A New Economic Measure of the Standard of Living

Ranking U.S. Metropolitan Areas

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Abstract

Standard of Living can be defined as the quality and quantity of goods and services available to people. The purpose of this analysis is two-fold, (1) to create a new standard of living index (hereafter, the PCISLI) based on per capita income versus the cost of living, and (2) to determine what factors are most significant to this measure. I utilize demographic and economic data on U.S. metropolitan areas and compare them through use of the PCISLI, ranking them from the best to the worst standard of living.

I conclude that analysis of PCISLI support relationships between standard of living and other economic measures found in past literature. This analysis suggests that business and personal bankruptcies, the unemployment rate, and population are all correlated with the PCISLI for metropolitan areas within the United States.

1. Literature Review

Bennett (1937) defines problems associated with measuring a standard of living: "Standard of living is a complex and elusive concept. It is perhaps most vague, and certainly most difficult for the statistician to deal with, when regarded as the per capita quantum of human satisfactions or enjoyments." Bennett suggests that absolute measures of standard of living are inadequate and one therefore must measure in relative terms. For example, Bennett's study compared differences in standard of living between six different countries.

Davis (1945) argues that one of the public sector's most important objectives is to raise the standard living. However, Bernard (1928) warns that administrative decision making not be made solely on the basis of such standard of living measures as the measure of standard of living is more an art than a science. Despite the difficulties in measuring standard of living, including the lack of a universally accepted model, standard of living has been a popular topic for economic research. Much of the literature on the topic measures standard of living in terms of consumption.[1] Williams and Zimmerman (1938) define standard of living as, "an ideal or norm of consumption which may be described in terms of goods and services of a specific quantity and quality." Konus (1939) gives a similar but more specific definition of standard of living: "the monetary value of those consumers' goods which are in fact consumed in a course of certain period of time by an average family belonging to a given stratum of a population."

Cottam and Mangus (1942) state the importance of freedom in defining the standard of living. "In American culture all persons are expected to live in houses and to

[1] Davis (1945), William and Zimmerman (1938), and Konus (1939) are three examples.

wear clothes, but the individual has wide latitude in choosing the kind of house he will occupy and the kind of clothes he will wear." While consumption based measures of standard of living have dominated past literature, more recent literature documents alternative methods of measuring standard of living. For example, Sen (1984) states that the most explored views of standard of living are based on utility from consumption and from opulence. However, he argues that a better measure for standard of living is one of freedom. Economic freedom is the choice available to allocate income as one sees fit.

Blackorby and Russell (1978) describe a relationship between standard of living and cost of living. They argue that the cost of living has a direct relationship to the standard of living. They define the cost of living index as "the ratio of costs of realizing a particular indifference surface or level of real income at different prices" Pope (1993) describes the relationship between per capita income and standard of living. Pope argues, "the standard of living of all classes could be assumed to have moved upward with the rise in average per capita income" The model used in the following study combines both the idea of per capita income as a measure of freedom and the cost of living as a constraint to this freedom.

Ogburn (1951) describes four factors that affect differences of standard of livings of peoples. These factors are population, natural resources, organization, and technology. He concludes that population has a negative relationship to standard of living. However, this negative relationship could be due to the fact that China and India, two overpopulated nations, make up two fifths of his study. Ogburn also argues that the standard of living is most closely correlated with technology, as countries with advanced technology also have high standards of living. High technology is associated with low production costs and therefore places of low technology have higher costs, hindering economic growth. Below, Table 1.1 gives brief definitions of various ways to measure standard of living as presented by their authors.

Table 1.1

Author	Standard of Living Measure	Range
Bernard (1928)	Based on nine separate measures broken down into three categories: Standard material requirements Standard Non-material requirements and standard adventitious requirements.	Universal
Bennett (1937)	Based on 14 measures broken down into three categories: Professional services, transportation and communication, and luxury food consumption.	National
Ogburn (1951)	Four measures: productivity cost of living, population density, and technological development.	National
Pope (1993)	Two measures: mortality age and height changes as a proxy for nutrition.	National (Over Centuries)
Grave and Jenkins (2002)	Three measures: education, income, and productivity.	National

Additional literature focuses on the implications of the standard of living on a local economy. Ely (1916) argues that the standard of living is a fundamental factor in the long run supply of labor. Ely states, “The standard of life affords an element of strength to laborers in their bargains with employers. Moreover, a high standard of living is, as we have seen, one of the things that make for productive efficiency on the part of the laborer, and hence tends to increase his earning capacity.” If the standard of living has an effect on the labor supply it must also contribute to the creation and relocation of business, a key factor of economic growth.

2. Proposal

In this analysis I propose both a new measure of the standard of living, based on the relationship between per capita income and the cost of living (the PCISLI), for U.S. metropolitan areas and employ a panel data regression model data to determine what key factors contribute to this new measure. Studying past literature on the topic I was unable to find a measure of the standard of living that pertained to measuring U.S. metropolitan areas. While most literature focused on consumption as a measure of standard of living, I found consumption to measure preferences rather than a standard of living. Certainly one should not be considered to have a higher standard of living than another simply because his or her present consumption expenditures. For example, consider two families, family one having a higher household income. Family one could consume a low level of goods and services because they are saving money to send their children to college. Family two, on the other hand, consumes more goods and services in the present, knowing they would not be able to afford college for their children in the future. A consumption based measure of standard of living would rank the second family as better off because it does not consider saving for future consumption. A measure based on income would correctly measure the first family as better off as they have a higher income and therefore more freedom to make purchases they want, holding costs constant.

