

Tax Modeling Update

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Outline

- ▶ Project overview
- ▶ GRT Model
 - ▶ Overview of Modeling Tool
 - ▶ Scenarios
- ▶ Pyramiding analysis
 - ▶ Description of analysis
 - ▶ Key results
- ▶ Personal income tax analysis
- ▶ Questions

1. Project Overview



Project purpose

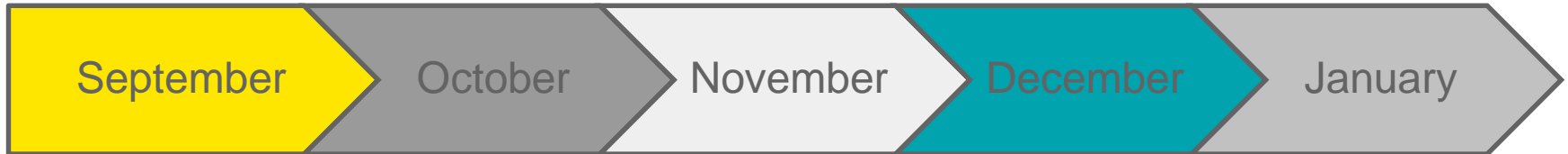
EY was commissioned by the State of New Mexico to:

- 1 Develop a Delivered Model for the Legislative Council Service
- 2 Undertake an analysis of the degree of pyramiding in the gross receipts tax (GRT)
- 3 Analyze the distributional impacts of various tax changes on households and businesses
- 4 Assess the strengths and weaknesses of New Mexico's tax system
- 5 Deliver a report that summarizes the model and major findings

Project components

	Component	Approach	Data Sources
1	Gross Receipts Tax Model	<ul style="list-style-type: none"> Collected data from government and other sources Constructed current law baseline for transactions and taxable gross receipts Estimated specific exemptions and deductions Developed excel tool 	<ul style="list-style-type: none"> IMPLAN Model of New Mexico Economic Census - 2012 State of New Mexico RP-80 data State of New Mexico RP-500 data Tax Expenditure report and data from TRD on tax expenditures CoStar data on non-residential sales in New Mexico National Association of Realtor data on residential sales BLS Quarterly Census of Employment and Wages
2	Personal Income Tax Model	<ul style="list-style-type: none"> Obtained data from the Taxation and Revenue Department to model current taxpayers, components of taxable income, relevant exemptions, deductions, and credits Develop an excel tool that allows for the modeling of changes to the tax rate, rate structure, and exemption, deductions, and credits 	
3	Pyramiding	<ul style="list-style-type: none"> Used IMPLAN I-O data to estimate intermediate business purchases Layered in effective tax rates (share subject to tax) Estimated pyramided tax and degree of pyramiding 	
4	Distributional Analysis	<ul style="list-style-type: none"> Estimate the change in tax burden by income decile for modeled tax changes This analysis takes into account the purchases made by households versus businesses 	

Project timeline (2017-2018)



- ▶ Signed contract
- ▶ Kick-off meeting with LCS
- ▶ Provided data request
- ▶ Received RP-80 data
- ▶ Began data collection from other sources

- ▶ Received RP-500 data
- ▶ Received tax expenditure data from TRD
- ▶ Began drafting GRT model

- ▶ Met with LCS to review draft GRT model
- ▶ Reviewed data questions
- ▶ Revised GRT model
- ▶ Received PIT data

- ▶ Analyze PIT data
- ▶ Draft PIT model
- ▶ Present draft GRT model findings to Legislative Committee

- ▶ Finish delivered model
- ▶ Testing of model
- ▶ Deliver draft report to LCS

2. Gross Receipts Tax Model



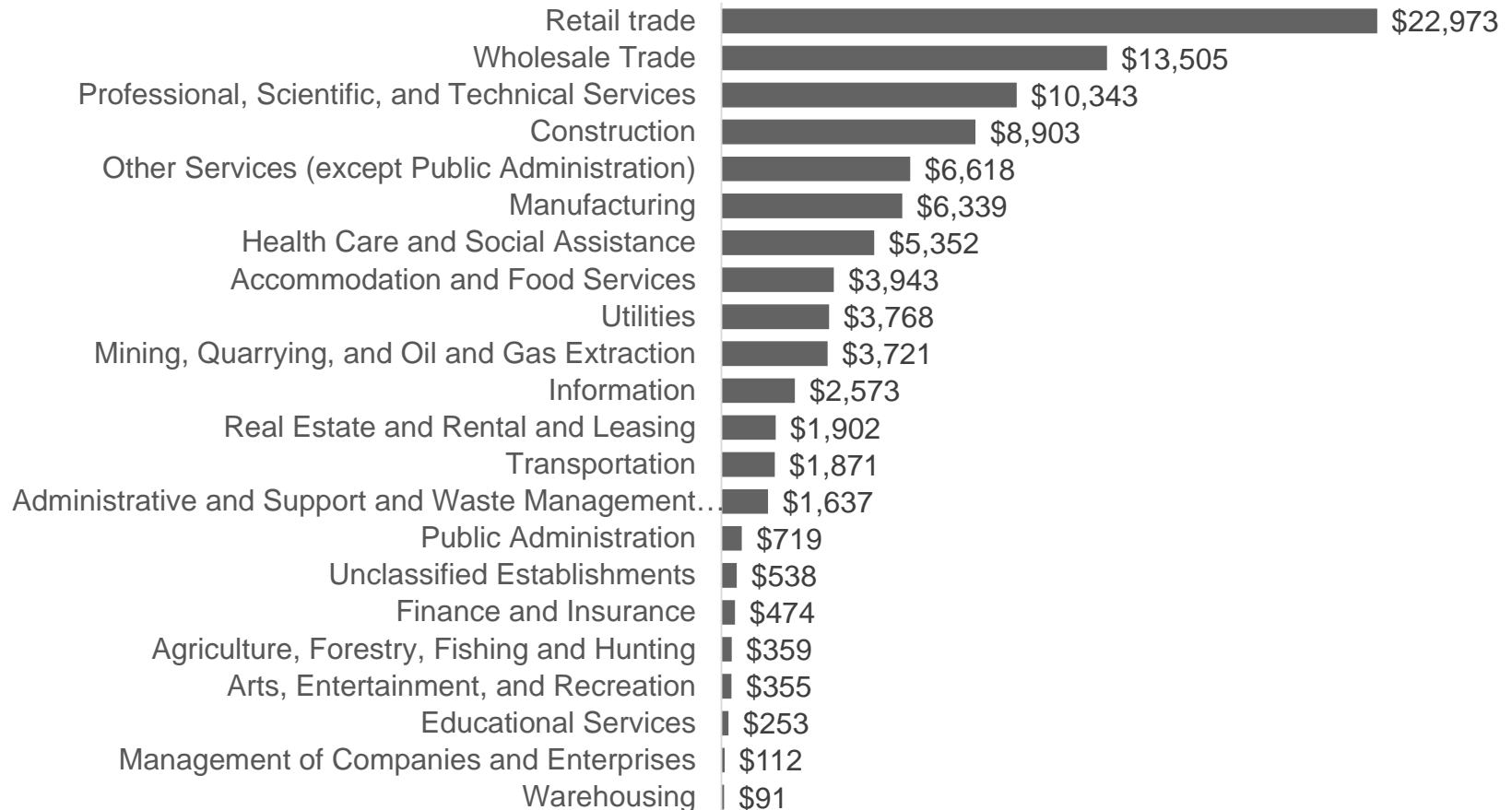
Baseline data in the GRT model

2016 Current law (RP-80) (\$millions)

2-digit NAICS	NAICS description	Gross receipts before deductions	Deductions	Taxable gross receipts	Gross tax before credits
11	Agriculture, Forestry, Fishing and Hunting	\$359	\$261	\$98	\$4
21	Mining, Quarrying, and Oil and Gas Extraction	\$3,721	\$1,468	\$2,252	\$99
22	Utilities	\$3,768	\$1,279	\$2,489	\$109
23	Construction	\$8,903	\$2,885	\$6,019	\$265
31-33	Manufacturing	\$6,339	\$4,930	\$1,410	\$62
42	Wholesale Trade	\$13,505	\$11,636	\$1,869	\$82
44-45	Retail trade	\$22,973	\$11,683	\$11,290	\$496
48	Transportation	\$1,871	\$1,293	\$578	\$25
49	Warehousing	\$91	\$46	\$45	\$2
51	Information	\$2,573	\$190	\$2,383	\$105
52	Finance and Insurance	\$474	\$201	\$273	\$12
53	Real Estate and Rental and Leasing	\$1,902	\$691	\$1,211	\$53
54	Professional, Scientific, and Technical Services	\$10,343	\$4,377	\$5,966	\$262
55	Management of Companies and Enterprises	\$112	\$109	\$3	\$0
56	Admin and Support, Waste Management & Remediation Services	\$1,637	\$368	\$1,269	\$56
61	Educational Services	\$253	\$36	\$217	\$10
62	Health Care and Social Assistance	\$5,352	\$2,830	\$2,522	\$111
71	Arts, Entertainment, and Recreation	\$355	\$109	\$246	\$11
72	Accommodation and Food Services	\$3,943	\$202	\$3,741	\$164
81	Other Services (except Public Administration)	\$6,618	\$2,578	\$4,040	\$178
92	Public Administration	\$719	\$117	\$602	\$26
99	Unclassified Establishments	\$538	\$163	\$375	\$16
TOTAL		\$96,351	\$47,453	\$48,899	\$2,149

