Forecasting 2020 U.S. County and MSA Populations

Between 2000 and 2020

the U.S. population will

increase 53.7 million.

Where will they live?

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WHETHER RELYING UPON explicit statistical models, recent information on the evolution of local markets, conversations with friends, the latest headlines in the local newspaper, or gut feelings, real estate entrepreneurs are constantly guessing the future demand for their product. Population growth is associated with increased residential demand, increased demand in the office and distribution sectors, and more shoppers to patronize local retail. In short, population growth drives real estate development opportunities.

We examine the key statistical determinants of population growth in U.S. metropolitan counties, identifying char-

acteristics that are important predictors of subsequent population growth. From our statistical analysis we gain a better understanding of the conceptual underpinnings of the population growth across U.S. metropolitan counties during the last 30 years. In addition to learning what makes cities "tick," we are also able to make predictions of population growth for all metropolitan counties in the United States.

It is perilous to predict the future. However, our model accurately describes the population growth that took place from 1980 to 2000, and past growth forecasts future growth relatively accurately. We therefore believe that our estimates for 2000 to 2020 population growth will prove to be not too far off the mark. Nevertheless, our statistical work fails to account for about a quarter of all the variation in county population growth. That is, growth surprises do occur, and in some cases they matter a lot. In the 1950s, who would have predicted that Benton County, Arkansas, would emerge as the center of the biggest commercial empire in world history? Spurred by the phenomenal growth of Wal-Mart, Benton County makes the Census list of top 70 counties by population growth. The point is that our statistical analysis cannot predict who the next Sam Walton will be, and where he or she will be based.

POPULATION GROWTH 1980-2000

Regression analysis allows us to identify some of the key variables that predict future population growth. We explore a variety of variables at the county level. Examples include demographic variables (such as the percentage of individuals older than 65), fiscal variables (such as taxes) and geographic factors (such as local weather and elevation). These variables have predictive power for several reasons. First, they capture attributes of an area that cause it to grow economically, and therefore attract employees. Firm productivity varies across locales for several reasons: the skills and education of their population; accessibility to markets and transportation nodes; the impact of local public finances (taxes and expenditures); and agglomeration economies. The latter refers to firms becoming more productive if they locate closer to similar firms, enabling them to share information, infrastructures, and a pool of relevant workers, and to reduce the transportation costs of their common input and output transactions.

Other variables predict how attractive an area is for prospective inhabitants due to local amenities. Research by Edward Glaeser, Jed Kolko, and Albert Saiz demonstrates that cities are becoming as important in terms of *consumption* as they used to be in terms of traditional *produc-*

tivity. The capacity to generate and retain amenities adds considerably to the appeal of a city. Some cities will attract high-income residents by offering varied shopping experiences, proximity to attractive activities, good schools, and a strong social milieu that is conductive to both work and play. The attraction to a city on the basis of its physical and social environment represents a major paradigm shift; whereas people formerly followed jobs, jobs now also follow workers.

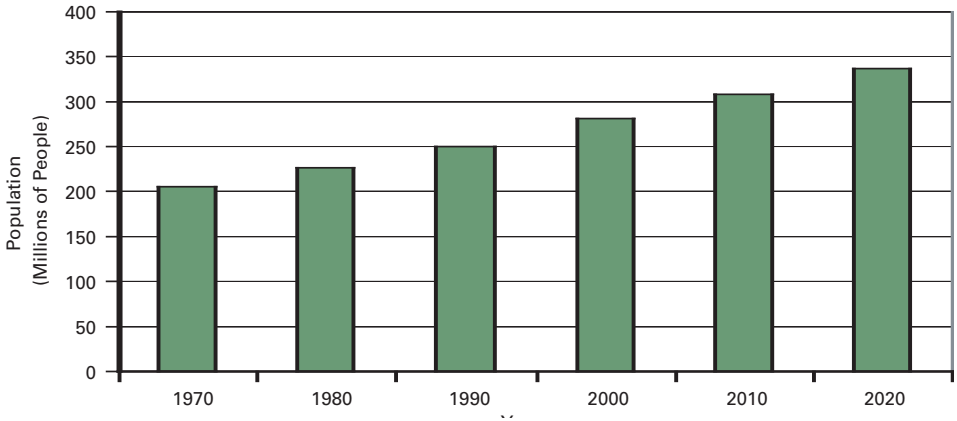
Thanks to information and ethnic networks, people tend to move to areas where they have social contacts. Thus, metropolitan areas with large immigrant populations, for example, tend to attract yet more immigrants. In addition, the characteristics of the population of a county can predict population growth for simple biological reasons: younger populations tend to be more fertile, while the elderly experience higher mortality rates. Finally, some variables are good predictors of population growth even though they are difficult to measure: a vibrant lifestyle, an openness to entrepreneurs, a good climate, and so on.

This study focuses on "metropolitan counties" as defined by the Office of Management and Budget (OMB) in 2000. These are counties that belong to OMB-defined metropolitan areas that are major population centers. We limit ourselves to the continental United States, excluding Hawaii, Alaska and Puerto Rico. The 804 counties that we examine in our analysis represent 76 percent of all U.S. population in 2000.

The U.S. population has grown by about 10 percent every decade since 1970, and is predicted to continue doing so through 2020 (Figure 1). In the 2000, the population was estimated to be 282 million, and by 2020 it is expected to grow to 336 million. This means that between 2000 and 2020 the population will increase by a staggering 53.7 million. Where will these people live? Our statistical model addresses this question by analyzing county population growth across all metropolitan counties between 1980 and 2000. The focus is on long-term urban population growth.

Whereas most of the previous research on city growth has focused on percentage of population growth, we use a more relevant growth metric that recognizes that in very small counties, growth rates can be extremely high although the actual number of new people moving into the area is very small. We calculate the share of county population as a percentage of *total* U.S. population, and use the change in that share between 1980 and 2000 in our statistical analysis. To the best of our knowledge, this is the first time this particular variable has been used in the context of long-term growth. Since this measure is relative to the total size of the population, we combine our regression results with

Figure 1: U.S. population, 1970 to 2020



Census projections of future population growth to forecast local growth. Table I shows the results of a regression analysis of the change in total population share from 1980 to 2000 as a function of a number of county characteristics in 1980.

The dependent variable in the regressions is multiplied by 10,000 so that our regression coefficients do not display an inordinate number of decimal positions. Table I presents the results, including a variable that has high forecasting power: the "population market share capture" of the county from 1970 to 1980 (growth in the recent past). Thus, we find that recent past growth forecasts future growth. This regression accounts for 75 percent of the variability in county growth.

Our model is rich in specification, including 26 local economic, demographic, political, climatologic, geological, and housing variables. We will focus primarily on describing the impacts of the variables that are most statistically significant, although we will comment on a few variables that we expected to be more important. We begin by noting the importance of recent growth. Our results confirm this result of previous research that used data from different countries, and different geographic definitions (for example, city level forecasts), population growth definitions, and time periods. Everyone (including us) finds that, even after controlling for a variety of other variables, population growth is extremely persistent; absent other information, the best way to predict a county's population growth is to look at how much it grew in the past decade. It appears that the forces that shape an area's attractiveness have persistent impacts.

