

**CUTTING STATE TAXES:
DYNAMIC FISCAL ANALYSIS
IN ARKANSAS
WEBINAR
JULY 24, 2019**

Background



- States design tax policy with many competing goals in mind
 - ▣ Revenue, economic development, business competitiveness, attracting population, etc.
- Arkansas has recently passed a number of tax reforms
 - ▣ Top personal income tax rate to drop from 6.9% to 5.9% in 2021
 - ▣ Corporate income tax rate to drop from 6.5% to 6.2% in 2021, 5.9% in 2022
- In 2018, Arkansas Bureau of Legislative Research contracted with REMI to analyze a variety of tax reform proposals
 - ▣ REMI used Tax-PI model to estimate fiscal, economic, and demographic impacts over time
 - ▣ Produced and presented dynamic fiscal notes to the Arkansas Tax Reform and Relief Task Force

About REMI



REMI's 38-year history of rigorous academic research and software development has led to the development of the the industry standard in macroeconomic research methodology:

Input-Output

Close analysis of inter-industry relationships

Econometrics

Advanced statistical analyses underpinning the model

General Equilibrium

Estimate of long-run stability of the economy allows for analysis of policy decisions

Economic Geography

Effects of geographic concentration of labor and industry



Integrated REMI economic modelling approach



Iowa Department of
REVENUE



what does **REMI** say? sm



About Tax-PI



Tax-PI is the only commercially available dynamic macroeconomic and fiscal impact analysis tool.

Tax-PI allows users to understand the deep linkages and relationship between a budget and its economic foundation.

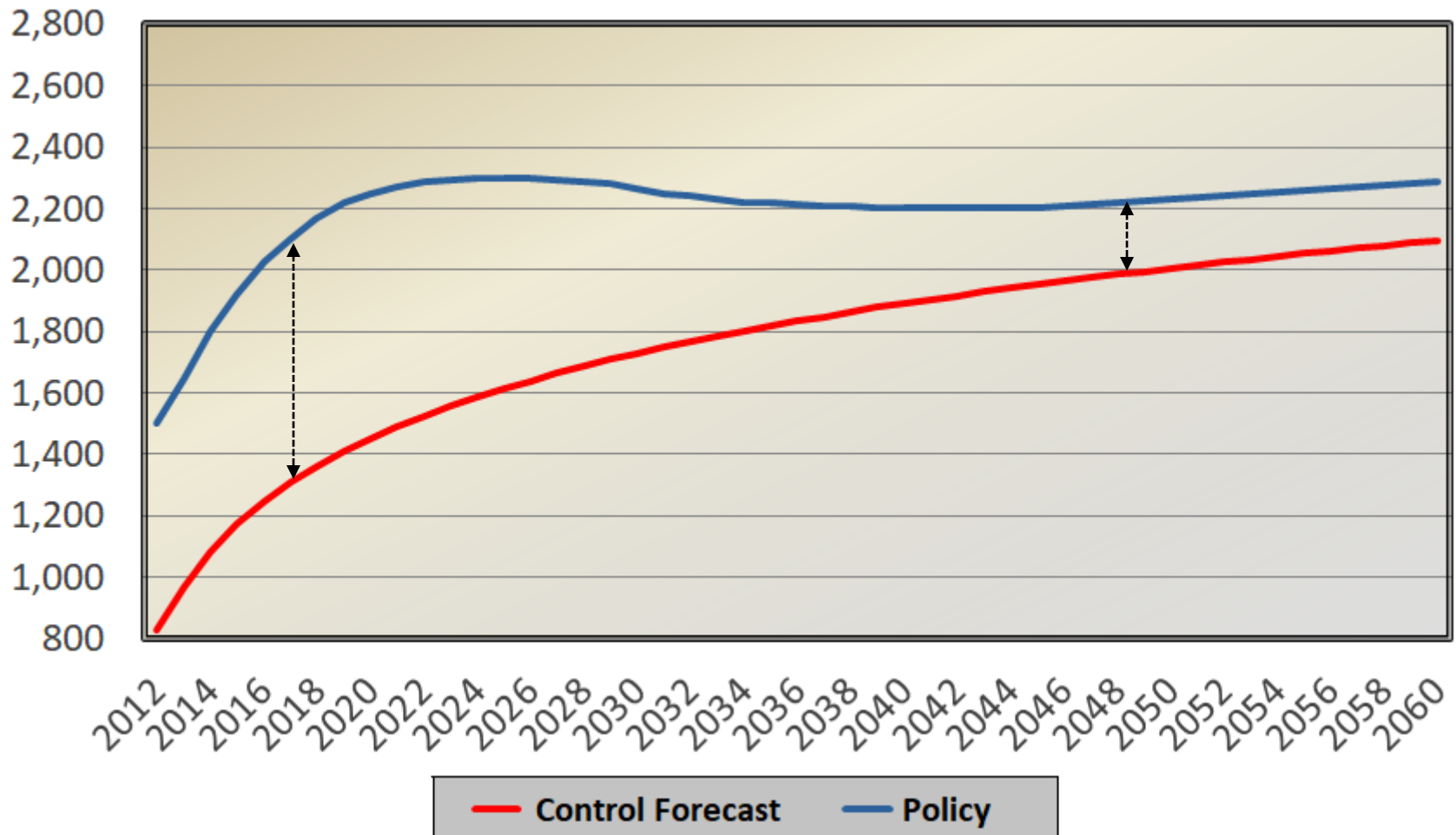
Tax-PI is uniquely customizable to your state's budget:

User-defined revenue and expenditure categories

Automatic budget-balancer: demand- or revenue-driven

Accommodates state's economic, demographic, fiscal projections

Model Framework

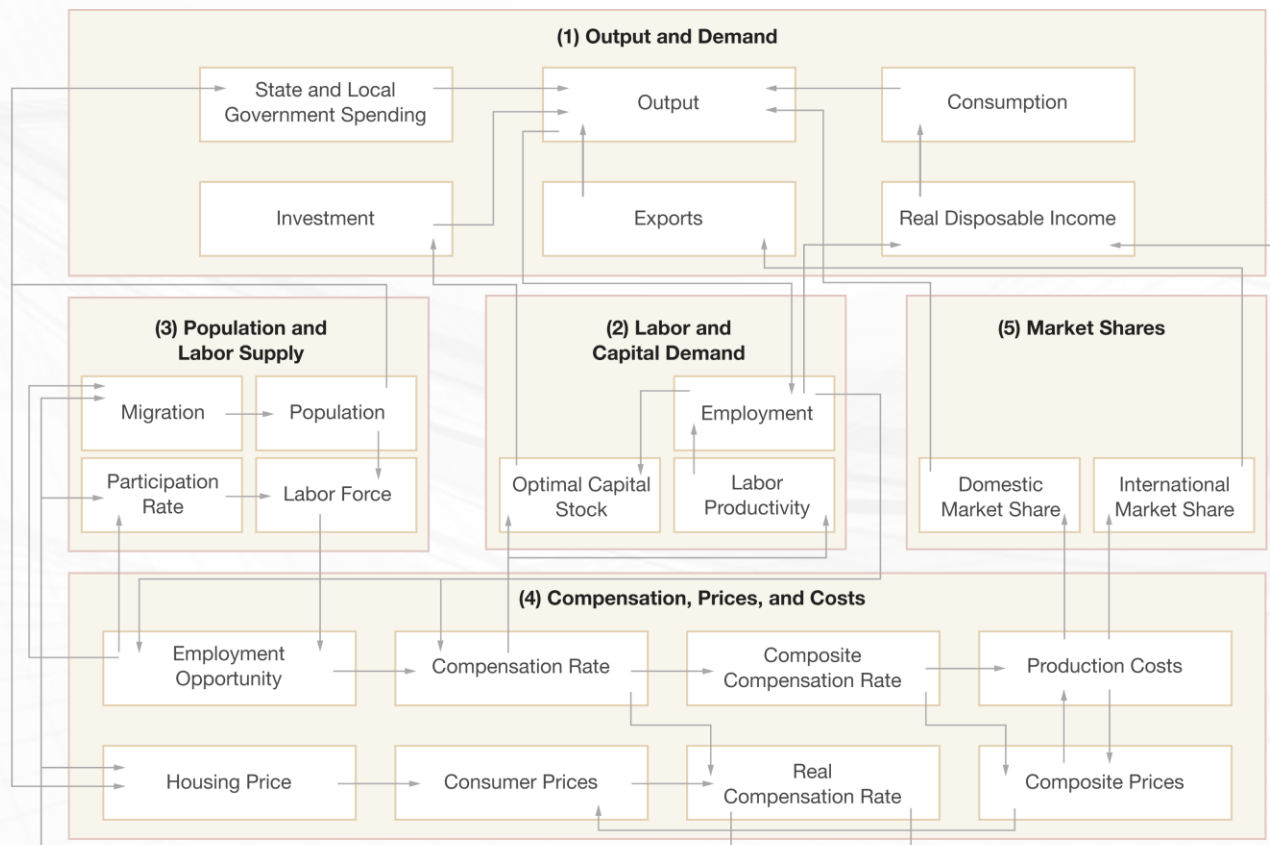


what does **REMI** say? sm

Model Structure

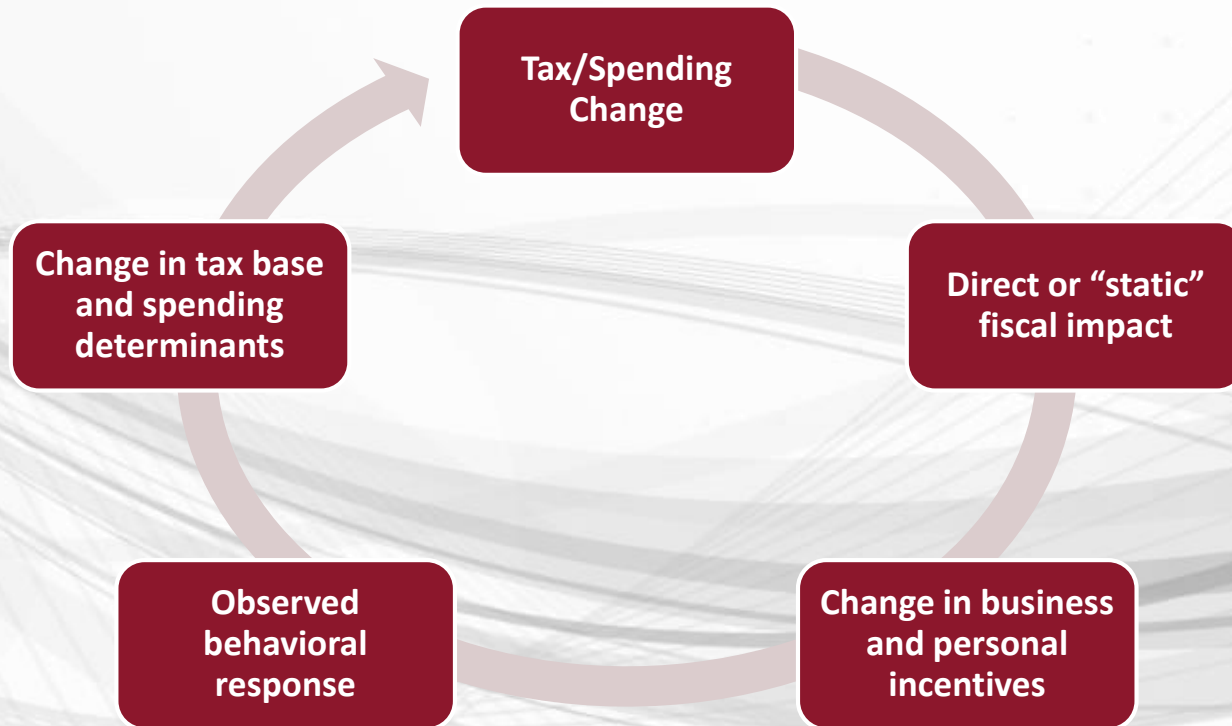


REMI Model Linkages (Excluding Economic Geography Linkages)



