July 2021

Improving Mexico's Economy Through Tax Reform

AMERICAN CHAMBER MEXICO

pwc

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Executive Summary

Following a recession in 2019, Mexico's economy is now suffering extreme decline as COVID-19 undermines the key supports of oil and gas, trade, tourism, and remittances. The OECD projected in May 2021 that Mexico's economy contracted by 8.2 percent in 2020 – a more severe downturn than projected for the world as a whole (-3.5 percent) and for all but three members of the G20 (Italy, -8.9 percent; the United Kingdom, -9.8 percent; and Argentina, -9.9 percent).[1] Among policies to address Mexico's economic situation, tax reform can improve competitiveness and generate much needed stimulus and investment in critical areas such as telecommunications and manufacturing.[2]

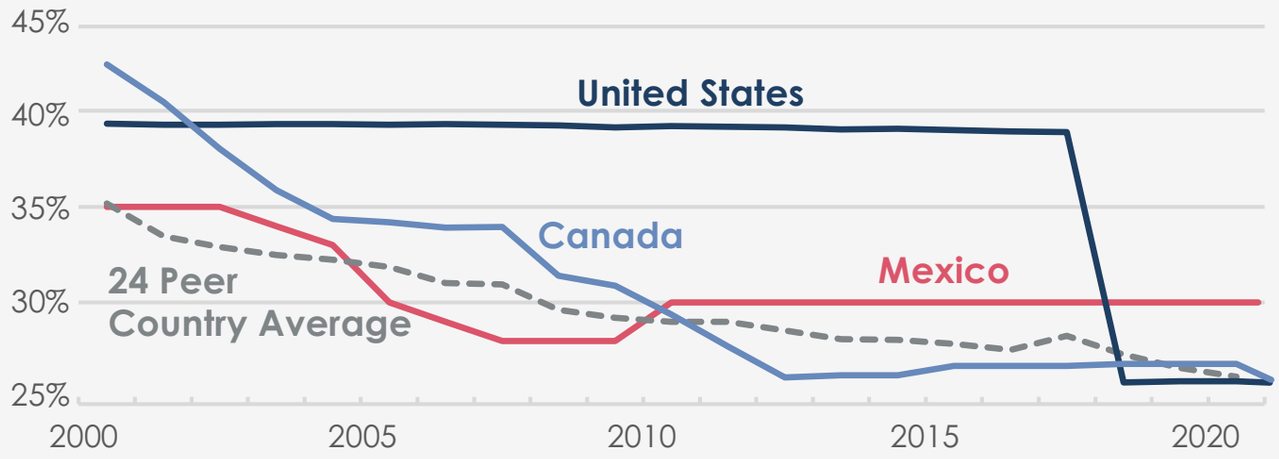
Studies have shown that business investment increases Mexican employment and wages. Mexico's ability to attract and expand business investment depends in part on its global tax competitiveness. Until 2010, Mexico's corporate tax rate was lower than that of the United States and Canada, and roughly matched the average corporate tax rate for a group of 24 peer countries (**Figure E-1**).[3] Mexico increased its corporate tax rate from 28 percent to 30 percent in 2010 and, in the years following, the United States, Canada, and many other peers lowered their corporate tax rates below Mexico's. Today, Mexico has the 4th highest corporate tax rate among the 24-country peer group. In addition to rate reductions, several countries within the peer group have recently enacted accelerated depreciation or full expensing, including the United States in 2017, Canada in 2018, and Chile and Peru in 2020. Either corporate rate reduction or accelerated depreciation, or a combination of each, is likely needed to make Mexico's tax system competitive with the United States, Canada, and other peers.

To assess tax competitiveness, we present two measures of effective corporate tax rates in Mexico and peer countries that account for national and subnational statutory corporate tax rates, cost recovery systems, and other relevant tax provisions using a methodology like that used by the OECD.[4] The two measures of effective tax rates – the effective average corporate tax rate (EATR) and the effective marginal corporate tax rate (EMTR) – provide somewhat different measures of tax competitiveness, but concur in finding that Mexico is in the bottom third of the 24-country peer group under both measures (7th highest EATR and EMTR among the 24 other countries) and significantly less competitive than Canada and the United States.

We assess how Mexico's tax competitiveness would change under four alternative policy proposals:

1. Expensing of all assets
2. Expensing of equipment
3. 20 percent corporate tax rate (a reduction from the 30 percent rate under current law), and
4. The combination of expensing of all assets and a 20 percent corporate tax rate (i.e., #1 with #3)

Figure E-1.
Combined (National and Subnational) Statutory Corporate Tax Rates in Mexico and 24 Peer Countries, 2000-2021



Source: OECD, PwC.

Each of the proposed reforms would enhance Mexico's tax competitiveness (**Figures E-2** and **E-3**). Reforms that would move Mexico into the top half of its peer group and make Mexico's tax system more competitive than either Canada or the US under the EATR measure are a 20 percent corporate tax rate or a combination of a 20 percent corporate tax rate and expensing of all assets.

Under the EMTR measure, expensing of equipment, expensing of all assets, or a 20 percent corporate tax rate would each lift Mexico into the top half of its peer group.

Such reforms for Mexico would be similar to tax reform actions undertaken by other countries in recent years.