Immigration has become a primary driver of population growth. In the 1960s, most Americans claimed

European or African ancestry, and the number of foreign-born households was relatively low. Between now and 2050, immigrants and their offspring will account for about half of the total growth in U.S. population, and Americans of European and African origin will become *primi inter pares* in a country of Mexican-

Table I: U.S. metropolitan county growth model

	US Population Share Change 1980-2000
Share foreign-born in 1980	12.621*
% with bachelor's degree or higher in 1980	-0.132
% with less than a high school diploma in 1980	-0.188
% white in 1980	0.184
% over 65 years old in 1980	-10.873*
% under 25 years old in 1980	-9.035*
ncome tax per capita / Income per capita in 1980	34.189
Sales tax per capita / Income per capita in 1980	-23.86*
Log population density in 1980	0.512
Log density squared in 1980 -0.050	
Presidential election vote over 55% Republican in 1980	-0.193
Presidential election vote below 45% Republican in 1980	0.317*
All state senators Republican in 1980	-0.407
All state senators Democrat in 1980	-0.195
Log average precipitation	-0.681
Log average snowfall	-0.238
Log January average temperature	0.282
Log average January sun days	1.101*
Share housing older than 30 years	3.040*
Share housing newer than 11 years	5.206*
=1 if county borders an ocean or a Great Lake	-0.684*
Hills or mountains in county	-0.079
Northeast	-0.349
South	-0.357
West	0.351*
U.S. population share change 1970-1980	1.026*
Constant	-2.011
Observations	805.00
R-squared	0.76
Robust standard errors in parentheses	
*Significant at 10%	

Americans, Chinese-Americans, Korean-Americans, Indian-Americans, Filipino-Americans, and many others.

It is obvious that immigration will be a key element of county-level growth, but can we forecast where immigrants will settle? The answer to the question is a qualified yes. Immigrants tend to concentrate wherever previous immigrants have settled. Kinship ties, shared language, and the existence of common amenities and public goods make "immigrant enclaves" attractive to subsequent immigrants. Thus, a county's share of the foreign-born in 1980 was an important predictor of population growth from 1980 to 2000. And so it will be in the future.

Previous research by Edward Glaeser and Albert Saiz has shown that during the last century local educational achievement has been an important explanatory factor for population growth in cities. In short, smart cities grow faster. We find the same to be true at the county level. Specifically, counties with lower shares of high-school dropouts grew more quickly. However, education is a weaker predictor of county growth than of metropolitan growth, especially when one includes previous growth trends. This means that education has an important long-run impact, but that short-term changes in education levels are not powerful predictors of short-term changes in growth patterns. Metropolitan areas with highly educated individuals are more productive, allowing them to pay higher wages, which attracts population inflows. On the other hand, highly educated populations are typically more effective in curtailing local residential development at the local level, and may be a counter-influence on population growth.

The age distribution of the population is another predictor of future growth; that is, very young and very old populations tend to grow more slowly. Specifically, we find that population growth is negatively related to both the share of people younger than 25 and the share of people older than 65, reflecting that households in their prime earning years are typically older than 25, and younger than 65. Moreover, areas with a major proportion of older residents are less attractive to younger generations.

Tax rates are not uniform for different municipalities. We use data from the Census of Governments on local taxation (municipal and county) to create two measures of fiscal burden: income taxes and the sales tax. Furthermore, since different individuals typically face different tax rates depending on their location, income, and type of business, we use total tax revenues per capita divided by income per capita to measure a county's tax burden. A high degree of taxation may make a county less attractive to taxpayers and entrepreneurs. On the other hand, higher tax revenues may be associ-

ated with a better public schools and public services. Our statistical analysis reveals that the local sales tax burden is generally associated with slower population growth. Since all tax measures are strongly associated, we tentatively conclude that higher taxation discourages local growth. We suspect, however, that the efficiency of local government in spending sensibly and government efficiency in providing key public services are also important. Determining the factors that are associated with local mismanagement or good government remains a topic for future research.

We find that population density also matters, although in a complex way. Counties with very low densities tended to grow more slowly. But above a certain threshold, *higher* density is associated with slower growth. This threshold population density corresponds with a median county density of 60 persons per square mile. Therefore, density increases growth up to about 60 people per square mile, after which amenity levels drop and population growth diminishes.

The impact of demography on politics is a hotly debated topic by political scientists and media pundits. Observations on the growth of "red" states and the demise of "blue" states are commonplace. If we run our analysis with politics as the only variable, we find that Republican-dominated counties (based upon presidential and senatorial election data from early 1980s) do tend to grow faster. However, this can be explained by other variables. Republican-dominated counties were already rapidly growing, so it is possible that the new rapidly growing areas are attracting individuals with a more libertarian or conservative outlook. Moreover, many of the metropolitan areas in "red" states have geographic attributes that are associated with growth. When we control for these other factors, we find that political orientation is not strongly associated with growth. There is a weak link, however, between the 1980 presidential results and subsequent county growth. Almost half of the counties in our sample of 804 metropolitan counties had between 45 percent and 55 percent support for Ronald Reagan. A number of counties were more polarized, with more than a 55 percent share for either Reagan (about 40 percent) or Carter (about 12 percent). These strongly Democratic counties grew significantly faster between 1980 and 2000, controlling for a host of other variables. It is unclear why.

Some of the most powerful predictors of county population growth during our sample years are weather-related. Briefly put, Americans are rapidly leaving cold, damp, and snowy areas for sunnier and drier climates. Both a West regional indicator and "good weather" variables are

strong predictors of population growth. All of the weather variables (snowfall, precipitation, temperature, and sun days) are interrelated, with the number of sun days in January being the variable that comes out more strongly in our analysis. In short, people are moving to "the bright side." We also speculate that there may be a geopolitical economic shift from the Atlantic to the Pacific area, motivated by changing trade links and the emergence of China and India as global powerhouses. The impact of globalization on population growth remains an understudied topic for future exploration.

The age distribution of the county's housing stock also has some predictive power, confirming previous research by Edward Glaeser and Joseph Gyourko. Areas with large amounts of new housing have three important attributes that favor growth: they are favorably inclined to development; they have a large recent demand relative to pre-existing housing; and their housing stock is more in line with modern housing preferences. Interestingly, there is some (weak) evidence that having a very old housing stock is mildly correlated with relatively faster growth than would otherwise be the case. The very old housing stock that has survived was generally built for high-income families, and hence are of good quality. Since declining cities such as New Orleans, Detroit, and Buffalo have massive and valuable housing stocks, reduced housing demand translated into lower housing prices and made these cities a bit less unattractive. All things equal, areas with older housing stocks experienced slower decline than expected.

Counties adjacent to the coastlines of the Atlantic, Pacific, and Great Lakes tend to grow more slowly than inland counties. Coastal areas in the west and northeast often have restrictive zoning, which raises prices and discourages growth. However, there appears to be no relationship between the altitude of a county and its growth. This is a somewhat surprising finding, as mountain areas are generally popular.

A LOOK AT 2020

Combining county characteristics with our statistical growth model and Census projections of total population in 2020, we obtain county and MSA population forecasts for 2020. Table II details the counties that are the biggest projected population losers. Also displayed are their MSAs, our estimate of population losses (expressed in both levels and as a percentage of the 2000 population), our estimate of population levels in 2020, and previous population gains or losses from 1980 to 2000. Because we used the change in the shares of the total population, five counties display neg-

