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The Kansas Experiment: Considering Dynamic Effects

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Overview

- Does state tax policy affect economic growth? Evidence from the research.
- Do tax cuts pay for themselves? Dynamic scoring and the influence of tax policy on state revenues.
 - Dynamic Scoring Explained
 - State Experiences
 - Dilemmas
 - Issues in the Kansas Context

Do Lower Taxes Increase Economic Growth?

- **OECD Reports:**

- In general, tax cuts increase national economic growth, **BUT**
 - Assumes no deficit and sufficient investment in human and physical capital
 - Tax financed growth in developed countries has a more negative effect than in developing countries (Miller & Russek, 1997)
 - Growth or contraction occurs over the short run but does not extend for a long time (the economy will return to equilibrium)
- In general, corporate income taxes have the most distortionary effect, followed by the personal income tax, and consumption taxes.
 - The least distortionary tax is a “value added tax” which avoids the tax pyramiding of the retail sales tax

- **US National Level:**

- Tax cuts are explicitly used as a counter-cyclical “stimulus” to the economy, CBO scores them as having a positive impact, **BUT**
 - Magnitude of effect depends on levels of employment
- Tax Foundation finds of 18 studies, only 3 show no effect; the remainder show a positive effect from decreasing taxes
 - One study shows that better to reduce taxes than to increase defense spending (Barro & Redlick, 2011)

Research on States

- Evidence is more mixed (23 studies):

Generic Tax Burden

- 3 studies show lower marginal tax rates increase economic growth (or higher rates decrease growth)
 - 1 shows will take 5 years to feel effect
 - 1 shows will only feel the effect in the short term
- 2 studies show that in the 1980s tax collections per capita/expenditures per capita more likely to have a negative effect; today closer to optimal spending on average
- 1 study shows a negative effect of cutting taxes
- 2 studies shows no effect on employment growth and residential choice

Income Tax

- 3 studies show positive impact of lowering marginal income tax rate
- 2 show no effect; 1 shows a negative effect
- 1 shows positive effect of reducing the progressivity of the income tax; 1 shows no effect (same author)

Corporate Income Tax

- 2 show a positive effect
- 2 show no effect

Hard to Measure These Effects

- State taxing and spending in the US is generally small relative to the overall size of state economies.
 - Kansas GDP is \$139 billion in 2012
 - Kansas State Revenues in 2012 = \$6.4 billion (5% of GDP)
 - By way of contrast, the federal government expenditures in Kansas were around \$29 billion in 2010
 - 2012 Tax Reduction = \$802 million in FY14 (or .6% of GDP)
- Of the total costs of doing business, state and local business taxes as a share of business costs are 1.2% (Lynch, 2010)

**Relative Importance of Different Criteria in Site Selection
(Deloitte & Touche/Fantus, 1997)**

Cost Factor	Manufacturing (%)	Office (%)
Labor	36	72
Transportation	35	0
Utilities	17	8
Occupancy	8	15
Taxes	4	5
Total	100	100

The Dilemma of a Balanced Budget Environment

- Taxes don't occur in a vacuum – they go to pay for something which may be of more or less value and has dynamic effects of its own.

Table 1

Summary of Results, Studies of Selected Public Services

Highways

(Transportation)

Public Safety

Education

10/15 positive

5/9 positive

12/19 positive

8/15 positive and
significant

4/9 positive and significant
2/8 positive and negative, by
industry and functional form

6/19 positive and significant
5/19 highly varied results



Physical and Human Capital Investment are Most Associated with Growth

Education/Human Capital Investment

- International studies show a significant correlation between cognitive achievement and economic growth.
 - A 10% increase in the number of students reaching basic literacy increases annual GDP growth by .3%; increasing the number of “rocket scientists” has a stronger effect 1.3%
 - Measuring the position of teacher salaries relative to income distribution of salaries overall in a society has a strong and significant effect (and can be a proxy cognitive achievement) (Hanushek & Woessman, 2012)
- US domestic studies show a relationship between targeted spending on education and economic growth.
 - Local spending on instruction and operations led to a 5-7% more business openings and 7% more investment in Maine municipalities (Bell & Gabe, 2004)

Physical Capital Investment

- Similar strong impact on growth, although US may be largely “built out” and marginal effects are not as strong as they used to be.