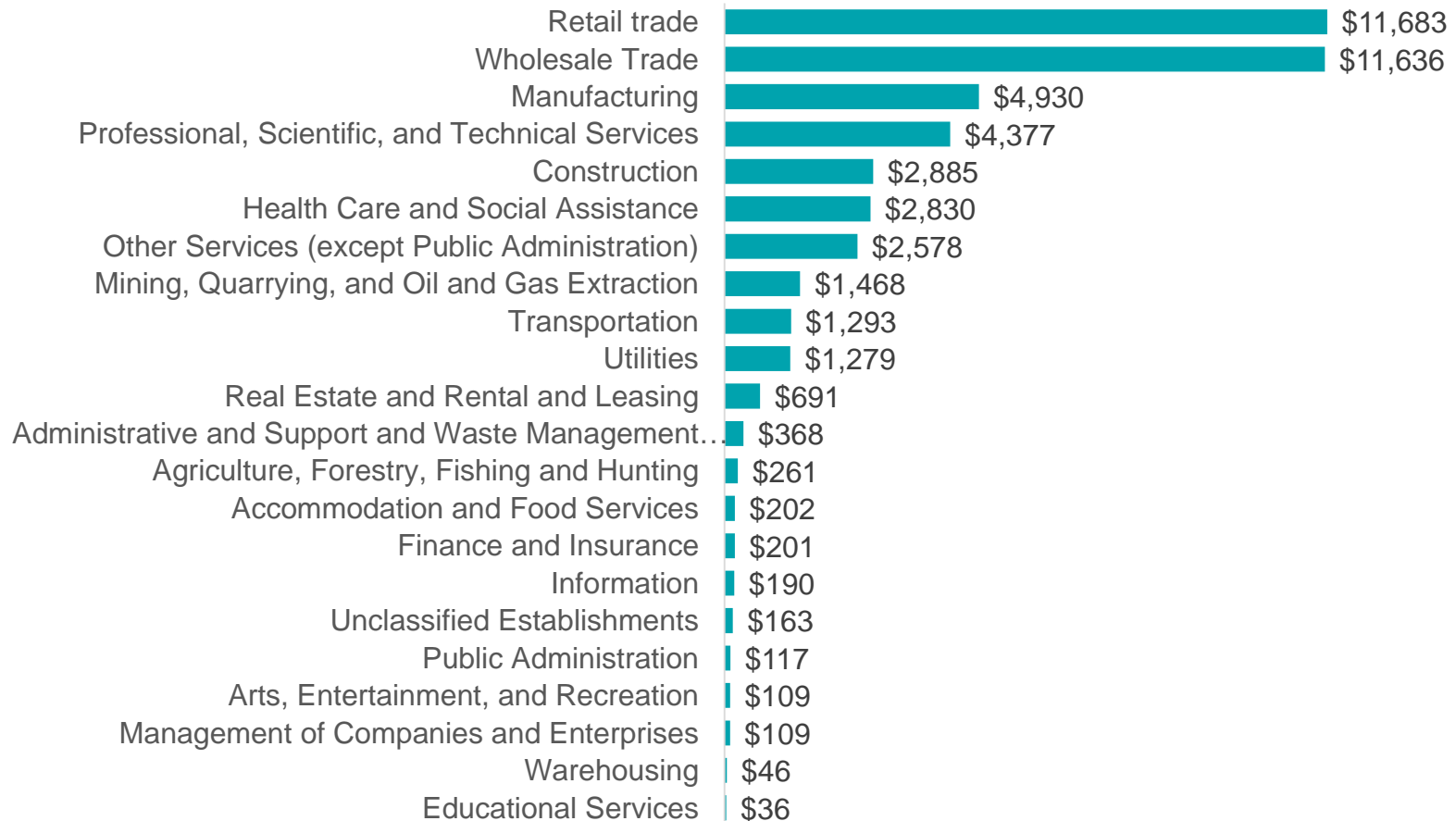
Source: EY analysis using State of New Mexico RP-80 data; data assembled by TRD in September 2017

Top industries by gross receipts (\$millions) – 2016 (industry remitting tax)



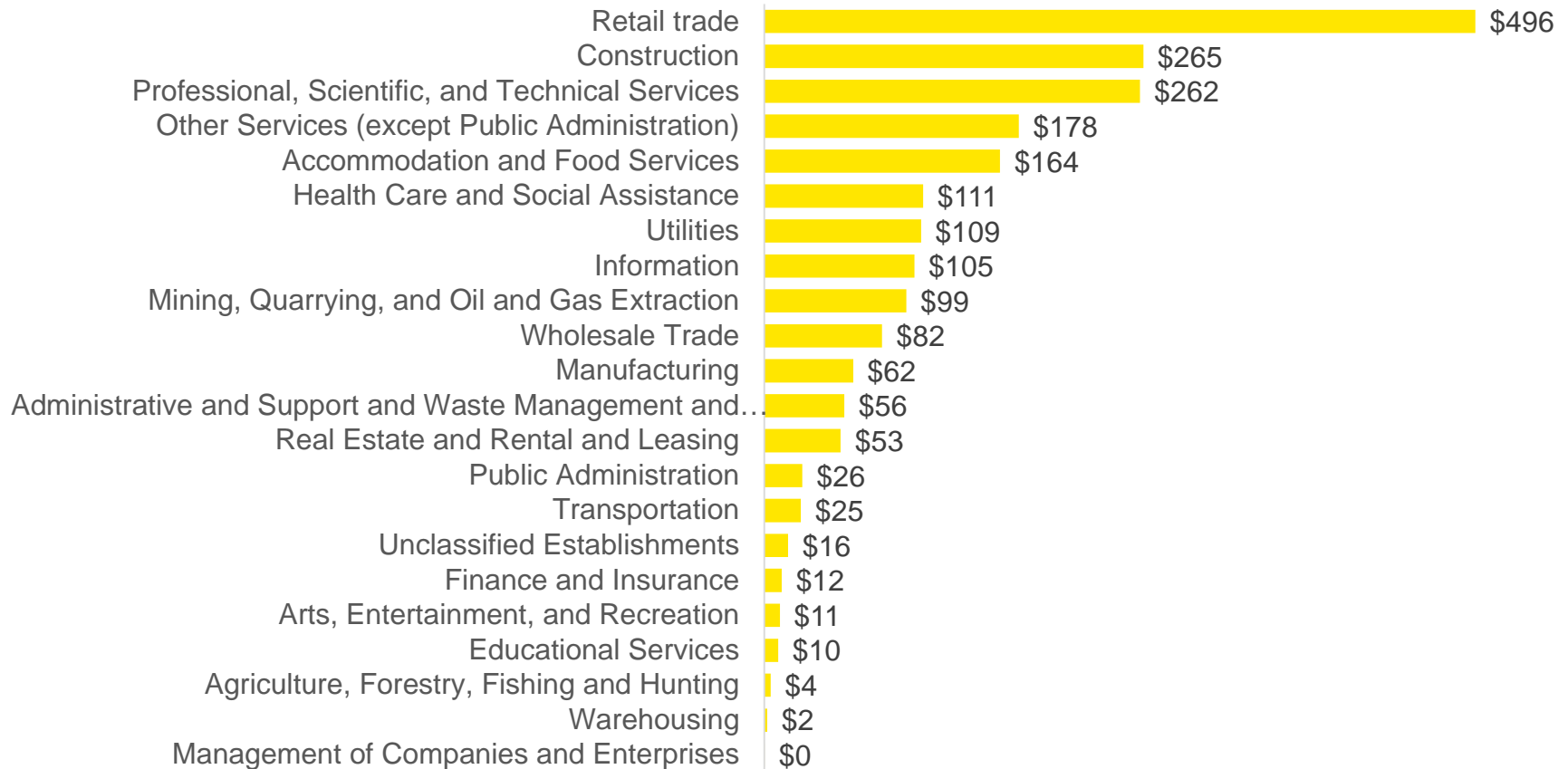
Source: EY analysis using State of New Mexico RP-80 data

Top industries by deductions (\$millions) - 2016



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

Top industries by gross tax (\$millions) – 2016 Current Law Baseline



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

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

NAICS	Industry	Deduction Share
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

Major current exemptions

	Estimated gross receipts
Large current exemptions	
Wages	\$34.4 billion
Residential real estate transactions	\$4.5 billion
Non-residential real estate transactions	\$1.7 billion
Nonprofit health receipts:	
Publicly paid for	\$2.1 billion
Privately paid for	<u>\$1.8 billion</u>
<i>Nonprofit health receipts subtotal</i>	<i>\$3.9 billion</i>
Donations to non-health foundations and nonprofits	\$1.9 billion

Source: EY estimates using BLS QCEW data; National Association of Realtors data; Co-Star data; GuideStar data

Major current deductions

<u>Deduction description</u>	<u>Gross receipts value</u>
Health care deductions	
Health care practitioners	\$1.0 billion
Prescription drugs	\$1.1 billion
Medical services	\$0.9 billion
Hospitals 50% deduction	\$0.2 billion
Sale of food at retail	\$3.0 billion
Anti-pyramiding deductions	
Sales to manufacturers	\$0.4 billion
Sales to construction businesses	\$0.8 billion

Source: EY estimates

Using the model to evaluate potential scenarios

- ▶ Purpose is to demonstrate the capabilities of the model
 - ▶ Show base data in the model that can be updated regularly by LCS
 - ▶ Show sample outputs
- ▶ Not modeling specific bills
 - ▶ Following slides show revenue impacts for specific tax base changes

