UNR Economics Working Paper Series
Working Paper No. 06-002

Local Decentralization and Economic Growth: Evidence from U.S. Metropolitan and Non-Metropolitan Regions

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November, 2006

Abstract

This paper extends the recent empirical literature on the relationship between local decentralization and growth using data from both metropolitan and non-metropolitan regions in the U.S. The analysis utilizes both metropolitan and non-metropolitan regions, and thus avoids the possible selection bias present in previous research. The results for non-metropolitan regions indicate a relatively weak or negative relationship between the local decentralization measures and local economic growth compared to a positive relationship suggested by a recent study on metropolitan regions. Results for the non-metro regions also suggest that there are different impacts across population and income than we observe for metropolitan regions.

JEL Classification: E62, H7, R11

Keywords: Decentralization, metropolitan, non-metropolitan, economic growth

1. Introduction

Countries around the world, particularly transition economies, have gone through a significant decentralization of their government structures in recent decades. Decentralization is generally defined as the transfer of certain administrative and fiscal functions or powers of a central authority to several local authorities. The main advantage of local decentralization is that local governments are more efficient (or at least as efficient) at providing certain public services compared to the higher levels of government (Oates, 1972). On the other hand, the theoretical literature in this area argues that there are limits to decentralization and points to an optimal level of fiscal federalism. Some of the limiting factors are listed as tax-benefit linkages, positive spillovers (externalities) of local public goods to neighboring communities and economies of scale involved with the production of the local public good. For example, there is thought to be a trade-off between better treatment of positive externalities through a centralized decision making and loss of local accountability (Oates, 2006). Unsurprisingly, evidence from various empirical studies shows that there is no empirical consensus on the relationship between decentralization and growth.

Arguments for the benefits of decentralization and certain empirical evidence led to a widespread decentralization trend particularly among transition economies. While the U.S. is generally more decentralized compared to most of the developed countries and the OECD average, there is a distinct trend towards more centralization in the U.S. states since 1970 (NCSL, 1997; Brunori, 2003).[1] The main culprit for this trend is the diminished reliance on property taxes in local financing. There is also a recent

[1] A report by the NCSL (1997: 3-5) shows this in terms of the percent of state and local tax revenue raised by state governments. Brunori (2003) provides a detailed review of the role property taxation in local fiscal autonomy.

movement towards consolidation of certain types of local governments. A recent example to this is the recent merger between the city of Louisville and Jefferson County in Kentucky which was approved in a referendum in 2000. There are also talks about possible mergers in Pittsburgh, Buffalo and other locations in upstate New York. Similar consolidations were proposed in West Virginia after recommendations by the West Virginia Commission on Governing in the 21st Century. These different decentralization trends highlight the importance of examining empirically the links between decentralization and certain economic outcomes, particularly economic growth.

In this paper, we examine the relationship between local decentralization and growth using data from both metropolitan and non-metropolitan regions in the U.S. The analysis utilizes both metropolitan and non-metropolitan regions, and thus avoids the possible selection bias present in previous research.

The paper is structured as follows. The next section provides a review of the relevant literature on decentralization and growth. Section 3 lays out our empirical approach and discusses the data used in our regression analysis. Section 4 presents the regression results. The last section provides our concluding remarks.

2. Previous Studies

Decentralization is seen as an important avenue for efficiency gains by enabling a direct link between local provision of services and local tastes (Oates 1972, 1993). It is then expected that decentralization helps promote economic growth. Numerous studies examined empirically the relationship between fiscal decentralization and economic growth. Among these Davoodi and Zou (1998) used a panel of 46 developed and developing countries for the period 1970-1985 and found a negative relationship between

fiscal decentralization and growth in developing countries and no significant relationship for the developed countries. China has been a popular case study due to its sweeping fiscal reforms to decentralize since late 1970s. Zhang and Zou (1998) examined a panel of 28 Chinese provinces during the period 1980-1992 and found a negative relationship between fiscal decentralization and growth. Xie, Zou and Davoodi (1999) found a similar relationship for the U.S. after examining time series data from 1948 to 1994. Other studies conflicted these findings by showing evidence of a positive relationship between fiscal decentralization and economic growth. For example, Lin and Liu (2000) found evidence of a positive relationship for the same Chinese provinces used by Zhang and Zou (1998) after taking into account other concurrent reforms. Akai and Sakata (2002) pointed to the importance of controlling for historical or cultural differences between observations and using a period of relatively lower growth. To improve on the data problems of other studies, they used data from 50 U.S. states for the period 1992-1996. They found evidence of positive contribution of fiscal decentralization to economic growth. After reviewing a variety of past studies on fiscal decentralization and economic growth, Martinez-Vazquez and McNab (2003) concluded that there is no empirical consensus on this relationship. In a recent study, Stansel (2005) extended the empirical literature by examining the link between local decentralization and local economic growth using a new dataset of 314 U.S. metropolitan areas. He found a negative and significant relationship between the central city share of metro population and population and real per capita income growth and a positive and significant relationship between the number of county governments per 100,000 residents and

