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EY tax policy professionals rank the countries in the Americas in terms of their tax burdens on capital investment and discuss which countries might find that they are no longer tax competitive for investment if the United States enacts tax reform that dramatically reduces corporate income tax rates.

Investing in the Americas—2017 Tax Competitiveness Report

Bloomberg BNA INSIGHTS>>

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Taxation of capital is one public policy that can affect a country's attractiveness for investment. Several studies in recent years have suggested that capital taxation has a strong impact on economic growth, and that high tax rates on capital can significantly imperil capital formation (see William McBride, *What Is the Evidence on Taxes and Growth?*, Tax Foundation, 2012; and Bev Dahlby and Kevin Hassett, *The Economic Effects of the Corporate Tax: A Review of the Recent Literature*, 2016).

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Based on current corporate tax policies, certain large economies—Argentina, Brazil, and the United States—impose some of the highest tax burdens on capital in the Americas. Given close trading relations in the Americas, how do the countries currently rank in terms of their tax burdens on capital investment? Which countries in the Americas might find that they are no longer tax competitive for investment if the United States enacts tax reform that dramatically reduces corporate income taxes?

This report provides a ranking of countries in the Americas in terms of their tax competitiveness for mobile capital. It also looks at proposed tax reform in the United States and questions how those changes, if enacted, could influence tax policy across the Americas. Key findings include:

- Of 18 countries in the Americas analyzed, those with the highest capital tax burdens on investment in 2017 are Brazil (47.3 percent), Argentina (38.9 per-

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cent), Ecuador (35.1 percent), and the United States (34.6 percent).

- The most tax-attractive American countries for investment, ranked by capital tax burden on investment in 2017, are Paraguay (7.8 percent), Chile (8.2 percent), Panama (18.6 percent), and Mexico (19.7 percent).

If the United States were to reduce its tax burden on capital to the OECD average, it is estimated that inward U.S. foreign direct investment (FDI) would increase by approximately 46 percent.

- If the United States is successful in its tax reform efforts, countries in the Americas that currently have a competitiveness advantage compared to the United States might need to consider changes to their tax systems to compete for investment in the future.

Introduction

Why does a country's level of competitiveness for capital investment matter? Capital investment is critical to growing an economy. It provides the tools for workers to develop new products and services for the global economy. New projects create employment for workers of all types and investment dollars are needed to create and adopt the latest technologies.

Capital investment generates long-term benefits. When a business chooses to make multimillion-dollar investments, it is expecting the investment to support operations for many years. Thus, when a country attracts more capital, it generates years of income for workers and suppliers as well as revenues for governments.

Many factors affect the willingness of businesses to make long-term investments in a country. These include the quality of its workforce, the availability of natural resources, robust infrastructure, political stability, and, of course, taxation. Even though taxation is only one of several policy tools used by governments to attract capital, it can have a powerful influence on investment and, ultimately, job creation.

It is not just the corporate income tax rate that matters in determining the tax burden on investments. Corporate income tax payments are affected by cost deductions for depreciation, inventory expenses, and interest payments. Tax burdens are also influenced by other taxes related to a company's capital expenditures—most notably sales taxes on capital purchases, transfer taxes on property and financial transactions, and asset-based levies.

In this report, countries in the Americas are ranked according to the annualized value of taxes paid as a share of a company's profitability sufficient to attract investor savings for new investments. We refer to this measure as the effective tax rate on new investment.

Of the 18 countries in the Americas analyzed, those with the highest capital tax burdens on investment in 2017 are Brazil (47.3 percent), Argentina (38.9 percent), Ecuador (35.1 percent), and the United States (34.6 percent). The most tax-attractive countries for investment are Paraguay (7.8 percent), Chile (8.2 percent), Panama (18.6 percent), and Mexico (19.7 percent).

