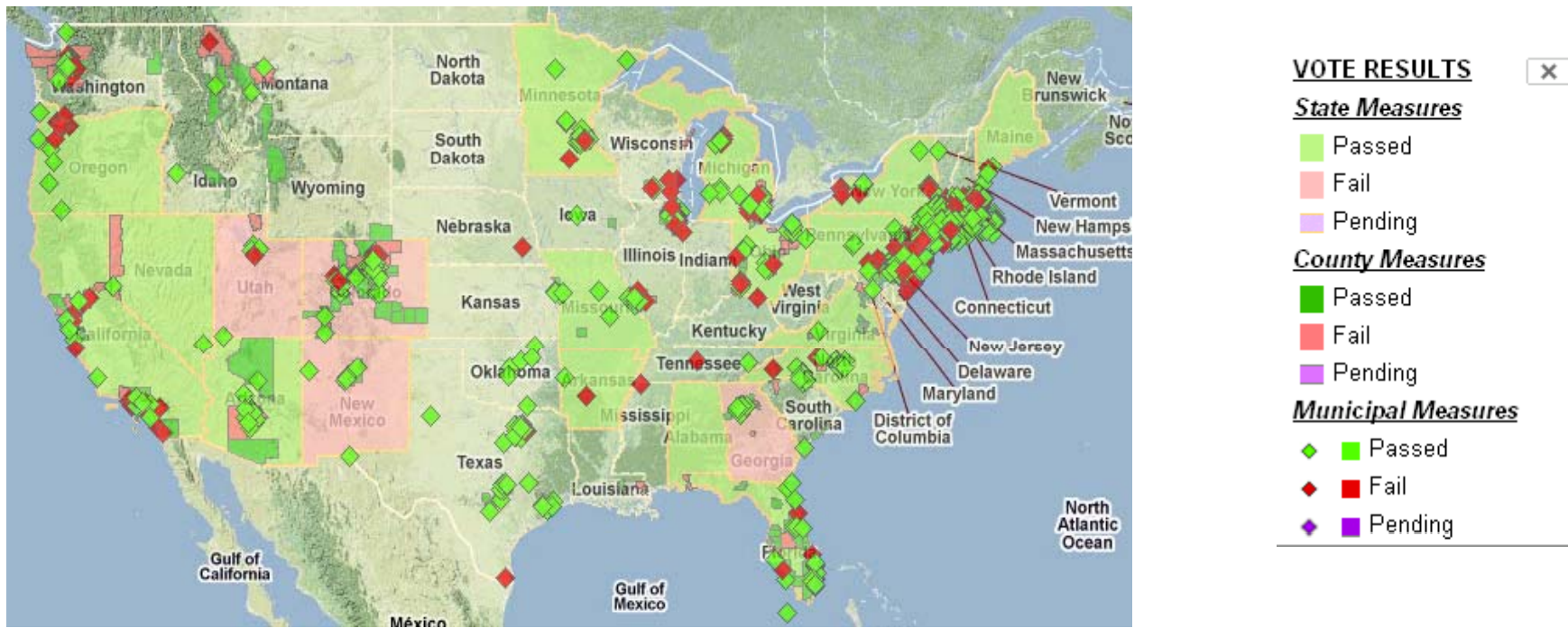


Green Open Space Referenda and **Spatial Dependence in Florida** **Municipal Expenditures**

Kamna Lal Mantode

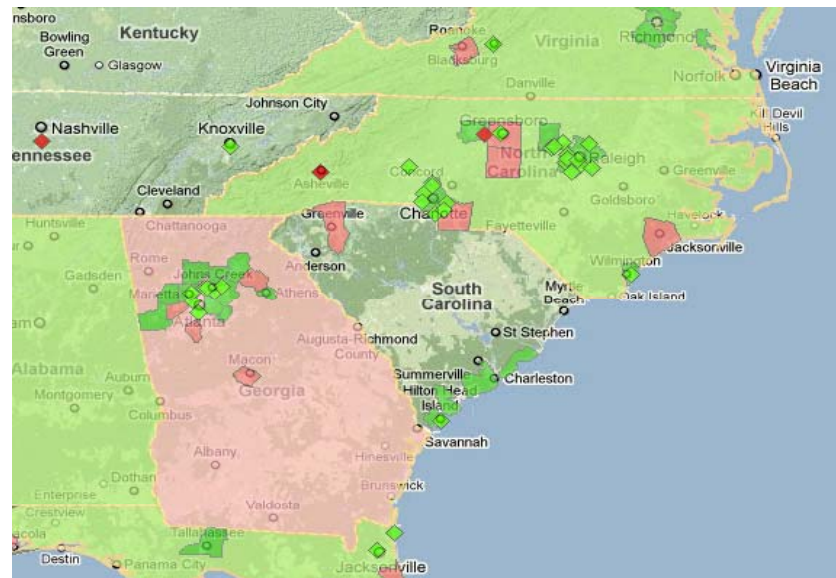
Prepared for Presentation at the Public Administration Symposium
College of Urban Planning and Public Affairs
University of Illinois, Chicago
March, 2011

