The New Competitive Advantage: Assessing the Impacts of the U.S. Innovation and Competition Act

Regional Economic Models, Inc.

what does REMI say?℠

Agenda

- Overview of the US Innovation and Competition Act (USICA)
- Bill Provisions
- About REMI
- Model Demo
- Notable Results
- Conclusion
- Q&A

U.S. Innovation and Competition Act (USICA)

- USICA is a merger of several related industrial policy and national security bills
- Key predecessor: Endless Frontier Act – establishes technology directorate for NSF, funds increased applied research efforts relevant to industry
- Key predecessor: CHIPS for America Act – funds incentives for semiconductor manufacturing
- Rolled major predecessors into one piece of legislation, adds some extra funding for semiconductor manufacturing, plus others
- Important Sponsors: Chuck Schumer (D-NY), Lindsey Graham (R-SC), Mitt Romney (R-UT)

USICA is a collection of many high-priority items with broad support from both parties and many regions of the US

Motives behind USICA

R&D

- Bolster the United States' competitive edge in developing 'frontier technologies'
- Fear of falling behind China in key technology areas, losing technological advantage in military and economic realms

Chip Manufacturing

- Semiconductor shortage, possible price instability for autos, computers, etc.
- Overextended supply chains vulnerable to shocks, demonstrated during pandemic
- Reinvigorate US manufacturing capabilities in one of the fastest-growing industries

Regional Innovation Hubs

- Expand the United States' capacity to innovate through involving more of the country in the tech sector
- Broaden the distribution of gains from the IT revolution
- Revitalize some underdeveloped areas of the US

Agenda

- Overview of US Innovation and Competition Act (USICA)
- **Bill Provisions**
- About REMI
- Model Demo
- Notable Provisions
- Conclusion
- Q&A

Appropriations Breakdown – Chips and Manufacturing

Major Line Items (>$100mln in domestic spending)

Item	Amount Funded	Years Applicable
CHIPS Act	$24Bn, $7bn, 6.3bn, $6.1bn, $6.8bn	FY22, FY23, FY24, FY25, FY26
Mfg. Extension Partnership	$2.4bn	FY22-26 (spread evenly)
Mfg. USA Partnership	$1.2bn	FY22-26 (spread evenly)
5G Supply Chain Innovation	$1.5bn	FY22
Semiconductor mfg at mature nodes	$2bn	FY22-26 (spread evenly)

USICA signals renewed interest in national industrial policy, bigger role for fed. government in economic activity

Appropriations Breakdown – Research & Development

Major Line Items (>$100mln)

Item	Amount Funded	Years Applicable
Pre-existing NSF activities	$52bn	FY22-26 (spread evenly, not in model)
Critical minerals grants	$100mln	FY22-26 (spread evenly)
Technology Directorate at NSF	$29bn	FY22-26 (spread evenly)
University R&D	$9.6bn	FY22-26 (spready evenly)
STEM Education and Workforce Development	$5.2bn	FY22-26 (spread evenly)

USICA signals renewed interest in national industrial policy, bigger role for fed. government in economic activity

Appropriations Breakdown – Research & Development

Major Line Items (>$100mln)

Item	Amount Funded	Years Applicable
R&D in key tech areas	$4.4bn	FY22-26 (spread evenly)
Technology testbeds	$2.9bn	FY22-26 (spread evenly)
University technology transfer improvements	$4.1bn	FY22-26 (spread evenly)
Department of Energy R&D	$16.9bn	FY22-26 (spread evenly)

USICA signals renewed interest in national industrial policy, bigger role for fed. government in economic activity

Appropriations Breakdown – Regional Innovation Centers

Major Line Items (>$100mln)

Item	Amount Funded	Years Applicable
Regional Innovation Hubs (unconventional locations)	$10bn	FY22-26 (spread evenly)

USICA signals renewed interest in national industrial policy, bigger role for fed. government in economic activity

Agenda

Overview of US Innovation and Competition Act (USICA)

Bill Provisions

About REMI

Model Demo

Notable Provisions

Conclusion

Q&A

About Us

We are the nation's leader in dynamic local, state and national policy modeling.

Regional Economic Models, Inc. (REMI) was founded in 1980 on a transformative idea:

government decision-makers should test the economic effects of their policies before they're implemented.

OUR CLIENTS

Our clients use REMI models to perform rigorous economic analysis that critically influences policy.