However, one can not measure standard of living solely based on income as all people are not faced with the same costs. A measure based on income alone would no doubt give bias to high-income high-cost locations such as San Francisco or Los Angeles. Therefore, the best standard of living models must also include an aspect of the cost of living. The most comprehensive measure of the cost of living available is

Economy.com's cost of living index.[2] Economy.com's cost of living index is weighted by total national expenditures on each of these five components: (1) Housing, (2) Utilities, (3) Transportation, (4) Insurance, and (5) Retail Expenditures.

Using both the notion of economic freedom and cost of living index I define the cost of living in my model as per capita income (percent relative to the national average) divided by the cost of living (percent relative to the national average). I assume this model will both eliminate the consumption bias presented by former models and also accurately weigh costs incurred in different metropolitan areas.

Having the measure of standard of living now defined, the purpose of further analysis is to model what aspects of a local economy have the most significant relationships to the standard of living. The model allows us to examine what factors contribute to the standard of living most, possibly giving policy makers ideas about what implications their decisions may have on the local economy. In addition all NAICS defined metropolitan areas used in this study (361) will be ranked in terms of the PCISLI, allowing us to determine any patterns in the ranking.[3]

[2] http://www.economy.com
[3] The best and worst ranked and notable metro areas will be listed in the model section for the complete ranking see data appendix.

3. Model

Stage 1

Let standard of living (*Sol)* = per capita income (percent relative to the national average) divided by cost of living (percent relative to the national average).

Results:[4]

Top 5 Metro Area Standards of Living

1) Bridgeport, Connecticut	68% above the national average
2) Vero Beach, Florida	45% above the national average
3) Trenton, New Jersey	42% above the national average
4) Rochester, Minnesota	40% above the national average
5) Washington D.C.	39% above the national average

Bottom 5 Metro Area Standards of Living

362) McAllen, Texas	61% of the national average
361) Laredo, Texas	67% of the national average
360) Brownsville, Texas	68% of the national average
259) Hinesville, Georgia	69% of the national average
258) Yuma, Arizona	73% of the national average

Notables

13) Philadelphia, Pennsylvania	33% above the national average
14) Pittsburgh, Pennsylvania	33% above the national average
187) New York, New York	7% above the national average
199) Los Angeles, California	6% above the national average
71) Chicago, Illinois	21% above the national average

Stage 2

Forecast Model:

$$SOL_t = \alpha + \beta_1 BKB_t + \beta_2 UNEMP_t + \beta_3 DPOP_t + \beta_4 DPOPA\text{^}2_{\ t} + \beta_5 DPOPDENS_t + \beta_6 DBKP_t + \beta_6 DBKP/POP + u_t \qquad (1.2)$$

All data in the panel regression model is in annual frequency.
Method of regression: panel least squares.

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[4] 2003 Rankings

Table 1.3

Variable	**Variable Definition**	**Range of Data**
SOL	Per capita income (percent relative to the national average)/cost of living (percent relative to the national average)	1984 – 2004
BKB_t	Number of business bankruptcies in a metro area.	1984 – 2004
$UNEMP_t$	Unemployment rate	1984 – 2004
POP_t	Population (measured in thousands)	1984 – 2004
$POP\text{^}2_t$	Population squared	1984 – 2004
$DPOPDENS_t$	First difference of population Density (# of people per square mile)	1984 – 2004
$DBKP_t$	First difference of number of personal bankruptcies	1984 – 2004
DBKP/POPt	First difference of number of personal bankruptcies divided by population.	1984 – 2004

Model Estimate

Table 1.4

Dependent Variable: SOL
Total panel (unbalanced) observations: 4324

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.202190	0.004852	247.7580	0.0000
BKB	8.34E-05	1.04E-05	8.049716	0.0000
UNEMP	-0.020026	0.000713	-28.08692	0.0000
DPOP	0.000865	0.000348	2.483119	0.0131
DPOP^2	-1.30E-05	2.44E-06	-5.323548	0.0000
DPOPDENS	0.005711	0.000802	7.117273	0.0000
DBKP/POP	-0.013075	0.004001	-3.267909	0.0011
DBKP	1.10E-05	2.94E-06	3.724822	0.0002

R-squared	0.210021	Durbin-Watson stat	0.055016
Adjusted R-squared	0.208739	F-statistic	163.9192
S.E. of regression	0.134018	Prob(F-statistic)	0.000000

Statistical Anomalies Encountered

1. The r-squared of .21 represents that the independent variables in the model explain 21% of the variation in the dependent variable *SOL*. A higher percent of explanation could be recognized using variables that were omitted from this model. This omitted variable bias gives room for further improvement to the model through the use of more explanatory variables.

2. Non-Stationarity in the variables *POP*, *POPDENS*, and *BKP*. These variables were made stationary by taking first differences, creating the variables *DPOP*, *DPOPDENS*, and *DBKP*. Also the dependent variable *SOL* is only marginally stationary.[5]

3. The low Durbin-Watson statistic indicates serial correlation. The following residual layout (Table 1.3) indicates that an AR (1) process could offset the serial correlation. However the model estimates, after taking into consideration the AR (1) process, become spurious. (Table 1.4) These erroneous results are cause by the marginal stationarity in my dependent variable. The presence of serial correlation in the model does not take away from its significance. My model remains non-bias and consistent. Serial correlation only affects parameter estimates. If anything, the presence of serial correlation downplays the significance of my model.

