

TABLE 7

Description of variables in simultaneous equations model—rural and urban commuting zones

(Descriptive statistics)

Variable name	Variable description	Source(s)	Commuting zone	Mean	Standard deviation	Minimum	Maximum
Dependent							
Patents	Utility patents awarded in commuting zone in year 2000 (geolocation based on awardee's or awardees' county of application)	U.S. Patent and Trademark Organization (USPTO)	Rural	35.47	56.1	0	502.52
			Urban	1,867.22	4,968.36	6.03	51,821.97
Inventive class (IC)	Workers in group of identified inventive occupations (in table 3)	Census special tabulation, 2000	Rural	1,168.84	1,188.44	24	9,606.00
			Urban	31,161.69	61,181.13	571	5.28E+05
Science, engineering, and technical (SET) employment	Workers in Census occupations 100–76 and 190–96	Census special tabulation, 2000	Rural	730.2	725.38	16	6,163.00
			Urban	21,749.28	42,831.45	284	3.41E+05
Creative class (CC)	Workers in McGranahan and Wojan's (2007) "recast" creative class (Florida 2002)	Census special tabulation, 2000	Rural	4,720.46	4,204.45	192	3.33E+04
			Urban	1.01E+05	1.96E+05	2,378.00	1.87E+06
Educated workforce (BA)	Working-age population (25–64 years) with at least a bachelor's degree	Census Bureau, 2000 Census of Population and Housing, Summary File 4 (SF4)	Rural	6,756.82	6,116.37	300	5.22E+04
			Urban	1.38E+05	2.75E+05	3,237.00	2.46E+06
Independent							
Patents equation							
1975–80 patent stock (PatStock)	Utility patents awarded in commuting zone in years 1975–80 (geolocation based on awardee's or awardees' county of application)	USPTO	Rural	23.88	84.59	0	1,498.20
			Urban	764.36	1,932.52	2	16,561.30
Population density (PopDens)	Commuting zone-level population divided by land area	Census Bureau, 2000 Census of Population and Housing, SF1	Rural	26.29	26.7	0.51	199.12
			Urban	210.67	471.81	6.5	7,164.24
University research expenditures (UniResExp)	Aggregate research expenditures (in millions of dollars) in commuting zone for public and private not-for-profit universities	Integrated Postsecondary Education Data System, 2000	Rural	2.39	12.9	0	127.62
			Urban	73.44	175.81	0	1,488.80
Population equation							
Unemployment rate (UR)	Commuting zone-level unemployment rate	Census SF4, 2000	Rural	5.97	2.46	1.38	15.83
			Urban	5.78	1.6	2.72	12.38
Crime rate (CR)	Crimes committed per thousand persons	Department of Justice, 2000	Rural	27.66	14.36	1.18	126.2
			Urban	41.45	13.88	8.48	90.79
Proximity to urban center (ProxUrbCen)	Mean linear distance in miles from geographic midpoint of county to midpoint of county with population ≥ 250,000, weighted by population of counties in commuting zone	Census 2000 shapefile; Department of Agriculture (USDA) Economic Research Service (ERS), 2000	Rural	137.8	96.74	29.82	584.08
Wage-rental ratio (WageRentR)	Ratio of average monthly wage to average monthly rental rate	Census SF4, 2000	Rural	5.22	1.01	3.23	9.42
			Urban	4.2	0.54	2.89	6.18
Natural amenity rank (NatAmen)	Mean ERS natural amenity rank, a discrete county-level low to high amenity index (1–7) "constructed by combining six measures of climate, topography, and water area that reflect environmental qualities most people prefer" (Department of Agriculture 2016), weighted by population of counties in commuting zone	USDA ERS, 1999	Rural	3.6	1.04	1.46	7
			Urban	3.69	1.07	1.33	7

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Location quotient for patent-intensive industries (LQPatInd)	Ratio of commuting zone's share of employment to nation's share of employment in patent-intensive industries	Bureau of Labor Statistics Quarterly Census of Employment and Wages, 1998	Rural	0.71	0.73	0	4.04
			Urban	0.95	0.61	0.04	3.46

Note(s):

Equations 2 and 3 additionally include categorical controls for Census region and ERS Rural-Urban Continuum Code of the commuting zone's most urban county.

Source(s):

U.S. Patent and Trade Organization; Census Bureau, Special Tabulation (2000), Census of Population and Housing, Summary File 1 and Summary File 4, and Shapefile; Integrated Postsecondary Education Data System, 2000; Department of Justice, 2000; Department of Agriculture Economic Research Service, 1999, 2000; Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 1998; Florida R, 2002, *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community, and Everyday Life*, New York: Basic Books; McGranahan D, Wojan T, 2007, Recasting the Creative Class to Examine Growth Processes in Rural and Urban Counties. *Regional Studies* 41(2):197–216.