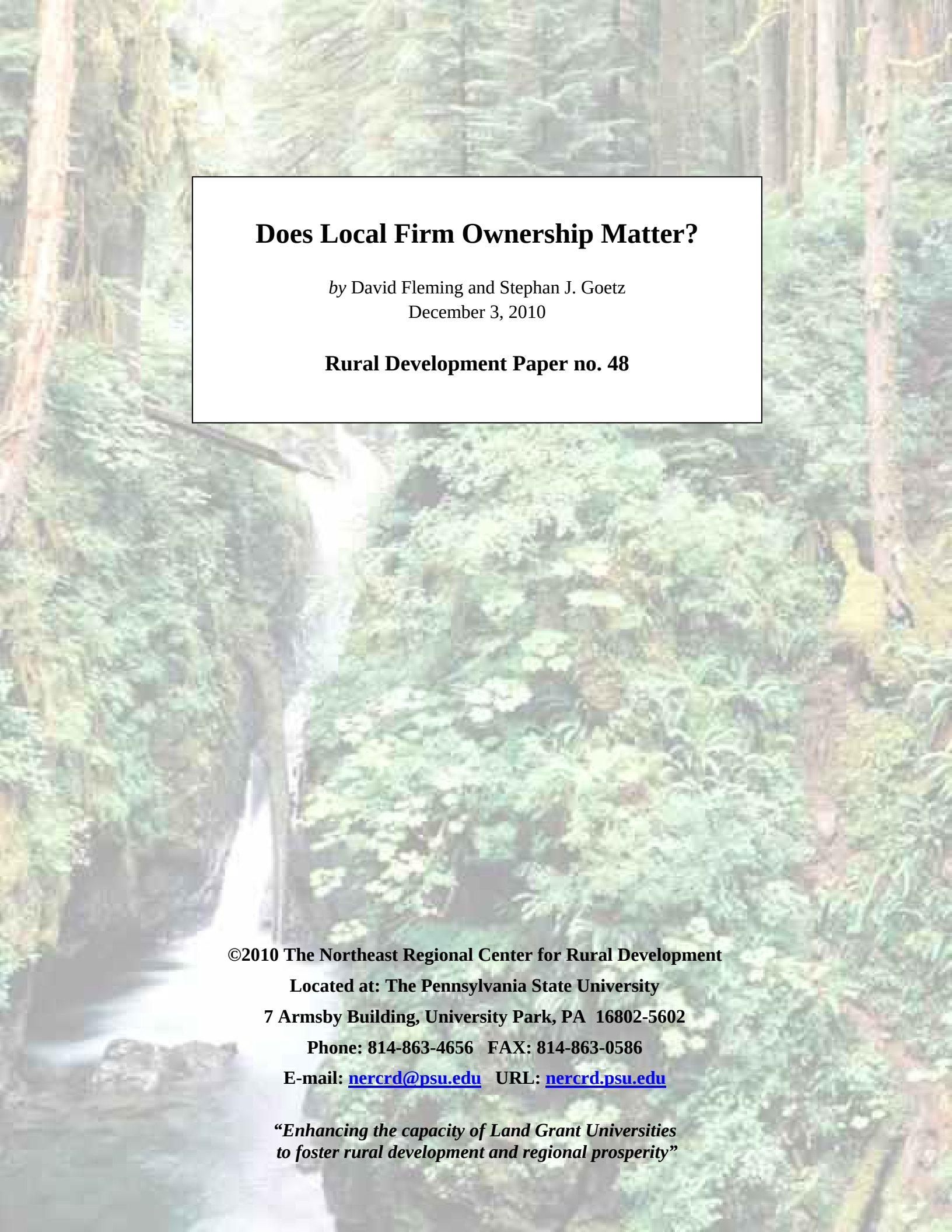

Does Local Firm Ownership Matter?

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Abstract

A dataset for U.S. counties that includes residence status of firm owners is used to assess whether per capita density of locally-owned businesses affects local economic growth, compared to non-local ownership. The database also permits stratification of firms across different employment size categories. Economic growth models that control for other relevant factors reveal a positive relationship between density of locally-owned firms and per capita income growth, but only for small (10-99 employees) firms, while the density of large (over 100 workers) firms not owned locally has a negative effect. These results provide strong evidence that local ownership matters for economic growth, but only in the small size category. Results are robust across rural and urban counties.

Keywords

firm size, firm ownership locus, economic growth

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Private businesses and entrepreneurs are widely regarded as essential to regional economic growth, and small firms have been viewed as important generators of new jobs since the seminal although not uncontroversial work of Birch (1987; also Acs & Armington, 2006). Owners of businesses who also reside in the community may have the best interests of the community in mind (Kolko & Neumark, 2010). Even so, the question of whether the place of residence of a firm's owner matters for economic growth has been not been investigated systematically. This study examines the effect of firm ownership, controlling for firm size, on U.S. county-level economic well being, including counties that are urban and non–urban.

