Economic Freedom in U.S. Metropolitan Areas

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Abstract

This paper is a revised, updated, and expanded version of the first economic freedom index for local economies in the U.S. (Stansel, 2013). It provides a more comprehensive measure of the restrictions government places upon economic freedom compared to simple fiscal measures like government spending or revenue. That makes it a valuable tool for a wide variety of academic and public policy researchers seeking to investigate the impact of government upon society. The two economic freedom indices of nations have stimulated a large body of such research, as have the state-level indices. There is a small and growing local-level literature reviewed herein. Like with the other two sets of indices, local economic freedom is found to be correlated with positive economic outcomes such as higher per capita income and higher population growth.

1   Introduction

For centuries, economists and other scholars have been trying to answer the question of why some places are so rich and others so poor. Way back in 1776, Adam Smith, the founding father of economics, wrote a book entitled An Inquiry into the Nature and Causes of the Wealth of Nations, in which he suggested that the "simple system of natural liberty" was the best way for societies to maximize their prosperity. His reasoning was that such a system left individuals maximally free to pursue their own plans, thereby creating an environment in which entrepreneurial activity would flourish and new innovations would be abundant.

About 30 years ago, Nobel Laureate economists Milton Friedman, Gary Becker, and Douglas North, as well as a host of other economists and public policy experts, began an effort to quantify how free the economies of individual nations were. About 10 years later, that resulted in the production of the first Economic Freedom of the World report, published by the Fraser Institute, a Canadian think tank. The 22nd edition of that report, now produced annually, came out in 2018 (Gwartney et al., 2018). A few years later, Fraser published a state-level version, the Economic Freedom of North America report (EFNA), which is also now produced annually and is in its 14th edition (Stansel et al., 2018).[1]

That state-level index shows us how the level of economic freedom can vary across sub-national jurisdictions within the same country (e.g., Texas and Florida have much greater freedom than New York and California). However, levels of economic freedom can also vary within those subnational jurisdictions. For example, the San Jose metro area has substantially higher economic freedom than Los Angeles. The same is true for Nashville compared to Memphis. This paper quantifies those intra-state disparities by providing a local-level version of the EFNA. It builds upon the first such index (Stansel, 2013), which provided only one year of data, by improving the methodology, updating the data, and expanding it backwards in time as well.

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[1]It should be noted that there have been other state economic freedom indices published in the past, but they have not been updated annually. Most recently, Ruger and Sorens (2018) provided an index of both personal and economic freedom in the U.S. states. Their Freedom in the 50 States report has now been produced five times (in 2018, 2016, 2013, 2011, and 2009).

It provides an economic freedom index for the 382 U.S. metropolitan statistical areas (MSA) as defined in 2015.[2] There is data for nine years over five decades (years ending in "2" and "7" from 1972 to 2012). This more disaggregated data can be useful to those doing research on a variety of topics.

2   Methodology and Data

The same time-tested methodology used in the Economic Freedom of North America 2018 report is used to measure economic freedom in U.S. metropolitan statistical areas. The MSA is a county-based concept intended to capture the boundaries of the local economy. Utilizing data on commuting patterns, the definition of an individual MSA includes all of the counties that are part of that local economy. For a variety of reasons, the MSA is preferable to the city or the county. First, the MSA approximates the entire local economy. Second, unlike cities, the MSA's boundaries can be held constant over time. (As cities expand, it is not feasible to get historical data on things like taxes and government spending for the areas that were previously not part of the city.) While it is very uncommon, there have been examples of counties expanding or contracting as well. Third, there are numerous special district governments that have boundaries overlapping more than one city and/or county. It is not possible to separate the taxes and spending across those cities and counties.

The same three areas of economic freedom measured in the 2018 EFNA are used in this local index. Area 1 measures government spending, Area 2 measures taxes, and Area 3 measures labor market freedom. There are three variables used in each of those three areas.[3] For each of those nine variables, the raw data is converted to a standardized 0 to 10 score, in which the value representing highest economic freedom gets a 10, the one representing lowest economic freedom gets a 0, and all others are given a score proportionately in between 0 and 10.[4] Those three standardized scores within each area are averaged to get an overall score for each of the three areas. Those three area scores are then averaged to get an overall economic freedom score. This approach maintains objectivity by giving each variable (and each area) an equal weight, rather than subjectively determining a different weight for each variable and area.