Table II: Largest population loss counties, 2020 forecast

Rank	County Name	Metropolitan Area	Population Loss 2020-2000	Forecast: Population in 2020	Loss as Percentage of 2000 Population	Population Loss/Gain 2000-1980
1	Baltimore	Baltimore, Md.	-91,607	556,950	-14.1%	-137,751
2	Oswego	Syracuse, N.Y.	-62,809	59,728	-51.3%	8,762
3	Herkimer	Utica-Rome, N.Y.	-59,174	5,217	-91.9%	-2,272
4	Cayuga	Syracuse, N.Y.	-56,550	25,388	-69.0%	1,986
5	Chautauqua	Jamestown, N.Y.	-49,891	89,698	-35.7%	-7,372
6	Allegheny	Pittsburgh, Pa.	-48,588	1,231,395	-3.8%	-168,271
7	Cambria	Johnstown, Pa.	-48,233	103,997	-31.7%	-30,756
8	St. Charles	New Orleans, La.	-48,196	0	-100%	10,713
9	Terrebonne	Houma, La.	-47,720	56,804	-45.7%	9,541
10	St. Bernard	New Orleans, La.	-47,531	19,484	-70.9%	2,620
11	Lafourche	Houma, La.	-41,959	47,996	-46.6%	6,621
12	Erie	Buffalo-Niagara Falls, N.Y.	-40,544	908,823	-4.3%	-64,847
13	St. John the Baptist	New Orleans, La.	-39,592	3,547	-91.8%	10,852
14	Grand Forks	Grand Forks, N.D.-Minn.	-38,635	27,233	-58.7%	-403
15	Erie	Erie, Pa.	-38,486	242,201	-13.7%	644
16	Ashtabula	Cleveland-Lorain-Elyria, Ohio	-37,191	65,579	-36.2%	-1,249
17	Somerset	Johnstown, Pa.	-36,894	43,131	-46.1%	-1,261
18	Oneida	Utica-Rome, N.Y.	-36,758	198,450	-15.6%	-18,352
19	Madison	Syracuse, N.Y.	-36,066	33,378	-51.9%	4,187
20	Belmont	Wheeling, W.V.-Ohio	-34,829	35,290	-49.7%	-12,345
21	St. Louis	St. Louis, Mo.-Ill.	-33,793	312,975	-9.7%	-104,344
22	Orleans	Rochester, N.Y.	-33,150	11,028	-75.0%	5,652
23	Acadia	Lafayette, La.	-32,338	26,489	-55.0%	2,196
24	Mercer	Sharon, Pa.	-32,073	88,113	-26.7%	-8,019
25	Ouachita	Monroe, La.	-31,782	115,441	-21.6%	7,569
26	Schoharie	Albany-Schenectady-Troy, N.Y.	-30,077	1,516	-95.2%	1,886
27	Webster	Shreveport-Bossier City, La.	-29,886	11,849	-71.6%	-1,923
28	Rapides	Alexandria, La.	-28,461	97,952	-22.5%	-9,009
29	Douglas	Duluth-Superior, Minn.-Wisc.	-28,419	14,988	-65.5%	-1,156
30	Livingston	Rochester, N.Y.	-27,988	36,395	-43.5%	7,298
31	Plaquemines	New Orleans, La.	-26,746	0	-100%	645
32	Tioga	Binghamton, N.Y.	-26,731	25,021	-51.7%	1,821
33	Ohio	Wheeling, W.V.-Ohio	-26,563	20,771	-56.1%	-14,010
34	Columbia	Scranton-Wilkes-Barre-Hazleton, Pa.	-26,520	37,585	-41.4%	2,036
35	Strafford	Boston-Worcester-Lawrence, Mass.-N.H.	-26,439	86,241	-23.5%	26,746
36	Carroll	Canton-Massillon, Ohio	-26,412	2,467	-91.5%	3,288
37	Chemung	Elmira, N.Y.	-25,628	65,413	-28.1%	-6,402
38	Niagara	Buffalo-Niagara Falls, N.Y.	-24,756	194,829	-11.3%	-7,476
39	Calhoun	Anniston, Ala.	-24,576	86,764	-22.1%	-8,676
40	Wayne	Rochester, N.Y.	-24,492	69,276	-26.1%	8,996
41	Onondaga	Syracuse, N.Y.	-24,414	434,030	-5.3%	-5,288
42	Morton	Bismarck, N.D.	-24,052	1,273	-95.0%	99
43	Wayne	Huntington-Ashland, W.V.-Ky.-Ohio	-23,953	18,958	-55.8%	-3,136
44	Polk	Grand Forks, N.D.-Minn.	-23,628	7,752	-75.3%	-3,423
45	Genesee	Rochester, N.Y.	-23,423	36,901	-38.8%	828
46	Lawrence	Huntington-Ashland, W.V.-Ky.-Ohio	-21,975	40,308	-35.3%	-1,459
47	Sequoyah	Fort Smith, Ark.-Okla.	-21,946	17,114	-56.2%	8,282
48	Broome	Binghamton, N.Y.	-21,465	178,829	-10.7%	-13,414
49	Philadelphia	Philadelphia, Pa.-N.J.	-21,309	1,492,375	-1.4%	-171,750
50	St. James	New Orleans, La.	-21,194	0	-100%	-370

Table III: Largest population gain counties, 2020 forecast

Rank	County Name	Metropolitan Area	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
1	Maricopa	Phoenix-Mesa, Ariz.	1,547,026	4,643,369	50.0%	1,575,503
2	Los Angeles	Los Angeles-Long Beach, Calif.	1,414,155	11,000,000	14.8%	2,038,470
3	Clark	Las Vegas, Nev.-Ariz.	1,120,793	2,513,962	80.4%	923,984
4	Harris	Houston, Texas	958,645	4,373,626	28.1%	976,442
5	Orange	Orange County, Calif.	853,954	3,710,400	29.9%	908,379
6	Miami-Dade	Miami, Fla.	722,061	2,982,303	31.9%	617,110
7	Riverside	Riverside-San Bernardino, Calif.	681,484	2,241,310	43.7%	890,353
8	Broward	Fort Lauderdale, Fla.	677,134	2,309,574	41.5%	606,378
9	Dallas	Dallas, Texas	642,464	2,867,806	28.9%	659,694
10	San Diego	San Diego, Calif.	634,780	3,459,858	22.5%	949,458
11	Queens	New York, N.Y.	610,051	2,840,947	27.3%	336,600
12	Cook	Chicago, Ill.	604,597	5,981,749	11.2%	128,274
13	San Bernardino	Riverside-San Bernardino, Calif.	569,074	2,288,002	33.1%	815,972
14	Santa Clara	San Jose, Calif.	497,900	2,184,374	29.5%	384,959
15	Tarrant	Fort Worth-Arlington, Texas	480,496	1,934,957	33.0%	586,130
16	Palm Beach	West Palm Beach-Boca Raton, Fla.	466,127	1,601,782	41.0%	549,913
17	Gwinnett	Atlanta, Ga.	443,177	1,039,634	74.3%	427,113
18	Collin	Dallas, Texas	438,551	938,606	87.7%	353,516
19	Orange	Orlando, Fla.	433,910	1,336,228	48.1%	427,576
20	Travis	Austin-San Marcos, Texas	424,739	1,244,583	51.8%	397,846
21	King	Seattle-Bellevue-Everett, Wash.	424,664	2,163,580	24.4%	462,391
22	Kings	New York, N.Y.	413,431	2,879,690	16.8%	232,473
23	Alameda	Oakland, Calif.	412,117	1,862,524	28.4%	340,476
24	Hidalgo	McAllen-Edinburg-Mission, Texas	396,458	970,381	69.1%	287,383
25	Wake	Raleigh-Durham-Chapel Hill, N.C.	392,122	1,025,270	61.9%	329,792
26	Pima	Tucson, Ariz.	380,615	1,229,259	44.8%	312,864
27	Bexar	San Antonio, Texas	374,932	1,772,749	26.8%	402,676
28	Contra Costa	Oakland, Calif.	358,894	1,312,457	37.6%	294,780
29	Mecklenburg	Charlotte-Gastonia-Rock Hill, N.C.-S.C.	349,854	1,050,071	50.0%	293,722
30	Fulton	Atlanta, Ga.	331,074	1,148,117	40.5%	224,253
31	Montgomery	Washington, D.C.-Md.-Va.-W.V.	326,464	1,204,245	37.2%	295,728
32	Hillsborough	Tampa-St. Petersburg-Clearwater, Fla.	321,649	1,324,731	32.1%	351,249
33	San Francisco	San Francisco, Calif.	315,630	1,092,232	40.6%	95,772
34	Fresno	Fresno, Calif.	315,146	1,117,160	39.3%	284,335
35	Cobb	Atlanta, Ga.	307,450	920,222	50.2%	312,184
36	Sacramento	Sacramento, Calif.	302,821	1,532,860	24.6%	441,764
37	Denton	Dallas, Texas	301,085	739,896	68.6%	293,360
38	Kern	Bakersfield, Calif.	297,696	961,370	44.9%	257,267
39	Bronx	New York, N.Y.	297,217	1,631,465	22.3%	165,845
40	San Mateo	San Francisco, Calif.	292,084	1,000,422	41.2%	119,896
41	El Paso	El Paso, Texas	285,652	967,352	41.9%	197,989
42	Salt Lake	Salt Lake City-Ogden, Utah	284,412	1,185,036	31.6%	276,617
43	Fort Bend	Houston, Texas	283,281	642,237	78.9%	225,689
44	Will	Chicago, Ill.	279,533	787,760	55.0%	183,253
45	Douglas	Denver, Colo.	277,818	458,222	154.0%	154,785
46	Ventura	Ventura, Calif.	269,157	1,025,782	35.6%	223,798
47	San Joaquin	Stockton-Lodi, Calif.	268,931	837,094	47.3%	217,859
48	Washington	Portland-Vancouver, Ore.-Wash.	266,919	715,361	59.5%	200,680
49	DeKalb	Atlanta, Ga.	262,934	931,246	39.3%	184,219
50	Washoe	Reno, Nev.	259,487	600,804	76.0%	145,945