The study uses the National Establishment Time-Series (NETS) Database provided by the Edward Lowe Foundation (*www.youreconomy.org*). This unique dataset describes ownership type and firm size across U.S. counties, but it has not been widely explored previously, and to our knowledge has not been used in the context of economic growth modeling.[1] Results of this study are relevant for academics and policymakers, especially in light of current discussions surrounding stimulus spending.

The Importance of Firm Size and Ownership in Economic Development

Several authors have examined the role of firm size in the economic growth of regions (e.g., Loveridge & Nizalov, 2007). Empirical evidence generally suggests that the presence of smaller firms is correlated positively with subsequent economic growth (Rosenthal & Strange, 2003; Glaeser et al., 2010). Small firms may benefit local economies because of higher marginal productivity of workers and greater flexibility to adapt to external shocks. In contrast, larger firms are postulated to enhance economic development through economies of scale, agglomeration effects, volume traded, specialization, and greater capacity for innovation through dedicated research and

development (R&D). Some authors also emphasize the destructive effects of large firms on smaller firms and local jobs, which are detrimental in the short run but may represent creative destruction in the long run. Larger firms also may exercise monopsony power over labor leading to reduced economic growth (e.g., Bonanno & Lopez, 2008).[2]

Although locally owned companies are argued to promote local economic development, there is no clear evidence of this relationship. Rosenthal and Strange (2003) find no consistent effect of local (non-subsidiary) firms on growth, while Kolko and Neumark (2010) detect a positive effect of local firm ownership on employment stability only for corporate headquarters or commercial chains. Michelacci and Silva (2007) suggest that local entrepreneurs are more successful because they have been able to build up stronger business networks over time. Non-local firms may provide an economic boost given that they provide new employment sources and activity; however, they may also be less flexible or less innovative at the local level and have little local impact because of vertical and horizontal integration with other non-local (subsidiary) firms (Glaeser et al., 2010). Non-resident-owned large (big-box) stores such as Wal-Mart may stifle local economic growth and innovation, or they may accelerate economic development through Schumpeterian destruction.

As indicated, this note examines the effect of both firm size and locus of ownership on subsequent economic performance. This provides a complementary analysis to previous empirical work, but especially to Rosenthal and Strange (2003) who, using similar data, examine relationships between firm size and ownership and birth of new establishments (and employment). The dependent variable used in the present study instead measures economic or per capita income growth rates over time across both metropolitan and non-metropolitan areas.

Empirical Methods

A parsimonious standard equilibrium growth model is given by

$$g_\gamma = \alpha + \beta\, \gamma_o + \delta\, firms_o + \varepsilon\,, \qquad (1)$$

where g_γ is per capita income growth in percent, α is a constant term, ε a well-behaved random error, and β and δ are parameters to be estimated. Variable γ_o is the beginning period (time zero) per capita income that controls for regional convergence as in Higgins et al. (2006), and *firms* is the set of variables of interest (also at time zero): firm size and ownership characteristics. We refer to this as the *short*, basic model. In addition, we estimate a *full* model that includes four additional variables as controls: population density (with an expected positive effect owing to agglomeration economies); county land area (positive effect as it allows for expansion); percent of population with a bachelor's degree (positive effect); and an industry entropy or diversity measure (with a negative effect since greater diversity implies less specialization). Table 1 reports definitions of and descriptive statistics for these additional variables along with the per capita income variables obtained from standard Census sources such as *www.usacounties.gov* (except for the entropy measure, which is calculated).

Table 1 here

By fixing regressors in 2000 and calculating the income growth rate over the subsequent period (2000-2007), we reduce if not eliminate endogeneity concerns. The *firms* variables are grouped into four different sets for use in the *short* and *full* models, corresponding to different size and ownership classes (Table 2). The total sample consists of 2,953 counties.[3]

Table 2 here

The county-level NETS database was published on *youreconomy.org* and is used in the empirical estimations (*firms* variables). The database is maintained by the Edward Lowe Foundation to describe the dynamics of the U.S. economy by following over 34 million establishments between 1990 and 2007 (Walls & Associates, 2010). Data include firm ownership type (residential and non-residential) and firm size measured as micro (1 to 9 employees), small (10 to 99 employees), medium (100 to 499 employees), and large firms (over 500 employees). Not surprisingly, the number of firms per capita owned locally (resident firms) is substantially greater compared to those not locally owned (non-resident firms) in all size categories except for the very largest one (over 500 employees), where it is the same at 0.02 per thousand people (or two per 100,000 residents). It is noteworthy that some micro and some small firms are *not* locally-owned. In all estimations below, the *firms* variables are normalized using county population.

