New Mexico's Gross Receipts Tax, Compensating Tax, and Personal Income Tax: Considerations and Model Documentation

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Executive summary

The New Mexico Legislative Council Service (LCS) retained Ernst & Young, LLP (EY) and Georgia State University (GSU) to analyze New Mexico's current taxation system and develop a model which estimates state revenue impacts of potential changes in the tax base or rate contained in legislative tax reform proposals. Two Excel-based models were developed that allow for revenue analysis of the Gross Receipts Tax (GRT), Compensating Tax (CT) and the Personal Income Tax (PIT). These models incorporate data provided by the New Mexico Taxation and Revenue Department, and other data sources including the US Census Bureau, US Bureau of Labor Statistics, Bureau of Economic Analysis, and the IMPLAN model of the New Mexico economy. The purpose of this report is to provide an overview of the GRT and PIT, including strengths and weaknesses of the current tax systems, describe the models that were developed to estimate revenue impacts of future proposals, and provide commentary on certain challenges and data limitations encountered while developing these models.

Summary of findings

Our first task was to evaluate the strengths and weaknesses of the gross receipts and personal income tax systems. These taxes were evaluated in terms of their adequacy to fund public services, revenue stability, equity, economic neutrality and efficiency, as well as tax burden on residents. We observed:

- The New Mexico GRT has characteristics of both a business entity gross receipts tax and a transaction-oriented retail sales tax. The GRT is the legal liability of business taxpayers and taxes a large portion of the receipts from many transactions which are not subject to sales taxes in most other states. However, numerous exemptions are provided to reduce pyramiding and provide tax relief on certain preferenced transactions for social or other reasons, presumably under the assumption that GRT is passed forward to consumers similar to a sales tax. As such, the GRT functions as both a business tax and a consumption tax.
- In its role as a business tax, the GRT raises more revenue and, due to its broader base, is more stable than the state's corporate income tax (CIT). Since the GRT's tax base is receipts, the GRT could also be compared with the sales taxes levied in many states. The New Mexico GRT had greater volatility (year-over-year changes) between 2011 and 2016 than the combined sales tax and GRT revenues in states that levy both taxes (Ohio and Washington), although these states had a much lower-rate business-focused GRT. Please refer to pages 11 and 17 for details.
- As compared with other states' sales taxes, the GRT is relatively broad and taxes most services. As compared with the business entity gross receipts taxes levied in a small number of states, the GRT base is relatively narrower due to numerous exemptions and deductions, many of which are provided to avoid pyramiding on business-to-business transactions. Industries with a large share of receipts from business-to-business transactions include warehousing, mining, management of companies, support services

to businesses, professional and technical services, and transportation. Please refer to page 56 for details.

- New Mexico's "anti-pyramiding" provisions in the GRT exclude from the taxable GRT base certain business-to-business sales. Some industries like agriculture have extensive exemptions of receipts from their gross receipts, while others have extensive deductions which reduce their taxable receipts (e.g. management of companies and enterprises, wholesale trade, manufacturing, and agriculture). Please refer to pages 33 to 36 for details.
- After removing certain business-to-business transactions from the tax base such as sales for resale and manufacturing inputs, it is estimated that these anti-pyramiding and other provisions provided tax relief equal to 55% of the receipts of these industries in FY 2016 related to business-to-business transactions. Please refer to page 57 for details.
- One of the largest specific categories of deductions in terms of the absolute dollar amount are deductions taken by the retail industry. The two most significant deductions claimed by this industry are for sales of food at grocery stores and prescription drugs. Despite the large dollar amount of these transactions, reported retail industry deductions as a share of gross receipts is similar to other industries at 51%. Please refer to page 35 for details.
- New Mexico is less reliant on the personal income tax to fund state government services than peer states (25% of state tax revenue in New Mexico in 2016 compared with an average of 49% in peer states). Likewise, New Mexico residents face a lower average PIT tax burden at 1.7% of statewide income than residents in peer states (peer average of 2.0%) and the US average (2.4%). Please refer to page 25 for details.
- New Mexico's PIT is a less volatile revenue source compared to personal income taxes in peer states (neighbors plus California, Hawaii, and Oregon). Additionally, the structure of the PIT makes it more progressive than peer states (for example, Colorado and Utah both have a flat rate structure) meaning that households with higher incomes pay a larger share of their incomes in state PIT. Please refer to page 19 for details.
- Long-run elasticity measures the responsiveness of tax revenue to changes in economic activity. Using data between 1998 and 2016, we found that a 1% increase in state economic activity (measured by state gross domestic product) resulted in a 0.6% increase in GRT revenue. A 1% increase in state personal income resulted in a 1.14% increase in PIT revenue for the state. Please refer to page 22 for details.

Based on the findings of the current strengths and weaknesses of the GRT and PIT, Excel-based models were developed that allow for revenue and distributional impacts to be estimated for specific tax base and tax rate changes. For example, high business tax burdens are often discussed as one consequence of the GRT's inclusion of business-to-business transactions, such as professional services, in the tax base. The GRT Model allows for the deduction of receipts from business-to-business transactions to be excluded from the tax base and the corresponding state government revenue impact to be estimated. Similarly, the PIT Model can be used to model similar changes in tax rates or certain tax base items to evaluate the corresponding impact on household tax burdens and state government revenues.

Limitations and data challenges

While the Models allow for the estimation of the state revenue impacts of many changes to the GRT and PIT, there are a number of model limitations due to data constraints. For the GRT Model these include:

- The models and analysis show the legal incidence of the taxes, rather than the economic incidence. In the case of business taxes, taxes are generally passed forward to consumers through higher prices, or backward to labor and capital through lower returns to their contributions to production. A destination-based consumption tax on final sales that is the legal liability of the seller will generally be borne by the consumers of goods. A tax that is imposed on business-to-business transactions may be borne by either the factors of production (labor and/or capital) or the consumer depending on the nature of the industry and the markets served by that industry (local or national). A model that includes an analysis of the economic incidence of taxes would show that gross receipts taxes imposed on business-to-business transactions have an impact on the distribution of the tax burden to households, because these business taxes would impact the earnings of New Mexico labor and capital, or would be absorbed by consumers through higher prices. However, this analysis is not reflected in the models.

- Data provided by the New Mexico Taxation and Revenue Department describing the value of current exemptions and deductions was limited. Data for certain deductions are not currently available and others are combined into one aggregate figure so that the revenue impact of certain specific deductions is unknown. The GRT Model could be improved if additional data describing deductions become available. For example, data describing the manufacturing deduction was not deemed reliable as compared with model estimates.

- Since there is no reporting requirement for exemptions, most exemptions included in the model had to be estimated, and not all exemptions are separately included. Exemption estimates were available for the textbooks exemption, fees from social organizations, and officiating at New Mexico Activities Association-sanctioned school events. However, other exemptions were estimated. For some of the exemptions this was fairly straightforward since reliable data sources existed, but for other exemptions it was extremely difficult to estimate the revenue cost of the exemption due to lack of data. Reporting of exemptions by businesses would fix this issue, although this would potentially present additional administrative complexity since many entities with large amounts of exempt transactions may not have the same reporting responsibilities under current law and may otherwise not maintain such records for tax purposes.

- Similarly, information on the size of certain tax expenditures related to anti-pyramiding deductions is limited. In many cases, deductions are not separately reported, requiring estimates of the value of individual anti-pyramiding provisions.

- The GRT model does not estimate revenue impacts of policy changes at the local level. This feature was not contracted as part of this analysis.

- Because household spending data is unavailable for households in New Mexico, National data was used to model household distributional impacts. To the degree that households in New Mexico have different expenditures than the average household nationally in each income bracket, the results of this analysis may over- or under-estimate the impact of certain tax policy changes estimated by the model.

- The tax base reported on RP-80 and other revenue reports does not reconcile to overall tax collections. To reconcile the amount of tax revenue estimated by the model to reported tax collections, a "gross up" factor was included in the model. While there is no reason to believe there is a systematic relationship reporting issue by industry or other relevant taxpayer characteristic, to the extent such a relationship exists, the results would be less accurate. In addition, this gross up factor may vary over time, requiring manual user intervention and careful use of the model.

Limitations to the PIT Model include:

- The PIT model was constructed using tax return information that was aggregated by percentile of income. This aggregation was required so that the data could be shared with EY/GSU in a manner that is permissible under IRS disclosure rules. However, such aggregation results in a loss of precision of the estimates, especially in cases where tax policy changes impact only a small number of taxpayers.

- Returns with negative taxable income were removed from the analysis. To the degree that tax change proposals being evaluated include reductions in exemptions or deductions that could result in these certain filers having positive taxable income, the revenue gains from the proposed change would be understated. Additionally, the distributional effects may be slightly distorted due to the exclusion of these taxpayers.

- Due to the nature of the data available to TRD, the resources required to extract certain data items, and data confidentiality issues, details for itemized deductions and other items that appear only on federal forms are not included in the analysis. Thus, it was not possible to model state income tax effects of most federal changes under recent federal reform (Tax Cuts and Jobs Act).

1. Strengths and Weaknesses of Current Taxation System in New Mexico

This report discusses the strengths and weaknesses of the New Mexico Gross Receipts Tax (GRT) and Personal Income Tax (PIT). Combined, the GRT and PIT represent 53% of total tax revenue to the state in FY 2017.[1] Of the remaining taxes, severance taxes are the largest tax source.

This reports considers several characteristics of the two tax systems. These include:

- Revenue adequacy of the current taxation system
- Revenue stability
- Equity and fairness
- Tax burdens
- Economic neutrality and efficiency

Each of these characteristics are discussed separately for both the GRT and the PIT as levied in New Mexico. In several sections of the analysis, the characteristics of the New Mexico tax system are compared to the characteristics of systems in other states deemed to be peer states. The set of peer states used in this analysis includes a combination of immediate neighboring states and states along the western coast of the US. The list includes the following states: Arizona, California, Colorado, Hawaii, Nevada, Oklahoma, Oregon, Texas, and Utah. Although distinct in several ways, Hawaii is added as a comparison state because it raises revenue from a general excise tax that is similar in structure to New Mexico's GRT, in lieu of a sales tax.

1.1 Tax structure key take-aways

- The New Mexico GRT bears similarities to both a traditional GRT in that it is the legal liability of businesses while it also functions as a retail sales tax in that the burden of the tax is generally passed onto consumers.
- The New Mexico GRT rate (5.125%) is lower than the average sales tax rate of the aforementioned comparison states (5.5%), excluding Oregon which levies no state sales tax. New Mexico's state GRT tax rate is also lower than the state sales tax rates of its immediate neighbors of Texas and Arizona, but higher than the state rates levied in Colorado, Utah, or Oklahoma.
- One advantage of the New Mexico GRT over a traditional sales tax is that because the GRT includes receipts related to services, while traditional sales taxes exclude many services, GRT revenue has grown with general consumption patterns that include more purchases of services.
- Because of the nature of the GRT, unprofitable firms likely have a positive tax liability.[2] This can be particularly burdensome for startup firms with low sales, high business costs, and which are less likely to be vertically integrated in their operations. These firms are

[1] LFC Hearing Brief - January 25, 2018. Accessed on 4/3/2018 from https://www.nmlegis.gov/Entity/LFC/Documents/Revenue_Reports/General_Fund_Revenue_Forecast/2018/Mid-Session%20Update%20-%20January%202018.pdf

[2] Kaeding, N. & Wilt, E. (2016). Gross Receipts Taxes: Lessons from Previous State Experiences. *Tax Foundation: Fiscal Impact No. 523.* Retrieved from https://taxfoundation.org/gross-receipts-taxes-state-experiences/

likely to be in a loss position but incur significant GRT liability. This issue has been addressed to some extent by other states, such as Ohio, with a business gross receipts tax by imposing filing thresholds and exempting a minimum amount of gross receipts, but not in New Mexico. In contrast to business gross receipts tax, state sales tax systems less frequently provide material filing thresholds.

- In New Mexico, the GRT is an origin-based tax with a rate which varies by the location of the seller. The state rate is set by statute and is currently 5.125%. The combined state and local rates vary from a low of 5.50% to a high of 9.25% in 2017. Model data is from FY 2016, when the maximum rate was 8.9375%.
- The New Mexico PIT is constructed to substantially conform to the federal personal income tax. The starting point for the determination of the state tax liability is Federal Adjusted Gross Income (FAGI).
- The state PIT links to the federal tax system on a rolling basis, which provides the benefit of following the federal system in terms of sharing audit and administrative services and may provide some benefit to taxpayers in terms of increased simplicity, but does so at the loss of some autonomy over state revenues, especially in the face of changes resulting from federal tax reform.
- The neighboring states of Colorado, Utah, and Arizona also impose personal income taxes, but Texas does not. The maximum rate of the New Mexico PIT for joint filers is higher than in Colorado and Arizona but is lower compared to Utah and Oklahoma.

Gross Receipts Tax

The New Mexico gross receipts tax has characteristics of both a business entity gross receipts tax and a transaction-oriented retail sales tax. The GRT is an origin-based tax such that the rate at which the GRT is levied varies by the location of the seller.[3] The rate of the total GRT consists of the sum of the rates imposed by the state, the county and the municipality at the business location. The state rate is set by statute and is currently 5.125%. Local increments are authorized by statute, imposed by resolution by the local governments, and vary by jurisdiction. Any changes to the local increments are effective in January and July of each year. Between January and June of 2018, the combined rates vary from a low of 5.50% to a high of 9.25%.

In general, gross receipts taxes are transaction-level taxes levied on the receipts from the sale of goods and services. They are paid by persons for the privilege of engaging in business within New Mexico. As applied in New Mexico, gross receipts are defined to include receipts from certain real estate transactions, leasing or licensing property employed in the state, granting permission to use a franchise employed in the state, performing services in the state, or selling research and development services performed outside of the state but using a product initially used in the state.

One of the most prominent features of the business-entity GRTs imposed in several other states is the low rate which is enabled by the broad base of activities that are included in the tax base,

[3] This is compared to a destination-based tax, the rate of which is determined by the location of the purchaser. There is an increasing trend among states to impose destination-based corporate income taxes by adopting a sales-only corporate apportionment formula.

as well as the role of these GRTs as complementary taxes to state sales taxes. As of 2017 only six states levied some form of a business gross receipts tax: Delaware, Nevada, New Mexico, Ohio, Texas and Washington.[4] Unlike the gross receipts taxes in other states, which tend to have few exemptions and deductions and a low rate, New Mexico's GRT has many exemptions and deductions and a tax rate that similar to a retail sales tax.

Retail sales taxes on the other hand are very common across the states. Forty-five states and the District of Columbia levied sales taxes in 2017, with many of those having local sales tax components. As the name implies, a retail sales ideally taxes the final sales of goods. It is typically considered a tax on consumers, though it is estimated that in 2016 businesses paid $118 billion in sales tax on the purchase of business inputs.[5] Although many states include some services in the sales tax base, this base has traditionally been largely composed of tangible products. Because the base of the retail sales tax is narrower than that of a typical gross receipts tax, the rate is commonly higher to raise the same amount of revenue.

One advantage of the GRT over a sales tax is that because the GRT typically includes transactions relating to services compared to a typical sales tax, this tax theoretically tracks overall consumption patterns more closely over time. It is well documented that general consumption patterns of Americans have shifted toward services over the past several decades, resulting in a decline in the productivity of sales taxes. To counteract this trend, states which rely on sales taxes as a major revenue source have increasingly sought to broaden the tax base through legislation to include certain services in the base.

Viewed from the perspective of small and new business, the structure of the GRT may be a weakness. Because of the nature of the tax structure, firms can have a positive GRT liability even when they are unprofitable.[6] This can be particularly burdensome for startup firms with low sales but high business costs which are less likely to be vertically integrated in their operations and can lead to additional pyramiding in the tax system. This issue has been addressed to some extent by other states with a gross receipts tax by imposing filing thresholds and exempting a minimum amount of gross receipts. For example, prior to eliminating this tax, Kentucky completely exempted all businesses with gross receipts less than $3 million and partially exempted businesses with receipts between $3 million and $6 million.[7] Under the current GRT structure, the

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[4] In addition, local governments in several states may also impose a gross receipts tax. New Hampshire levies the Business Enterprise Tax, which is based on a value added concept, and functions as minimum tax component of its corporate tax.

[5] Phillips, A., Sallee, C., & Peak, C. (2017). Total state and local business taxes. *Ernst & Young LLP, Council on State Taxation, & State Tax Research Institute.* Retrieved from http://www.ey.com/Publication/vwLUAssets/ey-total-state-and-local-business-taxes-2016/$File/ey-total-state-and-local-business-taxes-2016.pdf

[6] Kaeding, N. & Wilt, E. (2016). Gross Receipts Taxes: Lessons from Previous State Experiences. *Tax Foundation: Fiscal Impact No. 523.* Retrieved from https://taxfoundation.org/gross-receipts-taxes-state-experiences/

[7] Harkenrider, G. (2006). The Reformation of Kentucky Tax Reform. *Office of State Budget Director Commonwealth of Kentucky.* Retrieved from https://www.taxadmin.org/assets/docs/Meetings/06rev_est/harkenrider1.pdf

tax does not have a minimum threshold but does have an exemption for wages, dividends, interest, and some other inputs which are taxed under separate excise taxes.[8]

Because it is a fairly uncommon tax system with an unusually broad base, firms not normally subject to such taxes may require additional tax administration professionals to navigate it. This added component of complexity and uncertainty is a disadvantage to the state in terms of competitiveness.

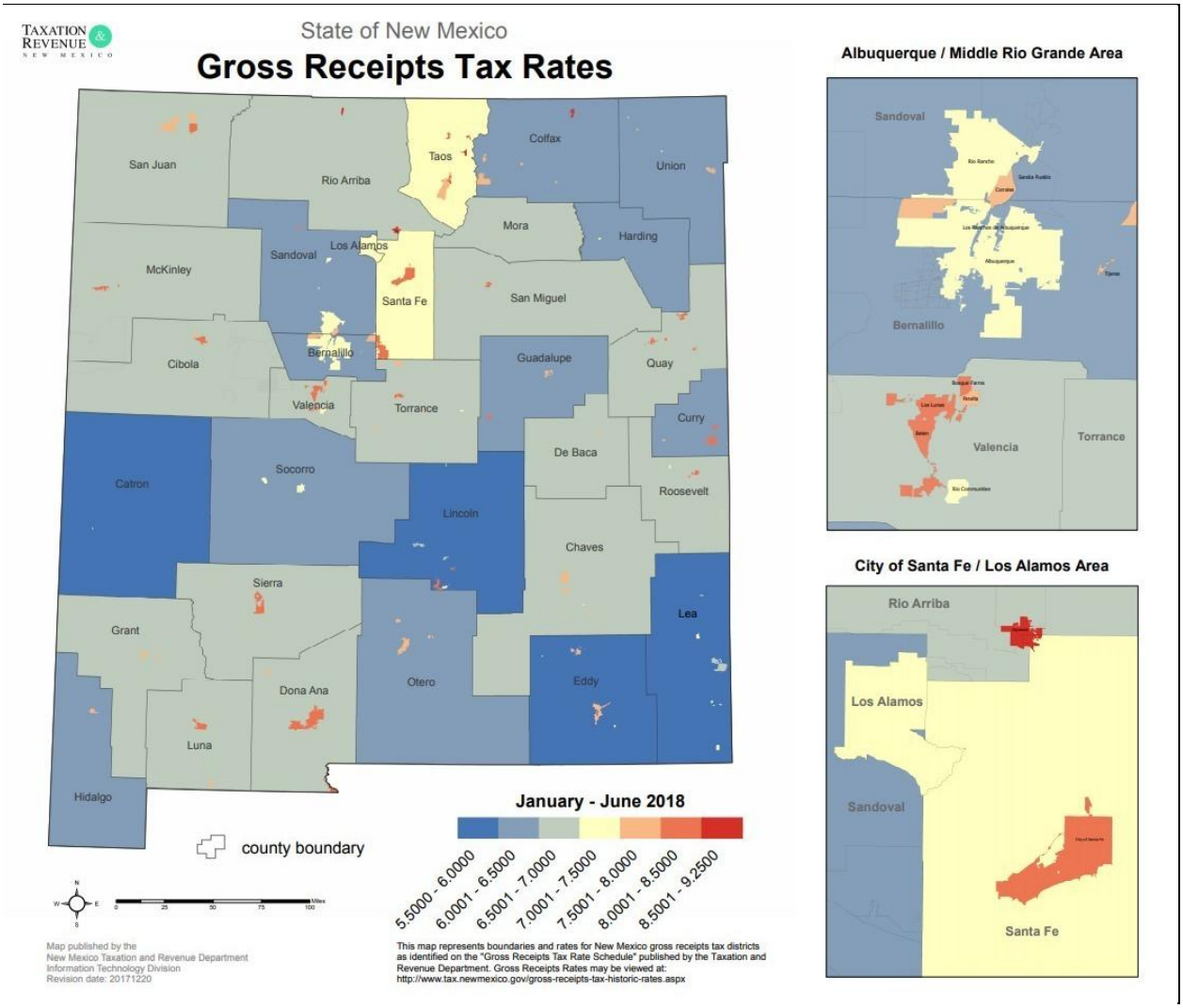
Although the tax is statutorily levied on business taxpayers, the New Mexico GRT is largely intended to be passed on to consumers through increased prices. In this way, the tax resembles a retail sales tax but with the broader tax base more commonly associated with gross receipt taxes. As an example, a 2007 survey from the Federation of Tax Administrators found that the New Mexico GRT taxed 158 different services, out of a total possible 168.[9] While certain changes may have occurred since then, it is an indicator of New Mexico's broad tax base on services. On the other hand, the rate at which the GRT is levied is in the range of a typical sales tax. This higher rate reflects the level of revenue raised by the GRT as well as the extent of exemptions and deductions provided. Both issues will be discussed further in this report.