UCONN UNIVERSITY OF CONNECTICUT

AARP

McKinsey & Company

North Carolina Department of Commerce

European Commission

University of Michigan

nea National Education Association

Sandia National Laboratories

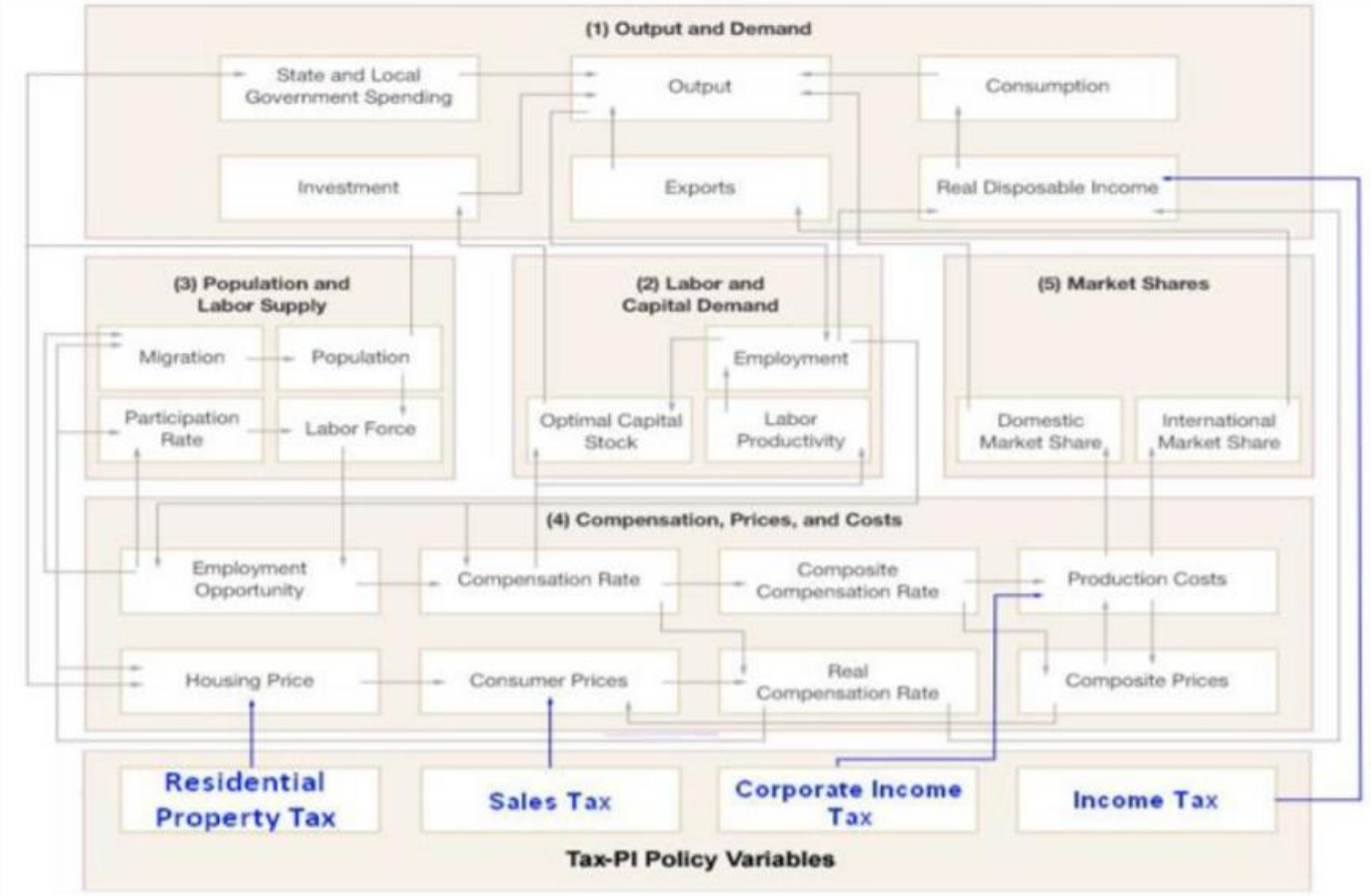
EY

what does REMI say?℠

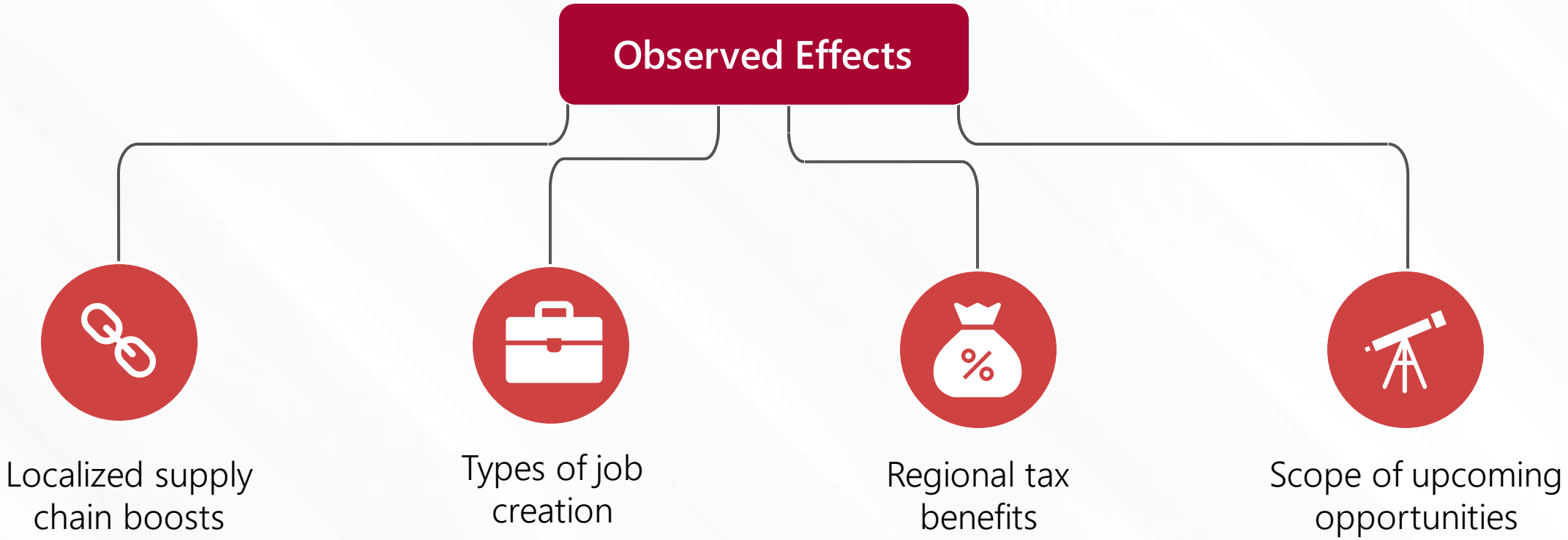
What is Tax-PI?