The Laffer Curve

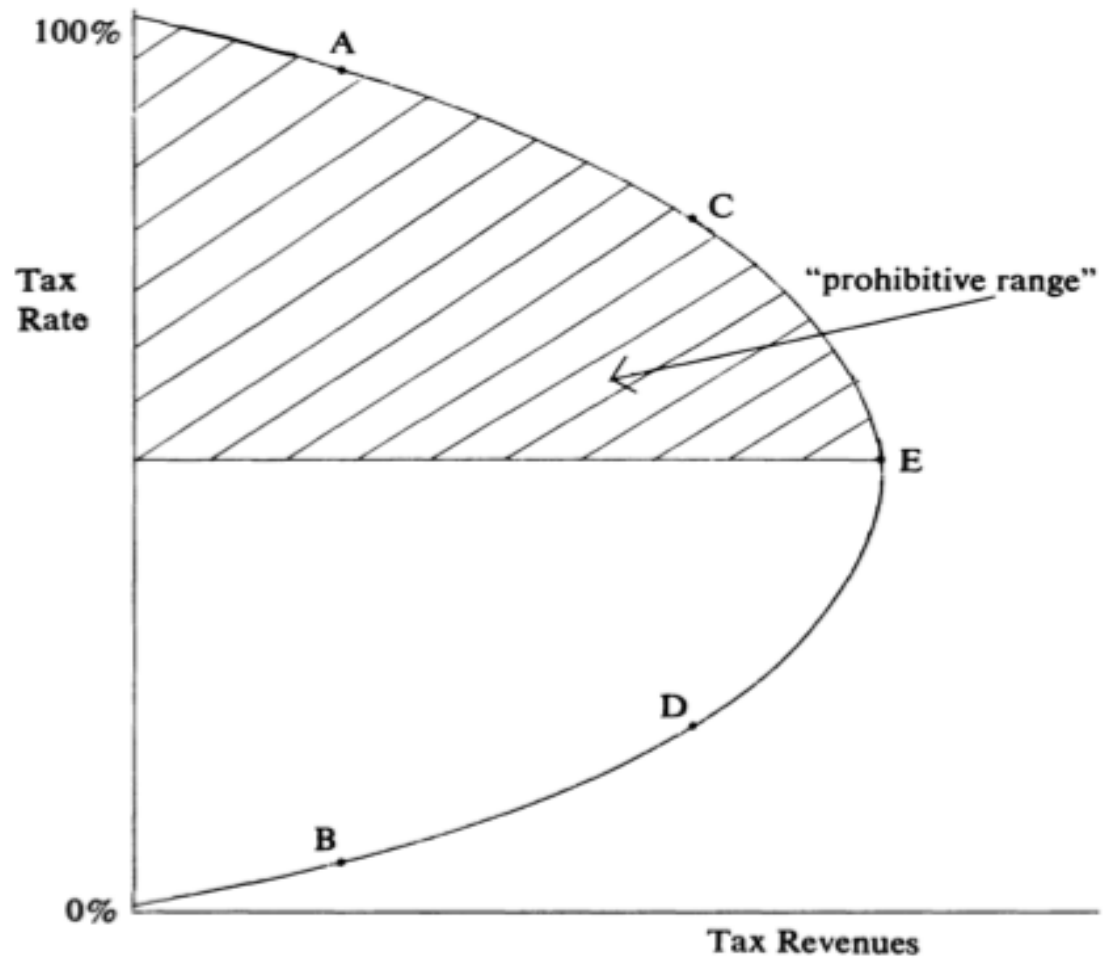