[5] Stationarity tests and multicollinearity tests for all of the variables are located in the data appendix.

Table 1.5

Sample: 1986 2004
Included observations: 4324

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
|*******|	|*******|	1	0.889	0.889	3418.8	0.000
|****** |	| |	2	0.783	-0.036	6069.5	0.000
|***** |	| |	3	0.687	-0.007	8113.9	0.000
|***** |	| |	4	0.597	-0.032	9655.5	0.000
|**** |	| |	5	0.508	-0.045	10774.	0.000
|*** |	*| |	6	0.419	-0.061	11533.	0.000
|*** |	| |	7	0.335	-0.033	12019.	0.000
|** |	| |	8	0.262	-0.013	12317.	0.000
|* |	| |	9	0.196	-0.019	12484.	0.000
|* |	*| |	10	0.127	-0.070	12554.	0.000

Table 1.6

Dependent Variable: SOL
Total panel (unbalanced) observations: 3962

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.528137	0.192869	2.738313	0.0062
BKB	-3.10E-06	6.86E-06	-0.451504	0.6517
UNEMP	-0.004443	0.000404	-10.99346	0.0000
DPOP	0.000553	0.000209	2.641356	0.0083
DPOP^2	-5.02E-07	9.85E-07	-0.509245	0.6106
DPOPDENS	-0.000928	0.000337	-2.752540	0.0059
DBKP/POP	0.002885	0.000607	4.755703	0.0000
DBKP	-6.74E-07	4.86E-07	-1.385203	0.1661
AR(1)	0.992312	0.002358	420.8411	0.0000

R-squared	0.979723	Durbin-Watson stat	1.933667
Adjusted R-squared	0.979682	F-statistic	23874.82
S.E. of regression	0.021572	Prob(F-statistic)	0.000000

Analysis of Coefficient Signs (Table 1.2)

The sign of the coefficient *BKB* or business bankruptcies is positive holding all other things constant. Intuitively one may believe that business bankruptcies are indications of a failing economy. However, most businesses fail within the first two years of inception. A high number of business bankruptcies indicate a thriving economy that can support the financial risks associated with opening a new business. An economy with a low number of business bankruptcies may be due to a failing economy unable to support growth.

The negative relationship between the unemployment rate and standard of living is to be expected. A high unemployment rate is a sign of a struggling economy. If the local economy was booming, theoretically it would support a large percentage of the workforce.

The first difference of the population has a positive relationship to the standard of living. However, economic theory suggests that there is an optimal level of population. Past this optimal level diminishing returns sets in through the form of over population. To test this relationship in my model I also regressed the first difference of population squared against the standard of living measure. The negative coefficient of this variable suggests that economic theory is upheld. My model indicates that there are in fact optimal levels of population and that past these levels overpopulation occurs, hindering the standard of living.

The positive coefficient associated with population density was also expected. Entertainment and leisure related industries thrive in dense population areas. For example, one finds more movie theatres, bowling alleys, skate rinks, etc in densely populated areas versus non-densely populated areas. These leisure related industries also tend to be located in more affluent areas, where the people can afford not only to pay for the goods and services with their money, but also with available time.

One unexpected sign given by the model estimate is the positive sign of personal bankruptcies. Intuitively the higher the number of personal bankruptcies, the worse off the economy. However, the positive relationship between personal bankruptcies and standard of living is caused by the fact that personal bankruptcies were measured in absolute terms. Higher population metro areas have more personal bankruptcies than lower population metro areas. Therefore the variable *DBKP* was positively correlated because it represented population, which also has a positive sign. To better understand the relationship between personal bankruptcies and the standard of living one must measure the bankruptcies in relative terms. To accomplish this measure the *DBKP/POP* variable was used. The negative relationship this variable portrays indicates that a higher proportion of bankruptcies to population is in fact a hindrance to the standard of living.

Additional Concerns

An additional concern associated with the regression model used in this analysis is the wide variety in populations between United States metropolitan areas. Because of the large sample of panel data, in this model, the population variety may have averaged out. However, the concern involves measuring subcategories of metro areas based on populations. In order to test the significance of the model over different population ranges, *if* statements were implemented in the model. For example, Sample 1986 – 2004 if pop > 100, would indicate to run the regression model, but only to apply it to metro areas with populations greater than 100,000. On next few pages are a series of these subcategories based on population.

