RIJKSUNIVERSITEIT GRONINGEN, FACULTEIT RUIMTELIJKE WETENSCHAPPEN, SUPERVISORS: NORRIS AND VAN STEEN

Doomed?

Thesis about the performance of the least creative MSA's in the U.S.

Joost Sonsma

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rijksuniversiteit groningen

STATE UNIVERSITY OF NEW YORK · COLLEGE AT GENESEO ·

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Abstract

In this thesis the 50 least creative metropolitan statistical areas (MSA's) of Richard Florida´s creative class ranking will be tested for their attractiveness. The misconception that MSA's with a low creativity index are also unattractive is central in this thesis. By picking a set of socioeconomic and demographic variables, the 50 MSA's are tested for their attractiveness. Population growth, job growth, percentage college and graduates, median housing costs, cost of living and unemployment are the variables which will determine attractiveness. It seems to be that for the 50 least creative MSA's, the average score for attractiveness is low for two variables, the share of college and graduates and income. On the other side, the median house price is lower, they face modest population growth as well as job growth, a lower unemployment rate and also the cost of living is lower. It seems to be that there is a relation between attractiveness for a city and the education of the people. High skilled people see the least creative MSA's as unattractive and will not live there, while low skilled people see the MSA's as attractive because of its low costs.

1. Introduction

1.1 Richard Florida´s ´creativity index´

In 2012 Richard Florida celebrated the 10th anniversary of his book *The rise of the creative class* by publishing a new and revised edition of his book. In this revised edition Florida comes up with three main conclusions (Moss, 2009). The first conclusion is that the nature of society and work is changing. Instead of spending their entire careers at companies or organizations, people now switch jobs more frequently, see the status of their job as important as their salary and job security. The second conclusion is that traditional notions of economic development are out of date. The old model stated that people would move to wherever jobs are. But according to Florida, the jobs are created or attracted at places where the creative people are. His third conclusion is that the creative class chooses where to live, because they have a specialized set of preferences as to where they want to live. These preferences are captured by Florida with the concept of the 3 T´s, technology, tolerance and talent, that together constitute the ´creativity index´. Wherever these factors are optimal, that is where the creative class is going to live. In this way Florida ranks all 361 metropolitan areas in the United States, from Boulder, Colorado to Florence-Muscle Shoals in Alabama. Lower ranked metropolitan areas in this creativity index have lower degrees of technology, tolerance and talent – they are, in short, 'less creative'.

But are those low ranked metropolitan areas doomed? Is it really so bad to live in the low-ranked metropolitan areas? The misconception that metropolitan statistical areas (MSA's) are also less attractive is well known (Moss, 2009) in the international debate about the creative class. The MSA's have a low creativity index, but does that also mean they are unattractive?

1.2 Research goal

The goal for this thesis is that I want to analyse the misconception that less creative MSA's are also unattractive, measured by socio-economic and demographic variables. In other words, I want to see if the 50 lowest scoring MSA's on Florida's creativity index score poorly in terms of attractiveness.

1.3 Research questions

By reaching my research goal, I want to give an answer to the main question:

''*How do the 50 least creative Metropolitan Statistical Areas (MSA's) from Richard Florida's 'Creativity index' ranking perform for socio-economic and demographic variables which are related to the level of residential attractiveness of those MSA's?*''

By looking for an answer on the main question, I divided the research in three subquestions:

1. *How does Florida measure tolerance, talent and technology (3T's)?*
2. *Which socio-economic and demographic variables are indicators for measuring the attractivity of a Metropolitan Statistical Area (MSA)?*
3. *Are the 50 lowest MSA's in Florida's 2012 creativity index ranking also performing worse for these socio-economic and demographic variables compared with the US average?*

1.4 Conceptual model

The key variables and their interrelations are visualized in the conceptual model. It is shown in figure 1.

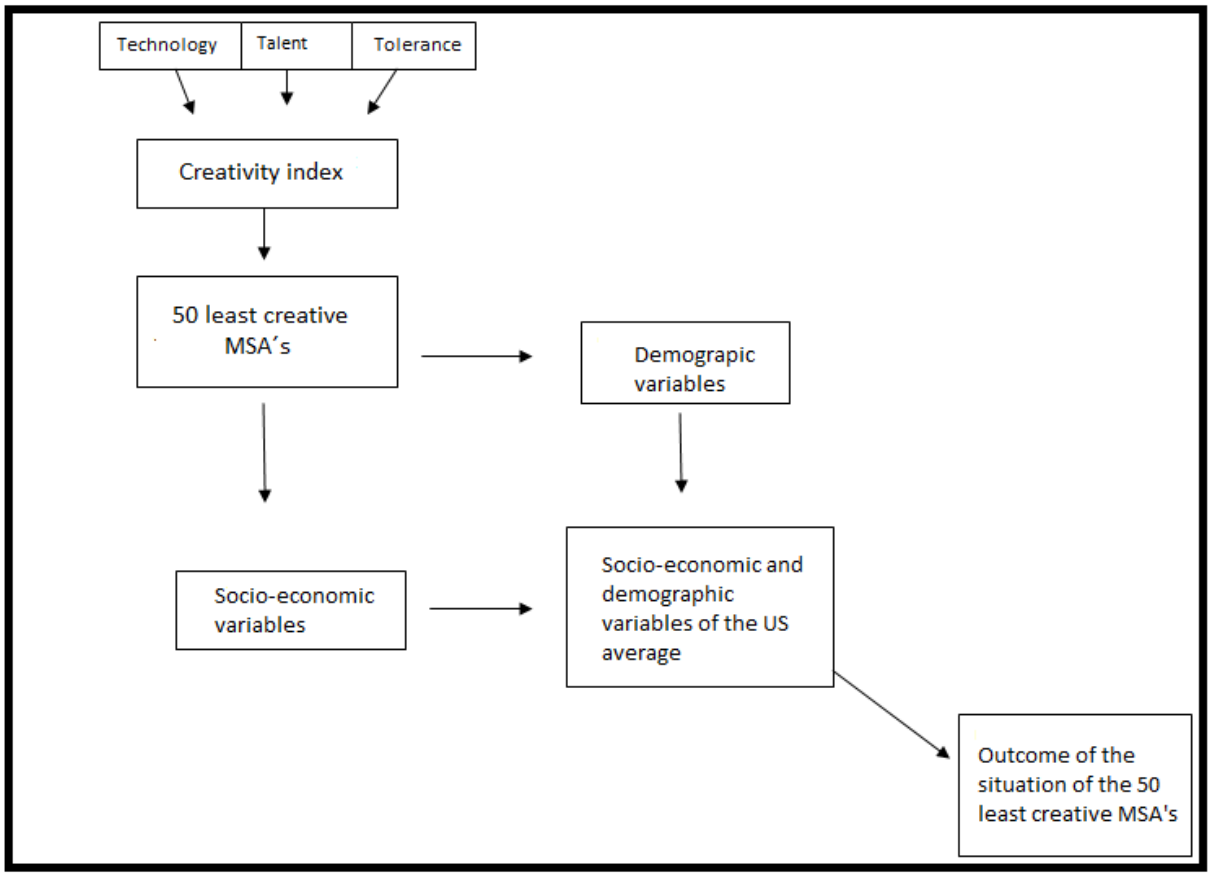

Figure 1: conceptual model.