ative population predictions for 2020, which we replace by zero. Our expectations for these counties are bleak, notwithstanding the fact that we do not know exactly how many people will actually be living there.

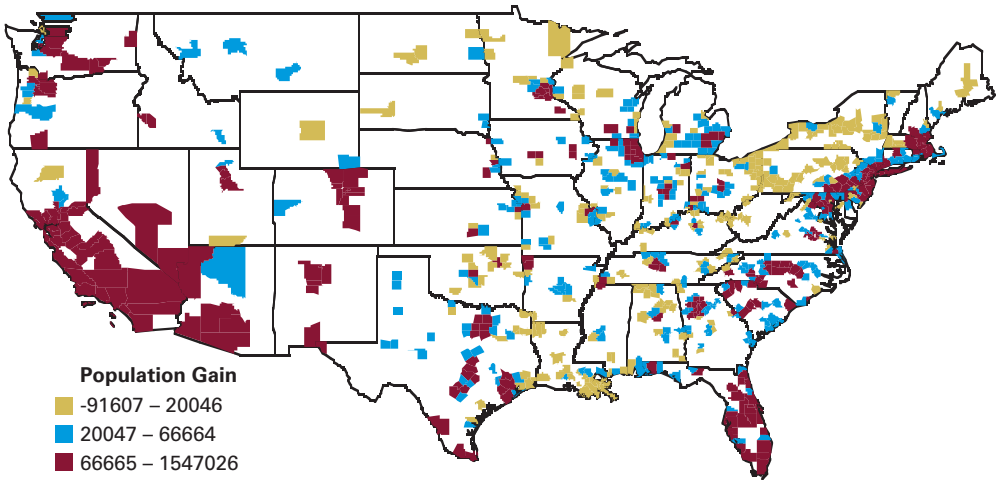
Baltimore has the dubious honor of being ranked the biggest loser by 2020. That city (which is also a county) is forecast to lose about 100,000 residents, or about 15 percent of its year 2000 population. Most other counties that we expect to decline are in the Rustbelt.

Interestingly, 10 percent (five out of 50) of the bottom counties are in the New Orleans metropolitan area—and this is without factoring in the impact of Katrina. In other words, New Orleans was the rare case of a Sunbelt area that was losing population like a Rustbelt area. According to research by Donald Davis and David Weinstein, who used data from the bombing of Japanese cities during World War II, the impact of major disasters on a city's population growth tends to dissipate over time. Remarkably, Davis and Weinstein found that the cities that lost more population during the war grew faster afterwards, and their populations after 20 years were at the point that one would have predicted by looking at pre-war growth trends. Thus, we are very pessimistic about New Orleans' growth over the next 20 years, irrespective of what aid flows to this area.

Table III displays the "winners" in terms of forecasted county growth. Big counties in major metropolitan areas tend to dominate. Insofar as the U.S. population is growing, and the share of population captured by a county is not declining too quickly, big counties are expected to grow because of general population growth trends. However, Table III also captures the massive expected growth of relatively new areas, such as Maricopa County, Ariz., the top county in terms of expected population growth in 2020. It is apparent that most of the big growth counties are in the West, the Sunbelt, and the Southern I-85 corridor linking Atlanta with Raleigh, N.C. Our results reveal that prospective real estate developers had better buy a good pair of sunglasses and some sunblock.

The map (Figure 2) displays the expected population growth for all metropolitan counties. Since we are measuring overall population growth numbers, rather than percentage growth, the Northeastern metropolitan counties are shown to expect considerable growth in numbers even if percentage growth there will be relatively slow. Otherwise, growth will be concentrated in California, Arizona, New Mexico, Florida, the greater Seattle metropolitan area, Salt Lake City, the Denver North-South corridor, Texas, the Atlanta-Charlotte-Raleigh corridor, and the Chicago-Madison region.

Figure 2: Expected population growth in metropolitan counties, 2000-2020



Lastly, Table IV displays our population growth forecasts for all U.S. metropolitan areas used in our analysis, based upon our county-level forecasts and year 2000 MSA definitions. In this case, we rank metropolitan areas according to their expected population gains (or losses). A small number of major metropolitan areas are forecasted to lose population by 2020: New Orleans, Syracuse, Rochester, Buffalo, Pittsburgh, and Youngstown-Warren.

The central cities of many other Rustbelt MSAs will continue to lose population. However, modest gains in their suburbs will offset further population decline from their MSAs. Notwithstanding mild positive metropolitan area growth, Cleveland, Philadelphia, Detroit, Milwaukee, New Haven, and Saint Louis are all expected to lag behind general U.S. population growth patterns through 2020.

Atlanta, Chicago, Phoenix, New York, Dallas, Houston, Los Angeles, Orlando, and Denver are all predicted to experience substantial population inflows. However, if we look at *percentage growth* in the biggest metropolitan areas, the forecasts single out Las Vegas, driven by good weather, gambling, tourism and an easy lifestyle. The group of major metropolitan areas with very high expected *growth rates* includes Phoenix, Dallas, Houston, Denver, Orlando, Charlotte, Austin, and Raleigh-Durham-Chapel Hill, all of them in the Sunbelt.

