



**The Hilltop Institute**

*analysis to advance the health of vulnerable populations*

# **The Hilltop Health Care Reform Simulation Model**

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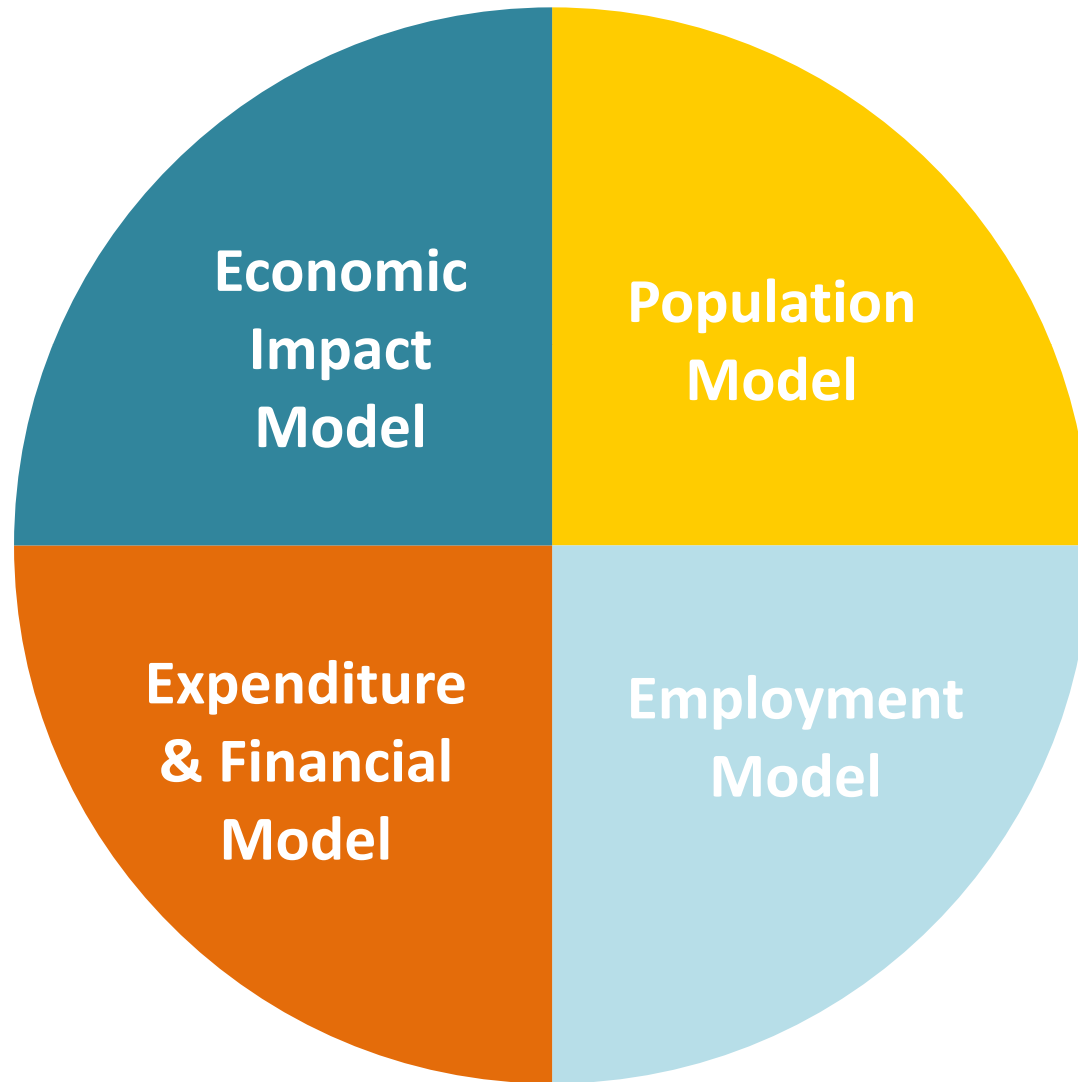
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# Overview of the Hilltop Health Care Reform Simulation Model

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- The model consists of four component models:
  - Population Model
  - Employment Model
  - Expenditure and Financial Model
  - Economic Impact Model

# Overview of the Hilltop Health Care Reform Simulation Model



# Population Model



# Population Model

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## Projects:

- Population and number of uninsured by age group, disability, and FPL (federal poverty level) status
- Number of people eligible for Medicaid expansion
- Number of individuals who are eligible but not enrolled in Medicaid, but are likely to enroll with health care reform (“woodwork effect”)

