Commuting in America 2013

The National Report on Commuting Patterns and Trends

Brief 5. The Nature and Pattern of Jobs

American Association of State Highway and Transportation Officials
AASHTO
The Voice of Transportation

CTPP

JANUARY 2015

About the AASHTO Census Transportation Planning Products Program

Established by the American Association of State Highway and Transportation Officials (AASHTO) and the U.S. Department of Transportation (U.S. DOT), the AASHTO Census Transportation Planning Products Program (CTPP) compiles census data on demographic characteristics, home and work locations, and journey-to-work travel flows to assist with a variety of state, regional, and local transportation policy and planning efforts. CTPP also supports corridor and project studies, environmental analyses, and emergency operations management.

In 1990, 2000, and again in 2006, AASHTO partnered with all of the states on pooled-fund projects to support the development of special census products and data tabulations for transportation. These census transportation data packages have proved invaluable in understanding characteristics about where people live and work, their journey-to-work commuting patterns, and the modes they use for getting to work. In 2012, the CTPP was established as an ongoing technical service program of AASHTO.

CTPP provides a number of primary services:

- **Special Data Tabulation from the U.S. Census Bureau—**CTPP oversees the specification, purchase, and delivery of this special tabulation designed by and for transportation planners.
- **Outreach and Training—**The CTPP team provides training on data and data issues in many formats, from live briefings and presentations to hands-on, full-day courses. The team has also created a number of electronic sources of training, from e-learning to recorded webinars to downloadable presentations.
- **Technical Support—**CTPP provides limited direct technical support for solving data issues; the program also maintains a robust listserv where many issues are discussed, dissected, and resolved by the CTPP community.
- **Research—**CTPP staff and board members routinely generate problem statements to solicit research on data issues; additionally, CTPP has funded its own research efforts. Total research generated or funded by the current CTPP since 2006 is in excess of $1 million.

Staff

- Penelope Weinberger, CTPP Program Manager
- Matt Hardy, Program Director, Policy and Planning
- Jim Tymon, Chief Operating Officer/Director of Policy and Management

Project Team

- Steven E. Polzin, Co-Author, Center for Urban Transportation Research, University of South Florida
- Alan E. Pisarski, Co-Author, Consultant, Falls Church, Virginia
- Bruce Spear, Data Expert, Cambridge Systematics, Inc.
- Liang Long, Data Expert, Cambridge Systematics, Inc.
- Nancy McGuckin, Data Expert, Travel Behavior Analyst

Contact

Penelope Weinberger, e-mail: pweinberger@aashto.org, phone: 202-624-3556; or CTPPinfo@aashto.org

Pub Code: CA05-4 ISBN: 978-1-56051-575-3

Brief 5. The Nature and Pattern of Jobs

This brief is the fifth in a series describing commuting in America. This body of work, sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and carried out in conjunction with a National Cooperative Highway Research Program (NCHRP) project that provided supporting data, builds on three prior *Commuting in America* documents that were issued over the past three decades. Unlike the prior reports that were single volumes, this effort consists of a series of briefs, each of which addresses a critical aspect of commuting in America. These briefs, taken together, comprise a comprehensive summary of American commuting. The briefs are disseminated through the AASHTO website (*traveltrends.transportation.org*). Accompanying data tables and an *Executive Summary* complete the body of information known as *Commuting in America 2013* (CIA 2013).

Brief 5 describes the changes taking place in employment patterns in the U.S. from the perspective of how this might influence commuting. This brief completes the information about the work force and employment presented in Briefs 3, 4, and 6.

Jobs Versus Workers

Brief 3 described workers as a component of the population and provided a comprehensive overview of changes in the workforce as they relate to the demographic characteristics of the population. Brief 4 provided more detailed descriptive data covering the geographic location of workers. Not surprisingly, there is a strong inherent relationship between jobs and workers—neither can exist without the other, at least not for any length of time. At the national level, aggregate disparities between jobs and workers can be explained by measures of vacant positions and unemployed workers. These measures do not add particular insight when trying to understand commuting trends. However, at more detailed levels of geography, there can be significant variations between the nature and counts of jobs and counts of appropriately-credentialed workers, and these disparities can influence commuting patterns as workers travel to fill available positions. Brief 15 discusses the flow of workers between geographies; this brief provides summary information on the location of jobs by geography.