The following regression outputs indicate that the significance of my model is drastically reduced when it measures solely small or large population metro areas. (Tables 1.7, 1.8, 1.10) Medium sized metropolitan areas, defined as populations between 300,000 and 1,000,000, are what the model measures best as indicated by the fact that all coefficient signs remain constant and the r-squared is almost identical to the original model. (Table 1.9)

Table 1.7

Dependent Variable: SOL
Sample: 1986 2004 IF POPA<100
Total panel (unbalanced) observations: 388

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.088521	0.018526	58.75745	0.0000
BKB	0.000879	0.000675	1.303120	0.1933
UNEMP	0.002631	0.003166	0.831065	0.4065
DPOP	-0.020112	0.010299	-1.952938	0.0516
DPOP^2	-0.007327	0.002289	-3.201304	0.0015
DPOPDENS	0.016800	0.004361	3.852571	0.0001
DBKP/POP	-0.073218	0.064257	-1.139458	0.2552
DBKP	0.000533	0.000770	0.691991	0.4894

R-squared	0.157060	Durbin-Watson stat	0.096106
Adjusted R-squared	0.141532	F-statistic	10.11471
S.E. of regression	0.127003	Prob(F-statistic)	0.000000

Table 1.8

Dependent Variable: SOL
Sample: 1986 2004 IF POPA<300
Total panel (unbalanced) observations: 2584

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.150354	0.006074	189.3980	0.0000
BKB	0.000445	0.000113	3.938969	0.0001
UNEMP	-0.013273	0.000830	-15.98704	0.0000
DPOP	-0.024647	0.002407	-10.23842	0.0000
DPOP^2	0.001500	0.000235	6.374851	0.0000
DPOPDENS	0.017693	0.001572	11.25835	0.0000
DBKP/POP	-0.045228	0.011392	-3.970052	0.0001
DBKP	0.000235	7.21E-05	3.257441	0.0011

R-squared	0.154315	Durbin-Watson stat	0.066608
Adjusted R-squared	0.152017	F-statistic	67.15032
S.E. of regression	0.127058	Prob(F-statistic)	0.000000

Table 1.9

Dependent Variable: SOL
Sample: 1986 2004 IF 300<POPA<1000
Total panel (unbalanced) observations: 4324

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.202190	0.004852	247.7580	0.0000
BKB	8.34E-05	1.04E-05	8.049716	0.0000
UNEMP	-0.020026	0.000713	-28.08692	0.0000
DPOP	0.000865	0.000348	2.483119	0.0131
DPOP^2	-1.30E-05	2.44E-06	-5.323548	0.0000
DPOPDENS	0.005711	0.000802	7.117273	0.0000
DBKP/POP	-0.013075	0.004001	-3.267909	0.0011
DBKP	1.10E-05	2.94E-06	3.724822	0.0002

R-squared	0.210021	Durbin-Watson stat	0.055016
Adjusted R-squared	0.208739	F-statistic	163.9192
S.E. of regression	0.134018	Prob(F-statistic)	0.000000

Table 1.10

Dependent Variable: SOL
Sample: 1986 2004 IF POPA>1000
Total panel (unbalanced) observations: 577

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.367638	0.017185	79.58218	0.0000
BKB	3.16E-05	9.55E-06	3.310434	0.0010
UNEMP	-0.025717	0.003198	-8.041957	0.0000
DPOP	-0.001099	0.000388	-2.830532	0.0048
DPOP^2	2.03E-06	2.44E-06	0.829072	0.4074
DPOPDENS	0.002070	0.001255	1.649926	0.0995
DBKP/POP	-0.019678	0.010789	-1.823932	0.0687
DBKP	8.39E-06	3.03E-06	2.764157	0.0059

R-squared	0.131300	Durbin-Watson stat	0.060008
Adjusted R-squared	0.120613	F-statistic	12.28600
S.E. of regression	0.103757	Prob(F-statistic)	0.000000

4. Conclusion

The purpose of this analysis was two fold. First, to create a new measure of the standard of living for U.S. metropolitan areas (PCISLI). And second, to determine the most significant factors of (PCISLI) through the use of a regression model. I conclude that analysis of PCISLI support relationships between standard of living and other economic measures found in past literature. This analysis suggests that business and personal bankruptcies, the unemployment rate, and population are all correlated with the PCISLI for metropolitan areas within the United States.

The model suggests that because variations in the standard of living can be measured by a grouping of variables, public policy decisions could be made with respect to these variables in an attempt to raise a local standard of living. However the inconsistencies in the model, with respect to population subcategories, make me wary of using solely this measure for public policy decisions. While a large sample, such as the one used in this analysis, may prove significant, when dealing with individual metro areas one needs to examine the intricacies of each specific economy. This being said, continued research on the topic and tweaking of this model could provide a useful economic tool for policy makers.

5. Suggestions for Future Research

The first suggestion to improve this analysis would be to incorporate crime statistics into the standard of living measure. While crime does not technically limit the amount of purchases available to you based on your income, it does amount to additional burdens on the local community. Perhaps the best way to incorporate the cost of crime is by factoring crime statistics into the cost of living index. Originally I disregarded crime in my measure of standard of living, as I assumed that the effects of crime would be incorporated in other economic measures. However, the high rankings of some metro areas with notoriously high crimes rates such as Washington D.C.(5) and Detroit (7) on my standard of living scale lead me to believe that crime would change my rankings significantly.

There were many additional variables considered throughout the construction of this analysis. Many of these variables were excluded from the model for lack of sufficient data points. The following variables, provided a more comprehensive measure of them can be found, could prove to be highly correlated to PCISLI (1) number of citizens in poverty or percent of population in poverty, (2) the population of specific races as a percentage of total population (population of whites, blacks, Asians, etc.), (3) and the industry mix of metro areas (% of laborers in manufacturing, transportation, technology, sales, etc), and (4) educational attainment (% of population that graduated from high-school/college).