When compared to the simple average tax burden of 20.7 percent for 92 other countries around the world (the GDP-weighted average of 28.8 percent), five out of 18 countries in the Americas have more tax-attractive regimes for investment in 2017. Compared to industrialized nations, however, most countries in the Americas tax capital investments considerably more—with an average tax burden of 26.1 percent (the GDP-weighted average is 33.2 percent).

Research finds that high taxes result in less foreign direct investment. A Canadian study examining the corporate tax reform from 2001 to 2004 found that a 10 percent reduction in the cost of capital led to a 7 percent increase in capital stock (see Mark Parsons, *The Effect of Corporate Taxes on Canadian Investment: An Empirical Investigation*, Department of Finance Canada, Working Paper 2008-01, Ottawa, 2008). A more recent survey on the relationship between effective tax rates and foreign direct investment estimated that a one-point reduction in the corporate income tax rate results in an increase in foreign direct investment by 2.49 percent (see Lars P. Feld and Jost H. Heckemeyer, *FDI and Taxation: A Meta-Study*, 25(2) J. Econ. Surv. 233, 2011).

Based on this research, if the United States reduced its tax burden on capital to the OECD average, it is estimated that FDI would increase by approximately 46 percent.

Should the United States enact corporate tax reform, a significant reduction in the tax burden on investment could occur in the Americas' largest economy. Adopting a 15 percent federal corporate income tax rate (roughly a combined 20 percent rate when accounting for state-level rates) would sharply reduce the tax burden on capital to two-thirds of what it is now, making the United States' corporate tax burden less than the current global average. Even if U.S. tax reform resulted in a federal corporate income tax rate in the 20-25 percent range, it would represent a significant decrease in the U.S. corporate tax burden.

If reform occurs in the United States, Americas' countries that are currently much more tax-attractive for capital might find themselves in a more competitive fight for investment projects.

Several countries in the Americas, such as Canada, Mexico, and Peru, may no longer have a significant tax advantage. Given the size of the U.S. market and its attractiveness for capital, these and other countries may look to their own reforms to compete.

How Well Do the Americas Attract Investment?

Private sector investment helps provide the tools needed for workers to produce goods and services in markets. Investment in plants, machinery, and structures enables businesses to adopt new technologies embedded in capital goods, which are critical to improving competitiveness in markets. Often, this investment comes from outside the recipient country by way of FDI.

Although numerous economic factors and policy considerations affect business investment decisions, including a country's labor force, infrastructure, and political stability, economists generally agree that private investment is sensitive to taxation. A conservative estimate is that each 10 percent increase in the cost of capital (adjusted for taxes, which adds to capital costs) causes a long-run decline of 7 percent in a country's

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Table 1. Inward Foreign Direct Investment for Select Countries in the Americas, 2015

	Inward FDI levels (millions of nominal U.S. dollars)
Argentina	$11,655
Bolivia	$503
Brazil	$64,648
Canada	$48,643
Chile	$20,176
Colombia	$12,108
Costa Rica	$2,850
Dominican Republic	$2,222
Ecuador	$1,060
Guyana	$122
Jamaica	$794
Mexico	$30,285
Panama	$5,039
Paraguay	$283
Peru	$6,861
Trinidad and Tobago	$1,619
United States	$379,894
Uruguay	$1,647

Note: FDI is in current prices. Most recent year available for complete data of countries analyzed is 2015.
Source: UNCTAD Stat Data Center, Foreign direct investment: Inward and outward flows of stock, annual, 1970-2015.

capital stock. (Kevin Hassett and Robert Glenn Hubbard conclude that ''the elasticity of investment with respect to the user cost of capital is between -0.5 and -1.0.'' See Tax Policy and Investment, in Alan J. Auerbach (ed.), *Fiscal Policy: Lessons from Economic Research*, 1997, pp. 339-85.)

Studies focusing on FDI show an even bigger impact, with FDI flows growing as much as 2.5 percent for each one-point reduction in the corporate income tax rate (see Parsons and Feld, above).

Looking to the Americas, Table 1 shows that in 2015 the United States, Brazil, Canada, and Mexico were the largest recipients of FDI in the Americas, reflecting, in large part, the size of their economies.