Figure E-2.
Effective Average Tax Rates in Mexico and 24 Peer Countries, 2020

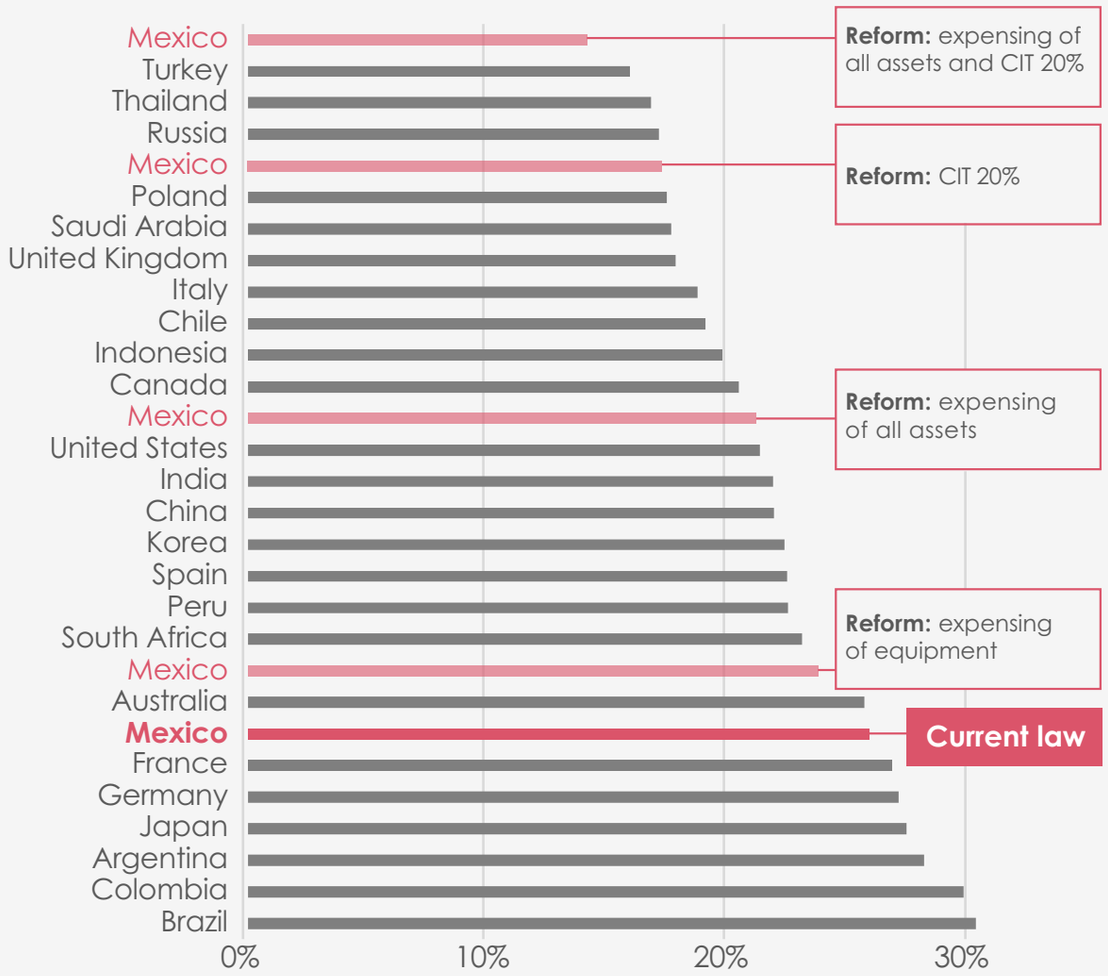
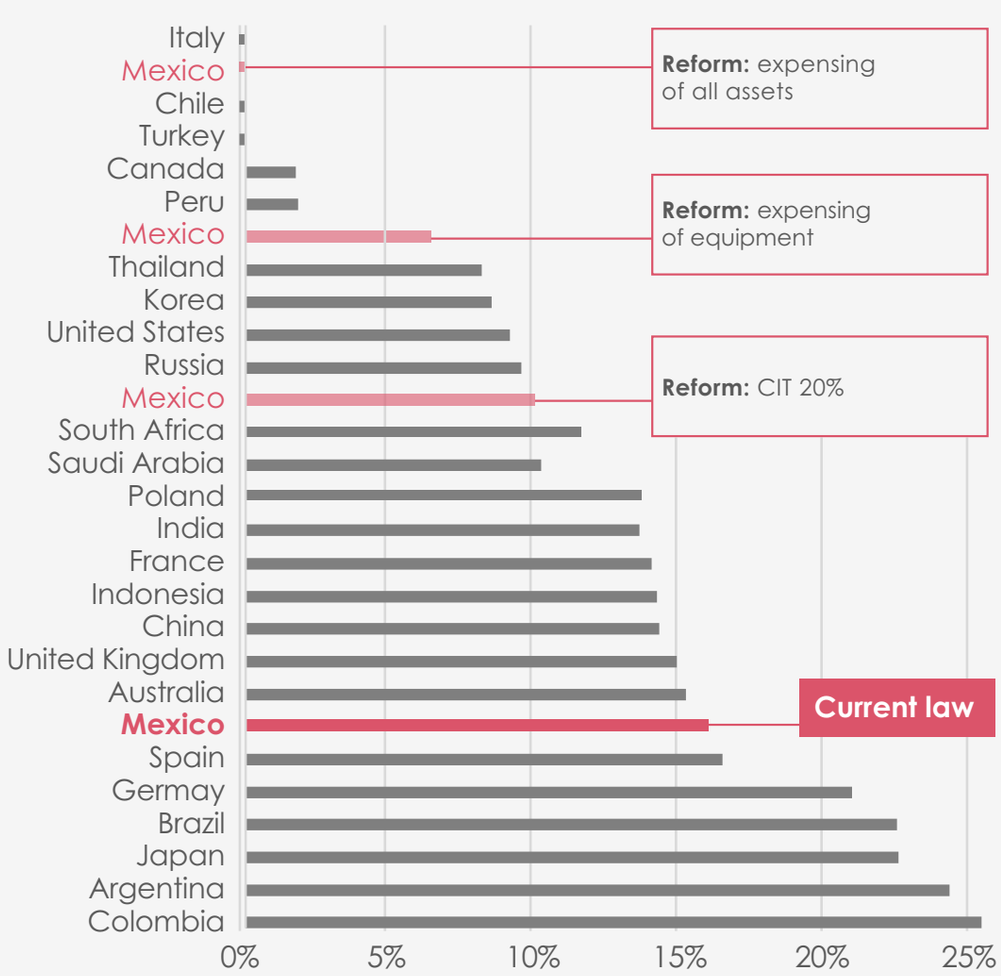


Figure E-3.
Effective Marginal Tax Rates in Mexico and 24 Peer Countries, 2020



Note: Negative EMTRs for Italy (-13.7%), Mexico with expensing of all assets (-8.5%), Chile (-7.3%), and Turkey (-3.4%) are due to the combined effect of certain deductions.

Improving Mexico's Economy Through Tax Reform

Introduction and Background on the Economy

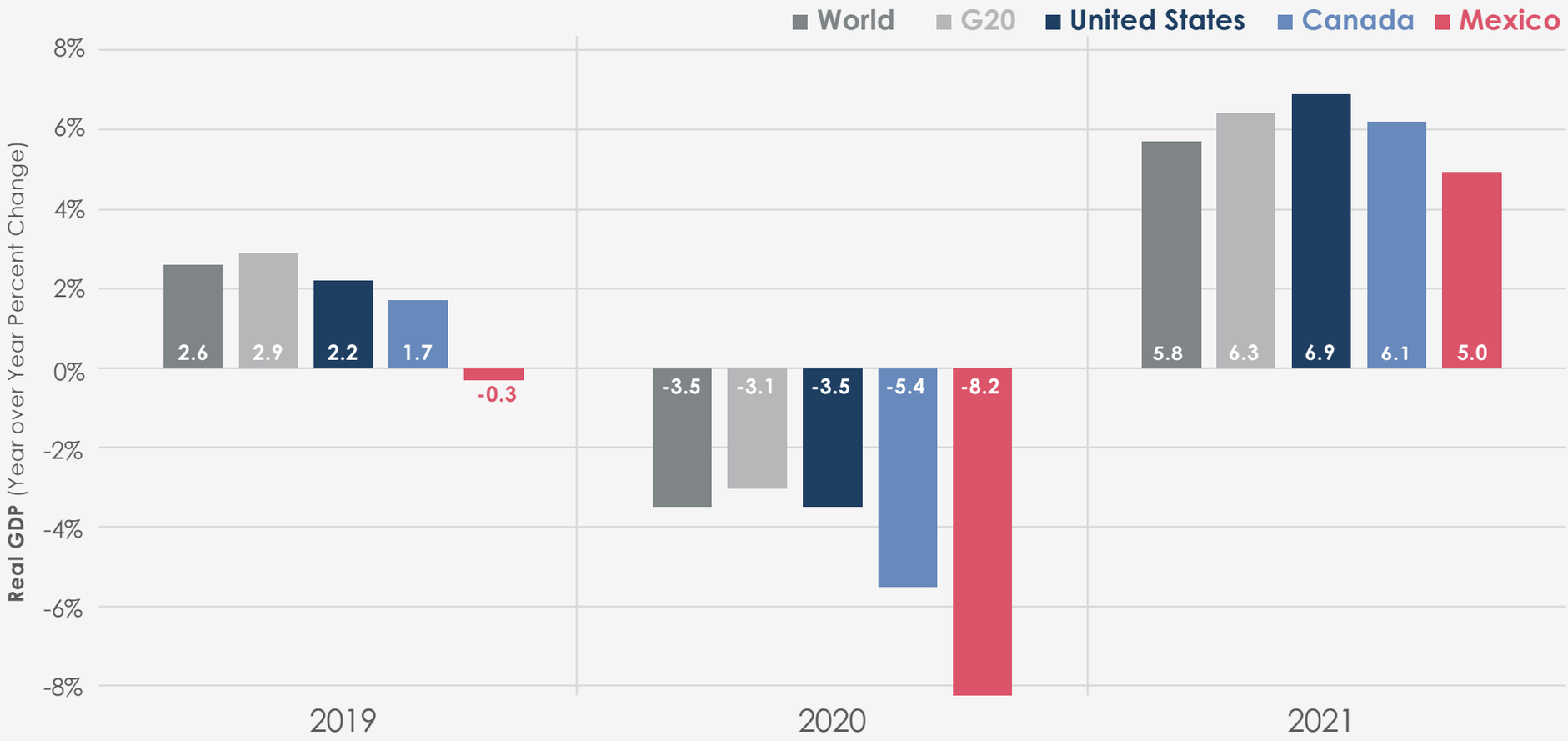
As Mexico considers ways to address the economic crisis brought on by COVID-19, it is instructive to consider the potential of tax reform to improve competitiveness and generate much needed stimulus and investment in critical areas such as telecommunications, manufacturing, transportation, and energy. Mexico's ability to attract and expand business investment depends in part on its global tax competitiveness, particularly with respect to its statutory corporate tax rate and method of cost recovery. This report provides a comparison of Mexico's corporate tax system to that of other countries, including an analysis of effective corporate tax rates that accounts for cost recovery systems and other relevant tax provisions.

