Entrepreneurship and State Economic Growth

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Abstract:

The purpose of this paper is to test whether entrepreneurship is a significant factor in explaining economic growth at the state level. This paper, unlike previous work, uses the Kauffman Index of Entrepreneurial Activity (KIEA) as the measure of entrepreneurial activity. Based on standard growth regressions using real per capita gross state product, real per capita personal income and employment growth we find that an increase in the level of entrepreneurial activity is robustly associated with an increase in economic growth. Such findings reinforce calls for policy changes at the state level that promote more productive entrepreneurship. This would include, among others, changes such as reducing or eliminating state income taxes and setting strict limits on the government's use of eminent domain and environmental property takings.

JEL Codes: O1, O47, H7

Key words: Economic growth, entrepreneurship, Kauffman Index of Entrepreneurial Activity, economic freedom

1. Introduction

The purpose of this paper is to test whether entrepreneurship is a significant factor in explaining economic growth. This paper differs from much of the previous work in two important ways. First, we focus on the economic growth-entrepreneurship at the state level. The second difference is the measure of entrepreneurship used. Cross-country studies of the growth-entrepreneur relation often rely on large survey-based data sets, such as the Global Entrepreneurship Monitor Consortium (GEM). For subnational analysis a common proxy for entrepreneurial activity is some measure of net firm formation.[1] In this paper we measure entrepreneurship using the Kauffman Foundation's Index of Entrepreneurial Activity (KIEA). Although this measure has been used in studies investigating diversity in entrepreneurship across states (e.g., (Goetz (2008) and Hall and Sobel (2008)), we believe that this paper is the first to employ it as a predictor of state economic growth.

The paper proceeds as follows. Section 2 provides a brief overview of the growth model used and a sample of the empirical results using such a model to examine the link between entrepreneurship and economic activity. Section 3 discusses the data used in this study and provides a discussion of the KIEA measure used. Empirical findings are presented in Section 4. Looking forward, we find that in the presence of a reasonable set of control variables, economic growth at the state level is, on average, positively and significantly related to a state's level of entrepreneurship. Section 5 closes the paper with conclusions and policy recommendations.

2. Economic growth and entrepreneurship

There is a long-standing tradition of belief in the value of entrepreneurship as a factor in economic growth. Economic growth models have expanded to incorporate various measures of entrepreneurship. Starting with the basic Solow (1956) model, researchers have sought to expand the list of economic factors that may contribute to observed economic growth, one of them being the role of entrepreneurship. This has led to valuable insights regarding the dynamic process by which economic growth occurs. Holcombe (1998), for example, argues that entrepreneurship, once included into the standard neo-classical growth model fleshes out the process by which the factors of production, namely, capital, labor and technology, interact to create economic growth.[2] Incorporating some measure of entrepreneurship into a model of economic growth makes it “apparent that the engine of economic growth is entrepreneurship, not technological advance or investment in human capital per se” and that doing so “fills in the institutional details to help make the growth process more understandable.” (Holcombe, p.60)

A standard model of economic growth can be written as

(1) $Y = A + f(K,L)$

where Y represents some measure of real output, A is technology, K is capital and L is labor. Historically, in estimating this model, technology was often estimated as the constant term since few direct measures of “technology” are available. Where technology is included it is usually proxied by a simple time-trend measure reflecting the assumption of advances over time.

Developments in growth theory stemming from the work of Lucas (1988) and Romer (1986, 1990, 1994) have focused on explaining the process by which technology advances. Endogenous growth theory emerged because the original Solow model did not address “black box” aspects of dynamic economic growth. That is, could it be that as one person’s human capital is advanced there are positive externalities that enhance the productivity of others? If the answer is yes, and Romer’s theoretical work suggests that it is, the stark Solow model is ill-equipped to address the complexities of dynamic growth. Although endogenous growth theory provides a mechanism by which human capital development can be explained and helps explain observed diffusion in economic growth patterns, it focuses on the inputs to the production process, rather than the process itself.

Extensions of the Solow model have tried to address this problem. There are many surveys of the existing growth literature and I will not attempt one here.[3] Suffice it to say that previous work, mostly conducted at the national level, has tested for the relative importance of health, geography, educational attainment, social institutions (such as property rights, religion and corruption), and measures of general intelligence as predictors of economic growth.[4] Although the actions of entrepreneurs and their effect on economic activity have long been recognized (e.g., Knight (1921), Schumpeter (1934), Kirzner (1973)) empirically assessing the explanatory power of entrepreneurship is relatively new.