Hypothetical Scenario 1

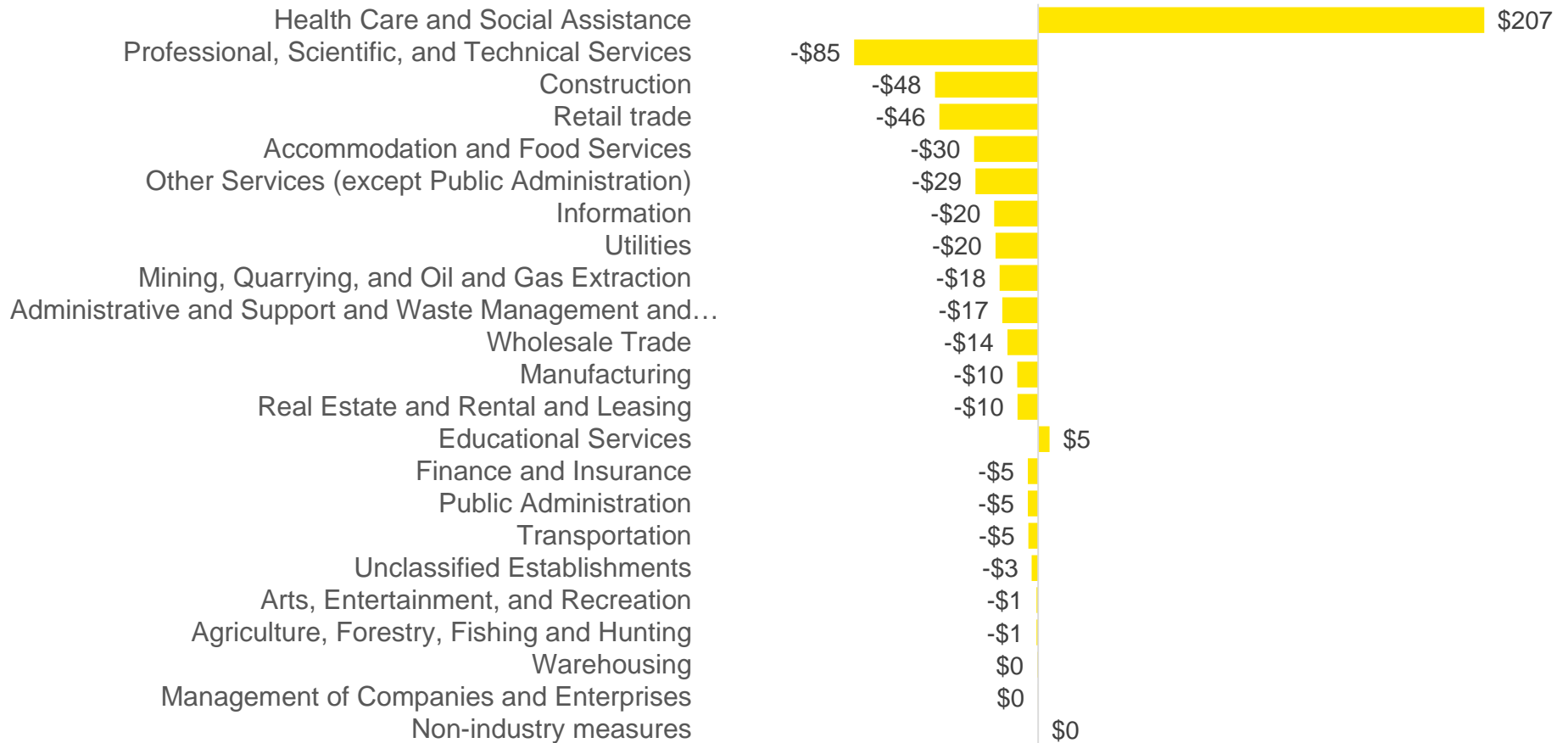
- ▶ Removes B2B tax pyramiding by adding in a deduction on the following:
 - ▶ Legal services
 - ▶ Financial management services
 - ▶ Accounting services
 - ▶ Engineering services
 - ▶ IT services
 - ▶ Human resource services
 - ▶ Temporary employment services
- ▶ Taxes nonprofits by removing exemption and creating a deduction on first \$250K of receipts
- ▶ Eliminates medical hold harmless payments to local governments
- ▶ Broad GRT base to tax healthcare services and products
 - ▶ Repeals the Healthcare practitioners deduction (7-9-93)
 - ▶ Repeals deduction for prescription goods (7-9-73.2)
 - ▶ Repeals Hospitals 50% GRT Deduction (7-9-73.1)
- ▶ Keep deduction for Medical Services paid for through Medicare (7-9-77.1)

Model output for Hypothetical Scenario 1 (\$millions)

Output Table

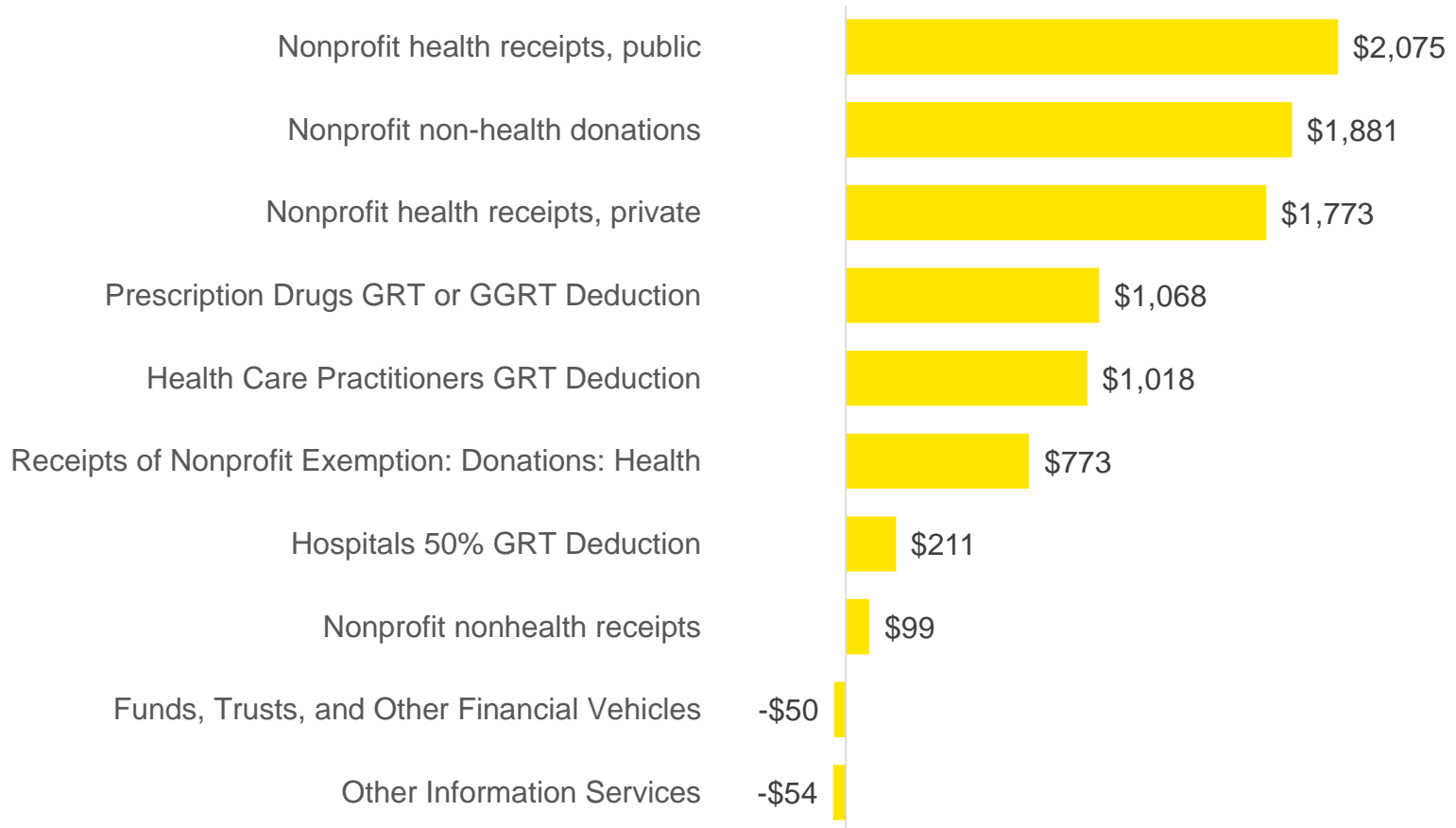
		Current law baseline	With policy changes	Percent change
1/	Statewide gross receipts, before exemptions	\$184,569	\$184,569	n/a
2/	Exemptions	\$88,218	\$82,591	-6.4%
3/	Current tax base, after exemptions	\$96,351	\$101,978	5.8%
4/	Deductions	\$47,453	\$46,537	-1.9%
5/	Taxable gross receipts	\$48,899	\$55,442	13.4%
	<i>Total change in taxable gross receipts from policy changes</i>		\$6,543	
6/	Tax rate	4.4%	3.6%	-18.1%
7/	Tax revenue before credits	\$2,149	\$1,996	-7.1%
8/	Value of credits	\$174	\$174	0.0%
9/	Tax revenue after credits	\$1,975	\$1,822	-7.8%
10/	Tax rate to make policy revenue neutral		3.9%	

Top industries by gross change in tax (\$millions)



Source: EY estimates

Top exemptions and deductions changed



Source: EY estimates

Change in tax before credits by industry (modeled with 3.6% rate change) (\$millions)