The first part of this thesis will be about how Richard Florida ranks the technology, talent and tolerance. What are those 3 T's about and how are they measured? The second part will be about creating a new set of demographic and socioeconomic variables which can measure attractiveness of cities or metropolitan areas in another way. The third part consists of the results: how do 50 low-ranked metropolitan areas score for the new set of variables? The third part will be followed by a conclusion in which it will be clear what the performance of those 50 least creative metropolitan areas will be with the new variables.

1.5 Hypothesis

I want to show the position of the least creative 50 MSA´s by using several variables. My hypothesis will be that I expect that those 50 MSA´s, which all have a low creativity index, are not all that unattractive compared with the US average of those variables. I expect for some variables that they are close to the average, because there might be a relation

between the MSA´s which have the lowest creativity index in the United States and a lower or average score for the variables which tell the attractiveness of a MSA.

2. Theory

2.1 Florida's measurement

In 2002 Richard Florida presented his new theory about the rise of the creative class. In his new book he connected his theory with urban growth. According to Richard Florida, the distinguishing characteristic of the creative class is that its members engage in work the function of which is to create meaningful forms. He divides the creative class into two components: the super-creative core and the creative professionals. The first component consists of scientists, engineers, university professors, poets and novelists, artists, entertainers, actors, designers and architects. The second component consists of people who work in knowledge-intensive industries, such as high-tech, financial services, the legal and health care professions and business management (Florida, 2012). These two components are the creative class and Florida argues that it will bring economic growth to a city, although not necessarily population growth. Those two are different things. Population growth in certain metropolitan areas does not mean that economic growth will be there as well. The main reason why this class is bringing economic growth to a metropolitan area is because companies with specialized, high-skilled and highly-educated employees are interested in this creative class pool of labor. Because the members of the creative class have several preferences, such as a tolerant society, quality housing and a livable society, they will settle in places where the circumstances are the best for them. According to Florida this class is so attractive for companies, their members having the luxury to live wherever they want. Thus jobs follow people, instead of people follow jobs. According to Richard Florida creative class members are going to metropolitan areas with a high percentage of technology, talent and tolerance.

In the revised edition of Florida's book (2012), he ranked all the metropolitan areas in the United States by a creativity index. This index is a composite measure of three measurements. The three T's: Technology, Talent and Tolerance.

2.2 Technology

The measurement of technology is measured by three variables. The first variable is the Tech-Pole index. This measurement, created by the Milken institute, divides the technological landscape into nineteen high-tech industry categories. The Milken Institute then aggregates the results to determine overall high-tech performance and it ranks for every category the individual performance as a tech-pole. The tech-pole metric is based on employment and wages and also looks at the concentration of technology in the local economy and each metropolitan area's relative share of aggregate North-American activity (Milken Institute, 2007). The better the performance, the better the rank in the Tech-Pole index. For example, in 2007, the metropolitan area San Jose–Sunnyvale–Santa Clara had the best performance (which makes a lot of sense since Silicon Valley is situated there).

The second and the third variables which are used to measure technology are measures of regional innovation: patents per capita and average annual patent growth. Both measures are based on data from the US Patent and Trademark Office for the years 2005-2009. A patent is an intellectual property right granted by the US government which protects these innovative ideas. There are three kinds of patents, a utility patent, design patents and plant patents. The combination of these three for a certain statistical area makes the total of patents. The population of a metropolitan area divided by the amount of patents makes the variable patents per capita. The average annual patent growth is the change in patents, which can be negative and positive.

The combination of these three measurements makes the variable technology. According to the Brookings Institution a high technology index is correlated with tolerance (Florida, 2001). Boston, New York City and San Francisco for example do have a high technology index, but also a high tolerance. Other metropolitan areas have a lot of talent in universities and technological research centers, but do not have a high tolerance index (this is based on 4 indices: gay-index, bohemian-index, foreign-born index and composite diversity index). I will return later about the criticism of measuring these variables.

2.3 Talent

The second main variable which Florida uses in his ranking is the variable talent. This variable consists of the share of the creative class in the labor force. As mentioned before, the creative class consists of two components. Next to the creative class, Florida defines three other classes: working class, service class and agriculture. These four classes make the working population. The higher the share in percentage of the working population in the creative class, the higher the variable talent. The data Florida uses for measuring this variable is collected using the occupational categories of the Bureau of Labor Statistics and the Occupational Employment Survey. Florida is for example not taking the graduates or educational institutions like universities or colleges into account.

2.4 Tolerance

As mentioned before, tolerance has a high correlation with technology and thus with the ranking (Brookings Institution, 2001). The variable tolerance is measured with four key variables: the share of immigrants, the Gay and Lesbian index, the Bohemian index and the integration index. The share of immigrants is the percentage of immigrants in the total population of a metropolitan area. The Gay and Lesbian index is based on the original Gay Index of Gary Gates et al. This index indicates the share of homosexuals in a metropolitan area. Florida is not saying that homosexuals cause creativity, but they indicate that they are accepted in many metropolitan areas and that tolerance is higher, which is attracting the creative class. The integration index measures level of integration versus segregation of a metropolitan area (Florida, 2012). An integration index of the value 0 means there is a high degree of segregation, while a value of 1 means that there is a high level of integration. A city might be more integrated or more segregated, but Florida is not using a measurement to measure foreign born people or people with a different racial background. The combination of all of these variables makes the creativity index. The higher the score, the higher the rank. For example the number one in Florida's ranking is Boulder, Colorado, and has a creativity index of .981 and is ranked 10th for technology, 5th for talent and 9th for tolerance. Number 361, the least creative metropolitan area is Florence-Muscle Shoals in Alabama. This metropolitan area has a creativity index of .048 and is ranked 340th for technology, 333th for talent and 361th for tolerance. There is a big difference between the

metropolitan areas in creativity index. By taking these three variables into account, Florida created a ranked list of 361 metropolitan areas.

