

Using Prisoner's Dilemma to Evaluate Corporate Tax Reform Proposals

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Abstract: The game Prisoner's Dilemma provides a helpful tool for understanding international tax competition. Nations would be best served by cooperating with each other to keep corporate income tax rates high. But fearing defection by other nations, many nations often unilaterally lower their corporate income tax rates and in the process they shift the tax burden onto labor and consumers. International coordination of tax law is the optimal solution to the problems caused by international tax competition rather than reductions in or elimination of the corporate income tax.

Keywords: Corporate income taxation; International tax competition; Multinational corporations; Game theory; Public decision-making; Race to the bottom

JEL classification: C7, D7, H25, H77, H87, K34

1. Introduction

Numerous studies have shown that nations compete with each other by lowering their corporate income tax rates in the hope of attracting investment and jobs. Devereux et al. (2008) found strong evidence that OECD countries set tax rates in response to each other.

The OECD Tax Database (2012) shows that top statutory corporate income tax rates have declined sharply across OECD countries, from an average of 47.5% in 1981 to 25.4% in 2012. Heinemann et al. (2010) estimate that a country reduces its own statutory tax rate by 1.5 to 3.2 percentage points in response to a reduction in statutory tax rates of one percentage point in neighboring countries. Gomes and Pouget (2008) in a study of 21 OECD countries, show that tax competition has led to a decline in spending on public infrastructure. Given recent proposals from President Obama (The White House, 2012) to cut the top statutory corporate income tax rate from 35% to 28% (with a lower 25% rate for manufacturing) in the U.S. and by Prime Minister Cameron (HM Treasury, 2013) to cut the top rate to 20% in the UK, it seems likely that rates will continue to decline in the foreseeable future.

This should be cause for concern. Multinational corporations (MNCs) currently have a greater “ability to pay” than labor or most consumers. Yet because MNCs and capital are more mobile, they have more leverage to negotiate for lower tax rates or avoid taxation altogether. As a result, increasingly the tax burden falls on labor income and consumption (in the form of sales tax in the U.S. or the VAT in most of the rest of the world). Not only does this increase inequality which has corrosive effects on democracy, but a lack of consumer demand can lead to recessions and long term economic stagnation (Reich, 2011).

Many classical economists are unconcerned about the decline in the corporate income tax rate because they see the tax as inefficient and would like to see it abolished altogether.

But even some heterodox economists argue (and the Obama administration seems to believe) that recent proposed reductions in corporate income tax rates are not cause for concern because most nations will settle at a new global equilibrium rate of around 28%. The thinking is that a 46% corporate income tax rate was unsustainable in the 1980s, a 35% corporate income tax is unsustainable now, but if the United States and other industrialized nations adopt a 28% rate, that will really stick this time. The key question is, “Where does it stop?” How long does any new “equilibrium” hold before some nation is tempted to cut rates again to gain an advantage in attracting investment and jobs? Given that corporate income tax rates have fallen dramatically and repeatedly around the world over the last sixty years and given the enormous competitive pressures national leaders feel to cut rates further, it seems clear that a 28% rate would not hold for long. Instead, a zero or negative tax rate (where a nation actually pays a corporation to locate in its country) is the likely equilibrium point in the long term given current trends.

A Helpful Conceptual Metaphor for Understanding Tax Competition

The game Prisoner’s Dilemma provides an incredibly helpful tool for understanding international tax competition. RAND researchers Merrill Flood and Melvin Dresher conducted an experiment with the game in January 1950 and another RAND consultant, Albert Tucker, coined the name “Prisoner’s Dilemma” when he presented the case in a lecture on game theory at Stanford University later that year (Poundstone, 1992). While the exact wording of the game has evolved over the years, a modern version of Prisoner’s Dilemma is described by Poundstone (1992): two suspects are arrested on suspicion of a

crime. The prisoners are held in separate interview rooms and have no ability to communicate with each other. The police do not believe they have enough evidence to convict both men on the main charge. But they believe they can convict both to a year in prison on a lesser charge. The police offer each prisoner a deal: a prisoner who testifies against his partner will go free while the partner gets three years in jail on the main charge. However, if both prisoners testify against each other, both will be sentenced to two years in jail.

