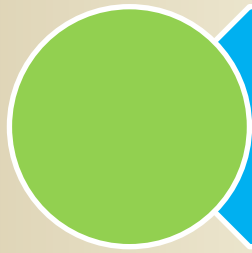


# The Effect of Taxes on State Economic Growth

ECONOMIC GROWTH

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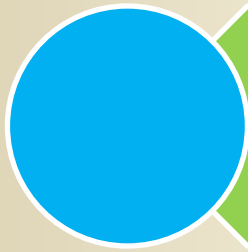


# The Current Crisis

- The problem:
  - Economic unrest (High unemployment rates, Housing Market etc...)
  - Unsustainable Debt (Currently above \$14 Trillion)
- How do we fix it?
  - Two Theories:
    1. Increase Taxes
    2. Decrease Taxes
- So which one works?

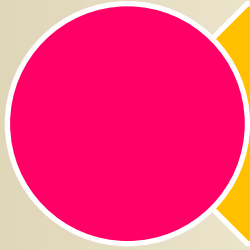
## Research Question:

Do states with higher taxes have more economic prosperity? Or, do states with lower taxes have higher economic prosperity?  
***In a comparison of States, those with lower taxes will experience more economic growth than states with higher taxes.***



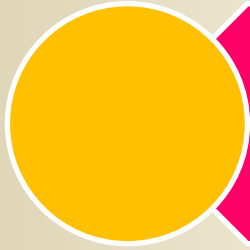
# Previous Findings

- **Part One:** Findings regarding the effect of taxes on economic growth is mixed
  1. Research differences
  2. Time Differences
- Big Picture
  - Taxes do have an effect on the economy
  - Some taxes have more effect than others
- Lee, Gordon (2005) Corporate Income Taxes/Personal taxes
- Milesi-Ferretti, Roubin (1998) Consumption Taxes, and Income taxes
- Helms (1998) & Mofidi, Stone (1990)



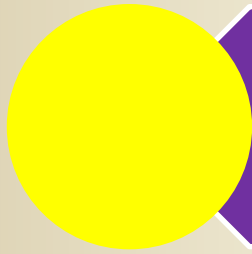
# Current Research

- What makes this research different?
- ★ • Independent Variables:
  - Sales Tax
  - Individual Income Tax
  - Corporate Income Tax
  - Property Tax



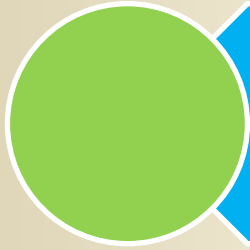
## Previous Findings Cont...

- **Part Two: Economic Indicators**
- Measuring the taxes effect on the economy-
  - GDP (Gross Domestic Product): Scully (2006)
  - Employment/Unemployment : Wasylenko, McGuire (1985)
  - Poverty: Roemer, Gugerty (1997)



# Current Research

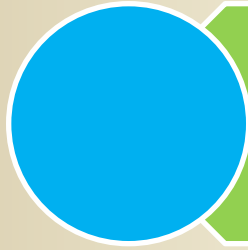
- ★ • Dependent Variables:
  1. State GDP (Gross Domestic Product)
  2. Unemployment Rate
  3. Poverty Rate



## Data & Measurements (IV)

- What to study: **Unit of Analysis** are the **50 U.S. States** between **2001-2009**
- Creating Variables:
  - Independent Variables:
    - Tax Revenue Data from U.S. Census Bureau for 2001 & 2009 (Units were in thousands of dollars)
    - Subtracted 2001 revenue from 2009 revenue-represents the change in taxes (growth or decline) over the eight years.
    - Divided by estimated population (U.S. Census Bureau)
    - Result: Variables representing the change in tax over the eight year period, Per Capita.





## Data & Measurements (DV)

- Creating Variables Cont...
  - Dependent Variables
    - Unemployment Rate for 2001 & 2009, Bureau of Labor Statistics
    - State GDP in current dollars (in millions) for 2001 & 2009 from Bureau of Economic Statistics
    - Poverty Rate for 2001 & 2009 from the U.S. Census Bureau
    - Subtracted 2001 values from 2009 to obtain the change over the eight year period.
    - Divided GDP change by estimated population to make it Per Capita (Unemployment and Poverty Rates excluded)