Prior to COVID-19, Mexico's economy was already in a relatively weak state, as one of the few countries to experience a recession in 2019 (along with Argentina and Venezuela, for example). Mexico's economy shrank by 0.3 percent in 2019, compared to growth of 2.3 percent in the United States, 1.7 percent in Canada, 2.9 percent worldwide, and 0.1 percent in Latin America and the Caribbean (see **Figure 1**). Investment (gross fixed capital formation) in Mexico fell by 4.9 percent in 2019 to approximately the same real level as in 2012.[5] Inflows of foreign direct investment (FDI) in 2019 also fell to the lowest level since 2012.[6] Reflecting weak investment, labor productivity (output per worker) in Mexico has fallen 2.5 percent since the global financial crisis – the worst result of 38 countries tracked by the OECD.[7] As a result, income per capita in Mexico has stagnated over the last decade,[8] while the distribution of income remains relatively unequal in comparison to other OECD countries.[9]

In 2020, Mexico's economy continued to underperform as COVID-19 undermined the key supports of oil and gas, trade, tourism, and remittances, and uncertainty remains high for 2021.[10] In the second quarter of 2020, Mexico's economy shrank 18.7 percent relative to the second quarter of 2019, considerably worse than the declines in the United States (9.1 percent), Canada (13.0 percent), and every other G20 country except France (18.9 percent), India (23.5 percent), and the United Kingdom (21.7 percent).[11]

For the full year 2020 forecast, the OECD projected in May 2021 that Mexico's economy contracted by 8.2 percent, by more than projected for the world as a whole (-3.5 percent) and by more than all but three members of the G20 (Italy, -8.9 percent; the United Kingdom, -9.8 percent; and Argentina, -9.9 percent) (see **Figure 1**).[12] This would be Mexico's longest lasting and "most severe contraction in Mexico since the Great Depression."[13]

Figure 1.
Mexico's Economy in Protracted and Severe Recession



Values for 2020 and 2021 are projected.
Source: OECD Economic Outlook, May 2021.

The International Monetary Fund (IMF) projects that under current policies it would take several years for Mexican GDP to recover from the pandemic and that "raising income requires turning around low productivity growth that has been Mexico's overarching and long-standing economic weakness. Raising growth would facilitate job creation, poverty alleviation, and debt reduction".[14]

The World Economic Forum (WEF) identifies support for digital competitiveness as key to helping economies recover from the global pandemic.[15] Adoption of digital technology by traditionally nondigital firms, such as telemedicine, has the potential to encourage advancement in a wide variety of fields. Ensuring widespread connectivity for a more inclusive recovery requires investment in digital infrastructure and policies to attract such investment.

WEF ranks countries on competitiveness, defined as "the set of institutions, policies, and factors that determine the level of productivity of a country," and measured with 103 indicators in 12 categories (institutions; infrastructure; information and communications technology (ICT) adoption; macroeconomic stability; health; skills; product market; labor market; financial system; market size; business dynamism; and innovation capability).[16]

In the most recent edition (2019), Mexico ranks as the 48th most competitive economy out of 141 economies worldwide and the second most competitive economy in Latin America (after Chile). Mexico's four lowest measures are for institutions (98th worldwide, partly due to crime and lack of security), labor market (96th, partly due to high taxes on labor), skills (89th, partly due to a low level of digital skills), and ICT adoption (74th). In ICT adoption, Mexico ranks 8th in Latin America. Within ICT adoption, Mexico's two worst scores are for mobile-cellular telephone subscriptions per capita (112th worldwide) and mobile broadband subscriptions per capita (78th).[17] In terms of infrastructure (which refers to transportation (51st) and utility infrastructure (63rd), but not telecommunications infrastructure), Mexico ranks 54th worldwide. Among the other areas where Mexico scores relatively poorly are the "distortive effect of taxes and subsidies on competition" and the "cost of starting a business" (Mexico ranks 102nd worldwide on both measures).

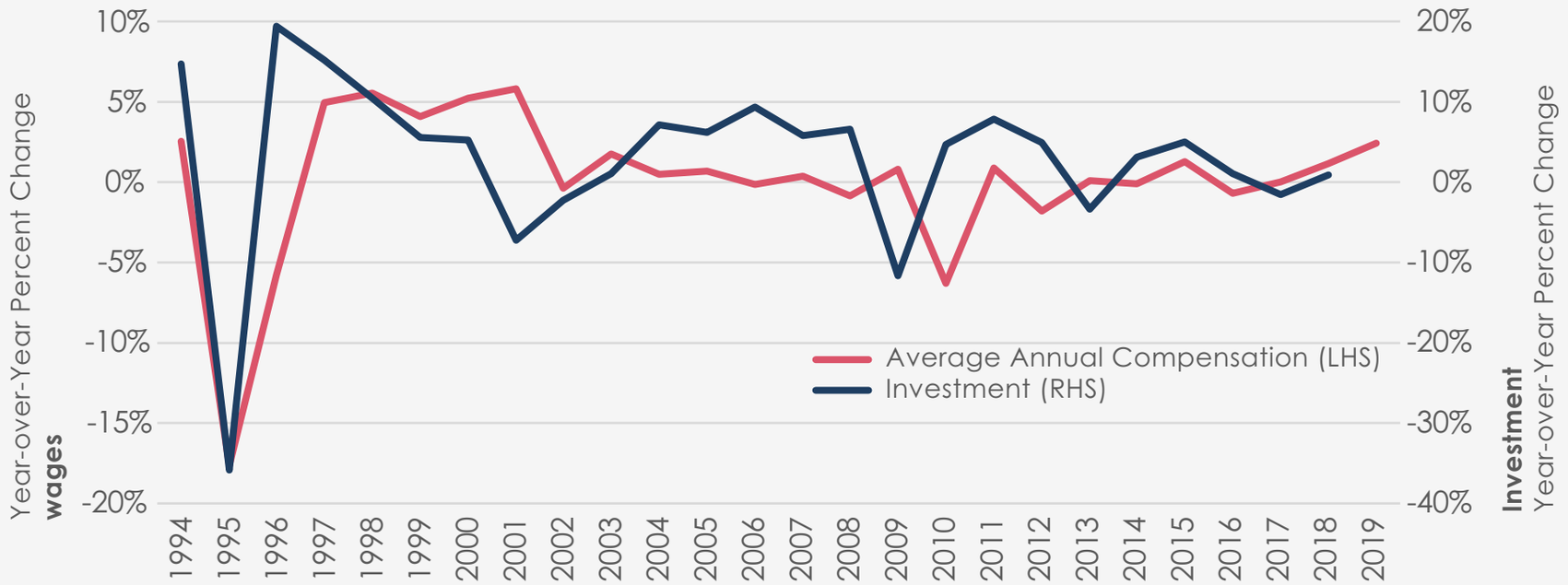
Studies have found that Mexico has lagged its peers in Latin America and other parts of the world in terms of infrastructure investment (broadly defined to include telecommunications, energy, transportation, and water and sanitation).[18] One study found that Mexico's investment in infrastructure, both from public and private sources, was less than 2 percent of gross

domestic product (GDP) over the period 2008 to 2013 – below that of 14 peer countries in Latin America, and below the 6.2 percent of GDP recommended by the United Nation's Economic Commission on Latin America and the Caribbean (ECLAC).[19] Mexico's private investment in infrastructure also ranked relatively low over this period, at less than 1 percent of GDP, as did Mexico's public and private investment in telecommunications, energy, and water and sanitation infrastructure in particular, at less than 0.4 percent of GDP.

The Inter-American Development Bank has found that Latin American countries remain disadvantaged by a lack of infrastructure investment, and that closing the gap with developed countries would likely result in substantially higher rates of economic growth among Latin American countries.[20] One study found that if Mexico were to invest in telecommunications and other infrastructure so as to catch up to the United States as a percentage of GDP over the course of a decade, Mexico's real GDP per capita would increase by 27.6 percent.[21] Encouraging private sector participation in the energy sector has also been identified by the IMF as a means of helping to "finance urgent needs in investment and expertise".[22]

After the Mexican financial crisis of the mid-1990s, average annual real compensation grew on average by approximately 5 percent per year. Since that time, real wage growth has been relatively flat except for a decline during the global financial crisis. Changes in average annual real compensation have generally moved in concert with changes in gross investment (see **Figure 2**).

Figure 2. Mexican Average Wages and Investment, 1994-2019



Source: OECD.