As previously discussed, a downfall of the model presented in this analysis is the fact that it does not significantly measure the determinants of the standard of living in subcategories such as small and large populations. Perhaps the differences in population between these metro areas call for specific models to measure each subcategory. Individual models based on population size would, if proven significant, prove as much better tools for public policy decisions as they would be more relevant to the specific economies than my general model.

6. References

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7. Data Appendix

Stationarity Tests Results

Table 1.11

Variable	Test	Parameter Estimate	Standard Error	T-stat	Critical T*	Conclusion
SOL	Random Walk	0.99779	0.00026	-8.5	1.94	stationary
	Random Walk w/trend	0.989604	0.001965	-5.290585242	2.86	stationary
	Random walk w/time trend	0.987236	0.001951	-6.542286007	3.41	stationary
bkb	Random Walk	0.938283	0.002435	-25.34579055	1.94	stationary
	Random Walk w/trend	0.937487	0.00261	-23.951341	2.86	stationary
	Random walk w/time trend	0.937234	0.002621	-23.94734834	3.41	stationary
bkp	Random Walk	1.026864	0.001686	15.93357058	1.94	non-stationary
	Random Walk w/trend	1.022887	0.001832	12.49290393	2.86	non-stationary
	Random walk w/time trend	1.022855	0.00184	12.42119565	3.41	non-stationary
irsminto	Random Walk	1.017003	0.001324	12.84214502	1.94	non-stationary
	Random Walk w/trend	0.932904	0.005768	-11.63245492	2.86	stationary
	Random walk w/time trend	0.932469	0.006177	-10.93265339	3.41	stationary
unemp	Random Walk	0.981323	0.002058	-9.075315841	1.94	stationary
	Random Walk w/trend	0.935485	0.004249	-15.18357261	2.86	stationary
	Random walk w/time trend	0.934506	0.004329	-15.12912913	3.41	stationary
nm	Random Walk	0.918052	0.005797	-14.13627738	1.94	stationary
	Random Walk w/trend	0.914434	0.005902	-14.49779736	2.86	stationary
	Random walk w/time trend	0.914558	0.005915	-14.44497041	3.41	stationary
	Random Walk	1.010098	0.000101	99.98019802	1.94	non-stationary
pop	Random Walk w/trend	1.0097	0.00011	88.18181818	2.86	non-stationary
	Random walk w/time trend	1.0097	0.00011	88.18181818	3.41	non-stationary

popdens	Random Walk	1.008748	0.0001	87.48	1.94	non-stationary
	Random Walk w/trend	1.007683	0.000129	59.55813953	2.86	non-stationary
	Random walk w/time trend	1.007693	0.000129	59.63565891	3.41	non-stationary
dpop	Random Walk	0.96899	0.003023	-10.25802183	1.94	stationary
	Random Walk w/trend	0.962914	0.003237	-11.45690454	2.86	stationary
	Random walk w/time trend	0.963079	0.003237	-11.40593142	3.41	stationary
dpopdens	Random Walk	0.008756	0.000102	-9718.078431	1.94	stationary
	Random Walk w/trend	0.007652	0.000131	-7575.175573	2.86	stationary
	Random walk w/time trend	0.901684	0.00507	-19.39171598	3.41	stationary
dbkp	Random Walk	0.482672	0.012862	-40.22142746	1.94	stationary
	Random Walk w/trend	0.470673	0.013028	-40.62995088	2.86	stationary
	Random walk w/time trend	0.470163	0.013049	-40.60364779	3.41	stationary

*All critical values at 5% confidence Interval

Multicollinearity Test Results

Table 1.12

Variable	**R-squared**	**VIF**	**VIF<10**
bkb	0.53642	2.157125	yes
unemp	0.007843	1.007905	yes
Dpop	0.80712	5.184571	yes
Dpop^2	0.862706	7.283639	yes
Dpopdens	0.545691	2.201145	yes
dbkp/pop	0.175425	1.212746	yes
dbkp	0.236432	1.309641	yes

Full Standard of Living Ranking (Best to Worst)

Table 1.13

1	Bridgeport-Stamford-Norwalk,	CT	1.68
2	Vero Beach,	FL	1.45
3	Trenton-Ewing,	NJ	1.42
4	Rochester,	MN	1.4
5	Casper,	WY	1.39
6	Washington-Arlington-Alexandria,	DC-VA-MD-WV	1.39
7	Detroit-Livonia-Dearborn,	MI	1.37
8	Ann Arbor,	MI	1.36
9	Springfield,	IL	1.36
10	Minneapolis-St.Paul-Bloomington,	MN-WI	1.34
11	Indianapolis,	IN	1.33
12	Midland,	TX	1.33
13	Philadelphia,	PA	1.33
14	Pittsburgh,	PA	1.33
15	Sioux Falls,	SD	1.33
16	Des Moines,	IA	1.32
17	Hartford-West Hartford-East Hartford,	CT	1.32
18	Omaha-Council Bluffs,	NE-IA	1.32
19	Kokomo,	IN	1.31
20	St. Louis,	MO-IL	1.31
21	Baltimore-Towson,	MD	1.3
22	Denver-Aurora,	CO	1.3
23	Appleton,	WI	1.29
24	Harrisburg-Carlisle,	PA	1.29
25	Naples-Marco Island,	FL	1.29
26	Seattle-Bellevue-Everett,	WA	1.29
27	Cincinnati-Middletown,	OH-KY-IN	1.28
28	Louisville,	KY-IN	1.28
29	Madison,	WI	1.28
30	Milwaukee-Waukesha-West Allis,	WI	1.28
31	Sarasota-Bradenton-Venice,	FL	1.28
32	Sheboygan,	WI	1.28
33	Anchorage,	AK	1.27
34	Boulder,	CO	1.27
35	Cleveland-Elyria-Mentor,	OH	1.27
36	Columbus,	IN	1.27
37	Lexington-Fayette,	KY	1.27
38	Wausau,	WI	1.27
39	Dayton,	OH	1.26
40	Fort Wayne,	IN	1.26
41	Kansas City,	MO-KS	1.26
42	Oshkosh-Neenah,	WI	1.26
43	Rochester,	NY	1.26