How can entrepreneurship affect economic growth?[5] It may not, as already noted, affect the inputs *per se* but can influence the *process* by which those inputs are combined to produce goods and services. Some have introduced entrepreneurship (in various forms) into endogenous growth models, with varying outcomes.[6] Howitt and Aghion (1998), for example, show that it is possible to link profit-seeking investment in knowledge to the individual making the investment: the entrepreneur. Schmitz (1989) also models the role of the entrepreneur within the endogenous growth model, finding that the equilibrium number of entrepreneurs, because of their passive role in his model, is less than the social-optimum.

So-called knowledge spillovers represent an important factor by which entrepreneurs can enhance the dissemination of new information and production techniques. Audretsch (2007) notes that this idea is not new, however. Griliches (1979) modeled the knowledge production function to show that a firm would invest in knowledge—R&D, for example—to produce an innovative output. What Audretsch argues is that the entrepreneur is able to exploit those new knowledge opportunities more fully than an organization within which such ideas may arise. Entrepreneurs may impact growth through innovation and introducing new production processes (Acs and Audretsch, 2003).

The evidence at the country level is mixed. Wong, et al. (2005) use sub-components of the GEM index and finds that only "high potential entrepreneurship" significantly and positively impacts economic growth. This, they argue, is consistent with the notion that fast-growing firms, not simply new firms in general, account for job creation and, thus, economic growth. Van Stel, et. al (2005) report that, after controlling for initial income and measures of global competitiveness (following McArthur and Sachs (2002)), entrepreneurship has a positive and significant impact on national growth. But their results are tempered by the fact that this outcome holds only for relatively prosperous countries: increased entrepreneurship is found to negatively affect economic growth in developing countries.

Acs and Armington (2006) suggest that the link between entrepreneurship and economic activity may be better understood at the subnational level. They argue that local regions are more homogenous, and there is likely to be greater mobility of capital, both human and nonhuman, and of knowledge between states than between nations. Their study of 394 local areas in the United States showed that "higher rates of entrepreneurial activity were strongly associated with faster growth in local areas."(141). Hobbs, Stansel and Gohmann (2011) analyze the effect of institutional variation on entrepreneurial activity using births and deaths of businesses across 288 U.S. metropolitan areas during the period 1990-2003. Creating a proxy for economic freedom at the MSA level, they find that smaller government—greater economic freedom—engenders greater entrepreneurial activity. Kreft and Sobel (2005) test the causal relation between several measures of entrepreneurship and local economic activity. Finding that entrepreneurship causes increased economic activity, they claim that their results "bridge the gap between the national and local links between entrepreneurs and economic growth." Studies of the localized entrepreneurship-economic activity relation in other countries tend to corroborate the findings for the United States.[7]

This study focuses on the entrepreneurship-economic growth link at the state level. Since the KIEA measure is available only at the state level, we are constrained to this level of analysis.[8]

3. Estimated model and data

The model that I estimate takes the basic form

$$\ln (y_{2005}/y_{2000})_i = \alpha + \beta_1 \text{(Entrepreneurship)}_i + \beta_2 \text{(Controls)}_i + \varepsilon_i \tag{2}$$

where $\ln (y_{2005}/y_{2000})_i$ is the ith state's rate of economic growth between 2000 to 2005. Three different measures of economic activity are used. One is the commonly used real per capita gross state product (GSP).[9] To provide some perspective, we also consider the effect of entrepreneurial activities on real per capita personal income and employment.[10] This inclusion of additional measures of economic activity provides a more robust test of the role of entrepreneurship. In addition, though we recognize that our sample is limited, the choice of the growth period is dictated by the availability of the KIEA data and our desire to ensure the latter's exogeneity to economic growth.[11]

The estimated coefficient on "Entrepreneurship" measures the impact of a change in the level of entrepreneurial activity on economic growth. As noted earlier, entrepreneurship is measured using the Kauffman Index of Entrepreneurial Activity. The KIEA index differs from some previous work where proxies like new firm startups, changes in self-employment rates and similar "outcomes" are used to assess the level of entrepreneurial activity. Unfortunately, such measures may understate the true level of entrepreneurial activity. The index is derived from the Current Population Survey and is measured as "the percent of individuals aged twenty to sixty-four who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked per week." (Fairlie, 2009)[12]

Hall and Sobel (2008) argue that the KIEA measure improves upon these other approaches in two important ways. First, the manner in which the KIEA is constructed means that it reflects the flow of entrepreneurial activity instead of the existing stock. If entrepreneurship is best thought of as the creation of new economic ventures and not the management of existing ones, KIEA is a preferable measure. Second, the KIEA is not based on data for payroll or firm incorporation. Because firm startups are unlikely to have significant employment impacts initially, measures that rely upon payroll will fail to accurately reflect entrepreneurial activity. While payroll will capture this over time it is likely to be a lagging measure for entrepreneurial activity. Firm incorporation data might be driven by entrepreneurial activity but could also be driven by other factors such as changes in legal environment (e.g., changes in the regulatory environment facing business or subsidy programs) or in tax environments. How each plays out in affecting measurable economic activity over time presents yet another empirically-verifiable research question.