what does **REMI** say? sm

Dynamic Fiscal Analysis



"Conventional analysis of proposed legislation...does not incorporate effects on the economy... trying to account for such effects may increase the likelihood of producing an accurate answer."

Keith Hall, Director, Congressional Budget Office

Proposals



REMI evaluated the following 8 proposals over 2019-2023:

- ❑ Change the personal income tax structure
 - **Governor's Proposal**
 - Option A
 - Option B with EITC
- ❑ Change the corporate income tax structure
 - **Reduce top corporate income tax rate to 6%**
 - Implement Single Sales Factor
 - Repeal Throwback Rule
 - Repeal Franchise Tax
- ❑ Repeal Inventory Tax

Governor's Proposal



- The Governor's Proposal would reduce the top personal income tax rate from 6.9% to 6%
- The total static fiscal impact would be a reduction in Arkansas state personal income tax revenue of \$180,000,000

Evaluating Tax Changes



- REMI used three approaches:
 - **Assessing changes in business production costs**
 - **Assessing changes to disposable personal income**
 - Blended approach taking both production costs and disposable personal income into consideration
- Lower taxes translate into lower cost of business; estimating production cost effects takes this into consideration
 - Major Arkansas-based companies compete for workers with companies in states with lower or no income taxes
 - Employers offer higher salaries to compensate for higher taxes, which increases production costs
 - Tax cuts attract in-migration due to the higher after-tax compensation

Evaluating Governor's Proposal



Scenarios Reflecting Range of Outcomes from REMI Tax-PI Dynamic Fiscal Analysis

- 1) Both direct personal income tax and business cost decreases with no reduction in general state government expenditures
- 2) Both direct personal income tax and business cost decreases with equal reduction in general state government expenditures
- 3) **Business cost decrease with no direct reduction in general state government expenditures**
- 4) **Business cost decrease with equal direct reduction in general state government expenditures**
- 5) **Direct personal income tax decrease with no direct reduction in general state government expenditures**
- 6) Direct personal income tax decrease with equal direct reduction in general state government expenditures

Governor's Option Scenario 3

Private Non-Farm Production Cost Decrease



Results	Units	2019	2020	2021	2022	2023	Average
Population	Individuals	727	1,456	2,145	2,755	3,266	2,070
Total Employment	Individuals	1,364	1,919	2,279	2,480	2,580	2,124
Government Employment	Individuals	66	123	169	202	226	157
Private Non-Farm Employment	Individuals	1,298	1,796	2,111	2,278	2,353	1,967
Gross State Product (Value-Added)	Nominal Millions	\$91.2	\$134.8	\$166.9	\$189.6	\$205.1	\$157.5
Output (Industry Sales)	Nominal Millions	\$158.0	\$234.6	\$290.7	\$330.0	\$356.8	\$274.0
Disposable Personal Income	Nominal Millions	\$58.0	\$91.8	\$119.8	\$142.4	\$159.4	\$114.3
Government Revenue	Nominal Millions	-\$175.5	-\$173.5	-\$171.8	-\$170.5	-\$169.4	-\$172.2
Government Expenditure	Nominal Millions	\$1.5	\$3.1	\$4.7	\$6.2	\$7.6	\$4.6
NET REVENUE (Gov Rev, less Gov Exp)	Nominal Millions	-\$177.0	-\$176.6	-\$176.6	-\$176.7	-\$177.0	-\$176.8