2.5 Criticism and misconception on Florida's theory

Florida might be one of the most criticized authors in the field of urban geography, and is highly criticized by many economists, historians and other geographers as well. As discussed before, his ranking is based on several variables which Florida thinks will bring in economic growth to metropolitan areas. There is in the field of urban geography and economic geography a lot of critique of the Richard Florida´s measurement procedure (Moss, 2009). The variables which Richard Florida is using will never forecast any economic growth, because there are several other variables which are more important (Hoyman and Faricy, 2009), like the share of universities for example. To bring it even further, Steven Malanga, a fellow of the Manhattan Institute for Policy Research, stated in 2004 that the best cities in Florida's analysis of 1993 have not grown faster than the overall U.S. jobs economy. In his opinion, Florida's indexes are poor predictors of economic performance.

2.6 Misconception

Not only is Florid's theory heavily criticized, it is also a lot of times misunderstood. In an attempt to make cities more attractive, policymakers use Florida's theory to justify their decisions . By adding more modern housing, mixed use and high density in cities, like in the last decade has happened in several cities in the world (Agora Magazine, 2011), they think they try to make cities attractive for the creative class . Criticism that Florida's theory was just copied and pasted in policy was occurring. Because some cities are just copying Florida's theory in their policy , it is very important that he is not misunderstood, because his theory is not as clear as it seems to be. The main misunderstanding according to Florida's theory is that less creative MSA's are also less attractive. For making cities 'creative', policymakers tried to copy his theory to make cities more attractive (Agora Magazine, 2011) In this thesis I want to test, by picking a new set of variables, that MSA's which are less creative are not necessary also less attractive. By picking this new set of variables, I want to make an end to this misunderstanding for once and for all. Because the implications of implementing the theory of the creative class in urban policies can be enormous, the importance of understanding the theory right are important.

2.7 The characteristics of the 50 MSA's

The ranking of Florida's creativity index contains all the MSA's in the United States (361 MSA's in total). The 50 MSA's with the lowest creativity index are MSA's with a small population for a metropolitan area. Most of the MSA's have a population in a scale of 100.000 till 200.000 (Sperling Best Places, 2012), and are more merged counties than real big cities. They are small metro's, and have different labor pools than the bigger MSA's. Labor is mainly focusing on low skilled and cheap labor, like transport and construction. Also the food sector has an important share in the labor pool. The MSA's in this thesis are places which not a lot of people have heard of, the unknown areas of the United States. Figure 2 shows the geographical positioning of the 50 least creative MSA's (Fairbanks, Alaska, is not included in the map).

Figure 2: a map of the geographical location of the 50 least creative MSA's (Fairbanks, Alaska, not included).

3. Methodology

3.1 Revisited variables

By picking a new set of demographic and socioeconomic variables I am testing if the 50 MSA's with the lowest creativity index are also unattractive. Those 50 metropolitan areas are the unknown MSA's of the United States. From Dothan Alabama to Lima Ohio, small metros of which not a lot of people had heard of (the list of the 50 least creative MSA's is in the appendix) But which variables determine a metropolitan area to be attractive and to whom? It is very complicated to determine exactly what makes a certain place attractive to live, because there are hundreds of measurements for it. It can be personal, by having a sense of place, identification with a place or other personal reasons. Also the status in the life cycle depends on the choice of a certain area for a person: people with kids tend to move towards the suburbs while young people are more likely to live in the inner city (Kaplan, 2009). People do not have always a choice where to live, because certain jobs are in that area or their financial situation forces them to live there. But also, until what level do people really care about attractiveness of a city. Sometimes economic reasons, like a place which has a lower cost of living, or lower housing prices. Although it is very difficult to determine what makes a metropolitan area attractive, I chose to use seven demographic and socioeconomic variables to capture an image of the situation and the attractiveness of the specific Metropolitan Statistical areas.

3.2 Seven variables which determine attractiveness

The first demographic variable which is being used is the population growth from 2000 till 2012 in percentage, by using the data from Sperling's best places. Net demographic growth indicates the overall attractiveness of a MSA, because the more population growth, the more attractive a city is to certain people. Nevertheless, there are some big limitations and uncertainties with this variable. First of all, there are some objections from a demographic perspective. The composition of the population of a certain area also determines if growth is high or low. A young population for example has a high birth rate, which ads a higher natural growth than the average, so this variable is sensitive for demographic compositions. Second, some MSA's have changed in administrative ways, by merging or adding different counties to a new MSA. According to the US Census, the MSA's

are determined by the Office of Management and Budget (OMB). On June 6, 2003, the OMB applied the new standards to Census 2000 data and announced different area definitions. There is a small fail margin in this measurement, because it might be that a few areas have administratively changed and thereby have no natural population growth from the period of 2000 till 2003. The data was obtained from Sperling's best places, an organization from Portland, Oregon, which collects all kinds of data for all the metropolitan areas in the United States. The population growth has to be higher than the United States average in order to be more attractive in terms of population growth. For example, if the United States average population growth is 10% and the population growth of a MSA is 9%, the MSA is seen less attractive for this variable.

The second variable is a socioeconomic variable, the job growth. The job growth is indicated in percentage and is the annual average for the past year. The data is used from Sperling's Best places database. The job growth tells the socioeconomic situation of a MSA. The job growth depends on several other variables, for example the percentage of college graduates or income per capita. The job growth needs at least to grow at the same pace as the population growth in order to prevent the unemployment rate from rising. The higher the job growth, the better the attractiveness in a city. There are some limitations for using job growth as a variable to determine attractiveness, because job growth can be temporary and can differ from month to month. Also national factors, like economic crises or changes in policy can influence job growth. Job growth is not only connected with the same MSA, but is influenced mainly from factors outside of that MSA. The data is about the average of the year and was updated in June 2012.