2-digit NAICS	NAICS description	Gross Tax Before Credits		
		Current law baseline	With policy changes	Percent change
11	Agriculture, Forestry, Fishing and Hunting	\$4	\$4	-18.1%
21	Mining, Quarrying, and Oil and Gas Extraction	\$99	\$81	-18.1%
22	Utilities	\$109	\$90	-18.1%
23	Construction	\$265	\$217	-18.1%
31-33	Manufacturing	\$62	\$52	-15.7%
42	Wholesale Trade	\$82	\$68	-17.4%
44-45	Retail trade	\$496	\$450	-9.3%
48	Transportation	\$25	\$21	-18.1%
49	Warehousing	\$2	\$2	-18.1%
51	Information	\$105	\$84	-19.4%
52	Finance and Insurance	\$12	\$7	-40.3%
53	Real Estate and Rental and Leasing	\$53	\$44	-18.1%
54	Professional, Scientific, and Technical Services	\$262	\$177	-32.6%
55	Management of Companies and Enterprises	\$0	\$0	-18.1%
56	Administrative and Support and Waste Management and Remediation Services	\$56	\$39	-29.9%
61	Educational Services	\$10	\$15	54.8%
62	Health Care and Social Assistance	\$111	\$318	186.9%
71	Arts, Entertainment, and Recreation	\$11	\$10	-7.5%
72	Accommodation and Food Services	\$164	\$135	-18.1%
81	Other Services (except Public Administration)	\$178	\$148	-16.4%
92	Public Administration	\$26	\$22	-18.1%
99	Unclassified Establishments	\$16	\$14	-18.1%
	Non-industry measures	\$0	\$0	n/a
TOTAL		\$2,149	\$1,996	-7.1%

Source: EY estimates

Hypothetical Scenario 2

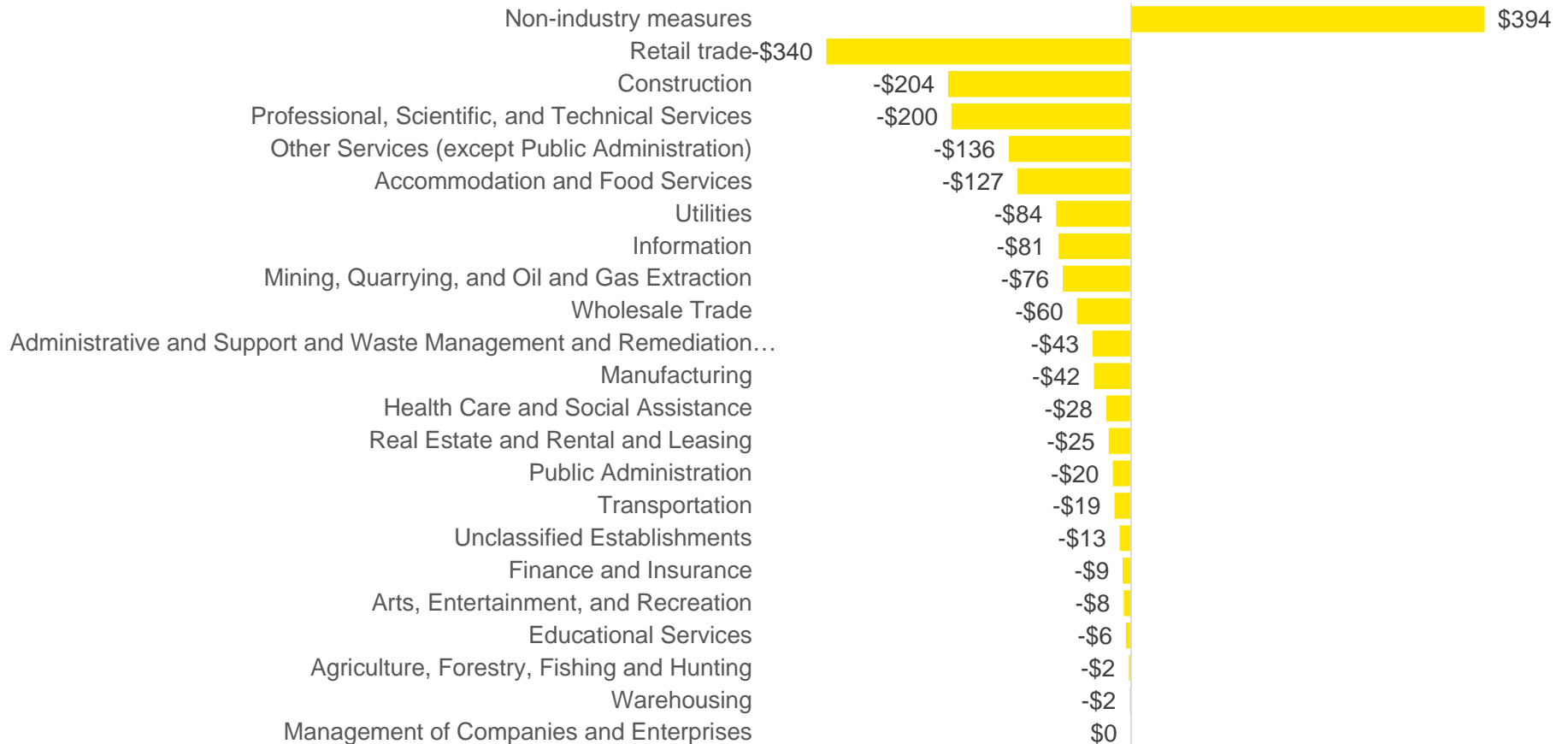
- ▶ Expand GRT base to tax wages
- ▶ Expand GRT base to value of real estate transactions
- ▶ Removes most exemptions and deductions:
 - ▶ Deductions for consumer purchases like food and prescriptions drugs
 - ▶ All medical and health care service deductions are removed
 - ▶ Removes exemptions on nonprofits
 - ▶ Removes the anti-pyramiding deductions (sales to manufacturers and construction businesses are now taxable)
- ▶ Keeps the exemption for government agencies

Model output for Hypothetical Scenario 2 (\$millions)

Output Table

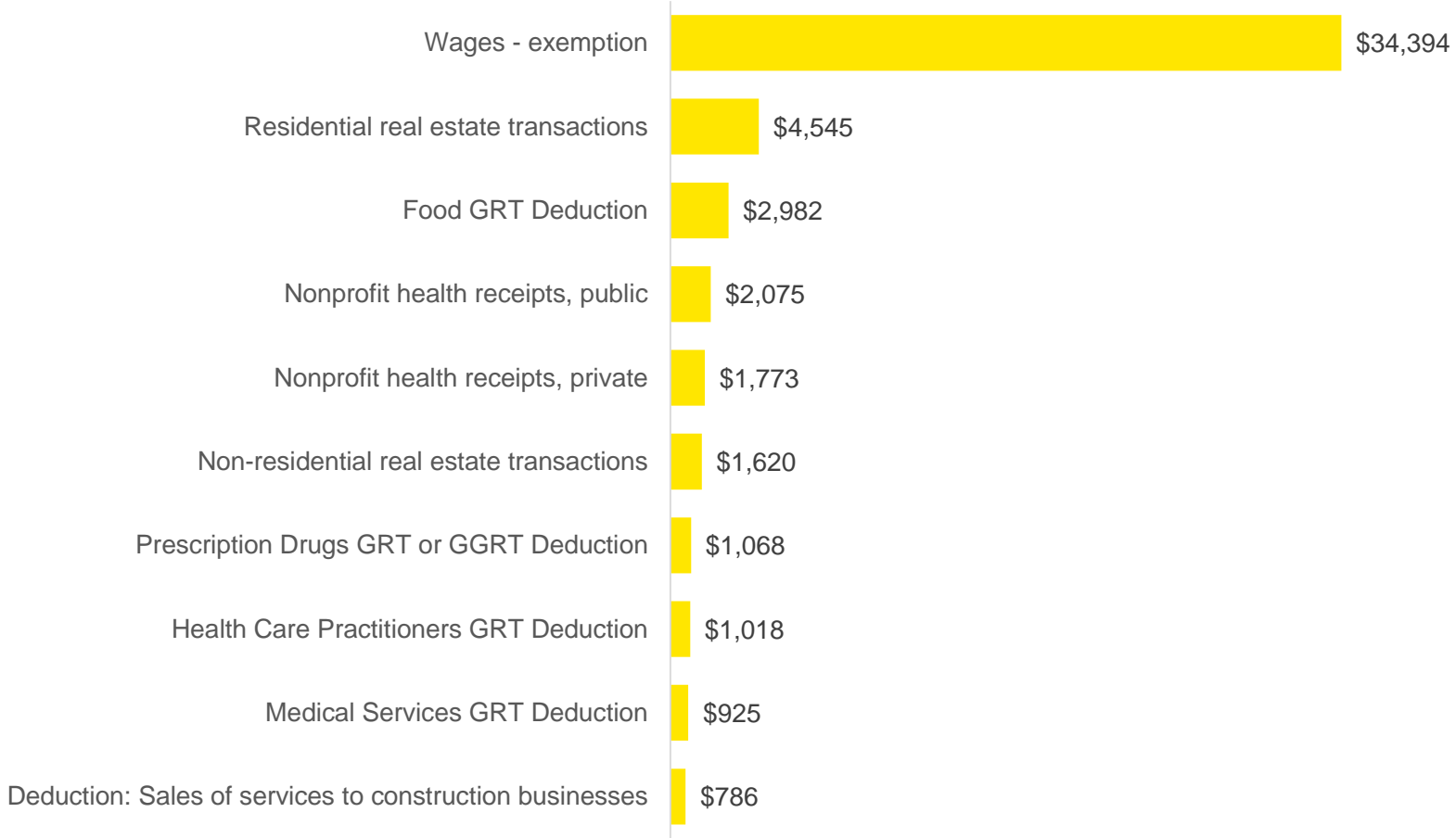
		Current law baseline	With policy changes	Percent change
1/	Statewide gross receipts, before exemptions	\$184,569	\$184,569	n/a
2/	Exemptions	\$88,218	\$43,529	-50.7%
3/	Current tax base, after exemptions	\$96,351	\$141,041	46.4%
4/	Deductions	\$47,453	\$40,182	-15.3%
5/	Taxable gross receipts	\$48,899	\$101,881	108.4%
	<i>Total change in taxable gross receipts from policy changes</i>		\$52,983	
6/	Tax rate	4.4%	1.0%	-77.2%
7/	Tax revenue before credits	\$2,149	\$1,019	-52.6%
8/	Value of credits	\$174	\$174	0.0%
9/	Tax revenue after credits	\$1,975	\$845	-57.2%
10/	Tax rate to make policy revenue neutral		2.1%	