Table 1 lists the nine variables. The first two areas utilize fiscal measures based on data from the U.S. Census Bureau. Their Census of Governments is conducted every five years, in the years ending in "2" and "7".[5] They survey all of the more than 90,000 individual local governments and collect data on various detailed components of taxes, spending, debt, and government employment. That includes not only cities and counties, but also school districts, transportation districts, and all other such single-purpose special districts. The data is summed at the county level. In the case of special district governments that overlap multiple city and county boundaries, the data is included within the county in which the government is headquartered.[6]

Because states differ in how much they centralize state and local government functions at the state level, looking just at local data would provide an incomplete picture. For example, in Vermont, state government accounts for 85 percent of total state and local government expenditures, whereas in Nebraska the state accounts for only 48 percent. The burden of state government on economic freedom must be incorporated in order to provide a complete picture of the level of restrictions faced by residents in each metropolitan area. For the six fiscal variables in Areas 1 and 2, a state-level figure for each variable is calculated (e.g., state government general consumption expenditures as a percentage of personal income). That figure is added to

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[2]Those definitions can be found here: https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/bulletins/2015/15-01.pdf.

[3]In the EFNA, there are four variables in Area 2 because a variable for the top marginal income tax rate is included. While that variable provides important information, there is no central source of historical local income tax rates, and there are hundreds of jurisdictions that levy them, so including that variable herein was not feasible.

[4]The specific formula is: (Vmax Vi)/(Vmax Vmin) 10, where (unless otherwise stated) Vmax is the largest value found within a component, Vmin is the smallest, and Vi is the observation to be transformed. In three cases, there are outliers that would skew the relative scores. In those cases, the cut-off for a zero is changed so that there are multiple areas with the lowest possible score.

[5]The Census of Governments data is available at the U.S. Census Bureau's website: https://www.census.gov/programs-surveys/cog.html

[6]This is the primary reason why a county-level index is not feasible. The scores would be biased against that headquarters county, which tends to be the county in which the largest central city is located.

Table 1: Areas and Components of the U.S. Metro Area Economic Freedom Index

1. Government Spending
1A. General Consumption Expenditures by Government as a Percentage of Personal Income
1B. Transfers and Subsidies as a Percentage of Personal Income
1C: Insurance and Retirement Payments as a Percentage of Personal Income

2. Taxation
2A. Income and Payroll Tax Revenue as a Percentage of Personal Income
2B. Sales Tax Revenue as a Percentage of Personal Income
2C. Revenue from Property Tax and Other Taxes as a Percentage of Personal Income

3. Labor Market Freedom
3A. Minimum Wage (full-time income as a percentage of per capita personal income)
3B. Government Employment as a Percentage of Total Employment
3C. Private Union Density (private union members as a percentage of total employment)

the local government figure discussed above to produce the total state and local value used to calculate each area's score. In the 46 metro areas that overlap state borders, a population-weighted average for the state government figure was used[7] (rather than using the figure for the state with the largest share of population, as was done in the previous version).

Combined together, variables 1A, 1B, and 1C account for all of state and local government spending with two exceptions: capital outlays (spending on things like physical infrastructure) and interest on debt. The former can fluctuate highly from year to year, so including it can be problematic. This can also be a problem for the latter, though the fluctuations are less dramatic and less frequent. Variables 2A, 2B, and 2C account for all tax revenue with the exception of severance taxes, which are levied only at the state level. Examples of these are taxes on natural resources such as oil and timber. These are excluded because they tend to be factored into resource prices and thus paid by consumers of those goods all over the country, not just in that state.

Area 3 is more complicated. Variable 3A captures the extent to which the minimum wage that prevails in each area is a binding constraint on the ability of employers and employees to enter into voluntary labor agreements. Until recently, the vast majority of minimum wages that were higher than the federal minimum wage were based on state-level laws. While there have been numerous increases at the local level in the past few years, as of 2012, the most recent year of this index, there were still only four local-level minimum wage laws: San Francisco, CA; Washington, DC; Albuquerque, NM; and Santa Fe, NM. For variable 3A, with the exception of Washington for all years and San Francisco, Albuquerque, and Santa Fe for 2007 and 2012, the data is based on the state minimum wage.[8] As of 2012, there were 18 states with a minimum wage higher than the federal level of \$7.25. For the remaining states the federal level was used. The full-time annual income is calculated by multiplying the minimum wage in each area by 40 hours a week and 52 weeks a year. That number is divided by the metro area's per capita personal income to adjust for varying levels of income in each MSA. In a poor area, a minimum wage of \$7.25 will be much more of a binding constraint than in a rich area where it likely will not be as far above the prevailing equilibrium wage for low-skilled labor. That percentage is what is used to calculate the standardized scores for variable 3A. In the case of the 46 multi-state metro areas, the same population-weighted average procedure is used as was described