Figure 1 provides a map of the variation of the combined GRT rates across the state. Based on the tax schedule for January-June of 2018, there are 258 different taxing jurisdictions in the state. This variation in tax rates throughout the state adds to both the administrative complexity compliance cost of the tax system, especially as municipal boundaries or other jurisdictional boundaries are altered because of annexation and incorporations. Furthermore, this encourages a system of competition between jurisdictions which tend to lead to an underfunding of government services at the local government level across the state.

[8] In addition, the deduction for the sale of goods for resale while not targeted to small or startup firms may help alleviate some of this concern.

[9] Federation of Tax Administrators, Sales Taxation of Services, Summary Table – Number of Services taxed by State and Category, July 2007.

Figure 1. Map of Gross Receipts tax rates by location, January-June, 2018



Source: New Mexico Taxation and Revenue Department

Like most taxes, the GRT includes many exemptions, deductions, and credits. Exemptions are defined as transactions that are not included or reported in the tax base. Deductions differ from exemptions in that they are subject to reporting on the GRT forms but are subtracted from the tax base before the tax rate is applied and tax liability is determined. Both exemptions and deductions result in reductions in the tax base and tax liability for the taxpayer based on the GRT tax rate applicable at that location. Credits, on the other hand, are subtracted from the amount of tax due and represent a dollar-for-dollar reduction in the tax liability. Thus, eliminating credits may increase revenues but not affect the underlying structure of the tax base.

Tax exemptions, deductions, and credits are offered for various reasons. Some are offered to incentivize economic development in certain industries or geographic areas of the state. Examples of this include the High-Wage Jobs Credit, Rural Job Credit, and the Research and Development Small Business Credit. Others are provided for citizen benefit, such as the exemption for food and prescription drug sales. Others, such as the Solar Energy Systems GRT Deduction, are meant to encourage conservation or renewable energy expenditures. Another

category of tax deviations is intended to resolve issues that arise due to the structure of the GRT and its place in a larger system of state taxes. For instance, wages, dividends, and interest are exempted from the GRT base because these are included in the personal income tax base. Because the GRT is a transaction-based tax, goods sold at each stage of production are subject to tax which can result in the tax being layered on prior taxes as goods and services move through the production chain. To provide some protection from this effect, goods and services for resale are also deducted from the GRT base.[10]

The calculation of the GRT tax liability is straight-forward and a stylized example is shown below.

	Gross Receipts transactions (excluding exempted transactions)
−	Deductions
	Taxable gross receipts
x	Tax rate (depending on locality)
	Gross Receipts tax liability before credits
−	Credits
	Gross Receipts tax liability after credits

The Compensating Tax (CT) is a parallel tax system that operates in the same fashion as a use tax in a retail sales tax system. The CT is levied on property manufactured in the state, property acquired from outside the state that would have been subject to tax if the property had been acquired from a person with nexus in the state, or for property which was initially acquired for nonbusiness use, but which was then used in a business operation. The rate is equal to 5.125% on certain property used in New Mexico and 5.0% on certain services used in New Mexico, but unlike the standard GRT, the statutory responsibility for remitting the tax is on the purchaser and not the seller, which is a similar arrangement to the use tax. Although the CT rate for property is equal to the standard GRT rate of 5.125%, the rate for services is slightly lower at 5.0% which provides a more favorable tax treatment of services acquired from outside the state relative to those from inside the state. The differential CT rate between goods and services may create a small economic distortion by providing a reduced rate on services, while also creating a minor distortion by imposing a lower tax rate on imported services as compared with the GRT rate on services sourced from within the state. However, most states do not generally impose transaction taxes on imports or services, so the potential distortions caused by the New Mexico are likely smaller than those in other states.

As a point of reference, Table 1 provides the sales tax rates of a set of nine comparison states. Eight are generally considered neighbors of New Mexico and as such, they compete for residents and businesses. Hawaii is also included because its General Excise Tax (GET) is a broad-based gross receipts tax that is similar to New Mexico's GRT.

[10] Technically, the Taxation and Revenue Department does not classify the deduction for goods sold for resale as a tax expenditure.

Comparing state rates provides only a partial analysis, though. Column 2 of Table 1 presents the average state and local tax rates experienced in each state. Because firms and consumers are also subject to local taxes in addition to state rates, this comparison is more complete than that provided in column 1. In addition, the lines between state revenue and local revenue can often be blurred. For instance, the state rate of Utah and California include a mandatory local tax rate of 1% and 1.25%, respectively, and 1.225% of state GRT in New Mexico is distributed to municipalities. Therefore, the comparison of rates in column 2 is preferred. Based on this comparison, New Mexico's average state and local rate is only slightly lower than the average of the comparison states of 7.53% and lower than all of its contiguous neighbors with the exception of Utah.

Table 1. State Sales Tax and Gross Receipts tax rates by state, 2016

State Name	State Sales Tax Rate	Weighted Average State and Local Sales Tax Rates
Arizona	5.600%	8.25%
California	7.500%	8.48%
Colorado	2.900%	7.52%
Hawaii*	4.000%	4.35%
Nevada	6.850%	7.98%
New Mexico	**5.125%**	**7.51%**
Oklahoma	4.500%	8.82%
Oregon	*No state tax*	*No state or local tax*
Texas	6.250%	8.17%
Utah	5.950%	6.69%

Source: Tax Foundation. Rates as of January 1, 2016. *The rate for Hawaii is associated with the Hawaii gross receipts tax, referred to as the GET.

In addition, C corporations operating in New Mexico are also liable for tax under the corporate income tax (CIT). This is comparable to the other states listed in Table 1 except for Texas and Nevada which do not impose a CIT. Of its immediate neighbors with a corporate income tax, the rate of the New Mexico CIT is surpassed only by Oklahoma.

Personal Income Tax

The New Mexico personal income tax is structured to substantially conform to the federal PIT. The starting point for the determination of the state tax liability is Federal Adjusted Gross Income (FAGI), subject to certain additions and subtractions, from which the taxpayer may deduct the value of their federal itemized deductions or the federal standard deduction and the value of their federal exemptions (including extra exemptions for the elderly and blind). An additional exemption for qualifying low- and middle-income taxpayers and a deduction for qualifying medical expenses are also allowed in determining state taxable income. The state also conforms to the filing statuses available at the federal level: single, married filing jointly, married filing separately, head of household, and qualifying widow(er). The system imposes a progressive rate structure with four brackets as shown in Table 2.

Table 2. New Mexico tax brackets for the Personal Income Tax, 2017

Filing Status	New Mexico Taxable Income		
	Over	Not over	Rate
Single			
	$0	$5,500	1.70%
	$5,500	$11,000	3.20%
	$11,000	$16,000	4.70%
	$16,000	--	4.90%
Married Joint, Qualifying Widow(er), & Head of Household			
	$0	$8,000	1.70%
	$8,000	$16,000	3.20%
	$16,000	$24,000	4.70%
	$24,000	--	4.90%
Married Separate			
	$0	$4,000	1.70%
	$4,000	$8,000	3.20%
	$8,000	$12,000	4.70%
	$12,000	--	4.90%

Note: These rates have been in effect since Jan 1, 2008.
Source: New Mexico Taxation and Revenue Department

New Mexico's choice to largely conform its state income tax to that of the federal income tax is a common one. In all, 30 states and the District of Columbia start the calculation of the state tax liability with FAGI.[11] Another characteristic of the New Mexico PIT is that it is linked to the federal tax system via a "rolling" link. This means that any changes made to the federal tax system are automatically adopted by the state tax system. This contrasts with states that link on a static basis, where federal changes are only adopted if specific action to do so is taken by the state legislature. 15 states and the District of Columbia link on a rolling basis to the federal tax system.[12] Overall, linking to the federal tax system reduces administrative costs of state tax systems as well as the compliance costs of state taxpayers. Linking to the federal tax system on a rolling basis tends to maximize the benefit of following the federal system in terms of sharing audit and administrative services, but does so at the loss of autonomy over state revenues because all changes at the federal level are automatically adopted by the state. As a case in point, the recent changes to the federal PIT will automatically flow through to the New Mexico PIT. These changes will nearly double the state standard deduction, eliminate the state personal exemption, and limit or eliminate certain itemized deductions.[13]

[11]See Auxier and Sammartino, "The Tax Debate Moves to the States: The Tax Cuts and Jobs Tax Act Creates Many Questions for States That Link to Federal Income Tax Rules". Tax Policy Center, Urban Institute, January 2018. Retrieved from https://www.urban.org/sites/default/files/publication/95986/2001677-the_tax_debate_moves_to_the_states_the_tax_cuts_and_jobs_act_creates_many_questions_for_states_that_link_to_federal_income_tax_rules_1.pdf

[12] Ibid.

[13] Because the state does not adopt the federal definition of taxable income, the new federal provision allowing a 20% deduction of qualified business income for certain taxpayers will not automatically flow through to the state taxpayers.

Similar to the GRT, the PIT allows many exemptions, deductions and credits that reduce the tax liability of the taxpayer directly in the case of credits or reduce taxable income. For instance, the state offers the low-income comprehensive tax rebate, the working families tax credit, which is a state version of the federal earned income tax credit, and a 50% deduction for capital gains income. In general, the PIT is determined as:

	Federal AGI
+	State additions to FAGI
−	Federal itemized deductions or federal standard deduction
−	Federal exemptions
−	NM low- and middle-income exemption
−	Medical care expense deduction (including unreimbursed and uncompensated expenses)
	NM taxable income
x	Tax rates
	Tax liability before credits
−	Credits
	Tax Liability after credits

The neighboring states of Colorado, Utah, and Arizona also impose personal income taxes, but Texas does not. Colorado imposes a flat rate of 4.63% and Utah imposes a flat rate of 5%. Arizona imposes an income tax system with a progressive rate structure of five brackets. The maximum rate for married filing joint filers was 4.54% in 2017 for taxable income in excess of $305,336. Oklahoma's personal income tax has five brackets with a maximum rate of 5% for taxable income in excess of $12,200 for married filing joint returns. The maximum marginal rates for filers in 2016 with a joint return for each of the comparison states are shown in Table 3.

Table 3. State Personal Income Tax rates by state, 2016
Flat rate or maximum rate shown

State Name	State PIT Rate	Flat or maximum rate shown
Arizona	4.54%	Maximum
California	13.3%	Maximum
Colorado	4.63%	Flat
Hawaii*	8.25%	Maximum
Nevada	No PIT	Not applicable
New Mexico	**4.9%**	**Maximum**
Oklahoma	5.0%	Maximum
Oregon	9.9%	Maximum
Texas	No PIT	Not applicable
Utah	5.0%	Flat

Source: Tax Foundation.

Regarding major tax expenditures, New Mexico is not an outlier compared to its neighbors and the combination of New Mexico's PIT rates and base definition along with its tax expenditures results in effective tax rates on statewide personal income that are similar to Arizona and Oklahoma, but lower than the peer state average, as shown in Table 8 (page 25). Of the comparison states, the 2016 PIT revenue as a percent of personal income range from 0% in Nevada and Texas, which do not have a personal income tax, to 4.14% in Oregon. New Mexico's 2016 value of 1.76% is very close to Arizona's (1.42%) and Oklahoma (1.79%).

Considering only one or two state taxes is insufficient to determine the overall competitiveness of a state tax system. The attractiveness of a state system is determined by the combination and interaction of all the components of the complete system. The Tax Foundation provides one such ranking.[14] Overall, New Mexico ranks 34th in terms of business tax climate using data presented by the Tax Foundation. This is worse than the comparison states, with the exception of California which was ranked 48th. Of its immediate neighbors, Nevada ranked 5th, Utah ranked 8th, Texas ranked 13th, Colorado 18th, while Arizona and Oklahoma ranked 21st and 32nd, respectively.

Federal tax reform is likely to have material impacts on New Mexico's PIT tax yield and those impacts are not fully considered in this review because they are not yet fully understood. However, given New Mexico's conformity with the US Internal Revenue Code, it is likely that within months of the issue of this report, the impact on revenuse will be better understood.

1.2 Revenue stability and yield

A key aspect of any primary revenue source is stability. Stable and reliable revenue sources provide policy makers with the ability to forecast with confidence and enable the formation of long-term plans for the government. To this end, predictable revenue streams are preferred. In this section, the stability of the New Mexico GRT and PIT are analyzed and compared with that of the comparison states.

- New Mexico's GRT is more volatile than the sales and gross receipts taxes of the peer states, except for Oklahoma and Utah, and is more volatile than the peer group average, partially due to the presence of the oil and gas industry in the state.
- New Mexico is less reliant on the GRT than other states are on their sales/general excise tax revenues, with the exception of Colorado, Oklahoma, and Utah.
- New Mexico's PIT revenue volatility is lower than all its peers due to a lower share of business and capital gain income compared to the comparison states.
- The state is less reliant on the PIT than its peers. The state is also less reliant on the PIT than the GRT, which is a more volatile revenue source.

[14] Tax Foundation 2018 State Business Tax Climate Index. Data presented in the Tax Foundation report is current as of July 1, 2017. The report considers the corporate and individual income tax, sales tax, property tax and the unemployment insurance tax.

Data

Volatility in revenues can come from two main sources, changes to the tax system and changes to the economy. The former causes one-time changes that distort comparisons across time and other states. To address this concern, we use tax revenue data that is adjusted to eliminate these policy changes. The data is provided by Pew's fiscal 50 data-set.[15] Pew gathers data on actual tax collection from the US Census Bureau's State Government Tax Collections historical data series for 1996 to 2016[16] and adjusts it for policy changes by using information from the National Conference of State Legislatures' (NCSL) "State Tax Actions" reports for 1996 to 2016.[17] For instance, according to The Pew Charitable Trusts (2017), "if a sales tax cut was expected to result in a 5% drop in collections but receipts decreased by 3%, Pew's analysis would consider that a 2% increase". The NCSL reports are based on information that is provided by legislative fiscal offices. State staff members detail tax and revenue changes enacted by legislatures or approved by voters and quantify the fiscal impact by tax type. For each year and tax type, Pew calculated the estimated impact of tax policy changes as a percentage of previous-year revenue and then removed these estimated increases or decreases from the calculation of year-to-year percent change. Such policy-adjusted measures of tax revenue are prepared by Pew only when the tax represents at least 5% of total tax revenue during FY 2010-16, prior to adjusting for known policy changes. Hence, whenever Pew does not provide a policy adjusted measure of tax revenue, actual tax revenue data is used from the US Census Bureau (same original source as that of Pew's fiscal 50 data-set).

Gross Receipts Tax

As discussed earlier, the GRT partially behaves like a broad-based sales tax, especially when the incidence of the GRT is passed on to the consumers. Hence, its volatility is compared with the volatility of the sales tax of New Mexico's comparison states in Figure 2.[18]

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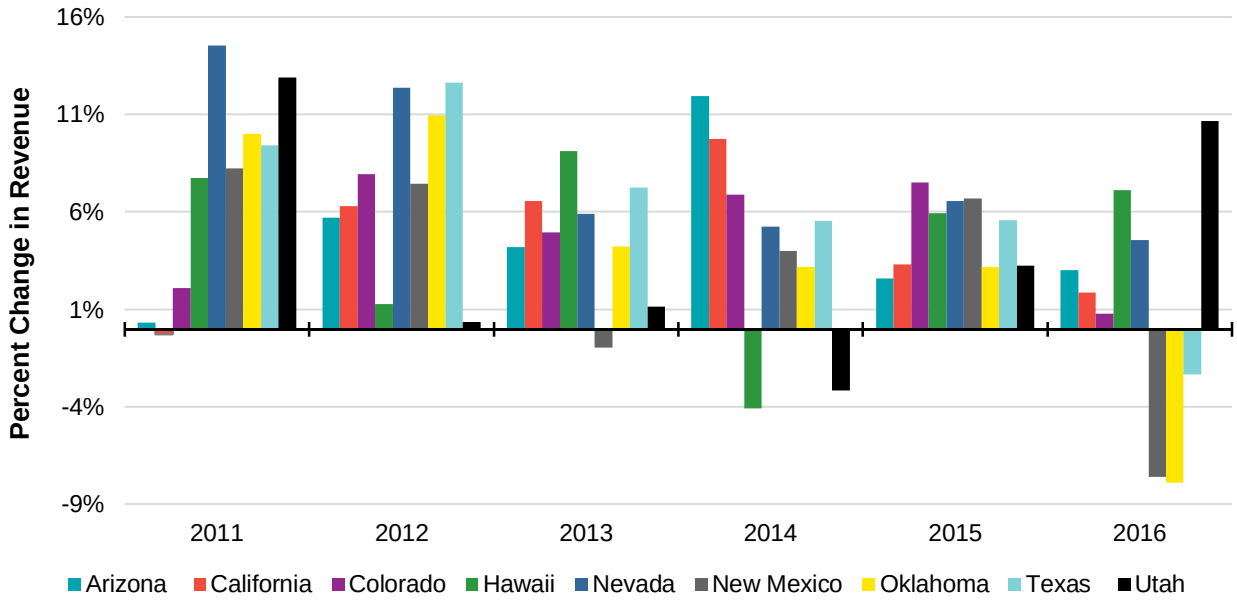
[15] The Pew Charitable Trusts (2017). Fiscal 50: State Trends and Analysis. Research & Analysis. Retrieved from http://www.pewtrusts.org/en/research-and-analysis/collections/2014/05/19/fiscal-50-state-trends-and-analysis

[16] https://www.census.gov/programs-surveys/stc.html

[17] http://www.ncsl.org/research/fiscal-policy/state-tax-actions-database.aspx

[18] It is important to note that Pew's policy adjusted measure of sales tax revenue is inclusive of revenue from the GRT as well. However, this is not a problem for the states of New Mexico, Arizona, Utah, Colorado, Oklahoma, California, and Hawaii as they only have one of this type of revenue source. Nevada and Texas have both sales and gross receipts taxes, which would be combined and presented by Pew under "Sales Tax". Nevada's GRT was only instituted in the 2015 Legislative Session. Hence, its first year of collected revenue was FY 2016. In addition, the amount collected was insignificant as it financed only 1.3% of direct state expenditures and 1.8% of overall tax revenue. Thus, the Pew measure for Nevada's sales tax is used as is. However, Texas's GRT (franchise tax) in FY 2016 represented 3.3% of direct state expenditures and 7.4% of overall tax revenue. In addition, it comprised 12.1% of the combination of sales and GRT revenue that was reported by the U.S. Census Bureau State Tax Collections. Therefore, actual sales tax revenue, excluding the GRT, is used for Texas instead of the measure that is provided by Pew.