Top industries by change in gross tax (\$millions)



Source: EY estimates

Top exemptions and deductions changed by tax expenditure value (\$millions)



Source: EY estimates



Change in taxable gross receipts by industry

2-digit NAICS NAICS description	Taxable Gross Receipts		
	Current law baseline	With policy changes	Percent change
11 Agriculture, Forestry, Fishing and Hunting	\$98	\$188	92.4%
21 Mining, Quarrying, and Oil and Gas Extraction	\$2,252	\$2,278	1.1%
22 Utilities	\$2,489	\$2,582	3.7%
23 Construction	\$6,019	\$6,052	0.5%
31-33 Manufacturing	\$1,410	\$2,044	45.0%
42 Wholesale Trade	\$1,869	\$2,173	16.3%
44-45 Retail trade	\$11,290	\$15,620	38.4%
48 Transportation	\$578	\$676	17.0%
49 Warehousing	\$45	\$45	0.0%
51 Information	\$2,383	\$2,391	0.3%
52 Finance and Insurance	\$273	\$275	0.7%
53 Real Estate and Rental and Leasing	\$1,211	\$2,831	133.7%
54 Professional, Scientific, and Technical Services	\$5,966	\$6,177	3.5%
55 Management of Companies and Enterprises	\$3	\$3	0.0%
56 Administrative, Waste Management and Remediation Services	\$1,269	\$1,295	2.1%
61 Educational Services	\$217	\$373	71.7%
62 Health Care and Social Assistance	\$2,522	\$8,322	230.0%
71 Arts, Entertainment, and Recreation	\$246	\$260	5.9%
72 Accommodation and Food Services	\$3,741	\$3,745	0.1%
81 Other Services (except Public Administration)	\$4,040	\$4,123	2.1%
92 Public Administration	\$602	\$602	0.0%
99 Unclassified Establishments	\$375	\$375	0.1%
Non-industry measures	\$0	\$39,450	n/a
TOTAL	\$48,899	\$101,881	108.4%

Hypothetical Scenario 2A

- ▶ Removes all deductions, not just modeled ones, using “Option 2” in our model
 - ▶ This adds \$47 billion of taxable gross receipts to the tax base
- ▶ Expand GRT base to tax wages
- ▶ Expand GRT base to tax value of real estate transactions

Model output for Hypothetical Scenario 2A (\$millions)

Output Table

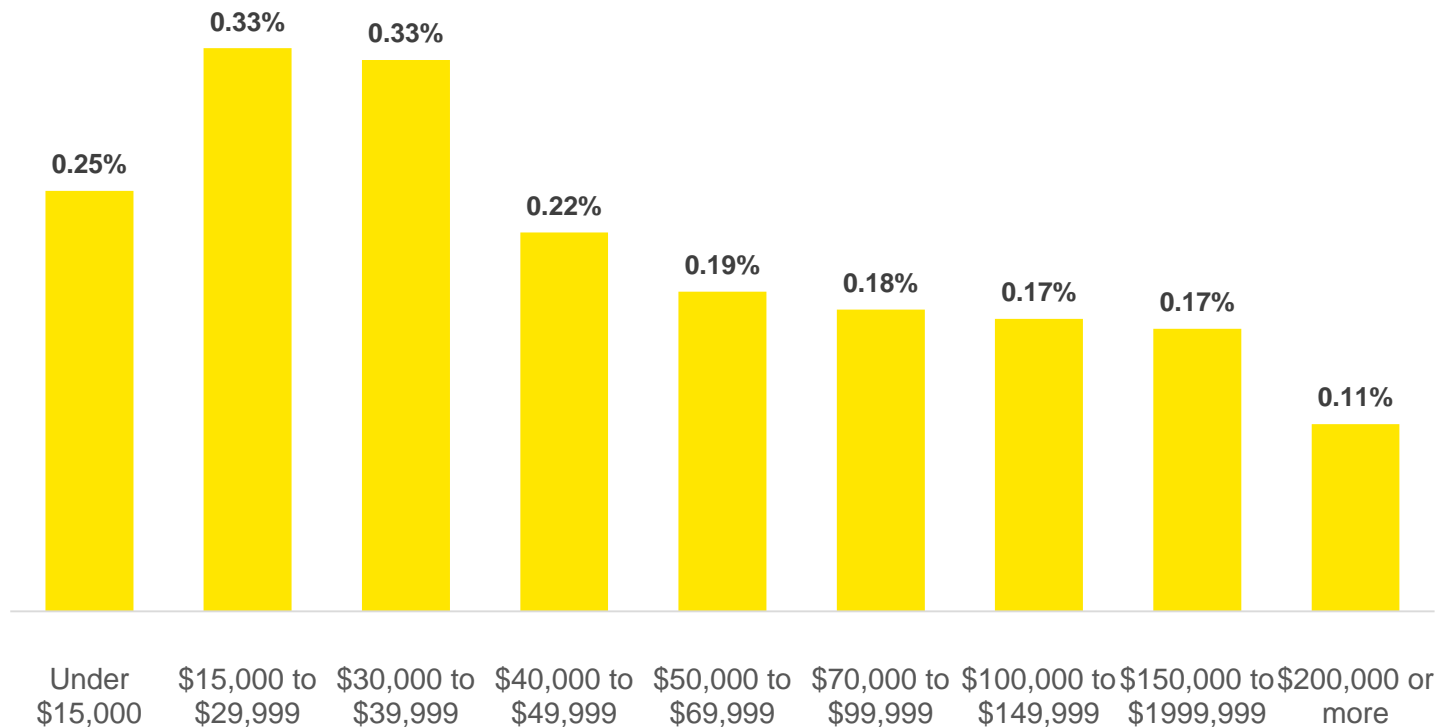
		Current law baseline	With policy changes	Percent change
1/	Statewide gross receipts, before exemptions	\$184,569	\$184,569	n/a
2/	Exemptions	\$88,218	\$43,529	-50.7%
3/	Current tax base, after exemptions	\$96,351	\$141,041	46.4%
4/	Deductions	\$47,453	\$0	-100.0%
5/	Taxable gross receipts	\$48,899	\$141,041	188.4%
	<i>Total change in taxable gross receipts from policy changes</i>		\$92,142	
6/	Tax rate	4.4%	1.0%	-77.2%
7/	Tax revenue before credits	\$2,149	\$1,410	-34.4%
8/	Value of credits	\$174	\$41	-76.4%
9/	Tax revenue after credits	\$1,975	\$1,369	-30.7%
10/	Tax rate to make policy revenue neutral		1.43%	

Other insights

- ▶ Removing all deductions shown as taken by the RP-80 data in 2016 implies that the same state tax revenue can be generated at a 2.2% rate.
- ▶ Model includes specific exemptions and deductions for which data was available or we were asked to specifically estimate.
- ▶ Model allows for data to be updated regularly by LCS and to incorporate specific tax expenditure data that TRD provides.