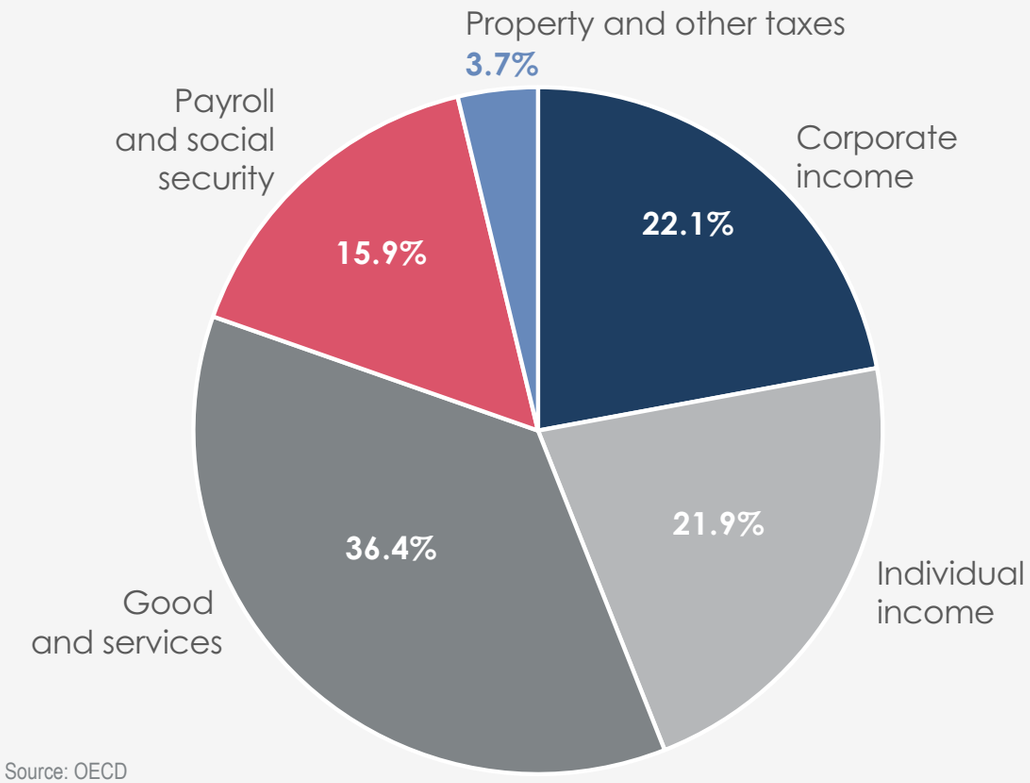
According to the World Bank's Doing Business report, Mexico ranks 60th out of 190 countries in terms of the ease of doing business.[23] Mexico ranks particularly low (120th) on the Paying Taxes indicator, which measures the burden of paying and complying with taxes.[24] The burden of paying taxes is measured by the total tax and contribution rate (TTCR) as a share of profit, which is 55.1 percent for Mexico as of 2018 – considerably higher than the TTCR for the United States (36.6 percent), Canada (24.5 percent), the average for Latin America and the Caribbean (47.0 percent), the average for the 24-country peer group (45.5 percent), and the average worldwide (40.5 percent). Mexico's TTCR consists of a corporate income tax (27.01 percent of profit), employer paid social security contributions (23.82 percent), employer paid payroll tax (3.38 percent), property tax (0.86 percent), and vehicle tax (0.04 percent).

Tax reform that lowers the statutory corporate tax rate and provides for accelerated cost recovery has the potential to address many of the identified weaknesses in Mexico's competitiveness. Its position would be strengthened, particularly to the extent that taxes are reformed to lower business costs and increase business investment, both broadly across business sectors and in critical areas such as ICT infrastructure. The IMF argues that "boosting investment and delivering lasting improvements in productivity requires steadfast implementation of reforms."[25]

Tax System

Mexico collected tax revenues of 16.2 percent of GDP in 2018. Mexico's largest source of tax revenue is the federal value added tax and other taxes on goods and services collected at the federal, state and local levels, which together provided 36.4 percent of tax revenue as of 2018 (see **Figure 3**). The federal corporate income tax provided 22.1 percent of tax revenue and the federal individual income tax provided 21.9 percent of tax revenue. Payroll and social security taxes collected at the federal and state levels provided 15.9 percent of tax revenue, and local property and other taxes provided the remainder of 3.7 percent. At 16.2 percent of GDP, Mexico's total tax revenue is lower than any other OECD country, yet Mexico's corporate tax revenue at 3.4 percent of GDP is higher than most OECD countries.[26]

Figure 3.
Mexico Sources of Tax Revenue, 2018



Source: OECD

Mexico's federal corporate income tax has a statutory tax rate of 30 percent applicable to resident taxpayers' income from worldwide sources as well as to foreign residents on the income attributed to their permanent establishments located in Mexico.[27] Tax liability is reduced by 30 percent for taxpayers exclusively engaged in agriculture, livestock, fishing, and forestry. A withholding tax of 10 percent applies to dividend payments to individuals in Mexico or foreign residents.

Mexico's tax system partially accounts for the effects of inflation, including adjustments to depreciation allowances and debt. Straight-line depreciation is permitted at the rates specified in the law (e.g., estimated lives for assets are 20 years for buildings, 3.3 years for computers, 4 years for cars, and 10 years for certain machinery and equipment), and the deduction may be adjusted for inflation from the month in which the asset was originally acquired. Since January 2020, the deduction for net interest expense is generally limited to 30 percent of adjusted taxable profit (standard taxable profit plus accrued interest, depreciation, amortization and pre-operative expenses). This limitation does not apply to certain industries, such as construction, oil, gas, extractive industry, public services, state owned companies and financial services operations. The amount of the losses incurred in prior years by a business may be deducted against taxable income over a subsequent ten-year period.

Importance of Business Investment

Several studies of the effect of business investment on employment and wages in the Mexican economy across time have found positive effects. A study of the Mexican economy from 1975 to 1988 finds that increases in foreign investment increased the wages of skilled workers.[28] Another study looking at the period from 1994 to 2006 finds that foreign direct investment had a significantly positive effect on manufacturing employment in Mexico, for both blue-collar and white-collar workers.[29] A study of investment in the 32 subnational Mexican states using data from 2005 to 2015 finds a positive relationship between foreign direct investment and wages.[30] A recent study of foreign direct investment in Mexico covering the period from 2005 to 2018 finds increases in investment in the manufacturing sector increased both low-skilled and high-skilled employment and increased wages in the manufacturing sector for low-skilled workers.[31]

More generally, policymakers have an interest in encouraging investment to increase economic output. Research suggests that differences in the intensity of investment explain about 20 percent of cross-country differences in per capita economic output.[32] Economic output depends on labor supply and average labor productivity. Business investment boosts economic output by increasing average labor productivity. More productive workers can earn higher wages.

The effect of the tax system on business investment depends on how sensitive investment is to changes in the EMTR, or the cost of capital on which the EMTR is based. The economic literature on tax policy and investment shows that taxes have a noticeable effect on investment. For the United States, the consensus of the academic research finds that a 10-percent reduction in the cost of capital would increase investment by 7.5 percent.[33] Some studies have looked at the effect of taxes on investment in Mexico specifically. A study of the repeal of the optional accelerated depreciation system in 1999 found investment was responsive to the tax change.

Manufacturing plants that qualified for accelerated depreciation reduced investment when the benefit was removed compared to plants that did not qualify for the treatment.[34] Another study of the Mexican economy found that investment in Mexico is much more responsive to changes in the EMTR than investment in the United States, estimating that a 10-percent reduction in the cost of capital would increase investment by about 20 percent.[35]

Therefore, policymakers can influence the level of investment by enacting changes in the corporate tax rate, depreciation allowances, investment tax credits, or taxation of investment returns at the individual level. Tax policy may be particularly important for financially constrained firms.[36]

Technological progress is an important determinant of economic growth both theoretically[37] and empirical.[38] Research has shown that investment in communications equipment in particular is an important factor in increasing labor productivity and growth, contributing 0.1 percentage points annually to output growth in the United States in the second half of the 1990s.[39] Other studies on the importance of telecommunications infrastructure and growth have been done for Japan,[40] United Kingdom,[41] Spain,[42] Singapore,[43] 47 Sub-Saharan African countries,[44] and 21 Asian countries,[45] and they find an important role for this specific type of investment for economic growth.

Research has also shown positive effects of sector-specific foreign direct investment in other sectors. A study of 47 countries, including Mexico, finds a positive effect on economic growth of foreign direct investment in the manufacturing sector, while the results for the services sector are ambiguous.[46] These results are confirmed in a study of India.[47] Positive effects of foreign direct investment are stronger in more capital-intensive and technologically advanced sectors.[48] Studies of China and Vietnam[49] and Egypt[50] find positive effects on economic growth from foreign direct investment in the manufacturing and energy extraction sectors.