Figure 2. Annual change in GRT and Sales Tax revenue, FY 2011-2016



Source: The Pew Charitable Trusts, computed by authors. Data for Texas is not policy-adjusted. Data for Hawaii represents revenues from the GET. Data for Nevada includes the state GRT revenues for 2016 only. Oregon has no sales tax and is excluded.

In Table 4, the volatility score (mathematical representation of the volatility information displayed in Figure 2) and reliance is displayed for each state's tax revenue. The volatility score is based on the standard deviation of the revenue's annual percentage change from FY 2011-2016. A higher volatility score indicates greater year-over-year changes on average. The revenue reliance is calculated as the percentage of direct state expenditures[19] that is financed by actual (non-policy adjusted) revenue that is sourced from the particular tax(es) in FY 2016.

[19] Data on direct expenditures is from U.S. Census, Annual Survey of State Government Finances for FY 2016. Direct expenditures are organized consistently across all states to include expenditures on education, public welfare, hospitals, health, police protection, corrections, natural resources, parks and recreation, general administration, liquor stores and utilities, insurance trust funds, and interest on debt. This measure of direct expenditures excludes expenditures from intergovernmental transfers.

Table 4. Tax volatility and state reliance on GRT and Sales Tax revenue

	Volatility Score, FY 2011-2016		Reliance on tax source for direct state expenditures, FY 2016	
State	**Sales Tax**	**GRT/GET**	**Sales Tax**	**GRT/GET**
Arizona	3.7		21.3%	
California	3.3		17.6%	
Colorado	2.7		10.4%	
Hawaii		4.6		26.1%
Nevada	3.8		37.9%	
New Mexico		**5.6**		**13.7%**
Oklahoma	6.1		12.1%	
Texas	4.6		24.2%	
Utah	5.7		12.9%	
Peer Average	**4.3**		**20.5%**	

Source: FY 2016 Annual Survey of State Government Finances; FY 2016 U.S. Census Bureau State Tax Collections; Data used in Figure 2.

As shown in Table 4, New Mexico's GRT is relatively more volatile than the comparison taxes of the peer states, with the exception of Oklahoma and Utah, and is higher than the peer group average. One reason for volatility in a sales tax is the presence of exemptions because they narrow the base of the tax. New Mexico exempts food from the GRT base. Although many states exempt food from tax, Hawaii and Oklahoma include food purchases and Utah taxes food at a reduced rate. Including food in the tax base tends to stabilize the base since this consumption varies less with changes in economic conditions. Many states exclude food to address the general regressive nature of the tax. On the other hand, states may consider a less broad measure of food that would be subject to the exemption. Limiting the exemption to food for home consumption as is done in New Mexico, for instance, focuses the exemption to lower income families and keeps more food in the base to address the concern related to stability.

Also contributing to the volatility of the tax is its dependence on revenues from the oil and gas industry. In 2015 revenues from the mining sector accounted for 5% of gross receipts from the GRT, 3% in 2016 and 5% in 2017.[20] Although the mining industry in New Mexico incorporates many activities, the substantial majority is from 3 sources: oil and gas extraction, oil and gas well drilling activities, and support services for oil and gas operations, with the majority of this activity associated with operations in Lea and Eddy counties located in the southeastern corner of the state. Between July 2017 and March 2018, taxable gross receipts from this industry grew by 103%.[21] This is due to both an increase in production and an increase in prices. In May of 2017 the price of oil was $49 per barrel compared to $67 per barrel as of May 2018 which has a ripple effect on GRT receipts.[22] Not only does the increase in price cause an increase in gross receipts,

[20] Authors' calculations based on Quarterly RP80 reports by geographic area and NAICs code.

[21] Legislative Finance Committee, General Fund Revenue Tracking Report: Accruals through March 2018. https://www.nmlegis.gov/Entity/LFC/Documents/Revenue_Reports/Monthly_Revenue_Tracking/2018/March%202018%20Revenue%20Report.pdf

[22] West Texas Intermediate Crude Oil prices.

it also results in an increase in production activities which also increases receipts from the oil and gas supporting activities.

In addition to GRT revenues from oil and gas, New Mexico also generates severance and other tax revenues directly from the industry. New Mexico is the 4th most dependent on tax from the oil and gas industry after Alaska, North Dakota, and Wyoming, as measured by severance tax collections as a percent of total state tax collections (for New Mexico, 15% of total tax collections came from severance tax collections in 2017).[23]

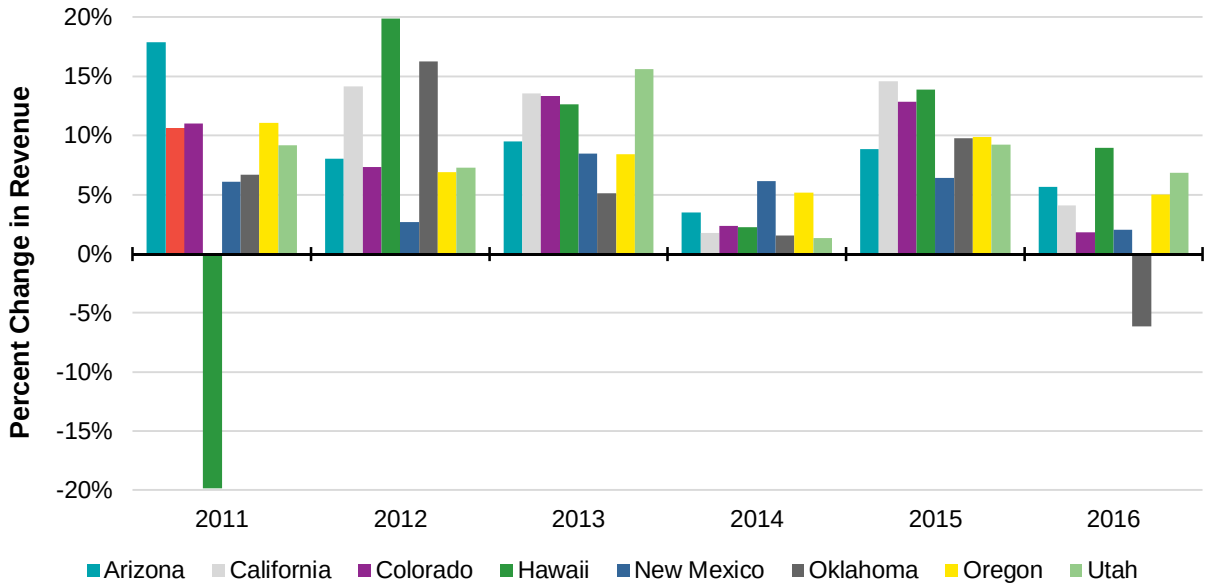
Finally, the volatility of the New Mexico gross receipts tax is the general swings in economic activity. As the base of this tax is business receipts, this tax is expected to exhibit greater volatility due to changes in economic activity than would be experienced with the retail sales taxes imposed by neighboring states.

Increased volatility results in greater uncertainty in the budget process. Revenue forecasting becomes more difficult and long-term planning of government programs becomes more challenging. However, in terms of reliance on the source of revenue to fund direct state expenditures, New Mexico is less reliant on the GRT than other states are on their sales/general excise tax revenues, with the exception of Colorado, Oklahoma, and Utah. The lower reliance helps to mitigate the adverse effects of the volatility of the tax system.

Personal Income tax

Figure 3 shows the yearly percentage change in policy-adjusted PIT revenue for New Mexico and its peer states from FY 2011 to FY 2016.

Figure 3. Annual percentage change in PIT revenue, FY 2011-2016



Source: The Pew Charitable Trusts, computed by authors; Nevada & Texas have no income tax and are excluded.

[23] EY analysis of data from U.S. Census Bureau State Tax Collections by State: 2016-2017.

In Table 5, the volatility score and reliance is displayed for each state's PIT revenue. The volatility score is based on the standard deviation of each state's PIT revenue's annual percentage change from FY 2011-2016. A higher volatility score indicates greater year-over-year changes on average.

Table 5. PIT Revenue volatility and reliance

State	PIT Volatility Score (2011-16)	Reliance on tax source for direct state expenditures, FY 2016
Arizona	4.5	12.7%
California	5.1	36.2%
Colorado	4.7	23.8%
Hawaii	12.8	17.2%
New Mexico	**2.2**	**9.3%**
Oklahoma	6.9	14.6%
Oregon	2.3	26.7%
Utah	4.2	20.9%
Peer Average	**4.6**	**22.5%**

Source: The Pew Charitable Trusts, compiled by authors; calculations using US Census Bureau State and Local Governmental Finances data.

As seen in Table 5, New Mexico's PIT revenue volatility is lower than all its peers. Hence, revenue from the PIT in New Mexico is relatively more predictable than that of other states. This is in part due to the absence of most capital gain income in the PIT base. This is because capital gain income is highly volatile largely due to swings in the stock market but also because of decisions related to timing of realizations. Another factor contributing to volatility in the personal income tax is business income. In all states, a significant portion of business income is taxed through the personal income tax system as pass-through income. The value of this income is subject to the swings in the economy which has been substantial over the 2011-2016 period. New Mexico has a smaller share of business and partnership income as a share of federal AGI compared to its comparison states over the 2011-2015 period as well as a smaller share of capital gain income.[24] This reduced reliance on these sources serve to create a more stable PIT relative to the comparison states.

New Mexico is also less reliant on the PIT than its peers. It is interesting to note that the state is less reliant on the PIT than the GRT, which is a more volatile revenue source.

1.3 Revenue adequacy

Another important characteristic of a source of revenue is that it provides a sufficient level of revenue to support government operations under normal economic conditions. Strong revenue streams track consistently against measures of economic activity and personal income, so that periods of strong economic growth are positively reflected in corresponding growth in state tax

[24] Based on author's analysis of Statistics of Income data for New Mexico and the comparison states for tax years 2011-2015. Data for 2016 is not available.

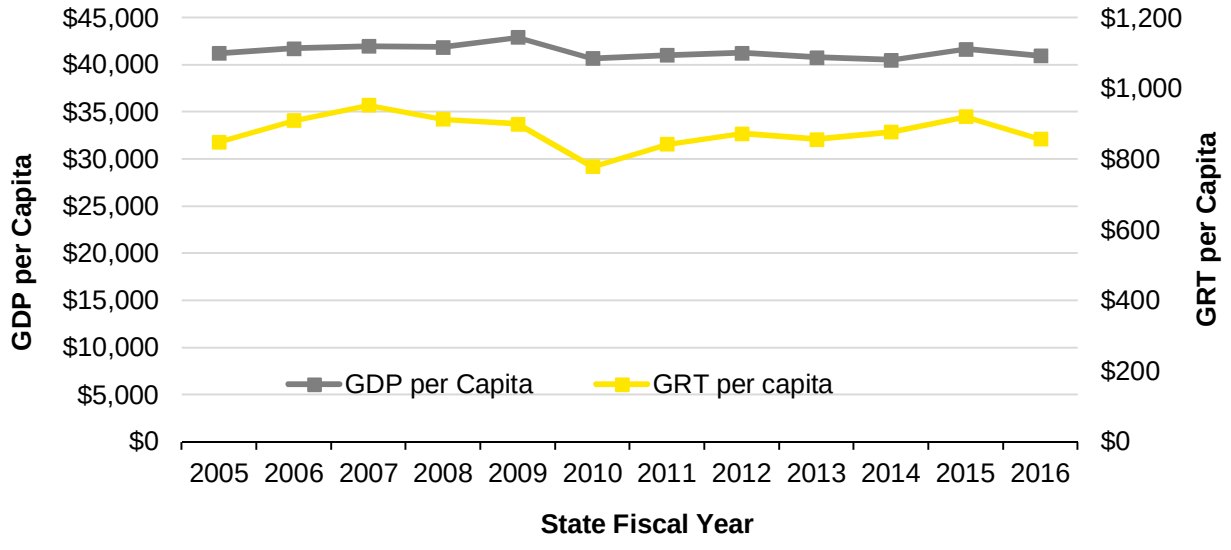
revenues. If revenue from a tax system grows at a pace that is lower than that of the economic activity that it taxes, it is indicative of a less productive tax system. Weak revenue streams can force law makers to impose relatively high tax rates, causing taxpayers to engage in additional tax avoidance behavior, and can lead to additional loss of revenue from tax evasion.

- During the FY 2005-2016 period, after adjusting for changes in population and inflation, the GRT, in general, follows the trend of economic activity in the state.
- The trend of the PIT follows fairly closely with the trend in state personal income, particularly in the years after 2009. Common to all states, New Mexico PIT receipts fell substantially during the 2008 recession but have consistently increased since 2011.
- Over the longer period of 1998-2016, although GRT revenue has a positive association with economic activity, the revenue from the GRT has grown more slowly than state GDP. Conversely, PIT revenue grew slightly faster than personal income in New Mexico over this period.

Gross Receipts Tax

Figure 4 displays the inflation-adjusted GRT revenue per capita trended against fiscal year GDP per capita from FY 2005 to FY 2016. Since the GRT is the primary business tax for the state, we graph its per capita values against the values of state Gross Domestic Product (GDP) which measures the level of economic activity in the state. As observed in the graph, during FY 2005-16, after adjusting for changes in population and inflation, the GRT generally follows the trend of economic activity in the state. The figure provides a helpful visual representation of the positive association between New Mexico's GRT and economic activity. However, a more precise mathematical representation of this relationship is estimated via regression analysis and presented in Table 6 (page 22).

Figure 4. Inflation-adjusted per capita state GDP and GRT receipts, 2005-2016
2009 dollars

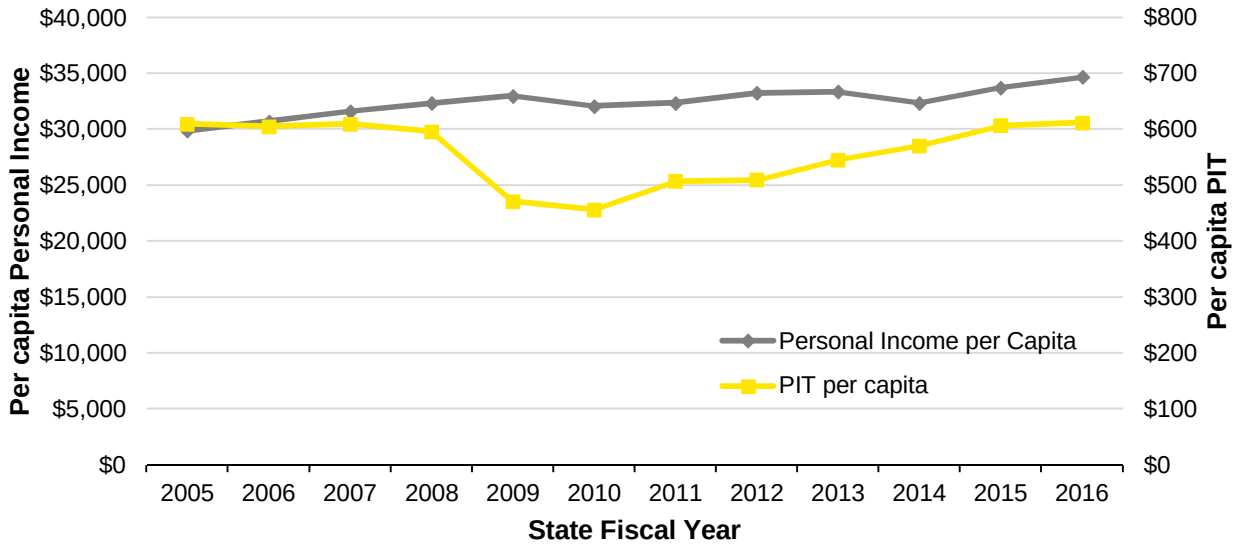


Sources: New Mexico Department of Revenue; US Bureau of Economic Analysis

Personal Income Tax

Figure 5 displays the inflation-adjusted PIT revenue per capita trended against one-year lagged state personal income per capita from 2005 to 2016. Because PIT is the primary personal tax in the state, we graph its per capita values against the values of state personal income. The values are lagged to reflect the timing difference between the income earned by individuals and the receipt of the tax revenues by the state.[25] From the 2005 through 2016 period, after adjusting for changes in population and inflation, the trend of the PIT follows fairly closely with the trend in state personal income, particularly in the years after 2009. As was the trend with all states, state PIT receipts fell substantially during the 2008 recession, but the 2007-09 periods were also impacted by reductions in the top marginal tax rate from 5.7% in tax year 2005 to 5.3% in 2006 and 4.9% in 2008. Since 2011, PIT receipts measured on a per capita basis have consistently increased.

Figure 5. Inflation-adjusted per capita personal income and PIT receipts
2009 dollars



Source: US Census Bureau Government Finance Statistics, US Bureau of Economic Analysis

Figure 4 and Figure 5 provide an indication of how New Mexico's GRT and PIT revenue trends compared to economic activity in New Mexico. An additional measure of the relationship between economic activity and tax revenues is provided by tax elasticity estimates for New Mexico's GRT and PIT. Long-run tax elasticity refers to the responsiveness of the particular tax revenue to changes in economic activity within the state, after accounting for all policy changes,[26] and can be measured from a simple linear regression. It is preferable for the elasticity estimate to be greater than or equal to 1. For instance, if the long-run tax elasticity for New Mexico's PIT is 1, it indicates that as the state's economy grows by 1%, all else constant, the state PIT revenue also

[25] The personal income data is on a calendar year basis while PIT revenues are for the fiscal year beginning July 1 of the given calendar year.

[26] Pew's policy adjusted data are used for this purpose.

grows by 1%. If the elasticity estimate is lower than 1, it would, as mentioned earlier, indicate that the tax system is less productive as it is not generating revenue growth at a pace that matches that of the economic activity that it is taxing. Table 6 shows results from regressions of GRT and PIT revenues on state GDP and personal income, respectively, for the periods 1998-2016.[27]

In Model 1 on Table 6, the estimated coefficient on state GDP is 0.61, indicating that, on average, revenue from the GRT increases by 0.61% when state GDP increases by 1%, all else the same. The sign of the coefficient (positive) indicates that GRT revenue has a positive association with economic activity, which was observed in Figure 4. However, since the estimated coefficient is less than 1, the revenue from the GRT has grown more slowly than GDP in New Mexico over the 1998-2016 time period. This is likely a result of the influence of significant exemptions from the tax base.

In Model 2, the estimated coefficient on personal income of 1.14 indicates that, on average, revenue from the PIT increases by 1.14% when personal income increases by 1%. The sign of the coefficient (positive) indicates that PIT revenue has a positive association with personal income, as observed in Figure 5. Since the magnitude of the coefficient is slightly larger than 1, it demonstrates that revenue from the PIT tends to grow in line with, or slightly faster than, personal income in New Mexico. Thus, we would expect revenue from the PIT to increase by more than the increase in personal income.

Table 6. Long-run elasticity estimates for GRT and PIT, 1998-2016

Variable	Model 1 Policy-adjusted GRT revenue	Model 2 Policy-adjusted PIT revenue
Fiscal year nominal GDP	**.61*** **	
Lagged nominal Personal Income		**1.14*** **
Constant	3.23**	-6.22***
Observations	19	19
Adj. R-Squared	.78	.94
F-Statistic	63.9***	297.1***

Source: Authors' analysis using data from US. Bureau of Economic Analysis and US Census Bureau State Government Tax Collections.
*** Indicates coefficients are statistically significant at the 1% level, ** at the 5% level.