population and real per capita income growth. Hence, his study shows evidence of a strong positive relationship between local decentralization and economic growth.

3. Data and Empirical Methodology

In this paper, we build on Stansel's empirical analysis and extend his data to include both metropolitan and non-metropolitan areas. We focus on determining the impact of local decentralization on population growth and real per capita income growth, because both are considered important outcome variables by policymakers. In addition to measures of local decentralization, we control for other influences including local human capital, industry mix, labor market performance, and spatial relationship. Our empirical specification is generally similar to Glaeser et.al. (1995) and Stansel (2005) in that we use many of the same control variables and use beginning period values for our right-hand side variables, in order to reduce possible endogeneity. Our approach differs from theirs in that we are interested in exploring these issues for all regions in the lower 48 U.S. states, not just the more populous metropolitan areas. This is important in order to avoid possible selection bias in the results (and resulting policy implications), because non-metropolitan counties accounted for 16.9% (49.7 million residents) of the U.S. population in 2004 (using the 1999 MSA designations from the federal Office of Management and Budget).

Our approach utilizes an exhaustive, mutually exclusive set of regions for the lower 48 U.S. states. We include 313 MSAs and primary metropolitan statistical areas (PMSAs) as defined by the federal Office of Management and Budget in 1999, similar to Stansel (2005). MSAs are (usually) multi-county regions defined around large urban agglomerations in order to reflect sub-state economic areas. We supplement MSAs with

the remaining 2,250 non-metropolitan counties in order to attain complete coverage of the lower 48 U.S. states. Table 1 shows descriptive statistics and sources for our data for both metropolitan areas and non-metropolitan counties.

Table 1 shows that population growth has been much slower on average for non-metropolitan counties than for MSAs during the 1970-2000 period, with the average MSA population rising by 36.7% while the average non-metropolitan county added 19.1% more residents. The data on real per capita income shows that non-metropolitan counties had much lower income levels in 1969 than MSAs, with average non-metropolitan incomes 22.2 percent below average MSA incomes. Average growth rates of real per capita income for non-metropolitan regions were slightly above MSAs during the 1969-1999 period, with average non-metropolitan real per capita income rising by 46.6% and MSA income rising by 43.2%. Our measure of income comes from decennial Census surveys and represents money income, which differs from personal income data produced by the Bureau of Economic Analysis. One of the major differences between these two measures is that money income excludes payments in kind, like food stamps and payments for Medicaid and Medicare. Personal income data includes estimates of payments in kind.

The average unemployment rate across non-metropolitan counties was similar to the average MSA rate in 1970, with both reporting 4.6% of the civilian labor force out of work. Also in 1970, manufacturing accounted 20.8% of metropolitan nonfarm employment in MSAs and 18.2% of employment for non-metropolitan counties. Educational attainment levels (measured by the share of the population age 25 and older with 16 or more years of schooling in 1970) were much lower in non-metropolitan

counties (6.4%) than for MSAs (11.2%). Finally, non-metropolitan counties were on average 97KM from the nearest MSA, while MSAs averaged 86.9KM from the nearest MSA, measured by the straight-line distance from county or MSA centroid.

Our main interest is the impact of local decentralization on regional growth. To this end we use data on the number and type of sub-state governments per capita. Our data, from the 1972 Census of Governments, includes the number of county, municipal, and township governments, as well as school systems. We express the local decentralization data relative to the MSA or county population in order to account for the large population differences across regions. This adjustment retains the basic idea of local decentralization, in which more governments per capita reflect a more direct link between the governments and the electorate, and thus a more decentralized structure. Our data show that MSAs tend to have fewer local governments per capita than non-metropolitan counties, which we take as evidence that non-metropolitan counties have more decentralized government structures. This holds true for all levels and types of local government. This reflects in part the higher population density of metropolitan areas, because the average number of these governments per region (MSA vs non-metropolitan county) is much higher for MSAs than for non-metropolitan counties.