Prepared for CUPPA PA
Symposium 11-12 March 2011



Source: Landvote Database,
Trust for Public Land

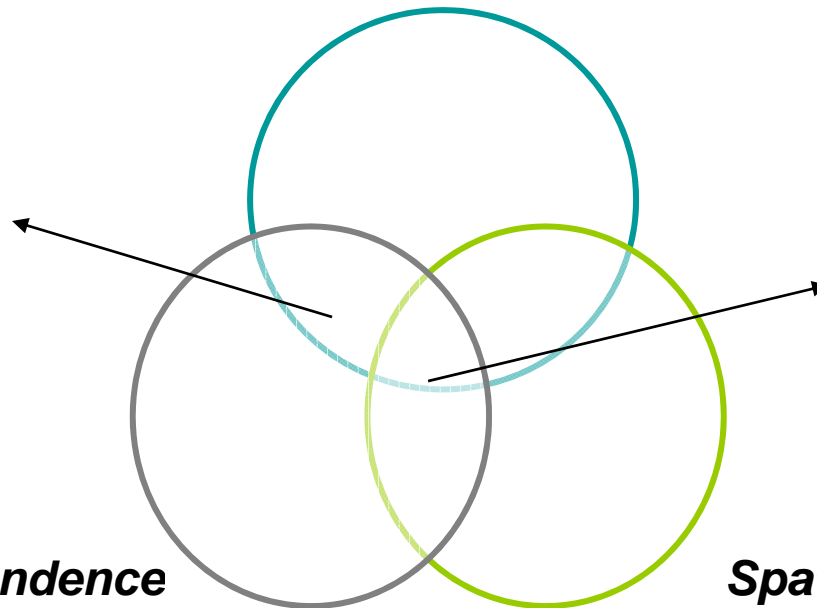
<http://207.114.175.61/LandVote/>



Theoretical Background

Green Open Space Referendum

How do expenditures change after a referendum?



How is spatial dependence in expenditures affected?

