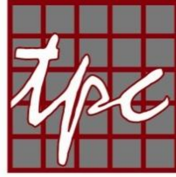


Tax Policy Center
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# International Competitiveness
## Who Competes against Whom and for What?

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## Introduction: Politicians, Economists, and Competitiveness

*Competitiveness* is the big buzzword these days in our national discourse. Everyone wants the United States to become more competitive, and many specific policy proposals and broader policy agendas appear aimed at achieving that elusive goal. Proposals for tax reform, for improving U.S. infrastructure, and for reforming public education are all promoted in the name of competitiveness.

Recent proposals to reduce the federal deficit and achieve long-run fiscal sustainability cite competitiveness as a justification for many of their recommendations. In its report on how to achieve fiscal sustainability, the National Commission on Fiscal Responsibility and Reform (2010) listed as one of its ten guiding principles and values "Cut and Invest to Promote Economic Growth and Keep America Competitive," asserting that "we must invest in education, infrastructure, and high-value research and development to help our economy grow, *keep us globally competitive*, and make it easier for businesses to create jobs." In the executive summary of its debt reduction plan, *Restoring America's Future*, the Bipartisan Policy Center (2010) proposes to "create a simple pro-growth tax system that broadens the base, reduces rates, *makes America more competitive*, and raises revenue to reduce the debt."

Our political leaders are singing the same tune. President Obama's (2011) latest State of the Union address elevated the improvement of America's ability to compete in the world to a leading goal of policy. The speech was filled with references to international competition:

- The *competition for jobs* is real. But this shouldn't discourage us. It should challenge us. Remember—for all the hits we've taken these last few years, for all the naysayers predicting our decline, America still has the largest, most prosperous economy in the world. (Applause.) No workers—no workers are more productive than ours.

- *We know what it takes to compete for the jobs and industries of our time*. We need to out-innovate, out-educate, and out-build the rest of the world. (Applause.)

- Investments—in innovation, education, and infrastructure—will make America a better place to do business and create jobs. *But to help our companies compete,* we also have to knock down barriers that stand in the way of their success…So tonight, I'm asking Democrats and Republicans to simplify the (tax) system. Get rid of the loopholes. Level the playing field. And use the savings to lower the corporate tax rate for the first time in 25 years—without adding to our deficit. It can be done. (Applause.)

But President Obama is not the only political leader who wants to make America more competitive. Some Republican presidential candidates are using the same songbook. Mitt Romney's economic plan (2011) proposes to introduce "Five Bills for Day One;" the first, which would reduce the corporate income tax rate to 25 percent, is called the

"American *Competitiveness* Act." Newt Gingrich's "Jobs and Prosperity Plan" calls for making the United States the most desirable location for new business investment through a series of "bold tax cuts," including "eliminating the capital gains tax to make American entrepreneurs *more competitive* against those in other countries."[1]

Official government reports from the last two administrations also promote the competitiveness theme. For example, the U.S. Treasury Department (2007) released near the end of the George W. Bush administration a proposal for business tax reform entitled "Approaches to Improve the *Competitiveness* of the U.S. Business Tax System for the 21st Century." While the report contains many useful international comparisons and assesses policies in terms of normative tax policy objectives widely shared by tax experts, in no place does the report define clearly what is meant by the term *competitiveness*. The theme of competitiveness has continued in the Obama treasury. A U.S. Treasury report (2011) advocating enhancements in the Research and Experimentation Tax Credit is entitled "Investing in U.S. *Competitiveness*."

Of course, we all know what competition is about. We watch the New York Yankees and Boston Red Sox compete with each other for the American League pennant (at least through the end of August). We will be following in 2011 and 2012 the competition for the Republican presidential nomination and later the contest between the Republican and Democratic nominees. We know how Ford competes with General Motors and Toyota and how Google+ competes with Facebook. All these contests are "zero sum" games where one side wins and the other loses and all at least in theory produce benefits for third parties, whether they be sports fans, voters, or consumers.

But is there an economic competition between nations that is analogous to this zero-sum competition between sports teams, political candidates, and companies? The basic premise of most economic theory says no. Ever since Adam Smith refuted the arguments of mercantilists in the *Wealth of Nations* and David Ricardo developed the theory of comparative advantage, economists have argued that trade between nations benefits all countries. Just as individuals within a country benefit from specialization and trade, so do nations by specializing in activities in which they are relatively more productive than others. Trade between countries is by and large a win-win, not a zero-sum game.[2]

Under standard economic theory, the notion that we are "competing" with China or that economic growth in China represents a threat gets it mostly backwards. Far from being an economic threat, more Chinese prosperity benefits the United States economy by providing more choices for U.S. consumers, markets for U.S. producers, and capital for U.S. borrowers.[3] Unlike Red Sox fans, who have reason to cheer when the Yankees lose,

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[1] See "The Gingrich Jobs and Prosperity Plan" at http://www.newt.org/solutions/jobs-economy.

[2] This is not to say that some workers and industries would not benefit from international trade restrictions, just as they would also benefit from barriers to entry by domestic competitors.

[3] Of course, a stronger China could eventually produce a *military* threat; this paper offers no opinion of the likelihood of that. And China's policy of undervaluing its currency and accruing huge trade surpluses may be contributing to imbalances in the world economy and did help enable the excessive buildup of private and public debt in the United States in the past decade. The availability of low-cost funds, while raising

we should, by this line of argument, be pleased when China's economy performs well.

An overwhelming majority of economists support free trade and oppose specific proposals for trade restrictions, a position that often places them in opposition to public opinion (Poole 2004). But the same politicians who make competitiveness, with its sometimes protectionist overtones, a leading talking point often also support free-trade agreements.[4] And the competitiveness rhetoric is often used to justify policies that many economists view as ranging from benign to positive, such as improving our educational system, investing in infrastructure, reducing the long-term buildup of federal debt, or reforming the federal income tax.

One strategy for those of us in the economics profession, then, is simply to hold our noses, salute the flag of competitiveness, and then advocate policies we would favor anyway.[5] A variant of that alternative, proposed by Slemrod (2011), would define policies to be competitive if they improve the U.S. standard of living. Krugman (1994a) expresses a darker view. He acknowledges that economists may wish to "appropriate the rhetoric of competitiveness on behalf of desirable economic policies," but then asserts that "the obsession with competitiveness is both wrong and dangerous" because it is likely to lead to flawed policies.