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[7]For example, in the Allentown-Bethlehem-Easton, PA-NJ MSA, 87 percent of the 2012 population was in Pennsylvania and 13 percent was in New Jersey, so for 2012 the state figure that was added to the local figure was the Pennsylvania number times 0.87 plus the New Jersey number times 0.13.

[8]In each of those four cases, since those were city-level laws, a population-weighted figure was calculated in which the higher local minimum wage was only attributed to that percentage of the population that lived in the city itself, as opposed to the entire metro area. The state-level minimum wage was attributed to the non-city portion of MSA population. An anonymous reviewer suggested that using a population-weighted figure would bias the results since there are likely to be employees who commute into the city who do not live there. However, that bias is likely to be smaller than the bias of an unweighted figure, and it only applies to three cities in 2012 (San Francisco, Santa Fe, and Washington, DC) and four in 2007 (those three plus Albuquerque). With the exception of Washington, DC, it is not an issue in any of the other seven years of data (prior to 2007) in the index.

previously for the variables in Areas 1 and 2.

Variable 3B is the total number of local government employees divided by the total number employed in the metro area plus the total number of state government employees divided by the total number employed in the state. The population-weighted average is used to calculate the state portion for the 46 multi-state metros. This is included to capture the extent to which the government competes with the private sector for workers.

Variable 3C measures the percent of employees who are members of a private employee union.[9] (We use only private employees because government employee share is already captured in Variable 3B.) This provides a more refined measure of the impact of state employment laws regarding unions than would a simple binary variable for whether or not a state has a "right to work" law. Due to small sample sizes, the local union density data can fluctuate greatly from year to year.[10] For that reason, we use state-level data in variable 3C. Population-weighted averages are used for the multi-state metros.

3   Economic Freedom and Economic Outcomes

A large and growing literature exists at both the country and state level that tends to find that economic freedom is associated with a plethora of positive economic (and other) outcomes.[11] The local level literature, still in its infancy, has produced similar findings. For example, Bologna (2014) was the first to utilize Stansel (2013) in an econometric study. Her spatial analysis found a small but statistically significant positive relationship between economic freedom and entrepreneurial activity, measured by establishment births and percentage changes in total nonfarm proprietors' employment. Bologna et al. (2016) did a similar analysis and found that both the level and growth of per capita income were positively associated with economic freedom. Koch (2015) found a positive relationship between economic freedom and domestic migration, and Wong and Stansel (2016) found a positive relationship between the labor market freedom component of the index and female labor market participation rates. Most recently, Dove (2017) found that economic freedom was positively associated with local government bond ratings; Shumway (2017) found that it was positively associated with net in-migration of population, income change, and per capita income change; andMillsap (2018) found that it was positively associated with the growth of per capita income and population.

In each of the examples described above, the use of a more disaggregated approach has notable benefits. For example, there can be wide variation in religion, cultural, and other institutional factors within a cross-section of countries that are difficult to quantify. That variation is much smaller across metro areas in the same country. In addition, the metro area concept is intended to define the local labor market, whereas countries and states sometimes have relatively arbitrary borders; some factors such as government policy can vary quite widely within those borders. Some local economies also cross those state and national borders. Finally, with nearly 400 metro areas in the U.S., the local approach provides a larger sample size than using countries or states.

Furthermore, there are a variety of issues that would be very difficult to explore at a more aggregated level compared to the MSA level. Location decisions are one example of that. When businesses or people move, they choose to locate in a specific local economy, not just a particular state or country. (The Koch (2015) and Shumway (2017) papers cited above are examples of such work on population migration.). Murphy and Yeom (2018), which examined the relationship between agricultural diversity and economic freedom, is another example. Work on the impact of environmental conditions, such as climate and proximity to a body of water, also would be difficult to do at a more aggregated level. Another potential application is to try to disaggregate the effects of state policy and local policy. All of these would be harder to do with country or state data compared to local data.