There is quite a long list of potential measures that can be used as control variables to account for state-specific characteristics that may account for differences in economic activity. They include measures of both human and non-human capital development, as well as other factors capturing regional variation. Our selection of control variables, guided by previous research, does not exhaust the potential list.[13] Our focus is on testing the relation between entrepreneurship and economic growth, not finding the "best" economic growth model per se. In this regard, the model estimated here, though compact compared to some others, seems reasonable.[14] We leave it for future researchers to explore possible alternatives.

The control variables cover several broad areas. One is characteristics of the state's population. Johnson, et al. (2011) suggest that when estimating a growth model it is important to capture changes in the population. To do this I include a measure of state population growth between 1990 and 2000.[15] Another measure is the state's population density. This variable has been used by Glaeser, et al. (1995), Hobbs, et al. (2011), Crain and Lee (1999) and Ciccone and Hall (1996), among others, to account for possible agglomeration effects. In his study, Reed (2009) finds that an increase in population density has a positive effect on state economic growth. I also account for the availability of the work force by including the percent of the population aged 18-64, a measure similar to that used in Crain and Lee (1999), Garrett and Rhine (2011), Sobel (2008), Hall and Sobel (2008), and Hobbs, et al. (2011). To capture ethnic diversity the percent of the population that is African-American is also included. (See Glaeser and Saks (2006) or Kreft and Sobel (2005)).

Differences in human capital are controlled using several measures. One is the percent of the adult population with a bachelor's degree. Glaeser and Saks (2006), Johnson et al. (2010), Hall and Sobel (2008) and Hobbs, et al. (2011) and Crain and Lee (1999) use such a measure to account for educational differences across states. Another measure of human capital, though an admittedly crude one, is life expectancy. This variable has been used successfully in estimating cross-country growth regressions (e.g., Knowles and Owen (1995), Sala-i-Martin (1997a,b) and Ram (2007)).

Previous work has sought to capture local economic conditions using a variety of measures. Crain and Lee (1999), for example, use an industry diversity index. In this study we use the percent of the labor force in the service industry. Such a measure also has been used in previous work, for instance Crain and Lee (1999) and Garrett and Rhine (2011).

Finally, previous work has indicated the importance of including some measure or measures of "policy." This influence often is controlled for by including such measures as government expenditure as a percent of output or government revenue as a percent of output (See Crain and Lee (1999), Johnson, et al. (2010), among others). Sometimes (e.g., Glaeser and Saks (2006)) it is proxied for by using public sector employment relative to the private sector. We argue that a reasonable alternative is an overall measure of government activity, such as the index of economic freedom published by the Fraser Institute.[16] Using the values for 2001, the index provides a useful portmanteau variable to capture the overall level of local government intervention into the local economy.[17]

In addition to these socio-economic control variables, dummies based on Census regions to account for any geographical differences also are included. Except for the freedom measure, all of the control variables are for 2000 or end in 2000 to reduce potential endogeneity with the growth measures. Unless noted otherwise, all of the data are from the *Statistical Abstract of the United States*.

4. Empirical results

Table 1 presents our regression estimates of equation (2) when gross state product and personal income (both measure in real per capita terms) measures are used.[18] Two regressions are reported for each measure: one uses only the KIEA variable and the other includes this variable along with the economic and geographical control variables.

Turning first to the results for state output, the estimated coefficient on KIEA is positive and statistically significant at the one-percent level. A one-standard deviation increase in KIEA increases annual economic growth by about half a percentage point.[19] Overall, the regression explains about 10 percent of the total variation in state output growth for this period which, while not large, is statistically significant.