4. Empirical Results

Our initial empirical results are summarized in Table 2, which contains the results for the basic growth model, similar to Glaeser et.al (1995). For the basic model for both metropolitan and non-metropolitan regions, we regress population growth (income growth) on the natural log of initial period population (income), the unemployment rate in 1970, the manufacturing employment share in 1970, the percent of population age 25

and older with 16 or more years of schooling in 1970, and the minimum distance to an MSA. We include state dummies in the regressions but do not report the results due to space constraints.

Our results for metropolitan areas are similar to Glaeser et.al. (1995) and Stansel (2005). We find a significant negative coefficient on initial period population (and income). This suggests that metropolitan areas with higher initial populations tend to experience slower population growth. We find similar results in the income regression, again suggesting that MSAs with high initial income tend to experience slower growth. We find significant negative coefficients in both the population growth and income growth regressions on the unemployment rate and the manufacturing share of employment, again consistent with Stansel (2005) and Glaeser et.al. (1995). We find a weak positive relationship between educational attainment and population growth for MSAs, similar to Glaeser et.al. (1995). Our results differ from Stansel (2005), who finds a significant relationship for population growth, but not income. We find a significant relationship only with income growth. Finally, our measure of spatial relationship, the minimum distance from MSA, is insignificant in both regressions for MSAs.

The results for non-metropolitan counties support the importance of the control variables, but suggest that for population there is little connection between initial levels and subsequent growth, in contrast to results for MSAs. However, we find a significant negative relationship between initial income and subsequent income growth, suggesting that low income non-metropolitan counties have added income at a faster rate than higher income counties. Further, we find a positive relationship between initial period unemployment rates and the manufacturing share of employment and subsequent

population growth. This suggests that non-metropolitan counties with more labor force slack tended to generate higher population growth than those with tighter labor markets. Higher shares of manufacturing employment are also significantly positively related to non-metropolitan population growth during the period, possibly reflecting the relative employment trends across metropolitan and non-metropolitan regions. Using SIC employment data from the U.S. Bureau of Economic Analysis, the manufacturing share of jobs in metropolitan areas fell from 23% in 1969 to 11% by 1999. The share decline has been less severe in non-metropolitan regions, falling from 20.6% in 1969 to 15.7% by 1999. However, a higher initial unemployment rate and share of manufacturing employment in non-metropolitan counties does not seem to have supported corresponding income gains. Our results for initial levels of population and income, as well as unemployment rates, are similar to others found in the literature on non-metropolitan income and population growth, see Deller et.al. (2001). Finally, we find a significant and negative relationship between both population and income growth and the distance from the non-metropolitan county to the nearest MSA. This implies non-metropolitan counties benefited from close proximity to a metropolitan area, particularly in terms of population growth (the negative impact is more than triple that found for income growth).

Table 3 shows our results for the extended growth regressions, which include our measures of local decentralization. The results for metropolitan regions are similar to Stansel (2005), with significant positive coefficients on county governments per capita in both the population growth and income growth regressions. This suggests that MSAs

with larger ratios of county governments to population tended to grow faster during the period and thus that increased local decentralization contributes to MSA growth.

For non-metropolitan counties we find a negative and significant coefficient on townships per capita in the population growth regression (and the remaining local decentralization coefficients insignificant), but in the income growth regression we find a significant positive coefficient on county governments per capita. Overall, the results for local decentralization in non-metropolitan counties suggest that there are weaker and different impacts for population and income growth than we observe for metropolitan regions.

One cause for concern in the non-metropolitan population growth regressions is the county governments per capita variable. We expect that this variable will be highly correlated with the log of initial population, because each county has one county-level government. Thus, in applying the Stansel (2005) specification to counties, we have included the log of 1970 population and the inverse of 1970 population. In order to remedy this potential problem, we explore two additional specifications for non-metropolitan counties.

First, we compute the total number of local governments per capita, including county, municipal, and township governments, as well as school systems. Second we compute the sub-county share of total governments, which is the ratio of the sum of municipal and township governments, as well as school systems, divided by the total number of local governments. Table 4 summarizes the extended growth regressions for non-metropolitan counties for population and real income.