The geographic location of jobs is influenced by a host of considerations. The top factors include access to markets or customers for retail and service activities, access to labor force, and access to materials/resources for jobs that involve working with physical commodities. The location of some employment types is constrained by the need to be in proximity to certain locations. For example, rapid growth in employment in energy extraction in North Dakota is driven by and dependent on being in proximity to the state's oil- and gas-bearing formations. Other jobs, such as healthcare, materialize in proximity to populations that

need services. In some situations, the growth of jobs (e.g., North Dakota energy extraction) attracts workers and, subsequently, generates more jobs to provide services to the growing population. In other cases, the growth of population is associated with the appeal or amenities in a given area, which then creates new employment (e.g., retirees moving to mild Southern climates, creating service and healthcare jobs to serve that population). Attractive, amenity-rich areas can also attract employment whose location is not constrained by access to natural resources or local markets (i.e., software, pharmaceuticals, some technologies, and some services that are dependent upon national or international markets), which subsequently attracts population and supporting employment. Commuting patterns are created as the various factors that influence the location of jobs and households play themselves out.

Brief 4, in a series of tables[1], described current population levels and their geographic distribution patterns and further traced population trends for the main national geographic units from 1990–2010. These tables establish the framework for examining worker and job trends.

Table 5-1 provides a national-level summary for 2010 for population and the associated worker and jobs levels within those geographic categories for metropolitan areas. Figure 5-1 presents the distribution of workers, population, and jobs by area type graphically.

Table 5-1. Geographic Distribution of Population, Workers, and Jobs, 2010

Geography	Population	Workers	Workers per Capita	Jobs	Jobs per Worker
Metro–Central Cities	75,283,196	27,899,370	0.37	40,536,506	1.45
Metro–Other Principal Cities	24,065,670	9,340,785	0.39	13,267,941	1.42
Metro–Suburbs	163,103,266	71,420,007	0.43	57,306,197	0.80
Metro–All	262,452,132	108,660,162	0.41	111,110,644	1.02
Non-Metro (by Subtraction)	46,293,406	28,280,848	0.61	25,830,366	0.91
Total U.S.	308,745,538	136,941,010	0.44	136,941,010*	1.00
Central City Share	24.3%	20.3%		29.6%	
Other Principal City Share	8.8%	6.8%		9.7%	
Suburban Share	52.8%	52.2%		41.8%	
Non-Metro Share	15.0%	20.7%		18.9%	

*For purposes of analysis, total U.S. jobs set to equal workers.

Source: Summary of ACS data

[1] *Commuting in America 2013*, Brief 4, "Population and Worker Dynamics," Tables 4-7, 4-8, 4-9.

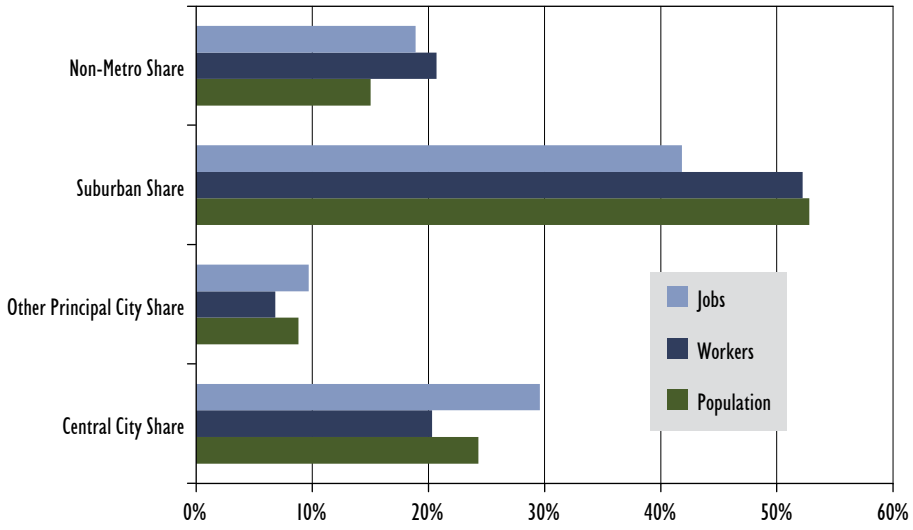

Figure 5-1. Distribution of Jobs, Workers, and Population by Area Type

Source: Summary of ACS data

Key points:

- Metro areas have approximately 85 percent of the nation's population, 79 percent of its workers, and 81 percent of the jobs.
- Workers per capita is lowest in the central cities and is similarly modest in the other principal cities. It is higher in the suburbs and significantly higher in non-metro areas.
- In something of an inverse relationship, jobs per worker is greatest in central cities and other principal cities and lowest in the suburbs. Jobs per worker is somewhat higher in non-metro areas but well below levels in central cities.
- While age is a factor (children and retirees), central cities have the lowest labor force participation, yet the greatest ratio of jobs per worker.
- Comparing workers and jobs in metro areas provides an important insight. There are roughly 2.5 million more jobs than workers in metropolitan areas, meaning there is a net flow each day of non-metro workers into metro areas.
- Approximately 20 percent of suburban workers must travel outside the suburbs to find employment, and more than 30 percent of central city and other principal city jobs must be filled by commuters from outside the geography.

Table 5-2 itemizes population, workers, and jobs by Metro area size for all Metropolitan Statistical Areas (MSAs) and Consolidated Statistical Areas (CSAs) of over one million population. This encompasses 130 MSAs, with some CSAs, such as New York, comprising up to seven separate MSAs. The far right-hand column in this table summarizes "surplus jobs," which is the difference between total MSA workers and total MSA jobs. A positive surplus jobs number means that workers from surrounding areas travel to the respective MSA to fill the available positions. Of the 54 CSAs included in the Table 5-2, all but 11 import workers.

Table 5-3 itemizes population, workers, and jobs for the central cities within the respective CSAs. As defined for the purposes of this series of briefs, each MSA has one—and only one—central city, representing the Principal City with the largest population. CSAs are shown in italics in the tables.

Core cities remain relatively worker-poor and job-rich, relying on suburbs and, to some extent, non-metro areas to provide workers.