REMI 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



The Importance of Modeling USICA



Analyzing these factors shows organizations how USICA will benefit their region

Agenda

- Overview of US Innovation and Competition Act (USICA)
- Bill Provisions
- About REMI
- **Model Demo**
- Notable Results
- Conclusion
- Q&A

Simulation Details

Inputs

- Policy Variables:
  - +$10bn for innovation hubs
  - +$72.2bn for R&D
  - +$57.3bn for chip manufacturing
  - Over 15 years

Observed Outputs

- Policy Variables:
  - Employment
  - Population
  - Labor force participation

Regional Tech Hubs

- **Geographical Areas**
  - Live Demo: Utah
  - Alaska
  - New York
  - South Carolina
  - Wyoming

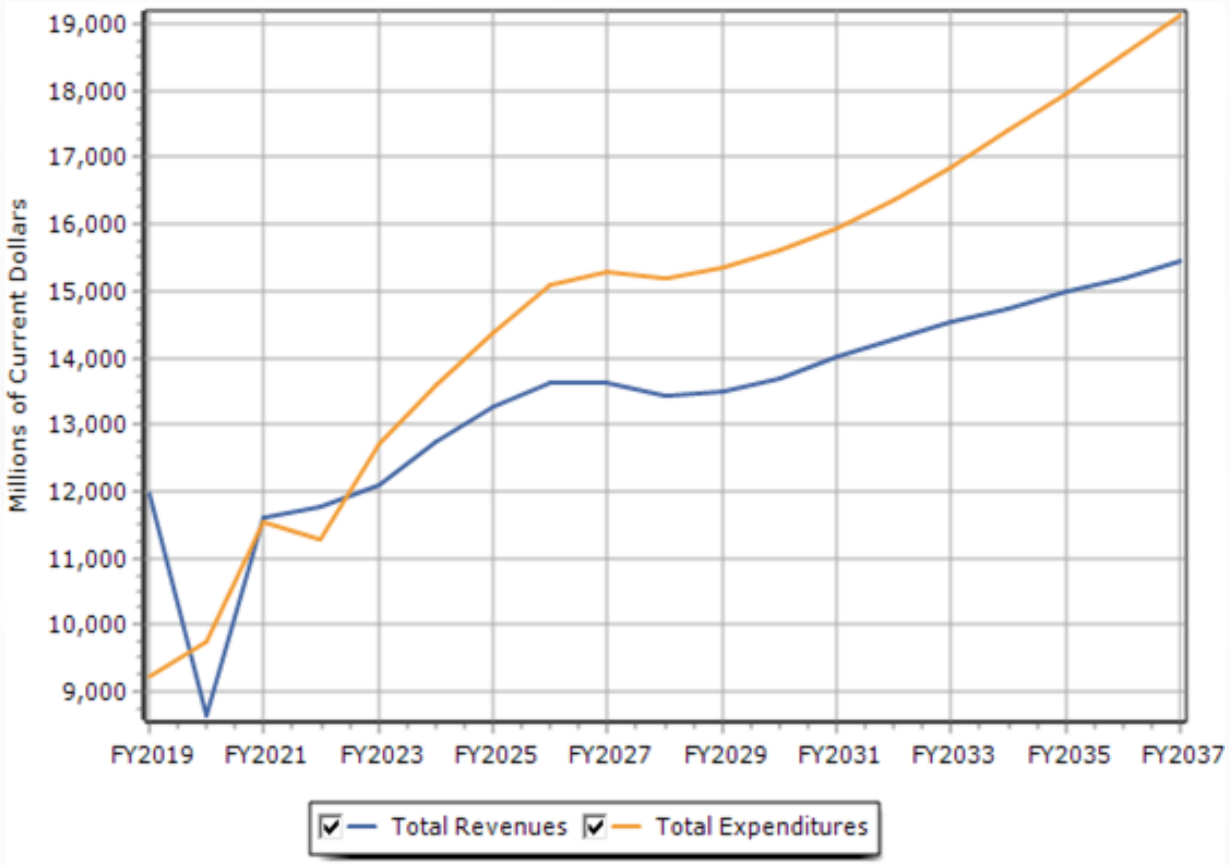
TaxPI+ Model | Year: 2022 – 2037

Agenda

- Overview of US Innovation and Competition Act (USICA)
- Bill Provisions
- About REMI
- Model Demo
- **Notable Results for other Regions**
- Conclusion
- Q&A