Governor's Option Scenario 3 Analysis



- Treats the personal income tax cut as a decrease in business costs
- Annual **increase** in Arkansas' population rises from **727** in 2019 to **3,266** in 2023, with average annual **increase** of **2,070**
 - Largely driven by higher employment opportunities, which raises the level of economic in-migration
- Total employment **increases** by an annual average of **2,124**
 - **92.6%** comes from private non-farm sectors
- Gross State Product (GSP) and output **increase** by an annual average of **\$157.5 million** and **\$274.0 million**, respectively
 - Largely driven by two key factors: (1) the influx of new population; and (2) the decrease in business costs which makes Arkansas industries more competitive with imports
- Disposable personal income **increases** by an annual average of **\$114.3 million**
- The static impact of the tax cut is a **\$180.0 million loss** in state revenue per year, but the increase in economic activity partially offsets the loss
 - Total revenue **loss** averages **\$172.2 million** annually
 - **4.4%** of the static revenue loss is recovered

Governor's Option Scenario 4

Private Non-Farm Production Cost Decrease with State Expenditure Decrease



Results	Units	2019	2020	2021	2022	2023	Average
Population	Individuals	-402	-555	-559	-467	-321	-461
Total Employment	Individuals	-1,751	-1,272	-898	-592	-359	-975
Government Employment	Individuals	-1,384	-1,348	-1,302	-1,246	-1,194	-1,295
Private Non-Farm Employment	Individuals	-367	76	404	654	834	320
Gross State Product (Value-Added)	Nominal Millions	-\$120.6	-\$89.3	-\$63.5	-\$41.1	-\$22.8	-\$67.5
Output (Industry Sales)	Nominal Millions	-\$199.1	-\$140.7	-\$92.8	-\$51.6	-\$17.8	-\$100.4
Disposable Personal Income	Nominal Millions	-\$79.7	-\$71.1	-\$61.3	-\$50.5	-\$40.2	-\$60.6
Government Revenue	Nominal Millions	-\$183.4	-\$182.7	-\$182.1	-\$181.5	-\$180.9	-\$182.1
Government Expenditure	Nominal Millions	-\$181.6	-\$182.6	-\$183.0	-\$183.2	-\$183.1	-\$182.7
NET REVENUE (Gov Rev, less Gov Exp)	Nominal Millions	-\$1.7	-\$0.2	\$0.9	\$1.7	\$2.3	\$0.6

Governor's Option Scenario 4 Analysis



- Treats the personal income tax cut as a decrease in business costs, and accounts for a cut in general state government expenditures equal to the size of the personal income tax cut
- Population **decreases** by an annual average of **461**
 - Largely driven by lower employment opportunities, which lowers the level of economic in-migration
- Total employment **decreases** by an annual average of **975**
 - Private non-farm employment **increases** by an annual average of **320**
 - Government sector employment **decreases** by an annual average of **1,295**
- GSP and output **decrease** by an annual average of **\$67.5 million** and **\$100.4 million**, respectively
 - Largely driven by two key factors: (1) the decline in population; and (2) a decrease in disposable personal income caused by a decline in government employment
- Disposable personal income **decreases** by an annual average of **\$60.6 million**
- The static impact of the tax cut is a **\$180.0 million loss** in state revenue per year, and the decrease in economic activity generates an additional loss
 - Total revenue loss averages **\$182.1 million** annually
 - Static revenue loss **increases** by another **1.2%**