It is beyond our scope here to produce a new econometric analysis, however, an examination of some basic statistics can provide some insight. The metropolitan area economic freedom index is found to be

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[9]That data comes from Hirsch and Macpherson (2018).

[10]For example, Athens, GA, had a union density of 0 percent in 2005 and 11 percent in 2007. McAllen, TX had 0.5 percent in 2005 and 12.3 percent in 2007.

[11]See Hall and Lawson (2014) for a review of the country-level literature and Stansel and Tuszynski (2018) for a review of the state-level literature.
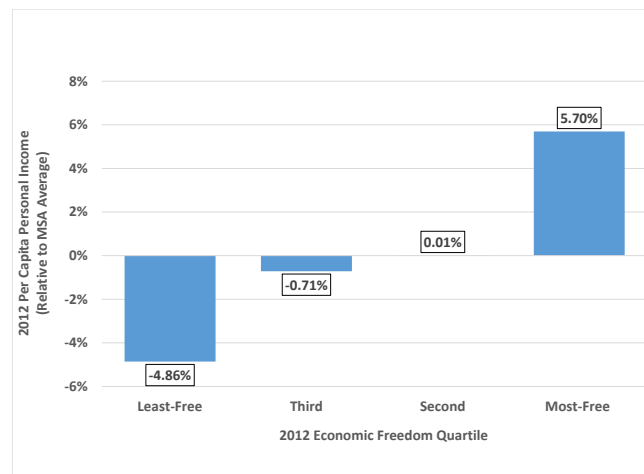
Figure 1: Per Capita Income in MSA's

positively associated with good economic outcomes, as the national and state indices have been. When the 382 MSA's are divided into quartiles, ranked by their 2012 economic freedom scores,[12] as Figure 1 shows, 2012 per capita personal income in the most-free quartile of MSA's was 5.70 percent above the MSA average while it was 4.86 percent below the MSA average in the least-free quartile. In addition, 2012-16 population growth was 4.83 percent in the most-free quartile but only 1.22 percent in the least-free quartile (Figure 2). Figure 3 illustrates further that there is a fairly strong correlation between economic freedom in 2012 and subsequent population growth from 2012 to 2016. (The correlation coefficient is 0.408.)

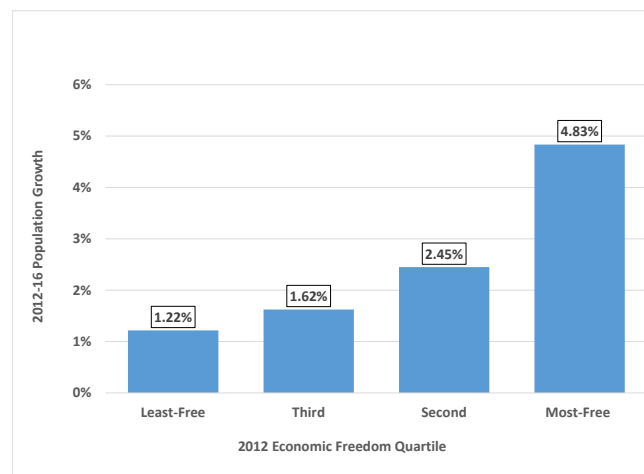Figure 2: Population Growth in MSA's

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[12]Since 382 does not divide evenly by four, the most-free quartile consists of the top 96 MSA's, the second quartile consists of MSA's 96-191, the third quartile consists of MSA's 192-287, and the least-free quartile is MSA's 287-382. In other words, the middle MSA in both the top and bottom half is included in both the quartile above it and the one below it.
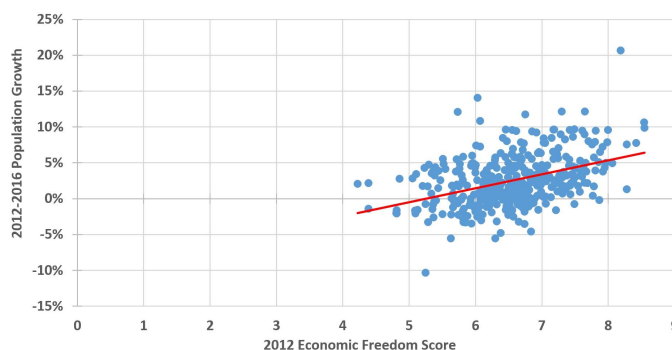
Figure 3: Economic Freedom and Population Growth in MSA's

4 Economic Freedom in U.S. Metropolitan Areas

Because there are important differences between the largest metro areas and the smaller ones, for purposes of ranking them, they are divided into two groups: the 52 with 2012 population of one million or higher and the 330 with population below one million. There are eleven large metro areas that contain multiple "metropolitan divisions" (as termed in the official definitions).[13] The 31 metropolitan divisions within those eleven larger areas are not included in the rankings. They are however given a score, which provides some insight into how economic freedom varies within those 11 areas. (Scores available upon request.)