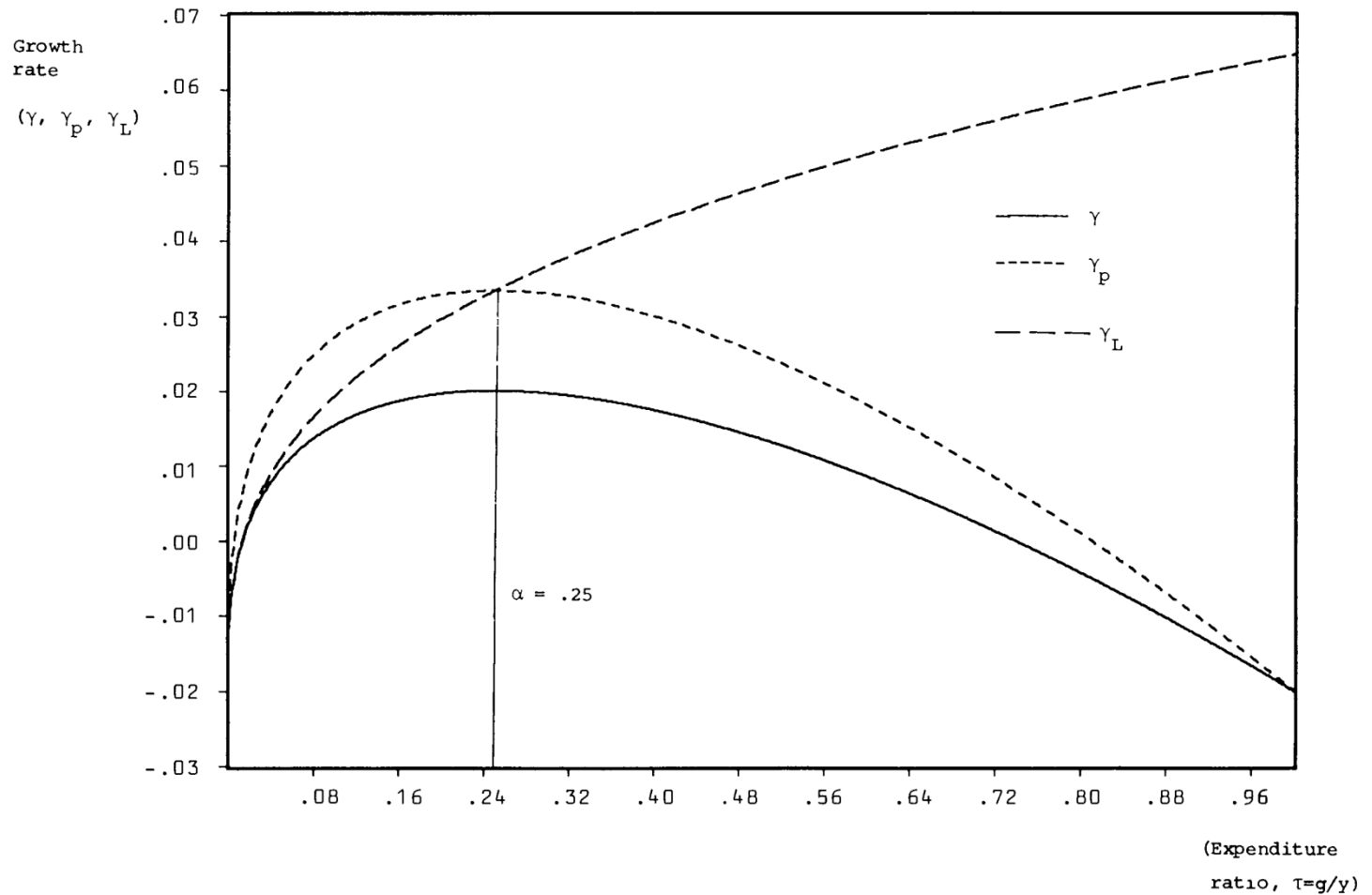