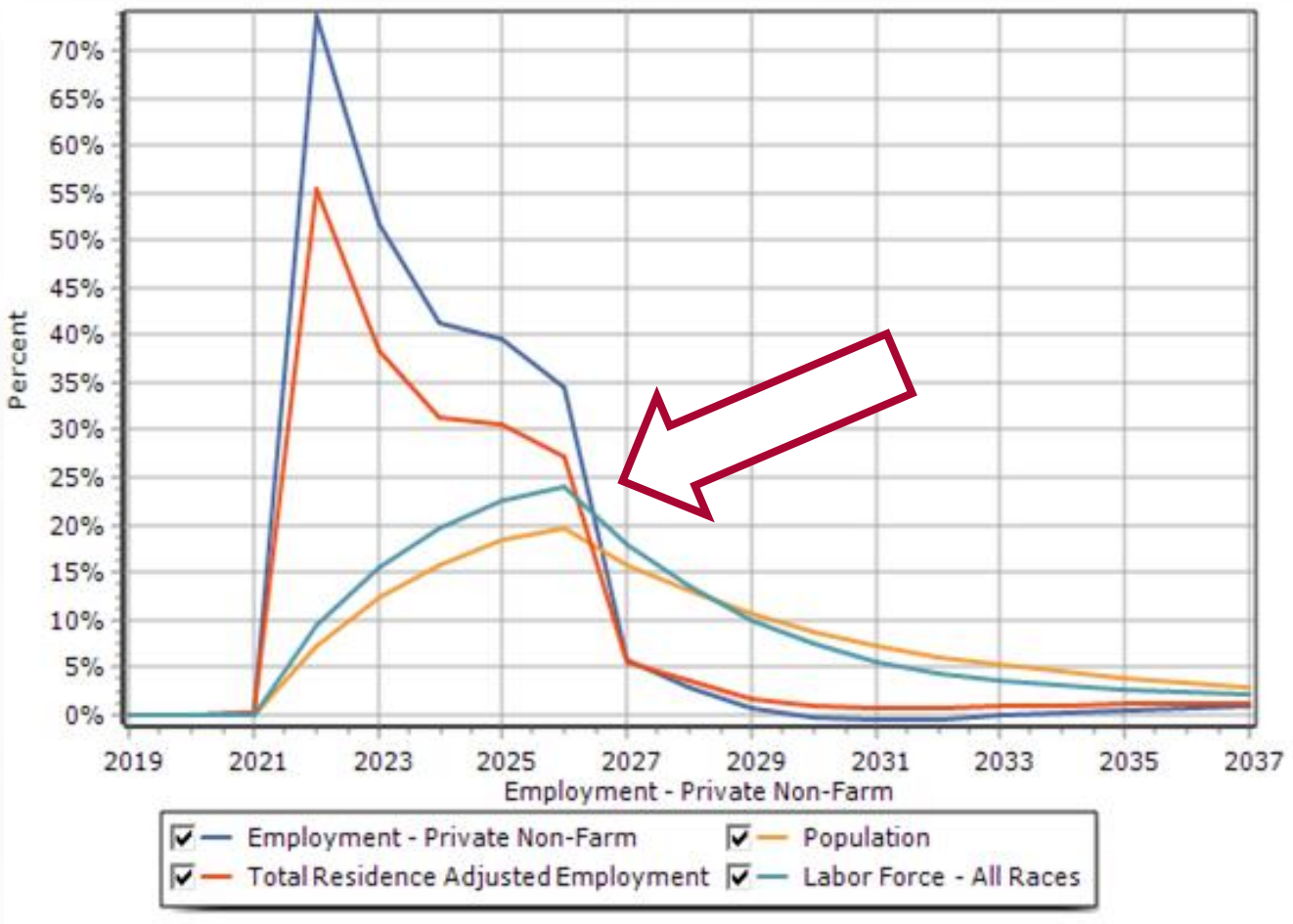
Alaska's Notable Results

Budget Projections for Alaska (FY2019 – 2037)



- Significant Expenditures:
  - University of Alaska
  - Department of Health & Human Services
  - Department of Education & Early Services
- Largest Revenue Source Increase:
  - Federal Receipts
  - Investment Revenue
  - Petroleum