Table IV: Forecasts for metropolitan areas, 2020

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
5560	New Orleans, La. (MSA)	-214,098	1,122,720	-16.02%	28,407
8160	Syracuse, N.Y. (MSA)	-179,839	552,524	-24.56%	9,647
8680	Utica-Rome, N.Y. (MSA)	-95,932	203,667	-32.02%	-20,624
6840	Rochester, N.Y. (MSA)	-91,710	1,007,018	-8.35%	66,504
3350	Houma, La. (MSA)	-89,678	104,801	-46.11%	16,162
3400	Huntington-Ashland, W.V.-Ky.-Ohio (MSA)	-88,634	226,593	-28.12%	-21,159
3680	Johnstown, Pa. (MSA)	-85,127	147,128	-36.65%	-32,017
9000	Wheeling, W.V.-Ohio (MSA)	-73,815	79,035	-48.29%	-32,490
7560	Scranton-Wilkes-Barre-Hazleton, Pa. (MSA)	-72,260	551,352	-11.59%	-35,478
1280	Buffalo-Niagara Falls, N.Y. (MSA)	-65,300	1,103,652	-5.59%	-72,323
2985	Grand Forks, N.D.-Minn. (MSA)	-62,264	34,984	-64.03%	-3,826
6280	Pittsburgh, Pa. (MSA)	-61,107	2,295,862	-2.59%	-211,721
3610	Jamestown, N.Y. (MSA)	-49,891	89,698	-35.74%	-7,372
960	Binghamton, N.Y. (MSA)	-48,197	203,849	-19.12%	-11,593
7000	St. Joseph, Mo. (MSA)	-41,008	61,579	-39.97%	839
2240	Duluth-Superior, Minn.-Wisc. (MSA)	-39,580	204,258	-16.23%	-22,633
2360	Erie, Pa. (MSA)	-38,486	242,201	-13.71%	644
2975	Glens Falls, N.Y. (MSA)	-32,592	91,755	-26.21%	14,622
7610	Sharon, Pa. (MSA)	-32,073	88,113	-26.69%	-8,019
5200	Monroe, La. (MSA)	-31,782	115,441	-21.59%	7,569
3880	Lafayette, La. (MSA)	-28,768	357,055	-7.46%	52,901
220	Alexandria, La. (MSA)	-28,461	97,952	-22.51%	-9,009
2335	Elmira, N.Y. (MSA)	-25,628	65,413	-28.15%	-6,402
3580	Jackson, Tenn. (MSA)	-24,707	82,844	-22.97%	19,997
450	Anniston, Ala. (MSA)	-24,576	86,764	-22.07%	-8,676
7680	Shreveport-Bossier City, La. (MSA)	-23,940	368,342	-6.10%	14,338
8080	Steubenville-Weirton, Ohio-W.V. (MSA)	-20,951	110,720	-15.91%	-31,674
1010	Bismarck, N.D. (MSA)	-20,688	74,143	-21.82%	14,629
2340	Enid, Okla. (MSA)	-18,395	39,277	-31.90%	-5,507
1320	Canton-Massillon, Ohio (MSA)	-16,106	390,848	-3.96%	2,589
280	Altoona, Pa. (MSA)	-15,994	113,050	-12.39%	-7,399
6020	Parkersburg-Marietta, W.V.-Ohio (MSA)	-15,946	135,126	-10.56%	-6,776
1480	Charleston, W.V. (MSA)	-14,445	236,971	-5.75%	-18,306
2180	Dothan, Ala. (MSA)	-11,659	126,386	-8.45%	15,067
9320	Youngstown-Warren, Ohio (MSA)	-10,774	583,313	-1.81%	-49,736
1900	Cumberland, Md.-W.V. (MSA)	-10,504	91,339	-10.31%	-6,025
733	Bangor, Maine (NECMA)	-9,402	135,483	-6.49%	7,657
6240	Pine Bluff, Ark. (MSA)	-7,693	76,526	-9.13%	-6,503
2650	Florence, Ala. (MSA)	-7,273	135,726	-5.09%	7,677
4800	Mansfield, Ohio (MSA)	-6,860	168,820	-3.90%	-5,510
5990	Owensboro, Ky. (MSA)	-3,181	88,423	-3.47%	5,512
6323	Pittsfield, Mass. (NECMA)	-2,750	132,059	-2.04%	-10,272
870	Benton Harbor, Mich. (MSA)	-2,459	160,152	-1.51%	-8,677
8050	State College, Pa. (MSA)	-1,221	134,758	-0.90%	22,848
4640	Lynchburg, Va. (MSA)	-408	31,486	-1.28%	2,766
840	Beaumont-Port Arthur, Texas (MSA)	-392	384,345	-0.10%	9,940

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
1350	Casper, Wyo. (MSA)	703	67,253	1.06%	-5,973
6660	Rapid City, S.D. (MSA)	788	89,559	0.89%	18,287
2030	Decatur, Ala. (MSA)	1,420	147,481	0.97%	25,626
9140	Williamsport, Pa. (MSA)	1,433	121,368	1.19%	1,664
2880	Gadsden, Ala. (MSA)	1,475	104,775	1.43%	188
2290	Eau Claire, Wisc. (MSA)	1,881	150,490	1.27%	17,204
3605	Jacksonville, N.C. (MSA)	1,881	152,104	1.25%	36,708
4243	Lewiston-Auburn, Maine (NECMA)	1,882	105,747	1.81%	4,334
160	Albany-Schenectady-Troy, N.Y. (MSA)	2,442	878,789	0.28%	51,127
3960	Lake Charles, La. (MSA)	4,423	187,943	2.41%	15,466
8600	Tuscaloosa, Ala. (MSA)	5,708	170,773	3.46%	27,234
2620	Flagstaff, Ariz.-Utah (MSA)	5,737	128,455	4.67%	43,101
2040	Decatur, Ill. (MSA)	7,833	122,316	6.84%	-16,722
6690	Redding, Calif. (MSA)	8,631	172,457	5.27%	47,236
3870	La Crosse, Wisc.-Minn. (MSA)	8,783	135,790	6.92%	17,311
3285	Hattiesburg, Miss. (MSA)	9,167	121,271	8.18%	21,665
8360	Texarkana, Texas-Texarkana Ark. (MSA)	9,616	139,348	7.41%	16,353
4420	Longview-Marshall, Texas (MSA)	10,000	218,747	4.79%	27,002
5280	Muncie, Ind. (MSA)	11,638	130,312	9.81%	-9,720
9080	Wichita Falls, Texas (MSA)	12,167	152,500	8.67%	11,442
7620	Sheboygan, Wisc. (MSA)	13,685	126,439	12.14%	11,847
8003	Springfield, Mass. (NECMA)	17,322	626,271	2.84%	26,257
4200	Lawton, Okla. (MSA)	18,354	132,918	16.02%	1,643
8940	Wausau, Wisc. (MSA)	18,751	144,653	14.89%	14,656
1890	Corvallis, Ore. (MSA)	19,450	97,609	24.88%	9,688
8750	Victoria, Texas (MSA)	19,492	103,509	23.20%	14,640
3700	Jonesboro, Ark. (MSA)	20,235	102,721	24.53%	19,182
6340	Pocatello, Idaho (MSA)	20,306	95,888	26.87%	9,932
6980	St. Cloud, Minn. (MSA)	20,384	188,460	12.13%	34,294
2520	Fargo-Moorhead, N.D.-Minn. (MSA)	20,567	195,253	11.77%	36,707
920	Biloxi-Gulfport-Pascagoula, Miss. (MSA)	21,056	385,880	5.77%	63,706
6800	Roanoke, Va. (MSA)	21,649	52,215	70.83%	7,255
1560	Chattanooga, Tenn.-Ga. (MSA)	21,785	487,506	4.68%	46,910
860	Bellingham, Wash. (MSA)	22,245	189,847	13.27%	60,380
5523	New London-Norwich, Conn. (NECMA)	22,822	282,282	8.80%	20,232
4320	Lima, Ohio (MSA)	24,528	179,689	15.81%	308
2190	Dover, Del. (MSA)	25,697	152,793	20.22%	28,816
40	Abilene, Texas (MSA)	25,700	152,162	20.32%	14,645
2200	Dubuque, Iowa (MSA)	26,027	115,285	29.16%	-4,443
8920	Waterloo-Cedar Falls, Iowa (MSA)	26,620	154,522	20.81%	-10,111
7200	San Angelo, Texas (MSA)	27,165	131,107	26.14%	18,619
1680	Cleveland-Lorain-Elyria, Ohio (PMSA)	27,723	2,278,531	1.23%	-25,649
3710	Joplin, Mo. (MSA)	27,996	185,698	17.75%	29,857
7640	Sherman-Denison, Texas (MSA)	28,292	139,304	25.49%	20,894
6403	Portland, Maine (NECMA)	28,451	294,410	10.70%	49,563
8440	Topeka, Kan. (MSA)	28,967	199,014	17.03%	14,913

