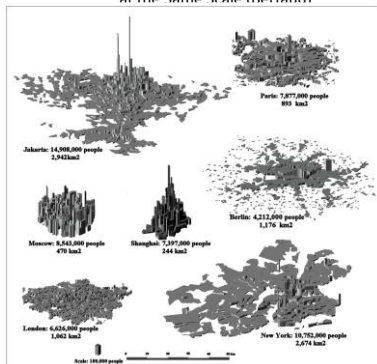


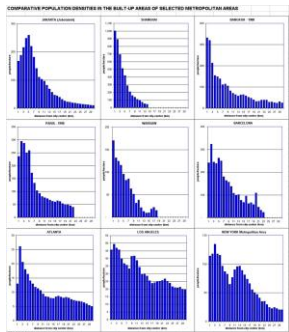
Substitution in Consumption and Production;
Empirical Testing of the Monocentric City Model

J. M. Pogodzinski
Lecture 15

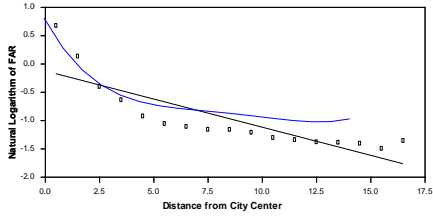
Spatial Distribution of Population in 7 Major Metropolis Represented at the Same Scale (Bertaud)



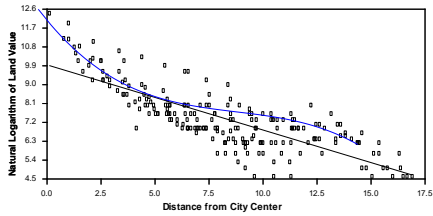
Population Densities by One-Kilometer Rings: Market-Oriented Cities (Bertaud)



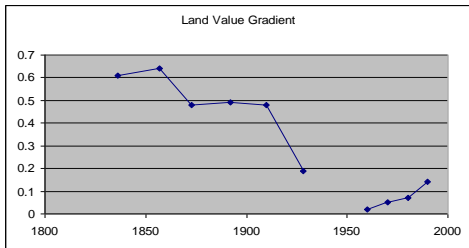
Log of Floor-Area Ratios in Chicago



Log of Land Values in Chicago in 1873



Land Value Gradient in Chicago over Time



Brueckner and Fansler's Estimates for Total Urban Land Area in American Cities

Variable	Coefficient	
Constant	-41.0723 (-2.277)	-63.4691 (-1.244)
Population	0.0004 (10.030)	0.0004 (9.876)
Median Agricultural Land Value in County	-0.0303 (-3.090)	-0.0289 (-2.888)
Household Income	0.0062 (3.033)	0.0062 (3.050)
Percentage of Commuters using Public Transit	-0.2444 (-0.4056)	
Percentage of Households with One or More Cars		0.2475 (0.4604)
R ²	0.7982	0.7985

Angel, Sheppard, and Civco's Estimates for the Natural Logarithm of Total Land Area for Cities throughout the World

Variable	Coefficient	T-Value
Ln Total Population	0.662	13.194
Ln Income	0.496	7.084
Ln Share of IP Addresses	0.051	2.165
Ln Air Links	0.122	4.773
Ln Agricultural Rent	-0.260	-7.431
Ln Fuel Cost	-0.087	-1.171
Shallow Ground Water	0.267	2.919
Temperate Humid Climate	-0.314	-2.414
Mediterranean Warm Climate	1.135	6.914
Mediterranean Cold Climate	0.681	2.867
Constant	-6.952	-5.699
R ²	0.897	

GIS DEMO

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