44	Sandusky,	OH	1.26
45	Burlington-South Burlington,	VT	1.25
46	Charlotte-Gastonia-Concord,	NC-SC	1.25
47	Cheyenne,	WY	1.25
48	Columbus,	OH	1.25
49	Houston-Sugar Land-Baytown,	TX	1.25
50	Norwich-New London,	CT	1.25
51	Richmond,	VA	1.25
52	Albany-Schenectady-Troy,	NY	1.24
53	Cedar Rapids,	IA	1.24
54	Fargo,	ND-MN	1.24
55	Green Bay,	WI	1.24
56	Lincoln,	NE	1.24
57	Manchester-Nashua,	NH	1.24
58	Nashville-Davidson--Murfreesboro,	TN	1.24
59	Racine,	WI	1.24
60	Raleigh-Cary,	NC	1.24
61	Fond du Lac,	WI	1.23
62	Huntsville,	AL	1.23
63	Pittsfield,	MA	1.23
64	Reno-Sparks,	NV	1.23
65	South Bend-Mishawaka,	IN-MI	1.23
66	Wichita,	KS	1.23
67	Bloomington-Normal,	IL	1.22
68	Evansville,	IN-KY	1.22
69	Reading,	PA	1.22
70	Boston-Quincy,	MA	1.21
71	Chicago-Naperville-Joliet,	IL	1.21
72	Decatur,	IL	1.21
73	Memphis,	TN-MS-AR	1.21
74	New Haven-Milford,	CT	1.21
75	Akron,	OH	1.2
76	Atlanta-Sandy Springs-Marietta,	GA	1.2
77	Bismarck,	ND	1.2
78	Buffalo-Niagara Falls,	NY	1.2
79	Iowa City,	IA	1.2
80	Ocean City,	NJ	1.2
81	Peoria,	IL	1.2
82	Tulsa,	OK	1.2
83	Birmingham-Hoover,	AL	1.19
84	Davenport-Moline-Rock Island,	IA-IL	1.19
85	Little Rock-North Little Rock,	AR	1.19
86	Portland-South Portland-Biddeford,	ME	1.19
87	Scranton--Wilkes-Barre,	PA	1.19
88	Winston-Salem,	NC	1.19
89	York-Hanover,	PA	1.19
90	Elkhart-Goshen,	IN	1.18
91	Lancaster,	PA	1.18
92	Lima,	OH	1.18
93	Sioux City,	IA-NE-SD	1.18

94	Toledo,	OH	1.18
95	Barnstable Town,	MA	1.17
96	Charleston,	WV	1.17
97	Charlottesville,	VA	1.17
98	Dallas-Plano-Irving,	TX	1.17
99	Durham,	NC	1.17
100	Napa,	CA	1.17
101	Rapid City,	SD	1.17
102	Syracuse,	NY	1.17
103	Topeka,	KS	1.17
104	Bremerton-Silverdale,	WA	1.16
105	La Crosse,	WI-MN	1.16
106	Lebanon,	PA	1.16
107	Roanoke,	VA	1.16
108	San Jose-Sunnyvale-Santa Clara,\	CA	1.16
109	Waterloo-Cedar Falls,	IA	1.16
110	Allentown-Bethlehem-Easton,	PA-NJ	1.15
111	Billings,	MT	1.15
112	Grand Rapids-Wyoming,	MI	1.15
113	Jefferson City,	MO	1.15
114	Lewiston-Auburn,	ME	1.15
115	Oklahoma City,	OK	1.15
116	San Francisco-San Mateo-Redwood City,	CA	1.15
117	Boise City-Nampa,	ID	1.14
118	Fort Walton Beach-Crestview-Destin,	FL	1.14
119	Janesville,	WI	1.14
120	Montgomery,	AL	1.14
121	Atlantic City,	NJ	1.13
122	Columbia,	MO	1.13
123	Dubuque,	IA	1.13
124	Greensboro-High Point,	NC	1.13
125	Kalamazoo-Portage,	MI	1.13
126	Knoxville,	TN	1.13
127	Monroe,	MI	1.13
128	Ames,	IA	1.12
129	Anderson,	IN	1.12
130	Bangor,	ME	1.12
131	Canton-Massillon,	OH	1.12
132	Cape Coral-Fort Myers,	FL	1.12
133	Carson City,	NV	1.12
134	Chattanooga,	TN-GA	1.12
135	Eau Claire,	WI	1.12
136	Fort Collins-Loveland,	CO	1.12
137	Grand Forks,	ND-MN	1.12
138	Great Falls,	MT	1.12
139	Holland-Grand Haven,	MI	1.12
140	Lansing-East Lansing,	MI	1.12
141	Muncie,	IN	1.12
142	Niles-Benton Harbor,	MI	1.12
143	Olympia,	WA	1.12