Regression Results and Discussion

All regressions include state fixed effects and standardized coefficient estimates and are based on robust standard errors. In Table 3 results in Set I show all *firms* per capita aggregated, while in Set II the *firms* are disaggregated by ownership status. The coefficient estimates are consistent with expectations in terms of predicting economic growth from 2000 to 2007. The absolute value of the standardized convergence parameter ranges in Table 3 from 0.121 to 0.187, confirming income convergence across U.S. counties. In the *full* model the agglomeration and education measures have expected positive signs, land area is not statistically significant, and counties with less-diversified portfolios of industries enjoyed faster economic growth than did counties with more industry diversification. This confirms the importance of clustering over diversification in economic growth and development (Porter, 2000; Testa, 2006; Goetz et al., 2009).

Table 3 here

More *firms* per capita clearly benefit income growth in both the *short* and *full* models of Set I (all firms combined). However, when we disaggregate *firms* based on ownership the standardized effect of resident-owned firms is clearly stronger in both the *short* and *full* models – in fact, in the *short* model the coefficient on non-resident firms lacks statistical significance. Thus, even after we control for other economic growth determinants, the standardized contribution of resident-owned firms is more than four times larger than that of non-resident owned firms.

Next we explore the effect of firm size on economic growth regardless of who owns the firm (resident or not); this is shown as Set III results in Table 4, again for the *short* and *full* models. Set III results reveal a strong positive effect of small firms on economic growth, but negative rates of economic growth for medium and large firms. These results hold in both the *short* and *full* models, but the positive effect of micro-sized firms disappears in the *full* model; that is, when we control for other factors.

Table 4 here

When ownership and firm size are considered (Set IV), the non-resident owned medium and large firms consistently and statistically depress economic growth rates in both the *short* and *full* models. The other major result is that resident-owned small firms have a statistically significant and relatively large positive effect in both models. The results for resident-owned micro firms are similar to those of Set III.

Table 5 provides *full* model (Set IV) results differentiating counties according to their urban–rural status. Four columns of results are provided based on the ERS urban–rural continuum code (the higher the code the less urbanized the county). If there is a positive

association between firm size and economic growth, through innovation in the major cities for example, then we would expect it to show up here.

Table 5 here

Results in Table 5 are similar to those in the previous tables. In particular, the resident–owned, small firms size consistently stands out as significantly enhancing economic growth, regardless of the relative county size or its position on the rural–urban continuum. The negative effect of large non-local firms is also supported by these results in most although not all categories. Also, the positive significant effect of micro non-local firms on income growth in code 3–6 counties is noteworthy. These could be counties on the urban fringe that offer some natural and agricultural amenities, and yet are not too rural or remote to attract footloose entrepreneurs. A somewhat surprising result is the statistically significant negative effect of density of locally owned micro firms on per capita income growth in core metropolitan areas. This suggests that economic performance of these metropolitan areas is negatively related to the emergence of business from very small local entrepreneurs. This question warrants further investigation.

Conclusion and Policy Implications

Subject to the caveat that the 2000-2007 period was unique in American economic history, results presented are remarkably robust in terms of the positive link between *small* firms that are locally owned and per capita income growth. Medium and larger firms appear to have the opposite effect, especially when they are not locally-owned. These include big boxes as well as other chain and non-chain operations that are owned by individuals who are not also residents of the community. While these types of firms may offer opportunities for jobs, as well as job growth over time, they do so at the cost of reduced local economic growth, as measured by income.

Small-sized firms owned by residents are optimal if the policy objective is to maximize income growth rates.

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Appendix

According to *www.youreconomy.org* (Edward Lowe Foundation web page), the categorization of the firm data is as follows: Nonresident (non-local) establishments are businesses that are located in the area but headquartered in a different state, and Resident (locally-owned) establishments sector are either standalone businesses in the area or businesses with headquarters in the same state. Another categorization of these data, but not used in this research note, are non-profit business, which include government agencies, public schools, and hospitals, and similar types of organizations.