Overall, the results suggest weak or negative correlation between local decentralization and non-metropolitan population or income growth. We find a negative coefficient, significant at the 1% level, for total local governments per capita in the population growth regression, and a negative but not significant (at the 10% level) coefficient for the sub-county local government share. The results for real income growth suggest no significant relationship for total local governments per capita, but a negative (and significant at the 10% level) relationship for the sub-county government share.

5. Policy Implications and Conclusions

In this paper, we examined empirically the relationship between local decentralization and growth using data from both metropolitan and non-metropolitan regions in the U.S. We find it important to include non-metropolitan counties in the analysis since they represent 16.9% (49.7 million residents) of the U.S. population. While the results for metropolitan regions are similar to Glaeser et al. (1995) and Stansel (2005), the results for non-metropolitan regions indicate a significantly weaker or negative relationship between the local decentralization measures and local economic growth compared to Stansel (2005). This re Results for these regions also suggest that there are different impacts across population and income than we observe for metropolitan regions.

Among possible future extensions of this research, we note that it may be useful to examine the same relationship by including the time dimension. Hence, a panel data analysis would enable us to examine both the variations in the number of local government units across metro and non-metro regions and also variation across time in these regions. It is also useful to complement this study with additional local decentralization measures such as revenue and spending measures. This will make it possible to examine the impact of vertical dispersion of fiscal power between different local government units on economic growth.

References

Akai, Nobuo and M. Sakata. 2002. "Fiscal Decentralization Contributed to Economic Growth: Evidence from State-Level Cross-Section Data for the United States," *Journal of Urban Economics*, 52: 93-108.

Brunori, David. 2003. *Local Tax Policy: A Federalist Perspective*, The Urban Institute Press, Washington, D.C.

Davoodi, H. and H. Zou. 1998. "Fiscal Decentralization and Economic Growth: A Cross-Country Study," *Journal of Urban Economics*, 43: 224–257.

Deller, Steven C., Tsung-Hsiu Tsai, David W. Marcouiller, and Donald B.K. English. 2001. "The Role of Amenities and Quality of Life in Rural Economic Growth," *American Journal of Agricultural Economics*, 83 (2): 352-365.

Glaeser, Edward, Jose Scheinkman, and Andrei Shleifer. 1995. "Economic Growth in a Cross-Section of Cities," *Journal of Monetary Economics*, 36: 117-143.

Lin, Justin Yifu and Zhiqiang Liu. 2000. "Fiscal Decentralization and Economic Growth in China," *Economic Development and Cultural Change*, 49 (1): 1-21.

Martinez-Vaquez, Jorge and R.M. McNab. 2003. "Fiscal Decentralization and Economic Growth," *World Development*, 31 (9): 1597-1616.

National Conference of State Legislatures. 1997. *Critical Issues in State-Local Fiscal Policy, A Guide to Local Option Taxes*. Denver: National Conference of State Legislatures.

Oates, Wallace E. 1972. *Fiscal Federalism*, Harcourt Brace Jovanovic, New York.

Oates, Wallace E. 1993. "Fiscal Decentralization and Economic Development," *National Tax Journal*, 46 (2): 237-243.

Oates, Wallace E. 2006. "On the Theory and Practice of Fiscal Decentralization," manuscript, March.

Stansel, Dean. 2005. "Local decentralization and local economic growth: A cross-sectional examination of US metropolitan areas," *Journal of Urban Economics*, 57: 55-72.

Xie, D., H. Zou, and H. Davoodi. 1999. "Fiscal Decentralization and Economic Growth in the United States," *Journal of Urban Economics*, 45: 228–239.

Zhang, Tao and H. Zou. 1998. "Fiscal Decentralization, Government Spending and Economic Growth in China," *Journal of Public Economics*, 67: 221-240.