Fiscal Dependence

Spatial Analysis

Focal Relationships

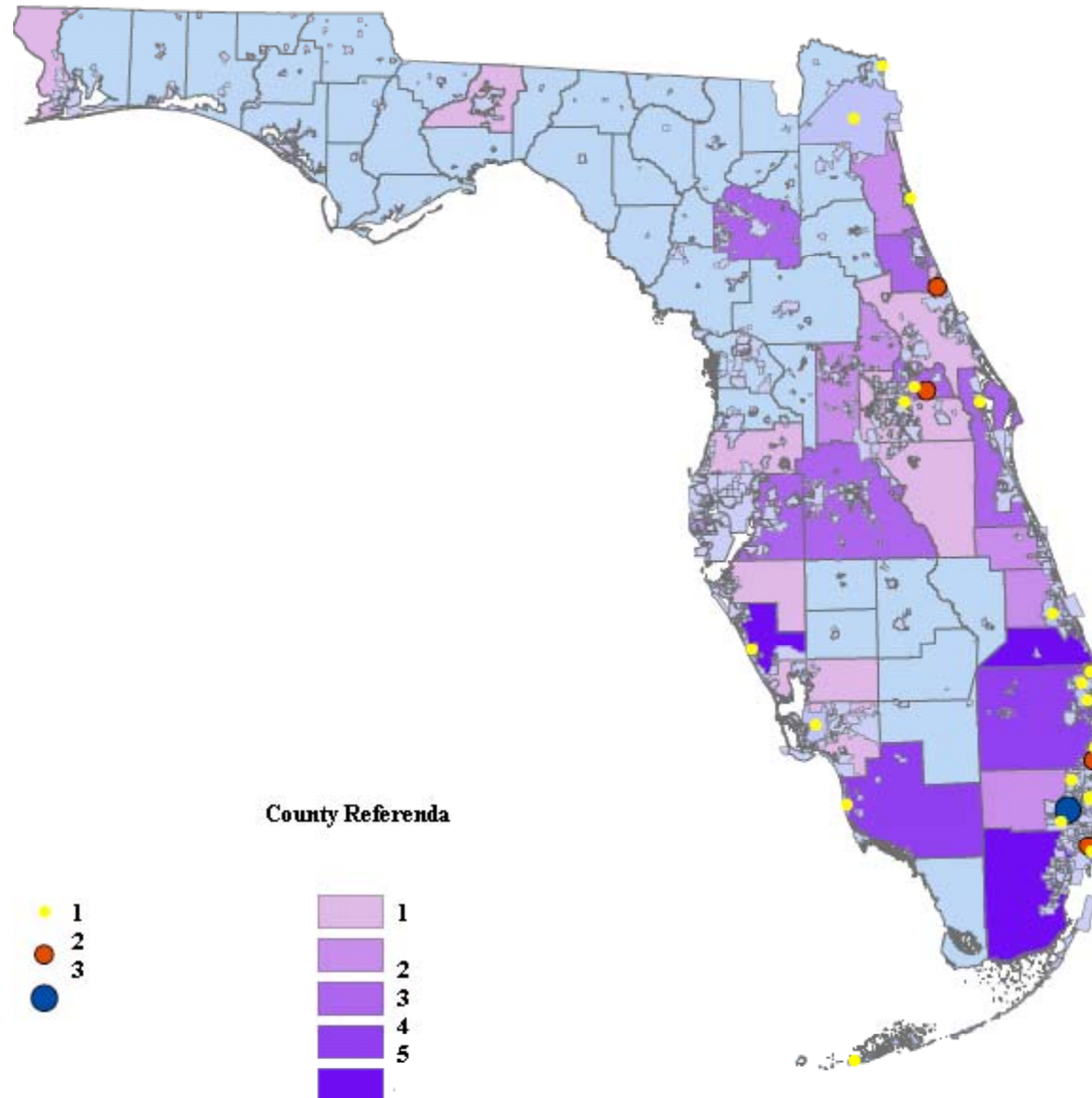
H1: Referendum → Increase in own spending

H2: Referendum → Change in neighbors spending.

Study Details & Data

- Florida as a case study
- Study is bound between 1996-2006.
- In the time period, Florida experienced 18 referendum
- Data
 - Referendum Data: The Trust for Public Land-
Landvote database
 - Expenditure Data: Florida Department of Financial Services
 - Dependent Variable: Per capita expenditures on parks and recreation (2000=base year)