Removing food gross receipt tax (GRT) deduction

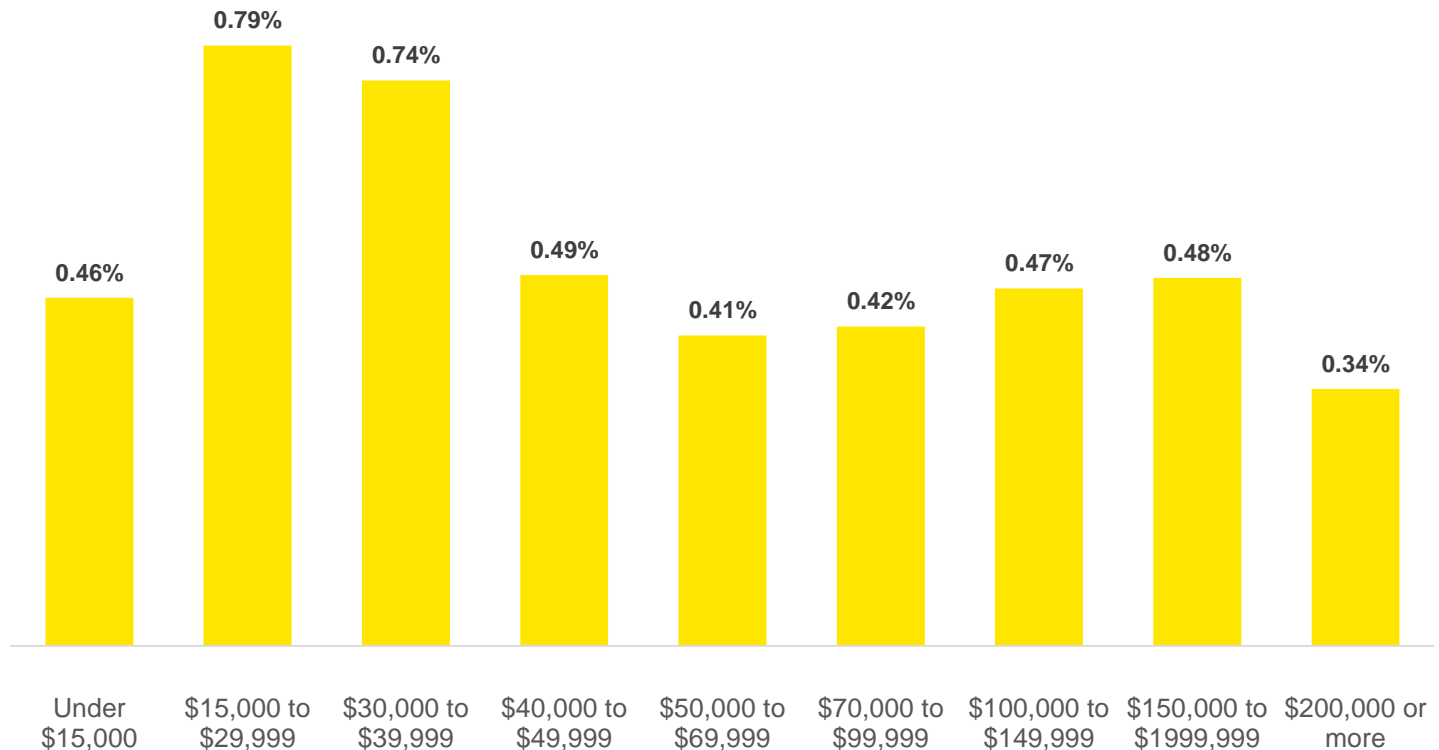
Tax burden- distributional effects by household income level
Taxes due to policy change as share of total income



Source: EY estimates

Removing deductions for health nonprofits, healthcare practitioners, medical services, prescriptions, and hospitals 50%

Tax burden- distributional effects by household income level
Taxes due to policy change as share of total income



Source: EY estimates

3. Pyramiding analysis



Pyramiding in a tax system

- ▶ Refers to the obligation of a tax on a tax, i.e. the same base is taxed repeatedly
- ▶ Occurs when there are several transactions bringing a good or service to the ultimate consumer
- ▶ A function of the number of transactions and the level of value added at each stage
- ▶ When an input good is taxed, it raises the subsequent price of that input as it moves up the supply chain and is part of the next transaction
- ▶ Goods and services subject to more stages of production will have higher degree of pyramiding

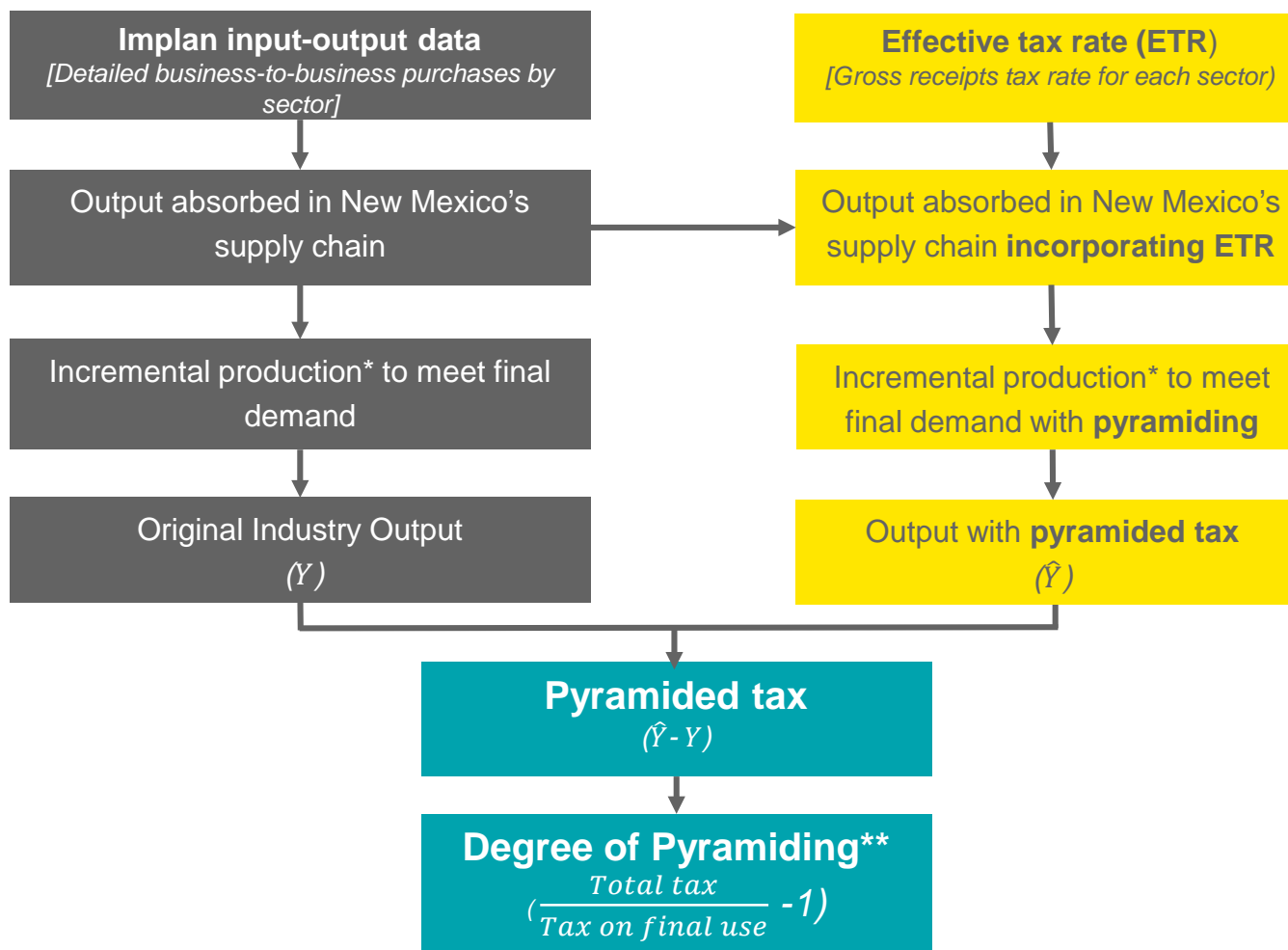
Pyramiding in a tax system- potential economic consequences

- ▶ **Pyramided taxes passed to customers:** Taxes paid by a business are passed to customers through higher prices, becoming part of the value of the final goods or services.
- ▶ **Lack of transparency:** Total tax rates on goods and services are not visible; goods are taxed at a higher effective tax rate on value-added than is observable.
- ▶ **Differential tax rates:** Pyramiding results in different total tax rates for each industry. Industries those make intensive use of inputs from other sectors impacted most.
- ▶ **Distorts taxpayer behavior:** It incentivizes companies to vertically integrate to escape the pyramiding tax.

Pyramiding in a tax system- benefits

- ▶ **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. Tax pyramiding accounts for about three-fifths of the total GRT revenue
- ▶ **Ability to keep rate low:** The revenue raised by pyramiding contributes to a lower general tax rate. In general, a low tax rate reduces tax avoidance and evasion and increases compliance.