The payoff matrix looks like this:

Table 1: Classical Prisoner's Dilemma

	Prisoner B refuses to testify (<i>cooperates with his partner</i>)	Prisoner B testifies against his partner (<i>defects</i>)
Prisoner A refuses to testify (<i>cooperates with his partner</i>)	A sentenced to 1 year, B sentenced to 1 year.	A sentenced to 3 years, B goes free (0 years).
Prisoner A testifies against his partner (<i>defects</i>)	A goes free (0 years), B sentenced to 3 years.	A sentenced to 2 years, B sentenced to 2 years.

Even though it is in their *collective* interest to cooperate, *individually* it is rational for both prisoners to defect because it presents a better alternative than the risk of cooperating while the other person defects. The great insight of Prisoner's Dilemma is that systems can reach equilibrium at a suboptimal point.

The choice confronting national governments in the face of international tax competition is analogous to the choice facing the prisoners in the game described above. Every nation

would be better off if they cooperated with each other by keeping corporate income tax rates high. But individual nations have an incentive to defect by lowering corporate income tax rates in order to attract businesses away from other nations. No national government wants to cooperate if the other nation is likely to defect from the deal. So every nation ends up defecting thereby driving down the equilibrium corporate income tax rate over time.

The payoff matrix in international tax competition is as follows:

Table 2: Prisoner's Dilemma Applied to International Tax Competition

	Country B taxes corporate income at 40% (<i>cooperates</i>)	Country B cuts its corporate income tax rate to 20% (<i>defects</i>)
Country A taxes corporate income at 40% (<i>cooperates</i>)	A collect 40%, B collects 40%. (optimum outcome)	A collects 0,* B collects 20%.
Country A cuts its corporate income tax rate to 20% (<i>defects</i>)	A collects 20% rate, B collects 0.*	A collects 20%, B collects 20%. (suboptimum equilibrium)

*Assumes perfect mobility of capital and corporate location, with all other factors of production (cost of labor, quality of infrastructure, regulations, quality of the legal system, etc.) equal between the two countries.

In the absence of both Country A and Country B coordinating their corporate income tax rates, both nations are likely to end up in the suboptimal outcome of a 20% corporate income tax rate characterized by the bottom right square. As this scenario is played out year after year, it seems likely then, that each country, fearful of the actions of the other, will chip away at its corporate income tax rate, until both nations end up with zero or even a *negative* corporate income tax rate.

This is exactly what we see in connection with corporate income tax rates around the world over the last several decades. As mentioned above, the average top statutory corporate income tax rate in OECD countries fell by almost half in the space of thirty-one years — from 47.5% in 1981 to 25.4% in 2012. (OECD, 2012)

This graph shows the trend:

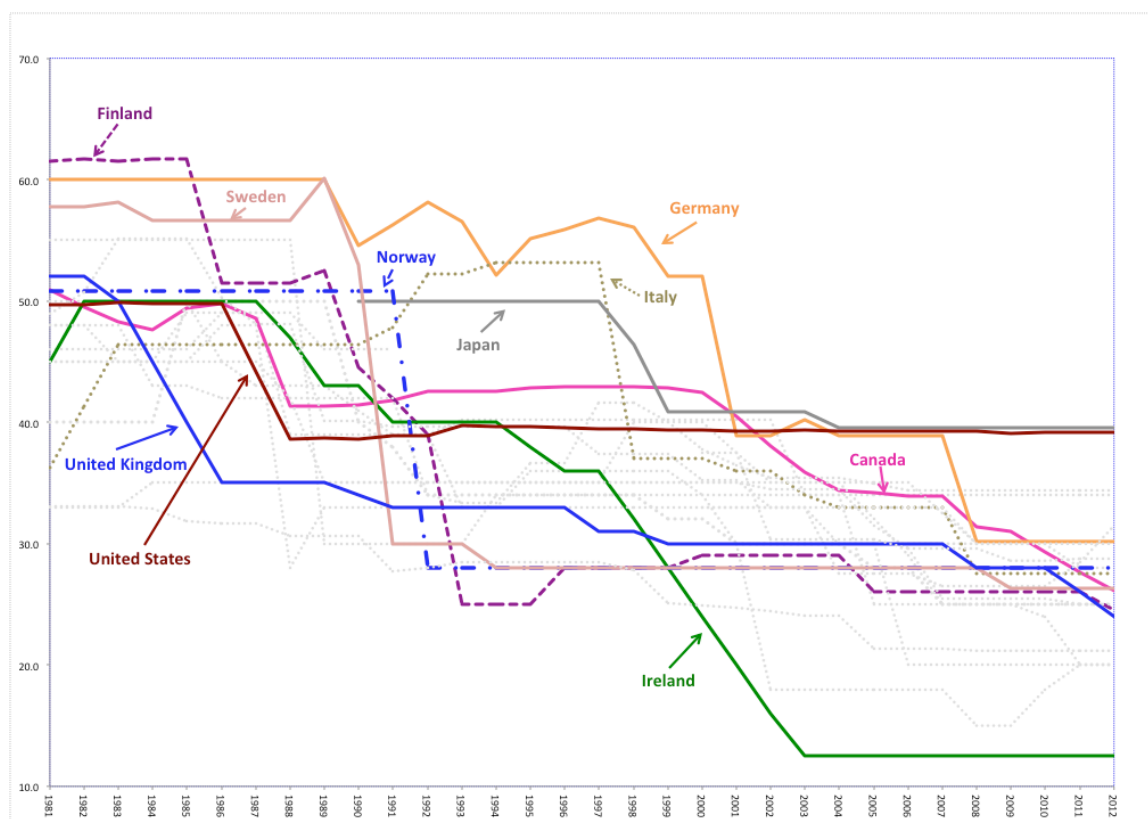


Figure 1: Corporate Income Tax Rates, 24 OECD Countries, 1981-2012.

Note: There were 24 countries in the OECD in 1981.

Data source: OECD Tax Database, Corporate and capital income taxes, Basic (non-targeted) corporate income tax rates, Table II.1. <http://www.oecd.org/tax/tax-policy/oecdtaxdatabase.htm>

There was a wave of defections in the late 1980s and early 1990s, followed by another huge wave at the beginning of this century. The trend is inexorably moving toward zero with countries hoping to make up the difference through increases in labor income and consumption taxes.

Strategies for Winning the Game

The way to win this game of Prisoner's Dilemma is to organize all of the players in the game. Business interests, through trade associations and lobbying efforts, organize to reduce corporate tax rates around the globe. They are winning the game by threatening to relocate if nations do not lower their corporate income tax rates. Meanwhile it seems that many national governments are approaching the problem of collecting revenue from corporations using the wrong conceptual metaphor. Many national leaders believe that they should compete to lower the corporate income tax rate. But by competing they are in fact defecting from an equilibrium rate. As a result, they are losing the game of Prisoner's Dilemma as corporate income tax revenues dwindle and the tax base is shifted from corporations onto workers and consumers. Nations cannot win this game through competition. Nations can only win through cooperation.

Important Differences From Prisoner's Dilemma

There are important ways in which international tax competition is different than the classical case of Prisoner's Dilemma. Unlike the prisoners described in the game, policy

makers have near perfect information on the decisions of other nations and can coordinate policy decisions.

Also, the classical game of Prisoner's Dilemma is conceived as a simultaneous one-time decision. But decisions in international tax law are sequential and multi-round. Every meeting of the legislature offers another chance to play the game. Thus nations can reward other nations that cooperate and punish those that defect. In RAND experiments with Prisoner's Dilemma, Flood and Dresher found when running the game 100 times in a row, two players cooperated 60 percent of the time (Poundstone, 1992: 116). In a multi-round game, the value of cooperation increases.