This paper explores whether there is anything to the concept of competitiveness, beyond the tautological position that competitiveness is equivalent to improving living standards. In what way do we compete with other nations and for what things? And how do tax policies affect that competition?

This paper defines competition with other nations in its traditional sense as a zero-sum game. In what ways does a gain for the United States come at the expense of a loss for other nations? Are those gains something policies should seek to achieve and at what price? And what tax policies would achieve them?

The following section of the paper considers five things we may be competing with other nations for: (1) labor supply, (2) financial and physical capital, (3) intangible capital, (4) tax revenues, and (5) natural resources. All of these objects of competition are *inputs*, which may contribute to higher living standards, but are not themselves a final goal of policy. And some policies to increase the U.S. share of some or all these inputs may come with costs that are not worth paying. Thus, competitiveness on these dimensions is potentially a *means* to an end, but not an end in itself. Subsequent sections examine how tax policy may affect the acquisition of these inputs and summarize the effects of

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living standards in the short run, comes with a long-run cost if the borrower fails to exert discipline. There could also be direct economic costs to the United States from Chinese growth; for example, an increase in the price of materials the United States imports, such as oil, or a decline in sales by U.S. producers to other nations.

[4] For example, President Clinton extensively promoted the idea of competitiveness but also strongly supported the North American Free Trade Act (NAFTA) in the face of significant opposition within the Democratic Party.

[5] A colleague suggested this strategy to me when I complained about the use of competitiveness rhetoric in a document proposing policies to reduce the growth of the federal debt.

alternative reforms of capital income taxation on dimensions of competitiveness.

Ways We May Engage in Competition with Other Nations in a Global Economy

We do compete with other nations on some dimensions. We compete to attract productive resources, such as high-skilled workers or investment capital. U.S. and foreign-resident corporations compete with each other in international markets, and corporations can exert some choice about where to establish and maintain residence. Governments may exert competing claims against each other for tax revenues associated with economic activities that transcend national boundaries. And, of course, competition among nations for territory and access to natural resources often leads to conflicts and spurs competition for military dominance.

*Competition for Labor*

Despite the fascination of tax specialists with capital income taxation, the talents and work ethic of an economy's labor force is its most important productive resource. Economic models of international taxation often treat labor as an immobile factor and focus on the effects of taxation on capital mobility. But we should not forget the huge role cross-border migration has played in the growth of economies, most definitely including the United States.

In 2010, the stock of global migrants numbered 214 million worldwide, more than the population of all but the four most populous countries (China, India, the United States, and Indonesia). The United States contained the largest number of international migrants (42.8 million), followed by the Russian Federation (12.2 million), Germany (10.8 million), Saudi Arabia (7.3 million), and Canada (7.2 million). In 2009, foreign-born persons accounted for 12.5 percent of the U.S. population. Some countries in the OECD, however, had larger shares of foreign-born persons in their population than the United States in 2009, among them Australia (26.5 percent), Israel (26.2 percent), New Zealand (22.7 percent), Canada (19.6 percent), Ireland (17.2 percent), Austria (15.5 percent), and Sweden (14.4 percent).[6]

Immigration to some nations is the flip side, of course, of emigration from others. Still, most developed countries have experienced net in-migration since the end of World War II. For example, net migration to the United States between 1950 and 2010 was about 43.4 million, or about 14 percent of its current population. Other countries experiencing large net in-migration over the same period were Germany (10.9 million, about half of them between 1985 and 1995), Canada (7.9 million), the Russian Federation (7.2 million), Australia (6.4 million), France (5.9 million), Spain (5.0 million), Italy (3.4

[6] The figures cited in this section come from tables at the web site of the Migration Policy Institute at http://www.migrationinformation.org/datahub/.

million), and the United Kingdom (2.5 million). In contrast, Mexico experienced a net out-migration of 13.8 million over the same period. (Ireland, which has been attracting immigrants in recent years, also experienced net out-migration over the 60-year period).

The United States can be viewed as in competition with other advanced countries for the labor services of potential migrants, especially those with advanced education and technical skills. In general, immigrants to the United States come from different places than immigrants to other advanced economies, so the United States is not in direct competition for the entire pool of such labor (table 1). For example, in 2000, half the foreign-born in the United States came from elsewhere in the Americas, primarily Mexico and other South and Central American countries, a much larger share from the Americas than for Canada (16 percent), the United Kingdom (12 percent), Australia (4 percent), Germany (3 percent) and France (less than 3 percent). But a much smaller share of the foreign-born in America came from Europe than in those other countries. France receives its largest share from Africa (reflecting large numbers from Algeria, Morocco, and Tunisia), while Germany receives a large share from Asia (mostly migrants from Turkey). People born in Asia, however, constituted a prominent share of the foreign-born in all six countries, ranging from over a third in Germany, Canada, and the United Kingdom to about 13 percent in France.

Whether countries want all these migrants is another question. Immigration policy is an increasingly divisive issue in both the United States and Europe, with people worrying about the capacity of societies to absorb large number of immigrants, especially those with different cultures and traditions from the current native population or those who may become economically destitute and place fiscal strains on publicly funded benefit programs. The main point, however, is that the ability to attract people says something about a country's competitiveness, at least providing a clear indication that the countries that attract immigrants are places where people prefer to reside.

There are positive economic benefits to attracting immigrants, particularly those whose skills are complementary to the skills of the native population and who can therefore raise others' incomes. Certainly, the United States has benefited tremendously over its history from the contributions of talented newcomers and their offspring. And if the United States is able to continue to attract and retain the skills of top scientists, engineers, doctors, and other high-skilled professionals, this will contribute positively to the U.S. economy. [7]

[7] Of course, low-skill immigrants may also be complementary to the native population if they are willing to perform relatively low-paying and unpleasant work that the local population prefers not to do. But they also can drive down the wages of low-skilled workers in the native population (including recent earlier immigrants) and thereby increase income inequality.