Governor's Option Scenario 5

Personal Income Tax Decrease



Results	Units	2019	2020	2021	2022	2023	Average
Population	Individuals	1,108	1,972	2,637	3,107	3,417	2,448
Total Employment	Individuals	1,440	1,671	1,713	1,631	1,507	1,593
Government Employment	Individuals	89	144	176	190	195	159
Private Non-Farm Employment	Individuals	1,351	1,527	1,537	1,441	1,313	1,434
Gross State Product (Value-Added)	Nominal Millions	\$103.8	\$124.4	\$131.9	\$130.5	\$125.0	\$123.1
Output (Industry Sales)	Nominal Millions	\$172.1	\$205.6	\$217.0	\$213.6	\$203.5	\$202.4
Disposable Personal Income	Nominal Millions	\$250.4	\$273.9	\$288.0	\$294.9	\$296.4	\$280.7
Government Revenue	Nominal Millions	-\$171.6	-\$170.3	-\$169.4	-\$169.0	-\$168.8	-\$169.8
Government Expenditure	Nominal Millions	\$2.1	\$3.8	\$5.2	\$6.3	\$7.0	\$4.9
NET REVENUE (Gov Rev, less Gov Exp)	Nominal Millions	-\$173.7	-\$174.1	-\$174.6	-\$175.2	-\$175.7	-\$174.7

Governor's Option Scenario 5 Analysis



- Treats the personal income tax cut as a direct decrease in personal income taxes
- The annual **increase** in Arkansas' population rises from **1,108** in 2019 to **3,417** in 2023, with an annual average **increase** of **2,448**
 - Largely driven by higher after-tax compensation rates raising the level of economic in-migration
- Total employment **increases** by an annual average of **1,593**
 - **90.0%** comes from private non-farm sectors
- GSP and output **increase** by an annual average of **\$123.1 million** and **\$202.4 million**, respectively
 - Largely driven by two key factors: (1) the influx of new population; and (2) the increase in disposable personal income generated by lower personal income taxes
- Disposable personal income **increases** by an average of **\$280.7 million**
- The static impact of the tax cut is a **\$180.0 million loss** in state revenue per year, but the increase in economic activity partially offsets the loss
 - Total revenue **loss** averages **\$169.8 million** annually
 - **5.7%** of the static revenue loss is recovered

Corporate Income Tax Rate Proposal



- This proposal would reduce the corporate income tax rate from 6.5% to 6%
- The total static fiscal impact would be a reduction in Arkansas state corporate income tax revenue of \$32,000,000

Corporate Income Tax Rate Scenario

Private Non-Farm Production Cost Decrease



Results	Units	2019	2020	2021	2022	2023	Average
Population	Individuals	101	198	289	368	436	279
Total Employment	Individuals	233	324	382	413	429	356
Government Employment	Individuals	10	19	25	30	34	24
Private Non-Farm Employment	Individuals	223	305	357	383	396	333
Gross State Product (Value-Added)	Nominal Millions	\$15.6	\$22.8	\$28.0	\$31.7	\$34.3	\$26.5
Output (Industry Sales)	Nominal Millions	\$27.1	\$39.8	\$49.0	\$55.4	\$60.0	\$46.3
Disposable Personal Income	Nominal Millions	\$8.9	\$13.8	\$17.7	\$20.8	\$23.3	\$16.9
Government Revenue	Nominal Millions	-\$31.3	-\$31.0	-\$30.8	-\$30.6	-\$30.4	-\$30.8
Government Expenditure	Nominal Millions	\$0.2	\$0.4	\$0.6	\$0.8	\$1.0	\$0.6

Corporate Income Tax Rate Analysis



- Treats the corporate income tax cut as a decrease in business costs
- The annual **increase** in Arkansas' population rises from **101** in 2019 to **436** in 2023, with an annual average **increase** of **279**
 - Largely driven by higher employment opportunities, which raises the level of economic in-migration
- Total employment **rises** by an annual average of **356**
 - **93.5%** comes from private non-farm sectors
- GSP and output **increase** by an annual average of **\$26.5 million** and **\$46.3 million**, respectively
 - Largely driven by two key factors: (1) the influx of new population; and (2) the decrease in business costs which makes Arkansas industries more competitive with imports
- Disposable personal income **increases** by an annual average of **\$16.9 million**
- The static impact of the tax cut is a **\$32.0 million loss** in state revenue per year, but the increase in economic activity partially offsets the loss
 - Total revenue **loss** averages **\$30.8 million** annually
 - **3.8%** of the static revenue **loss** is recovered