Florida Map of Local Government Referenda



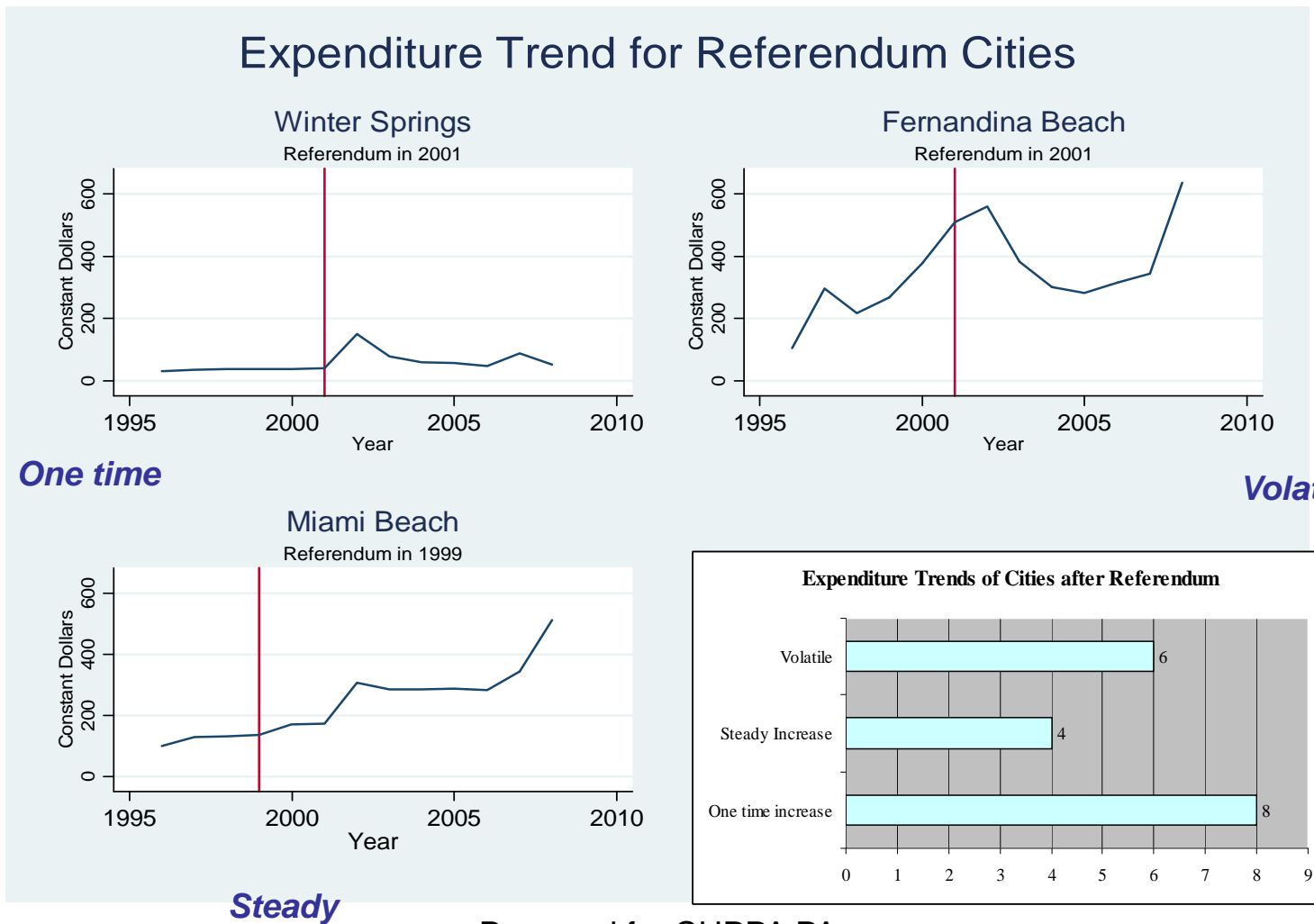
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Q1: Effect of Referendum on own spending

- Graphs
 - Cities
- Difference of Means
 - Referendum vs. non referendum cities
 - Total spending
 - » Operating
 - » Capital

Trend of Expenditures in Referendum cities (n=18)

Expenditure Trend for Referendum Cities



Difference of Means-Handout

- Visible shift in per capita expenditures-especially in cities till 2000.
- Visible higher investment in capital expenditures after referendum
 - Exceptions
 - Cities with referendum in 2000
 - Cities with referendum in 1990s Vs. 2000