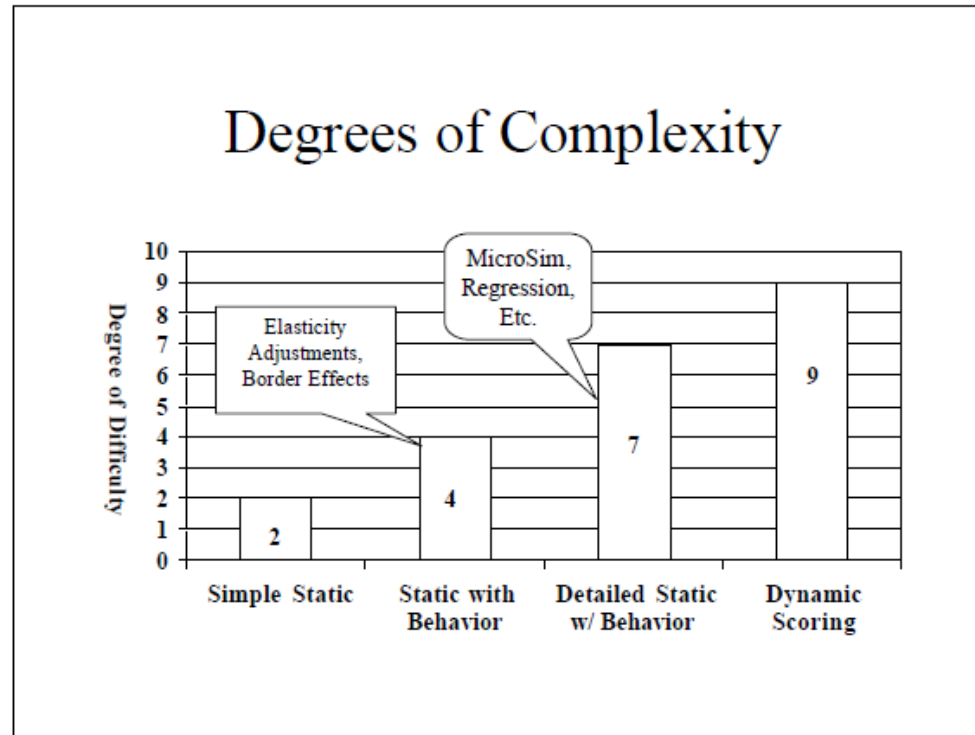
Figure 1: *The Laffer Curve*

Barro "Growth Hill"



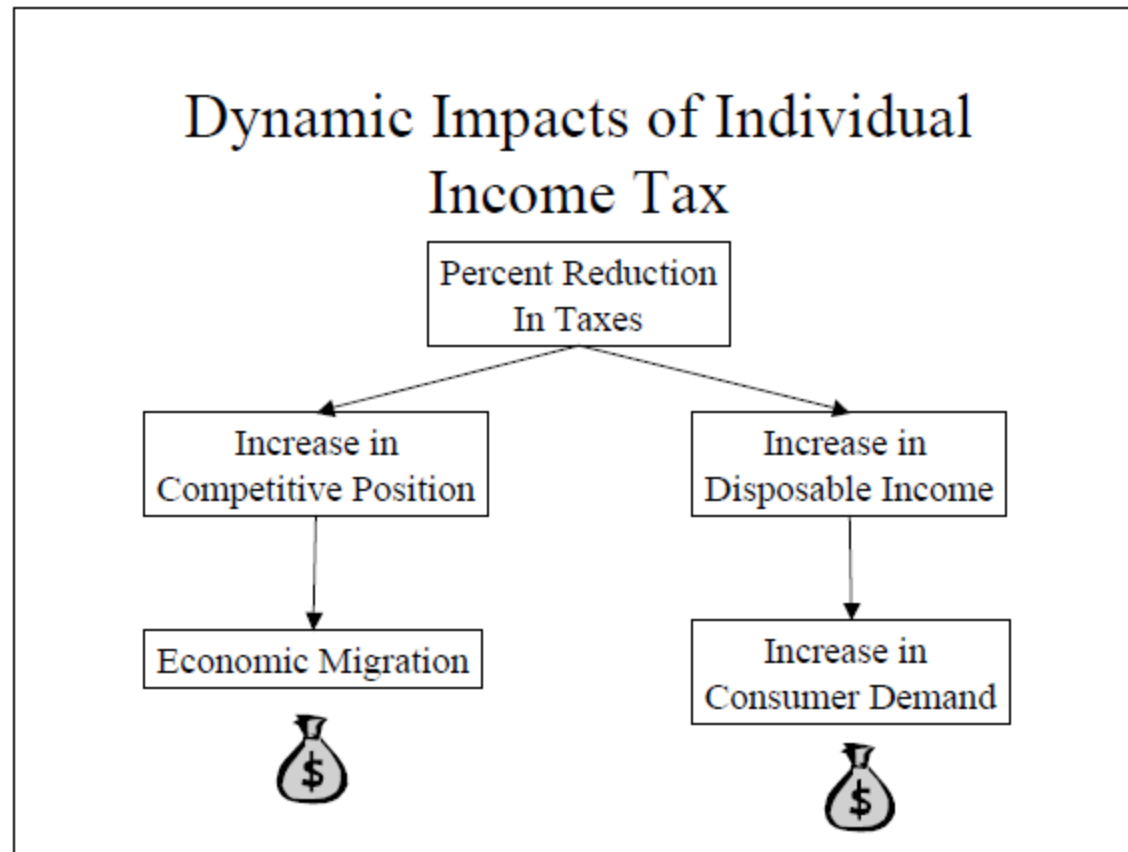
States must balance the drag on the economy from taxes with the economic lift they get from investment in important public services.