Column (2) in Table 1 reports the regression results when the control variables are included. A number of the control variables achieve significance, including population growth, percent bachelor degree and life expectancy. The signs on the variables are expected, though the result for the education variable is somewhat perplexing.[20] We also find that including regional dummies is important. The overall explanatory power of the equation jumps considerably by including these extra measures, increasing from about 11 percent with just KIEA as the explanatory variable to about 36 percent with the extended set of variables.[21] What is most interesting given the focus of this study is the fact that the coefficient on entrepreneurship remains positive and statistically significant even when the control and regional variables are included in the regression equation. The results indicate that a one standard deviation increase in KIEA is associated with about a 40 basis point increase in the annual growth of per capita real state output. This outcome indicates that entrepreneurship, measured by the KIEA index, is an important predictor of state output growth.

Columns (3) and (4) in Table 1 report the estimation results when real per capita personal income is used instead of real per capita GSP. In the basic model (column (3)) again the estimated coefficient on KIEA positive and statistically significant, though the effect of a change in KIEA on personal income is smaller when compared to the output effect. The estimates in Table 1 indicate that a one standard deviation increase in KIEA results in an annual increase in the growth rate of real per capita personal income of about 20 basis points. Although the effect is smaller relative to the output regression, it appears that states with higher levels of entrepreneurial activity are more likely to experience relatively faster economic growth than states with lower levels of entrepreneurship.

The full-estimation results for personal income are found in column (4) of Table 1. As with output, several of the control variables are statistically significant, as are the regional dummies. Inclusion of the control variables significantly improves the overall explanatory power of the equation but, more importantly, does not significantly affect the size or significance of the estimated coefficient on entrepreneurship. Overall, then, the results in Table 1 do not reject the notion that higher levels of entrepreneurial activity are, all else the same, likely to generate a higher growth rate in per capita real output and per capita real income.

In Table 2 we investigate the relation between entrepreneurship on employment growth. Columns (1) and (2) report the results when non-farm employment growth is the dependent variables. Entrepreneurship by itself accounts for 21 percent of the variation in non-farm employment growth, significant at the one percent level. A one-standard deviation increase in KIEA results in an average annual increase in non-farm employment growth of about one standard deviation (=.042). This effect is somewhat reduced when the control variables are included, as reported in column (2). The estimated coefficient on KIEA declines from 0.211 to 0.117, though it continues to be statistically significant at the one-percent level. Inclusion of the control variables, while they have little effect on the KIEA variable, increases the overall explanatory power of the equation three-fold.

Lastly, the results using total employment growth as the dependent variable are reported in columns (3) and (4) of Table 2. In the equation with KIEA as the only explanatory measure the overall fit is quite low, about 8 percent, even though the estimated coefficient on KIEA is significant and positive. The results provided in column (4) indicate that adding the control variables once again dramatically improves the overall explanatory power of the equation. But doing so has little effect on the statistical significance of the KIEA variable. However, the economic impact of the KIEA term on total employment growth is reduced markedly.

Overall, the evidence presented in Tables 1 and 2 supports the idea that, on average, states with a higher level of entrepreneurship are more likely to experience better records in economic growth.[22]

5. Conclusion

The gist of our results is that, other factors held constant, entrepreneurship has an independent, statistically significant effect on economic activity at the state level. Based on regressions explaining real per capita Gross State Product, real per capita personal income and two measures of employment growth, states with higher levels of entrepreneurial activity, measured using the KIEA index, are more likely to experience greater economic success.

Such a conclusion using the evidence presented here is admittedly tentative. Even so, the results of this study corroborate previous findings that improvements in the entrepreneurial climate foster economic growth. And although we have not attempted to distinguish between different categories of entrepreneurship, for example productive and unproductive entrepreneurship, results from that line of research are clearly relevant here. Sobel's (2008) work, for example, shows that states could enact various policy changes that would alter the incentive structure facing entrepreneurs. Combined with the findings of this study, the weight of the evidence strongly suggests that states should actively consider policies that promote entrepreneurship as a means to bolster economic activity at the state level.

Endnotes

1. Campbell and Rogers (2007), for example, approximate entrepreneurial activity as "net new business formation, defined as $nnbf_1$ = (business $births_1$ – business $deaths_1$)/total $businesses_0$ * 100. Campbell, et al. (2009) also suggest using the measure (firm births $_t$/firm deaths $_{t-1}$). Hobbs, et al. (2011) use these measures to gauge the effect of local government finance on entrepreneurial activity in metropolitan areas.

2. See also Kirzner (1973, 1997).

3. Excellent overviews are provided by Sala-i-Martin (1997), Barro and Sala-i-Martin (2004), Sala-i-Martin, et al (2004) and Bleaney and Nishiyama (2002), among others.