But if that is the case, why, judging from the evidence, has cooperation in the setting of corporate income tax rates seemed to *decrease* over the last thirty years? It seems plausible that corporate campaign contributions are an important factor here. Even though policy makers have near perfect information, they are also subject to fierce lobbying by corporate donors who urge them to lower corporate income tax rates. So while the self-interest of each prisoner in the game is focused solely on escaping jail time, politicians' self-interest is multi-faceted and includes making the decision that best maximizes the well-being of their community, while also securing sufficient contributions to get re-elected. Corporate campaign contributions and international cooperation (around setting uniformly high corporate income tax rates) seem inversely related.

Finally, not all actors are equal. Given the size of its market, the United States has a great deal of leverage to encourage cooperation it chooses to exert such leadership. For example, the United States could repeal deferral rules that allow U.S. corporations to avoid paying taxes on foreign source income until it is repatriated and repeal the foreign tax credit for controlled foreign corporations operating in any nation that sets its effective rate below a certain target. This would disincentivize countries from joining the race to the bottom and reward countries that keep their rates similar to the United States.

Different measures of the effect of competition?

Many economists argue that the top statutory corporate income tax rate is the wrong measure of the effects of tax competition. Instead, many research reports focus on corporate income tax as a share of GDP. This reflects the fact that when a country lowers its statutory corporate income tax rate, it often also simultaneously “broadens the base” so that more firms and/or more corporate revenue is subject to taxation at this lower rate. The idea is that so long as corporate income tax as a share of GDP remains roughly constant, then no harm is done by lowering the rate.

From a U.S. perspective, regardless of whether one looks at top statutory corporate income tax rates or corporate income tax as a share of GDP, both measures show sharp declines over the past sixty years. As the top statutory corporate income tax rate fell from as high as 70% in 1951 to 35% in 2010, so too corporate income tax revenue as a share of GDP fell from over 6% in 1950 to about 2% in 2010.¹