Static v. Dynamic Scoring



Dynamic scoring estimates changes in economic variables such as personal income and employment in response to tax changes and in turn estimates the impact of these variables on revenues.

Example of Dynamic Effects of Income Tax Cut



Dynamic Scoring

- Do tax cuts pay for themselves? No.
- Does the increased economic activity from tax cuts help offset some of the revenue loss? Yes – possibly.
- Assuming there is an effect, what is the estimated magnitude of effect?



California

- Used a Computable General Equilibrium (CGE) model
- \$1 billion static revenue increase
 - Personal income would require 4% rate increase; 4% offsetting revenue reduction from dynamic effects
 - Sales and Use would require 5% increase; 12% offsetting revenue reduction from dynamic effects
 - Corporate would require 17% increase; 18% offsetting reduction from dynamic effects
- Dynamic effects occur over a 5 year period



Oregon

- Used a CGE model
- \$100 million tax increase and decrease (symmetrical effect)
 - Personal income tax, partially offsetting revenue reduction of 6.8%
 - Corporate income tax, partially offsetting revenue reduction of 15%
 - Oregon has no sales tax



New Mexico

- Modeled impact using REMI
- Reduced top personal income tax rate from 8.2% to 4.9% over 5 years
- 50% cut in capital gains tax
- First year static estimate, -\$21.8 million; REMI dynamic estimate -\$21 million (3.7% difference, over 5 years is reduced to 2.3%)



Ohio

- Modeled impact using REMI
- Tax Reform:
 - 21% reduction in state personal income tax,
 - .5% reduction in state sales tax,
 - Elimination of tangible personal property tax on machinery, equipment, inventory;
 - Elimination of corporate franchise tax; increase excise tax on tobacco and creation of a broad base, low rate commercial activities tax.
- \$3.06 billion reduction in revenues when fully implemented; dynamic effect of +\$216 million
 - A 7% recovery of revenues over static estimate.
- Note that this model did not incorporate dynamic effects from the required expenditure reductions.

The problem with measuring dynamic effects

- Size of effects are typically small

Table 1: California, Oregon, and New Mexico Dynamic Revenue Estimates of Personal Income Tax Changes

	Dynamic revenue offsets (absolute value)		Static estimate % of 2010 state GSP (absolute value)
	% of static revenue cut	% of state 2010 GSP	% of state 2010 GSP
California	4.0%	0.002%	0.05%
Oregon	6.8%	0.004%	0.05%
New Mexico	2.4%	0.028%	1.18%

Source: (Vasche 2006, LRO 2001, Francis 2007, LFC 2004, and author's calculations)

- Tax cuts do not pay for themselves even with strong assumptions about positive dynamic effects → non-revenue neutral tax cuts lead to expenditure reductions, which in turn have a negative dynamic effect

Implications for Kansas Shortfalls

- Kansas appears to need around a 20% dynamic effect to meet basic expenditure demand over 5 years.
 - May well get some bounce from the tax cut particularly in the short run.
 - But, would need a % lift at the high end of what other state models would predict to cover expenditure shortfall.
 - The state needs to keep an eye on “depreciating” physical and human capital over time.
- The size of the dynamic effect is likely to be within the margin of error of the revenue estimate and estimation is easily confounded by conflicting economic forces
 - Federal government cuts (~1-2% cut in federal funds to Kansas will neutralize the impact of tax cuts)
 - Weather, international markets, etc.

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This presentation is based on the following reports and presentations:

A Review of State Dynamic Revenue Analysis [Draft] (Peter Bluestone, Senior Analyst, Georgia State Fiscal Research Center).

Dynamic Impacts of Tax Law Changes (Greg Harkenrider, Office of State Budget Director, Commonwealth of Kentucky, September 22, 2004, Presentation to Federation of Tax Administrators)