Table 1. Distribution of the Foreign-Born in Selected Countries, by Country of Origin

| Shares from: | United States, 2000 | Australia, 2001 | Canada, 2001 | France, 1999 | Germany, 2001 | United Kingdom, 2001 |
|---|---|---|---|---|---|---|
| Africa | 2.8% | 4.5% | 5.4% | 43.5% | 4.1% | 17.0% |
| Americas | 54.4% | 3.9% | 15.6% | 2.5% | 3.0% | 11.7% |
| Asia | 26.4% | 28.6% | 36.7% | 12.6% | 38.6% | 33.8% |
| Europe | 15.8% | 51.5% | 41.3% | 41.3% | 53.1% | 33.1% |
| Oceania and other | 0.5% | 11.5% | 1.0% | 0.1% | 1.2% | 4.4% |

Source: Migration Policy Institute web site, http://www.migrationinformation.org/datahub/migrant_stock_region.cfm, based on data from the Census of Australia, 2001; Census of Canada, 2001; U.S. Census, 2000; National Institute for Statistics and Economic Studies (France), 1999; Federal Statistical Office (Germany), 2001; and United Kingdom Census, 2001.
Note: Tables in source are labeled "Distribution of Foreign" for France and Germany and "Distribution of Foreign-Born" for the United States, Australia, Canada, and United Kingdom.

*Competition for Financial and Physical Capital*

With financial markets increasingly globalized, countries compete to attract capital from individual investors, institutional investors, and state-managed investment funds. U.S. firms and households seek capital to invest in factories, machinery and equipment, office buildings, homes, and household consumer durables. The U.S. government seeks funds from abroad to finance its deficit and states and localities seek funds to finance schools, roads, and other public facilities.

Even for users of capital services in small countries, however, the supply of funds to any sector is less than perfectly elastic. Investors view debt and equity as a whole as imperfect substitutes and also view debt of different risk grades and equity issues by different firms as imperfect substitutes. Investors also view debt issued by different governments and debt and equity issued by firms resident in different countries as imperfect substitutes. And various investments are influenced by clientele effects; for example tax exemption makes debt issued by states and localities in the United States attractive at a lower rate only to high-bracket investors in the United States, although because these investors also may hold foreign debt and equities, states and localities compete with foreign borrowers for this source of funding.

To the extent capital users in the United States can attract more funding that would otherwise go to foreign borrowers, they could benefit from lower capital costs. Lower capital costs could raise domestic investment in the United States, thereby raising capital per worker, domestic wages, and living standards.

*Competition for Intangible Capital and Corporate Residence*

Countries may also compete with each other to be the residence of the multinational corporations that produce a significant share of world output, especially in certain industries. Substantial barriers prevent existing corporations from changing their corporate residence. But the start-ups that will become the corporate giants of the future have a choice of where to establish residence. Resident companies of one country may expand or contract relative to resident companies of other countries. And firms resident in one country can buy firms in another one, preserving the structure of production and distribution but shifting corporate residence.

As large corporations have become more globalized, the nationality of corporate residence has become a less important determinant of where corporations employ labor, raise financial capital, produce goods and services, and sell their output. In addition, some firms are also decentralizing their headquarters functions, placing centers of managerial control, finance, and legal residence in different jurisdictions (Desai 2009a).

Therefore, the connection between the legal residence of a corporation and things that matter for economic performance is weakening over time. Yet countries will still compete with each other for headquarters-type functions, such as being the center for management, finance, and research activities. Further, the reputational capital of a country's leading firms may raise worldwide demand for its products, and therefore for its workers. Countries may compete with each other to be centers of intellectual leadership and innovation and the presence of headquarters of innovative corporations could contribute to the ability to do this. And these features may still be connected with corporate legal residence, even if the connection is much less than previously assumed.

*Competition for Tax Revenue*

The system of international tax rules that has evolved over the past century has given countries where production facilities are located the first right to tax the profits those facilities generate, regardless of the residence of the corporate group that owns the domestic facility. But as corporations have become more globalized and intangible assets have become a more important input to production, it has become more difficult to determine where profits originate. The traditional arms-length transfer pricing system used to allocate profits among corporate entities has become more difficult for governments to enforce, and easier for companies to manipulate, because of the absence of comparable arms-length transactions for unique intangibles transferred within corporate groups.

There is evidence, for example, that shifts of reported profits of U.S. firms to low tax jurisdictions are much larger than can be explained by shifts in corporate investment, employment, or output (Grubert 2011; Sullivan 2010, 2011). A possible solution would to be replace the transfer pricing system with a formula apportionment system (Avi-Yonah and Clausing 2007; Martens-Weiner 2006), but the importance of intangible assets

with no clear location makes it also difficult to apply formula apportionment properly (Altshuler and Grubert 2010)

It is not the purpose of this paper to review the vast literature on how multinational companies can or should allocate reported profits among jurisdictions or to recommend alternatives to current rules. The main point here is that profits of multinational corporations represent a potential source of tax revenues that countries may compete for. And companies have many ways within existing tax statutes to shift their reported profits among jurisdictions. All things the same, any single country would prefer to capture a larger share of the reported profits of multinationals.

*Competition for Natural Resources*

The competition for resources has been a source of conflict among people throughout history, from the conflicts between desert tribes over access to water to the conflicts between modern nations over land containing valuable deposits of oil, natural gas, and other resources. Nations may also compete over rights to resources that fall outside of national boundaries, such as ocean fishing rights. Or, given the cross-border effects of activities that contribute to climate change, there may in the future be conflicts related to environmental policies.

Countries with stronger economies can deploy more diplomatic and potentially more military resources and therefore exert more influence in this type of competition. So perhaps, this is one area where the economic policies most favorable to economic growth also promote competitiveness.

## How Does Fiscal Policy (Taxes and Spending) Affect Competition for Resources?

*Tax Policy and International Movements of Labor*

International migration patterns are influenced by many factors, including the desire to escape persecution and oppression and gain political freedom and the search for higher living standards, either because the new country offers greater economic opportunity generally or because it offers positions for people with specialized skills or training. People don’t usually think of tax policy as a strong motivator for international migration of labor.

There has been scant economic research on how taxes might affect international movements of labor. But there are some circumstances where high marginal tax rates could affect locational decisions of highly productive workers. For example, Kleven, Landais, and Saez (2010) find evidence that the migration within the European Union of top football stars was very responsive to differentials in top marginal tax rates and special tax incentives. As an example, Spain reduced its top marginal tax rate on foreign residents to 24 percent, a measure referred to as the “Beckham Law” after David Beckham moved from Manchester United to Real Madrid to benefit from it. The authors believe the effect of taxes on the migration of top talent may be much a wider

phenomenon that just for sport. There is also evidence that interstate differences in taxation affect migration of high-wage labor within the United States (Feldstein and Wrobel 1998)

The influence of tax rate differences is no doubt much more important for decisions to migrate among countries located in the same region with open borders like the EU, among countries with the same culture or similar languages, or among states within the United States than between the United States and most other countries. Nonetheless, tax policy could be one factor influencing the worldwide competition for highly mobile and talented individuals.