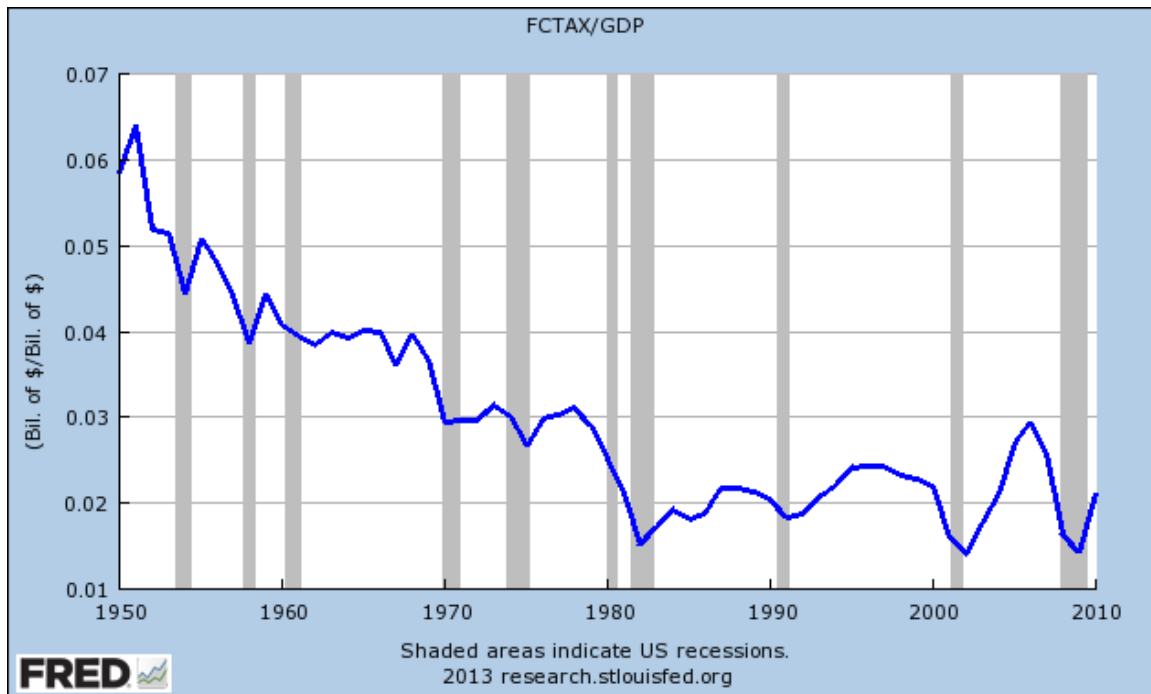


Figure 2: U.S. Corporate Federal Income Tax Collections as a Share of GDP 1950 - 2010. Data source: Federal Reserve Economic Data (FRED), Federal Reserve Bank of St. Louis, “Federal Government: Tax Receipts on Corporate Income (FCTAX)/Gross Domestic Product, 1 Decimal (GDP).” Used with permission.
<http://research.stlouisfed.org/fredgraph.png?g=hZt>

In the rest of the OECD it is a slightly different story. The OECD was created in 1961 and their data in connection with corporate income tax revenue starts in 1965. In 1965, corporate income tax revenue as a share of GDP (weighted average) for OECD countries excluding the U.S. was 2.3%. It peaked at 3.8% during the economic bubble of 2006 before falling back to 2.4% in 2009 (CTJ, 2011: 4). Additional research is necessary to explain the difference between the U.S., where cuts in corporate income tax rates resulted in a dramatic reduction in revenue collection, and the rest of the OECD, where cuts in statutory corporate income tax rates do not appear as closely correlated with decreased

revenue collection. It seems plausible however, along the lines described in Table 2 above, that rate cutting in non-U.S. OECD countries enabled them to gain market share (of global corporate income tax revenue) for a while, but once most nations in the OECD defected, revenue collection declined for everyone.

Previous efforts at stopping Harmful Tax Competition

Tax policy appears to be a game with 193 players (the 193 nations that are recognized as members of the United Nations). But coordinating tax policy is actually a more finite challenge. Baldwin and Krugman (2004) show that MNCs prefer to locate in what they call “core” nations with highly developed infrastructure and an existing base of suppliers and related industries. “Agglomeration forces mean that industry is not indifferent to location in equilibrium; tax issues apart, each industrial firm understands that it earns more in the core than it would in the periphery.” (Baldwin and Krugman, 2004) The 34 members of the OECD plus Brazil, Russia, India, China, and South Africa (BRICS) are a rough proxy for the number of “core economies” in the world. Thus they have enormous power to set the global equilibrium through coordinating tax rates among themselves while removing preferential tax treatment for companies that locate in low tax countries.

In the 1990s both the European Union and the OECD introduced programs designed to reduce harmful tax competition. The European Commission produced a report in 1997 titled, “Toward Tax Co-Ordination in the European Union: A Package to Tackle Harmful Tax Competition.” The EC then adopted a non-binding “Code of Conduct on Business

Taxation” that asked member states to rollback existing laws or practices which fell within a five-part definition of “harmful” contained in the code and not to introduce new tax measures defined as harmful (EC 2008).

Along the same lines, in 1998, the ministers of the OECD set up a Harmful Tax Competition (HTC) program to identify ways to stop the race to the bottom happening between OECD member states (OECD, 1998). The HTC program focused mainly on increasing transparency and reporting from known tax haven countries. The effort to crack down on tax havens was intended as a first step with additional coordination around tax competition to come in subsequent years (OECD, 1998).² The Clinton Administration strongly supported the HTC program and even co-chaired the newly created OECD Forum on Harmful Tax Practices from October 1998 to October 2000 (O’Neill, 2001).

With the election of George W. Bush in 2000, there was a marked shift in U.S. policy regarding tax competition. In February 2001, the new Secretary of the Treasury, Paul O’Neill, announced a review of the HTC program (O’Neill, 2001). Secretary O’Neill subsequently ruled out any effort to coordinate policy on statutory tax rates and worked to make sure that the HTC focused only on issues of transparency and reporting in connection with tax havens.

There is some debate about the extent to which the Bush administration’s change in policy damaged the effectiveness of the HTC program or whether it might have come up short in any event because its initial goals were not sufficiently far reaching. (Kudrle,

2008). Subsequent research has shown that the Harmful Tax Competition program led nearly forty nations identified as tax havens to adopt reforms in information gathering and sharing with foreign governments; but the reforms have not had an impact on tax evasion as measured by the volume of tax haven liabilities (Kudrle, 2008).