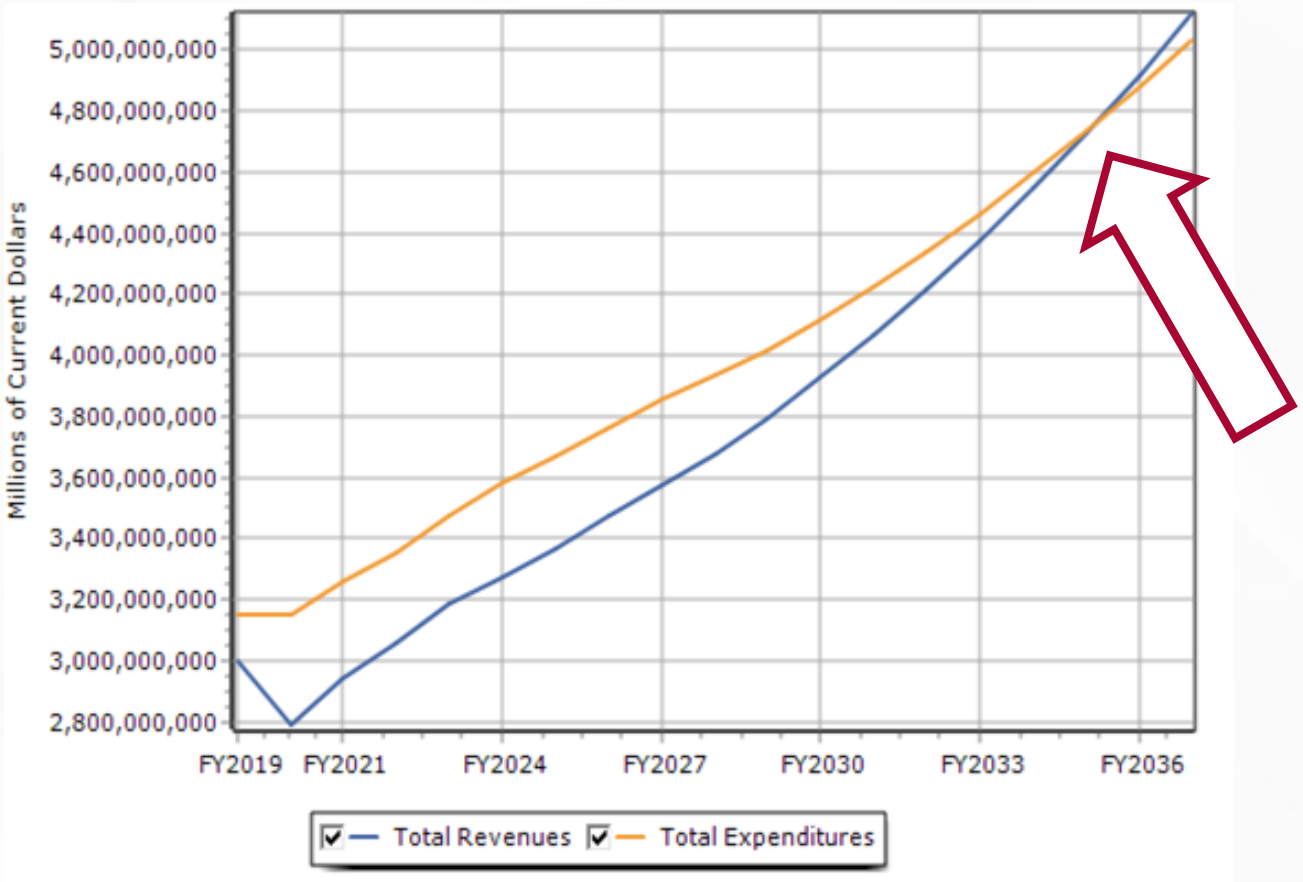
Alaska's Notable Results (Contd.)



- After the suspension of funding for FY2026, sharp declines are seen for all key economic indicators.

Wyoming's Notable Result

Budget Projections for Wyoming (FY2019 – 2037)