The analysis above focuses on the relationship of the GRT and the PIT to the level of economic activity in the state. Another metric by which to measure adequacy is against the growth in state expenditures. Over the FY 1998-2016 time period, the compound annual growth rate (CAGR) of state expenditures equals 3.8%. During the FY 2011-2016 period, this growth was largely due to increases in the cost of Medicaid services. Over this period, the CAGR of the budget line for Health and Human Services equaled 4.9%, increasing from 36% of the state budget in FY 2010 to 41% in FY 2016.[28] Over this same period the CAGR of the GRT equals 1.4% while the CAGR of the PIT equals 1.3%. Combined these revenues sources have a CAGR of 1.4% over the FY

[27] Period selection is restricted to the period of data that was provided by The Pew Charitable Trusts (2017).

[28] Expenditure data taken from the state Comprehensive Annual Financial Report for fiscal years 2010-2016.

1998-2016 period, which is significantly less than the growth in government expenditures. The state, of course, relies on additional revenue sources to fund government operations but these are the two largest sources. This disconnect between the growth of these two revenue sources and the growth of general expenditures indicates that the state government will have increasing difficultly funding current expenditures.

1.4 Tax Burdens

This section provides information on the tax burdens faced by New Mexico residents from the GRT and the PIT. The level of a tax burden is determined by many factors, such as the mix of taxes, the ability to export taxes to taxpayers outside the state, and the level of services demanded by the population. There is no correct choice for the value of the tax burden by states, but to the extent that states compare rates, we include in this report an analysis of the relative tax burdens faced by businesses and individuals in the state.[29]

- The ratio of total state and local taxes (net of tax expenditures) borne by businesses in New Mexico is 6.4% of gross state product which is higher than the peer state average and the US average.
- Business taxes (net of tax expenditures) per private sector employee in New Mexico for FY 2016 equaled $7,000, while the US average was $5,800.
- New Mexico's residents are relatively less burdened by their PIT than their peers (except for Arizona) as indicated by the relatively low values of PIT revenue as a percentage of personal income and PIT revenue per capita for FY 2016.

Gross Receipts Tax

In general, business taxes are not thought to be ultimately borne by the firms themselves over the long-run. Instead, taxes imposed on firms are considered to be passed on to consumers in the form of higher prices, employees in the form of lower wages, and shareholders in the form of reduced share prices or dividends. The information presented below provides a measure of the statutory burden on businesses before any shifting to other parties occurs. Table 7 presents the size of these taxes relative to gross state product and the number of private sector employees in the state. The information presented in Table 7 is inclusive of all business taxes levied in the state and account for various credits and deductions. This information also includes taxes paid by pass-through entities. Table 7 provides information on the ratio of state and local taxes per gross state product and the ratio of business taxes per employee. Column 2 of Table 7 provides information on total effective business tax rates (TEBTR), defined as total business taxes as a percent of gross state product, across the comparison states. Relative to the peer states and the US average, the TEBTR for New Mexico is 6.4% which is higher than the peer state average and the US average. Business taxes per private sector employee in New Mexico for FY 2016 equaled $7,000, while the US average was $5,800. Though not a function of the amount of employment

[29] As tax burdens are presented in the following sections of the report, note that the burdens reflect the statutory liability or the burden considering only first-round tax shifting. For instance, GRT paid by businesses on receipts from sales to households is considered a household tax burden and shifted to consumers. See the limitations section of the executive summary for a discussion of this limitation.

in the state, the amount of business taxes per employee indicates the amount of additional taxes, on average, that an employer would incur if an additional employee was hired. Higher values of this metric are an indication of a less competitive environment, all other factors being equal. For instance, in New Mexico businesses pay taxes averaging $7,000 per employee compared to a peer state average of $5,500.

Table 7. Business taxes to gross state product and business taxes per employee, FY 2016
Thousands of dollars

State	Ratio of total state and local business taxes to gross state product (TEBTR)	Business taxes per employee ($ in 000)
Arizona	4.8%	$5.3
California	4.2%	$6.4
Colorado	4.3%	$5.4
Hawaii	5.8%	$7.0
Nevada	5.3%	$5.8
New Mexico	**6.4%**	**$7.0**
Oklahoma	4.2%	$4.9
Oregon	3.7%	$4.5
Texas	4.7%	$6.5
Utah	3.7%	$4.0
US Average	**4.5%**	**$5.8**
Peer Average	**4.5%**	**$5.5**

Source: Phillips, A., Sallee, C., & Peak, C. (2017). Total state and local business taxes. *Ernst & Young LLP, Council on State Taxation, & State Tax Research Institute.*

Personal Income Tax

Personal income taxes are borne by the individuals remitting the tax payments. Just as is the case with business taxes, a high tax burden may be acceptable to taxpayers if it reflects desired levels of spending on education, transportation, and other government services.

Data for FY 2016 presented in Table 8 provides information on the tax burden of the PIT for New Mexico and its peers. New Mexico's residents are relatively less burdened by their PIT than their peers (except for Arizona) as indicated by the relatively low values of PIT revenue as a percentage of personal income and PIT revenue per capita.

Table 8. PIT as a percent of personal income, FY 2016

State	PIT Revenue as a % of Personal Income	Per capita PIT
Arizona	1.42%	$574
California	3.65%	$2,055
Colorado	2.25%	$1,173
New Mexico	**1.76%**	**$676**
Oklahoma	1.79%	$764
Oregon	4.14%	$1,882
Utah	2.70%	$1,108
Texas	*No Personal Income Tax*	
Nevada	*No Personal Income Tax*	
US Average	**2.30%**	**$1,104**
Peer Average	**2.66%**	**$1,259**

Source: U.S. Census Bureau, 2016 State Tax Collections; and Bureau of Economic Analysis

1.5 Equity and Fairness

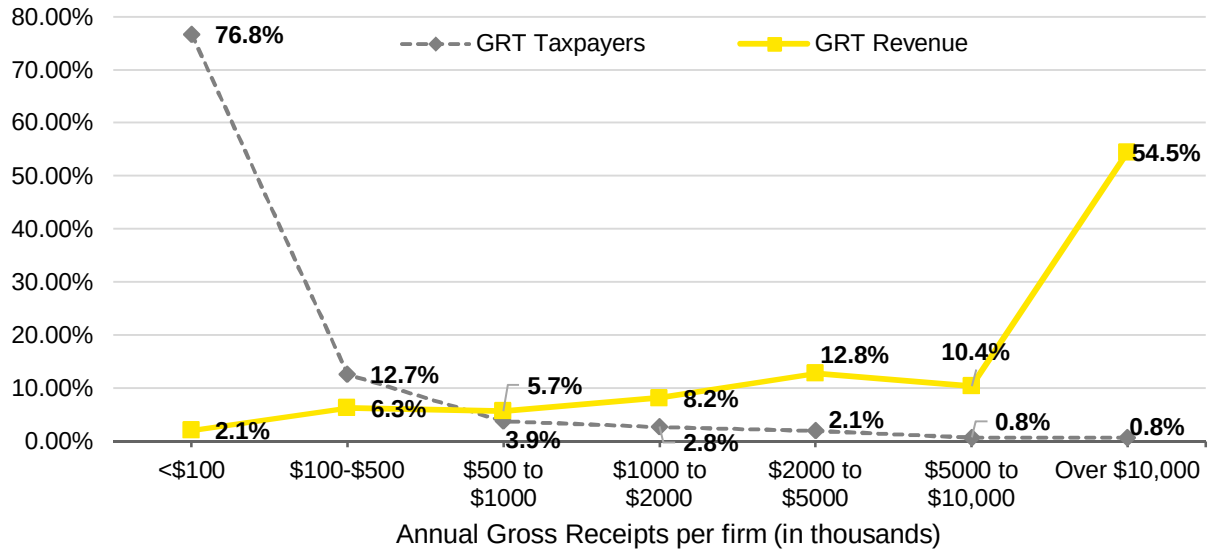
A characteristic of an equitable tax system is that similarly situated taxpayers are treated similarly with regards to their tax liability. That is, the system adheres to some notion of horizontal equity. In addition, society tends to view a tax system as fair if it is structured such that the tax liability increases as taxable income increases, reflecting some degree of vertical equity. Of course, the degree to which a tax system reflects the principles of horizontal and vertical equity depends on preference of the voters and their elected officials, the structure of the tax system, and its ability to raise revenue. The following section presents information on the GRT and the PIT with respect to the notion of both horizontal and vertical equity.

- Over all firms, the amount of a firm's taxable receipts under the GRT is inversely related to its gross receipts. Approximately 45% of gross receipts in FY2017 were classified as taxable for firms with annual receipts of over $10 million. Alternatively, more than 70% of gross receipts are subject to tax for firms with gross receipts of less than $100,000.
- The GRT is fairly regressive with taxpayers with incomes less than $17,000 paying almost 10% of their income as GRT taxes while those with incomes above $338,000 pay 1.3% of their income in taxes. Although higher income individuals have a larger overall tax liability compared to low-income individuals, they pay less tax as a percent of their income.
- New Mexico's PIT demonstrates a fair degree of progressivity, particularly for incomes up to $100,000 due to the presence of the graduated rate structure and two credits that provide targeted relief to low-income taxpayers.

Gross Receipts Tax

Figure 6 displays the share of GRT taxpayers and the GRT revenue, by size of firm based on annual value of gross receipts.[30] The dashed line provides the distribution of GRT taxpayers in New Mexico by firm size. The solid line represents the share of the GRT revenue that is contributed by each firm class. For example, in FY 2017, GRT taxpayers with annual gross receipts in excess of $10 million comprised 0.8% of all GRT taxpayers in the state but contributed 54.5% of GRT revenue. Likewise, GRT taxpayers with gross receipts less than $100,000 made up 76.8% of all GRT taxpayers but contributed only 2.10% of GRT revenue. This general effect of a heavy reliance on large firms is not unusual for a business tax and is also seen in the case of corporate income tax systems.

Figure 6. Share of GRT taxpayers and GRT revenue by firm size, FY 2017



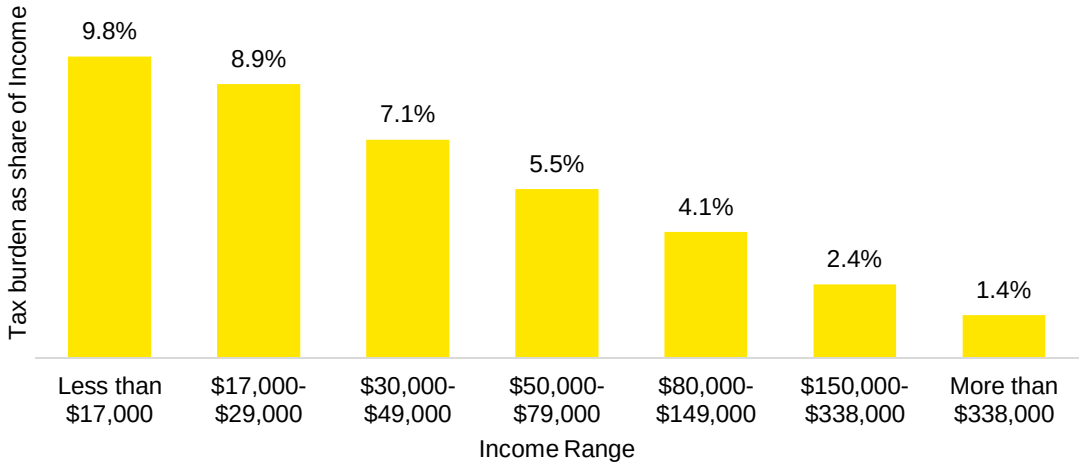
Source: New Mexico Taxation and Revenue Department.

Figure 7 illustrates the regressive nature of the GRT under the assumption that the majority of the tax is ultimately passed onto consumers. The Institute on Taxation and Economic Policy (ITEP) uses a micro simulation model to model the tax systems of the U.S. Government and all 50 states and the District of Columbia.[31] The shares in Figure 7 are generated based on the microsimulation model and assumptions about the amount of business tax that is passed on to consumers. Similar to our modeling of household expenditures for the impact of potential changes to the GRT, lower income households spend more than their income, on average, and often on locally-purchased items, thus subject to the GRT with few exclusions. The exemptions for food purchased at grocery stores and prescription drugs are two notable exceptions.

[30] For the purposes of this figure, GRT taxpayers refers to entities statutorily obligated to remit GRT taxes to the state and is not adjusted to reflect any assumptions about the ultimate burden of the GRT.

[31] https://itep.org/whopays/ accessed 1-30-2018.

Figure 7. GRT paid as a share of income, 2015



Source: Institute on Taxation and Economic Policy, "Who Pays? A Distributional Analysis of the Tax Systems in All 50 States", 2015. Data includes receipts from other selected sales or excise taxes.

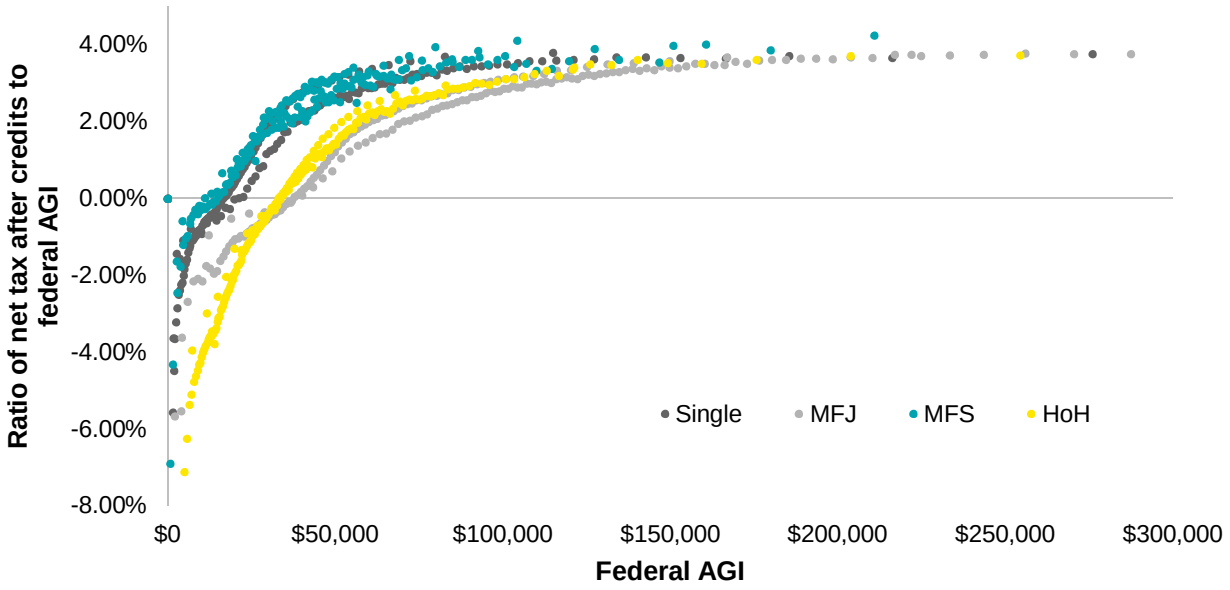
Personal Income Tax

Figure 8 shows the average effective tax rates for filers grouped by filing status and income level.[32] The horizontal axis is federal adjusted gross income (FAGI), while the vertical axis is the net tax liability after all credits divided by FAGI. As reflected in the figure, New Mexico's PIT is highly progressive, particularly in the case of incomes of up to about $100,000. The system results in negative effective tax rates[33] for many single filers with incomes of up to around $19,000 and married filers up to around $36,000. The progressive nature of the New Mexico PIT is largely a result of the graduated rate structure and two credits that provide targeted relief to low-income taxpayers. At the other end of the income distribution, the deduction for capital gains contributes to the lower degree of progressivity at rates above $100,000, though this is largely due to graduated rate structure reaching the top marginal rate at taxable income levels of $12-24 thousand, depending on filing status.

[32] Filing status: Single: Single Filer; MFJ: Married Filing Jointly; MFS: Married Filing Separate; HoH: Head of Household

[33] Negative tax rates occur when low income tax filers receive a refund in excess of their tax liabilities. This is income support for low income individuals.

Figure 8. Ratio of net tax after refundable credits to federal AGI, FY 2015



Source: Author's analysis using data provided by New Mexico Taxation and Revenue Department

1.6 Economic Efficiency & Neutrality

Under the best circumstances, influence of tax laws should be neutral to different business activities and industries, and to consumer choices. That is, the tax structure should not favor some industries or types of behavior over others. Furthermore, unnecessary or excessive complexity of, and cost of compliance with a state's tax system can further complicate business, investment, consumption and other economic decisions, which can ultimately hamper economic growth.[34] In this section, the general efficiency of the GRT is reviewed.

- The effective tax rates (ETR) for manufacturing and service industries in New Mexico before the application of the various credits and deductions are higher than the peer averages. On the other hand, after the effect of these credits, the state ETRs for both manufacturing and services are less than the peer averages.
- The value of incentives taken in New Mexico comprised 4.23% of value-added,[35] on average, which is significantly higher than that of the national and peer state average.
- The New Mexico GRT includes several credits to encourage economic development while reducing the burden that the tax system places on businesses operating in the state. In Table 9, the combined ETR for all state and local business taxes imposed in a state is presented both before and after the inclusion of various credits, deductions, and exemptions.

[34] Buschman, R. & Sjoquist, D. L. (2012). An Analysis of Options for Reforming Georgia's Income Tax: Simplicity, Equity, and Adequacy. Fiscal Research Center: FRC Report No. 240. Retrieved from http://cslf.gsu.edu/files/2014/06/analysis_of_options_for_reforming_georgias_income_tax_simplicity_equity_and_adequacy.pdf

[35] Value-added equals the difference between the industry's or state's gross output and the cost of intermediate inputs.

Table 9. Effective business tax rates pre- and post-credits

	ETR – pre-credits		ETR – post credits	
State	**Manufacturers**	**Services**	**Manufacturers**	**Services**
Arizona	5.8%	8.3%	4.2%	8.0%
California	5.8%	9.7%	5.6%	9.4%
Colorado	6.2%	8.2%	6.1%	8.0%
Nevada	6.8%	6.7%	5.6%	6.1%
New Mexico	**9.5%**	**12.6%**	**3.3%**	**6.1%**
Oklahoma	10.0%	12.4%	9.2%	12.4%
Oregon	3.6%	2.3%	3.5%	2.2%
Texas	10.9%	8.1%	10.8%	7.9%
Utah	6.8%	7.0%	5.7%	6.7%
Peer Average	**7.0%**	**7.8%**	**6.3%**	**7.6%**

Source: Ernst & Young (2014). New Mexico Business Tax Competitive Study: Updated Results – Prepared for the New Mexico Tax Research Institute

As seen in Table 9, the ETRs for manufacturing and service industries in New Mexico before the application of the various credits and deductions are higher than the peer averages. On the other hand, after the effect of these credits, the state ETRs for both manufacturing and services are less than the peer averages. To the extent that the GRT is passed onto consumers, the higher rate is born by all residents, but may be disproportionately born by lower income individuals who spend a larger portion of their income.

As another measure of the impact of incentives, Bartik[36] uses simulation modelling to develop a ratio of the value of commonly used incentives[37] to the value added by firms, averaged across several major industries[38] from 1990 to 2015. This ratio for 2015 is presented in Table 10 along with that of several of New Mexico's peer states.[39] A detailed breakdown by incentive type is also provided.

[36] Bartik, T., J. (2017). A New Panel Database on Business Incentives for Economic Development Offered by State and Local Governments in the United States. *W.E. Upjohn Institute for Employment Research.*

[37] These include property tax abatements, job creation tax credits, R&D tax credits, customized job training subsidies, and investment tax credits that are commonly used by medium to large export-base industries, which includes firms that export their goods/services outside of the state, nationally.

[38] The set of industries includes 31 export-based industries and 14 nonexport-based industries. These industries comprise 90% of private-sector employment and wages, nationally and 75% of value-added.

[39] Comparable information for the peer states of Hawaii, Oklahoma, and Utah are not available.

