay dividends despite the tax penalty - Dividends offer special benefits that offset their costs
     - e.g., Signaling profitability, solve principal-agent problem
   - Reducing dividend tax reduces the firm's cost of capital and increases investment.
   - Firms indifferent between financing with retained earnings and new equity - div taxes affect both equally on margin
   - Dividend taxes very distortionary.

Three Views of Dividend Taxation

3. "New" view
    - Dividends are a residual after all profitable investments have been made.
    - **Key**: Earnings can ONLY be distributed to shareholders as dividends, not share repurchases. Equity is trapped.
        - Burden of extra dividends tax (over capital gains) is inescapable.
    - Extra dividend tax is capitalized into firms value, regardless of whether that particular firm pays dividends or not.
    - Windfall gains if dividends tax cut. Firms investment decision is not affected by dividend taxes.
    - Effective tax rate on investment financed with retained earnings is independent of individual tax rate: only a function of capital gains and business taxes. (See Zodrow 1990).
    - Like "expensing": the tax value of the "deduction" or deferral exactly equal to the present value of all future dividend taxes.
    - The extra dividend tax is "eliminated". Only business tax and capital gains taxes. Differential between the dividends tax rate and capital gains tax rate does not matter.
    - Theory most applicable to mature firms with lots of retained earnings.

Three Views of Dividend Taxation

Do dividend taxes affect investments financed with...		
	New Equity	Retained Earnings
Tax Irrelevance	No	No
Traditional View	Yes	Yes
New View	Yes	No

Implications and extensions of the “New View”:

- Dividend taxes do not affect the firm. Does not affect investment decisions.
- Dividend taxes are “capitalized” or built into the firm’s value. Market capitalization should increase after dividend tax cut.
- Windfall gains from a dividends tax cut.

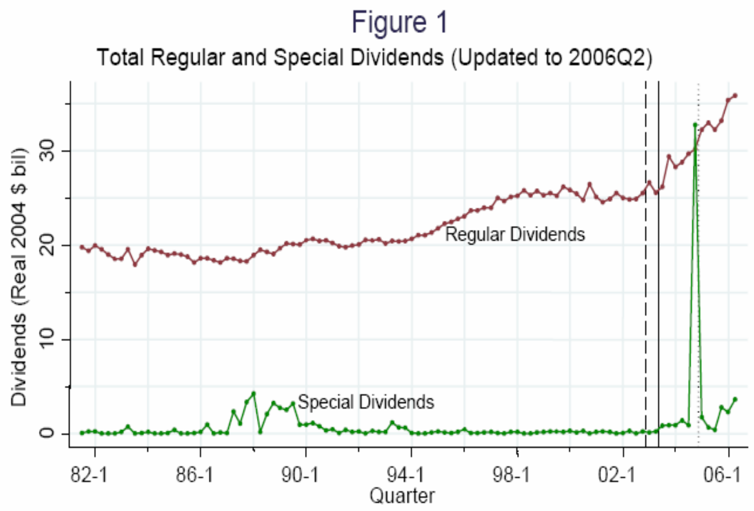
Taxation and Corporate Dividends

- The Jobs and Growth Tax Relief Act of 2003 (JGTRRA 2003) provides a natural experiment to test these theories
- The bill reduced the tax rate on dividends to 15% from ordinary rates (typically 35%)
  - Final bill enacted May 28th
- Did this tax cut:
  1. Cause the surge in dividends observed
  2. Induce substitution of repurchases for dividends (that is, did total payouts rise?)
- Chetty and Saez (2006) is an "Event Study"

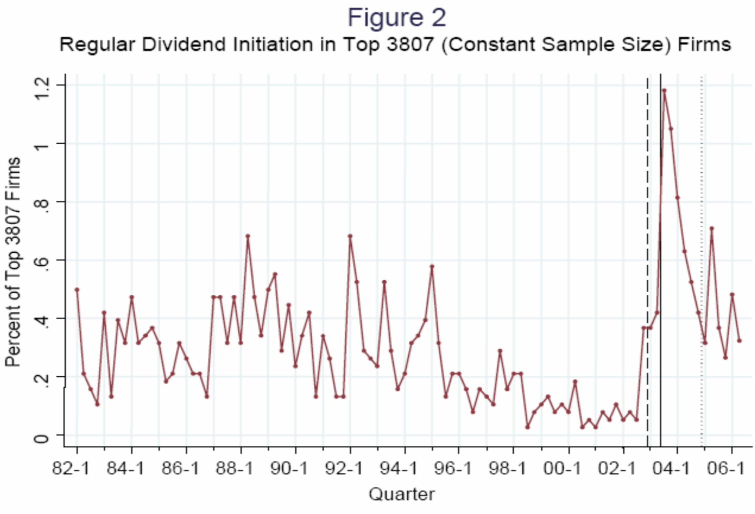
Chetty and Saez (2006)

- Data: 1981-2006, quarterly, roughly 5,000 firms.
- Regular and Special dividends.