144	Owensboro,	KY	1.12
145	Portland-Vancouver-Beaverton,	OR-WA	1.12
146	Rockford,	IL	1.12
147	Salt Lake City,	UT	1.12
148	Santa Fe,	NM	1.12
149	Battle Creek,	MI	1.11
150	Champaign-Urbana,	IL	1.11
151	Duluth,	MN-WI	1.11
152	Flint,	MI	1.11
153	Jacksonville,	FL	1.11
154	Macon,	GA	1.11
155	Springfield,	OH	1.11
156	Virginia Beach-Norfolk-Newport News,	VA-NC	1.11
157	Albuquerque,	NM	1.1
158	Bay City,	MI	1.1
159	Colorado Springs,	CO	1.1
160	Elizabethtown,	KY	1.1
161	Jackson,	MS	1.1
162	Mansfield,	OH	1.1
163	Port St. Lucie-fort Pirece,	FL	1.1
164	Saginaw-Saginaw Township North,	MI	1.1
165	Williamsport,	PA	1.1
166	Altoona,	PA	1.09
167	Binghamton,	NY	1.09
168	Columbia,	SC	1.09
169	Columbus,	GA-AL	1.09
170	Fairbanks,	AK	1.09
171	Mount Vernon-Anacortes,	WA	1.09
172	Oxnard-Thousand Oaks-Ventura,	CA	1.09
173	Savannah,	GA	1.09
174	Springfield,	MA	1.09
175	Youngstown-Warren-Boardman,	OH-PA	1.09
176	Decatur,	AL	1.08
177	Lynchburg,	VA	1.08
178	Miami-Miami Beach-Kendall,	FL	1.08
179	Nassau-Suffolk,	NY	1.08
180	Palm Bay-Melbourne-Titusville,	FL	1.08
181	Shreveport-Bossier City,	LA	1.08
182	Springfield,	MO	1.08
183	St. Cloud,	MN	1.08
184	Wichita Falls,	TX	1.08
185	Brunswick,	GA	1.07
186	Johnstown,	PA	1.07
187	New York-White Plains-Wayne	NY-NJ	1.07
188	Tampa-St.Petersburg-Clearwater,	FL	1.07
189	Warner Robbins,	GA	1.07
190	Wheeling,	WV-OH	1.07
191	Austin-Round Rock,	TX	1.06
192	Bowling Green,	KY	1.06
193	Dothan,	AL	1.06

194	Greenville,	SC	1.06
195	Kennewick-Richland-Pasco,	WA	1.06
196	Lafayette,	IN	1.06
197	Las Vegas-Paradise,	NV	1.06
198	Longview,	TX	1.06
199	Los Angeles, Long Beach-Glendale,	CA	1.06
200	Poughkeepsie-Newburgh-Middletown,	NY	1.06
201	Providence-New Bedford-Fall River,	RI-MA	1.06
202	Sacramento--Arden-Arcade--Roseville,	CA	1.06
203	Spokane,	WA	1.06
204	Tyler,	TX	1.06
205	Weirton-Steubenville,	WV-OH	1.06
206	Winchester,	VA-WV	1.06
207	Worcester,	MA	1.06
208	Augusta-Richmond County,	GA-SC	1.05
209	Beaumont-Port Arthur,	TX	1.05
210	Erie,	PA	1.05
211	Idaho Falls,	ID	1.05
212	Jackson,	TN	1.05
213	Lawrence,	KS	1.05
214	Jackson,	MI	1.04
215	Kankakee-Bradley,	IL	1.04
216	Michigan City-La Porte,	IN	1.04
217	Missoula,	MT	1.04
218	Parkersburg-Marietta-Vienna,	WV-OH	1.04
219	Phoenix-Mesa-Scottsdale,	AZ	1.04
220	Tuscaloosa,	AL	1.04
221	Abilene,	TX	1.03
222	Anderson,	SC	1.03
223	Asheville,	NC	1.03
224	Burlington,	NC	1.03
225	Danville,	IL	1.03
226	Fayetteville-Springdale-Rogers,	AR-MO	1.03
227	Hagerstown-Martinsburg,	MD-WV	1.03
228	Honolulu,	HI	1.03
229	Hot Springs,	AR	1.03
230	Lafayette,	LA	1.03
231	Lake Charles,	LA	1.03
232	Lawton,	OK	1.03
233	Morgantown,	WV	1.03
234	San Antonio,	TX	1.03
235	Terre Haute,	IN	1.03
236	Utica-Rome,	NY	1.03
237	Alexandria,	LA	1.02
238	Elmira,	NY	1.02
239	Glens Falls,	NY	1.02
240	Gulfport-Biloxi,	MS	1.02
241	Hickory-Lenoir-Morganton,	NC	1.02
242	Ithaca,	NY	1.02
243	Joplin,	MO	1.02