Table 10. Business Incentives as a percent of Value-Added

State	Total	Job creation tax credit	Property tax abatement	Investment tax credit	R&D tax credit	Customized job training
Arizona	1.06	0.39	0.00	0.21	0.29	0.16
California	0.47	0.00	0.00	0.00	0.39	0.08
Colorado	0.69	0.62	0.00	0.00	0.00	0.07
Nevada	0.23	0.00	0.19	0.00	0.00	0.04
New Mexico	**4.23**	**1.64**	**1.70**	**0.16**	**0.25**	**0.48**
Oregon	0.70	0.56	0.00	0.00	0.13	0.00
Texas	1.24	0.51	0.58	0.00	0.07	0.08
National average	**1.42**	**0.64**	**0.39**	**0.20**	**0.13**	**0.07**
Peer average	**0.73**	**0.35**	**0.13**	**0.04**	**0.15**	**0.07**

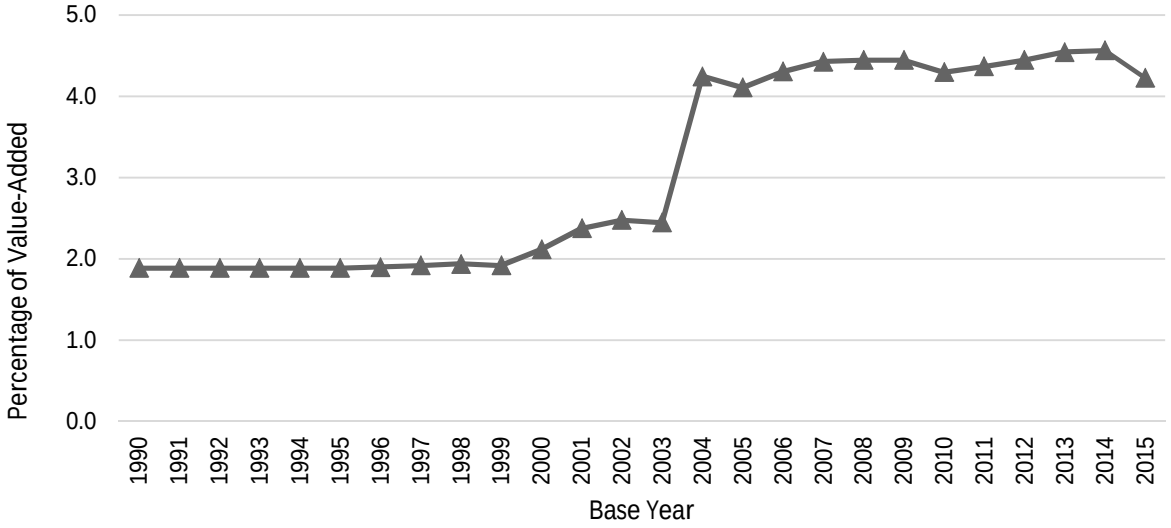
Source: Bartik (2017)

As seen in Table 10, incentives comprised of 4.23% of value-added[40] for New Mexico firms, on average, which is significantly higher than the national and peer state averages. This indicates that, compared to other states, New Mexico incurs $4.23 of tax incentives for every $100 increase in value-added.

As seen in Figure 9, this ratio has grown considerably since 1998, especially during the period of 2003-2005. This sharp increase reflects the implementation of the exemptions for food for home consumption and prescription drugs. Based on the 2016 New Mexico tax expenditure report, the value of the food exemption equaled $134 million in FY 2016. In addition, the hold harmless component of this expenditure equaled another $109 million. Thus, the total tax expenditure for the exemption for food equaled $243 million in total in FY 2016. The expenditure for the prescription drugs exemption equaled $74 million. Although, the combined size of these exemptions is large, most states with a sales tax exclude food for home consumption and prescription drugs from the base.

[40] Value-added equals the difference between the industry's or state's gross output and the cost of intermediate inputs.

Figure 9. Incentive/Value Added for Firms in New Mexico from 1998-2015



Source: Bartik (2017)41

2. Gross Receipts and Compensating Tax model

Based on the findings of the current strengths and weaknesses of the GRT system discussed in the previous section, an Excel-based model was developed to allow for revenue and distributional impacts to be estimated for specific tax base and tax rate changes. The GRT Model allows for base expansion as the user can add in specific types of transactions currently exempted or deducted from the taxable base. It also allows for new exemptions and deductions to be added, such as deductions for a broader category of business-to-business purchases. Based on selected tax base and rate changes, the GRT Model produces estimates of the change in state tax revenue and the change in household and business taxes paid. This section discusses the underlying data, functionality, and current limitations of the GRT Model. We also include estimates of the Compensating Tax (CT) tax base by industry and allow the user to change the tax rate and several exemptions related to the CT.

2.1 Description of data

2.1.1 Gross Receipts Tax

The statewide Gross Receipts Tax Model (GRT Model) incorporates data from several sources including 2016 data from the New Mexico Taxation and Revenue Department (TRD), the 2015 IMPLAN model of the New Mexico economy, and 2012 Economic Census data for New Mexico. Data on economic output by industry from the 2015 IMPLAN model provided an estimate of potential sales subject to the GRT for most industries. Wholesale trade transactions were estimated using economic census data. IMPLAN has its own categorization system (codes) of

[41] A New Panel Database of Business Incentives for Economic Development Offered by State and Local Governments in the United States. February 2017. W.E Upjohn Institute for Employment Research.

economic activity by industry. IMPLAN data was mapped to four-digit North American Industry Classification System (NAICS) codes, which allowed for standardization of data from different sources by industry. This data provided an estimate of the potential taxable transactions in the New Mexico economy. However, as discussed previously, not all transactions are subject to the GRT. Certain transactions are exempt from taxation, meaning the gross receipts are not subject to the tax and the taxpayer is free from a reporting requirement, and other transactions are deductible, meaning that while they must be reported, they are not included in the filer's taxable gross receipts.

Data from the New Mexico Taxation and Revenue Department RP-80 report for 2016 was used to estimate the following: gross receipts after exemptions, deductions claimed, taxable gross receipts, and gross tax (before credits) paid. The RP-80 report contains information on the industry of the business remitting the tax. The business self-reports its industry by reporting a NAICS code. The RP-80 report contains tax information by NAICS code ranging from the 2-digit level down to the specific 6-digit level. The GRT Model categorizes data at the 4-digit level. The 2-digit and 3-digit level of reported tax data from the RP-80 was partitioned into the more detailed level by using the proportion of each 4-digit code in the 2-digit and 3-digit total using IMPLAN output data.

This data formed the basis of the following components of the GRT Model:

- **Potential statewide transactions**. Transactions that could be subject to the GRT were estimated using IMPLAN and Economic Census data described above.
- **Value of exemptions**. The overall level of exemptions in the New Mexico economy is the difference between potential statewide transactions and gross receipts reported by businesses in the RP-80 data.
- **Gross receipts reported by businesses**. These are gross receipts reported by businesses in the RP-80 data after exemptions.
- **Value of deductions**. Deductions taken by industry are calculated as the difference between gross receipts reported by businesses and taxable gross receipts.
- **Taxable gross receipts**. This is the tax base reported by businesses on which the tax rate is multiplied.
- **Statewide gross tax paid**. Using the tax base, and the state gross receipts tax rate (after deducting local share), we calculated the gross tax paid by industry.

Some of the baseline data used in the GRT Model is shown in Table 11. Gross receipts after exemptions reported by businesses totaled $96 billion in 2016. Taxable gross receipts reported totaled $49 billion, implying deductions claimed of $47 billion.

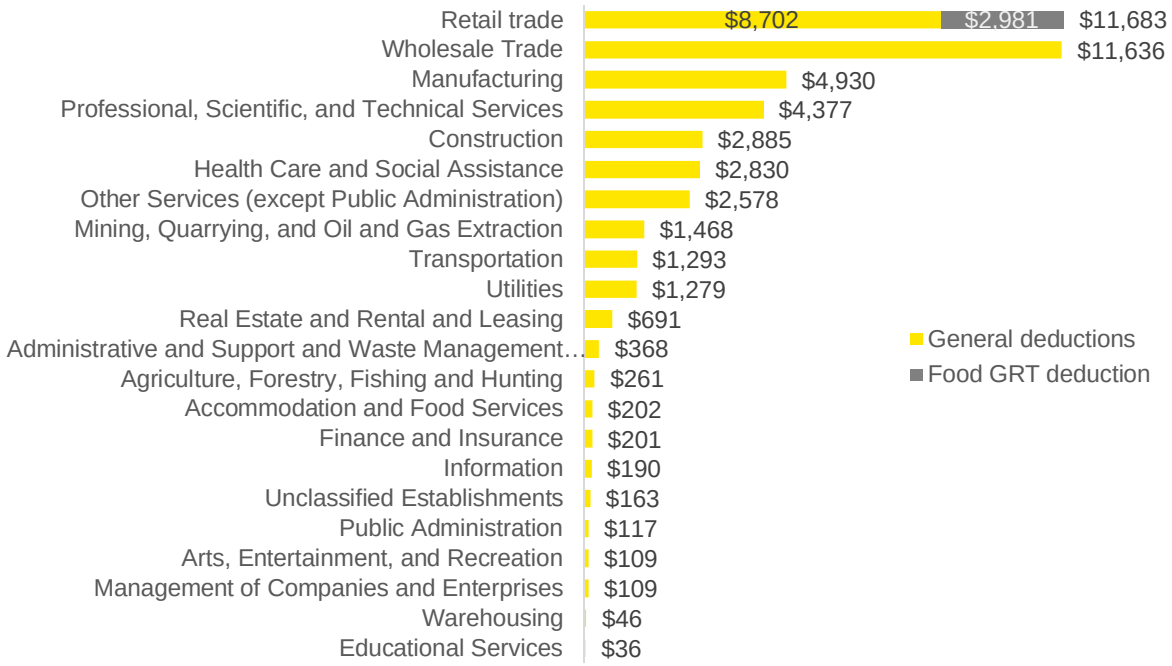
Table 11. Baseline data in the GRT Model, 2016 current law data
Millions of dollars

NAICS Sector	Description	Gross Receipts (RP-80)	Deductions	Taxable Gross Receipts (RP 80)	Statewide Gross Tax (before credits)
11	Ag., Forestry, Fishing	$359	$261	$98	$4
21	Mining, Oil & Gas Extraction	$3,721	$1,468	$2,252	$97
22	Utilities	$3,768	$1,279	$2,489	$107
23	Construction	$8,903	$2,885	$6,019	$259
31-33	Manufacturing	$6,339	$4,930	$1,410	$61
42	Wholesale Trade	$13,505	$11,636	$1,869	$80
44-45	Retail Trade	$22,973	$11,683	$11,290	$485
48	Transportation	$1,871	$1,293	$578	$25
49	Warehousing	$91	$46	$45	$2
51	Information	$2,573	$190	$2,383	$102
52	Finance and Insurance	$474	$201	$273	$12
53	Real Estate, Rental, Leasing	$1,902	$691	$1,211	$52
54	Prof., Scient., Technical Services	$10,343	$4,377	$5,966	$257
55	Management of Companies	$112	$109	$3	$0
56	Admin, Waste Management & Remediation Services	$1,637	$368	$1,269	$55
61	Educational Services	$253	$36	$217	$9
62	Health Care & Social Assistance	$5,352	$2,830	$2,522	$108
71	Arts, Entertainment, & Recreation	$355	$109	$246	$11
72	Accommodation and Food Services	$3,943	$202	$3,741	$161
81	Other Services	$6,618	$2,578	$4,040	$174
92	Public Administration	$719	$117	$602	$26
99	Unclassified Establishments	$538	$163	$375	$16
Total		**$96,351**	**$47,453**	**$48,899**	**$2,103**

Source: Authors analysis using State of New Mexico RP-80 data; data assembled by TRD in September 2017

Figure 10 shows the deductions claimed by industry in order from highest to lowest dollar amounts. About half of the deductions claimed were by businesses in the retail and wholesale trade sectors. Certain deductions, such as the sale of food at grocery stores and the deduction for prescription drugs, show up in the retail trade category and total $5.3 billion of deductions, of which the food GRT deduction accounts for nearly $3.0 billion. Sales of goods for resale are also deductible, explaining large deductions in the wholesale trade sector. This is one of the provisions in the Gross Receipts Tax that reduces pyramiding, or levying the GRT on the same base multiple times.

Figure 10. Top industries by deductions, 2016
Millions of dollars



Source: EY analysis using State of New Mexico RP-80 data; Difference between gross receipts and taxable gross receipts.

Table 12 shows deductions as a share of reported gross receipts from the RP-80 data. The table is organized with the industries with the highest percentage of reported gross receipts as deductions at the top of the table and the industries where deductions make up the smallest percentage of gross receipts at the bottom. As shown in this table, businesses in certain industries, such as management of companies and enterprises and wholesale trade, have a significant share of their gross receipts deducted from taxable gross receipts due to anti-pyramiding, sale-for-resale, or specific deductions available under current law. Other industries, such as food service and accommodation, do not have deductions that apply to their sales and thus have a much smaller share of gross receipts removed from the tax base.

Table 12. Deductions as a share of gross receipts (before deductions) from RP-80 data

NAICS	Industry	Deduction share of reported Gross Receipts
55	Management of Companies and Enterprises	97%
42	Wholesale Trade	86%
31-33	Manufacturing	78%
11	Agriculture, Forestry, Fishing and Hunting	73%
48	Transportation	69%
62	Health Care and Social Assistance	53%
49	Warehousing	51%
44-45	Retail trade	51%
52	Finance and Insurance	42%
54	Professional, Scientific, and Technical Services	42%
21	Mining, Quarrying, and Oil and Gas Extraction	39%
81	Other Services (except Public Administration)	39%
53	Real Estate and Rental and Leasing	36%
22	Utilities	34%
23	Construction	32%
71	Arts, Entertainment, and Recreation	31%
99	Unclassified Establishments	30%
56	Admin., Support, Waste Mgmt and Remediation Services	22%
92	Public Administration	16%
61	Educational Services	14%
51	Information	7%
72	Accommodation and Food Services	5%
	Total	**49%**

Source: EY analysis using State of New Mexico RP-80 data

Figure 11 shows contributions to the statewide gross receipts tax in 2016 by industry. Businesses in the retail sector remitted the most gross receipts tax with an estimated $485 million in taxes in 2016. This is followed by businesses in the construction industry ($259 million) and businesses in the professional, scientific, and technical services industry ($257 million).

The tax burdens faced by each industry in the state affect New Mexico's competitiveness in attracting those industries. While the information presented in Figure 11 is not sufficient to evaluate the degree to which New Mexico's gross receipt tax imposes a greater or lesser burden than other surrounding or competitor states, any tax that cannot be passed forward to consumers through higher prices is likely to have some competitive effect. Given New Mexico's extensive taxation of services and business inputs (despite anti-pyramiding deductions), the gross receipts tax has a larger effect on competitiveness than the sales taxes imposed in most states.

Figure 11. Top industries by state gross receipts tax (before credits), 2016
Millions of dollars

Source: EY analysis using State of New Mexico RP-80 data

2.1.2 Compensating Tax

The statewide Compensating Tax Model (CT Model) incorporates FY 2016 CT revenue data by industry from the New Mexico Taxation and Revenue Department RP-90 report. The CT is an excise tax imposed on persons using property or services in New Mexico. The tax rate differs whether goods or services are used within the state. A state rate of 5.125% is imposed on certain property used and 5.0% on services. According to estimates from TRD, 70% of the CT revenue is distributed to the General Fund.

Table 13 shows the FY 2016 data used in the CT Model. General Fund revenue was estimated at 70% of the total $112 million for a General Fund total of nearly $79 million on FY 2016. For each NAICS industry, we assigned a tax rate based on whether businesses in the industry were primarily using goods or services. We assigned the 5.125% rate for NAICS industries 11 – 45. For the remaining industries, we assumed that the services rate was most applicable. This is a simplifying assumption that allowed us to estimate the CT tax base shown in column 1 in the table below. Based on this analysis, we estimate that the CT tax base was $1.55 billion in FY 2016.

Table 13. Baseline data in the CT Model, FY 2016 current law data
Millions of dollars

NAICS Sector	Description	Compensating Taxable Base (RP-90) (70% assumption)	Assumed Tax Rate category	Assumed Tax Rate	General Fund Revenue
11	Ag., Forestry, Fishing	$9	Goods	5.125%	$0
21	Mining, Oil & Gas Extraction	$461	Goods	5.125%	$24
22	Utilities	$172	Goods	5.125%	$9
23	Construction	$31	Goods	5.125%	$2
31-33	Manufacturing	$112	Goods	5.125%	$6
42	Wholesale Trade	$92	Goods	5.125%	$5
44-45	Retail Trade	$159	Goods	5.125%	$8
48	Transportation	$38	Services	5.000%	$2
49	Warehousing	$38	Services	5.000%	$2
51	Information	$59	Services	5.000%	$3
52	Finance and Insurance	$7	Services	5.000%	$0
53	Real Estate, Rental, Leasing	$12	Services	5.000%	$1
54	Prof., Scient., Technical Services	$106	Services	5.000%	$5
55	Management of Companies	$0	Services	5.000%	$0
56	Admin, Waste Management & Remediation Services	$14	Services	5.000%	$1
61	Educational Services	$2	Services	5.000%	$0
62	Health Care & Social Assistance	$93	Services	5.000%	$5
71	Arts, Entertainment, & Recreation	$5	Services	5.000%	$0
72	Accommodation and Food Services	$29	Services	5.000%	$1
81	Other Services	$76	Services	5.000%	$4
92	Public Administration	$38	Services	5.000%	$2
99	Unclassified Establishments	$0	Services	5.000%	$0
Total		**$1,552**			**$79**

Source: EY analysis using State of New Mexico RP-90 data

2.2 Tax expenditure data and review

Data from the TRD and LCS provided estimates for 26 exemptions and deductions, shown in Table 14. Two of the expenditures, the Food GRT Deduction and the Health Care Practitioners GRT Deduction, were estimated using RP-80 data on the food and medical deduction. State-provided estimates came from the *New Mexico Tax Expenditure Report*, published by the Taxation and Revenue Department. State-provided estimates for deductions and exemptions shown in the table below totaled nearly $6.2 billion in FY 2016. Removing exemptions, deductions totaled $6.0 billion, or 13% of the estimated $47 billion in deductions taken by businesses in FY 2016, estimated from the RP-80 data as the difference between reported gross receipts and taxable gross receipts.

Table 14. Exemptions and deductions estimated using data from TRD and LCS
Millions of dollars

Statute	Description	FY 2016
7-9-13.4	Textbooks Exemption from GRT	$127.0
7-9-39	Fees from Social Organizations Exemption from GRT	$54.9
7-9-41.4	Officiating at NM Activities Association-Sanctioned School Events Exemption from GRT	$2.5
7-9-56.2	Hosting World Wide Web Sites GRT Deduction	$7.2
7-9-56.3	Border Zone Trade-Support Companies GRT Deduction	$3.9
7-9-57.1	Sales through world wide websites	$1.1
7-9-57.2	Software Development Services GRT Deduction	$34.0
7-9-60	Sales to Nonprofit Organizations GRT or GGRT Deduction	$216.5
7-9-61.2	Sales of Tangible Personal Property to Credit Unions GRT Deduction	$6.9
7-9-62A; 7-9-77A	Sale and use of aircraft 50% GRT Deduction	$75.1
7-9-63	Publication Sales GRT Deduction	$5.1
7-9-64	Newspapers GRT Deduction	$144.4
7-9-73.1	Hospitals 50% GRT Deduction	$210.9
7-9-77.1	Medical Services GRT Deduction	$925.4
7-9-83; 7-9-84	Jet Fuel GRT and Comp Tax Deduction	$98.2
7-9-85	Fundraising Events GRT Deduction	$15.7
7-9-87	Lottery Retailers GRT Deduction	$138.6
7-9-92	Food GRT Deduction	$2,981.6
7-9-93	Health Care Practitioners GRT Deduction	$1,018.0
7-9-95	Back to School GRT Deduction (Tax Holiday)	$47.6
7-9-103	Services for Electric Transmission Facilities GRT Deduction	$0.1
7-9-104	Nonathletic Special Events GRT Deduction	$2.5
7-9-107	Production or Staging of Professional Contests GRT Deduction	$1.4
7-9-108	Investment Advisory Services GRT Deduction	$2.0
7-9-110.1; 7-9-110.2	Locomotive Engine Fuel GRT and Comp Tax Deduction	$66.4
7-9-114	Advanced Energy GRT and Comp Tax Deduction	$7.2
	Total state-estimated exemptions and deductions	**$6,187.0**

Source: Data provided by the New Mexico Taxation and Revenue Department and Legislative Council Service

The GRT Model also includes independent estimates by EY of 14 additional exemptions and deductions for a total of $70.1 billion, shown in Table 15. Independent estimates of deductions total $19.5 billion, or 42% of current estimated deductions of $47 billion. Several different methods and data sources were used to estimate these:

- *Exemption for governmental agencies* was estimated using the 2015 IMPLAN model for the New Mexico economy. Output reported for public administration is the basis of the nearly $4.5 billion exemption.
- *Exemption for wages* was estimated using data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW) for New Mexico in 2016. This data set contains employment and wages reported by employers. It includes full- and part-time employees that are covered by state and federal unemployment insurance laws.