Table 5-2. Population, Workers, and Jobs by Metro Area Size, 2010

CSA/MSA Name	Number of MSAs	Population Size Group	MSA Population (2010)	Total MSA Workers (2010)	Total MSA Jobs (2010)	Surplus Jobs in MSA (2010)
New York CSA	7	Over 5M	22,886,737	9,672,282	9,657,479	(14,803)
Los Angeles-Riverside CSA	3	Over 5M	17,877,006	6,968,876	7,036,843	67,967
Chicago CSA	3	Over 5M	9,686,021	4,159,124	4,244,251	85,127
Washington-Baltimore CSA	6	Over 5M	8,981,561	4,103,105	4,246,093	142,988
San Francisco-San Jose CSA	7	Over 5M	8,153,696	3,371,058	3,463,350	92,292
Boston-Providence CSA	5	Over 5M	7,686,843	3,746,882	3,761,760	14,878
Philadelphia CSA	6	Over 5M	7,067,807	3,082,013	3,033,987	(48,026)
Dallas CSA	2	Over 5M	6,547,091	2,836,239	2,925,743	89,504
Miami CSA	3	Over 5M	6,126,770	2,279,074	2,277,159	(1,915)
Houston-The Woodlands-Sugar Land, TX	1	Over 5M	5,920,416	2,457,177	2,528,846	71,669
Atlanta CSA	3	Over 5M	5,658,953	2,266,993	2,355,493	88,500
Detroit CSA	4	Over 5M	5,218,852	2,005,783	2,003,676	(2,107)
Phoenix-Mesa-Scottsdale, AZ	1	2.5–5M	4,192,887	1,622,185	1,661,476	39,291
Seattle CSA	4	2.5–5M	4,060,107	1,730,685	1,803,498	72,813
Minneapolis CSA	2	2.5–5M	3,537,952	1,735,516	1,788,768	53,252
Cleveland-Akron CSA	3	2.5–5M	3,184,862	1,362,394	1,414,028	51,634
San Diego-Carlsbad, CA	1	2.5–5M	3,095,313	1,253,748	1,230,279	(23,469)
Denver CSA	3	2.5–5M	3,090,874	1,392,312	1,435,097	42,785
Portland-Salem CSA	5	2.5–5M	2,921,408	1,225,938	1,227,612	1,674
Orlando-Daytona CSA	3	2.5–5M	2,818,120	1,138,371	1,169,678	31,307
St. Louis, MO-IL	1	2.5–5M	2,787,701	1,228,715	1,256,692	27,977
Tampa-St. Petersburg-Clearwater, FL	1	2.5–5M	2,783,243	1,066,064	1,046,561	(19,503)
Pittsburgh CSA	2	1–2.5M	2,480,739	1,115,507	1,134,900	19,393
Sacramento CSA	2	1–2.5M	2,316,019	893,921	880,252	(13,669)
Kansas City CSA	3	1–2.5M	2,247,497	1,014,911	1,034,639	19,728
Charlotte-Concord-Gastonia, NC-SC	1	1–2.5M	2,217,012	888,779	910,853	22,074
Salt Lake City CSA	3	1–2.5M	2,211,842	909,632	931,095	21,463
Las Vegas CSA	2	1–2.5M	2,151,455	852,167	857,108	4,941
San Antonio-New Braunfels, TX	1	1–2.5M	2,142,508	835,629	801,317	(34,312)
Cincinnati, OH-KY-IN	1	1–2.5M	2,114,580	931,060	941,995	10,935
Indianapolis-Muncie CSA	3	1–2.5M	2,082,342	911,722	988,169	76,447
Columbus, OH	1	1–2.5M	1,901,974	827,727	877,731	50,004
Milwaukee CSA	2	1–2.5M	1,751,316	811,299	864,872	53,573
Austin-Round Rock, TX	1	1–2.5M	1,716,289	753,790	800,514	46,724
Virginia Beach-Norfolk-Newport News, VA-NC	1	1–2.5M	1,676,822	676,349	674,008	(2,341)
Nashville-Davidson—Murfreesboro—Franklin, TN	1	1–2.5M	1,670,890	712,750	767,209	54,459
Raleigh-Durham CSA	2	1–2.5M	1,634,847	709,566	812,046	102,480
Greensboro-Winston-Salem CSA	3	1–2.5M	1,515,527	615,083	628,035	12,952
Hartford-New London CSA	2	1–2.5M	1,486,436	663,581	719,182	55,601
Louisville CSA	2	1–2.5M	1,384,046	599,192	617,510	18,318
Jacksonville, FL	1	1–2.5M	1,345,596	569,775	653,161	83,386
Memphis, TN-MS-AR	1	1–2.5M	1,324,829	543,898	570,953	27,055
New Orleans CSA	2	1–2.5M	1,310,963	507,643	540,521	32,878
Oklahoma City, OK	1	1–2.5M	1,252,987	515,376	546,958	31,582
Harrisburg-York CSA	4	1–2.5M	1,219,422	564,795	563,204	(1,591)
Richmond, VA	1	1–2.5M	1,208,101	546,349	561,928	15,579
Grand Rapids CSA	2	1–2.5M	1,161,126	475,217	506,137	30,920
Greenville-Spartanburg CSA	2	1–2.5M	1,137,380	453,015	466,390	13,375
Buffalo-Cheektowaga-Niagara Falls, NY	1	1–2.5M	1,135,509	519,051	542,353	23,302
Birmingham-Hoover, AL	1	1–2.5M	1,128,047	452,892	477,549	24,657
Fresno CSA	2	1–2.5M	1,081,315	368,395	361,801	(6,594)
Rochester, NY	1	1–2.5M	1,079,671	479,388	494,018	14,630
Albuquerque-Santa Fe CSA	2	1–2.5M	1,031,247	406,137	421,520	15,383
El Paso CSA	2	1–2.5M	1,013,356	369,045	383,861	14,816
Total	**130**		**195,415,910**	**82,198,175**	**83,900,158**	**1,701,983**