# Table 1.1

## Regression Analysis: Impact of States Sales tax on Economic Growth Indicators (T-Statistics in Parentheses)

	Unemployment	Poverty	GDP
<i>Bivariate Regression</i>			
	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Sales Tax	-.193 (-1.362)	<b>-.399 (-3.0184)*</b>	<b>.575 (4.872)*</b>
R Square	.037	.159	.331
Adjusted R Square	.017	.142	.317
<i>Multivariate Regression</i>			
	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Sales Tax	-.168 (-1.248)	<b>-3.94 (-2.842) *</b>	<b>.559 (4.785) *</b>
Democratic Legislators	.793 (1.990)***	.305 (.745)	-.649 (-1.880)
Percentage of African Americans	-.425 (-1.057)	-.152 (-.369)	.493 (1.414)
College Education or Higher	-.048 (-.333)	-.164 (-1.122)	.175 (1.148)
Union Membership	.233 (1.578)	.027 (.177)	.071 (.557)
R Square	.264	.222	.447
Adjusted R Square	.180	.133	.384

Source: U.S. Census Bureau, Bureau of Labor Statistics, Pollock State Data Set, Bureau of Economic Statistics

Significance: \*p<.05, \*\*p<.01, \*\*\*p<.1

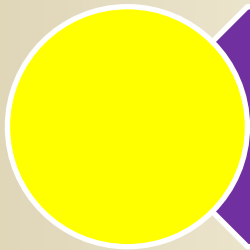
# Table 1.2

## Regression Analysis: Regression Analysis: Impact of Individual Income Tax on economic growth Indictors (T-Statistics in Parentheses)

	Unemployment	Poverty	GDP
<i>Bivariate Regression</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Income Tax	<b>-0.435 (-3.091)*</b>	<b>-0.292 (-1.954)***</b>	<b>0.631 (5.203)*</b>
R Square	.189	.085	.398
Adjusted R Square	.169	.063	.383
<i>Multivariate Regression</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Income Tax	<b>-0.591 (-4.565)*</b>	<b>-0.255 (-1.573)***</b>	<b>0.582 (4.521)*</b>
Democratic Legislators	-.018 (-.130)	-.143 (-.819)	.141 (1.023)
Percentage of African Americans	<b>.380 (2.985)*</b>	.241 (1.513)	-.163 (-1.293)
College Education or Higher	.025 (.189)	-.077 (-.466)	.176 (1.347)
Union Membership	<b>.502 (3.483)*</b>	.028 (.154)	-.062 (-.434)
R Square	.471	.172	.478
Adjusted R Square	.398	.057	.406

Source: U.S. Census Bureau, Bureau of Labor Statistics, Pollock State Data Set, Bureau of Economic Statistics

Significance: \*p<.05, \*\*p<.01, \*\*\*p<.1



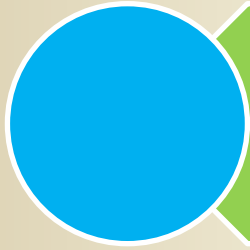
# Table 1.3

## Regression Analysis: Impact of Corporate Income Taxes on Economic growth indicators. (T-Statistics in Parentheses)

	Unemployment	Poverty	GDP
<i>Bivariate Regression</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Corporate Tax	<b>-0.473 (-3.557)*</b>	-0.239 (-1.632)	<b>0.661 (5.839)*</b>
R Square	.223	.057	.437
Adjusted R Square	.206	.036	.424
<i>Multivariate Regression</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>	<i>Standardized coefficient</i>
Corporate Tax	<b>-0.518 (-4.103)*</b>	-0.191 (-1.245)	<b>0.615 (5.404)*</b>
Democratic Legislators	.012 (.082)	-0.161 (-0.936)	-0.004 (-0.028)
Percentage of African Americans	.330 (2.542)***	.173 (1.094)	-0.110 (-0.938)
College Education or Higher	.034 (.253)	-0.103 (-0.629)	.142 (1.173)
Union Membership	.316 (2.194)***	.038 (.216)	.147 (1.130)
R Square	.407	.123	.519
Adjusted R Square	.331	.011	.457

Source: U.S. Census Bureau, Bureau of Labor Statistics, Pollock State Data Set, Bureau of Economic Statistics

Significance: \*p<.05, \*\*p<.01, \*\*\*p<.1



# In Conclusion

- All in all the **Hypothesis is not supported**
- Looking at specific taxes revealed certain taxes have more/less of an effect on the economy
  - Study suggests Individual Income tax had the greatest effect (Three dependent variables were significant), followed by Corporate Income Tax and Sales Tax.
- Going Forward...
  - More questions than answers
  - Causality issues
  - Where to go from here: Tax Rates, State Expenditures (how revenue is spent)



Questions?