In contrast, as shown in Figure 1, inward FDI is more important to a number of the smaller economies in the Americas when considered in relation to countries' GDP. For example, although Costa Rica and Columbia had comparatively lower levels of FDI in 2015, FDI made up approximately 4 percent to 5 percent of their GDP.

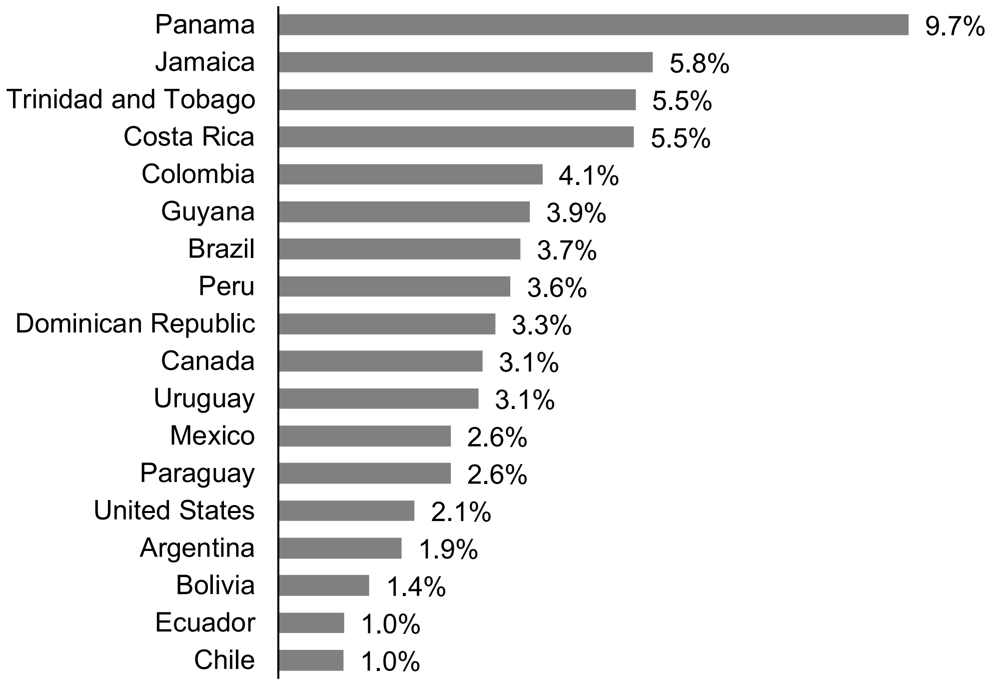
Inward FDI to the Americas has only recently begun to recover from its fall during the 2008 financial crisis (see Figure 2).

Taxes as an Investment Cost

In ranking a locale on its ability to attract investment, taxes, a cost of investing, can figure prominently. In most of the Americas, capital investment can move freely between countries with open markets. As a result, where the non-tax investment conditions are similar to each other, multinational companies decide whether or not to invest in a country by gauging the tax cost compared to those in other countries.

Most agree that companies do not bear the taxes they pay—people do in their role as workers, investors, or consumers. Taxes imposed on business in an open economy will be generally passed on to those factors that are least mobile. As a result, workers often will bear the burden of taxes on businesses in the form of higher prices on consumer goods and/or lower real wages. Conversely, lower tax costs for companies work in the opposite direction and can benefit workers through higher real wages and lower prices for con-

Figure 1. FDI as Share of GDP for Select Countries in the Americas, 2015



Note: Most recent year available for complete data of countries analyzed is 2015.
Source: UNCTAD Stat Data Center, Foreign direct investment: Inward and outward flows of stock, annual, 1970-2015.

sumer goods, both of which directly contribute to higher living standards.

Effective Tax Rate on New Investment—How Do the Americas Rank?

Globalization, which continues to change the relative power of economic partners, coupled with countries' tendency to alter their tax systems in light of economic and budget changes, can make it challenging to rank countries according to their tax competitiveness.