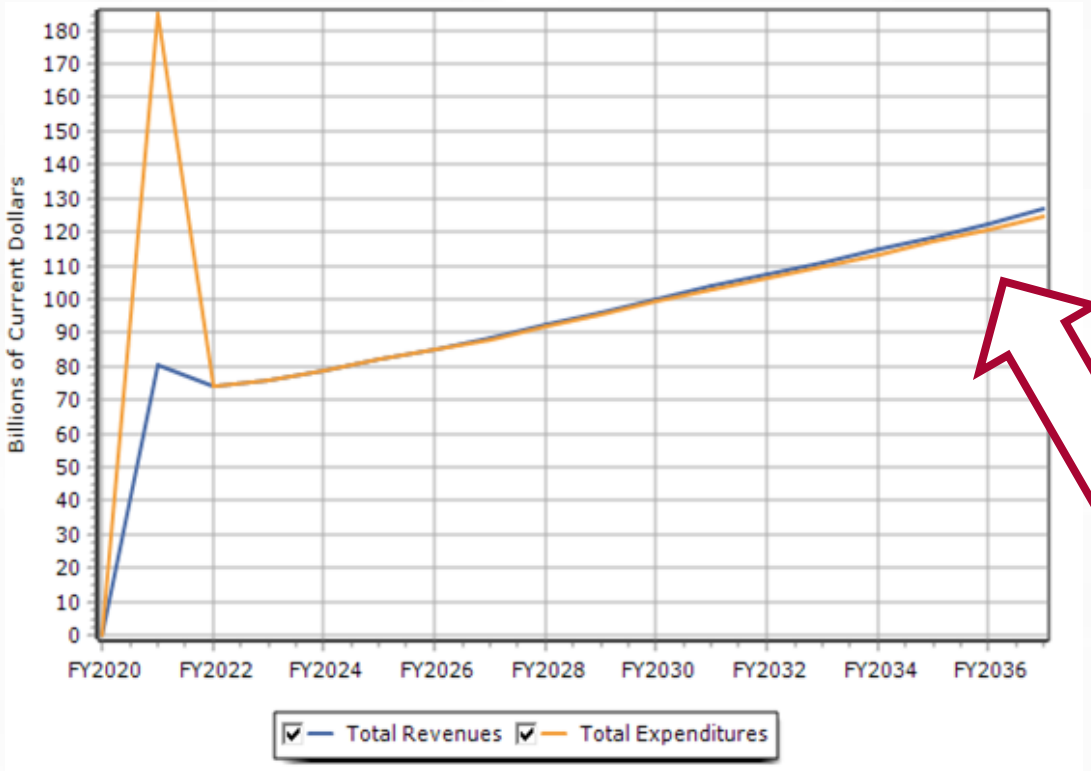


- Significant Expenditure :
  - Education
  - Health
  - Higher Ed (UW & Colleges)
- Largest Revenue Source Increase:
  - State Sales & Use Tax
  - Property Taxes
  - Federal Mineral Revenues (FMRs)

what does REMI say? sm

New York's Notable Result

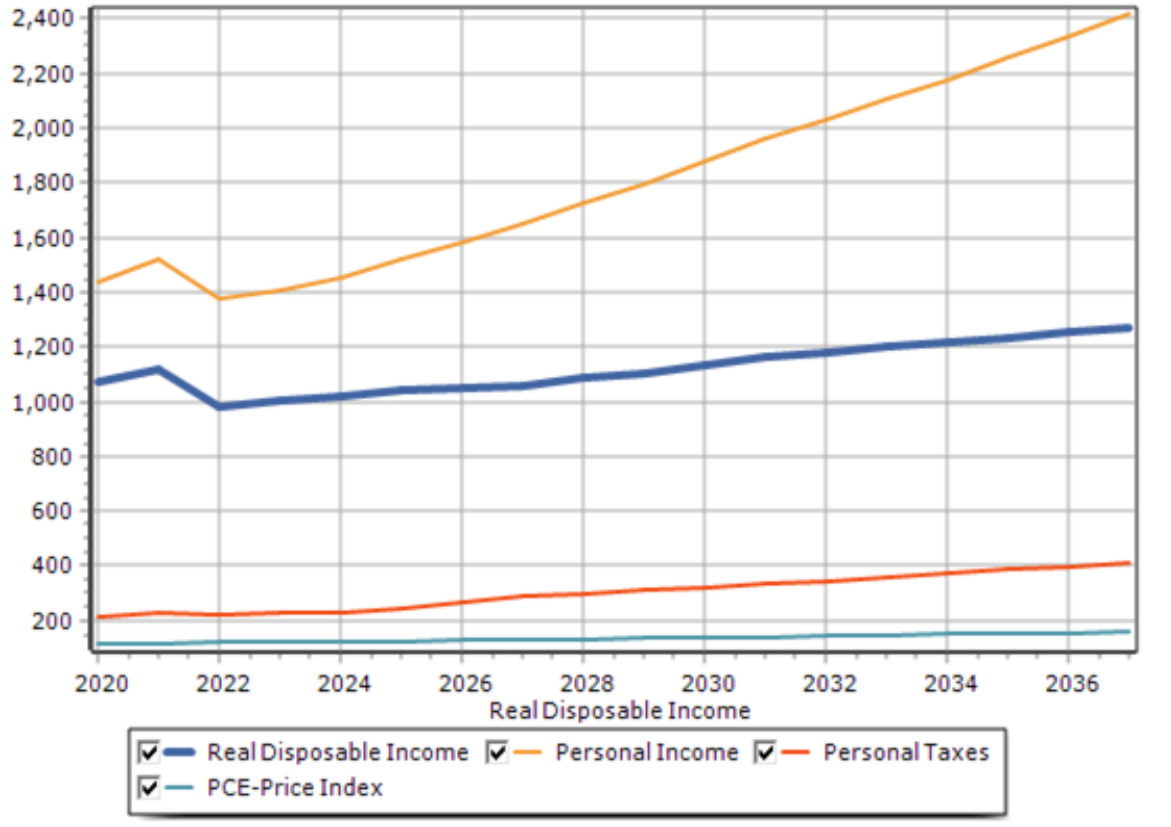
Budget Projections for New York(FY2019 – 2037)