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
6600	Racine, Wisc. (PMSA)	29,126	218,111	15.41%	16,006
8140	Sumter, S.C. (MSA)	29,953	134,694	28.60%	16,005
1580	Cheyenne, Wyo. (MSA)	30,914	112,623	37.83%	12,715
3180	Hagerstown, Md. (PMSA)	32,076	164,188	24.28%	19,108
5140	Missoula, Mont. (MSA)	32,153	128,235	33.46%	19,967
8320	Terre Haute, Ind. (MSA)	32,857	181,911	22.04%	-6,247
1400	Champaign-Urbana, Ill. (MSA)	33,029	212,994	18.35%	11,085
8760	Vineland-Millville-Bridgeton, N.J. (PMSA)	33,559	179,933	22.93%	13,286
580	Auburn-Opelika, Ala. (MSA)	33,587	149,045	29.09%	38,848
2720	Fort Smith, Ark.-Okla. (MSA)	34,256	242,220	16.47%	44,880
3740	Kankakee, Ill. (PMSA)	34,494	138,371	33.21%	991
3040	Great Falls, Mont. (MSA)	34,777	114,960	43.37%	-444
1660	Clarksville-Hopkinsville, Tenn.-Ky. (MSA)	35,214	242,826	16.96%	57,025
8400	Toledo, Ohio (MSA)	35,767	654,012	5.79%	1,080
1740	Columbia, Mo. (MSA)	36,451	172,276	26.84%	35,049
6015	Panama City, Fla. (MSA)	36,533	184,776	24.64%	49,925
3520	Jackson, Mich. (MSA)	36,797	195,527	23.18%	7,176
6580	Punta Gorda, Fla. (MSA)	36,808	179,076	25.87%	82,796
743	Barnstable-Yarmouth, Mass. (NECMA)	38,089	261,331	17.06%	74,395
3850	Kokomo, Ind. (MSA)	38,952	140,478	38.37%	-2,033
7800	South Bend, Ind. (MSA)	40,572	306,433	15.26%	24,509
3800	Kenosha, Wisc. (PMSA)	41,300	191,369	27.52%	27,126
1880	Corpus Christi, Texas (MSA)	41,498	422,188	10.90%	52,875
2281	Dutchess County, N.Y. (PMSA)	42,223	323,059	15.03%	35,499
1020	Bloomington, Ind. (MSA)	42,526	163,219	35.23%	21,486
4600	Lubbock, Texas (MSA)	42,590	285,480	17.53%	30,773
5910	Olympia, Wash. (PMSA)	42,768	251,132	20.53%	83,039
1260	Bryan-College Station, Texas (MSA)	43,073	195,875	28.19%	57,397
4150	Lawrence, Kan. (MSA)	44,253	144,435	44.17%	32,137
2980	Goldsboro, N.C. (MSA)	44,584	157,914	39.34%	16,016
880	Billings, Mont. (MSA)	45,375	174,928	35.02%	20,977
5160	Mobile, Ala. (MSA)	46,107	587,572	8.52%	96,328
6960	Saginaw-Bay City-Midland, Mich. (MSA)	47,027	450,122	11.67%	-18,197
6120	Peoria-Pekin, Ill. (MSA)	48,334	395,520	13.92%	-18,716
2400	Eugene-Springfield, Ore. (MSA)	48,683	372,096	15.05%	47,705
8800	Waco, Texas (MSA)	48,814	262,815	22.81%	42,547
2995	Grand Junction, Colo. (MSA)	49,649	167,124	42.26%	34,679
3620	Janesville-Beloit, Wisc. (MSA)	49,866	202,404	32.69%	13,269
3720	Kalamazoo-Battle Creek, Mich. (MSA)	50,234	503,553	11.08%	31,992
1040	Bloomington-Normal, Ill. (MSA)	50,680	201,556	33.59%	31,522
8640	Tyler, Texas (MSA)	51,100	226,508	29.13%	46,092
1620	Chico-Paradise, Calif. (MSA)	51,120	254,890	25.09%	58,942
2640	Flint, Mich. (PMSA)	51,640	488,593	11.82%	-12,178
7880	Springfield, Ill. (MSA)	55,160	256,724	27.37%	13,784
3660	Johnson City-Kingsport-Bristol, Tenn.-Va. (MSA)	56,740	468,693	13.77%	42,787
2655	Florence, S.C. (MSA)	59,507	185,300	47.31%	15,272

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
2750	Fort Walton Beach, Fla. (MSA)	60,088	231,048	35.15%	60,281
3080	Green Bay, Wisc. (MSA)	60,104	287,361	26.45%	51,522
3150	Greenville, N.C. (MSA)	60,770	194,859	45.32%	43,509
1303	Burlington, Vt. (NECMA)	60,991	260,487	30.57%	44,066
2960	Gary, Ind. (PMSA)	61,366	693,187	9.71%	-9,798
240	Allentown-Bethlehem-Easton, Pa. (MSA)	61,877	700,751	9.69%	87,073
760	Baton Rouge, La. (MSA)	64,219	668,478	10.63%	107,056
1150	Bremerton, Wash. (PMSA)	64,615	297,141	27.79%	83,764
2920	Galveston-Texas City, Texas (PMSA)	66,336	317,061	26.46%	53,697
3500	Iowa City, Iowa (MSA)	67,275	178,637	60.41%	29,213
6680	Reading, Pa. (MSA)	67,888	442,355	18.13%	61,451
80	Akron, Ohio (PMSA)	69,506	765,426	9.99%	35,586
5240	Montgomery, Ala. (MSA)	69,693	403,185	20.90%	60,187
6820	Rochester, Minn. (MSA)	69,929	194,773	56.01%	32,491
3240	Harrisburg-Lebanon-Carlisle, Pa. (MSA)	73,652	703,441	11.69%	72,233
2000	Dayton-Springfield, Ohio (MSA)	73,749	1,024,036	7.76%	8,136
560	Atlantic-Cape May, N.J. (PMSA)	75,220	430,570	21.17%	78,030
120	Albany, Ga. (MSA)	75,257	196,045	62.31%	7,942
6895	Rocky Mount, N.C. (MSA)	75,297	218,350	52.64%	19,590
2440	Evansville-Henderson, Ind.-Ky. (MSA)	75,351	371,650	25.43%	19,832
1540	Charlottesville, Va. (MSA)	75,660	111,255	212.56%	17,614
9280	York, Pa. (MSA)	76,931	459,651	20.10%	69,121
3440	Huntsville, Ala. (MSA)	77,994	421,489	22.71%	99,875
2330	Elkhart-Goshen, Ind. (MSA)	78,776	262,283	42.93%	46,215
2560	Fayetteville, N.C. (MSA)	79,882	382,720	26.38%	54,942
1360	Cedar Rapids, Iowa (MSA)	80,226	272,448	41.74%	22,572
4040	Lansing-East Lansing, Mich. (MSA)	80,470	528,894	17.95%	28,315
3200	Hamilton-Middletown, Ohio (PMSA)	80,717	414,402	24.19%	74,153
6560	Pueblo, Colo. (MSA)	81,719	223,557	57.61%	15,826
5660	Newburgh, N.Y.-Pa. (PMSA)	82,869	472,546	21.27%	110,789
7920	Springfield, Mo. (MSA)	84,046	410,871	25.72%	98,242
480	Asheville, N.C. (MSA)	84,180	310,850	37.14%	48,544
1145	Brazoria, Texas (PMSA)	89,454	332,674	36.78%	72,371
3840	Knoxville, Tenn. (MSA)	89,876	779,010	13.04%	140,732
8560	Tulsa, Okla. (MSA)	90,396	895,332	11.23%	143,935
320	Amarillo, Texas (MSA)	90,801	309,186	41.58%	43,855
7760	Sioux Falls, SD (MSA)	90,809	264,347	52.33%	49,967
3920	Lafayette, Ind. (MSA)	91,505	274,816	49.92%	29,799
1960	Davenport-Moline-Rock Island, Iowa-Ill. (MSA)	95,229	454,124	26.53%	-26,173
7460	San Luis Obispo-Atascadero-Paso Robles, Calif. (MSA)	96,291	343,969	38.88%	90,892
4000	Lancaster, Pa. (MSA)	96,896	568,550	20.54%	108,234
4360	Lincoln, Neb. (MSA)	97,268	348,458	38.72%	57,591
4890	Medford-Ashland, Ore. (MSA)	103,137	284,977	56.72%	48,911
2900	Gainesville, Fla. (MSA)	107,987	326,282	49.47%	66,072
1800	Columbus, Ga.-Ala. (MSA)	108,793	383,768	39.56%	20,348