Methodology- tax pyramiding analysis using input-output (IO) data

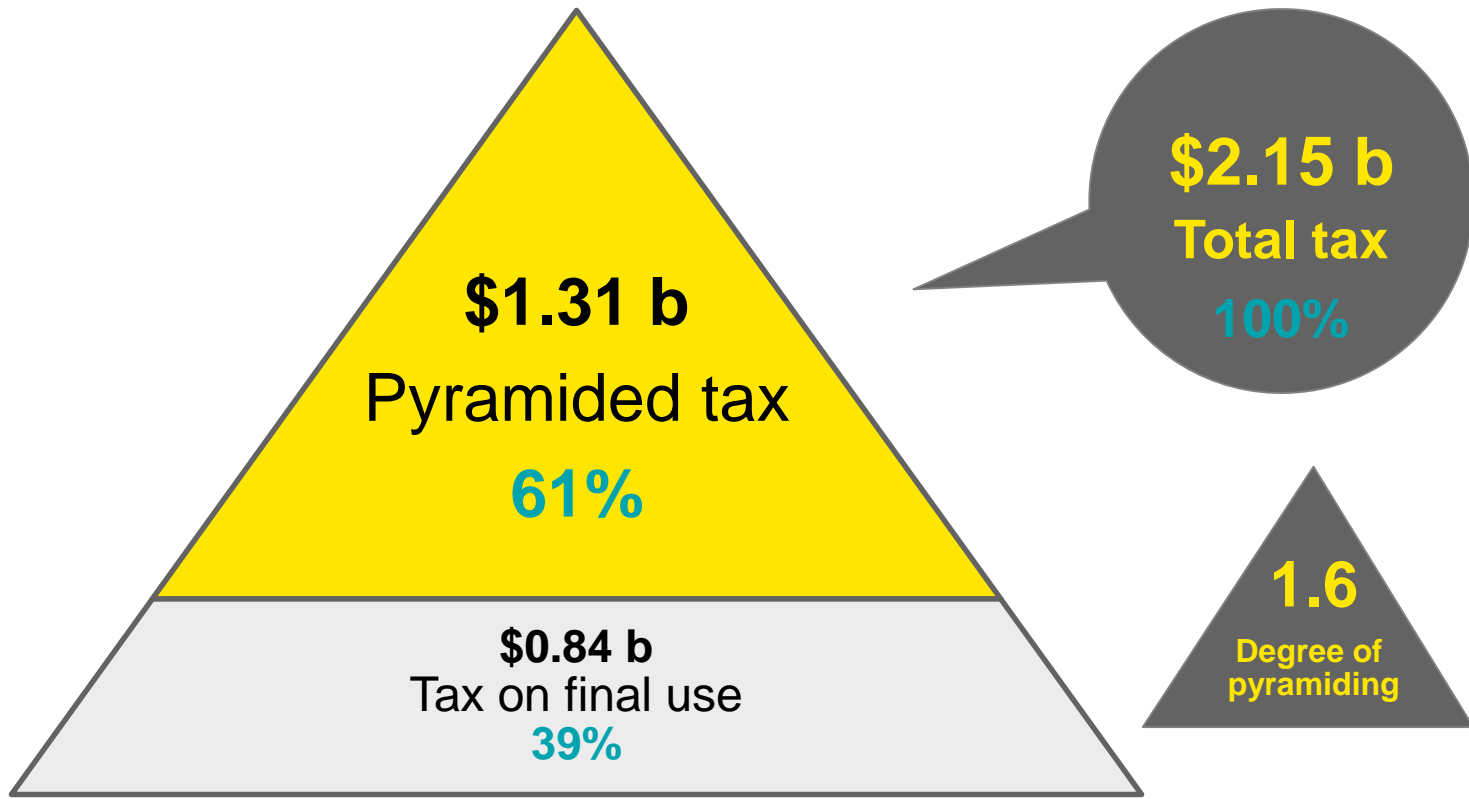


*Amount by which sector (i) must change its production to satisfy increase of one unit in the final demand of sector (j)

** Total tax = Tax on final use + Pyramided tax

Estimated \$1.3 billion of state tax revenue generated from tax pyramiding

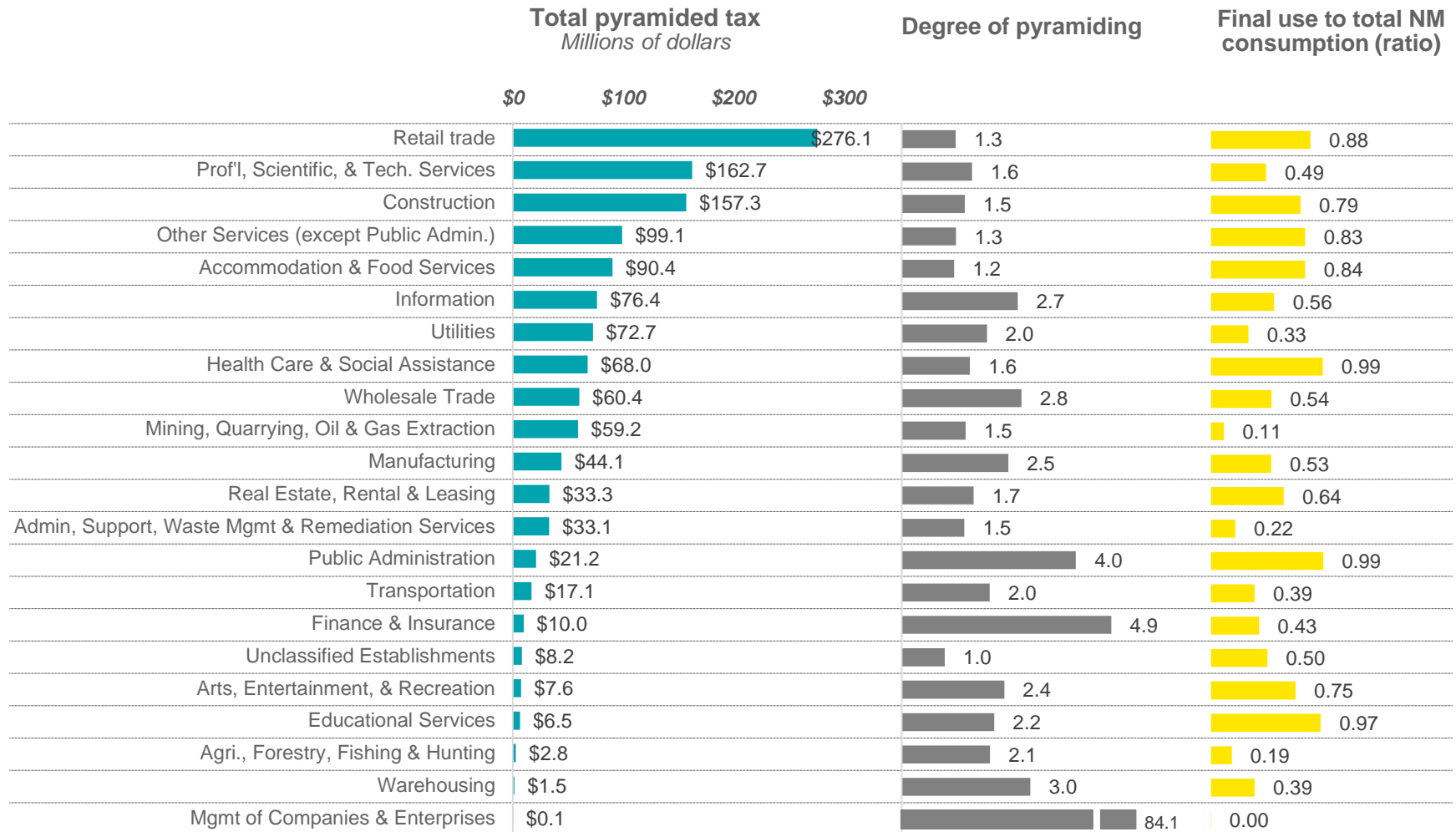
Composition of tax revenue in New Mexico *In billions of dollars*



Source: EY analysis of IMPLAN input-output (IO) data

Note: Degree of pyramiding = $\left(\frac{\text{Total tax}}{\text{Tax on final use}} - 1\right)$

Amount and degree of pyramiding varies considerably by sector



Source: EY analysis of IMPLAN input-output (IO) data

4. Personal income tax



Personal income tax model

▶ Simulation Model

- ▶ Excel-based
- ▶ Data consist of tabulations of tax returns,
 - ▶ partitioned by filing status, PIT-B status, and itemizer status;
 - ▶ then tabulated by percentile rank within partition.
- ▶ Capabilities will include simulating changes to
 - ▶ the bracket and rate structure,
 - ▶ exemptions and deductions (though not to specific itemized deductions), and
 - ▶ (to a limited degree) credits and adjustments from secondary forms.
- ▶ Simulation results will be applied to a consensus baseline forecast under current law to estimate future fiscal effects.
- ▶ Output will also include effects on taxpayers by filing status and income (FAGI) level.

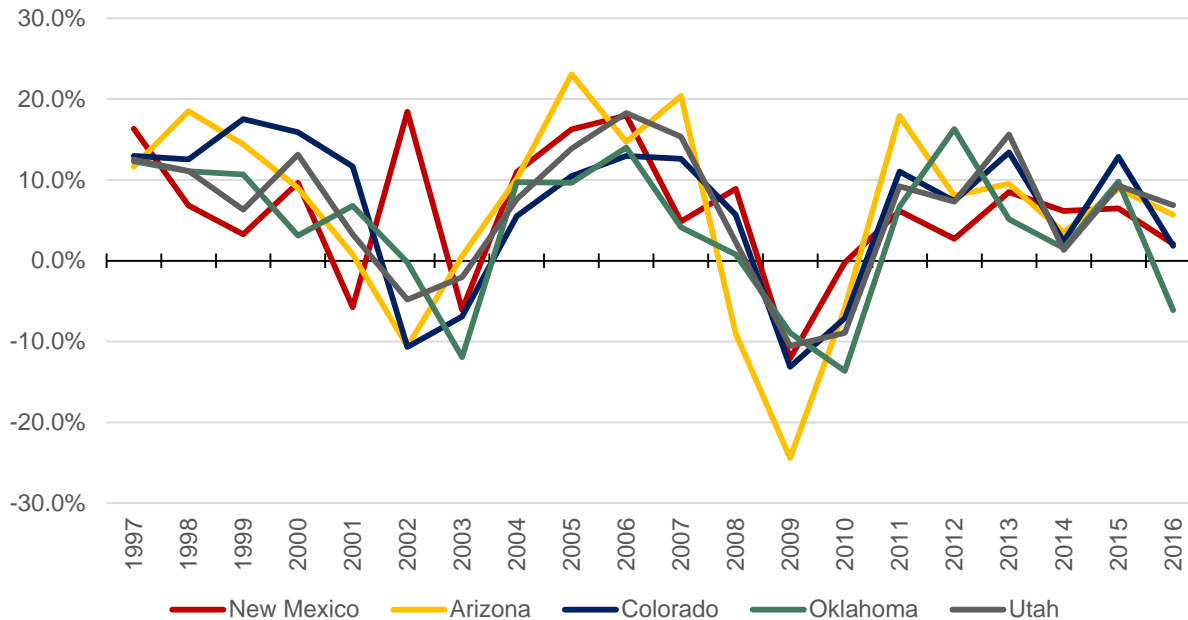
Strengths and weaknesses of personal income tax

Considerations:

- ▶ Equity
 - ▶ Horizontal – similarly-situated taxpayers bearing similar tax burdens
 - ▶ Vertical – tax burdens reflecting ability to pay, some degree of progressivity
- ▶ Efficiency – minimal distortion of economic behavior, ease of administration and compliance
- ▶ Adequacy – tax revenue stability, predictability, and ability to grow with demand for services

New Mexico has similar volatility in revenue as neighboring states

Pew Fiscal 50 Revenue Volatility: PIT
(Year-to-year percent change in revenue, adjusted for policy changes)



Source: The Pew Charitable Trusts

New Mexico ranks 7th highest in overall volatility, but volatility is not coming from PIT

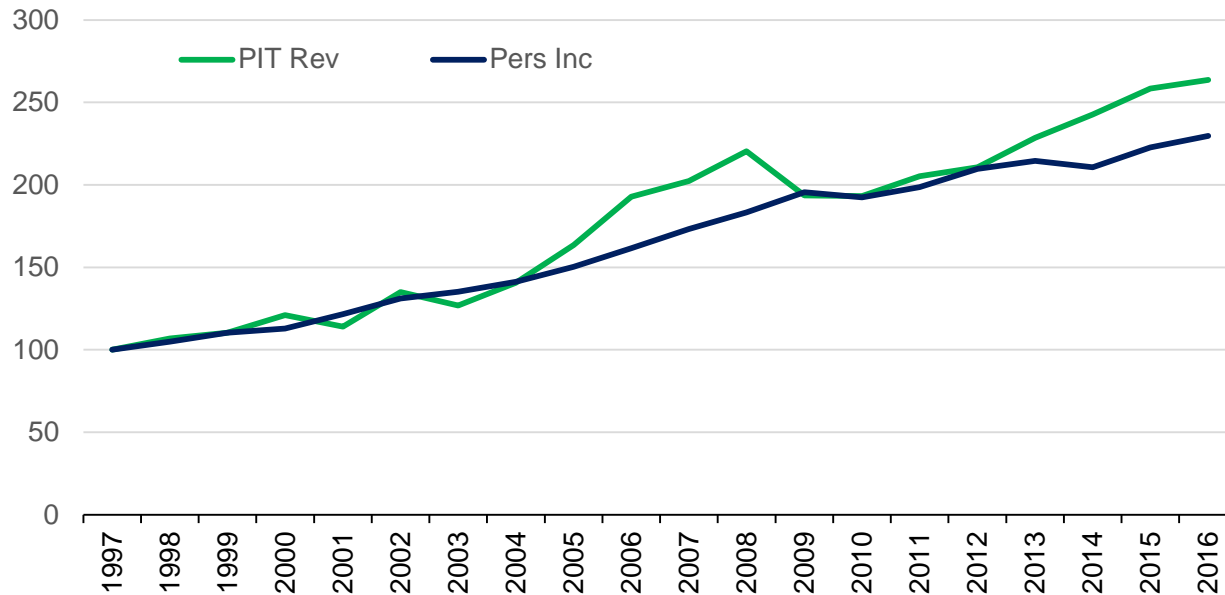
20-Year Volatility Index and 50-State Rank
(High number means high volatility)

State	PIT Volatility	Rank	Overall Volatility	Rank
Arizona	11.8	4	8.0	8
Colorado	9.2	13	8.5	6
New Mexico	8.1	21	8.2	7
Oklahoma	8.6	16	7.1	11
Texas	NA	NA	5.9	21
Utah	8.1	20	6.5	15
State Average	8.4		5.0	

Source: The Pew Charitable Trusts

Policy-adjusted PIT revenue trends follow personal income growth

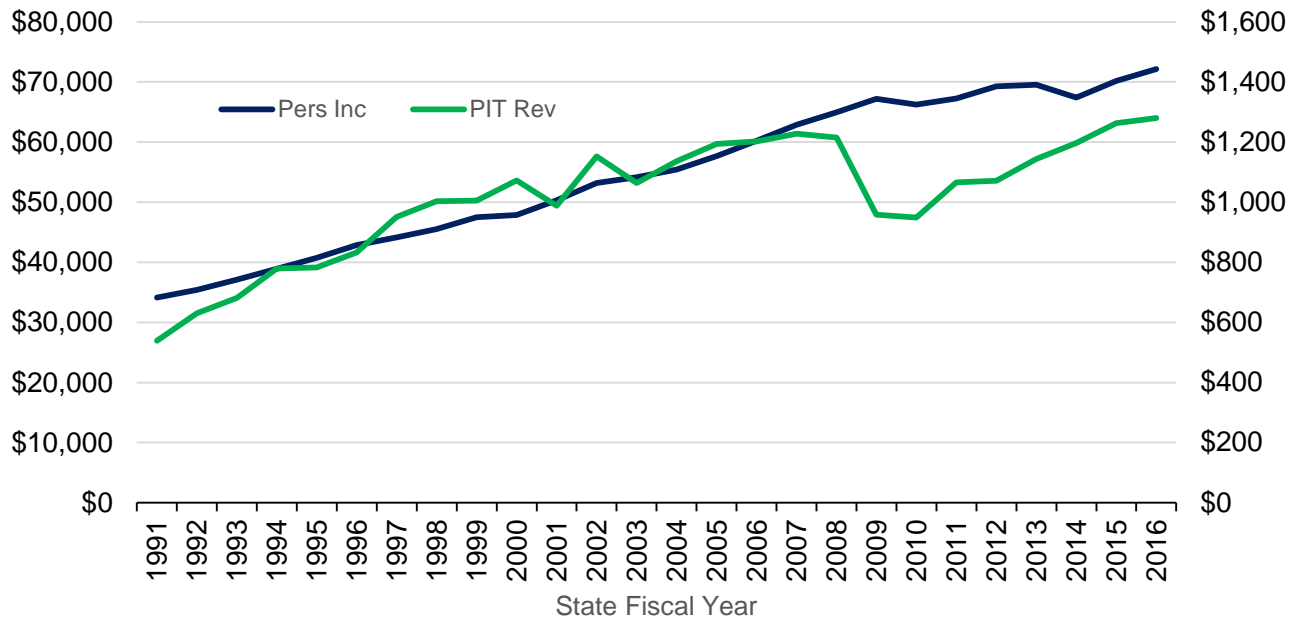
Policy-Adjusted PIT Revenue vs. Lagged Personal Income (Indexed to 100 as of FY1997/CY1996)



Source: The Pew Charitable Trusts, U.S. Bureau of Economic Analysis

Actual PIT revenue lag personal income growth

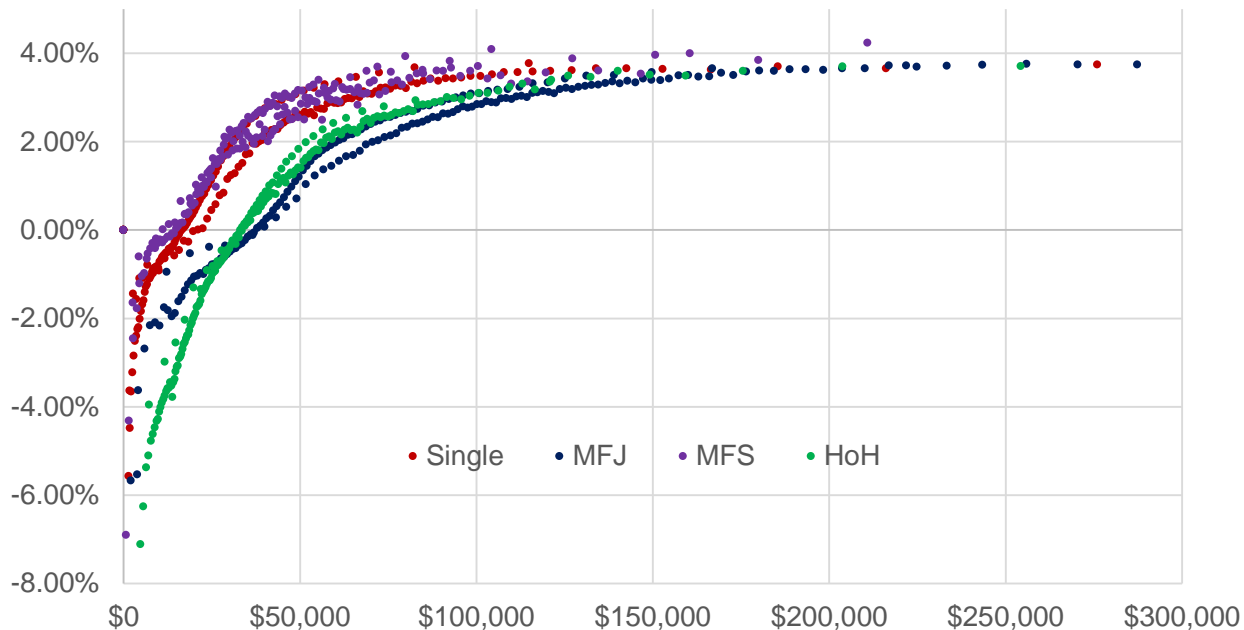
Actual PIT Revenue vs. Lagged Personal Income
(inflation-adjusted 2009 \$, millions)



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

Average effective tax rates by filing status and income level – New Mexico's PIT is progressive

Net Tax after Refundable Credits / FAGI



Source: NM Tax and Revenue Division and author's calculations

Next steps

- ▶ Gross receipts tax model nearing completion; planned delivery in January
- ▶ PIT model still in development; planned delivery in January
- ▶ Preliminary report in late January

Questions?