Source: Cambridge Systematics, summary of ACS data

Table 5-3. Population, Workers, and Jobs for Central Cities in CSAs, 2010

Central City Name(s)	Central City Population (2010)	Percent of Total MSA Population	Workers Living in Central City (2010)	Percent of Total MSA Workers	Central City Jobs (2010)	Percent of Total MSA Jobs	Surplus Jobs in Central Cities (2010)
New York, Stamford, New Haven, Allentown, Ewing, Kingston, East Stroudsburg	8,615,027	37.6%	3,341,374	34.5%	3,786,427	39.2%	445,053
Los Angeles, Riverside, Thousand Oaks	4,223,175	23.6%	1,596,411	22.9%	1,794,718	25.5%	198,307
Chicago, Kankakee, Michigan City	2,754,614	28.4%	1,077,989	25.9%	1,280,290	30.2%	202,301
Washington, Baltimore, Hagerstown, Chambersburg, Winchester, Lexington Park	1,320,443	14.7%	549,721	13.4%	1,022,843	24.1%	473,122
San Francisco, San Jose, Stockton, Santa Rosa, Vallejo, Santa Cruz, Napa	2,463,502	30.2%	965,331	28.6%	1,141,901	33.0%	176,570
Boston, Providence, Worchester, Manchester, Barnstable	1,131,439	14.7%	377,723	10.1%	852,587	22.7%	474,864
Philadelphia, Reading, Atlantic City, Dover, Vineland, Ocean City	1,762,118	24.9%	618,383	20.1%	766,485	25.3%	148,102
Dallas, Sherman	1,236,337	18.9%	509,923	18.0%	802,791	27.4%	292,868
Miami, Port St. Lucie, Vero Beach	579,280	9.5%	184,690	8.1%	285,191	12.5%	100,501
Houston	2,099,451	35.5%	799,308	32.5%	1,437,414	56.8%	638,106
Atlanta, Athens-Clark County, Gainesville	569,259	10.1%	209,690	9.2%	458,446	19.5%	248,756
Detroit, Flint, Ann Arbor, Monroe	950,878	18.2%	258,108	12.9%	400,238	20.0%	142,130
Phoenix	1,445,632	34.5%	550,026	33.9%	802,516	48.3%	252,490
Seattle, Olympia, Bremerton, Mount Vernon	724,610	17.8%	337,076	19.5%	579,115	32.1%	242,039
Minneapolis, St. Cloud	448,420	12.7%	193,906	11.2%	328,494	18.4%	134,588
Cleveland, Akron, Canton	668,932	21.0%	249,921	18.3%	411,401	29.1%	161,480
San Diego	1,307,402	42.2%	550,528	43.9%	693,107	56.3%	142,579
Denver, Boulder, Greeley	790,432	25.6%	319,058	22.9%	511,534	35.6%	192,476
Portland, Salem, Albany, Longview, Corvallis	879,681	30.1%	365,720	29.8%	512,613	41.8%	146,893
Orlando, Daytona Beach, The Villages	350,747	12.4%	120,003	10.5%	270,410	23.1%	150,407
St. Louis	319,294	11.5%	132,307	10.8%	231,227	18.4%	98,920
Tampa	335,709	12.1%	128,901	12.1%	274,327	26.2%	145,426
Pittsburgh, Steubenville	324,363	13.1%	133,413	12.0%	288,223	25.4%	154,810
Sacramento, Yuba City	531,413	22.9%	174,172	19.5%	289,185	32.9%	115,013
Kansas City, St. Joseph, Lawrence	624,210	27.8%	258,425	25.5%	350,284	33.9%	91,859
Charlotte	731,424	33.0%	248,805	28.0%	390,126	42.8%	141,321
Salt Lake City, Ogden, Provo	381,753	17.3%	145,877	16.0%	329,727	35.4%	183,850
Paradise, Lake Havasu City	275,694	12.8%	108,900	12.8%	347,871	40.6%	238,971
San Antonio	1,327,407	62.0%	518,071	62.0%	606,820	75.7%	88,749
Cincinnati	296,943	14.0%	118,190	12.7%	218,461	23.2%	100,271
Indianapolis, Muncie, Columbus	934,591	44.9%	389,599	42.7%	592,199	59.9%	202,600
Columbus	787,033	41.4%	289,343	35.0%	439,763	50.1%	150,420
Milwaukee, Racine	673,693	38.5%	265,422	32.7%	311,088	36.0%	45,666
Austin	790,390	46.1%	327,212	43.4%	534,717	66.8%	207,505
Virginia Beach	437,994	26.1%	189,210	28.0%	165,447	24.5%	(23,763)
Nashville-Davidson	601,222	36.0%	264,462	37.1%	389,861	50.8%	125,399
Raleigh, Durham	632,222	38.7%	207,756	29.3%	418,833	51.6%	211,077
Greensboro, Winston-Salem, Burlington	549,246	36.2%	189,779	30.9%	331,061	52.7%	141,282
Hatford, Norwich	165,268	11.1%	60,325	9.1%	133,669	18.6%	73,344
Louisville-Jefferson County, Elizabethtown	625,868	45.2%	105,453	17.6%	207,396	33.6%	101,943
Jacksonville	821,784	61.1%	366,524	64.3%	489,372	74.9%	122,848
Memphis	646,889	48.8%	228,462	42.0%	335,945	58.8%	107,483
New Orleans, Hammond	363,848	27.8%	127,131	25.0%	176,817	32.7%	49,686
Oklahoma City	579,999	46.3%	237,779	46.1%	349,098	63.8%	111,319
Harrisburg, York, Lebanon, Gettysburg	126,343	10.4%	50,704	9.0%	97,838	17.4%	47,134
Richmond	204,214	16.9%	83,068	15.2%	143,937	25.6%	60,869
Grand Rapids, Muskegon	226,441	19.5%	82,865	17.4%	135,525	26.8%	52,660
Greenville, Spartanburg	95,422	8.4%	35,825	7.9%	89,437	19.2%	53,612
Buffalo	261,310	23.0%	98,702	19.0%	147,040	27.1%	48,338
Birmingham	212,237	18.8%	78,103	17.2%	162,688	34.1%	84,585
Fresno, Madera	556,081	51.4%	166,241	45.1%	192,990	53.3%	26,749
Rochester	210,565	19.5%	80,937	16.9%	150,255	30.4%	69,318
Albuquerque, Santa Fe	613,799	59.5%	229,502	56.5%	324,821	77.1%	95,319
El Paso, Las Cruces	746,739	73.7%	275,214	74.6%	328,112	85.5%	52,898
	51,332,787	**26.3%**	**19,571,568**	**23.8%**	**28,112,681**	**33.5%**	**8,541,113**