Canada, for example, cut its corporate income tax rate from 43 percent in 2000 to 26.6 percent today to promote job creation. With additional policies that removed taxes on capital purchases and assets, Canada shifted from having the highest tax burden on new investment among OECD countries to being in the middle of the pack. Corporate income tax revenues, however, were virtually unchanged after 2001—remaining at approximately 3 percent of GDP. Canada's rate reductions expanded its corporate income tax base with companies more willing to leave profits in Canada. Despite the lower corporate income tax rates, the expansion in its tax base translated into corporate taxes remaining largely unchanged in relation to the size of Canada's economy. (Note that although the expansion of the U.S. corporate income tax base from a reduction in its corporate income tax rate would also be important, its overall effect on revenue might not be as pronounced due to the larger size of its economy. In contrast, for many of the smaller economies in the Americas, the impact on their corporate income tax bases could be more important.)

This report considers corporate income tax rates and bases, sales taxes on capital purchases, asset taxes and transfer levies to rank select countries in the Americas according to their effective tax rate on new investment. The higher the effective rate—or tax wedge between pre- and post-rates of return—the less tax-competitive a country is for investment projects.

The statutory corporate income tax rate is just one of the many components of the tax burden on investment. Investors can, and do, focus on both the corporate income tax rate and the other tax provisions that affect the tax burden on investment. For example, although the United States has the highest statutory corporate income tax rate in the Americas, it does not have the highest tax burden on investments due to its tax code's various deductions and tax credits that reduce tax costs. In contrast, Ecuador has a relatively low corporate income tax rate on reinvested earnings but a relatively high effective tax rate on new investment due to a capital tax on assets and a transfer tax.

Tax burdens vary across countries, depending on provisions for capital costs (depreciation, financing, and inventory costs), as well as other taxes on capital that include asset-based, sales, and transfer levies. Table 2 provides the estimated 2017 effective tax rates on new investment for the 18 select countries in the Americas, as well as top combined central-subnational statutory corporate income tax rates for comparison purposes. Countries are ranked in Table 2 according to their tax burden on new investments as reflected by their effective tax rate—with the highest burden in Brazil and the lowest in Paraguay.

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Measuring Tax Competitiveness

To evaluate tax competitiveness, a summary measure is provided that takes into account the various taxes that directly impact profitability. The effective tax rate on new investment—also called the marginal effective tax rate on corporate investments—is commonly used in public policy analysis to understand how the tax structure affects capital investment.

A business invests in capital until the return on capital, net of taxes and risk costs, is equal to the cost of holding capital. At the margin, the investment decision will be affected by taxes paid on capital investments. If taxes increase, the business will earn after-tax returns that are lower than financing costs. The business will then cut back investment, accepting only those projects with a sufficiently high rate of return to cover both financing costs and taxes. Thus, the effective tax rate on new investment, or tax wedge, is a good indicator of how investment is affected by taxation—the higher the tax wedge, the lower investment will be, and vice versa.

For example, suppose companies must pay out in after-tax profits a return (net of risk and taxes) equal to 5 percent to attract financing from equity and bondholders for a new investment project. If the tax wedge is 50 percent, the company must earn a 10 percent net-of-risk rate of return to cover taxes and cost of financing. If the project earns less than 10 percent as a pre-tax rate of return, the project will not move forward. Of course, some projects might earn more than a 10 percent rate of return on capital, but as long as the minimal rate of return is earned, a project will be profitable to undertake. Therefore, if the tax wedge decreases, more investment projects become profitable because a lower rate of return is acceptable to cover both tax and financing costs.

Briefly, the effective tax rate, or tax wedge, is the portion of capital-related taxes paid as a share of the pre-tax rate of return on capital for marginal investments (on the assumption that businesses invest in capital until the after-tax return on capital is equal to the cost of financing capital). Included are corporate income taxes, sales taxes on capital purchases, and other capital-related taxes such as financial transaction taxes and asset-based taxes. Municipal property taxes are excluded since effective property tax rates are not observable by industry or across countries. To measure municipal tax effects on investment exactly, the cost of municipal services that are directly funded by property levies should also be subtracted to arrive at the effective property tax rate.