The third variable is a demographic variable, percentage college and university graduates. This variable indicates the share of college and university graduates in the population of a MSA, and says something about the attractiveness of a MSA for higher educated people. The data is collected from the online database of Sperling's best places. This variable is the sum of three different variables: percentage of people who attend 2 years of college, the percentage of people who attend 4 years of college and the percentage of graduates who are living in the MSA. The more high educated people there are in a MSA, the more economic growth there will be in the MSA (high educated people have an average higher annual income and better jobs). It is an alternative for the suggestion Hoyman and

Faricy (2009) are giving, the share of universities in a city. The share of universities is a variable which is only based on the amount of universities, and not of the share of high educated people in the MSA. Areas with several universities are not per se able to contain the graduates in that area. The share of high educated people in the population of a MSA indicates the attractiveness of a MSA. According to the OECD better life index, studies show that educated individuals live longer and most important participate more actively in politics and in the community where they live. They have different preferences and a more demanding lifestyle. The data used in the thesis is from June 2012.

Unemployment is the fourth variable which is used in revisiting the MSA's. The unemployment is in percentage and is the annual average. This variable is from the data of Sperling's Best places, and the data is the average for the last year from June 2012. The higher the percentage, the less attractive a city is. A high percentage of unemployment causes less spending (affects real estate, economic growth etc.) and social unrest, which are both factors that make a city less attractive. The same critique as for job growth goes here: it can be temporary and could be influenced by regional or national factors, like crises.

The fifth variable is the income per capita in US Dollars. This variable comes from the database of Sperling´s best places and indicates the amount of money people make in the MSA. The higher the income per capita per MSA, the more attractive it is to live in one of those MSA´s.

The sixth variable is the cost of living. This socioeconomic variable is an index number and is the sum of food costs, utilities costs and miscellaneous costs . The lower this variable, the cheaper it is to live in this metropolitan area. The cheaper it is to live in a certain area, the more attractive the MSA is. Also this variable is from Sperling's Best Places and was for the last year (updated in June 2012).

The last variable is the median home value expressed in US Dollars, taken from the data of Sterling's best places for the last year, updated in June 2012. The lower the median home value, the cheaper it is to get a home in this metropolitan area. The cheaper a house will be in a MSA, the more attractive it is to live over there. The fact that median home value is not inherited in the cost of living is the reason why it is a different variable. The fact that this variable is a median instead of an average serves a goal. The average of home prices is

sensitive to extremes. In the metropolitan areas in this thesis the population is on average 100.000 people. The median is the middle value, and is less influenced by extreme values.

The revisited demographic and socioeconomic values in this thesis will all be single tested against the national average of the United States. How are they performing according to the national average and what is the typical profile of the 50 least creative MSA's? By showing this comparison I expect to refute the misconception about Florida's theory that less creative areas are also less attractive to live in.

For the 50 metropolitan statistical areas the variables were collected by using two databases: the US Census database, the most recent collection is from 2010, and Sterling's best places. By gathering the seven variables, for all the 50 metropolitan areas I created a database which gives a clear overview of all the data, which is shown in the Appendix .

4. Results

4.1 Characteristics' of the 50 MSA's with the new variables

The results of the indexes give a clear outcome. For the first variable, population growth, it is clear that they are not all declining. Actually, 38 out of the 50 metropolitan areas show a growing population. Although growth varies in this category from 0,1% (Albany, Georgia) up to 22% (Brunswick, Georgia), most of the metropolitan areas are growing in terms of population. Actually, 15 of those 38 growing areas show growth above the US average of 8,07%. 12 of the 50 metropolitan areas are declining. Although the average of the 50 MSA´s is 5%, lower than 8,07% (US average), the average of the US has a huge amount of cases, while these MSA's are only 50.

The second variable job growth shows that of the 50 metropolitan areas 18 show job growth above the US average of 0,35%. The fact is that the average job growth for the 50 metropolitan areas is lower than the US average, it is 0,06%. Actually, for 24 of the metropolitan areas the job growth is negative and only 8 MSA's are growing under the US average. The job growth is overall worse than the job growth of the country's average, but over half of the metropolitan areas have positive job growth. As discussed before, the MSA's in this thesis have a strong focus on the transport, food and construction industries. Industries which are sensitive for changes in the economy.

The third variable, the percentage college and graduates in a MSA, shows that for the 50 metropolitan areas 48 have a lower percentage than the US average of 31,47%. 22,20% is the average for the 50 MSA's, which is significantly lower than the US average. Only two MSA's show a slight advantage to the national average (Fairbanks AL, 35%, and Casper WY, 31%). It is clear that the population of those 50 metropolitan areas is less well educated than the national average is.

The fourth variable, percentage unemployment, is highlighting in the results. Although job growth is worse than the national average, the unemployment rate is somewhat lower than the national average. With a national average of 8,6% in June 2012, the unemployment rate of the 50 MSA's is 8,13%. Out of the 50 MSA's, 16 have a higher unemployment rate than

the average, and 34 have a lower unemployment rate. So, despite the fact that the number of jobs are on average declining, the unemployment rate is lower than the average.

The fifth variable, income per capita, is also showing a lot of interesting results. 47 out of the 50 MSA's show that the income per capita is lower than the national average. With a national average of $26,154 per capita, the average of the 50 MSA's is way lower: $21,745. The 3 MSA's which have an income per capita above average are slightly above the average.

The sixth variable, the cost of living, shows that for 47 MSA's the overall cost of living is cheaper and lower than the national average. Because the cost of living was expressed as an index, the national average was 100. Only 3 MSA's show a higher cost of living. The average cost of living compared with the national average for all the 50 metropolitan areas is 90,1.

The last variable is the median home price. It becomes clear that for the 50 MSA's only 6 MSA's have a higher median home price than the national average, while 47 have a lower median home prices. The national average median home price is $153,800. The average median home price for the 50 MSA's is $113,158. The difference between the national average and the average for the 50 MSA's is a big one.

The typical profile of the 50 Metropolitan areas is shown in figure 3: the people are less well educated, have a lower income per capita, have a lower cost of living, have cheaper housing and do have lower unemployment. Despite the fact that those MSA's have a low ranking on income per capita and education, the job growth and population growth enjoy modest growth.