Source: Cambridge Systematics, summary of ACS data

All but one of the CSAs (Virginia Beach) has a surplus of central city jobs. The average surplus is 30 percent, indicating that at least 1/3 of central city jobs are filled by workers from outlying areas. In actuality, as some city residents work in outlying areas, the share of city jobs filled by workers from outlying areas is higher. An understanding of these geographic flows of commuters is presented in Brief 15.

Today's complex and dynamic urban form, at a minimum, makes it challenging to fully understand what's going on in terms of job location trends when relying on the traditional Metro area classifications. The geographic pattern of job growth trends cannot be described meaningfully at the national level. One reason is that jurisdictional boundaries change over time; another is that the growth and development of employment and activity nodes beyond traditional central cities result in changing geographies for MSAs. In the absence of an ability to quantify relative trends in the orientation of job locations and change, this brief defaults to using descriptive trend data at the county level. County boundaries remain fixed, and data are available to quantify employment growth trends at the county level.

The following maps are used to communicate conditions and trends as they relate to jobs and workers. These maps are based on census-produced estimates of daytime population. The 2000 data are based on the 2000 census long-form information on work trip commuting. The 2010 estimates are based on 2006–2010 American Community Survey five-year estimates of commuting flows applied to 2010 demographic estimates to derive estimates of 2010 daytime population.

Figure 5-2 presents the change in daytime population due to commuting for 2000. This change represents the net effect on the reference county's population associated with workers being assigned to their county of employment for enumeration. Expressed as a percent, positive numbers indicate a net inflow of workers to the county.

As indicated by the blue- and green-shaded counties, the vast majority of counties have lower daytime population, and their workers commute to generally urban jobs in adjacent counties. Yellow, orange, and red-shaded counties are net importers of workers. In 2000, approximately 2/3 of counties had lower daytime population due to commuters leaving the county.