Taxation of wealth and capital income could also affect locational choice, although this would be less important for labor supply than the taxation of labor income unless the wealthy people considering migrating are also high earners. But it could affect the competition for taxing the assets and capital income of wealthy individuals.

In the United States, for example, states may choose to reduce their estate tax rates to encourage wealthy older people to migrate there. Prior to the Economic Growth and Tax Relief Act of 2001 (EGTRRA), a provision of the federal estate tax law discouraged this competition by allowing taxpayers to claim a credit against federal estate taxes for state taxes up to 16 percent of taxable wealth over $10,400,000. But EGTRRA phased out the state tax credit as part of a provision to phase down and eventually repeal federal estate taxes.[8]

Out-migration to avoid wealth taxation has also been at times an issue in the United States. The Clinton administration in 1995 proposed a tax on unrealized capital gains of Americans renouncing their U.S. citizenship, prompted by press reports (Lenzner and Mao 1994) that a small number of extremely wealthy Americans had renounced citizenship to avoid paying U.S. capital income taxes and estate taxes.[9] The proposal was controversial and Congressional staff challenged the administration's arguments for the proposal and its estimate of the revenue gains (Joint Committee on Taxation 1995). Eventually, Congress enacted a more limited measure than the administration proposal that increased taxes on U.S. income of expatriates. Yet, there continue to be press reports that tax reasons are causing some Americans to renounce citizenship (Knowlton 2010).

Tax policies may also affect incentives for citizens to live and work overseas. Most countries impose worldwide income taxes only on residents, where the residency test is based on the number of days spent within the country during a tax year. As a result, citizens of most countries receive a tax incentive to reside in foreign jurisdictions with

[8] The estate tax expired for tax year 2010, but was scheduled to return in 2011 at pre-EGTRRA rate and exemption levels. In December 2010, Congress extended the estate tax through the end of 2012, but reduced the top tax rate from 45 percent in 2009 to 35 percent in 2011 and increased the exemption from $3.5 million to $5 million. Absent additional Congressional action, pre-EGTRRA rates and exemptions will apply beginning in tax year 2013.

[9] In an interview, the then Assistant Treasury Secretary for Tax Policy Leslie Samuels referred to these individuals as "economic Benedict Arnolds." See http://renunciationguide.com/Site-Overview.html.

lower income tax rates than their home countries. The United States, in contrast, taxes its citizens on their worldwide income, irrespective of where they reside. The U.S. income tax does, however, allow an exemption for foreign earnings of $92,900 per person in tax year 2011, indexed for inflation. In addition, U.S. citizens working abroad may claim a credit for foreign income taxes paid, which effectively eliminates residual U.S. income tax liability for U.S. citizens residing and working in countries with effective income tax rates equal to or higher than the effective U.S. income tax rate on the same earnings. But high-earning Americans do pay residual U.S. income tax on their earnings in low-tax jurisdictions. The choice of how to tax this foreign-source income affects to varying degrees the net earnings of U.S. workers in low-tax foreign jurisdictions and the net costs of employing workers in these jurisdictions, depending on the extent to which the employee absorbs the tax or the employer raises pretax wages paid to overseas workers to compensate them.

While high tax rates may make a jurisdiction less attractive to potential residents, the public services that taxes finance might make them more attractive. So it is over-simplistic to argue that higher taxes by themselves may discourage migration, without considering also the effects of taxes on the quantity and quality of public services.

Nonetheless, very high marginal income tax rates unrelated to marginal benefits that the taxes enable could make a country less competitive in the market for high-skilled labor. And high capital income taxes could lead to an outflow of wealthy residents. This form of competition is relatively unimportant for a large country with unique attributes and few close neighbors like the United States, but may be much more important for smaller countries competing for the same pool of high-skilled labor with culturally similar neighbors.

*Tax Policy and Location of Tangible Capital*

Corporate income taxes imposed on internationally mobile capital are largely source-based. Many countries now exempt from domestic income tax the active foreign-source income of home-based multinationals. A shrinking number of others, including the United States, tax active foreign-source income of foreign subsidiaries of resident corporations only when it is repatriated as dividends to the domestic parent.

With source-based taxation, the tax variable that matters most for investment location is the marginal effective tax rate imposed on investments within a country's borders. The marginal effective tax rate is defined as METR = (R – d)/R, where *R* is the pretax return on investment and *d* is the discount rate or required rate of return. The METR depends on the statutory corporate tax rate, depreciation schedules and other capital recovery provisions (such as expensing of certain items and depletion for minerals), and tax credits. For a given discount rate *d*, the METR determines the pretax return required for a firm to undertake an additional investment. A number of researchers have estimated marginal effective tax rates for different investments in the United States (Gravelle 2003; Mackie 2002). Others have compared marginal effective corporate tax rates on new investments in the United States and other countries in the OECD (Gravelle 2011;

Mathur and Hassett 2010). Gravelle (2011) finds the effective tax rate on investments in the United States roughly equal to those in other large OECD countries (even though the U.S. statutory rate is higher), once one accounts for the effects of the domestic production deduction. Hassett and Mathur (2011) report that the United States has a higher marginal effective tax rate than other countries in the OECD, but an examination of the data in their paper suggests that the difference disappears when one includes only other large economies in the comparison.

There is considerable evidence that investment location choices are responsive to differences among jurisdictions in the effective tax rate on corporate investments and that they may be becoming more sensitive over time (Altshuler, Grubert, and Newlon 2001; Grubert and Mutti 2000; Organization for Economic Cooperation and Development 2008). So a relatively low *effective* corporate rate on the return to corporate investment could attract more capital from countries with relatively higher effective rates. And the presence of this additional capital, all else the same, could raise domestic wages and living standards.

Therefore, lowering the marginal effective tax rate on corporate income would by itself help the United States in the *competition* for scarce capital resources. But, of course, there is a price to be paid in the form of reduced corporate tax revenues, requiring either higher revenues from other sources or reduced public services. And other countries might follow with competitive reductions in their effective corporate rates, resulting in a net gain for shareholders of multinational corporations (and capital income recipients in general) and little or no competitive benefit for any country. The question is whether, taking all these considerations into account, a lower effective corporate rate attracts enough additional investment to make this competitive benefit worth paying for.