- *Exemption for food stamps (SNAP)* was estimated using the USDA SNAP state activity report for 2016. This report provides data on benefits paid to recipients in New Mexico.
- *Exemption for occasional sale of property or services* provides an exemption from the GRT for the value of residential real estate transactions. EY estimated the value of real estate transactions using data published by the Realtors Association of New Mexico for 2016. This data includes the sales volume by county for residential real estate transactions. In 2016, these transactions totaled $4.5 billion.
- *Exemption for the receipts of nonprofits*: Nonprofit exemptions were estimated using a combination of data from Independent Sector, GuideStar, and the Kaiser Family Foundation. Independent Sector and GuideStar provided data on the number, type, and revenues of nonprofits in New Mexico. This allowed for nonprofit receipts to be divided into two categories: (1) receipts for health services and (2) receipts for non-health services. Furthermore, GuideStar data allowed for an estimation of program service revenue (i.e. revenue in exchange for providing a service) and donations. We then modeled the payer of health services as a public payer (through government programs like Medicare and Medicaid) and private payers (i.e. private insurance or out-of-pocket payments) using State Health Facts data from the Kaiser Family Foundation. Using these data sources, EY estimated total nonprofit revenue of $6.5 billion in 2016. Health receipts were estimated to be $4.5 billion, of which $3.9 billion was estimated as potentially taxable (but currently exempt) health receipts with the remaining $760 million as donations.
- *Deduction for sales to manufacturers* was estimated using the 2015 IMPLAN model of the New Mexico economy. Statute 7-9-46 allows for the deduction of receipts from sales of tangible personal property to manufacturers that are consumable and used in such a way that the property is consumed in the manufacturing process of a product. Using a matrix of sales to manufacturers from the IMPLAN model data, we first estimated the local use/local supply of these transactions to estimate what amount of transactions occurred in New Mexico. Next, we estimated what share is consumable, using EY's statewide sales tax model that estimates a percentage of goods consumed in the manufacturing process. This parameter was 36% of purchases. This produced an estimate of $434 million in GRT deductions due to sales to manufacturers.
- *Deduction for sales of tangible property for resale* was estimated using data from the 2015 IMPLAN model of the New Mexico economy. The IMPLAN data provided estimates of sales by New Mexico manufacturers to wholesalers and retailers located in New Mexico. These sales qualify for the 7-9-47 deduction. Local manufacturing sales of $3.75 were divided into sales to final consumers (not available for the deduction), and $1.4 billion in sales to wholesalers and retailers that would qualify for the resale deduction. This division was based on a review of commodity data. A similar approach was used for wholesale industry sales to retailers that would qualify for the deduction. IMPLAN data provided wholesale industry sales for local (in-state) use. The wholesale margin total was provided, so this was "grossed up" to the full sale amount using the 18% margin that the IMPLAN model uses, producing an estimated $19.8 billion in wholesale sales. A review of Census data provided a breakdown of 60% of sales being re-sold versus 40% for final users. This 60% ($11.9 billion) of wholesale sales were added to the $1.4 billion in manufacturing

sales to arrive at a total estimate of $13.3 billion in sales that qualify for the resale deduction.

- *Deduction for sales of services for resale* was estimated using the 2015 IMPLAN model of the New Mexico economy data. A matrix of sales of services used as an intermediate input was constructed. We removed sales to construction businesses as those are covered by the next deduction. This produced an estimate of $13.3 billion in sales of services as an intermediate purchase. Not all sales qualify for the resale deduction. The difference in reported gross receipts and taxable gross receipts for firms in service industries (NAICS 51-56) is a reduction of gross receipts by 25% due to deductions. We also reviewed a previous report on pyramiding by the New Mexico Tax Research Institute in 2005 as another check on the likely deductible amount of services for re-sale.[42] Inflated deductible amount estimated by that report to 2016 would produce an estimate of $3.3 billion in deducted gross receipts, which we are using in the GRT Model.
- *Deduction for sale of services and materials to construction businesses* was estimated using data on the sales to construction businesses (NAICS 23) for materials and services by other businesses using data from the IMPLAN 2015 model of the New Mexico economy. Certain services are specified in the statute (7-9-52) as deductible, such as design, architecture, drafting, surveying, engineering, sanitation, structural testing, and security. We removed these sales to construction businesses when reviewing the data and putting together the $786 million GRT deduction estimate.
- *Deduction for the sale or lease of real property* provides a deduction for receipts related to real property. Since residential transactions are covered under the exemption for the occasional sale of property or services, statute 7-9-53 provides a deduction for commercial real property transactions. We estimated the amount related to nonresidential real estate transactions as the midpoint between two independent estimates from different data sources. Using the share of residential taxable value from New Mexico *State Property Tax Facts for 2016* that reported residential as 65% of taxable value, we assumed transactions in a given year followed a 65% residential to 35% nonresidential breakdown. Since we had good data on the residential transactions from NAR ($4.5 billion), we could estimate the total real estate transactions in the state of $7 billion and the nonresidential share as the residual $2.5 billion. We also pulled non-residential transactions in 2016 from a private data source CoStar that contained $867 million sales in New Mexico. We selected the midpoint $1.6 billion in nonresidential sales as our estimate for 2016 and then used an assumption of 20% land value and 80% improvement value (i.e. buildings, structures) based on our previous experience analyzing commercial projects. Our final estimate of the deduction for real property is $323 million in 2016.

[42] See Manuel del Valle, "Pyramiding Transaction Taxes in New Mexico: A Report on the Gross Receipts Tax," from the New Mexico Tax Research Institute, September 2005. Using data from the New Mexico Taxation and Revenue Department, this report estimates revenue loss associated with statute 7-9-48 (deduction for services for resale) of $160 million in FY 2005. Dividing this estimate by the average state and local GR tax rate of 6.0% used in the report produces an estimate of $2.7 billion in gross receipts. Inflating this by 2% annually to 2016 produces the $3.3 billion in deductible gross receipts used by EY.

- *Deduction for certain real estate transactions* provides that commissions may be deducted on the improvement value of the non-residential transactions. Using the $1.6 billion discussed above as our estimate of 2016 nonresidential transactions and an 80% assumption (or $1.3 billion) related to improvement value, a 6% commission provides a deduction of $77.7 million in 2016.
- *Deduction for the sale of prescription drugs* was estimated using data from the Kaiser Family Foundation State Health Facts that reports retail sales of prescription drugs in New Mexico.
- *Deduction for hearing and visual aides*: EY reviewed the available research to gather information on the total sales of hearing instruments. In 2012, the total unit sales of hearing aids was 16,801 in New Mexico. EY grew 2012 sales by an annual growth rate of 2.9% to estimate 2016 total sales. A 2013 study shows that a hearing aid, considering all styles and all technology levels, costs about $2,363, on average. EY grew the 2013 average cost by an annual inflation rate of 2% to estimate the average cost of a hearing aid in 2016. Using the average hearing aid cost and the total estimated unit sales in 2016, EY estimated the total hearing aids deduction for 2016. Similarly, a 2013 study analyzing the economic burden of visual impairment shows that each patient with a severe case of visual impairment annually spends between $13,154 to $16,321 on average. EY took the mid-point of this range and grew it by an annual inflation rate of 2% to derive 2016 estimates. EY attributed 50% share of the total annual costs per patient to visual aid spending. EY used 2015 estimates produced by the National Institutes of Health on the US visual impairment cases. EY estimated 6,486 units for New Mexico using the ratio of New Mexico's total population to the US total population. EY grew New Mexico's visual impairment estimates for 2015 using the annual population growth rate from 2015-2016 to derive 2016 estimate. Using total visual impairment cases in 2016 and the adjusted annual average costs per patient, EY estimated the total visual aids deduction for 2016.

Table 15. Exemptions and deductions estimated independently by EY, FY 2016
Millions of dollars

Statute	Description	FY 2016
7-9-13	Exemption: governmental agencies	$4,469.0
7-9-17	Exemption: wages	$34,393.8
7-9-18.1	Exemption: food stamps (SNAP)	$693.4
7-9-28	Exemption: occasional sale of property or services	$4,544.5
7-9-29	Exemption: receipts of nonprofits	$6,500.0
7-9-46	Deduction: sales to manufacturers	$434.4
7-9-47	Deduction: sales of goods for resale	$13,333.1
7-9-48	Deduction: sales of service for resale	$3,318.1
7-9-51; 7-9-52	Deduction: sales of services and materials to construction businesses	$786.3
7-9-53	Deduction: sale or lease of real property	$323.9
7-9-66.1	Deduction: certain real estate transactions	$77.7
7-9-73.2	Deduction: prescription drugs	$1,158.3
7-9-111	Deduction: hearing and visual aides	$98.0

Source: EY analysis

We reviewed all data and reports available on tax expenditures provided by the State. A few observations on some of these estimates:

- The deduction taken in 2016 for food sold at retail and prescription drugs reported in the RP-80 (our base data source) was $1 billion lower than the deductions reported in the RP-500 state report. The RP-80 reports are updated when amended returns come in, so these reports will differ. However, the size of the difference is substantial between the two reports. We used the RP-80 to estimate these deductions based on our conversations with TRD as this data is continually updated to reflect activity occurring in the particular tax month/year it is initially reported.
- Certain deductions, such as the sales for resale deduction, are reported as deductions on the CRS-1 return in Column E (total deductions), but since they are not separately reported on the tax form, TRD could not provide an independent estimate of certain deductions. Requiring separate reporting of some of the anti-pyramiding deductions or some of the larger ones would allow for easier monitoring and revenue estimation for LCS.
- An estimate of the GRT deduction for sales of consumables to manufacturers (7-9-46) was provided by TRD. The amount provided totaled $64.3 million in deducted gross receipts. Using IMPLAN data on intermediate sales to manufacturers would suggest a much larger deduction could be taken. After performing our analysis (see the bulleted list above) we estimated this deduction at $434 million—more than six times greater than the estimate provided by TRD. When we asked about the scale of the deduction, TRD expressed a lack of confidence in the data they currently collect around this deduction.
- The taxability of loans under other states' gross receipts tax codes varies. Ohio exempts receipts from the repayment of loans from the gross receipts tax, Hawaii does not tax interest on loans or loan fees, and Delaware does not have a gross receipt tax on loans. Washington, however, does not generally exempt or exclude loans.

2.3 GRT model functionality

The Gross Receipts and Compensating Tax Model is Excel-based and contains baseline 2016 data and a set of customizable "input" and "output" tabs which describe the revenue and distributional impacts of modeled policy changes compared to 2016 "current baseline" data. In future years, baseline data can be updated and a new baseline year used in comparison with modeled policy changes.

Input sheets

A set of "input" sheets allow the user to model the following policy changes:

- **Change the state gross receipts tax rate**. The current "weighted state share tax rate" is calculated using the statutory rate (5.125%), the local distribution percentage to municipalities (~24%), and the share of gross receipts by industry that occur in municipalities versus unincorporated areas. Theoretically, this should provide the statewide effective tax rate calculated as tax collections divided by the tax base. There is also a place to adjust the weighted state share tax rate to hit a historical or average

statewide effective rate (tax collections divided by the tax base) via a "gross-up factor". The user may want to use the gross-up factor to hit a specific statewide effective tax rate because tax collections at the state level could be higher than estimated with the RP-80 data due to missing components of the tax base in the RP-80 data, or to tax amendments. The statutory rate, the local distribution percentage, the share of taxable gross receipts by 2-digit NAICS codes, and the gross-up factor can be adjusted in the model. The weighted state share tax rate adjusts automatically when a policy change is modeled based on the new distribution of taxable gross receipts across industries, and whether those are located in municipalities.

- **Remove current exemptions and deductions.** Current exemptions and deductions can be changed in two ways: (1) by selecting to remove an estimated exemption or deduction, or (2) by removing a percentage of exemptions and deductions shown in the baseline at the 2-digit NAICS industry level. Within the specific exemptions and deductions section of the model, the exemptions and deductions calculated that are listed in Table 14 and Table 15 are currently available for the user to select to remove from the tax base. A percentage for the amount of the deduction or exemption removed is also available. There are also a number of exemptions and deductions with a current tax expenditure value of $0 that can be incorporated into the model if at a later date TRD estimates them. Along with removing these specific tax expenditures, the model also allows for the deductions of business-to-business sales, and the percent of sales to unique resellers and affiliates can be adjusted by line item.
- **Add new exemptions or deductions.** There is also the capability to model the effects of adding new exemptions or deductions to the GRT tax base. The change in gross receipts can be allocated to a specific 4-digit NAICS industry, if known. This feature can also be used to remove exemptions or deductions that have not been individually estimated.
- **Remove anti-pyramiding deductions or add new ones**. Five specific anti-pyramiding provisions have been estimated: (1) deduction for sales to manufacturers (7-9-46), (2) deduction of goods for resale (7-9-47), (3) deduction for sales of services for resale (7-9-48), (4) deduction for sales of services and materials to construction businesses (7-9-51; 7-9-52), and (5) deduction for certain real estate transactions (7-9-66.1). We estimated that these deductions collectively reduce taxable gross receipts by $17.9 billion in 2016. We modeled all business purchases and estimated $46 billion transactions in New Mexico in 2016. After accounting for all exemptions and deductions that apply to businesses, we estimated that $20 billion in taxable gross receipts were due to purchases by businesses (or 42% of all taxable gross receipts).
- **Account for interaction effects for a few exemptions and deductions**. We modeled interaction effects for certain policy changes. These include:
    - **Removal of the Food GRT deduction and the impact on the exemption for gross receipts using food stamps (SNAP benefits)**. There is concern that retailers are mis-categorizing SNAP exemptions as food GRT deductions. The result is the same for the retailer in that they do not pay tax on the gross receipts. However, there is a difference to the State as reimbursements are provided to local governments for revenue lost from the food GRT deduction but not from an exemption due to purchases with SNAP benefits. If the Food GRT deduction were

removed, it is possible that retailers would better claim purchases with SNAP benefits and the exempted amount of gross receipts would increase. We know the maximum potential exemption due to state activity reports of SNAP benefits. In 2016, SNAP beneficiaries in New Mexico received $693 million. However, it is unlikely that 100% of gross receipts from these benefits are being miscategorized as food GRT deductions. It is likely that some amount of these benefits would be recategorized as a SNAP exemption and in the model we have selected 10%, or $69 million of gross receipts, as not being added back to the tax base if the food GRT deduction were removed, but would be reclassified as an exemption and remain nontaxable. The result is that this lowers the tax revenue to the state government from removing the food GRT deduction.

- **Removal of the exemption for nonprofits and the impact on deductions and credits for medical services, health care practitioners, and hospitals.** Removing the exemption on nonprofits, without the simultaneous removal of the Medical Services (7-9-77.1), Health Care Practitioners (7-9-93), and 50% Hospital GRT (7-9-73.1) deductions, as well as the Hospital GRT credit (7-9-96.1), would mean that up to 65% (approximately $3 billion out of $4.5 billion) of gross receipts related to nonprofit health care providers would be taken as deductions and credits by these providers. This would eliminate any revenue gains from removing the exemption for nonprofit health care providers. There is an order to which the deductions and credits have to be taken. First, gross receipts related to Medicare services at health care practitioners would be taken in the Medical Services Deduction. Remaining gross receipts related to health care practitioners would then be taken via the Health Care Practitioners Deduction. The 50% deduction for hospital gross receipts would then apply and finally a credit for the remaining hospital gross receipts. The GRT Model allows for the user to customize the amount of gross receipts moved from the nonprofit exemption into health care deductions. The default is set at 100% of gross receipts currently exempted by nonprofit health care providers.
- **Removal of Medical Services deduction** would mean more deductions in the Health Care Practitioners deduction**.** If the Medical Services deduction were repealed, the gross receipts (up to approximately $925 million, which is the current Medical Services deduction amount) could be deducted via the Health Care Practitioners Deduction. The GRT Model assumes that 100% of these gross receipts would be deducted via the Health Care Practitioners deduction. This can be customized by the user.
- **Removal of the Health Care Practitioners** would likely result in $223 million in gross receipts being claimed by the 50% hospital GRT deduction and up to approximately $10 million with the hospital credit**.**
- **Removal of 50% Hospital GRT Deduction** would lead to more hospital credits claimed (up to approximately $9 million). This is because the hospital credit can be claimed after deductions. Repealing health care gross receipts deductions, but not the hospital credit, would result in gross receipts that had been previously claimed by the Hospital GRT Deduction to increase the credit amount claimed.

- **Adjust credits.** Credits in the model are broken in to five different types: 60-day money and other credits, hold harmless payments for food GRT deduction, hold harmless payments for the medical GRT deduction, additional business credits, and administrative fees and miscellaneous adjustments. These five types of credits can be adjusted.
- **Specify how a policy change will affect households at different income levels.** The GRT Model estimates the impact of policy changes on households at different income levels. The Model allows the user to customize the share of the gross receipts tax expected to be paid by households, and characteristics of these households, such as expenditures as a share of income and the type of expenditures that households make.

Model results

The Model results show the revenue effects of the policy changes made by the user in the input tab. The user has to select what and how they want to model potential changes to the tax base or tax rate. For example, this includes selecting what share of current tax exemption or deduction to remove. It requires interpreting a proposed legislative tax change and then selecting the right industry in which businesses would be affected. Adding new exemptions or deductions requires an estimate of the gross receipts that would be effected and what industries would be affected.

After the user has made his/her selections, the specific outputs include:

- **Changes to the tax base, state tax collections, exemptions and deductions by industry**. The model shows the change in tax revenue due to the policy change compared to the 2016 baseline, along with the effective and statutory tax rates to make the policy revenue neutral.
- **Compliance with health care industry 6% safe-harbor taxation for Medicaid reimbursements**. The GRT Model includes a calculation of the impact of changes to taxation of the health care industry as a percentage of Medicaid net patient revenue in 2016. Medicaid is jointly financed by state and federal governments. Current regulations allow for broad-based, uniformly imposed taxes on health care providers where collections from taxes and assessments equal 6.0% or less of Medicaid net patient revenue in the state. In the GRT Output sheet, there is a current calculation of taxation of the industry (currently estimated at 4.2%) where any changes that the user makes that affect GRT paid by the health care industry will flow into the numerator so that the user can assess whether the total taxation of the health care industry is below the legally-required 6% of net patient revenue.
- **Impacts on businesses.** The model shows the gross receipts affected that can be attributed to businesses, and it also estimates the change in the business share of gross tax by industry.
- **Impacts on households.** The model provides distributional effects of the policy change by household income level. These estimates may be customized by adjusting the percentage of receipts attributable to households versus businesses, by adjusting expenditure as a share of income by income level, and by adjusting the share of expenditure categories distributed across industries and household income levels.

- **Sensitivity.** The model permits both the exemptions and deductions to be changed by a percentage (25% decrease to 25% increase, in 5% increments) to assist in the understanding of the sensitivity of revenue to the total policy change.
- **Five-year forecast.** The model compares the state tax revenue generated by the baseline and policy change. The growth rates for gross receipts and each of the five credit amounts can be adjusted in this tab, along with the effective tax rate.