- Significant Expenditure:
  - Education
  - Health
  - Social Welfare
- Largest Revenue Source Increase:
  - Personal Income Taxes
  - Usage Tax
  - Business Taxes

New York's Notable Result (Continued)

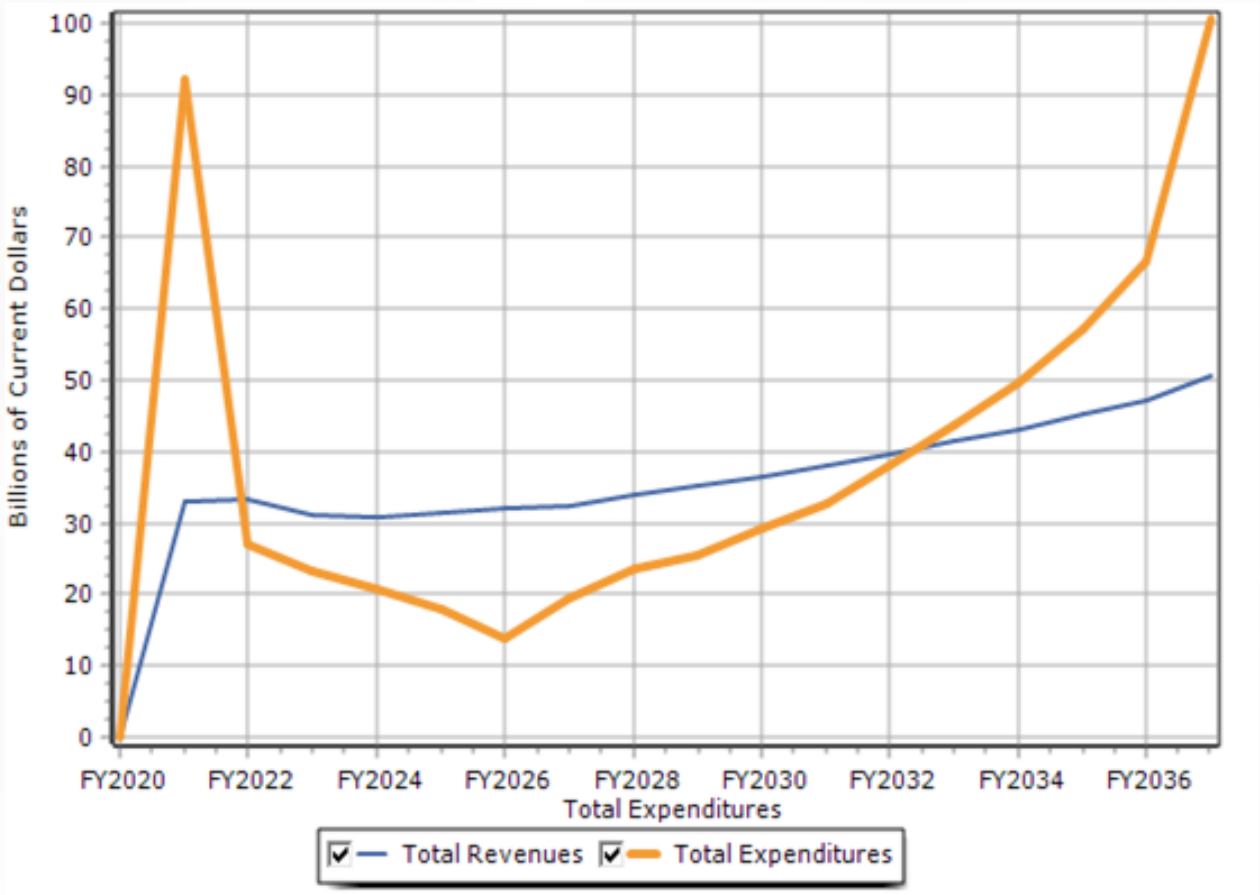
Real Disposable Income Projections for New York(FY2019 – 2037)



- Personal income increased over +100% over the 15 year period
- Real disposable income increased by just a little over +25%
- Personal taxes increased by only +20%