4. Sala-i-Martin (1997) is an especially informative look at the potential variables used to explain economic growth across countries. See also Jones and Schneider (2006).

5. For useful surveys, see the introductions to the special issues of *Small Business Economics* by Acs and Szerb (2007). See also Audretsch, et al (2006) for an overview of this literature.

6. Caree and Thurik (2003) provide a more detailed review, on which this discussion is based.

7. Audretsch and Fritsch's (1996) study of regional data in Germany found that increased entry and exit of firms—a measure of entrepreneurial activity called "turbulence"—was associated with reduced economic growth.[1] When data for the 1990s is utilized, Audretsch and Fritsch (2002) find that regions in Germany with higher start-up rates for new firms, another measure of entrepreneurial activity, also have higher rates of growth. Audretsch and Keilbach (2004) also find that those regions in Germany with higher levels of entrepreneurial activity are

characterized by higher rates of productivity, thus helping to explain observe differences in regional growth.

8. There are values for MSAs, but the sample is too small to be useful.

9. In some previous work, it is not clear whether per capita output or income is being used. One issue in measuring real state GSP is which price index to use, if any. If one argues that the prices across states are roughly similar, then using nominal GSP is possible. Because I are trying to account for changes in the *annual output* of states—the use of a real GSP measure instead of a nominal one—requires us to deflate nominal GSP. We must, therefore, choose between a consumer-based price index like the Consumer Price Index (CPI) and a broad-based measure like the GDP deflator. There are several issues surrounding use of the CPI, however. As is well known, the CPI suffers from large short-term fluctuations due to swings in prices of key components, such as food and fuel. In its place, one could use core CPI, which removes these two components. In the end, I used the GDP deflator for its breadth and its lower volatility.

10. The correlation between these measures is quite high, but this does not rule out possible differences in effect. For example, the correlation between output and income growth is 0.88 (t=13.02); between output and non-farm employment growth it is 0.55 (t = 4.59). The source of the output and personal income data is the Bureau of Economic Analysis, various years. The employment growth data were kindly supplied by Thomas Garrett.

11. In estimating equation (2) KIEA should be exogenous to economic growth. In this regard, Hall and Sobel (2008) find no evidence of economic activity "causing" changes in KIEA. The choice of the 1996-98 KIEA measure is based on availability. As reported in Fairlie (2009), the other available KIEA data are for 2004-06. Hall and Sobel (2008) use of the 2004-06 index to

explore the relation between economic freedom and entrepreneurship. See also Goetz (2008). Garrett and Rhine (2011) also use the 2000-05 period in their study of economic freedom and employment growth, offering a useful point of comparison.

12. See Fairlie (2009) for a complete description of how the KIEA is constructed.

13. Crain and Lee (1999) and Reed (2008, 2009) provide excellent overviews of the potential variables that may explain state economic growth.

14. Such parsimony in selection of right-hand-side variables is not unique to this paper. Garrett and Rhine (2011), in their estimation of employment growth equations, use only a measure of human capital, population density and employment share as economic control variables.

15. I also experimented with using population growth between 1995 and 2000 and found no substantial changes in the outcome.

16. Garrett and Rhine (2011) use the index in regressions of employment growth. See their discussion of the debate over using a single measure to capture the many-faceted effects of government actions on the economy. While other competing measures exist, for example the state freedom index published by the Mercatus Center at George Mason University, it is available only since the past few years.

17. The 2001 value is used because there are no reported data for 2000. The freedom index is based on three sub-components: government size, takings and labor market freedom. Government "size" by is determined by government consumption expenditures relative to state GDP, transfers, subsidies etc. as a percent of GDP. "Takings" is based on measures such as total tax revenues as a percent of GDP and the level of marginal tax rates, among others. And "labor

market freedom" is measured by the extent of a state's minimum wage legislation, the relative size of government employment and the degree of unionization. The greater the government's involvement, the lower the index score. See Ashby, et al. (2010) for details.

18. We do not include an initial-year measure of the log level of the dependent variable. The estimated coefficient on the initial level of, say, output, provides an estimate of convergence (e.g., Barro and Sala-i-Martin, 1992). Although debated in the literature (e.g. Quah (1993)), one expects, *ceteris paribus*, that by controlling for a state's initial level of real GSP per capita, one can control for a variety of temporary, nonstructural historical factors and allow the other regressors to provide information about the state's long-term economic growth potential. What we find, however, is that when included in the regressions the log of the initial level of output (or income) never achieves statistical significance. This finding, also reported in Jones, et al. (2011) could well reflect the short time period over which growth is being measured. It is important to note that including the initial value of the dependent variable does not affect the estimated coefficient on entrepreneurship.