Table 1. Description of Variables and Summary Statistics

Variable	Description	Mean	Std. Dev.
Per capita income growth	% growth 2000–2007	31.58	13.00
Per capita income (γ_o)	2000 level of per capita income	23,000.84	5,788.58
Population density	2000 Population per county land area (sq. miles)	208.54	1,628.17
County land	County land area (sq. mile)	983.27	1,327.25
% population with bachelor degree	% of population over 21 year with bachelor degree or more	16.34	7.55
Industry entropy	Industry diversity measure – See text	2.45	0.63

Note: Sample size is 2,953 counties

Table 2. *firms* Variables by Set

Set	*firms* variables	Mean	Std. Dev.
I	Total number of firms	49.75	21.67
II	Number of resident firms	47.17	21.43
	Number of non–resident firms	2.57	1.36
III	Number of micro firms	43.81	20.81
	Number of small firms	5.51	2.10
	Number of medium firms	0.37	0.23
	Number of large firms	0.04	0.06
IV	Number of resident micro firms	42.30	20.60
	Number of resident small firms	4.63	1.75
	Number of resident medium firms	0.20	0.15
	Number of resident large firms	0.02	0.03
	Number of non–resident micro firms	1.50	0.81
	Number of non–resident small firms	0.87	0.56
	Number of non–resident medium firms	0.16	0.13
	Number of non–resident large firms	0.02	0.04

Source: Authors' calculations using NETS Dataset.
Note: n = 2,953 counties. All firm variables are normalized by the respective county population (thousands) in 2000.

Table 3. Standardized Coefficients from Regression Results of Sets I and II

	Set I		Set II	
	Short Model	*Full Model*	*Short Model*	*Full Model*
Per capita income (γ_o)	–0.121***	–0.182***	–0.123***	–0.187***
Population density		0.045***		0.045***
County land		0.007		0.005
% pop. with bachelor degree		0.134***		0.127***
Industry entropy		–0.129***		–0.140***
Total number of firms	0.178***	0.147***		
Number of resident firms			0.174***	0.136***
Number of non–resident firms			0.017	0.039*
Adjusted R^2	0.36	0.37	0.36	0.38

Note: all explanatory variables are measured in the year 2000 (to reduce potential endogeneity bias) and the dependent variable is calculated as the change between 2000 and 2007. State fixed effects are used in both models, but results are not reported. Robust standard errors are used in all estimations. n = 2,953 counties. ** $p < .05$. *** $p < .01$.

Table 4. Standardized Coefficients from Regression Results of Sets III and IV

	Set III		Set IV	
	Short Model	*Full Model*	*Short Model*	*Full Model*
Number of micro firms	0.093***	0.037		
Number of small firms	0.154***	0.185***		
Number of medium firms	–0.074***	–0.060***		
Number of large firms	–0.059***	–0.054***		
Number of resident micro firms			0.084**	0.031
Number of resident small firms			0.148***	0.168***
Number of resident medium firms			–0.020	–0.020
Number of resident large firms			–0.002	–0.006
Number of non–resident micro firms			–0.001	–0.004
Number of non–resident small firms			0.030	0.037
Number of non–resident medium firms			–0.077***	–0.058***
Number of non–resident large firms			–0.065***	–0.056***
Adjusted R^2	0.37	0.39	0.37	0.39

Note: The short model contains only initial income as a regressor in addition to the number of firms, while the full model contains the four additional explanatory variables. All explanatory variables are measured in 2000 (see note to Table 3). Convergence variable (γ_0), state fixed effects, and additional explanatory variables are not reported. Robust standard errors used in all estimations. n = 2,953 counties. $^{**}p < .05$. $^{***}p < .01$.

Table 5. Standardized Coefficients from Results of the *Full Model* using Set IV for the Urban–Rural Gradient

	Code 1	Code 2	Code 3–6	Code 7–9
Number of resident micro firms	–0.149**	–0.098	–0.060	0.098
Number of resident small firms	0.554***	0.226*	0.153***	0.163**
Number of resident medium firms	0.122	–0.058	–0.034	–0.023
Number of resident large firms	–0.138**	0.026	–0.034	0.000
Number of non–resident micro firms	–0.091	–0.012	0.124**	–0.036
Number of non–resident small firms	0.010	0.027	–0.047	0.033
Number of non–resident medium firms	–0.197**	–0.264***	–0.018	–0.046
Number of non–resident large firms	–0.068**	–0.000	–0.101***	–0.067***
Adjusted R^2	0.56	0.44	0.43	0.32
Number of observations	354	315	1,216	1,068

Note: All explanatory variables are measured in 2000 (see note to Table 3). Additional explanatory variables are not reported. Robust standard errors used in all estimations. Code 1 means USDA-ERS (Economic Research Service) urban – rural continuum code 1 (counties in metropolitan areas of more than 1 million people), and so on until code 9 (completely rural counties with less than 2,500 urban population and not adjacent to metropolitan areas). For more details see: *www.ers.usda.gov/briefing/rurality/ruralurbcon*. *p < .10. **p < .05. ***p < .01.

Notes

[1] Important exceptions are Rosenthal and Strange (2003) and Carlton (1983), who use earlier versions of this dataset.

[2] Examples of negative links are reported by some studies of big box retailers' effects on local economies (Goetz & Rupasingha, 2006; Neumark et al., 2008).

[3] Counties of the continental United States with the exception of Virginia, which is excluded because of data matching conflicts.