

Untangling Regional GDP and Population Growth

As metropolitan areas try to attract Creative Class occupations in order to succeed within the knowledge economy, it is necessary to analyze the relationships between the Creative Class, innovation, production and population across geographies. When examining the growth of place, population and GDP are generally cited as being two interrelated metrics, as an increase in one is thought to lead to an increase in the other, and vice versa. Metropolitan areas are becoming increasingly complex and diverse, but as this Insight will demonstrate, there is, in fact, relatively no clear relationship between GDP growth and population growth. The data for this Insight was compiled by [Jose Lobo](#) and includes population and GDP growth rates across every U.S. metro, from 2001–2011.

Population growth and GDP growth are often cited as being interrelated, as increases in population will lead to greater GDP production, or as GDP grows within a region, this will attract people to migrate there (as there is a perceived better standard of living in areas where GDP is growing). However, this is not the case, as new research by Lobo/the MPI suggests there is no direct relationship found within U.S. metros between population and GDP growth. A complex relation of many factors from amenities and tolerance, to entrepreneurship and technology lead to population and GDP growth. To analyse the geographic relationships between the metro population and GDP growth rates, we split each variable across four quartiles and examined where these intersect, displayed in **Exhibit 1**. This allows the map to demonstrate whether there is a relationship between population and GDP growth or population and GDP decline, or not. The metros with the highest growth were put into Q4, and the lowest were put into Q1. The metros with very high GDP and population growth are shaded dark blue, falling within Q4 for both high population and GDP growth. The metros with the smallest growth in both categories are shaded dark red.

The map illustrates that there is no simple direct correlation between population and GDP growth, as there is only a small number of metros demarcated by dark blue or dark red. Detroit and other rust belt metros do, however, form a cluster in which there is high GDP and population decline, which suggests that these areas have become the least desirable in attracting both business and people. Some of the metros that were found to have both high GDP and population growth rates include: Bakersfield, CA; Idaho Falls, ID; Midland, TX; and Huntsville, AL. For the most part though, as **Exhibit 2** displays, most of the metros fall somewhere within the middle indicating that there is no direct correlation between population and GDP growth rates. When looking at some of the largest and most innovative metros, the lack of uniform correlation between population and GDP growth is shown. New York, Seattle, Washington, Los Angeles, Chicago, and San Francisco were all found to have middle of the pack growth rates for both population and GDP, with the greater of the two variables differing from metro to metro. Boston and San Jose are two metros in which the GDP growth was much higher than the population growth, while Boulder, CO experienced high GDP growth, but population decline. Two of the fastest growing metros in the U.S., Houston and Atlanta, surprisingly both had very high population growth rates, but negative GDP growth. It is surprising that an economically strong metro such as Houston, actually experienced negative GDP growth over 10 years, but this serves as an example that population growth does not always have a direct relationship on GDP growth.