19. The standard deviation of KIEA is 0.095, so 0.095x0.224) = .021. On an annual average basis this would be 0.0042, or about .42 percentage points. With an annual average growth rate in output of 2 percentage points, this is about a 20 percent increase in the annual average growth rate.

20. The sample period may account for this. The initial years of the sample coincide with the economic downturn and slow labor market recovery, a time when unemployment was high and slow to adjust downward. When the percent of the population with at most a highs school education was used, we find a similarly signed coefficient.

21. Testing that the control variables as a group are zero easily rejects the null hypothesis for output growth. The calculated F-statistic is 3.74, significant at less the 0.001 level of significance. This qualitative result also holds true for the other regression estimates using the other measures of economic activity: in every instance the level of significance is similar or better than that for output growth.

22. One outcome worth mentioning is the failure of the economic freedom variable to achieve significance. This is result is perhaps a function of the time horizon: Garrett and Rhine (2011) for example, also find that for the same 2000-2005 period the estimated effect of economic freedom on non-farm employment growth is only marginally significant. And it does not appear to be the result of missing some interaction between the two measures. When an interaction measure between KIEA and economic freedom was included in the regressions, it was not statistically insignificant. Moreover, entering the freedom measure in change form produced no significant results.

Table 1
Regression results: Output and income growth

Variable	GSP (1)	GSP (2)	Personal Income (3)	Personal Income (4)
KIEA9698	0.224	0.289	0.162	0.164
	(2.82)***	(4.21)***	(2.84)***	(2.94)***
Pop growth		-0.374		-0.286
		(2.58)***		(1.88)*
Population density		0.0001		0.0001
		(0.95)		(0.57)
Population 18-64		-0.002		-0.008
		(0.31)		(1.50)
Percent BA2000		-0.008		-0.004
		(2.60)***		(1.73)*
Percent Black		0.071		0.022
		(0.64)		(0.32)
Share Service		0.415		0.342
		(1.41)		(1.85)*
Life Expectancy		0.017		0.003
		(1.99)**		(0.55)
Economic Freedom		0.030		0.013
		(1.44)		(0.91)
South		0.062		0.039
		(2.25)**		(1.78)*
West		0.079		0.051
		(1.76)*		(1.64)*
North Central		-0.003		-0.009
		(0.11)		(0.52)
Constant	0.016	-1.873	-0.004	0.100
	(0.65)	(2.29)**	(0.24)	(0.17)
$\bar{R}^2$	0.109	0.362	0.117	0.360
F/pr	6.97/0.01	3.31/0.002	7.52/0.01	3.30/0.002

Notes: Absolute values of t-statistics, based on White heteroskedasticity-consistent standard errors, are reported in parentheses. Significance at the 1 percent, 5 percent and 10 percent levels is designated by ***, ** and *, respectively.

Table 2
Regression results: Employment growth

	Non-farm		Total	
Variable	(1)	(2)	(3)	(4)
KIEA9698	0.211	0.117	0.179	0.095
	(5.06)***	(2.69)***	(2.53)***	(2.05)**
Pop growth		0.098		0.500
		(1.08)		(5.94)***
Population density		0.0001		0.0001
		(1.38)		(1.29)
Population 18-64		0.001		-0.009
		(0.15)		(2.35)**
Percent BA2000		-0.007		-0.005
		(3.07)***		(2.65)***
Percent Black		0.042		0.071
		(0.66)		(1.37)
Share Service		0.254		0.093
		(1.99)**		(0.84)
Life Expectancy		0.020		0.025
		(3.55)***		(5.24)***
Economic Freedom		0.009		-0.001
		(0.91)		(0.08)
South		0.021		-0.001
		(1.18)		(0.08)
West		0.034		-0.027
		(1.58)		(1.33)
North Central		-0.015		-0.037
		(0.99)		(2.81)***
Constant	-0.044	-1.626	-0.001	-1.327
	(3.05)***	(3.23)***	(0.06)	(2.73)***
$\bar{R}^2$	0.214	0.652	0.080	0.751
F/pr	14.31/0.00	8.65/0.00	5.23/0.03	13.292/0.00

Notes: Absolute values of t-statistics, based on White heteroskedasticity-consistent standard errors, are reported in parentheses. Significance at the 1 percent, 5 percent and 10 percent levels is designated by ***, ** and *, respectively.

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