In contrast to policies to reduce the effective tax rate on domestic-source income, policies that lower the residual tax rate U.S. multinational corporations pay on foreign-source income could *reduce the ability to compete for scarce capital resources* by providing an incentive for U.S.-resident corporations to invest overseas instead at home. But if U.S.-resident corporations shift capital overseas, lowering the domestic capital stock and raising the pretax return to capital, this provides an incentive for foreign-based multinationals to invest more in the United States, which would offset in part the outflow of investment from resident multinationals. As a result, increased preferential treatment for foreign investment of U.S. companies may not have that much adverse effect on total corporate investment in the United States. Moreover, if outbound investment by U.S. firms and exports are complementary, outbound investment may increase instead of decreasing demand for U.S. labor (Desai 2009b).

Taxation of interest income may also affect the location of capital, especially if the supply of debt capital to individual countries is highly elastic. A high-interest elasticity of supply of debt capital to individual countries implies that taxes on interest income of nonresident lenders would be shifted to residents in the form of higher pretax interest rates. (In contrast, resident individuals would largely bear the burden of taxes on their worldwide interest income.) For this reason, most countries have eliminated withholding

on interest paid to nonresidents. But some proposals that have been discussed could effectively raise borrowing costs to a country. For example, the Comprehensive Business Income Tax Proposal (CBIT) option that was presented in a study of corporate integration by the U.S Department of the Treasury (1992)[10] would have equalized the treatment of corporate debt and equity by eliminating taxes on corporate dividends and interest payments, while also eliminating interest deductibility. If the supply of debt capital is elastic, CBIT would cause pretax interest rates in the United States to rise, thereby raising the cost of borrowing to U.S. corporations.

*Tax Policy, Corporate Residence, and Intangible Capital*

U.S. corporate spokespersons and leading politicians often cite competitiveness as a justification for a different set of policies—policies that reduce the residual income tax that U.S. corporations pay on income accrued within their foreign subsidiaries, or controlled foreign corporations (CFCs). Proposals advanced include enacting a second dividend repatriation holiday,[11] reducing the amount of accrual taxation of foreign-source income under subpart-F of the Internal Revenue Code, and switching to a territorial system that totally exempts active foreign-source dividends. Supporters of these policies argue that the United States taxes foreign-source income of its multinational corporations more than other advanced countries and therefore places U.S.-based multinationals at a competitive disadvantage against foreign-based multinationals. They also argue that the repatriation tax causes profits to be locked in to foreign subsidiaries. Policies that reduce taxation of foreign-source income could improve *competitiveness* in the sense of increasing the share of worldwide corporate output accounted for by U.S.-resident corporations.

Whether the U.S. overtaxes the foreign-source income of our resident multinational corporations relative to the other countries depends on many factors, in addition to the fact that the U.S. nominally has a worldwide system of corporate income taxation, while most other advanced countries now have an exemption system. These factors include a comparison between our subpart F rules and rules other countries impose to ensure that passive and other easily shiftable forms of income do not escape tax by migrating to low tax jurisdictions. But these also include the entire set of rules and practices—transfer pricing rules and enforcement, thin capitalization rules, interest allocation rules, and rules for allocating overhead expenses and taxing royalties—that affect the extent to which companies are able to escape tax on income from both domestic activities and from high-tax foreign jurisdictions by shifting reported income to low-tax jurisdictions.

It is not the purpose of this paper to unpack the net effect of these complex sets of rules and enforcement practices. Instead, let us consider in what sense it may matter if U.S.

[10] Also see Hubbard (1993).

[11] In 2004, Congress enacted a dividend repatriation tax holiday that reduced the tax rate U.S. multinational corporations received on dividends from their foreign subsidiaries from 35 percent to 5.25 percent for one year. Recent research suggests the holiday generated little additional domestic investment, with most of the additional cash used for dividends to shareholders and stock repurchases (Dharmapala, Foley, and Forbes 2011).

resident corporations face higher tax rates on the same international allocation of investments than companies resident in other jurisdictions.

Suppose U.S. residents owned all the shares of U.S. corporations and foreign residents owned all the share of foreign corporations. Suppose also that the private saving were relative inelastic with respect to the after-tax rate of interest. Then, imposing relatively higher tax rates on U.S. corporations than other corporations would simply depress after-tax returns earned by U.S. shareholders. They would not raise the cost of capital to U.S. companies relative to others.

Alternatively, however, if corporations are raising capital in a worldwide equity market and investors view shares of domestic and foreign-based companies as close substitutes, then the subset of global corporations based in the United States cannot necessarily pass higher taxes they pay backwards to shareholders. So it is possible that raising the tax burden that U.S.-resident corporations pay relative to foreign-based corporations on *economic activity within the same countries*[12] could reduce the worldwide share of economic output accounted for by U.S.-resident corporations. This could happen both because the increased taxes make relative costs higher for output produced within U.S. corporations than in foreign corporations and because some corporate entities may choose to establish residence in countries other than the United States. They may choose to reside in otherwise high-tax countries that do not tax the foreign-source income of their multinationals, so that they can enjoy the benefit of low tax rates imposed by some countries where they invest without paying a residual tax to the home country. Or, alternatively they may seek to establish residence in tax havens with little economic output.

The importance to the United States of considering this form of competitiveness in formulating tax policy depends in part on an empirical assessment of how different tax rules might affect the share of world output originating in U.S.-resident corporations. But it also depends on an assessment of how important U.S. residence of corporations is to the U.S. standard of living. If corporations simply change their place of incorporation and tax residence, but otherwise keep their location of production, employment, and sales unchanged, how much it really matter?

A full assessment of how U.S. rules and enforcement practices compare with other countries and how much it matters is beyond the scope of this paper. But here are some questions one might ask to determine how much U.S. tax policy should seek to promote the competitiveness of U.S.-based companies:

[12] Note that it does not matter for competitiveness of U.S. companies whether the tax rate applied to U.S.-source income is higher than the tax rate applied to domestic-source income in other countries. If U.S.-resident companies have a relatively high share of their investments in the United States, then relatively high tax rates on U.S.-source income will also make the average tax rates on U.S.-resident companies higher than the average tax rate their competitors pay. But it would not put U.S. corporations at a competitive disadvantage compared with foreign-resident corporations, as long total tax rates applied to income within any jurisdiction were the same regardless of corporate residence.