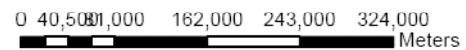
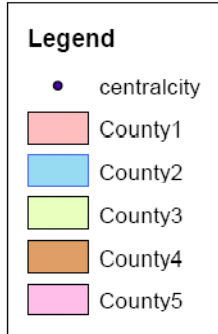
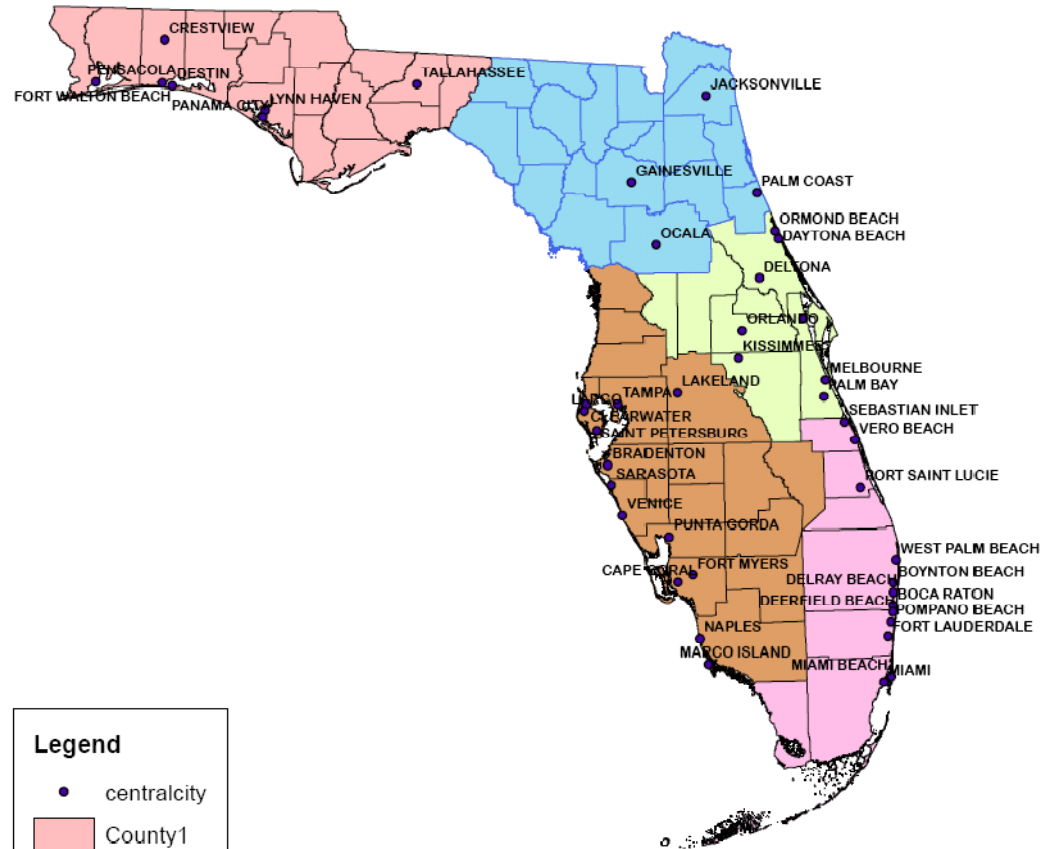
Inferences

- A) Referendum → Affect spending
- Visible increase in parks and recreation expenditures.
 - Delay due to bond process
 - Difference for cities in mid 2000s-primary vs. suburban cities (handout)
- There exists a difference between allocation to operating vs. capital expenditures

Q2: Effect on spatial dependence

- Previous studies of positive spatial dependence (Murdoch et al, 1993; Choumert, 2010) more than negative (Lundberg, 2006; Solle Ole, 2006)
- 5 regions-cross section estimation: 1996 & 2006
 - Difference in number of referendum
 - Difference in policy context
- Weight Matrix: threshold distance 5 miles

Florida Regions and Central cities



Note on Method

- Spatial Dependence Equation
 - Spatially weighted DV on the RHS to estimate dependence
- **$\text{Exp}_i = \alpha + \rho W.\text{Exp}_{j\dots k} + \beta_1 X_i + \beta_2 \text{Tax}_i + \beta_3 \text{Grants}_i + \beta_4 \text{Top}_i + e_i$**
- OLS estimation: LM statistic-lag & error
- MLE

Coefficient of spatial dependence by region (rho)

	All	1	2	3	4	5
1996	0.21	-0.33	-	0.58	-	-
2006	0.07	-	-	-	-	0.14
Ref			2	6	2	10
N	400	63	71	73	83	110

Note: Control Variables include: income, percentage population over 65, grants, tax price, land miles, central city

Inferences

- Results concur with previous studies.
- Spatial dependence magnitude changes over time.
 - Regional equations (rho undetected in region 1 & 3 in 2006)
 - Positive rho in region 5 (It has 10 referenda)
 - Lack of positive rho in region 3 (It has 6 referenda)
 - Plausible Explanation-Amount & Timing of referenda from the point of evaluation.

Limitations of FL analysis

- Small n of referenda
- Analyzing Referendum vs. referenda
- Geography (spatial holes)

Thank You!

Questions