2.4 Limitations

The reader should note several limitations with respect to the GRT model:

- The GRT model uses several data sources, including the IMPLAN economic model database, which is derived from Bureau of Economic Analysis input-output data. The IMPLAN data has several features that require adjustments in order for it to be useful in the estimation of the gross receipts tax base. The IMPLAN data used in the GRT model is economic output by industry. Economic gross output, as defined in the national accounts, is the total value of production in each sector including the cost of that sector's intermediate input purchases. For certain sectors, namely trade and financial services, gross economic output is defined as a margin concept. For trade sectors, gross economic output reflects the gross margin of wholesalers and retailers. For financial services, gross economic output reflects the margin of the financial services provided including net interest for depository institutions and net premiums after expected claims for insurers. Because these margin concepts do not align with the definition of gross receipts subject to tax in New Mexico, adjustments are required to impute a tax base.
- The model reflects simplified incidence assumptions rather than the estimated final (economic) incidence of the tax. While taxes are ultimately borne by individuals through their roles as capital owners, labor suppliers, or consumers, the GRT model assigns the tax liability to businesses and households based on the purchaser of the good subject to tax. The tax on each good and service included in the model is assigned to households and businesses based on their respective shares of purchases and the taxability of those purchases. Because the taxes that are paid on business transactions will ultimately be shifted to labor, capital, or consumers, the distributional effects that are reflected in the model understate the effect of tax policy changes on households.
- Data provided by TRD around the value of current exemptions and deductions was limited as not every statutory exemption and deduction is estimated. Currently only about half of the value of exemptions and deductions are estimated in the individual exemption/deduction section of the model. The model includes the ability to choose to repeal a certain percent of exemptions or deductions from an industry (0% to 100%), and for the user to model specific exemptions and deductions if the amount of gross receipts and industries affected are known. In most cases this would require the user to make a separate calculation of the amount of gross receipts impacted by the desired policy change and to figure out which types of businesses, and their 4-digit NAICS industries, would be affected.

- TRD expressed some reservations about the accuracy of certain types of data reported by taxpayers. This was true for deductions for sales to manufacturers as the amount reported by TRD was $64 million in 2016 but using other data sources would imply a much larger set of deductible transactions to manufacturers. We estimated potentially $434 million in deductions. TRD also expressed that for some of the deductions they could not disaggregate the amount claimed from one deduction to the next since their reporting system aggregated the deductions claimed. Separate reporting around anti-pyramiding deductions, for example, would allow the state to better model policy changes introduced by legislators.
- Another limitation is that data from the consumer expenditure survey used for estimating household effects of policy changes is at a national level since it is unavailable at the state level for New Mexico. This means that the average income within income groups, and average expenditures per household of different income levels, estimated in the household effects analysis, is based on national level data. The user can modify this and change expenditures as a share of income or the distribution of types of expenditures by category if they have better information on the expenditures and incomes of New Mexico households.
- During conversations with employees in the New Mexico Medical Assistance Division, we were told that there was no official calculation for whether the state is below the requirement that taxes on providers be less than 6% of net patient revenue. We were also told there was no uniform definition across the states as to what exact provider taxes and assessments should be included in the numerator. We were told they thought the state's provider taxes were equivalent to 5.5% of net patient revenue. Therefore, we had to find our own data sources and construct this calculation. We used data from the 2016 Annual Report of the Office of Superintendent of Insurance. This listed types of revenue in FY 2016. We included in the numerator revenue from insurance premium taxes with an estimate for health insurers, insurance premium surtaxes, and assessments. Revenue from these three sources totaled $225 million in FY 2016. We then divided this by total Medicaid spending in New Mexico in 2016 of $5.4 billion, which did not include administrative costs. Our calculation at 4.2% is lower than the 5.5% that the Medical Assistance Division told us.

3. Personal Income Tax model

3.1 Description of data

Data used in the model consist of a tabulation of personal income tax return data for tax year 2015 provided by the New Mexico Taxation and Revenue Department (TRD). Only returns with positive taxable income were included.[43] To create the tabulation, returns were partitioned into twenty groups based on filing status, whether the filer itemized deductions, whether the tax was calculated using form PIT-B, and whether the taxpayer filed his or her federal return using form 1040EZ. Once partitioned, returns in each group were ranked into percentiles by federal adjusted gross income (AGI), then return line items were averaged across all returns in each percentile group. Thus, each row of tabulated data represents return averages for 1 percent of all returns in the given partition, from five to 1,758 taxpayers. Table 16 below summarizes the returns tabulated for each partition.

Return line items tabulated include monetary and count (e.g. numbers of exemptions) items, plus indicators for check boxes (e.g. for blind and age 65+ taxpayers). Return forms from which line items were included are forms PIT-1 Personal Income Tax Return, PIT-ADJ Schedule of Additions & Deductions and Exemptions, PIT-B Allocation & Apportionment of Income Schedule, and PIT-RC Rebates and Credits Schedule.

[43] Returns for which deductions and other adjustments exceed income would report zero rather than negative taxable income, and their inclusion would thus introduce inaccuracy into the tabulation and model results.

Table 16. Summary of PIT Model Data
Millions of dollars

Partition	Filing Status	Deduction Type	Number of Returns	Share	Total Fed AGI ($ *millions*)	Share
Non-PIT-B Filers:						
1	Single	Std	175,706	25.3%	$5,647.4	4.4%
2	Single	Std (1040EZ)	45,902	6.6%	1,395.7	1.1%
3	Married Joint	Std	117,513	17.0%	8,950.9	7.0%
4	Married Joint	Std (1040EZ)	3,804	0.5%	$236.8	0.2%
5	Married Separate	Std	3,972	0.6%	164.2	0.1%
6	Head of Household	Std	52,181	7.5%	2,202.6	1.7%
7	Single	Item	62,142	9.0%	4,823.1	3.8%
8	Married Joint	Item	91,452	13.2%	14,113.6	11.0%
9	Married Separate	Item	2,579	0.4%	202.3	0.2%
10	Head of Household	Item	14,662	2.1%	1,164.4	0.9%
Subtotal			**569,913**	**82.2%**	**$38,901.0**	**30.4%**
PIT-B Filers:						
11	Single	Std	23,634	3.4%	$1,042.2	0.8%
12	Single	Std (1040EZ)	4,879	0.7%	298.8	0.2%
13	Married Joint	Std	22,425	3.2%	2,016.0	1.6%
14	Married Joint	Std (1040EZ)	495	0.1%	31.7	0.0%
15	Married Separate	Std	726	0.1%	57.3	0.0%
16	Head of Household	Std	3,921	0.6%	221.4	0.2%
17	Single	Item	17,787	2.6%	14,663.6	11.5%
18	Married Joint	Item	45,353	6.5%	64,429.9	50.3%
19	Married Separate	Item	1,356	0.2%	4,889.2	3.8%
20	Head of Household	Item	2,717	0.4%	1,414.1	1.1%
Subtotal			**123,293**	**17.8%**	**$89,064.4**	**69.6%**
Total			**693,206**	**100%**	**$127,965.4**	**100%**

Source: Authors summary of personal income tax aggregate data provided by New Mexico Taxation and Revenue Department, 2017

3.2 How the model works

The model is built using Microsoft Excel and includes worksheet tabs for the raw data, three model-calculations tabs, three tabs for inputting hypothetical tax parameters needed for model calculations, summaries of model results, graphical presentation of certain results, and application of model results to consensus revenue forecasts to project fiscal effects of tax change scenarios. A tab defining the data partitions is also provided.

The three model-calculations tabs and their respective purposes are as follows:

- **Pre-TCJA Sim** – This tab utilizes the raw data to generate a clean baseline to which the parameters reflecting changes resulting from conformity to the federal Tax Cut and Jobs Act (TCJA) can be applied in the next step. It includes some recalculations of reported

line item amounts for the purpose of error checking the raw data, but in general assumes the tabulations of reported amounts in the raw data are reliable. Some exceptions, where it substitutes calculated amounts for reported amounts for certain tax return line items (or in one case, generates a variable not included in the raw data, but which is needed for further simulation capabilities), include the following:

- For partitions 2, 4, 12, and 14 (the 1040EZ filers), personal exemption and standard deduction amounts in the raw data are combined and reported on returns as one line item. To facilitate the modeling of hypothetical changes to these tax parameters, the model splits the single reported amount back into its component parts. See the columns for lines 12 and 13 of the PIT-1.
- The low-/middle-income exemption (PIT-1 line 14) is recalculated to create a comparable baseline for modeled changes. In the vast majority of cases, the recalculated amount is the same as the tabulated amount from the raw data, but in some there were differences that could bias the simulation results if the parameters determining that exemption are (hypothetically) being changed, potentially causing the simulation to under- or overstate the effects of the changes.
- Line 16a of the PIT-1, the medical care expense amount used to determine the medical care expense deduction (line 16), was not included in the data provided by TRD, but is easily calculated from the deduction amount based on the current law parameters for that deduction, taken from the corresponding worksheet in the PIT-1 instructions. In the event that a hypothetical tax change includes changes to those parameters, the line 16a amount would be needed to calculate the new, pro forma deduction amount.

· **Post-TCJA Sim** – This tab adjusts certain parameters for changes arising from the TCJA, including increases in standard deduction amounts and elimination of personal exemptions (along with the phase-out thereof), and also enables the user to make adjustments to itemized deduction amounts to reflect the new law. TCJA eliminated the itemized deductions for casualty and theft losses, and for miscellaneous deductions subject to the 2 percent floor (e.g. unreimbursed employee business expenses). It also increased the limitation on charitable contribution deductions, lowered the limits on deductible mortgage interest, and temporarily lowered the floor for the medical expense deduction (increase the amounts deductible). Perhaps most importantly, TCJA imposed a $10,000 cap on the deduction for state and local taxes paid, the so-called state and local tax (SALT) deduction. This change would not only reduce the amount of itemized deductions reported (in total) on New Mexico tax returns, but would also reduce the amount of the SALT addback on line 10 of the PIT-1 for some or all of the state income taxes deducted.

  In order to create a baseline against which to evaluate hypothetical tax changes, it is necessary to account for the effects of these TCJA changes to the extent possible. However, the data available for the tabulation provided by TRD did not include any

details of itemized deductions, which details do not appear on any New Mexico return form, so the model cannot be made to make adjustments directly, based on the particular deduction types. Instead, the model allows the user to input assumptions, based on a separate analysis of itemized deduction data, for adjustments to the reported itemized deduction and SALT addback amounts.[44]

This simulation also accounts for the likely switching by some taxpayers, as a result of the TCJA, from itemizing to taking the standard deduction. For any itemizer group where the pro forma itemized deductions after adjustment for TCJA limitations falls below the new standard deduction amount, the group is assumed to switch, taking the standard deduction instead. For the groups that switch, the SALT addback is zeroed out as well.

- **Tax Change Sim** – This tab uses the Post-TCJA model as a base from which the various hypothetical tax parameter changes can be modeled.

The key tabs for inputs to the simulations are as follows:

- **Worksheets-Tables** – This tab includes key parameters of the state's tax structure and allows users to modify those parameters to simulate a particular tax change scenario or proposal. Parameters included are:
    - Personal exemption amounts
    - Standard deduction amounts
    - Low-/middle-income exemption worksheet parameters
    - Medical expense deduction worksheet parameters
    - Tax rate schedules (graduated rates and bracket thresholds)

  For each of these tables of parameters, there are three versions: parameters applicable prior to passage of the TCJA, those applicable after passage of TCJA, and those reflecting hypothetical tax changes being modeled. It is the latter set of (highlighted) parameter tables where the parameters can be entered by the user. For the tax rates and brackets table, the hypothetical tax changes that can be accommodated include adding up to three additional brackets to the graduated rate structure.
- **ID Adj** – This tab allows the user to input assumptions for adjustments to the reported itemized deduction and SALT addback amounts, both for the post-TCJA simulation and for further hypothetical adjustments as part of a tax change simulation.
- **Tax Expend Items** – This tab allows the user to toggle off or adjust select tax expenditure items that appear as line items on the New Mexico return forms. Items included are the twenty adjustments (additions and subtractions) to federal adjusted

[44] It is the authors' understanding that TRD possesses itemized deduction data from the federal schedule A, presumably provided by the Internal Revenue Service, but that these data are stored separately from the New Mexico forms data. These data should be tabulated in a similar fashion to the data used in the model (eight partitions by filing status of PIT-B and non-PIT-B filers, ranked into percentile groups) and used to estimate the net percent change for each filer group affected as well as the percent change in the SALT addback for line 10. These estimates would then become inputs for the model (see discussion of the ID Adjustment tab in this section). It should be noted that these data were not available for use in building the model and that analysis of TCJA effects is beyond the scope of this project.

gross income (AGI) reported on form PIT-ADJ, two credits claimed directly on the PIT-1 (the credit for taxes paid to another state and the working families credit), the totals of non-refundable and refundable business-related credits from form PIT-CR (PIT-1 lines 21 and 26, respectively), and the six rebates and credits reported on form PIT-RC. Users may model a full repeal of any item, or model a uniform increase or decrease in the amount of any item (e.g. a 50 percent increase or reduction in a specific credit).

The **Sim Summary** tab includes tables summarizing key amounts from each of the model-calculations tabs. The final summary table also summarizes the changes in net tax liability for each partition of the data as well as overall, including showing the changes in tax in percentage terms from the 'Part-TCJA Sim' baseline.

The **Revenue Effects** tab utilizes the latest available consensus forecast of state personal income tax revenues as the baseline against which tax change simulation results are applied to estimate impacts on future revenues of the proposed changes. The consensus forecast can be updated as needed by the user. This tab applies the modeled results of a given tax change scenario to the baseline consensus forecast of state income tax revenues to estimate the scenario's impact on state revenues over the forecast window, subject to adjustments reflecting the effective date of the proposed changes. Depending on the nature of the change, assumptions about the timing of the ultimate impact on revenue collections may differ, so this tab enables the user to change those timing assumptions.

The user is able to choose the period in which a simulated set of tax changes would take effect and to modify assumptions about how changes in tax liabilities on a tax year basis are expected to filter through to tax collections or revenue on a fiscal year basis. For example, tax changes that are likely to affect collections primarily through taxpayers changing their withholding or estimated tax payments would likely impact collections fairly evenly over the tax year, and thus impact revenues over both the fiscal year ending June of the tax year (the trailing fiscal year) and the one beginning July of the same tax year (the forward fiscal year). On the other hand, if the change is one likely to only affect collections at the time of filing returns, the revenue effect would fall primarily in the forward fiscal year, with some possibly spilling over to the next year if taxpayers take extensions in time to file or subsequent years if credits are carried forward.

Finally, a **Distributional Graphs** tab is also provided to present the distributional nature of model results, showing how tax burdens differ across income levels. It presently includes graphs showing average effective tax rates (AETRs) at different levels of income. AETR is measured as tax liability net of all credits divided by AGI. Graphs are included reflecting this calculation on a pre-TCJA, post-TCJA, and simulated-tax-changes basis. Additional graphs show changes in AETRs across the simulated results, pre-to-post-TCJA and post-TCJA to the given tax change scenario. Additional graphs may be added as needed.

3.3 Limitations

As noted above, it was necessary to remove returns with negative taxable income (deductions and adjustments more than offsetting AGI) from the data prior to tabulation. To the degree that tax change proposals being modeled include reductions in exemptions or deductions that could

result in these filers having positive taxable income under that scenario, the revenue gains from the proposed change would be understated.

More importantly, because the data available from TRD only included line items from New Mexico return forms, details for itemized deductions and other items that appear only on federal forms are not included in the tabulation. Thus, it is impossible to model directly the state income tax effects of changes to these items, including under the TCJA. In addition to the changes to itemized deductions discussed above, the TCJA also eliminated the moving expense deduction, which appears on the federal form 1040 as an adjustment to income above the AGI line.

While the model does allow for the adjustment of total itemized deductions by filer group to reflect estimated effects of those TCJA changes, it was not possible to model the elimination of the moving expense deduction. Fortunately, this deduction is claimed by few taxpayers and the aggregate amount deducted is small, at least nationally. Only 0.75% of federal filers for the 2015 tax year claimed a deduction for moving expenses and the aggregate of all such deductions was less than 0.04% of aggregate AGI.

Other limitations arise from the tabulated nature of the data, as opposed to modeling on an individual taxpayer level. For example, because most tax credits are taken by relatively few taxpayers within any given group of filers represented by a row in the tabulation, it is not possible to model changes in such credits as precisely as one might prefer. Increases in a nonrefundable credit, for example, may go unutilized if the taxpayers receiving it have too little tax liability to offset with the credit. But, because the credits taken by some taxpayers are averaged with zeros for those who don't receive the credit, it may appear from the data that the credit increase could be fully utilized when that is not the case in reality. This limitation applies similarly to increasing deductions; taxpayers with taxable income smaller than the increase in the deduction receive only partial (or no) benefit.

More generally, because the tabulation rows represent, in most cases, averages across many taxpayers, variations in line items other than AGI are blurred or lost, limiting the model's ability to show disparate impacts of a given proposed change across filers in the same partition and income percentile group. Thus, the user's ability to gauge horizontal equity effects of a proposed change are somewhat limited. The blurring of the variations in tax credits and deductions across many taxpayers also reduces the precision of estimates of the effects of changes in these items.

3.4 Options for improving PIT model

Ideally, simulations of adopted or proposed tax changes would be done using individual taxpayer data. Subject to the technological capabilities of TRD, there are ways, within the bounds of IRS information security regulations (IRS publication 1075), to get close to individual data by merging state and federal data files while "blurring" (averaging) monetary line item amounts across several otherwise-similar taxpayers to avoid disclosing actual return information of any taxpayer. This would be similar to the currently-available, tabulated data except that 1) federal form items could be included and 2) the tabulation would be much finer. The cost would be that the number of observations or rows, now representing individual rather than multiple filers, would exceed the current capabilities of Microsoft Excel (1.048 million rows in Excel 2016).

Options for improvement within the existing Excel framework include the following:

- If TRD is unable to merge state and federal return data so as to include the latter in the tabulated data, federal Schedule A items could be tabulated separately and the resulting tabulation added to the existing spreadsheet, tied into the ID Adj tab to drive the percentage adjustments by partition and percentile rank. Obtaining such a separate tabulation is recommended now for use in arriving at the assumptions for the ID Adj tab, but once the tabulation is obtained, it could be added to the model without great difficulty.
- The number of partitions could be expanded to add back filers with calculated taxable incomes of less than zero. Some of these filers may be eligible for rebates or refundable credits, even though they have no tax liability under pre-TCJA law. Likewise, as noted before, some of these filers could be affected by hypothetical tax changes that increase taxable income compared to pre-TCJA law, provided the increase is large enough to make their taxable income positive. The partitioning in terms of filing status and whether the returns utilize form PIT-B for the tax calculation would need to be the same as for the existing tabulation, but the ranking would likely need to be coarser than percentiles to avoid groups with too few filers to be disclosed. The existing model would simply need to be modified by adding rows (copying formulas as needed) in the simulation and simulations summary tabs, as well as the raw data tab, and adding columns as needed to the ID Adj tab.
- Finally, for partitions with sufficiently-large numbers of filers, the numbers of income-ranked groups could be increased without running afoul of state disclosure rules. For example, the single, non-PIT-B filers taking the standard deduction total over 175 thousand, resulting in filer groups of 1,757 for each percentile ranking. Instead of percentiles, larger groups could be ranked by permilles (1000 quantiles) or some other quantile greater than 100 in order to capture more variation in return data cross filers.

4. Pyramiding and Distributional Effects Discussion

4.1 Pyramiding

Pyramiding refers to the obligation of a tax on a tax, i.e., the same base is repeatedly taxed. In a state gross receipts tax system, tax pyramiding is a function of the number of transactions in a chain of production, the extent to which goods and services are sourced from within state borders, and the level of value added at each stage of production. In other words, pyramiding occurs in a system when there are several transactions bringing a good or service to the ultimate consumer with a supply chain that is subject to the tax. When an input good is taxed, it raises the subsequent price of that input as it moves through the supply chain and is part of the next transaction; as a result, goods and services with more stages of production and less vertical integration will have a higher degree of pyramiding.