# Current Population Survey: Number of Uninsured Individuals by Percentage of the FPL

Health Insurance Coverage 2009 to 2010: Number of Uninsured

Age Group	Income-to-Poverty Ratio, 2009 to 2010						Total
	Below 50%	50% to below 139%	139% to below 150%	150% to below 200%	200% to below 400%	400% and above	
<b>00 to 20</b>	16,494	37,647	8,768	27,038	36,608	13,949	140,504
<b>21 to 64</b>	72,196	117,572	23,340	88,316	189,177	105,635	596,236
<b>65 to 80+</b>	2,216	2,944	649	634	4,362	1,795	12,600
<b>Total</b>	<b>90,906</b>	<b>158,162</b>	<b>32,758</b>	<b>115,988</b>	<b>230,147</b>	<b>121,379</b>	<b>749,340</b>

Source: U.S. Census Bureau

# Forecasting Numbers of Uninsured

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- To forecast number of uninsured by age group and FPL status, adjustments are made to account for:
  - Over-reporting number of uninsured in lower FPL categories by comparing to actual Medicaid data
  - The effects of the aging of the population
  - Changes in economic conditions

# Unemployment Rate

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- Unemployment rate projections are used in both Population and Employment Models
- Estimated econometric model to forecast state's unemployment rate as a function of national unemployment rate
- Used the long-term forecast of the national unemployment rate published by the Congressional Budget Office (CBO)



# Unemployment Rate and Number of Uninsured

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- Increase in unemployment rate leads to decrease in employer-sponsored insurance (ESI) and increase in number of people with Medicaid coverage (Gruber & Levitt, 2002)
  - Explains recent rapid growth in Medicaid enrollment due to economic recession
  - Addresses the “crowd-out” or “substitution” effects
- Effects of change in unemployment rates are included in the Population and Employment Models

# Citizenship Status

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- The model takes into account state's population that has U.S. citizenship and would be eligible for enrollment in Medicaid expansion or for coverage through the exchange, with or without subsidies

# Employment Model



# Employment Model

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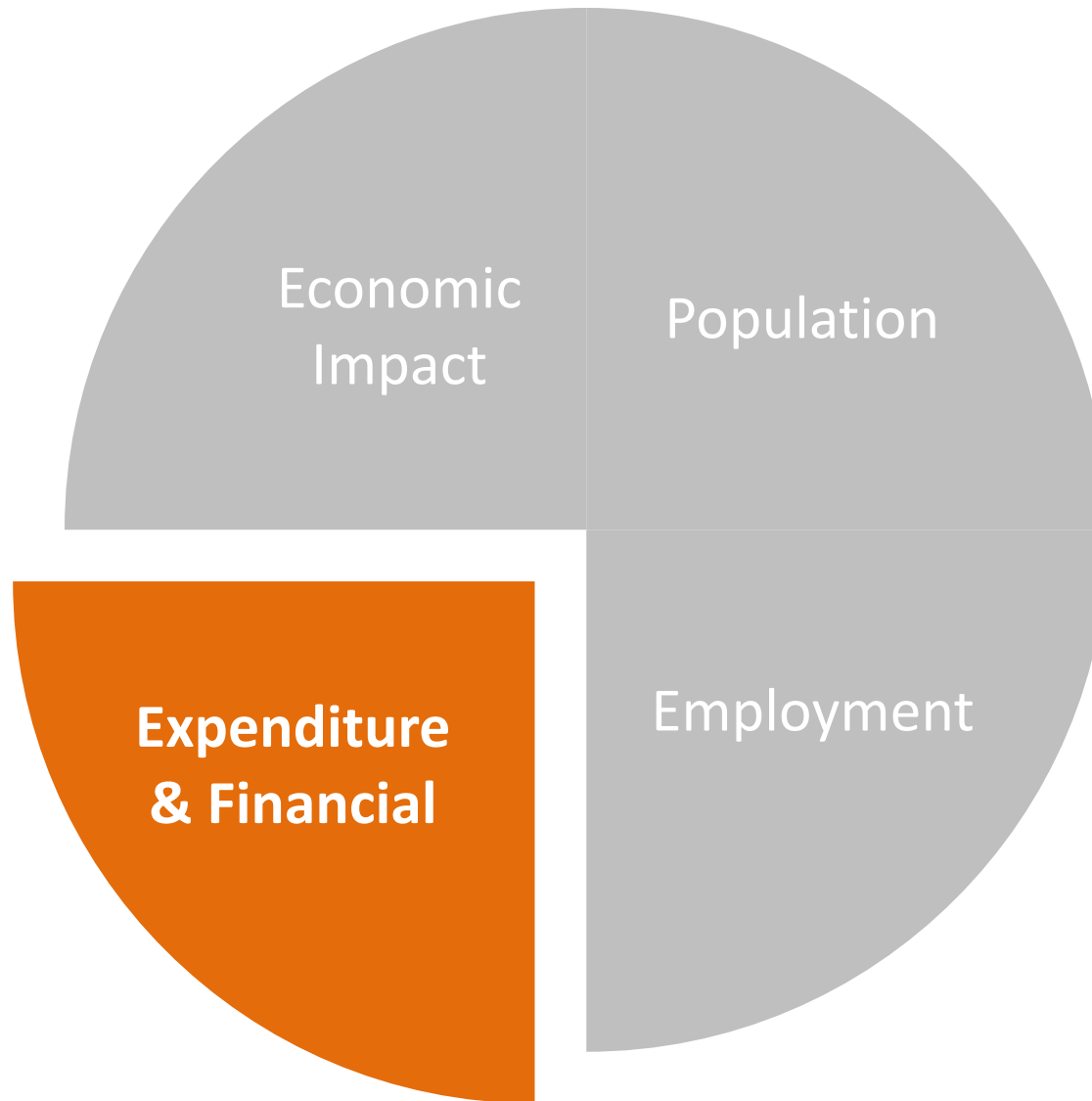
- Projects insurance take-up rate for individuals above 138% of the FPL
- Three econometric sub-models project ESI and individual direct purchase coverage:
  - Employer Offer of Insurance
  - Employee Take-Up of Insurance
  - Direct Purchase of Insurance