Table 1
Summary Statistics For MSAs, PMSAs, and Non-metropolitan Counties^

		313 MSAs & PMSAs				2250 Non-metropolitan Counties			
Variable	**Source**	**Mean**	**Std.Dev.**	**Min**	**Max**	**Mean**	**Std.Dev.**	**Min**	**Max**
Growth in Ln Population 1970-2000*	Census 1970 and 2000	0.367	0.447	-3.673	3.434	0.191	0.393	-0.982	4.957
Growth in Ln RPCI 1969-1999*	Census Per Capita Income, CPIU deflator	0.432	0.106	0.165	0.918	0.466	0.166	-0.456	1.341
Total Local Govts 1972**	Census of Governments 1972, CGF	63.687	85.842	3.000	815.000	15.577	14.263	1.000	109.000
Per 100k Residents	Using 1970 Census population	20.608	17.865	1.554	153.867	136.243	175.649	1.267	2,156.334
County Govts 1972	Census of Governments 1972, CGF	2.492	2.455	0.000	20.000	0.997	0.056	0.000	1.000
Per 100k Residents	Using 1970 Census population	1.008	0.669	0.000	3.941	12.532	23.677	0.000	609.756
Municipal Govts 1972	Census of Governments 1972, CGF	23.473	33.110	0.000	288.000	4.896	3.680	0.000	31.000
Per 100k Residents	Using 1970 Census population	7.210	5.339	0.000	35.476	39.031	36.717	0.000	495.050
Township Govts 1972	Census of Governments 1972, CGF	15.850	29.563	0.000	210.000	5.227	9.410	0.000	67.000
Per 100k Residents	Using 1970 Census population	5.481	11.398	0.000	104.671	42.298	107.943	0.000	1,752.022
Public School Systems 1972	Census of Governments 1972, CGF	21.872	32.102	1.000	360.000	4.457	5.207	0.000	62.000
Per 100k Residents	Using 1970 Census population	6.909	6.059	0.158	39.329	42.382	86.929	0.000	1,815.182
Sub-county Govt Share of Total Local Govts 1972**	Computed by authors	0.929	0.064	0.667	1.000	0.872	0.104	0.000	1.000
Ln Population 1970	Census 1970	12.392	1.063	10.224	16.021	9.486	0.917	5.100	12.663
Real Per Capita Money Income 1969, Thous., $1969	Census 1970	2.908	0.465	1.482	4.432	2.262	0.462	0.979	4.908
Unemployment Rate 1970	Census, City and County Databook 1972	0.046	0.015	0.020	0.121	0.046	0.025	0.000	0.180
Manufacturing Employment Share 1970	BEA data from REIS-CD, SIC manufacturing	0.208	0.111	0.020	0.554	0.182	0.139	0.000	0.630
Percent of Pop 25+ with 16+ Yrs. Schooling 1970	Census 1970	0.112	0.042	0.051	0.308	0.064	0.030	0.011	0.361
Min. Distance to MSA/PMSA, KM	Computed by authors using centroid method	86.938	52.895	16.512	353.090	97.015	56.173	20.411	368.584

^MSA & PMSAs defined by OMB in 1999
*Computed by first difference of Ln. Not annualized.
**Includes county, municipal, township governments and school systems. Sub-county government share is sum of municipal, township, and school systems divided by total governments.
CGF: Compendium of Government Finances

Table 2
Basic Growth Model Regressions
(Standard Errors in Parentheses^)

	Metropolitan		Non-Metropolitan	
Variable	**Population Growth 1970-2000**	**Real Per Capita Income Growth 1969-1999**	**Population Growth 1970-2000**	**Real Per Capita Income Growth 1969-1999**
Ln Population 1970	-0.0751 *		-0.0077	
	(0.0428)		(0.0122)	
Real Per Capita Money Income 1969		-0.1262 ***		-0.5094 ***
		(0.0487)		(0.0187)
Unemployment Rate 1970	-5.2620 **	-1.9225 ***	1.6480 ***	-0.7032 ***
	(2.6703)	(0.5624)	(0.3299)	(0.1274)
Manufacturing Employment Share 1970	-0.8859 ***	-0.1352 *	0.1292 *	0.0042
	(0.2308)	(0.0753)	(0.0727)	(0.0258)
Percent of Pop 25+ with 16+ Yrs School 1970	0.1705	0.2687 *	1.6906 ***	0.3660 ***
	(0.6517)	(0.1563)	(0.3030)	(0.1032)
Min. Distance to MSA/PMSA, KM	-0.0003	-0.0001	-0.0011 ***	-0.0003 ***
	(0.0004)	(0.0001)	(0.0001)	(0.0001)
Constant	1.5809 **	1.5284 ***	-0.3019 **	4.7388 ***
	(0.6262)	(0.3904)	(0.1276)	(0.1860)
Obs.	313	313	2250	2250
Adj. R-Squared (R-Squared for Population)	0.326	0.340	0.386	0.523

Note: Due to space constraints, we omit results for state dummies.
^Robust standard errors for population growth.
*, **, *** indicate significance at the 10%, 5%, and 1% significance levels, respectively