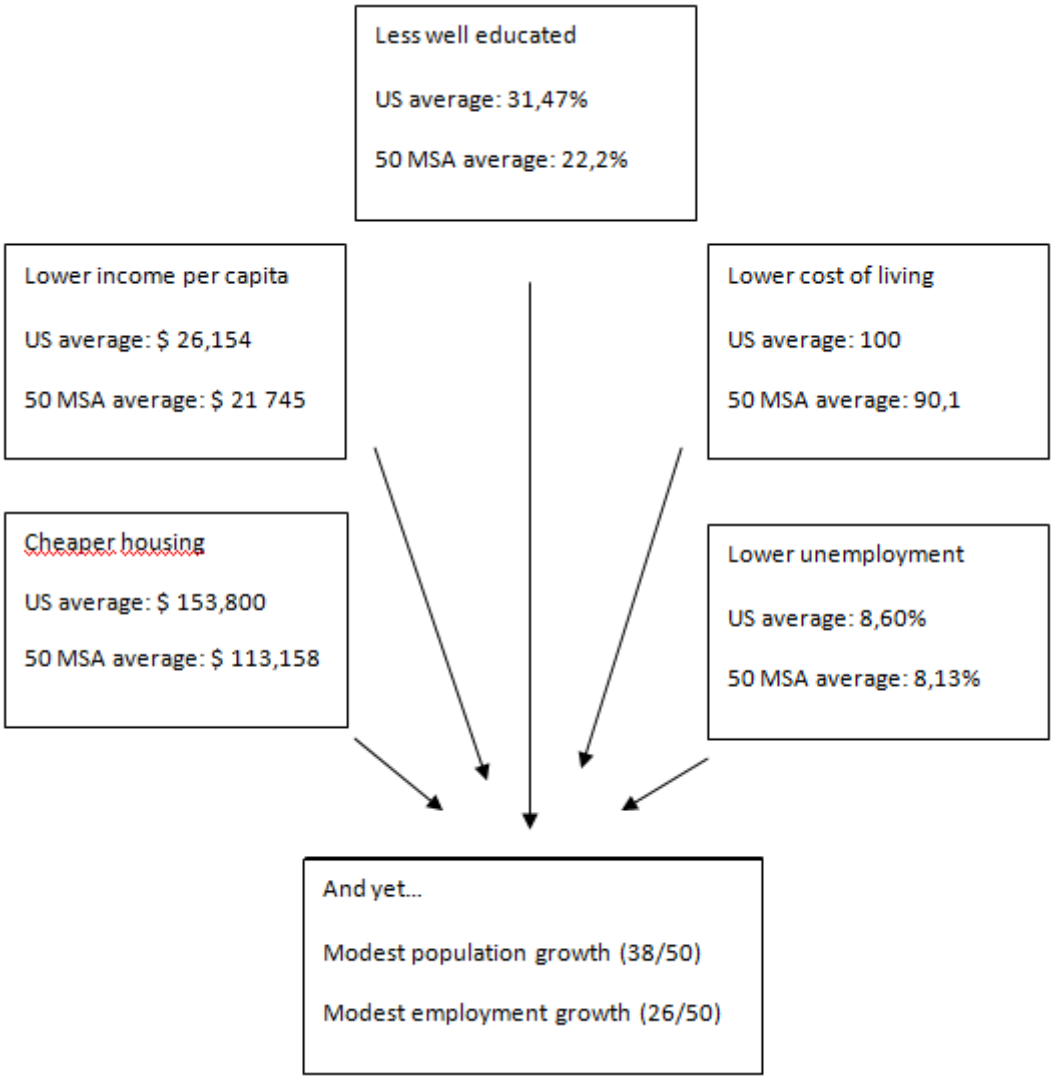

Figure 3: Typical profile for smaller metro settings

It is important to state that there are two outliers in the database. Fairbanks, Alaska, and Ocean City, New Jersey. These MSA´s have for all the variables extreme values. Fairbanks is in Alaska, and the main urban settlement. Ocean City is a place where a lot of wealthy people live who work in the weeks in the New York City region and stay in their chalets and houses during the weekend. Both of these MSA's are influencing the outcome of the data.

4.2 Correlation

To see if there is any relation between the characteristics, all the variables for all the 50 MSA's in this thesis were tested for correlation. The correlation analysis was chosen instead of a regression analysis, because there was no clear distinction between a dependent and an independent variable. By using IBM SPSS 19 a database was created. The indexes were measured by dividing the value of each cell by the average value and multiply it with 100. To asses evidence of correlation among the variables selected a correlation matrix (7*7) was generated.

	Population growth	Job growth	% college and graduates	Unemployment	Income per capita	Cost of living	Median home cost
Population growth	1	.341*	.366*	-.142	-.058	.215	.312*
Job growth	.341*	1	.244	-.133	.362*	.294*	.414*
% college and graduates	.366*	.244	1	-.170	.563*	.611*	.534*
Unemployment	.327	.357	.238	1	.380	.240	.391
Income per capita	-.058	.362*	.563*	-.127	1	.654*	.742*
Cost of living	.215	.294*	.611*	.169	.654*	1	.870*
Median home cost	.312*	.414*	.534*	.124	.742*	.870*	1

Figure 4: Correlation matrix with Pearson correlation * *correlation is significant at the 0.05 level (2-tailed)*

The figure is showing some highlighting results. There are 12 pairs of significant correlation, none of them show a negative correlation, they are all positive. This means that when one value for a variable is increasing, the other variable will increase as well. The value of the correlation can tell something about the strength of the relation: the closer to 1, the stronger the relation (closer to linear).

The variable population growth shows significant correlation with job growth (.341), % college and graduates (.366) and with the median home cost (.312). This means that if the population is growing, the job growth, the % college and graduates and the median home cost grow as well, though this relation doesn't have much strength.

The variable job growth shows significant correlation with four variables: population growth (.341), income per capita (.563), cost of living (.294) and median home cost (.414). This means that if the job growth is positive, the income per capita, the cost of living and the median home cost will grow as well, but also this relation is not strong.

The variable % college and graduates shows significant correlation with population growth (.366), income per capita (.362), cost of living (.611) and median home cost (.534). This means that if the % college and graduates is growing, the population growth, the income per capita, the cost of living and the median home cost will grow as well. For the cost of living and the median home cost the relation is stronger than previous relations.

The variable unemployment doesn't show any significant correlation and thus has no relation with the other variables.

The variable income per capita shows significant correlation with job growth (.362), % college and graduates (.563), cost of living (.654) and median home cost (.742). Especially for median home cost, but also for job growth, % college and graduates and cost of living, this means growth in case of a growing income per capita.

The variable cost of living shows significant correlation with job growth (.294), % college and graduates (.611), income per capita (.654) and median home cost (.870). This means that if the cost of living is growing, job growth, % college and graduates, income per capita and median home cost will grow as well. Especially the last variable, median home cost, shows a very strong relation.

The last variable, median home cost, shows significant correlation with population growth (.312), job growth (.414), % college and graduates (.534), income per capita (.742) and cost of living (.870). This means that if median home cost is growing, population growth, job growth, % college and graduates and income per capita will grow as well. As mentioned before, the last variables show a very strong relation with median home cost.