Chetty and Saez (2)

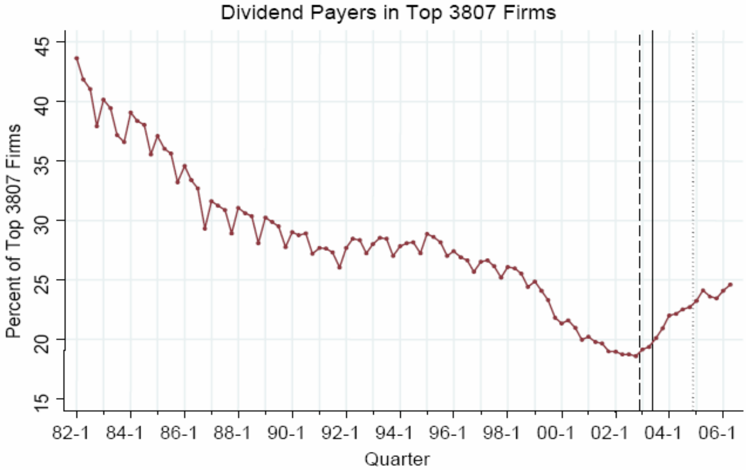


Chetty and Saez (3)



Chetty and Saez (4)

Figure 3



Chetty and Saez (5)

- While the legislation clearly "unlocked" lots of retained earnings (like the Microsoft special dividend), there also appears to be a significant increase in both the level of regular dividend payments and the number firms paying dividends
- What is less clear is whether there was an increase in investment as predicted by the "traditional/old view"
- Or a change in firm value as predicted by the "new view"
    - Work by Auerbach and Hassett (2006) provide evidence that dividend paying firms outperformed the market which is consistent with the "new view" that the tax cut was capitalized into the share price

Chetty and Saez (6)

- Tax cut appears to increase dividends by $5 billion or 20% in quarters immediately following announcement and enactment.
  - But, this is noisy. Could be other factors. (see Edgerton (forthcoming))
- But increase in (1) number of dividend initiators (extensive margin) and a (2) dollar amounts by regular payors (intensive margin) while controlling for various factors suggests robust results.
- MUCH heterogeneity in dividend response. Firms (1) controlled or owned by taxable entities or (2) have high executive ownership with low executive stock option holdings were much more likely to respond.
  - New and old view miss this.
- Unclear if firms increased investment in response to tax cut.

Summary of Tax Provisions: 2002-2010

- Notice how the various provisions work to reinforce one another and how intertwined they are.
  - Bonus depreciation reduces cost of capital.
  - Expansion of carryback window reinforces that impact. Allows non-taxable firms to use the extra deductions.
  - Lower dividend rates might also increase investment depending on ones view (old vs new view).
- A troubling aspect is that we don't know where the current incidence of the tax falls.
  - So, very difficult to say how changes to corporate tax policy affect the overall progressivity of the system.

Corporate Tax Incidence

Romney:
"Corporations are people, my friend."

- It's not remittance that matters - it's incidence!
- One can only tax things that feel pain
- When tax corporation, burden falls on:
  - Consumers $\rightarrow$ higher prices
  - Employees $\rightarrow$ lower wages
  - Owners $\rightarrow$ lower after-tax profits

Who bear's the burden of the corporate tax?

- Atkinson and Stiglitz (1980)
  - Theory suggests labor could bear more than 100% of burden
- Desai, Foley, Hines (2007)
  - 45%-75% of burden falls on labor
  - 25%-55% on capital (i.e., owners)
  - This range is reflective of the literature as a whole

Corporate Tax Incidence

- Wide ranges in empirical estimates reflect many assumptions needed
    - Capital mobility
    - Labor mobility
    - Competition in product markets
    - Competition in labor markets
    - Capital-labor substitutability
    - Identification of who owns capital (complications of investment vehicles)