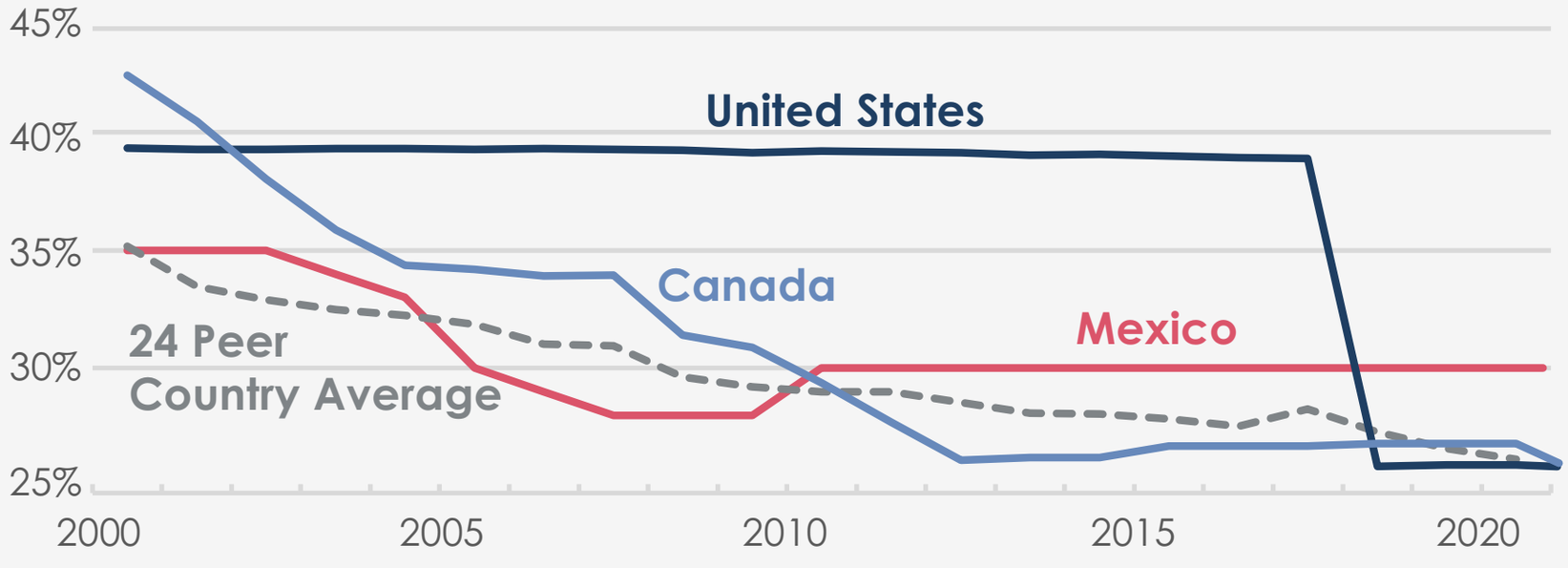
Research has also studied the effect of investment more generally. A study of Latin American economies from 1980 to 2014 found that a 10 percent increase in gross fixed capital formation in upper-middle-income countries (the group that includes Mexico) is associated with an increase in GDP of between 2.3 percent and 3.6 percent.[51]

Based on the estimates from the literature cited above, a 10-percent reduction in the cost of capital in Mexico (corresponding to a reduction in the EMTR from 15.9 percent to 6.6 percent) could increase investment by 20 percent and thereby cause GDP to rise by between 4.6 percent and 7.2 percent. Any additional tax revenue as a result of the increased economic output would partially offset the revenue cost of the tax incentives.

Possible Tax Reforms

Until 2010, Mexico's corporate tax rate was lower than that of the United States and Canada, and roughly matched the average corporate tax rate for a group of 24 peer countries (**Figure 4**).[52] In 2010 Mexico increased its rate from 28 percent to 30 percent, while Canada and many other peer countries continued to lower their corporate tax rates, with the United States finally lowering its corporate tax rate in 2018. Mexico's 30-percent corporate tax rate is the 4th highest corporate tax rate in the 24-country peer group in 2021.

Figure 4.
Combined (National and Subnational) Statutory Corporate Tax Rates in Mexico and 24 Peer Countries, 2000-2021



Source: OECD, PwC.

The OECD studied how tax systems can best be designed to support GDP per capita growth. The analysis concluded that "corporate taxes are the most harmful type of tax for economic growth, followed by personal income taxes, and then consumption taxes, with recurrent taxes on immovable residential property being the least harmful tax."[53] Tax reform that shifts taxation away from corporate taxes and toward less harmful taxes could strengthen economic growth over the medium term. Corporate taxes are harmful for growth because they discourage investment in capital and productivity improvements that are most important for growth. The study suggests that lowering statutory corporate tax rates can lead to particularly large productivity gains in firms that are dynamic and profitable and that increasing the net present value of depreciation allowances increases investment.[54]

Several countries within the 24-country peer group have recently enacted plans for corporate tax reform, including (from earliest to most recent) the United States, Canada, Argentina, India, Colombia, Peru, Indonesia, and Chile.

In 2017, the United States enacted legislation to reduce the federal corporate tax rate from 35 percent to 21 percent. In addition, the US legislation provided temporary full expensing of investment in equipment and certain structures, among other reforms. The expensing provision is scheduled to phase out in stages after 2022 (80 percent expensing in 2023, 60 percent in 2024, 40 percent in 2025, and 20 percent in 2026).[55]

In 2018, Canada introduced full expensing for manufacturing and processing equipment and specified clean energy equipment (a provision that phases down between 2023 and 2028) and increased the first-year deduction for most other eligible depreciable property (a provision that expires in 2028).[56]

In 2018, Argentina reduced its corporate tax rate from 35 percent to 30 percent and planned a further reduction to 25 percent in 2020. Recently Argentina has enacted legislation under which the 25 percent rate will take effect in 2021 rather than 2020.[57]

In September 2019, India enacted a reduction in the top corporate tax rate from 34.94 percent to 25.17 percent, effective for tax years beginning April 1, 2019.[58]

In December 2019, Colombia enacted tax reform that reduced the corporate tax rate from 33 percent in 2019 to 32 percent in 2020, 31 percent in 2021, and 30 percent in 2022 and onward.[59]

In response to the COVID-19 pandemic, on May 10, 2020, Peru enacted special accelerated depreciation rules including (1) increasing the annual depreciation allowance from 5 percent to 20 percent (straight-line) for buildings and construction started on or after January 1, 2020 and 80 percent complete as of December 31, 2020, and (2) doubling the annual depreciation allowance for data processing equipment and most machinery and equipment acquired in tax years 2020 and 2021.[60]

In June 2020, due to the pandemic, Indonesia enacted a reduction in the corporate tax rate from 25 percent to 22 percent in 2020 and 2021 and 20 percent in 2022 and onward.[61]

Lastly, Chile enacted tax reform in February 2020 that introduced 50-percent expensing for all depreciable assets applicable to investments made in Chile from October 1, 2019 to December 31, 2021.[62] Chile's law was subsequently modified in September 2020 to allow 100-percent expensing for all depreciable assets applicable to investments made in Chile from June 1, 2020 to December 31, 2022.[63]

Prior use of accelerated depreciation in Mexico

Through the history of the Mexican tax system, accelerated depreciation and other incentives have been used to help develop the Mexican economy. From 1987 to 2013 the tax system allowed taxpayers to elect accelerated depreciation of fixed assets (instead of applying the regular authorized depreciation rates depending on the type of asset). The main objective was to encourage investment through an efficient, flexible, and competitive tax system that allows taxpayers to guarantee the continuity of their businesses and support employment with the correct distribution of income. Authorities desired a tax system that was adequate to support the development of the economy. Recognizing that taxpayers could utilize accelerated depreciation as a financing measure to free other resources that could be used in the business, authorities viewed accelerated depreciation as a means of allowing the development and expansion of businesses. There was also a concern for international competitiveness, to encourage investment and productivity of certain sectors of the economy. This rationale may be especially applicable today in light of peers of Mexico in the Americas, such as Canada, Chile, Peru, and the United States, as well as some other global peers, all having enacted accelerated depreciation provisions.

The prior-law accelerated depreciation benefit consisted of expensing an applicable percentage of the amount of investment in a single year (up to 96% depending of the type of asset) instead of applying the regularly authorized straight-line depreciation rates over the useful tax life of the asset, ranging from 10 to 30 percent depending on the type of asset. The deduction was allowed at a net present value of the straight-line depreciation deductions, which required the application of a discount rate.