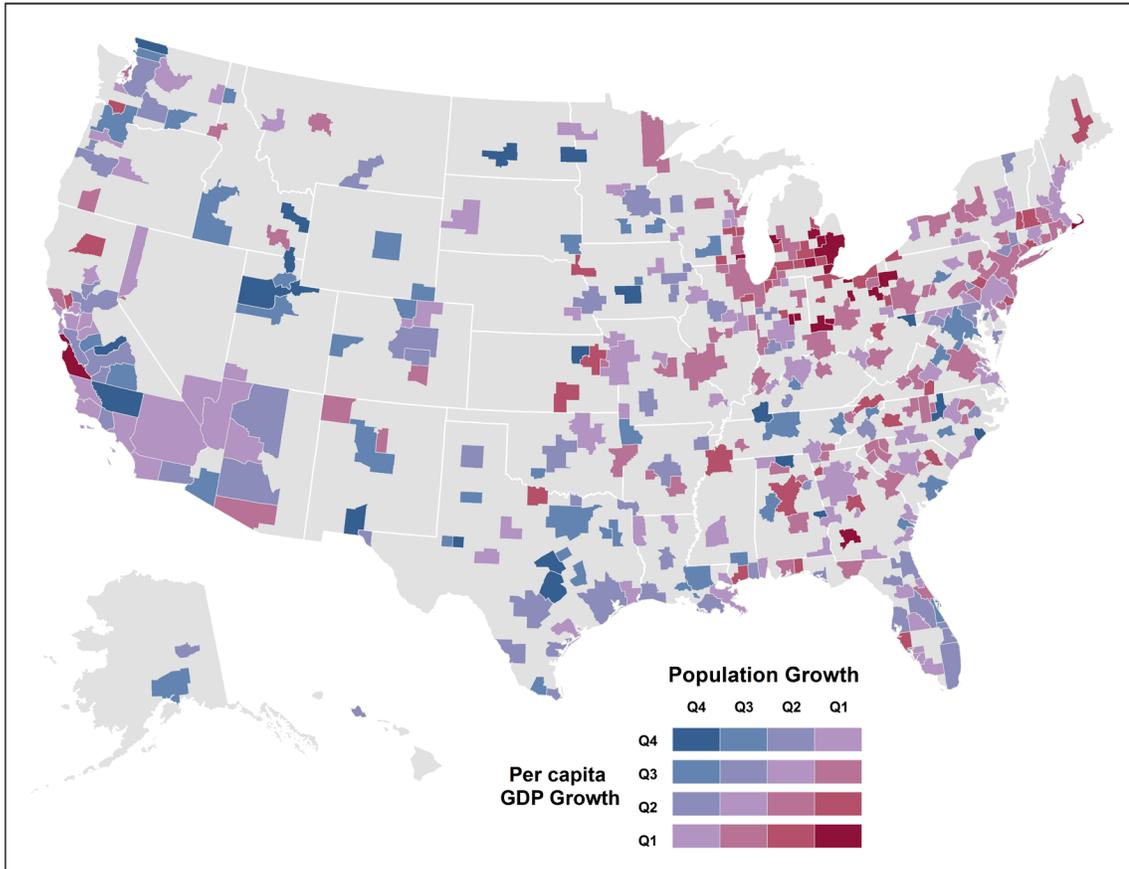


Exhibit 2 identifies the number of metros that fall within each quartile illustrated on the map. As found within the map, **Exhibit 2** also shows that there is a small number of metros that have experienced a combination of high population and GDP growth or low population and GDP growth, as found within Q4,Q4 and Q1,Q1 (only 20 metros each). Most metros, as previously stated, were found to be spread throughout the different quartiles, suggesting that there is not a direct relationship between increased population and GDP. The two largest quartile groups were found to be the following: Q4 (Population), Q1 (GDP): Q2 (Population) combined with Q2 (GDP). This demonstrates that there are a large amount of metros that defy conventional thinking, as they experienced either high population growth, yet the lowest GDP growth or middle of the pack population and GDP growth, but in which the growth rates across the two metrics were not the same.

		POPULATION			
		Q4	Q3	Q2	Q1
GDP	Q4	20	25	21	26
	Q3	21	22	23	24
	Q2	21	19	29	22
	Q1	29	25	19	20

Metropolitan Statistical Area	GDP Growth	Metropolitan Statistical Area	Population Growth
Corvallis, OR	8.99	Palm Coast, FL	6.08
Portland-Vancouver-Hillsboro, OR-WA	4.21	St. George, UT	4.13
Durham-Chapel Hill, NC	3.65	Raleigh-Cary, NC	3.4
Beaumont-Port Arthur, TX	3.61	Provo-Orem, UT	3.22
San Jose-Sunnyvale-Santa Clara, CA	3.49	Cape Coral-Fort Myers, FL	3.19
Odessa, TX	3.46	Myrtle Beach-North Myrtle Beach-Conway, SC	3.18
Victoria, TX	2.92	McAllen-Edinburg-Mission, TX	3.06
Peoria, IL	2.90	Austin-Round Rock-San Marcos, TX	3.05
Longview, TX	2.83	Las Vegas-Paradise, NV	3.04
Houma-Bayou Cane-Thibodaux, LA	2.81	Kennewick-Pasco-Richland, WA	3.01

Exhibit 3 presents the ten metros that were found to have the highest GDP growth from 2001–2011 along with the ten metros that had the greatest population growth during the same time period. When examining the areas with the highest GDP growth, what stands out is the large number of metros that were identified in *Rise of the Creative Class Revisited* as having some of the highest Creativity Indexes. Durham, NC and San Jose, CA are two metros that have been discussed in numerous MPI Insights as being creative and innovative leaders, which have partially contributed to a high GDP growth rate. From a geographical perspective, Texas is the state that had the most metros within the top ten highest GDP growth rates, with four. When looking at the second half of **Exhibit 3** (top ten metros with the highest population growth), none of the metros that had the highest GDP growth were found to have the highest population growth. This illustrates in itself that there is not a cut and dry relationship between increasing population growth and subsequent GDP growth (and vice versa). In fact, 6 out of the top 10 metros with the highest population growth had declining GDP growth rates during the same time period. The average GDP growth for the top ten metros with the highest population growth rates is -0.53, which is lower than the U.S. metro average of 0.48. The population growth rate average for the top ten metros with the highest GDP growth is 0.88, which is close to, but still below the U.S. average of 0.99.

Since the deindustrialization of the rust belt, for many American metros, a declining population was seen as the beginning of a downward spiral, as cities since have been trying their best to attract residents in order to grow. Population growth is often seen as a way for cities and regions to succeed as with an increase in population, the economy, tax base and other things will grow. It is also often believed that with an increase in GDP, a region or place will then attract a greater population. What this Insight demonstrates is that in fact, there is no direct correlation between population and GDP growth within the U.S. metros. The success and growth of regions is not solely determined on population or GDP, as many factors, such as quality of place, talent, technology, and tolerance, are shaping our complex cities.

The Martin Prosperity Institute at the University of Toronto's Rotman School of Management is the world's leading think-tank on the role of sub-national factors—location, place and city-regions—in global economic prosperity. We take an integrated view of prosperity, looking beyond economic measures to include the importance of quality of place and the development of people's creative potential.