- Will increasing the share of world output accounted for by U.S.-resident companies increase the demand for U.S. labor and raise U.S. wages? Or will it have little or no effect on the location of production and relative wages?

- Are U.S.-resident companies more likely to expand sales efforts in the United States than foreign-resident companies and are they more likely to charge lower prices for comparable goods and services? Or will all corporations respond the same to competitive pressures and market demand, regardless of their nationality?

- Will U.S.-resident companies generate more investment income for U.S. residents than foreign-resident companies because their shareholders are more likely to be Americans (including institutional investors and pension funds)? Or will U.S. resident investors seek out the highest investment opportunities worldwide on their last investment dollar, so that the residence of corporations doesn't matter to them?

- Will increasing the share of world output generated by U.S.-resident corporations increase the share of worldwide innovation and R&D in the United States and will this cause spillover effects that disproportionately benefit the United States?

It is this last point that is perhaps the one most strongly advanced by proponents of lowering worldwide taxation of U.S.-based companies. U.S. corporate residence may be associated with the generation of new technologies within the United States. And although these technologies (such as the iPod, Facebook, or new drugs) are deployed internationally and have worldwide spillover benefits, they may give U.S. producers an advantage in the ability to deploy them and U.S. consumers an opportunity to enjoy the benefits before others do. They may also generate high-end jobs in the United States instead of elsewhere and provide a very long term advantage to producers located in the United States.[13]

To sum up, there may be benefits from tax policy aimed at increasing the competitiveness of the United States as a place of residence for multinational corporations. But whether those benefits are real depends on many assumptions. Changing the relative tax rates on U.S. versus foreign-based multinationals may or may not raise the share of world output accounted for by U.S. multinational companies. And raising that share may or may not improve U.S. living standards.

*International Competition for Revenues*

If large corporations are truly global and corporate residence is only a matter of putting a sign on an office door, then there could be many possible claimants to the revenue from

[13] Krugman (1994b) uses the example of the QWERTY keyboard, said to be inferior to alternative designs, to illustrate the path dependence of economic activities and how an initial lead in a technology or in a geographic location of production can be locked in. Liebowitz and Margolis (1990), however, have challenged the QWERTY example, asserting it is not, in fact, inferior to alternatives.

taxing the profits of multinational corporations. This is especially true for corporations whose value consists mainly of intangible capital that generates output and sales throughout the world—patents, research knowhow, corporate governance and reputation—instead of tangible physical assets that generate production only where they are located. For these corporations, location of the source of profits is ambiguous and different taxing rules can lead to very different profit allocations. In this sense, countries may be *competing* for revenues when they lower corporate tax rates to attract a larger corporate tax base, beyond any competition to attract real investment.

Unlike the competition for real investment, the competition for corporate tax bases depends on the statutory corporate rate, not the marginal effective rate. If corporations can easily shift profits among jurisdictions, lowering the U.S. statutory corporate rate may generate relatively little or no loss in corporate revenue[14]. Some authors estimate that a lower corporate rate would raise corporate revenues (Brill and Hassett 2007; Clausing 2007), but others dispute this finding (Gravelle and Hungerford 2007).

*Tax Policy and Competition for Natural Resources*

Competition for natural resources and territory is the most direct source of competition among nations, often resulting in violent conflict. There is little direct connection between tax policy and this form of competition. Nonetheless, to the extent economic power enhances a country's leverage, it increases its ability to prevail in such competition without resort to military force.

The policies that promote this basic form of competitiveness are quite different than policies that promote other forms of competitiveness. Public spending on a strong military and diplomatic corps, education, and public infrastructure such as a good transportation network promotes a country's power. Financing this public spending requires adequate revenues and thus, in contrast to other forms of competiveness discussed in this paper, may require higher instead of lower taxes, at least on some tax bases. Beyond this, promoting a country's overall strength requires a tax structure that minimizes efficiency costs, very similar to the tax structures economists might favor without considering notions of "competitiveness."

## Corporate Tax Reform and Competitiveness

Different policies can have different effects on how scarce productive inputs are allocated among nations. Policy instruments that promote U.S. competitiveness for some resources can have minimal, zero, or negative effects on competitiveness for other resources. This section compares five forms of tax cuts: cuts in marginal income tax rates, cuts in capital income and wealth taxes on individuals (taxes on capital gains and dividends and estate and gift taxes), cuts in the effective marginal tax rate on new corporate investments

[14] Lowering the corporate tax rate could result in some loss of individual income tax revenue, however, by providing an incentive for closely held companies to organize themselves as taxable corporations, instead of as partnerships and subchapter S corporations, if they can arrange their activities so as to avoid paying their owners taxable dividends.

(either through a reduced statutory rate or through more generous capital recovery allowances), cuts in the statutory corporate rate (either revenue reducing or revenue neutral by combining with a broader corporate tax base), and cuts in taxes on residual foreign-source income of U.S. corporations (by enacting repatriation holidays, reducing the scope of subpart F rules, or switching to a territorial system). Note that some of the policies that increase certain inputs may nevertheless do so at too high a cost in lost revenues or by increases in other economic distortions.

Among these five ways of reducing taxes, cuts in marginal personal income tax rates have the most direct effect on increasing competitiveness for skilled and internationally mobile workers (table 2, column 2). Cuts in taxes on dividends and capital gains could also attract labor if the workers also come with capital that may be taxed or are considering future taxes on the return to their saving when they decide where to migrate. Cuts in corporate income taxes may affect attractiveness of the U.S. to workers indirectly if higher corporate investment in the United States boosts labor productivity and wages. But cuts in the residual tax on foreign-source income of U.S. corporations could have a reverse effect if they cause corporations to invest more overseas.

Cuts in taxes on capital gains and dividends and in estate taxes are the tax policy changes that have the most direct effect on the choice residence of wealthy individuals, although in considering migration into and out of the United States these effects probably range from small to negligible (table 2, column 3). Cuts in the U.S. corporate income tax might also attract wealthy individuals if the benefits of the tax cuts are higher for U.S. residents than for other recipients of capital income. This would only occur, however, if potential migrants become more likely to hold corporate assets (whether of U.S.- or foreign-based companies) that are invested in the United States instead of elsewhere when they move to the United States.