To compare across 54 countries, this analysis includes manufacturing and service industries (services include construction, utilities, transportation, communications, trade, and other business and household services). Companies invest in structures, machinery, inventory, and land to develop their various projects. They use retained earnings, new share issues, and debt to fund their projects. Capital structures and financial ratios are equalized across countries to isolate tax effects. Inflation rates vary across countries to take into account their interaction with tax system with some such as Chile and Mexico indexing taxable profits for inflation.

Of the 18 countries examined, only three impose a lower effective tax rate on new investment than the OECD simple average of 19.1 percent. However, the current simple average effective tax rate on new investment in the Americas is over 26 percent. This can be attributed to the three nations that impose a significantly higher tax burden relative to large countries in the G7 and G20: Brazil, Argentina, and the United States.

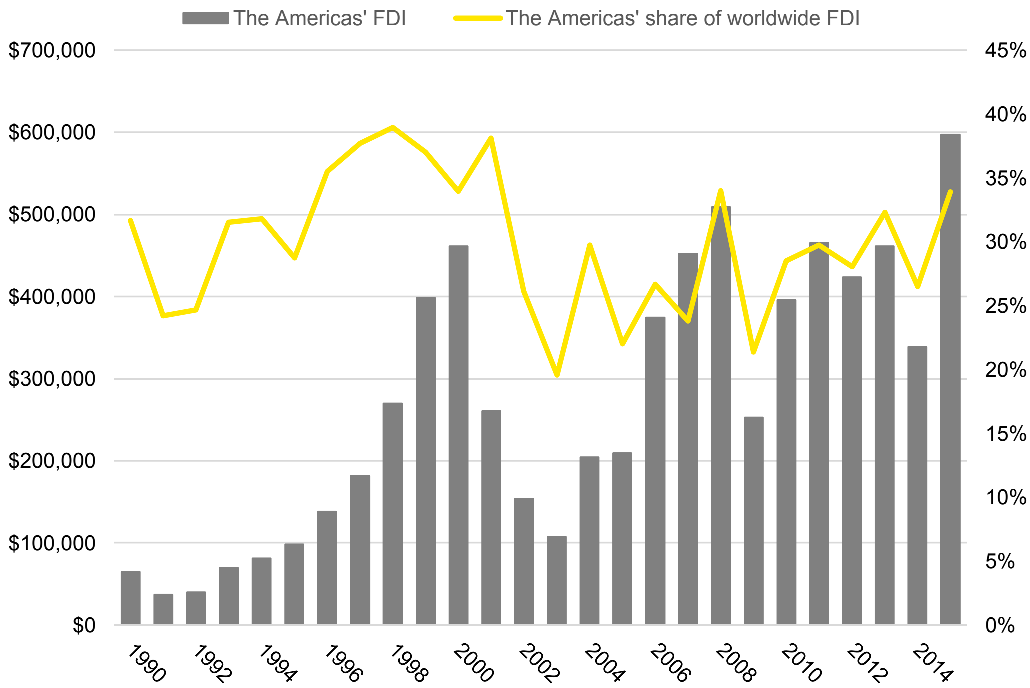
Brazil, with an effective tax rate on new investment of 47.3 percent, has the least competitive tax system in the Americas. Brazil has a relatively high corporate income tax rate at 34.0 percent, which is sixth highest in the Americas. Various incentives are provided, including an allowance for corporate equity financing, limited to 50 percent of profits. However, Brazil's tax disadvantages arise from indirect taxes imposed on companies. It has four value-added taxes at the federal and state levels of which sales taxes on capital purchases are not necessarily refunded, especially for the services sector under the federal Tax on Industrialized Products (IPI), the Social Integration Program (PIS), and the Social Security Financing Contribution levies. Brazil also assesses a financial transaction tax and a municipal tax on gross receipts.