The Ministry of Finance estimated the amount the Federal Treasury did not collect in 2013 due to accelerated depreciation was Mex$32.975 billion pesos.[64] Corporate income tax receipts in 2013 were Mex$392.2 billion pesos,[65] so the tax expenditure estimate for accelerated depreciation represented about 8.4 percent of corporate tax revenue. However, the estimate is calculated as the collection loss that occurs in the year in which the deferral occurs, without considering that the deferral will be reversed in the future because it will not be possible to take the deduction in a straight line for those assets that

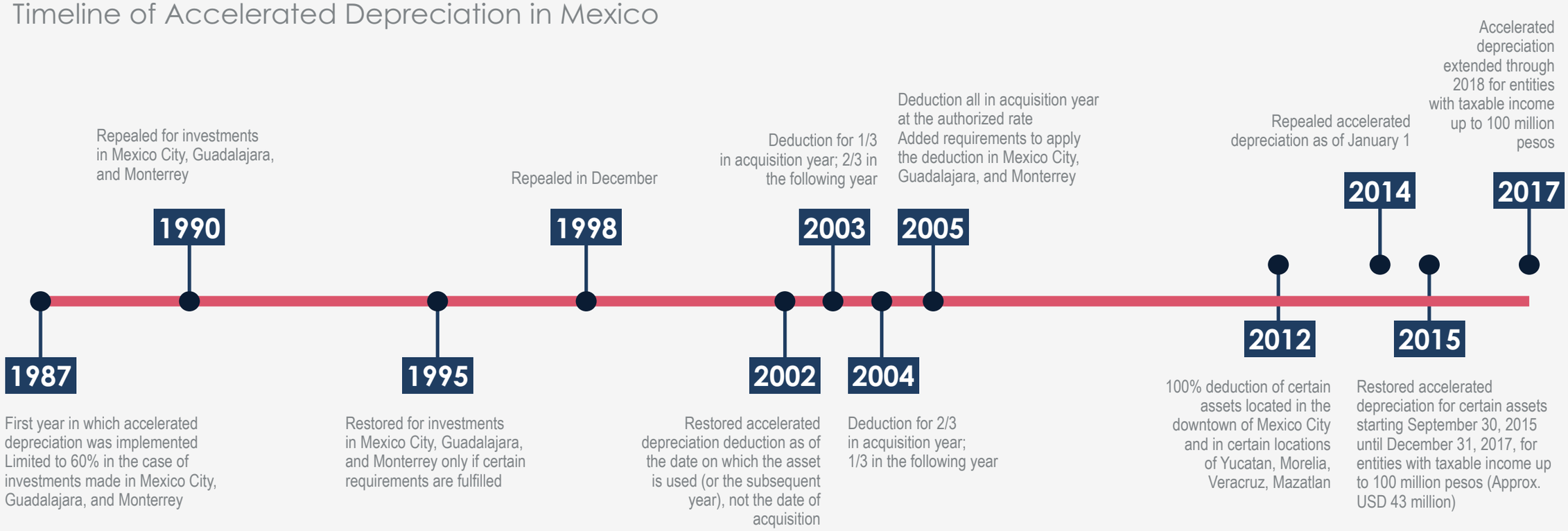
have already been deducted immediately. Over the life of an investment, the same amount of tax will be paid whether the asset is deducted immediately or depreciated over a number of years.

The provision was repealed as of January 1, 2014, restored in late 2015, and extended through 2018. In initially repealing the provision, the tax authorities considered that there was insufficient evidence that the measure attracted more investments mainly for small and medium businesses, perhaps because of the discount rate. If the discount rate used to calculate the applicable percentage to be expensed was higher than the taxpayer's actual discount rate, the taxpayer would in general be better off by not electing expensing. Similarly, a discount rate only slightly below the taxpayer's actual discount rate would confer only a small benefit to the taxpayer, which may result in only a small investment response.

Following repeal of the expensing provision fixed assets are generally recovered over the useful life of each asset, which may align taxable income more closely with economic income.

Table 1 presents a timeline of the major changes to the use of accelerated depreciation in Mexico.

Table 1.
Timeline of Accelerated Depreciation in Mexico



Source: PwC Mexico

The main rules that regulated accelerated depreciation were as follows. Accelerated depreciation applied only for new assets used for the first time in Mexico. Certain assets, including office furniture or equipment, armor for motor vehicles, or any non-identifiable fixed asset on an individual basis, were not eligible for the benefit. Any value added tax (VAT) on the purchase of an asset was 100-percent creditable. The rules allowed taxpayers to adjust the amount of the investment for the effects of inflation.

In the event of the disposal of assets for which accelerated depreciation had been claimed, the gross income from the disposal was considered taxable without any deductions except as follows. When the assets were disposed of, lost their value, or ceased to be useful, an additional deduction could be made according to the years elapsed between the acquisition date and the date on which the accelerated deduction was applied. The taxpayer still may not have obtained a deduction for 100-percent of the cost of the asset.

Table 2 contains the applicable percentages for accelerated depreciation for selected assets.

Table 2.
Accelerated Depreciation Percentages – Selected Assets

TYPE OF ASSET	PERIOD 2002 -2003	PERIOD 2004-2013	PERIOD 2016-2018
COMPUTER EQUIPMENT			
Personal desktop and laptop computers, servers, printers, optical readers, plotters, barcode readers, digitizers, external storage units and computer network hubs.	88%	88%	94%-88%
CONSTRUCTION SECTOR			
Properties declared as archaeological, artistic, historical or patrimonial monuments, in accordance with the Federal Law on Monuments and Archaeological, Artistic and Historical Zones, which have the restoration certificate in Mexico.	74%	74%	85%-74%
Others.	57%	57%	74%-57%
SATELLITE COMMUNICATIONS			
For the satellite segment in the space, including the main body of the satellite, the transponders, the antennas for the transmission and reception of digital and analog communications, and the monitoring equipment on the satellite.	69%	82%	82%-69%
For satellite equipment on the earth, including antennas for transmission and reception of digital and analog communications and equipment for satellite monitoring.	74%	85%	85%-74%
TELEPHONE COMMUNICATIONS			
Transmission towers and wires, except fiber optics.	57%	74%	74% - 57%
Radio systems, includes transmission and handling equipment that uses the radioelectric spectrum, such as digital or analog microwave radio transmission, microwave towers and wave guides.	69%	82%	82%-69%
Equipment used in the transmission, such as internal plant circuits that are not part of the switching and whose functions are focused on the trunks that reach the central telephone, includes multiplexers, concentrator equipment and routers.	74%	85%	85%-74%
Central Telephone equipment designed to switch calls with technology other than electromechanical.	87%	93%	93%-87%
Others.	74%	85%	85%-74%

TYPE OF ASSET	PERIOD 2002 -2003	PERIOD 2004-2013	PERIOD 2016-2018
TRANSPORTATION			
Train fuel for supply pumps.	43%	43%	63%-43%
Railways.	57%	57%	74%-57%
Railroad cars and locomotives.	62%	62%	78%-62%
Ships.	62%	62%	78%-62%
Track leveling machinery, unclamping machines, track grinders, remover, inserter railways and drill.	66%	66%	80%-66%
Communication, signaling and remote-control equipment.	74%	74%	85%-74%
Aircraft dedicated to agricultural aerial spraying.	87%	87%	93%-87%
OTHER EQUIPMENT			
Dies, molds, and tools.	89%	89%	95%-89%
OTHER STRUCTURES, MACHINERY, AND EQUIPMENT ACCORDING TO THE ACTIVITY			
General structures	57%	74%	74%
In the production of metal; in the manufacture of tobacco products and natural charcoal by-products.	62%	62%	78%-62%
In the manufacture of pulp, paper and similar products.	66%	66%	80%-66%
In the manufacture of parts for motor vehicles; in the manufacture of metal products, machinery and professional and scientific instruments; in the production of food and beverage products, except grains, sugar, edible oils and derivatives.	69%	69%	82%-69%
In the tanning of leather and the manufacture of leather articles; in the production of chemical, petrochemical and biological products; in the manufacture of rubber and plastic products; in printing and graphic publishing.	71%	71%	84%-71%
In electric transport.	74%	74%	85%-74%
In the manufacture of textile products, as well as clothing.	75%	75%	86%-75%
Mining industry, except in the production of metal; in the manufacture of tobacco products and natural charcoal by-products.	77%	77%	87%-77%
Transmission of communication services provided by radio and television stations.	81%	90%	90%
Restaurants	84%	84%	92%-84%
Transportation activities	87%	87%	93%-87%
Assets destined directly to the research of new products or technology development in the country.	89%	95%	95%
In the manufacture, assembly and transformation of magnetic components for hard drives and electronic cards for the computer industry.	92%	92%	96%-92%
Other activities not mentioned	74%	74%	85%-74%

Source: PwC Mexico.