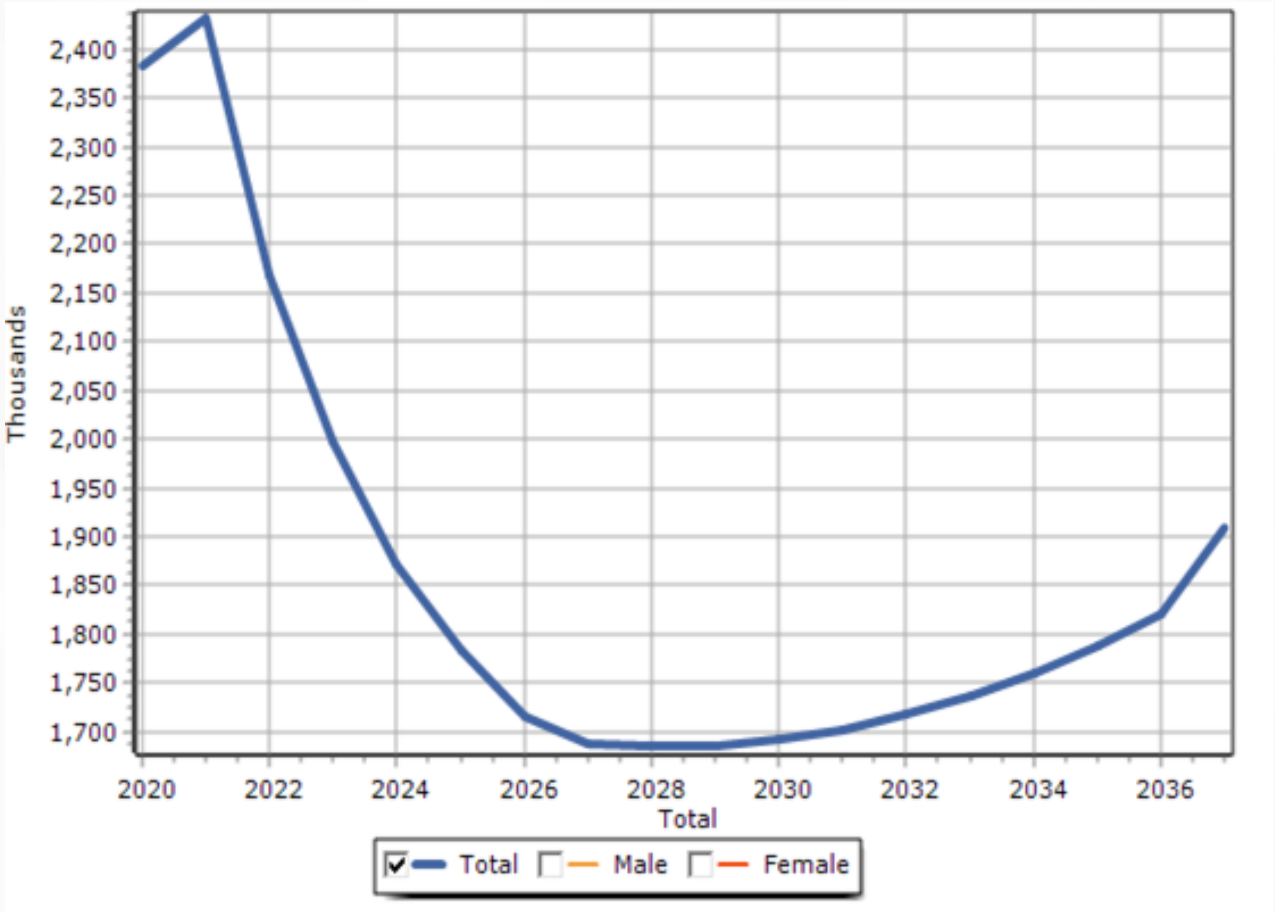
South Carolina's Notable Results

Budget Projections for South Carolina (FY2019 – 2037)



- Significant Expenditure:
  - K-12 Education
  - Economic Development
  - Higher Education
- Largest Revenue Source Increase:
  - Earned on Investments
  - Sales & Use Tax
  - Individual Income Taxes

South Carolina's Notable Results (Contd.)



- A significant decrease in labor supply was observed to accommodate new high-paying jobs, until 2032

Agenda

- Overview of American Innovation and Competition Act (USICA)
- Bill Provisions
- About REMI
- Model Demo
- Notable Results
- **Conclusion**
- Q&A

Conclusions

Increased Tax Revenues

- Federal funding & university funds were the primary sources of new revenue streams
- Investment revenues steadily rose at an average rate of +3% for all states (FY2022-2028)

Localized Supply Chain Expansion

- Chip Manufacturing became a significant industry in each state
- Increased population and innovation clusters

Long-term reduced production cost

- All production costs steadily increased between 5% - 13% (FY2022 – 2030)
- In 2030, all regions saw decrease between 1% and 5%

Consistent flow of investments

- Long term industrial investments are needed to sustain the positive impacts of the bill
- How will states make up for budget shortfalls?

Why Economic Modeling?

- Economic policy modeling can help governments estimate the effects of policies before they are implemented
- Bidders for grants, contracts from USICA will want to demonstrate that their proposals will have a positive economic impact in host communities
- Policy organizations and regional planners can use models to add quantitative rigor to their proposals, making the benefits more clear to stakeholders and decision-makers
- The ability to forecast the potential positive and negative impacts of policy, and know when to implement new taxes to compensate for lost revenues from federal funds.
- Remain competitive and address bottlenecks associated with industrial investments, such as 'who benefits?'

Agenda

- Overview of US Innovation and Competition Act (USICA)
- Bill Provisions
- About REMI
- Model Demo
- Notable Results
- Conclusion
- Q&A

Q&A

Thank you for attending!

For more information, please contact:

Guyesha.Blackshear@remi.com

James.ClarkStewart@remi.com