Cuts in the effective marginal tax rate on new corporate investments are the cuts that have the most direct effect on capital invested in the United States (table 2, column 4). A cut in the statutory marginal rate may also increase corporate investment in the United States, but only if not offset by corporate base-broadening provisions that keep the overall effective marginal rate on new investment unchanged. Cuts in taxes on capital gains and dividends of U.S. residents, often promoted as helping competitiveness, may indirectly have beneficial effects on U.S. investment by reducing the cost of equity capital invested in the United States, but these effects are likely to be small because U.S. residents receive the same benefit from lower individual taxes on capital income wherever their wealth is invested. Because this policy is not location-based, it is likely to have little effect on the ability of the United States to attract more capital. And cuts in the taxation of foreign-source income of U.S. multinationals directly reduce investment in the United States by giving these companies an incentive to invest more overseas. As noted above, however, the net adverse effect on investment in the United States may be small if the outflow of capital from U.S. multinationals raises pretax returns in the United States and induces an offsetting inflow of investment from foreign-based multinationals.

Cuts in the residual U.S. tax on foreign-source income do, however, provide a direct benefit for U.S.-resident corporations, reducing their tax burden relative to taxes imposed on profits of corporations resident in other countries (table 2, column 5). None of the other tax policies considered benefit U.S.-based relative to foreign-based multinationals.

Finally, the policy best designed to increase the share of income that both U.S.- and foreign-based corporations report in the United States is a cut in the statutory U.S. corporate tax rate. Cuts in the residual tax rate on foreign-source income have the opposite effect, encouraging U.S.-based companies to report a larger share of their profits to foreign jurisdictions, including tax havens.

Table 2. Tax Policies and the Competition for Productive Inputs

| Policies/Resources | Skilled Labor | Wealthy Individuals | Tangible Capital | Corporate Residence | Corporate Tax Base |
|---|---|---|---|---|---|
| Cut in marginal personal income tax rates | **Increases directly** | **Increases directly** | Increases indirectly | No effect | Reduces indirectly |
| Cut in investor tax rates (capital gains, dividends, estate tax) | Increases indirectly | **Increases directly** | Increases indirectly | No effect | Increases indirectly |
| Cut in marginal effective corporate tax rate on domestic investments | May affect indirectly | Increases indirectly | **Increases directly** | No effect | Increases if statutory rate decreased |
| Cut in statutory corporate tax rate | May affect indirectly | Increases indirectly if marginal effective rate increased | Increases directly only if marginal effective corporate rate decreased | No effect | **Increases directly** |
| Cut in residual tax on foreign-source income of resident corporations | May affect indirectly | No effect | **Reduces directly,** but may result in indirect offsets | **Increases directly** | **Reduces directly**, but may results in indirect offsets |

In addition to various forms of cuts in tax rates on capital income, some reformers have advocated revenue-neutral reforms of taxation of corporate-source income. Four possible

options are to (1) reduce the corporate statutory rate, broaden the tax base on domestic-source corporate income, and switch to a territorial system for taxing active foreign-source income; (2) reduce the corporate tax rate, broaden the tax base on domestic-source corporate income, and eliminate deferral, taxing all income of controlled foreign corporations of U.S. multinationals on an accrual basis; (3) reduce the statutory corporate tax rate and enact a value added tax, and (4) reduce the statutory corporate tax rate and increase tax rates on capital gains and dividends of U.S. residents (see Altshuler, Harris, and Toder 2010). A variant of Option 1 was included in the proposals by the President's National Commission on Fiscal Responsibility and Reform (2010). A variant of Option 2 was included in the Bipartisan Tax Fairness and Simplification Act of 2010 introduced by Senators Ron Wyden and Judd Gregg (Nunns and Rohaly 2010) and now cosponsored by Senators Wyden and Dan Coats (Wyden and Coats 2011).

A revenue neutral combination of lower corporate tax rates, a broader tax base, and a territorial system (Option 1) would reduce the incentive to invest in the United States, compared with current law (table 3). Although some variants to territorial systems could raise money, a territorial system, without other reforms that prevent income-shifting or impose minimum taxes on income from low-tax jurisdictions, will lose revenue, both by eliminating the existing residual tax on foreign-source income and encouraging more corporate income, both real and reported, to shift overseas. So if the entire proposal is to be revenue neutral, the combination of a lower rate and broader domestic tax base must raise revenue. Put another way, a cut in taxes on foreign-source income, in a revenue neutral proposal, must necessarily lead to an increase in the taxation of investment based in the United States.

Option 1 would, however, increase the share of world output accounted for by U.S. multinational corporations by lowering the tax they pay relative to foreign multinationals. This occurs because the higher tax rate on investments in the United States raises taxes on both U.S. and foreign-based multinationals on their U.S. investments. With a revenue-neutral proposal and foreign-based companies paying more tax, the tax on U.S.-based multinationals on their worldwide income must necessarily fall.

Option 1 would produce offsetting effects on the share of the worldwide corporate tax base captured by the U.S. Treasury, with the direction of the net change uncertain. The lower U.S. corporate tax rate would encourage both U.S. and foreign-based multinational corporations to report relatively more income to the United States compared with other developed countries with similar rules for corporate taxation. But moving to a territorial system would increase the reward to U.S. corporations for shifting their profits to low-tax foreign jurisdictions because there would be no subsequent tax when those profits are repatriated.

Option 2 would lower the corporate tax rate, broaden the corporate tax base, and include in the tax base annually the profits of CFCs of U.S. multinational corporations. Because option 2 would increase instead of decrease the taxation of foreign-source income of U.S. corporations, it would require a lower statutory corporate rate, for a given amount of domestic base-broadening, to be revenue neutral than would option 1.

The effects of Option 2, therefore, would mostly be the opposite of Option 1. It would increase corporate investment in the United States because the increased taxation of foreign profits would allow lower effective tax rates on domestic-source profits. But, because some of this tax cut would flow to foreign-based multinationals, Option 2 would raise the worldwide tax imposed on U.S.-based multinationals, thereby worsening their competitive position.

As with Option 1, Option 2 would also produce offsetting effects on the share of the worldwide corporate tax base captured by the U.S. Treasury, although the net effect is probably positive. Eliminating deferral would directly increase the share of the worldwide income of U.S.-resident multinationals that is currently taxable in the United States. Lowering the corporate rate would increase the incentive for both U.S.- and foreign-based multinationals to arrange transactions so they can report profits as U.S.-sourced instead of sourced to another jurisdiction. But if the option reduces the share of multinational company activity coming from U.S.-resident companies, there would be an offsetting reduction in the U.S. tax base coming from a reduction in foreign-source profits that might otherwise be repatriated to the United States.