Argentina has the next highest tax burden on investment at 38.9 percent, followed by **Ecuador** at 35.1 percent. These two countries, however, have quite different corporate tax structures. Argentina's disadvantages arise from a relatively high corporate income tax rate, as well as indirect and transfer taxes on real estate and financial transactions. As mentioned, Ecuador has a globally competitive corporate income tax rate of 12 percent. Its high tax burden on capital comes from nonprofit taxes, most notably capital taxes on assets and transfer taxes.

The **United States** is the largest economy in the Americas with the fourth highest tax burden on capital (34.6 percent). Its average federal-state corporate income tax rate is 39.0 percent (the federal rate is 35 percent and state taxes are deductible from federal income). A lower effective corporate income tax rate is applied to manufacturing and other qualifying businesses due to the production activities deduction. Although various tax incentives, such as bonus depreciation, reduce the tax component of business costs, state retail sales taxes on capital purchases and state and local asset-based taxes increase the tax burden on capital by almost 6 percentage points.

Latin American countries at one time faced very high inflation, leading many governments to adjust profits to remove the impact of inflation. Some countries, including **Chile** and **Mexico**, continue to reduce corporate profits with inflation adjustments.

Figure 2. Inward FDI in the Americas, 1990-2015
Millions of USD



Note: FDI is in nominal prices. Most recent year available for complete data of countries analyzed is 2015.
Source: UNCTAD Stat Data Center, Foreign direct investment: Inward and outward flows of stock, annual, 1970-2015; EY analysis.

Table 2. 2017 Effective Tax Rates on New Investment and Top Statutory Corporate Income Tax Rates for Countries in the Americas

	Effective tax rate on new investments (%)	Statutory corporate income tax rate (%)
Brazil	47.3	34.0
Argentina	38.9	35.0
Ecuador	35.1	12.0
United States	34.6	39.0
Guyana	34.3	39.0
Jamaica	34.4	27.9
Dominican Republic	30.7	27.0
Costa Rica	25.7	30.0
Bolivia	25.2	25.0
Colombia	23.7	40.0
Uruguay	23.6	25.0
Peru	23.0	27.2
Canada	21.2	26.6
Trinidad and Tobago	20.0	25.0
Mexico	19.7	30.0
Panama	18.6	25.0
Chile	8.2	25.0
Paraguay	7.8	10.0

Note 1: Effective tax rates for individual countries are weighted by the manufacturing and service industry components of GDP. The top statutory corporate income tax rates reflect effective income tax rates that integrate both national and sub-national rates, as well as surtaxes and other measures that effectively modify the statutory rate.
Note 2: Corporate income tax rates include both central and average sub-national rates. The corporate income tax rates are those applicable to retained earnings.
Source: 2017 calculations by Philip Bazel and Jack Mintz, School of Public Policy, University of Calgary.

Chile, with an effective tax rate of 8.2 percent is the second most tax competitive regime in the Americas, largely due to accelerated depreciation for machinery investments. It has a few relatively minor indirect or transfer taxes on capital. Nonetheless, Chile has been increasing its tax rate on businesses in the past several

Table 3. 2017 Average Effective Tax Rates on New Investment and Top Statutory Corporate Income Tax Rates For Select Country Groupings in the Americas

	Effective tax rates on new investment (%)	
	Simple average	*GDP-weighted average*
Americas	26.1	33.2
G7	27.4	32.2
G20	27.5	31.0
OECD	19.1	29.2
Global	20.7	28.8
	Statutory corporate income tax rate (%)	
	Simple average	*GDP-weighted average*
Americas	28.3	37.2
G7	30.2	33.9
G20	28.3	31.9
OECD	24.7	31.7
Global	24.7	30.4