Table 2: Ten Most-Free and Least-Free MSA's (among 52 largest MSA's*)

Metropolitan Area	Economic Freedom Score, 2012	Rank	2012 Population
Houston-The Woodlands-Sugar Land, TX MSA	8	1	6,180,817
Jacksonville, FL MSA	7.92	2	1,379,131
Tampa-St. Petersburg-Clearwater, FL MSA	7.88	3	2,847,624
Richmond, VA MSA	7.81	4	1,233,682
Dallas-Fort Worth-Arlington, TX MSA	7.8	5	6,704,080
Nashville-DavidsonMurfreesboroFranklin, TN MSA	7.7	6	1,727,218
Miami-Fort Lauderdale-West Palm Beach, FL MSA	7.66	7	5,779,518
Austin-Round Rock, TX MSA	7.65	8	1,834,319
Orlando-Kissimmee-Sanford, FL MSA	7.5	9	2,226,473
San Antonio-New Braunfels, TX MSA	7.47	10	2,237,381
Riverside-San Bernardino-Ontario, CA MSA	5.23	52	4,342,166
Rochester, NY MSA	5.38	51	1,083,350
Buffalo-Cheektowaga-Niagara Falls, NY MSA	5.41	50	1,135,633
New York-Newark-Jersey City, NY-NJ-PA MSA	5.44	49	19,864,434
Cleveland-Elyria, OH MSA	5.68	48	2,064,240
Columbus, OH MSA	5.94	47	1,946,428
Portland-Vancouver-Hillsboro, OR-WA MSA	5.95	46	2,288,142
Sacramento–Roseville–Arden-Arcadee, CA MSA	6.01	45	2,193,741
Providence-Warwick-Pawtucket, RI MSA	6.03	44	1,604,242
Los Angeles-Long Beach-Anaheim, CA MSA	6.14	43	13,038,490

*Those with 2012 population of one million or greater.

The top 3 large areas are Houston, Jacksonville, and Tampa. The bottom 3 are Riverside, Rochester, and Buffalo. As Table 2 shows, amongst the largest 52 MSA's, the top 10 consists of four areas in both Texas and Florida, and one each in Virginia and Tennessee. The bottom 10 has three in both California and New York, two in Ohio, and one each in Oregon and Rhode Island. Online Appendix Table A1 has the full list. As Table 3 shows, amongst the smaller metro areas, the top and bottom show a similar pattern. The top 3 are Naples, FL, Midland, TX, and Sebastian-Vero Beach, FL. The bottom 3 are El Centro, CA, Kingston, NY, and Visalia-Porterville, CA.Table A2 in the online appendix contains the full list. A detailed data file

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[13]They are Boston, Chicago, Dallas, Detroit, Los Angeles, Miami, New York, Philadelphia, San Francisco, Seattle, and Washington, DC.

is available from the author with the full list for both groups of MSAs with the 2012 scores and ranks for the overall index as well as all three areas of the index, as well as the full list of scores and ranks for all nine years for the overall index its areas.

Table 3: Ten Most-Free and Least-Free MSA's (among 330 smaller MSA's*)

Metropolitan Area	Economic Freedom Score, 2012	Rank	2012 Population
Naples-Immokalee-Marco Island, FL MSA	8.55	1	332,332
Midland, TX MSA	8.54	2	152,143
Sebastian-Vero Beach, FL MSA	8.43	3	140,650
Sioux Falls, SD MSA	8.28	4	237,753
Manchester-Nashua, NH MSA	8.28	5	402,651
The Villages, FL MSA	8.19	6	102,790
Tyler, TX MSA	8.06	7	214,774
Crestview-Fort Walton Beach-Destin, FL MSA	7.99	8	247,584
Pensacola-Ferry Pass-Brent, FL MSA	7.97	9	462,584
San Angelo, TX MSA	7.95	10	114,993
El Centro, CA MSA	4.22	330	177,287
Kingston, NY MSA	4.39	329	181,811
Visalia-Porterville, CA MSA	4.39	328	450,701
Binghamton, NY MSA	4.81	327	249,219
Glens Falls, NY MSA	4.81	326	128,484
Ocean City, NJ MSA	4.81	325	96,460
Merced, CA MSA	4.86	324	261,430
Yuba City, CA MSA	5.05	323	167,263
Atlantic City-Hammonton, NJ MSA	5.09	322	275,604
Vineland-Bridgeton, NJ MSA	5.10	321	157,071

*Those with 2012 population below one million.