Median home cost, cost of living, income per capita (socio-economic variable) and % college and graduates (demographic variable) show the strongest relation and must be seen as the biggest influence on determining attractiveness for a MSA.

5. Conclusion and discussion

The profile of the average scores of the 50 least creative MSA's is as follows: the average population growth is below the US average, but 15 show growth above the average, 23 overall growth and only 12 are declining.

The average job growth of the 50 MSA's is very low compared to the US average, but the group has a high internal diversity. 18 MSA's show job growth above the average, 8 show overall growth and 24 are facing negative job growth. The average of the share of college and graduates in the population is highly below the US average. Only two metro's show a higher share, 48 are below the average. The average unemployment rate is a better than the US average. 34 metro's have a lower unemployment rate, 16 higher. The average income per capita is lower than the US average. Only three metro's are above the average, 47 are under average. The cost of living is way lower than the US average. 47 metro's have a lower cost of living, and only three metro's are more expensive. The median housing prices are lower than the US average. 44 metro's have cheaper homes and only 6 are more expensive.

There is also something to say about the relation of the variables for those 50 MSA's. The variable median home cost and cost of living show a strong relation. The higher the median home cost, the higher the cost of living as well. Also the relation between the median home cost and income per capita seem to be strong, the same goes for cost of living and income per capita. Also the strong relation between % of college and graduates with income per capita, cost of living and median home cost must be highlighted. It seems to be that for those 50 MSA's the income per capita, cost of living, median home cost and % college and graduates show the strongest relation and have the biggest influence of determining attractiveness of a MSA.

The results show that the 50 MSA's with the lowest creativity index are also performing very diverse on the other socio-economic and demographic factors compared with the national average. The so called misconception seems to be partly true for the 50 least creative metros. The hypothesis, the 50 MSA's are not performing worse than the US average for the other variables, needs to be rejected. They do have a low average income and a low share of college and graduates, but on the other side they have cheaper homes and a lower cost of living. It seems to be more the case that the MSA's are attractive for low

skilled workers, and not for high skilled and educated people. There might also be a regional effect for these 50 metropolitan areas. As shown in figure 2, the geographical positioning of all the metro's, there is a higher density in the East in the United States. To be more specific, there are two 'cores'. The north-eastern metropolitan areas, which are mainly placed in the Rustbelt (Kaplan, 2009). These cities where growing in terms of economic growth and population growth during the hay days of the modern economy by producing a lot of goods. Production labor was the key to economic growth. When the economy of the Western countries made a shift from a producing economy towards a service and knowledge economy, those cities faced a lot of social and economic problems. The second core is in the Southeast, a region which is well known of its less qualified and less skilled workers. Jobs are mainly focusing on industrial activities. The metropolitan areas are attractive to a certain type of people. People who are working in construction, transport and other low skilled labor in terms of education. Brunswick, Georgia, for example has a big port and a factory for pulp and paper, while Clarksville in Tennessee has an enormous transport industry while Jacksonville in North-Carolina is more focusing on construction and sales and office. Those places are attractive to a certain type of people, people with a lower education and a lower income.

My conclusion is that there is a relation between unattractiveness and a low creativity index, but it highly depends for what person it is unattractive. The high educated worker is not going to live in one of those metro's, but the low skilled worker will see the metro (in this group of 50 'least creative' metros) as attractive.

Future research should therefore focus on the relation between attractiveness and creativity for other cohorts in Florida's ranking. Are the MSA's which are ranked from 200 till 250 also unattractive, or do they show another score for the variables. It might be that there is a relation for all the cases of Florida's ranking. It might be that the lower ranked, the less attractive the MSA's are.

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Appendix

Metropolitan Area
Parkersburg-Marietta-Vienna (WV/OH)
Brunswick (GA)
Casper (WY)
Anderson (IN)
Joplin (MO)
Mansfield (OH)
Wichita Falls (TX)
Beaumont-Port Arthur (TX)
Jacksonville (NC)
Youngstown-Warren-Boardman (OH/PA)
Terre Haute (IN)
Fairbanks (AK)
Saint Joseph (MO)
Houma-Bayou-Cane-Thibodaux (LA)
Tuscaloosa (AL)
Danville (IL)
Monroe (LA)
Sumter (SC)
Lima (OH)
Morristown (TN)
Jonesboro (AR)
Anderson (SC)
Springfield (OH)
Clarksville (TN)
Cleveland (TN)
Victoria (TX)
Lewiston (ID)
Bay City (MI)
Cumberland (MD)
Muskegon-Norton Shores (MI)
Owensboro (KY)
Pine Bluff (AR)
Wheeling (WV)
Albany (GA)
Fort-Smith (AR)
Valdosta (GA)
Anniston-Oxford (AL)
Great Falls (MT)
Decatur (AL)
Ocean City (NJ)
Sandusky (OH)
Dothan (AL)
Gadsden (AL)
Danville (VA)
Pascagoula (MS)
Lake Charles (LA)
Altoona (PA)
Michigan City - La Porte (IN)
Steubenville-Weirton (WV)
Florence - Muscle Shoals (AL)

Metropolitan Area	Population growth (2000-2012)
Brunswick (GA)	22%
Jacksonville (NC)	20%
Fairbanks (AK)	18%
Clarksville (TN)	18%
Valdosta (GA)	17%
Tuscaloosa (AL)	14%
Anderson (SC)	13%
Casper (WY)	12%
Joplin (MO)	12%
Jonesboro (AR)	12%
Morristown (TN)	11%
Cleveland (TN)	11%
Dothan (AL)	11%
Houma-Bayou-Cane-Thibodaux (LA)	9%
Fort-Smith (AR)	9%
Pascagoula (MS)	9%
Pine Bluff (AR)	7%
Anniston-Oxford (AL)	6%
Victoria (TX)	5%
Lewiston (ID)	5%
Decatur (AL)	5%
Saint Joseph (MO)	4%
Monroe (LA)	4%
Owensboro (KY)	4%
Sumter (SC)	3%
Lake Charles (LA)	3%
Florence - Muscle Shoals (AL)	3%
Beaumont-Port Arthur (TX)	2%
Parkersburg-Marietta-Vienna (WV/	2%
Terre Haute (IN)	1%
Cumberland (MD)	1%
Muskegon-Norton Shores (MI)	1%
Great Falls (MT)	1%
Sandusky (OH)	1%
Gadsden (AL)	1%
Michigan City - La Porte (IN)	1%
Wichita Falls (TX)	0%
Albany (GA)	0%
Anderson (IN)	-1%
Bay City (MI)	-1%
Lima (OH)	-2%
Ocean City (NJ)	-2%
Altoona (PA)	-2%
Mansfield (OH)	-3%
Danville (IL)	-3%
Wheeling (WV)	-3%
Danville (VA)	-3%
Springfield (OH)	-5%
Youngstown-Warren-Boardman (OH	-6%
Steubenville-Weirton (WV)	-6%
CONCLUSION	**5%**
US AVERAGE	8,07%