# Variables Affecting These Sub-Models

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- Unemployment rate
- Price of medical care
- Insurance premiums
- Employee portion of premiums
- Employer penalty under the ACA
- Average workers' income
- Percentage of workers in firms of different sizes

# Expenditure and Financial Model



# Expenditure & Financial Model

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- These models show summaries of revenues, expenditures, and savings
- Estimates are based on:
  - Projections of the population and employment models
  - Detailed calculations based on the ACA law and specific to state

# Medicaid Expansion

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- Cover individuals with income up to 138% of the FPL
- Costs of Medicaid Expansion =  
(Number of Medicaid Expansion enrollees)  
multiplied by  
(Average cost per Medicaid enrollee)



# Health Status of New Medicaid Enrollees

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- Research-Based Assumptions:
  - New Medicaid enrollees will have better health status than existing Medicaid disabled enrollees
  - Similar to current Medicaid Expansion enrollees
  - Eligible individuals with a disability will have largely enrolled in Medicaid by 2014

# Federal Medical Assistance Percentage (FMAP)

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- FMAP rates for Medicaid Expansion:
  - 100% in federal fiscal years (FFYs) 2014 - 2016
  - 95% in FFY 2017
  - 94% in FFY 2018
  - 93% in FFY 2019
  - 90% in FFY 2020 and later

# Impact on Employers and Employees

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- Federal assessment of employers under the ACA:
  - Fewer than 50 employees: exempt from penalties
  - More than 50 employees with no insurance coverage: Penalty of \$2,000 per employee, excluding 30 employees

# Federal Subsidy Payments (Tax Credits) for Individuals

- Insurance premiums of individuals with incomes less than 400% of the FPL will be capped at:

Income % of the FPL	Max Payment
Up to 133%	2.0% of income
134% to 150%	4.0% of income
151% to 200%	6.3% of income
201% to 250%	8.05% of income
251% to 400%	9.5% of income

# Economic Impact Model



# Economic Impact Model

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- Estimates new spending in the state health care sector due to the ACA
- Evaluates the total economic impact of the ACA on the state's economy
- Estimates the effects of spending in health care sector on other sectors of the economy

# Impact on the State Economy

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- Results of the Simulation Model are used by the IMPLAN input-output model to evaluate the total economic impact of the ACA on the state's economy
- Estimates of increase in employment are included in the Simulation Model through reductions in projected state unemployment rates
- Multiple iterations of the two models are done

# Model Output Includes

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- Flow of new federal funds through the state economy
- Additional state products/outputs generated
- Total uninsured (with and without ACA)
- Uninsured as % of total population
- New employment due to ACA
- Unemployment rate with and without ACA
- Federal subsidies to individuals
- Increases in health care expenditures



# Contact Information

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