244	Kingsport-Bristol-Bristol,	TN-VA	1.02
245	Orlando-Kissimmee,	FL	1.02
246	San Diego-Carlsbad-San Marcos,	CA	1.02
247	Spartanburg,	SC	1.02
248	State College,	PA	1.02
249	Wilmington,	NC	1.02
250	Amarillo,	TX	1.01
251	Anniston-Oxford,	AL	1.01
252	Florence,	SC	1.01
253	Fort Lauderdale-Pompano Beach-Deerfield Beach,	FL	1.01
254	Greenville,	NC	1.01
255	Huntington-Ashland,	WV-KY-OH	1.01
256	Lewiston,	ID-WA	1.01
257	Monroe,	LA	1.01
258	Muskegon-Norton Shores,	MI	1.01
259	Rocky Mount,	NC	1.01
260	Rome,	GA	1.01
261	St. Joseph,	MO-KS	1.01
262	Texarkana-Texarkana	TX-AR	1.01
263	Vineland-Millville-Bridgeton,	NJ	1.01
264	Wenatchee,	WA	1.01
265	Rouge,	LA	1
266	Bend,	OR	1
267	Charleston-North Charleston,	SC	1
268	Cleveland,	TN	1
269	Cumberland,	MD-WV	1
270	Dover,	DE	1
271	Fayetteville,	NC	1
272	Florence-Muscle Shoals,	AL	1
273	Ogden-Clearfield,	UT	1
274	Clarksville,	TN-KY	0.99
275	Corvallis,	OR	0.99
276	Dalton,	GA	0.99
277	Lakeland,	FL	0.99
278	Longview,	WA	0.99
279	Lubbock,	TX	0.99
280	Panama City-Lynn Haven,	FL	0.99
281	San Angelo,	TX	0.99
282	Santa Rosa-Petaluma,	CA	0.99
283	Tallahassee,	FL	0.99
284	Victoria,	TX	0.99
285	Bellingham,	WA	0.98
286	Bloomington,	IN	0.98
287	Coeur d'Alene,	ID	0.98
288	Houma-Bayou Cane-Thibodaux,	LA	0.98
289	Jonesboro,	AR	0.98
290	Pascagoula,	MS	0.98
291	Pocatello,	ID	0.98
292	Pueblo,	CO	0.98
293	Punta Gorda,	FL	0.98

294	Salisbury,	MD	0.98
295	Santa Barbara-Santa Maria,	CA	0.98
296	Santa Cruz-Watsonville,	CA	0.98
297	Corpus Christi,	TX	0.97
298	Danville,	VA	0.97
299	Eugene-Springfield,	OR	0.97
300	Gadsden,	AL	0.97
301	Jacksonville,	NC	0.97
302	Kingston,	NY	0.97
303	Pensacola-Ferry Pass-Brent,	FL	0.97
304	San Luis Obispo-Paso Robles,	CA	0.97
305	Albany,	GA	0.96
306	Gainesville,	FL	0.96
307	Grand Junction,	CO	0.96
308	Waco,	TX	0.96
309	Deltona-Daytona Beach-Ormond Beach,	FL	0.95
310	Goldsboro,	NC	0.95
311	Harrisonburg,	VA	0.95
312	Medford,	OR	0.95
313	Myrtle Beach-Conway-North Myrtle Beach,	SC	0.95
314	Athens-Clarke County,	GA	0.94
315	Hattiesburg,	MS	0.94
316	Valdosta,	GA	0.94
317	Gainesville,	GA	0.93
318	Johnson City,	TN	0.93
319	Morristown,	TN	0.93
320	Ocala,	FL	0.93
321	Odessa,	TX	0.92
322	Pine Bluff,	AR	0.92
323	Salinas,	CA	0.92
324	Sherman-Denison,	TX	0.92
325	Tucson,	AZ	0.92
326	Killeen-Temple-Fort Hood,	TX	0.91
327	Mobile,	AL	0.91
328	Salem,	OR	0.91
329	Vallejo-Fairfield,	CA	0.91
330	Flagstaff,	AZ	0.9
331	Yakima,	WA	0.9
332	Yuba City,	CA	0.9
333	Redding,	CA	0.89
334	Sumter,	SC	0.89
335	Greeley,	CO	0.88
336	Modesto,	CA	0.88
337	Auburn-Opelika,	AL	0.87
338	Las Cruces,	NM	0.87
339	Fresno,	CA	0.85
340	Riverside-San Bernadino,	CA	0.85
341	Bakersfield,	CA	0.84
342	Farmington,	NM	0.84
343	Blacksburg-Christiansburg-Radford,	VA	0.82

344	Logan,	UT-ID	0.82
345	Stockton,	CA	0.82
346	College Station-Bryan,	TX	0.81
347	El Centro,	CA	0.81
348	El Paso,	TX	0.81
349	Visalia-Porterville,	CA	0.81
350	Chico,	CA	0.79
351	Prescott,	AZ	0.79
352	Provo-Orem,	UT	0.78
353	St. George,	UT	0.78
354	Hanford-Corcoran,	CA	0.75
355	Merced,	CA	0.75
356	Madera,	CA	0.74
357	Yuma,	AZ	0.73
358	Hinesville-Fort Stewart,	GA	0.69
359	Brownsville-Harlingen,	TX	0.68
360	Laredo,	TX	0.67
361	McAllen-Edinburg-Mission,	TX	0.61