Option 3 would reduce the corporate tax rate and replace the lost revenues with a new value added tax (VAT). If the VAT is designed as a destination-based tax, as are other VATs throughout the world, it would be neutral with respect to the location of production and reporting of the VAT base. But the lower corporate rate, with no corporate base-broadening, would encourage both U.S.- and foreign-resident multinationals to invest more in the United States and report a larger share of their profits to the U.S. Treasury. Because the lower rates would apply equally to profits in the United States of both U.S. and foreign-resident multinationals, Option 3 would not affect the relative tax rates either in the United States or in other jurisdictions on U.S.- and foreign-based corporate-source income. Combined with current foreign tax credit systems, however, a lower U.S. corporate rate would reduce slightly the residual tax on repatriations of foreign-source income by U.S. corporations, and so would slightly reduce the relative tax burden on overseas income generated by U.S.-based multinational corporations.

Option 3 would reduce overall taxation of income from capital and make the tax system less progressive. Option 4 is an alternative that would also lower the corporate tax rate, but make up the revenue from increased taxes on capital gains and dividends of U.S. residents instead of a value added tax. Because capital gains and dividends are concentrated among higher-income taxpayers, Option 4 would be more progressive than Option 3. It also may be more progressive than the current tax system for two reasons. (Altshuler, Harris, and Toder 2010). First, because of international capital flows, more of the incidence of the corporate tax falls on labor than the incidence of residence-based individual income taxes on capital (Gravelle 2010). Second, a portion of the corporate tax that falls on capital is paid by recipients of income from qualified retirement saving plans (employer pension plans, individual retirement accounts, and deferred compensation plans such as 401(k) plans). The ownership of these retirement accounts is less concentrated among the very wealthy than the ownership of equities held outside of

retirement plans that are subject to individual income taxation of dividends and capital gains.

Option 4 has similar effects on the competition for capital, corporate residence, and the corporate tax base as Option 3. As with Option 3, it would lower the effective tax rate of the source-based corporate tax and replace it with a tax that falls largely on U.S. residents irrespective of where they spend, save, or invest. It would therefore encourage both U.S. and foreign-resident multinational corporations to invest more in the United States and, for a given level of investment, to report a larger share of their profits to the U.S. Treasury. As with Option 3, it would have little effect on the share of output by U.S. resident corporations because it would not treat U.S. and foreign-resident corporations differently.

Table 3. Effects of Proposed Corporate Tax Reforms on Competition for Investment Capital, Corporate Residence, and Taxable Profits from Multinational Corporations

| Revenue Neutral Combination of: | Corporate Investment in the United States | Share of Output by U.S.-Resident Corporations | Share of Corporate Profits Tax Base Captured by United States |
|---|---|---|---|
| Lower corporate tax rate, broader corporate tax base, and territorial system | Reduced | Increased | Ambiguous |
| Lower corporate tax rate, broader corporate tax base, and elimination of deferral | Increased | Reduced | Ambiguous |
| Lower corporate tax rate and introduction of VAT | Increased | Increased slightly | Increased |
| Lower corporate tax rate and increased tax rates on capital gains and dividends | Increased | Increased slightly | Increased |

## Conclusions

The idea that the United States needs to be more competitive has become a major theme in public debate. Public officials, candidates for political office, and publications by government agencies and private groups have promoted proposals that purport to make

the United States more competitive. But typically they fail to offer a definition of this elusive term. And the notion that we compete with other nations economically in the same sense that companies, sports teams, and political candidates compete with each other contradicts the economist's notion that trade between nations is mutually beneficial.

This paper suggests an operational definition of competitiveness and explores policies to promote competitiveness in these terms and their potential consequences. It accepts the standard economists' view that economic relationships between countries are mutually beneficial and that gains for one country usually don't come at the expense of others. But the paper also notes that, in a world where resources are fixed, at any point in time, countries may compete for these fixed resources. It identifies five possible areas in which zero-sum competition may exist: competition for (1) labor supply, (2) financial and physical capital, (3) corporate residence and intangible capital, (4) tax revenues from multinational organizations, and (5) natural resources. All these objects of competition are *inputs* that contribute to a nation's output and living standards, but not final outputs or appropriate objectives of policy.

The wisdom of adopting policies to increase a country's share of these resources depends on a balancing between the increase in the value of output that the inputs produce and the cost of obtaining more of them. This means that competitiveness in the sense that the paper defines is a means to achieving the goal of higher living standards, but not an end in itself.

The paper reviews what alternative tax policies may help a country attract high-skilled and internationally mobile labor, more capital investment, and a larger share of the tax revenue from multinational corporations. It also considers what policies might help a country attract more corporations to establish and maintain a tax residence within its borders and the extent to which increasing the share of world corporate output accounted for by its resident multinationals may be a relevant policy goal to pursue.

Many policies that are promoted in the name of competitiveness will help a country attract more of some of the inputs discussed in this paper, but either reduce others or leave them unaffected. For example, a lower effective tax rate on corporate investment in the United States will attract more capital to the United States, but not necessarily improve the competitive position of U.S.-resident multinational corporations. In contrast, a lower tax rate on outbound investment of resident multinationals will make U.S.-based companies more competitive with foreign-based companies, but may make the United States less competitive in attracting capital investment. A revenue-neutral tax reform that lowers the corporate tax rate, broadens the tax base, and adopts a territorial system that reduces taxation of foreign-source income will improve the competitiveness of U.S. multinational corporations but raise the cost of investing in the United States. In contrast, a tax reform that lowers the corporate tax rate, broadens the tax base, and eliminates deferral will make U.S.-based multinational corporations less competitive but reduce the cost of investing in the United States.

If one takes the tautological position that any policy that improves U.S. living standards promotes competitiveness, then by definition good policies are also competitive. But using the definition of competitiveness in this paper—a competition between nations for scarce and mobile resources—policies to promote competitiveness are not necessarily good policies. The usual criteria of promoting economic efficiency and fairness should apply to international tax policies as well as other policies. Policymakers should certainly take into account how tax policies affect immigration, capital flows, and corporate residence. But elevating competitiveness for some of these inputs into a separate goal of policy instead of a consideration that must be weighed against other costs and benefits of tax policy changes could lead to seriously flawed policies.

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