Metropolitan Area	Job growth
Victoria (TX)	4,76%
Casper (WY)	3,98%
Florence - Muscle Shoals (AL)	3,69%
Cumberland (MD)	3,39%
Pascagoula (MS)	2,48%
Albany (GA)	2,40%
Fairbanks (AK)	2,11%
Ocean City (NJ)	1,95%
Joplin (MO)	1,84%
Dothan (AL)	1,71%
Valdosta (GA)	1,50%
Brunswick (GA)	1,30%
Danville (VA)	1,09%
Decatur (AL)	0,89%
Anniston-Oxford (AL)	0,85%
Clarksville (TN)	0,59%
Bay City (MI)	0,49%
Sandusky (OH)	0,38%
Owensboro (KY)	0,26%
Houma-Bayou-Cane-Thibodaux (LA)	0,23%
Beaumont-Port Arthur (TX)	0,21%
Morristown (TN)	0,20%
Terre Haute (IN)	0,13%
Saint Joseph (MO)	0,08%
Lake Charles (LA)	0,04%
Gadsden (AL)	0,03%
Tuscaloosa (AL)	-0,08%
Altoona (PA)	-0,24%
Lima (OH)	-0,25%
Michigan City - La Porte (IN)	-0,28%
Cleveland (TN)	-0,39%
Parkersburg-Marietta-Vienna (WV/OH)	-0,43%
Jacksonville (NC)	-0,43%
Jonesboro (AR)	-0,68%
Great Falls (MT)	-0,77%
Anderson (SC)	-1,10%
Youngstown-Warren-Boardman (OH/PA)	-1,35%
Fort-Smith (AR)	-1,51%
Wichita Falls (TX)	-1,65%
Sumter (SC)	-1,71%
Steubenville-Weirton (WV)	-1,80%
Pine Bluff (AR)	-1,87%
Monroe (LA)	-1,90%
Anderson (IN)	-1,92%
Wheeling (WV)	-2%
Lewiston (ID)	-2,04%
Muskegon-Norton Shores (MI)	-2,13%
Springfield (OH)	-2,52%
Danville (IL)	-3,17%
Mansfield (OH)	-3,61%
CONCLUSION	**0,06%**
US AVERAGE	0,35%

Metropolitan Area	% College and graduates
Fairbanks (AK)	35,49%
Casper (WY)	31,81%
Great Falls (MT)	28,43%
Tuscaloosa (AL)	28,27%
Lewiston (ID)	26,51%
Ocean City (NJ)	25,74%
Wichita Falls (TX)	25,01%
Clarksville (TN)	24,53%
Brunswick (GA)	24,31%
Anderson (SC)	24,27%
Monroe (LA)	23,98%
Terre Haute (IN)	23,67%
Valdosta (GA)	23,31%
Sandusky (OH)	23,13%
Jacksonville (NC)	23,01%
Sumter (SC)	22,92%
Pascagoula (MS)	22,88%
Muskegon-Norton Shore	22,78%
Dothan (AL)	22,64%
Bay City (MI)	22,32%
Youngstown-Warren-Boa	22,04%
Jonesboro (AR)	21,90%
Florence - Muscle Shoals	21,78%
Lima (OH)	21,75%
Owensboro (KY)	21,51%
Albany (GA)	21,49%
Joplin (MO)	21,46%
Springfield (OH)	21,46%
Victoria (TX)	21,34%
Lake Charles (LA)	21,25%
Parkersburg-Marietta-Vi	21,07%
Anniston-Oxford (AL)	21,04%
Decatur (AL)	21,04%
Anderson (IN)	20,94%
Saint Joseph (MO)	20,86%
Wheeling (WV)	20,60%
Beaumont-Port Arthur (T	20,58%
Gadsden (AL)	20,42%
Cleveland (TN)	20,22%
Cumberland (MD)	20,14%
Altoona (PA)	19,81%
Danville (IL)	19,73%
Michigan City - La Porte (	19,68%
Mansfield (OH)	19,09%
Fort-Smith (AR)	18,80%
Steubenville-Weirton (W	18,28%
Pine Bluff (AR)	17,65%
Danville (VA)	16,67%
Morristown (TN)	16,46%
Houma-Bayou-Cane-Thib	15,95%
CONCLUSION	**22,20%**
US AVERAGE	31,47%

Metropolitan Area	Unemployment
Houma-Bayou-Cane-Thibodaux (LA)	4,50%
Casper (WY)	5,60%
Great Falls (MT)	5,60%
Lake Charles (LA)	5,90%
Fairbanks (AK)	6,30%
Jonesboro (AR)	6,40%
Victoria (TX)	6,40%
Altoona (PA)	6,50%
Joplin (MO)	6,60%
Saint Joseph (MO)	6,60%
Wichita Falls (TX)	6,70%
Monroe (LA)	6,90%
Lewiston (ID)	7%
Owensboro (KY)	7,10%
Parkersburg-Marietta-Vienna (WV/OH)	7,20%
Wheeling (WV)	7,20%
Cumberland (MD)	7,30%
Bay City (MI)	7,40%
Dothan (AL)	7,40%
Florence - Muscle Shoals (AL)	7,40%
Tuscaloosa (AL)	7,50%
Sandusky (OH)	7,70%
Fort-Smith (AR)	7,80%
Decatur (AL)	7,90%
Springfield (OH)	8%
Anniston-Oxford (AL)	8%
Lima (OH)	8,10%
Gadsden (AL)	8,10%
Youngstown-Warren-Boardman (OH/PA)	8,20%
Cleveland (TN)	8,40%
Muskegon-Norton Shores (MI)	8,40%
Jacksonville (NC)	8,50%
Danville (VA)	8,50%
Valdosta (GA)	8,60%
Clarksville (TN)	9%
Anderson (SC)	9,10%
Mansfield (OH)	9,30%
Pine Bluff (AR)	9,30%
Brunswick (GA)	9,70%
Albany (GA)	9,70%
Steubenville-Weirton (WV)	9,70%
Terre Haute (IN)	9,90%
Danville (IL)	9,90%
Michigan City - La Porte (IN)	9,90%
Morristown (TN)	10,10%
Pascagoula (MS)	10,20%
Anderson (IN)	10,30%
Beaumont-Port Arthur (TX)	10,30%
Sumter (SC)	10,30%
Ocean City (NJ)	14,10%
CONCLUSION	**8,13%**
US AVERAGE	8,60%