Potential economic consequences of pyramiding in a tax system

Pyramiding can have the following negative consequences:

1. **Lack of transparency and economic distortions:** Total tax rates on goods and services are not visible; certain items may be taxed at a higher effective tax rate on value-added than is observable due to taxes collected at prior stages of production which are embedded in input prices.
2. **Differential and higher effective tax rates:** Pyramiding results in different overall effective tax rates for each industry. Industries that make intensive use of inputs from other sectors are impacted most. Pyramiding and multiple taxation result in overall effective tax rates on goods that are higher than the statutory rate.
3. **Incentives to vertically integrate:** Pryamiding incentivizes companies to vertically integrate and to favor goods with fewer stages of production to escape the pyramiding tax.

Benefits of pyramiding in a tax system

Tax pyramiding can also have some benefits from a revenue collection standpoint:

- **Lower administrative burden:** A system with higher pyramiding may avoid complicated deductions that increase administrative burden.
- **Increased revenue:** New Mexico depends on the GRT revenue collected by state and local governments, which for any given statutory rate is higher as a result of pyramiding and multiple taxation that arises from business inputs.
- **Ability to keep statutory rate low:** The revenue raised by pyramiding contributes to a lower general statutory tax rate. In general, a low statutory tax rate reduces tax avoidance and evasion and increases compliance.

Challenges to estimating tax pyramiding accurately

The most significant obstacle to estimating tax accurately in any system is the lack of data on goods and services sales between businesses. Since pyramiding occurs due to the accumulation of taxes in different stages of production, it is necessary to track purchases throughout the supply chain to fully capture the impact of pyramiding. However, such level of information is not available, and it becomes challenging to calculate the degree of pyramiding within any system accurately.

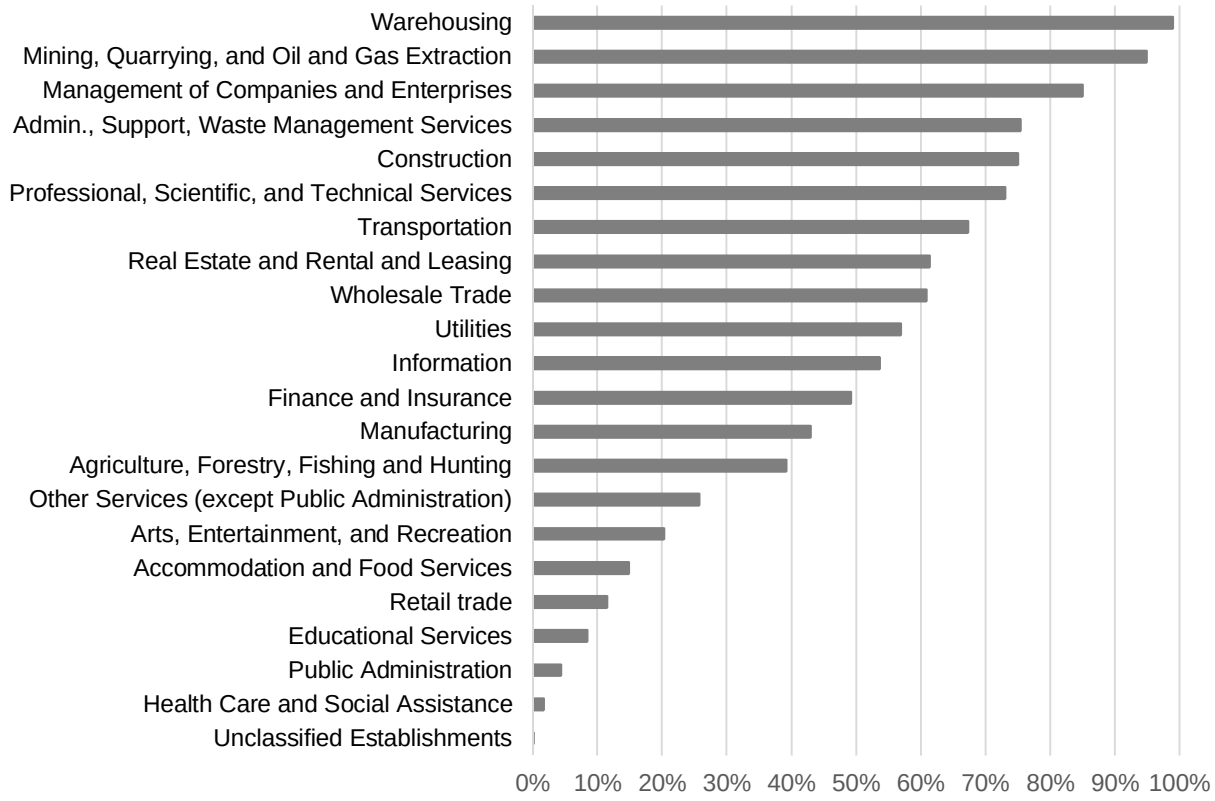
Business share of gross receipts taxes

The GRT Model divides gross receipts into sales to businesses (“business share”) and sales to households (“household sales”). Data from the New Mexico 2015 IMPLAN model was used for this analysis. A make-use matrix was used to estimate sales by an industry to other businesses that was using the good or service as an input (intermediate purchase) and sales to households as a final product. Capital and inventory final demand were assigned as business purchases. The IMPLAN data has several limitations. One limitation is that the definition of gross economic output

does not align perfectly with the definition of receipts used in computing the GRT base. Another is that because the input-output matrix is establishment based, certain transactions between establishments within the same company may be captured erroneously.

Figure 12 shows the estimated share of sales of each industry to business customers. As shown in the figure below, the industries with the greatest share of their sales to businesses were warehousing; mining, oil, and gas extraction industries; management of companies and enterprises; and other support services for business such as administration, support, and waste management, and professional, scientific, and technical services. Industries with low shares of business sales include health care and social assistance, educational services, accommodation and food services, and retail trade. Pyramiding, or multiple taxation of the same value of a good, occurs when the GRT is levied on the receipts from a sale of a business input used to produce a good that is subsequently subject to tax. For example, the GRT levied on sales of inputs to hospitals would generally not result in pyramiding because hospital receipts are generally not subject to tax, however the GRT levied on receipts from sales of inputs to restaurants selling taxable meals would generally result in pyramiding since the value of the input would effectively be taxed twice and there would be some amount of tax on a tax.

Figure 12. Estimated share of sales to businesses by industry



Source: EY analysis using 2015 IMPLAN model of New Mexico

Table 17 shows the estimated purchases by businesses and potential tax on these purchases if all sales ($46.2 billion) were taxable by the GRT. We estimated that exemptions and deductions applicable to business purchases reduced taxable gross receipts from $46.2 billion for business

purchases to $20.7 billion in taxable gross receipts. Five main anti-pyramiding provisions were modeled (and estimation methodology discussed in Section 2.2.) These anti-pyramiding provisions were estimated to reduce taxable gross receipts by $17.9 billion in FY 2016.[45] The estimated anti-pyramiding provisions do not include deductions and exemptions that apply to specific industries, such as exemptions related to livestock and agricultural products. Businesses benefit from exemptions and deductions that are not specifically designed to curtail pyramiding, such as the deduction for retail purchases of food.

Due to statutory anti-pyramiding provisions, and other deductions and exemptions that apply to business purchases, an estimated 55% of purchases made by businesses were excluded from the GRT tax base in FY 2016, reducing the potential tax of $2.0 billion levied on businesses to an estimated tax of $894 million.

Table 17. Estimates of reduction in New Mexico Gross Receipts Tax due to anti-pyramiding and other tax provisions, FY 2016
Millions of dollars

Selling industry	Purchases by Businesses	Business Potential Tax	Estimated Business Tax	Tax Reduced
Agriculture, Forestry, Fishing and Hunting	$1,340	$58	$2	$56
Mining, Quarrying, and Oil and Gas Extraction	$2,860	$123	$92	$31
Utilities	$1,721	$74	$61	$13
Construction	$6,975	$300	$194	$106
Manufacturing	$2,353	$101	$26	$75
Wholesale Trade	$2,566	$110	$49	$61
Retail trade	$1,068	$56	$56	$0
Transportation	$1,777	$76	$17	$60
Warehousing	$722	$31	$2	$29
Information	$2,481	$107	$55	$52
Finance and Insurance	$3,961	$170	$6	$165
Real Estate, Rental and Leasing	$6,113	$263	$32	$231
Professional, Scientific, Technical Services	$6,808	$293	$187	$105
Management of Companies and Enterprises	$870	$37	$0	$37
Admin., Support, Waste Management	$2,604	$112	$41	$71
Educational Services	$43	$2	$1	$1
Health Care and Social Assistance	$115	$5	$2	$3
Arts, Entertainment, and Recreation	$285	$12	$2	$10
Accommodation and Food Services	$577	$25	$24	$1
Other Services (except Public Administration)	$813	$45	$45	$0
Public Administration	$149	$6	$1	$5
Unclassified Establishments	$0	$0	$0	$0
Total	**$46,201**	**$2,007**	**$894**	**$1,112**

Source: Authors analysis using 2015 IMPLAN Model of New Mexico and RP-80 data for FY 2016

[45] A 2005 report titled *Pyramiding Transaction Taxes in New Mexico*, by Manuel del Valle using data provided by TRD, estimated that these four deductions accounted for 83% of lost revenue due to anti-pyramiding provisions in the GRT. The report does not include the deduction for the resale of tangible personal property (7-9-47) as an anti-pyramiding deduction.

Industries with a significant reduction in taxable gross receipts for businesses include:

- **Agriculture, Forestry, Fishing, and Hunting**: there are a number of statutory provisions that exempt certain gross receipts within this industry, such as an exemption for livestock feeding.
- **Management of Companies and Enterprises**: Sales to affiliates or the re-sale of services are deductible from the gross receipts tax base.
- **Manufacturing**: Deductions in this industry include sales to other manufacturers and to businesses engaged in construction.
- **Finance and insurance:** There are deductions for revenue subject to another tax.

Industries with high levels of business sales but few deductions to the tax base include professional, scientific, and technical services, and utilities, mining, and construction services. Industries where households generally purchase the final product, such as retail trade and accommodation and food services, have low levels of business purchases (as a share of all sales) and few deductions.

4.2 Household distributional effects

Gross Receipts Tax

The GRT Model estimates the change in tax burden that occurs for each household income level within different income brackets due to GRT policy scenarios. The analysis reflects the initial incidence of the GRT with shifting of GRT on receipts from sales to households allocated to households. No assumption is made regarding shifting of GRT paid by business, which may be passed forward to customers through higher prices or backward to factors of production.

In general, taxes on destination sales are likely to be passed forward to consumers through higher prices when the receipts are related to consumer sales. The mechanism by which GRT levied on receipts from sales to businesses will be shifted to households is less certain and will vary by industry and based on the other taxes levied in a state. If one considers the GRT levied on receipts of sales of business operating inputs an origin-based tax which is immediately shifted to the business purchasing the input, there are three general outcomes: (1) the tax is shifted to capital owners (either the business owner or owners of capital used in the business); (2) the tax is shifted to labor employed in the business; or (3) the business raises prices and shifts the tax forward to its consumers. Businesses selling into national or global markets, such as manufacturers, have fewer opportunities to shift additional taxes forward to their consumers. Likewise, businesses which are already taxed in New Mexico at an overall rate higher than the US average are also less likely to be able to shift additional taxes to consumers.

The net result of this shifting process is that a portion of the GRT imposed on business transactions is likely borne by New Mexico residents through lower wages, lower returns on investments, or because they pay higher prices on the goods purchased from industries which incurred tax on their purchase of inputs. To the extent the tax is passed to capital owners, upper income households are likely affected disproportionately, and a large portion of the tax is likely exported from the state. To the extent the tax is passed to labor, the distributional impact is likely

allocated across lower and middle brackets. And to the extent the tax is passed forward in higher prices, the distribution of the tax is likely to resemble the overall expenditure distribution but may be slightly more progressive since local industries which have the ability to pass forward the tax are more likely to be service sectors which are consumed disproportionately by higher income households.

Data describing household income distribution in New Mexico comes from the US Census Bureau. The total number of households (~760,000) are distributed across nine different brackets according to their annual household income. Table 18 provides overview of household characteristics used in the household distributional effect analysis.

Table 18. Household income distribution and expenditures used in GRT Model

Income bracket	Total number of households in New Mexico	Mean wages (income before taxes)	Expenditure as share of income
Under $15,000	117,423	$8,383	150%
$15,000 to $29,999	137,605	$22,167	125%
$30,000 to $39,999	71,609	$34,703	117%
$40,000 to $49,999	72,681	$44,589	101%
$50,000 to $69,999	111,431	$59,369	89%
$70,000 to $99,999	109,394	$83,595	79%
$100,000 to $149,999	82,008	$120,512	69%
$150,000 to $199,999	29,206	$170,704	65%
$200,000 or more	26,732	$345,002	44%

Source: U.S. Census Bureau, Consumer Expenditure Survey- Bureau of Labor Statistics
Note: Expenditures as a share of income are based on national Consumer Expenditure Survey data since state data for New Mexico is not available. Expenditures as a share of income are adjusted for the lowest two quintiles of income.

For goods and services consumed by these households, the model distributes consumption of these goods and services to households at different income levels using publicly-available data, such as the Consumer Expenditure (CEX) Survey. The CEX data includes itemized categories of goods and service purchased by different households. CEX categories are consolidated into relevant two-digit NAICS industries. This allowed for the estimation of the change in taxes paid as a share of household income at different household income levels due to a policy change in a particular industry.

Data from the input-output matrix is used to estimate purchases made by households versus businesses, which are then used to estimate corresponding gross receipts taxes on those household purchases (Table 19). Both the household and business shares are shown in the table below. Note that the business share was also shown in Figure 12.

Table 19. Household and business share of New Mexico taxable gross receipts used in GRT Model

Industry/sector	Household share	Business share
Agri., Forestry, Fishing & Hunting	61%	39%
Mining, Quarrying, Oil & Gas Extraction	5%	95%
Utilities	43%	57%
Construction	25%	75%
Manufacturing	57%	43%
Wholesale Trade	39%	61%
Retail trade	88%	12%
Transportation	33%	67%
Warehousing	1%	99%
Information	46%	54%
Finance & Insurance	51%	49%
Real Estate, Rental & Leasing	39%	61%
Professional, Scientific, & Tech. Services	27%	73%
Mgmt of Companies & Enterprises	15%	85%
Admin, Support, Waste Mgmt & Remediation Services	25%	75%
Educational Services	92%	8%
Health Care & Social Assistance	67%	33%
Arts, Entertainment, & Recreation	80%	20%
Accommodation & Food Services	85%	15%
Other Services (except Public Admin.)	74%	26%
Public Administration	96%	4%
Unclassified Establishments	100%	0%
Non-industry: Wages	100%	0%
Non-industry: Residential real estate transactions	100%	0%
Non-industry: Other	50%	50%

Source: EY analysis using 2015 IMPLAN New Mexico input-output data

The share of gross receipts taxes borne by households is further distributed across different income levels using proportions of total expenditures on goods and purchases across different income level from the CEX data described above. Once the additional household gross receipts tax due to a policy change is estimated for different income brackets, EY computed an incremental impact of that tax change as a percentage of their annual income.

An example of a change in tax policy, and how it impacts households at different income levels, is provided below. Figure 13 shows the impact on households in different income brackets if the prescription drugs GRT deduction is removed. Table 20 shows the estimated increase in GRT tax due to the removal of the deduction for prescription drugs. The tax change was then distributed across households at different income levels based on their share of purchases of drugs according to the CEX data.

Table 20. Example of tax policy scenario: distribution of prescription drugs GRT deduction by household income level

	Dollar amount of prescription drugs GRT or GGRT deduction	Allocation of tax change (based on distribution of medical expenses)
Under $15,000	$3,037,804	6%
$15,000 to $29,999	$5,348,544	11%
$30,000 to $39,999	$4,266,804	8%
$40,000 to $49,999	$3,824,088	8%
$50,000 to $69,999	$6,584,607	13%
$70,000 to $99,999	$8,588,642	17%
$100,000 to $149,999	$8,994,864	18%
$150,000 to $199,999	$4,381,555	9%
$200,000 or more	$5,373,735	11%
All households	**$50,400,643**	**100%**

Source: EY Analysis using Consumer Expenditure Survey- Bureau of Labor Statistics. Note: Expenditures as a share of income are based on national Consumer Expenditure Survey data since state data for New Mexico is not available. We adjusted expenditures as a share of income for the lowest two quintiles of income.

Figure 13. Distributional effects of tax burden by household income level (due to removal of prescription drugs GRT deduction)

Source: EY Analysis. Source: EY Analysis using Consumer Expenditure Survey- Bureau of Labor Statistics. Note: Expenditures as a share of income are based on national Consumer Expenditure Survey data since state data for New Mexico is not available. We adjusted expenditures as a share of income for the lowest two quintiles of income.

Appendix

Table 21. Distribution of expenditures by household income levels, from GRT Model (rows sum to 100%)

	Under $15,000	$15,000 to $29,999	$30,000 to $39,999	$40,000 to $49,999	$50,000 to $69,999	$70,000 to $99,999	$100,000 to $149,999	$150,000 to $1999,999	$200,000 or more
Agri., Forestry, Fishing & Hunting	7%	12%	8%	8%	13%	17%	17%	9%	9%
Mining, Quarrying, Oil & Gas Extraction	0%	0%	0%	0%	0%	0%	0%	0%	0%
Utilities	8%	13%	9%	8%	13%	16%	16%	7%	9%
Construction	5%	10%	8%	7%	11%	15%	19%	9%	15%
Manufacturing	6%	11%	8%	8%	13%	17%	18%	9%	11%
Wholesale Trade	6%	11%	8%	8%	13%	17%	18%	9%	11%
Retail trade	6%	11%	8%	8%	13%	17%	18%	9%	11%
Transportation	8%	14%	9%	8%	13%	16%	15%	7%	10%
Warehousing	8%	14%	9%	8%	13%	16%	15%	7%	10%
Information	7%	11%	9%	8%	11%	14%	15%	11%	15%
Finance & Insurance	6%	12%	9%	8%	13%	18%	17%	8%	9%
Real Estate, Rental & Leasing	11%	16%	9%	9%	12%	14%	13%	6%	10%
Prof'l, Scientific, & Tech. Services	8%	14%	9%	8%	13%	16%	15%	7%	10%
Mgmt of Companies & Enterprises	8%	14%	9%	8%	13%	16%	15%	7%	10%
Admin, Support, Waste Mgmt & Remediation Services	8%	14%	9%	8%	13%	16%	15%	7%	10%
Educational Services	8%	11%	4%	3%	7%	11%	17%	11%	28%
Health Care & Social Assistance	4%	10%	8%	7%	11%	16%	20%	11%	13%
Arts, Entertainment, & Recreation	5%	9%	7%	6%	13%	17%	18%	10%	15%
Accommodation & Food Services	5%	8%	7%	7%	12%	17%	18%	11%	14%
Other Services (except Public Admin.)	6%	10%	7%	6%	12%	15%	19%	10%	16%
Public Administration	6%	10%	7%	6%	11%	15%	16%	10%	19%
Unclassified Establishments	4%	9%	9%	9%	14%	16%	18%	8%	13%
Non-industry: Wages	2%	5%	5%	5%	10%	16%	20%	11%	26%
Non-industry: Residential real estate transactions	3%	6%	6%	5%	11%	17%	21%	12%	19%
Non-industry: Non-industry	6%	11%	7%	8%	12%	15%	17%	9%	15%

Source: EY Analysis using Consumer Expenditure Survey- Bureau of Labor Statistics and IMPLAN model of New Mexico. Note: Expenditures as a share of income are based on national Consumer Expenditure Survey data since state data for New Mexico is not available. We adjusted expenditures as a share of income for the lowest two quintiles of income.