One reason that a local-level index is important is that economic freedom can vary quite widely within the same country and even the same state.[14]

Table 4: Most-Free and Least-Free MSA in Ten Most Populous States

Metropolitan Area	Econ Freedom Score, 2012	2012 Population
San Jose-Sunnyvale-Santa Clara, CA MSA	6.71	1,895,787
El Centro, CA MSA	4.22	177,287
Naples-Immokalee-Marco Island, FL MSA	8.55	332,332
Panama City, FL MSA	7.20	187,698
Atlanta-Sandy Springs-Roswell, GA MSA	7.23	5,452,145
Rome, GA MSA	5.98	96,065
Peoria, IL MSA	6.47	380,386
Kankakee, IL MSA	5.81	112,976
Midland, MI MSA	6.62	83,678
Bay City, MI MSA	5.50	107,091
Albany-Schenectady-Troy, NY MSA	5.66	875,637
Kingston, NY MSA	4.39	181,811
Jacksonville, NC MSA	7.43	183,807
Rocky Mount, NC MSA	5.88	150,986
Canton-Massillon, OH MSA	6.17	403,394
Mansfield, OH MSA	5.66	122,590
State College, PA MSA	6.74	155,936
East Stroudsburg, PA MSA	5.35	168,567
Midland, TX MSA	8.54	152,143
McAllen-Edinburg-Mission, TX MSA	6.30	806,388

Table 4 shows the most-free and least-free MSA's for the ten most populous states. The average difference

[14]The standard deviation (SD) of the MSA scores within the 46 states with more than one MSA ranged from 0.00 in Alaska to 0.74 in Mississippi. It exceeded 0.25 in 31 states The SD of the 2012 MSA EFI scores across the entire dataset of 382 MSA's was 0.74. The smaller within-state variation is explained by the fact that state-level policies are included and those can be a substantial portion of the amount for each variable. For example the average state share of state and local direct expenditures is about 48 percent. However, it varies quite widely, from a low of 37 percent in Nebraska to a high of 76 percent in Hawaii.

between the two areas is 1.38, with a high of 2.49 in California. El Centro, California is the overall least free area in the country with a score of 4.22. San Jose-Sunnyvale-Santa Clara is the most-free area in California at 6.71. However, the San Jose area still has substantially less freedom than the least-free area in Florida (Panama City at 7.20), the state with the overall most-free area in the country.[15] In fact, in 35 states the most-free area has less freedom than Panama City, Florida.

5   Conclusion

The founding father of economics, Adam Smith, held that the "simple system of natural liberty" is the key to producing economic prosperity. Economic freedom indexes are an attempt to quantify how close individual economies come to meeting that standard of the "system of natural liberty." There are several already in existence for nations and states. They provide more comprehensive measures than simple measures of taxes or government spending. There is a large volume of literature using those indexes, the vast majority of which finds that areas with more economic freedom tend to have more prosperous economies, as well as a wide variety of other positive outcomes. One of the problems involved with conducting that sort of research is that there are numerous differences across areas that cannot easily be quantified, and thus cannot be incorporated into statistical tests. That problem is most pronounced with nations, but it is also troublesome with states within the same nation.

This paper is a revised, updated, and expanded version of the first economic freedom index for local economies in the U.S. (Stansel, 2013). By examining economic freedom at the local level, those unquantifiable differences across areas are kept to a minimum. While rigorous hypothesis testing will be left to those who use this index in their own independent work, some simple statistical analysis indicates that metropolitan areas with higher economic freedom tend to have higher per capita incomes and faster population growth. That positive correlation between economic freedom and economic prosperity is similar to what has been found for both nations and states.

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[15]That area is Naples-Immokalee-Marco Island at 8.55, highest amongst the entire set of 382 metro areas (combining the 52 largest with the 330 smaller ones). Naples was also highest in the previous version of this index.

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