Metropolitan Area	Income per capita (in $)
Casper (WY)	30,529
Ocean City (NJ)	29,779
Fairbanks (AK)	28,027
Sandusky (OH)	24,677
Victoria (TX)	23,775
Great Falls (MT)	23,287
Lake Charles (LA)	23,077
Lewiston (ID)	22,796
Florence - Muscle Shoals (AL)	22,795
Houma-Bayou-Cane-Thibodaux (LA)	22,792
Youngstown-Warren-Boardman (OH/PA)	22,605
Tuscaloosa (AL)	22,597
Owensboro (KY)	22,581
Parkersburg-Marietta-Vienna (WV/OH)	22,557
Springfield (OH)	22,545
Decatur (AL)	22,442
Beaumont-Port Arthur (TX)	22,191
Wichita Falls (TX)	22,186
Brunswick (GA)	22,173
Dothan (AL)	22,168
Mansfield (OH)	22,007
Danville (VA)	21,983
Anderson (IN)	21,816
Wheeling (WV)	21,529
Anderson (SC)	21,461
Michigan City - La Porte (IN)	21,411
Monroe (LA)	21,321
Steubenville-Weirton (WV)	21,273
Cumberland (MD)	21,264
Altoona (PA)	21,185
Bay City (MI)	21,118
Anniston-Oxford (AL)	21,047
Lima (OH)	20,597
Saint Joseph (MO)	20,539
Gadsden (AL)	20,342
Cleveland (TN)	20,339
Pascagoula (MS)	20,171
Terre Haute (IN)	20,157
Fort-Smith (AR)	20,122
Albany (GA)	19,922
Jonesboro (AR)	19,838
Danville (IL)	19,693
Clarksville (TN)	19,449
Morristown (TN)	19,441
Pine Bluff (AR)	19,134
Joplin (MO)	19,129
Muskegon-Norton Shores (MI)	19,111
Jacksonville (NC)	18,988
Sumter (SC)	18,951
Valdosta (GA)	18,353
CONCLUSION	**21,7454**
US AVERAGE	26,154

Metropolitan Area	Cost of living
Wichita Falls (TX)	78,3
Pine Bluff (AR)	81,6
Jonesboro (AR)	82,8
Terre Haute (IN)	83
Bay City (MI)	83,3
Muskegon-Norton Shores (MI)	83,4
Steubenville-Weirton (WV)	83,5
Anderson (IN)	83,6
Beaumont-Port Arthur (TX)	83,9
Danville (IL)	83,9
Fort-Smith (AR)	84
Lake Charles (LA)	84,5
Youngstown-Warren-Boardman (OH/PA)	84,6
Dothan (AL)	84,6
Wheeling (WV)	85,3
Owensboro (KY)	86,1
Victoria (TX)	86,3
Gadsden (AL)	86,3
Anniston-Oxford (AL)	86,4
Joplin (MO)	86,5
Danville (VA)	86,8
Saint Joseph (MO)	86,9
Monroe (LA)	87,2
Houma-Bayou-Cane-Thibodaux (LA)	87,3
Albany (GA)	87,5
Parkersburg-Marietta-Vienna (WV/OH)	87,8
Pascagoula (MS)	87,8
Mansfield (OH)	88,2
Cleveland (TN)	88,7
Morristown (TN)	88,8
Valdosta (GA)	88,8
Springfield (OH)	89
Sumter (SC)	89,2
Decatur (AL)	89,3
Florence - Muscle Shoals (AL)	89,3
Anderson (SC)	89,5
Lima (OH)	90
Michigan City - La Porte (IN)	90,6
Brunswick (GA)	91,9
Altoona (PA)	93,3
Sandusky (OH)	93,6
Tuscaloosa (AL)	94
Clarksville (TN)	94
Cumberland (MD)	94,6
Casper (WY)	97,8
Jacksonville (NC)	98,4
Great Falls (MT)	98,8
Lewiston (ID)	101,6
Fairbanks (AK)	133,5
Ocean City (NJ)	136,6
CONCLUSION	**90,054**
US AVERAGE	100

Metropolitan Area	Median home cost (in $)
Sumter (SC)	59500
Lima (OH)	65600
Danville (IL)	69600
Bay City (MI)	72200
Youngstown-Warren-Boardman (OH/PA)	75600
Steubenville-Weirton (WV)	76000
Mansfield (OH)	76200
Muskegon-Norton Shores (MI)	76400
Pine Bluff (AR)	77000
Terre Haute (IN)	79800
Wheeling (WV)	84000
Anniston-Oxford (AL)	86600
Cumberland (MD)	87800
Anderson (IN)	87900
Fort-Smith (AR)	89300
Jonesboro (AR)	92200
Danville (VA)	92400
Valdosta (GA)	93700
Gadsden (AL)	94100
Albany (GA)	94800
Wichita Falls (TX)	96300
Springfield (OH)	97600
Joplin (MO)	100400
Decatur (AL)	100900
Florence - Muscle Shoals (AL)	101500
Parkersburg-Marietta-Vienna (WV/OH)	103800
Owensboro (KY)	104800
Anderson (SC)	105000
Dothan (AL)	106300
Saint Joseph (MO)	106500
Morristown (TN)	108600
Beaumont-Port Arthur (TX)	113900
Tuscaloosa (AL)	115500
Great Falls (MT)	115800
Monroe (LA)	116900
Altoona (PA)	117000
Michigan City - La Porte (IN)	117800
Cleveland (TN)	119300
Pascagoula (MS)	119900
Jacksonville (NC)	130500
Sandusky (OH)	135500
Lake Charles (LA)	137900
Houma-Bayou-Cane-Thibodaux (LA)	140200
Clarksville (TN)	141600
Lewiston (ID)	154900
Victoria (TX)	156800
Brunswick (GA)	176800
Casper (WY)	176800
Fairbanks (AK)	262800
Ocean City (NJ)	345100
CONCLUSION	**113148**
US AVERAGE	153800