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
8480	Trenton, N.J. (PMSA)	113,600	465,180	32.31%	43,784
5800	Odessa-Midland, Texas (MSA)	113,645	349,877	48.11%	35,223
3560	Jackson, Miss. (MSA)	114,708	556,539	25.96%	78,649
5330	Myrtle Beach, S.C. (MSA)	115,446	313,473	58.30%	95,558
9200	Wilmington, N.C. (MSA)	116,943	351,356	49.89%	94,427
7840	Spokane, Wash. (MSA)	118,094	536,767	28.21%	75,734
7520	Savannah, Ga. (MSA)	119,243	412,557	40.65%	61,623
9260	Yakima, Wash. (MSA)	122,911	345,620	55.19%	49,591
6080	Pensacola, Fla. (MSA)	125,081	537,832	30.30%	120,921
5790	Ocala, Fla. (MSA)	126,184	386,474	48.48%	136,072
7720	Sioux City, Iowa-Neb. (MSA)	126,855	250,982	102.20%	6,502
460	Appleton-Oshkosh-Neenah, Wisc. (MSA)	128,178	487,724	35.65%	67,908
500	Athens, Ga. (MSA)	132,142	286,186	85.78%	48,677
3060	Greeley, Colo. (PMSA)	133,687	316,851	72.99%	59,397
2670	Fort Collins-Loveland, Colo. (MSA)	134,548	387,486	53.19%	102,847
2710	Fort Pierce-Port St. Lucie, Fla. (MSA)	134,951	455,511	42.10%	166,790
4680	Macon, Ga. (MSA)	135,454	458,665	41.91%	49,550
2760	Fort Wayne, Ind. (MSA)	136,513	639,661	27.13%	58,955
7080	Salem, Ore. (PMSA)	138,556	486,786	39.79%	97,381
4720	Madison, Wisc. (MSA)	140,455	568,854	32.79%	104,045
1000	Birmingham, Ala. (MSA)	143,657	1,066,520	15.57%	107,179
3810	Killeen-Temple, Texas (MSA)	143,878	458,080	45.79%	98,244
9040	Wichita, Kan. (MSA)	144,657	690,690	26.49%	101,636
4900	Melbourne-Titusville-Palm Bay, Fla. (MSA)	145,575	623,407	30.47%	202,168
1440	Charleston-North Charleston, S.C. (MSA)	151,196	701,561	27.47%	116,750
8200	Tacoma, Wash. (PMSA)	151,866	855,827	21.57%	215,207
9160	Wilmington-Newark, Del.-Md. (PMSA)	156,082	744,400	26.53%	129,200
7485	Santa Cruz-Watsonville, Calif. (PMSA)	156,829	412,611	61.31%	66,477
3283	Hartford, Conn. (NECMA)	157,093	1,307,965	13.65%	97,414
6520	Provo-Orem, Utah (MSA)	160,268	531,128	43.22%	150,967
9340	Yuba City, Calif. (MSA)	161,321	300,829	115.64%	37,120
9270	Yolo, Calif. (PMSA)	167,084	336,850	98.42%	55,975
6483	Providence-Warwick-Pawtucket, R.I. (NECMA)	167,874	1,132,863	17.40%	97,869
8240	Tallahassee, Fla. (MSA)	169,427	454,505	59.43%	93,533
7480	Santa Barbara-Santa Maria-Lompoc, Calif. (MSA)	170,907	570,653	42.75%	99,555
3980	Lakeland-Winter Haven, Fla. (MSA)	173,954	659,358	35.84%	161,366
8780	Visalia-Tulare-Porterville, Calif. (MSA)	174,369	543,214	47.27%	121,419
5880	Oklahoma City, Okla. (MSA)	176,642	1,262,292	16.27%	219,202
6880	Rockford, Ill. (MSA)	177,111	549,290	47.59%	45,928
2700	Fort Myers-Cape Coral, Fla. (MSA)	177,526	621,315	40.00%	235,739
4400	Little Rock-North Little Rock, Ark. (MSA)	180,592	765,784	30.86%	109,751
4100	Las Cruces, N.M. (MSA)	180,911	355,891	103.39%	77,968
1125	Boulder-Longmont, Colo. (PMSA)	180,944	473,917	61.76%	102,038
1240	Brownsville-Harlingen-San Benito, Texas (MSA)	181,585	518,369	53.92%	124,840
2580	Fayetteville-Springdale-Rogers, Ark. (MSA)	182,824	496,307	58.32%	134,430

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
4280	Lexington, Ky. (MSA)	183,128	663,890	38.09%	109,151
5080	Milwaukee-Waukesha, Wisc. (PMSA)	188,685	1,690,777	12.56%	105,433
7510	Sarasota-Bradenton, Fla. (MSA)	197,219	789,935	33.27%	237,992
2020	Daytona Beach, Fla. (MSA)	199,448	694,990	40.25%	222,894
7500	Santa Rosa, Calif. (PMSA)	200,535	660,873	43.56%	158,752
3290	Hickory-Morganton-Lenoir, N.C. (MSA)	204,666	547,659	59.67%	71,925
6740	Richland-Kennewick-Pasco, Wash. (MSA)	205,560	398,206	106.70%	47,131
2120	Des Moines, Iowa (MSA)	206,664	664,268	45.16%	89,491
600	Augusta-Aiken, Ga.-S.C. (MSA)	213,036	691,067	44.57%	113,691
4080	Laredo, Texas (MSA)	213,157	407,818	109.50%	94,180
4940	Merced, Calif. (MSA)	215,010	426,643	101.60%	76,008
5345	Naples, Fla. (MSA)	217,819	471,890	85.73%	166,567
1720	Colorado Springs, Colo. (MSA)	222,520	742,011	42.83%	207,448
3000	Grand Rapids-Muskegon-Holland, Mich. (MSA)	223,359	1,315,681	20.45%	249,302
4520	Louisville, Ky.-Ind. (MSA)	223,650	1,251,377	21.76%	73,783
7490	Santa Fe, N.M. (MSA)	224,125	372,235	151.32%	54,646
5483	New Haven-Bridgprt-Stamfrd-Danbry-Wtrbry, Conn. (PMSA)	225,394	1,934,985	13.18%	138,822
7120	Salinas, Calif. (MSA)	228,776	631,809	56.76%	110,627
1760	Columbia, S.C. (MSA)	229,297	767,509	42.60%	126,531
5720	Norfolk-Virginia Beach-Newport News, Va.-N.C. (MSA)	230,045	1,013,710	29.35%	295,293
4920	Memphis, Tenn.-Ark., Miss. (MSA)	230,618	1,369,085	20.26%	200,074
9360	Yuma, Ariz. (MSA)	236,192	396,899	146.97%	69,314
5190	Monmouth-Ocean, N.J. (PMSA)	242,004	1,372,732	21.40%	278,713
3640	Jersey City, N.J. (PMSA)	242,171	851,548	39.74%	50,785
5920	Omaha, Neb.-Iowa (MSA)	244,940	963,811	34.07%	112,370
5170	Modesto, Calif. (MSA)	247,120	696,910	54.94%	181,938
6720	Reno, Nev. (MSA)	259,487	600,804	76.03%	145,945
440	Ann Arbor, Mich. (PMSA)	261,703	843,700	44.97%	126,842
8120	Stockton-Lodi, Calif. (MSA)	268,931	837,094	47.33%	217,859
8735	Ventura, Calif. (PMSA)	269,157	1,025,782	35.57%	223,798
2320	El Paso, Texas (MSA)	285,652	967,352	41.90%	197,989
680	Bakersfield, Calif. (MSA)	297,696	961,370	44.86%	257,267
1080	Boise City, Idaho (MSA)	317,238	753,305	72.75%	178,033
8720	Vallejo-Fairfield-Napa, Calif. (PMSA)	331,254	853,006	63.49%	184,965
7040	St. Louis, Mo.-Ill. (MSA)	337,622	2,944,132	12.95%	191,189
3160	Greenville-Spartanburg-Anderson, S.C. (MSA)	366,869	1,332,334	38.00%	217,831
5380	Nassau-Suffolk, N.Y. (PMSA)	369,709	3,130,120	13.39%	154,617
8520	Tucson, Ariz. (MSA)	380,615	1,229,259	44.85%	312,864
4880	McAllen-Edinburg-Mission, Texas (MSA)	396,458	970,381	69.08%	287,383
875	Bergen-Passaic, N.J. (PMSA)	399,718	1,776,350	29.04%	82,277
6760	Richmond-Petersburg, Va. (MSA)	406,660	1,077,913	60.58%	256,517
5360	Nashville, Tenn. (MSA)	416,861	1,652,993	33.72%	383,221
7160	Salt Lake City-Ogden, Utah (MSA)	420,031	1,758,405	31.38%	421,078
3600	Jacksonville, Fla. (MSA)	421,801	1,525,501	38.22%	377,695