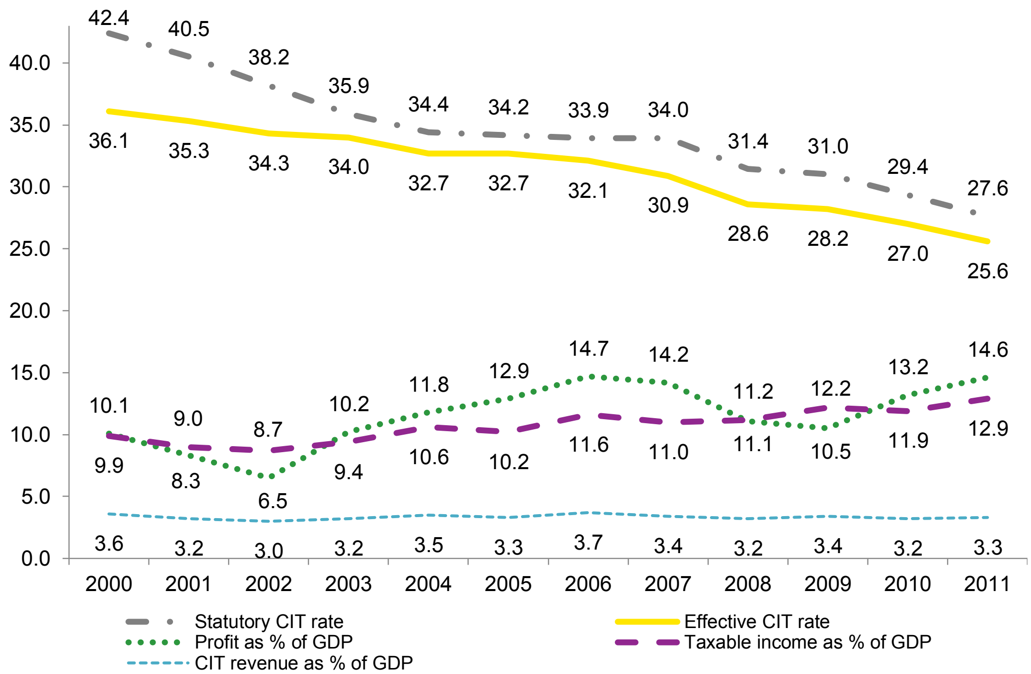
Note: Effective tax rates for individual countries are weighted by the manufacturing and service industry components of GDP. The top statutory corporate income tax rates reflect effective income tax rates that integrate both national and sub-national rates, as well as surtaxes and other measures that effectively modify the statutory rate. These rates are then averaged for countries within the selected country groupings listed above. The "global" grouping represents 92 select countries from around the world.
Source: 2017 calculations by Philip Bazel and Jack Mintz, School of Public Policy, University of Calgary.

years. The corporate income tax rate increased from 24 percent in 2016 to 25 percent in 2017 (distributed profits will be taxed at 27 percent in 2018).

Mexico has a corporate income tax rate just under the OECD GDP-weighted average at 30 percent and levies a transfer tax on real estate ranging from 2 percent to 4.5 percent but otherwise relies on few non-profit taxes on capital investments.

Canada has reformed its corporate tax system more than any other country in the Americas by implementing three complementary policy initiatives over the span of 15 years. First, the federal-provincial corporate income tax rate fell by graduated steps from 43 percent in 2000 to 26.6 percent today. Second, the federal government and most provinces eliminated a tax on assets of non-financial corporations (financial companies still bear some asset taxes). Third, provincial retail sales taxes in all provinces east of Manitoba (Alberta has no sales tax) have been harmonized with the federal value-added tax, which eliminated sales taxes on capital purchases. As a result, Canada has managed to reduce its effective tax rate on new investments by nearly one-half in 2017 (effective tax rate of 21.2 percent) without losing significant corporate tax revenue due to rising corporate profits (even after the 2008 financial crisis (Figure 3)). However, Canada's tax burden on capital has increased since 2012 due to some federal and provincial tax increases.