Table 3
Extended Growth Model Regressions
(Standard Errors in Parentheses^)

	Metropolitan		Non-Metropolitan	
Variable	**Population Growth 1970-2000**	**Real Per Capita Income Growth 1969-1999**	**Population Growth 1970-2000**	**Real Per Capita Income Growth 1969-1999**
County Govts Per Capita 1970	0.1524 *	0.0208 *	-0.0009	0.0004 ***
	(0.0845)	(0.0111)	(0.0010)	(0.0001)
Municipal Govts Per Capita 1970	0.0047	0.0008	-0.0004	-0.0001
	(0.0050)	(0.0015)	(0.0004)	(0.0001)
Townships Per Capita 1970	-0.0051 *	-0.0005	-0.0003 ***	0.0000
	(0.0027)	(0.0010)	(0.0001)	(0.0000)
School Systems Per Capita 1970	-0.0010	-0.0019	-0.0001	-0.0001
	(0.0058)	(0.0015)	(0.0001)	(0.0000)
Ln Population 1970	-0.0166		-0.0397 *	
	(0.0391)		(0.0203)	
Real Per Capita Money Income 1969		-0.1006 *		-0.5104 ***
		(0.0535)		(0.0187)
Unemployment Rate 1970	-3.6724 *	-1.6160 ***	1.4828 ***	-0.6748 ***
	(2.0600)	(0.5890)	(0.3526)	(0.1282)
Manufacturing Employment Share 1970	-0.8814 ***	-0.1411 *	0.1316 *	0.0069
	(0.2309)	(0.0759)	(0.0734)	(0.0261)
Percent of Pop 25+ with 16+ Yrs School 1970	0.3194	0.2447	1.6675 ***	0.3830 ***
	(0.6440)	(0.1588)	(0.3130)	(0.1065)
Min. Distance to MSA/PMSA, KM	-0.0004	-0.0001	-0.0011 ***	-0.0003 ***
	(0.0005)	(0.0001)	(0.0001)	(0.0001)
Constant	0.6521	1.3028 ***	0.0755	4.7436 ***
	(0.4850)	(0.4342)	(0.2285)	(0.1858)
Obs.	313	313	2250	2250
Adj. R-Squared (R-Squared for Population)	0.348	0.341	0.392	0.525

Note: Due to space constraints, we omit results for state dummies.
^Robust standard errors for population growth.
*, **, *** indicate significance at the 10%, 5%, and 1% significance levels, respectively

Table 4
Alternative Non-metropolitan Decentralization Measures
Extended Growth Model Regressions
(Standard Errors in Parentheses^)

	Non-Metropolitan			
Variable	**Population Growth 1970-2000**		**Real Per Capita Income Growth 1969-1999**	
Total Local Govts Per Capita 1970	-0.0003 ***		0.0000	
	(0.0001)		(0.0000)	
Sub-County Govt Share 1970		-0.1621		-0.0597 *
		(0.1238)		(0.0340)
Ln Population 1970	-0.0285 **	0.0017		
	(0.0124)	(0.0139)		
Ln Real Per Capita Money Income 1969			-0.510 ***	-0.5059 ***
			0.019	(0.0188)
Unemployment Rate 1970	1.5079 ***	1.6119 ***	-0.6830 ***	-0.6986 ***
	(0.3362)	(0.3310)	(0.1282)	(0.1273)
Manufacturing Employment Share 1970	0.1234 *	0.1248 *	0.0082	0.0065
	(0.0729)	(0.0729)	(0.0260)	(0.0258)
Percent of Pop 25+ with 16+ Yrs School 1970	1.6177 ***	1.6306 ***	0.3935 ***	0.3679 ***
	(0.3051)	(0.3103)	(0.1052)	(0.1031)
Min. Distance to MSA/PMSA, KM	-0.0010 ***	-0.0011 ***	-0.0003 ***	-0.0003 ***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Constant	-0.0454	-0.2378 *	1.2152 ***	1.2751 ***
	(0.1337)	(0.1408)	(0.1171)	(0.1212)
Obs.	2250	2250	2250	2250
Adj. R-Squared (R-Squared for Population)	0.391	0.386	0.523	0.523

Note: Due to space constraints, we omit results for state dummies.
^Robust standard errors for population growth.
*, **, *** indicate significance at the 10%, 5%, and 1% significance levels, respectively