Effect of Tax Reform on Business Investment

This section presents our analysis of the effective tax rates paid by companies on investment projects in Mexico in 2020 under current law and under four policy proposals. It additionally provides a comparable analysis for the same companies operating under current law in the 24 peer countries mentioned above. We assess these by computing effective marginal corporate tax rates (EMTR) and effective average corporate tax rates (EATR), following the methodology of Devereux and Griffith.[66]

The EMTR represents the corporate tax burden on an incremental break-even investment, while the EATR represents the corporate tax burden on projects generating economic rents. The EATR may drive the decision of where to place a specific investment when there is locational choice across countries, while the EMTR may influence the scale of the investment. The analysis presented here considers national and subnational corporate-level income taxes and does not consider taxes at the level of the shareholder or interest recipient. It thus is useful for comparing the relative corporate level tax burdens on investment projects across countries.

The investment project is a composite asset comprised of structures, equipment, and inventory. The analysis of effective tax rates takes into consideration differences in depreciation allowances across assets. The investment is assumed to be financed by a combination of debt and equity. Interest expense is assumed to be fully deductible (in countries that limit interest deductions to a percentage of taxable income, we assume income is sufficient to permit all interest to be deducted).

For Mexico, the analysis considers current law and the following four alternative policy proposals:

1. Expensing of all assets
2. Expensing of equipment
3. 20 percent corporate tax rate (instead of 30 percent under current law)
4. The combination of expensing of all assets and a 20 percent corporate tax rate (i.e., #1 with #3)

In all cases, it is assumed the firm making the investment has sufficient taxable income to fully utilize all deductions, including under tax reform options that provide for expensing.[67]

Figure 5 and **Figure 6** present results of the EMTR and EATR analysis for companies in Mexico in 2020 under current law and under the four policy proposals, and comparable analysis for the same companies operating under current law in 24 peer countries.

Figure 5 shows the ranking of composite asset EATRs, indicating Mexico under current law has the 7th highest EATR among these countries. With expensing of equipment, Mexico would have the 8th highest EATR, and with expensing of all assets Mexico would have the 11th lowest EATR. A corporate tax rate of 20 percent would give Mexico the 4th lowest EATR, and when combined with expensing of all assets would give Mexico the lowest EATR.

Figure 5.
Effective Average Tax Rates in Mexico and 24 Peer Countries, 2020

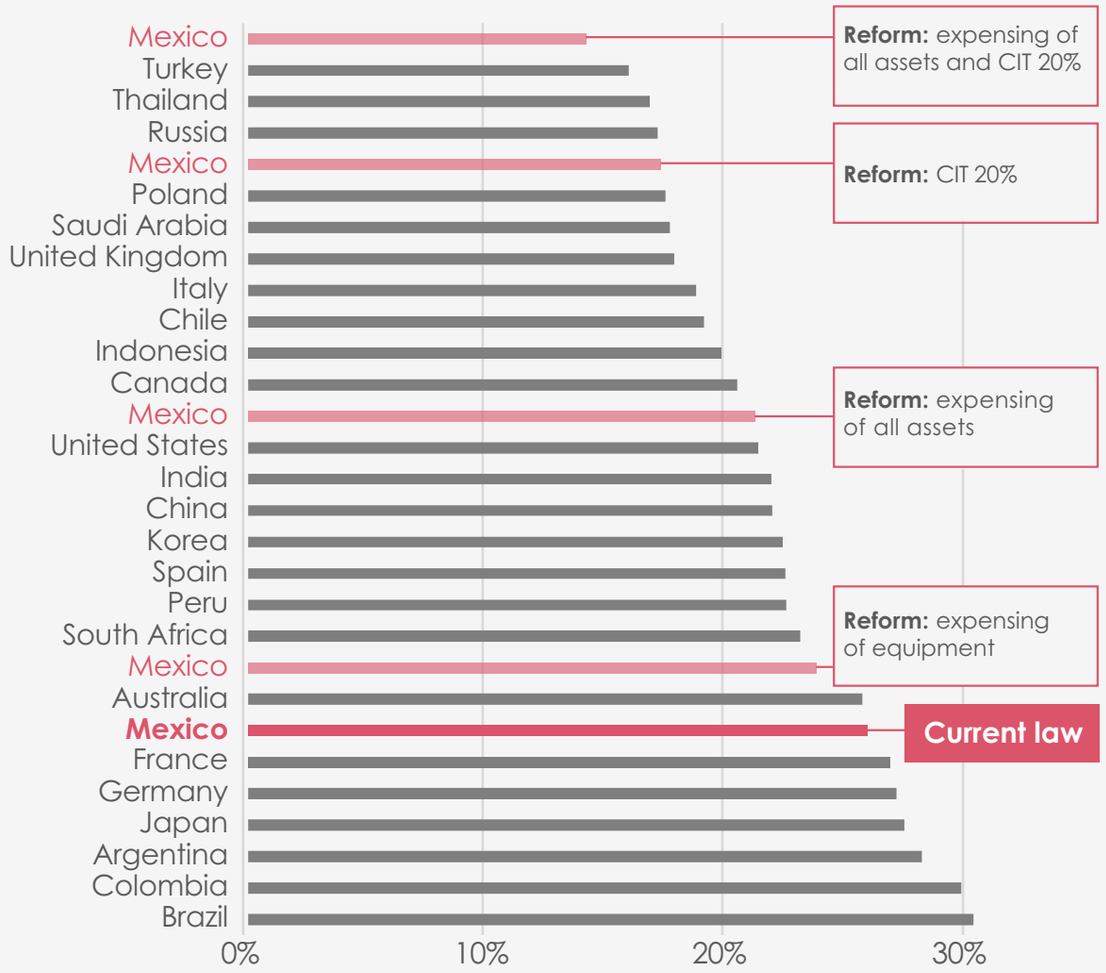
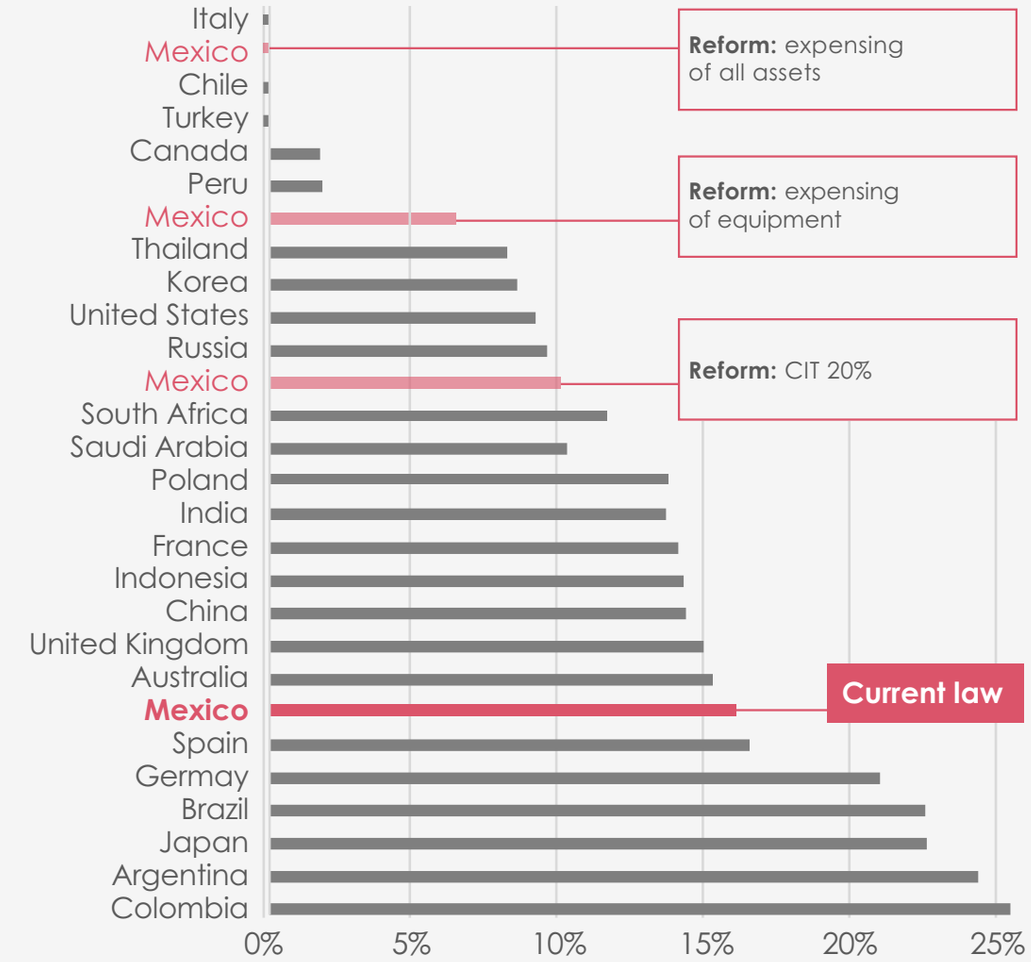