MSA Code	MSA Name	Population Gain 2020-2000	Forecast: Population in 2020	Gain as Percentage of 2000 Population	Population Gain 2000-1980
1640	Cincinnati, Ohio-Ky.-Ind. (PMSA)	425,905	2,076,104	25.81%	181,274
200	Albuquerque, N.M. (MSA)	437,323	1,151,941	61.20%	196,532
1840	Columbus, Ohio (MSA)	447,346	1,993,370	28.94%	328,268
5015	Middlesex-Somerset-Hunterdon, N.J. (PMSA)	447,355	1,621,940	38.09%	286,127
3760	Kansas City, Mo.-Kan. (MSA)	455,683	2,238,064	25.57%	330,831
8960	West Palm Beach-Boca Raton, Fla. (MSA)	466,127	1,601,782	41.04%	549,913
720	Baltimore, Md. (PMSA)	467,127	3,024,426	18.27%	353,914
2840	Fresno, Calif. (MSA)	478,510	1,404,155	51.69%	344,006
5640	Newark, N.J. (PMSA)	491,983	2,526,593	24.18%	71,462
7400	San Jose, Calif. (PMSA)	497,900	2,184,374	29.52%	384,959
2160	Detroit, Mich. (PMSA)	531,480	4,977,649	11.95%	72,320
6920	Sacramento, Calif. (PMSA)	538,971	2,177,470	32.89%	645,335
7240	San Antonio, Texas (MSA)	560,660	2,159,863	35.06%	503,432
8280	Tampa-St. Petersburg-Clearwater, Fla. (MSA)	587,691	2,991,828	24.44%	777,162
3120	Greensboro-Winston-Salem-High Point, N.C. (MSA)	600,863	1,856,583	47.85%	302,124
6160	Philadelphia, Pa.-N.J. (PMSA)	604,153	5,708,962	11.83%	319,909
7320	San Diego, Calif. (MSA)	634,780	3,459,858	22.47%	949,458
2800	Fort Worth-Arlington, Texas (PMSA)	652,796	2,366,071	38.10%	713,971
3480	Indianapolis, Ind. (MSA)	662,227	2,275,157	41.06%	305,763
7600	Seattle-Bellevue-Everett, Wash. (PMSA)	667,900	3,087,827	27.60%	758,548
2680	Fort Lauderdale, Fla. (PMSA)	677,134	2,309,574	41.48%	606,378
5000	Miami, Fla. (PMSA)	722,061	2,982,303	31.95%	617,110
5775	Oakland, Calif. (PMSA)	771,010	3,174,980	32.07%	635,256
7360	San Francisco, Calif. (PMSA)	776,304	2,508,855	44.81%	240,335
6440	Portland-Vancouver, Ore.-Wash. (PMSA)	834,721	2,760,577	43.34%	587,047
6640	Raleigh-Durham-Chapel Hill, N.C. (MSA)	837,397	2,031,703	70.12%	526,350
640	Austin-San Marcos, Texas (MSA)	843,168	2,107,774	66.67%	675,024
5945	Orange County, Calif. (PMSA)	853,954	3,710,400	29.90%	908,379
1520	Charlotte-Gastonia-Rock Hill, N.C.-S.C. (MSA)	884,449	2,393,562	58.61%	533,119
1123	Boston-Worcester-Lawrence-Lowell-Brocktn, Mass.-N.H. (NECMA)	927,833	7,000,417	15.28%	725,956
5960	Orlando, Fla. (MSA)	932,809	2,589,134	56.32%	843,100
5120	Minneapolis-St. Paul, Minn.-Wisc. (MSA)	1,062,726	4,043,656	35.65%	774,385
2080	Denver, Colo. (PMSA)	1,161,122	3,283,739	54.70%	683,792
6780	Riverside-San Bernardino, Calif. (PMSA)	1,250,558	4,529,312	38.14%	1,706,325
4120	Las Vegas, Nev.-Ariz. (MSA)	1,353,348	2,935,680	85.53%	1,047,239
8840	Washington, D.C.-Md.-Va.-W.V. (PMSA)	1,389,616	4,762,682	41.20%	832,437
4480	Los Angeles-Long Beach, Calif. (PMSA)	1,414,155	11,000,000	14.82%	2,038,470
3360	Houston, Texas (PMSA)	1,552,407	5,753,543	36.95%	1,414,017
1920	Dallas, Texas (PMSA)	1,624,924	5,168,165	45.86%	1,472,984
6200	Phoenix-Mesa, Ariz. (MSA)	1,739,038	5,016,813	53.06%	1,665,593
1600	Chicago, Ill. (PMSA)	1,912,411	10,200,000	23.06%	1,044,858
5600	New York, N.Y. (PMSA)	1,969,280	11,300,000	21.11%	1,044,813
520	Atlanta, Ga. (MSA)	2,653,713	6,798,925	64.02%	1,898,202

CONCLUSION

Population growth at the county level can be predicted using widely available demographic and economic data. Past recent growth, the presence of immigrants, the fraction of population older than 25 and younger than 65, low taxes, and good weather are all positively associated with population growth. Our forecasts reveal that most growth and real estate development will occur in the West, the Sunbelt, and along the Southern I-85 route. However, our model only accounts for 75 percent of the variance in growth experiences between 1980 and 2000, with the other 25 percent explained by "surprise" events. Many unexpected places will be winners or losers in the game of future local real estate development.

A companion spreadsheet of our population predictions at the county level (metropolitan counties) is available in the Working Paper section of the Zell-Lurie Real Estate Center website, http://realestate.wharton.upenn.edu.