The Obama Administration could pick up where the Clinton Administration left off by working with allies in the EU and OECD to reinvigorate and expand the HTC program. Furthermore, the Obama administration could also take the logical next step which is to coordinate upward harmonization of rates between industrialized nations.

Evaluation of How Several Other Reform Proposals Impact the Race to the Bottom

There are a range of corporate tax reform proposals on the table in the U.S. right now. Some would speed the race to the bottom, another would potentially stop it unilaterally, and one may work in concert with the coordination model I described above.

The President's Framework for Tax Reform (2012) would lower the statutory corporate income tax rate and broaden the base. But at a time of severe budget cutbacks, the President's Framework aims to be revenue neutral — without ever specifying the tax expenditures that would be eliminated to pay for the lower statutory rate. As it turns out, we already have a case study that shows how such a proposal would play out if passed into law. In the Tax Reform Act of 1986 (TRA86), the U.S. Congress lowered the top corporate income tax rate (from 46 percent to 34 percent) and broadened the base by

closing some loopholes and eliminating some tax expenditures. For a short period of time, TRA86 succeeded in slightly raising overall corporate tax revenue. But almost as soon as the ink was dry, companies began lobbying for loopholes and exceptions — and now they were negotiating from a lower statutory starting point. Rules built into TRA86 and additional tax changes in 1988 and 1997 made it easier for companies to organize as pass-through entities (S-corporations) that avoid the corporate income tax altogether. Today, most companies are organized as pass-through entities that pay no corporate income tax and corporate tax revenue as a share of GDP is at its lowest level in 40 years thereby shifting the tax burden onto labor and consumers.

But there is another piece of the President's Framework (2012: 14) that is a potential game changer that could unilaterally help to stop the race to the bottom. The President's Framework includes a minimum tax on foreign earnings (taxed currently). The rate is never specified. But if set at a high enough level, it nullifies the tax benefits for U.S. based MNCs locating in low or no tax jurisdictions. It is exactly the sort of marginal change that, if done correctly, solves the Prisoner's Dilemma problem by not rewarding companies that move production or profits to countries that defect from the global equilibrium.

Other proposals make existing problems worse. U.S. based MNCs currently hold \$1.6 trillion in cash overseas (Kocieniewski, 2013). Under current U.S. tax law those profits are deferred from taxation until they are repatriated to the U.S. Many in Congress are pushing for another repatriation holiday that would enable MNCs to bring those earnings

home. But once again we know how that would likely play out because we have a recent case study. In 2004, Congress passed a “one-time” repatriation holiday as part of the American Jobs Creation Act (AJCA) of 2004. Firms repatriated over \$300 billion; but, in spite of requirements that the money be used for job creation, MNCs mostly used it for dividends and stock repurchases that drove up their share price without making an impact on employment (Maples and Gravelle, 2011). Rather than being a one-time deal, the AJCA of 2004 created the expectation that there would be additional tax breaks in the future thereby accelerating the race to the bottom. The top 20 MNCs that took advantage of AJCA 2004 now have three times as much foreign profits held overseas (CTJ, 2011).

Integration of the personal and corporate income tax system is a proposal that always seems to resurface anytime corporate tax reform is discussed (e.g. Thurow, 1980; Graetz and Warren Jr., 1992). Integration would eliminate the corporate income tax in favor of a much higher rate on dividends and capital gains taxed as ordinary income. This idea is popular with a wide range of economists but it is unworkable for a number of reasons. Economists Heady and Brys (2008: 2) explain that the corporate income tax performs an important withholding function. The corporate income tax “acts as a ‘backstop’ to the personal income tax.” In the absence of a corporate income tax, wealthy individuals could incorporate and shelter their wealth tax free (by contrast, currently corporate income is taxed yearly as are interest earnings from a savings account). Heady and Brys (2008: 2) also point out that the “corporate income tax acts as a withholding tax on equity income earned by non-resident shareholders, which might otherwise escape taxation in the source country.” So elimination of the corporate income tax would cause decreasing