Figure 6 shows the ranking of composite asset EMTRs, indicating Mexico under current law has the 7th highest EMTR among these countries. With a corporate tax rate of 20 percent, Mexico would have the 10th lowest EMTR, and under expensing of equipment Mexico would have the 6th lowest EMTR. Expensing of all assets (with the current 30 percent tax rate) would give Mexico the 2nd lowest EMTR (full deductibility of investment and interest expense results in a negative EMTR).

Table 3 provides EMTRs and EATRs for each asset and the weighted average composite asset in Mexico in 2020 under current law and under the four policy proposals, and under current law in the 24 peer countries.

Figure 6.
Effective Marginal Tax Rates in Mexico and 24 Peer Countries, 2020



Negative EMTRs for Italy (-13.7%), Mexico with expensing of all assets (-8.5%), Chile (-7.3%), and Turkey (-3.4%) are due to the combined effect of certain deductions.

Table 3.
Effective Tax Rates in Mexico and 24 Peer Countries, 2020

Country	Reform	Structures		Equipment		Inventory		Composite	
		EMTR	EATR	EMTR	EATR	EMTR	EATR	EMTR	EATR
Mexico	Current law	10.2%	24.5%	20.9%	27.1%	27.3%	29.1%	15.9%	25.8%
	Expensing of all assets	-15.9%	20.1%	-15.9%	20.1%	27.3%	29.1%	-8.5%	21.1%
	Expensing of equipment	10.2%	24.5%	-15.9%	20.1%	27.3%	29.1%	6.4%	23.7%
	CIT 20%	6.2%	16.3%	13.4%	18.1%	18.0%	19.4%	9.9%	17.2%
	Expensing of all assets and CIT 20%	-8.7%	13.4%	-8.7%	13.4%	18.0%	19.4%	-4.8%	14.1%
Argentina		23.5%	27.9%	25.5%	28.5%	24.3%	28.1%	24.2%	28.1%
Australia		14.6%	25.5%	12.1%	24.9%	24.3%	28.1%	15.1%	25.6%
Brazil		17.1%	28.9%	29.1%	32.3%	27.9%	31.9%	22.4%	30.3%
Canada		4.4%	20.9%	-19.5%	17.1%	25.7%	26.4%	1.7%	20.4%
Chile		-13.4%	18.1%	-13.4%	18.1%	24.5%	26.2%	-7.3%	19.0%
China		8.9%	20.6%	21.0%	23.7%	20.0%	23.4%	14.2%	21.9%
Colombia		24.1%	29.4%	27.3%	30.4%	26.1%	30.0%	25.3%	29.8%
France		12.1%	26.4%	12.0%	26.3%	26.1%	30.0%	14.0%	26.8%
Germany		18.6%	26.4%	25.4%	28.4%	19.1%	26.6%	20.8%	27.0%
India		6.1%	20.1%	23.1%	24.5%	20.2%	23.6%	13.6%	21.8%
Indonesia		7.6%	18.1%	23.4%	22.5%	17.5%	20.6%	14.1%	19.7%
Italy		-18.3%	18.1%	-6.8%	19.7%	-11.1%	19.1%	-13.7%	18.7%
Japan		23.3%	27.6%	22.0%	27.3%	19.0%	26.4%	22.4%	27.4%
Korea		10.0%	22.6%	1.1%	20.8%	17.4%	24.4%	8.4%	22.3%
Peru		-9.0%	20.7%	9.2%	23.9%	23.9%	27.7%	1.8%	22.5%
Poland		12.7%	17.2%	15.7%	18.0%	11.5%	16.9%	13.5%	17.4%
Russia		8.7%	16.9%	9.9%	17.2%	12.2%	17.8%	9.5%	17.1%
Saudi Arabia		11.0%	17.5%	10.9%	17.4%	15.8%	18.8%	11.5%	17.6%
South Africa		10.2%	23.0%	4.2%	21.8%	22.6%	26.3%	10.2%	23.0%
Spain		15.2%	22.1%	17.2%	22.7%	20.0%	23.4%	16.4%	22.4%
Thailand		6.8%	16.5%	5.7%	16.2%	19.1%	19.7%	8.1%	16.8%
Turkey		-2.1%	16.1%	-8.3%	15.0%	2.2%	16.9%	-3.4%	15.9%
United Kingdom		14.4%	17.7%	14.3%	17.6%	18.2%	18.7%	14.8%	17.8%
United States		17.6%	23.4%	-18.4%	16.5%	16.2%	23.0%	9.1%	21.3%

Notes: The composite asset consists of 58% structures, 30% equipment, and 12% inventory.
Investment is financed by a mix of 32 percent debt and 68 percent equity.

Conclusion

Mexico faces a severe economic crisis brought on by COVID-19. Tax reform offers an opportunity for Mexico to improve its competitive position and attract the investment in critical areas such as telecommunications, manufacturing, transportation, and energy, that can help the economy recover. Given the importance of business investment for growth and the effect that effective marginal tax rates (EMTR) and effective average tax rates (EATR) have on business investment, Mexico may wish to consider tax reforms that lower the EMTR and EATR. Mexico may find it beneficial, as many of its peers have done, to lower its corporate tax rate, which at 30 percent is the 4th highest corporate tax rate among its peers. Several countries in this group have also enacted some form of accelerated depreciation, as Mexico has done in the past. Tax reform that lowered the corporate income tax rate to 20 percent and provided for expensing of all business investment would lower the composite EMTR in Mexico by more than 20 percentage points, making it the 3rd lowest among its peers, and would give Mexico the lowest composite EATR.

Based on estimates from the economic literature, even a 10-percent reduction in the cost of capital in Mexico (corresponding to a reduction in the EMTR from 15.9 percent to 6.6 percent) could increase investment by 20 percent and thereby cause GDP to rise by between 4.6 percent and 7.2 percent. Increases in investment have also been shown to increase both low-skilled and high-skilled employment and to increase wages in the manufacturing sector for low-skilled workers. Changes in tax policy that boost both investment and wages could help increase growth in a way that is broadly shared throughout the Mexican economy.

Appendix A: Methodology

We calculated corporate Effective Marginal Tax Rates (EMTRs) and Effective Average Tax Rates (EATRs) for Mexico and 24 peer countries according to the Devereux-Griffith methodology used by the European Commission (EC), including national and subnational corporate income taxes.[68] We excluded all other taxes, such as shareholder taxes and property taxes.

Data for corporate income tax rates and allowances for corporate equity (ACE) applicable in 2020 are from the OECD database, the EC report, and PwC Worldwide Tax Summaries.[69] Following the EC report, we assumed the notional interest rate applicable for ACE purposes is equal to the nominal interest rate assumed in the model, consisting of a real interest rate of 5 percent and inflation of 2 percent.

The analysis assumes domestic investment in a composite asset consisting of 58 percent structures, 30 percent equipment, and 12 percent inventory, financed by a mix of 32 percent debt and 68 percent equity.[70] Following the Devereux-Griffith methodology, the investment is assumed to have a pre-tax rate of return of 20 percent (for EATR only).

In accordance with other studies utilizing the Devereux-Griffith methodology, we analyzed equipment deemed to have a useful life of 7 years (economic depreciation rate of 17.5 percent) and structures deemed to have a useful life of 25 years (economic depreciation rate of 3.1 percent).[71]

Unless otherwise noted above, depreciation allowances for equipment and structures, and for the treatment of inventory were determined from the database maintained by Oxford University's Center for Business Taxation (CBT), government data sources, and PwC Worldwide Tax Summaries.[72]

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