Figure 3. Canadian Corporate Income Tax Rates: Statutory vs. Effective (in percent), 2000-2011



Source: Duanjie Chen and Jack Mintz, "US Corporate Taxation: Prime for Reform," Tax Foundation, Special Report 228, February, 2015.

U.S. Tax Reform—Could It Trigger a Broader Trend?

Comprehensive U.S. tax reform could introduce complex changes that would significantly impact the rankings presented in this report. From a business investment perspective, changes in the tax rate and the tax base can greatly impact business decisions, while changes in the treatment of interest and in the taxation of foreign earnings can affect cross-border tax strategies.

Given the widespread interest in growing the U.S. economy and creating jobs, tax competitiveness is at the forefront of U.S. tax policy discussions. The push for corporate tax reform in the United States has gained significant momentum. Many tax-writers have long been aiming for lower rates, a broader base, faster capital cost recovery, and a shift to a territorial system of taxation. The taxation of passthrough businesses has also been a focus. And it seems that these goals may become a reality. These changes are designed, in part, to address some of the challenges the current U.S. corporate income tax system faces in attracting investment, which include:

- The U.S. tax burden on capital investment, as shown in Table 2, is one of the highest in the Americas, having a potentially significant impact on the competitiveness of many industries.

- The U.S. statutory corporate income tax rate of 39.0 percent (including sub-national tax rates) is also one of the highest in the world, making it less attractive to keep profits and capital in the United States.

- The United States, with its worldwide system, taxes foreign earnings when remitted or repatriated back to the United States. Because profits brought back home will generally be taxed by the U.S. government, many companies keep profits abroad rather than bringing them back to the United States to invest in production.

A reform of the U.S. corporate income tax has the potential to significantly reduce the tax burden on new investment and improve the overall competitive position of the United States within the Americas. Such a reformed system could enable the United States to better attract capital from abroad. Table 4, below, presents estimated effective tax rates under various potential U.S. corporate tax reforms. Although the estimates indicate that, post-reform, the United States would not have the lowest tax burden in the Americas, it could move to the middle of the pack and closer to average OECD tax burden on capital.

Table 4. U.S. Effective Tax Rates Under Various Corporate Rate Reductions in Percentages (%)

	Manufacturing	Services	Aggregate
Current effective tax rate	32.1	36.0	34.6
Corporate income tax rate			
at 25%	25.6	30.1	28.6
at 20%	22.5	27.4	27.4
at 15%	19.6	24.9	24.9
Expensing of capital with a corporate income tax rate at 15%	10.8	17.7	15.5

Source: 2017 calculations by Philip Bazel and Jack Mintz, School of Public Policy, University of Calgary.

Countries with current advantages might need to make adjustments to their systems in response to a U.S. tax reform. For example, if the United States moves ahead with a major reduction in its corporate income tax rates, countries in the region that have benefitted from a comparative rate advantage, like Canada, Brazil, and Argentina, might need to lower their rates to better compete for investment. Countries such as Mexico and Brazil that have worldwide systems of taxation might need to respond to a new territorial system in the United States to ensure that their multinationals can compete abroad on the same footing as American multinationals. Other potential features of U.S. tax reform, including shorter capital cost recovery periods and changes in interest deductibility, could also put significant pressure on other countries in the Americas to react. All countries in the region will have to carefully consider their own corporate tax systems to compete with a new U.S. system to attract investment.

Conclusion

A country's tax policies are just one factor companies consider when determining where to invest capital. However, as globalization continues to shape where and how companies do business, policymakers will likely sharpen their focus on ways to make their countries more attractive for investment. For countries in the Americas, the prospect of U.S. tax reform may trigger a closer look at existing tax rates and policies. If the United States succeeds in enacting corporate income tax reform, corporate tax reform might also become a major priority throughout the Americas. Countries that currently have prominent tax competitiveness advantages over the United States could find these advantages significantly reduced or even eliminated by a U.S. reform. Policymakers throughout the region will need to consider whether changes to their tax systems would be necessary to remain competitive.

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