personal income tax revenue as well. CTJ (2013: 2) points out that “two-thirds of the profits that corporations pay out today (as stock dividends) go to tax-exempt entities like retirement plans and university endowments. In other words, if the personal income tax was the only tax applied to the profits of large, currently taxable corporations, then two-thirds of those profits would *never* be taxed.” There is an additional political problem here. Mobility gives corporations leverage in corporate income tax negotiations. But wealthy individuals are highly mobile too and they have disproportionate political power. Tax rates for dividends and capital gains have been falling across the OECD for over a decade (OECD, 2011). Nations very well could end up with a situation where they get rid of the corporate income tax hoping to make it back on dividends and capital gains taxes, only to see dividends and capital gains taxes whither away as well as a result of the greater exit options of wealthy shareholders. Once again, the result would be rising inequality, the erosion of democracy, and a global economy even more prone to recessions as consumer demand dries up.

In the U.S. House of Representatives, Dave Camp chairman of the Ways and Means Committee has been leading a multi-year campaign to convert the U.S. system of corporate taxation to a territorial system. The current U.S. system is sometimes referred to as a “worldwide” system based on the principle of “residence” — taxes are paid based on the residence of the tax payer regardless of where the taxes are earned in the world (Misey and Schadewald, 2011). Under the Camp Proposal, the U.S. system would move toward a “territorial” system based on the principle of “source” — the idea that taxes should be collected based on where the income is earned. The problems with territoriality

are numerous and well documented (Elliott, 2010; Kleinbard, 2007; Repetti, 2007).

Deferral rules have already created an incentive for U.S. based MNCs to locate production overseas. Under territoriality, that exodus of jobs from the U.S. would increase as companies would be able to locate production in countries with low or zero tax and return those profits to the U.S. without paying taxes to the U.S. Treasury (CTJ 2011). Kleinbard (2007) and Durst (2010) note that territoriality also amplifies existing problems with transfer pricing.

In this paper, I have argued that nations should coordinate upward harmonization of rates. But to be clear, coordination is the *process* and high rates are the *policy*. But nations could also coordinate around a different *method* of corporate taxation that might also increase revenue and stop the race to the bottom. For example, leaders in the EU and some in the U.S. Congress are exploring formulary apportionment. Clausing and Avi-Yonah (2007) propose a sales-based formula: in calculating tax liabilities, MNCs would take global income minus global expenses, and the remaining profit would be taxed based on the proportion of MNCs sales in each country.³ A company that has 60% of its sales or services in the U.S. would have 60% of its worldwide profits subject to U.S. taxation. Formulary apportionment dramatically simplifies the tax system. If properly design it would solve many of the problems associated with transfer pricing rules. It ends deferral and the foreign tax credit, two of the biggest sources of abuse in the current tax system. Formulary apportionment could be revenue positive — Clausing and Avi-Yonah (2007) estimate a revenue gain from moving to formulary apportionment in the range of \$52 to \$79 billion a year.

Coordination and formulary apportionment could work together: in fact the more countries that participate in formulary apportionment, the better it works. Formulary apportionment solves the problems posed by Prisoner's Dilemma because it reduces the returns to defection. Apple would no longer be able to gain benefits from accounting schemes that purport to locate its profits in a low tax country like Ireland — because taxes are calculated based on the location of the *customer*, the U.S. and large countries in the E.U. would get the lion's share of Apple's tax payments. By taxing based on the location of customers rather than the location of profits, formulary apportionment plays to the strengths of countries with large markets and generous social welfare policies that fuel consumer demand. Given that MNCs are going to have a global pool of profits subject to taxation, countries have every incentive to get their fair share of the revenue through coordinating rates. The idea is almost certain to face strong headwinds politically — under a “sales only” version of formulary apportionment, large MNCs like Apple, G.E., and Google would likely see a substantial tax increase.

Altshuler and Gruber (2008) see formulary apportionment as a Pandora's box with potentially severe adverse consequences that are worse than simply making marginal changes to the status quo. Altshuler and Grubert (2008) argue that corporations will sell to distributors in no tax countries who will then re-sell the products back to the high tax country at a small markup, thereby largely evading taxation. Clausing and Avi-Yonah (2007: 20) perhaps anticipating these criticisms propose adopting “a look-through rule that would regard any sales made by an [MNC] to an unrelated distributor as sales made

into the United States if the distributor sells the goods into the United States and does not substantially transform them before they are resold” which is based on existing US Treasury regulations. As always, the devil is in the details.

Wider Application

Prisoner’s Dilemma applies not just to international tax competition over corporate income tax rates, it helps us understand many forms of regulatory and tax competition. Carbon taxes, property taxes, taxes on dividends and capital gains, environmental protection, and labor protections (from health and safety to minimum wage laws) are all areas where nations (and states, counties, and cities too) would be better off to cooperate on setting uniformly high standards, but will be tempted to defect to get a slight edge in attracting corporate investment. In a globalized era, with mobile capital and firms, if one nation acts to stabilize revenue or to improve workplace and environmental standards, it risks losing investment and jobs to another nation. Increasingly, successful political leadership that improves the well being of citizens will require finding a way to work with other nations to secure global agreement and enforcement on a range of tax and regulatory issues.

Conclusion

It seems like a simple question: what sort of game is international tax competition?

Getting the answer correct turns out to have important consequences for the health of the

global economy. Many policy makers and the popular press often use the wrong conceptual metaphor to understand the dynamics involved in setting tax policy. Policy makers have been encouraged to understand global tax policy as an athletic event, a zero sum game, with only one winner. As a result they are pursuing policies that, over time, are leading to a zero or negative corporate income tax rate. This shifts the tax burden onto labor and consumers which contributes to rising inequality and frequent economic crises.

Instead, global tax policy is better understood as a coordination problem that can be modeled using the game of Prisoner's Dilemma. Every nation has an incentive to defect from a global equilibrium rate in order to achieve a disproportionate payoff in business investment and jobs. But every nation would be better off if it cooperated with others to keep top corporate income tax rates high throughout the world. Unlike the game of Prisoner's Dilemma, setting global tax policy is a sequential, multi-round game, with near perfect information in which the United States has disproportionate influence as a result of the size of its market. The Obama administration could help stop the race to the bottom through reinvigorating the OECD Harmful Tax Competition program, coordinating corporate income tax policy with allies, and removing tax preferences for companies that locate in nations that fail to adhere to a set of minimum standards.

Corporate campaign contributions may distort the economic decision making of national leaders. But international coordination of tax rates could have an important stabilizing effect on the global economy which would enhance the well being of citizens and corporations alike. The choice ahead is clear. Either we continue down the present path

where nations compete over corporate income tax rates (and capital income tax rates for that matter) until labor and consumers are forced to bear the entire tax burden. Or nations coordinate rates and everyone pays their fair share to live in a modern democracy. Seen in this light, coordination is the only rational choice.

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Endnotes

¹ The top statutory corporate income tax rate in 1951 was 50.75% and there was an additional 30% excise profits tax, but the combined top rate was capped at 70% (IRS 2003).

² “Tax incentives designed to attract investment in plant, building and equipment have been excluded at this stage, although it is recognized that the distinction between regimes directed at financial and other services on the one hand and at manufacturing and similar activities on the other hand is not always easy to apply. The Committee intends to explore

² “Tax incentives designed to attract investment in plant, building and equipment have been excluded at this stage, although it is recognized that the distinction between regimes directed at financial and other services on the one hand and at manufacturing and similar activities on the other hand is not always easy to apply. The Committee intends to explore this issue in the future.” (OECD 1998: 8)

³ Many U.S. states currently use formulary apportionment but many use a three-part formula based on sales, employees, and property to determine where income is earned. The problem with this three-part formula is that, if adopted internationally, it would encourage companies to move their employees and assets out of high tax countries which just further fuels the race to the bottom. The Clausing and Avi-Yonah (2007) formula based only on sales is thus an improvement upon the current formulas used in many U.S. states.