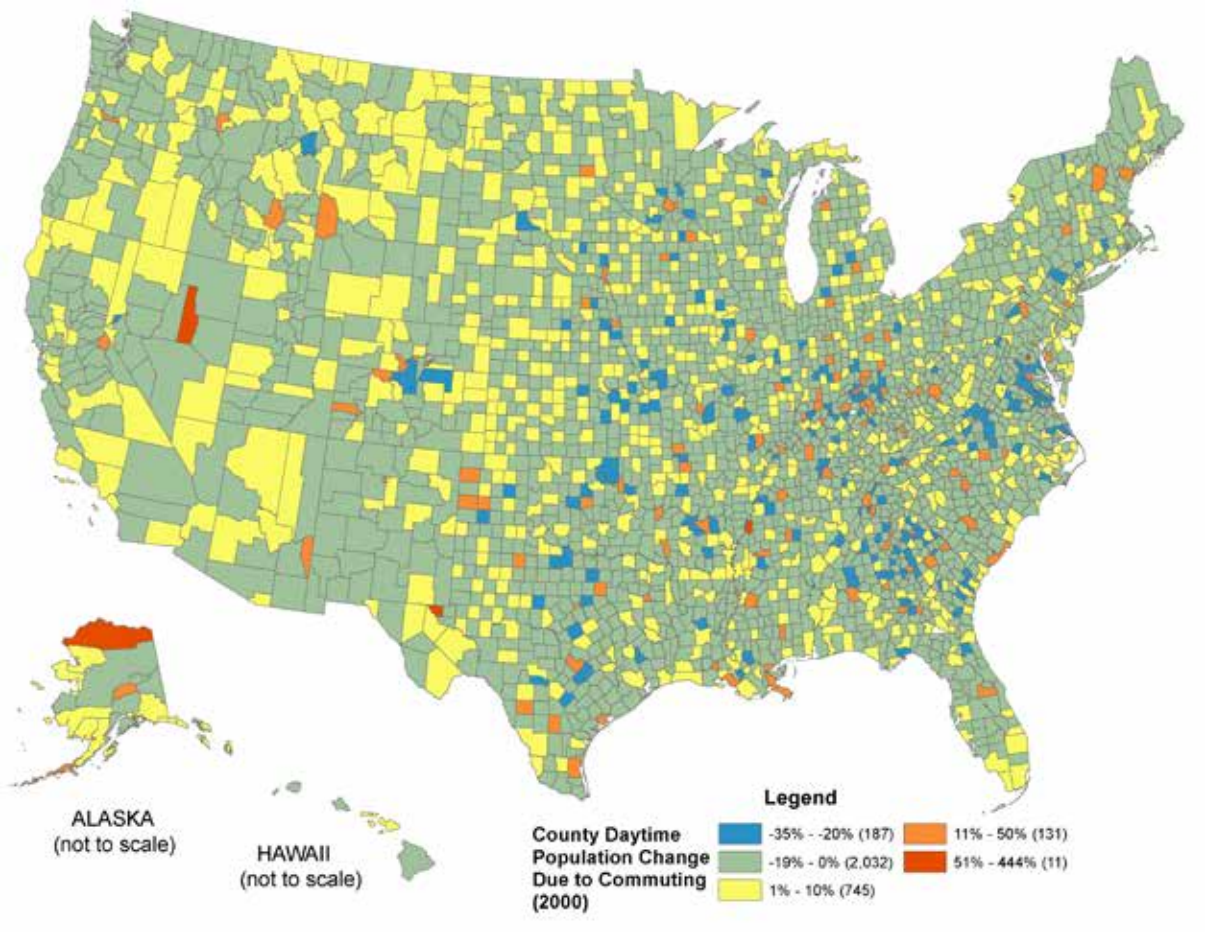

Figure 5-2. Daytime Population Change Due to Commuting, 2000

Source: Census

Figure 5-3 is this same map for estimated 2010 conditions. Due to the lack of a long-form 2010 census, 2006–2010 American Community Survey commuting flow data were applied to 2010 demographics.

Figure 5-3 is similar to Figure 5-2, but shows a slight increase in the number of counties that are net importers of workers—887 in 2000 and 931 in 2010.

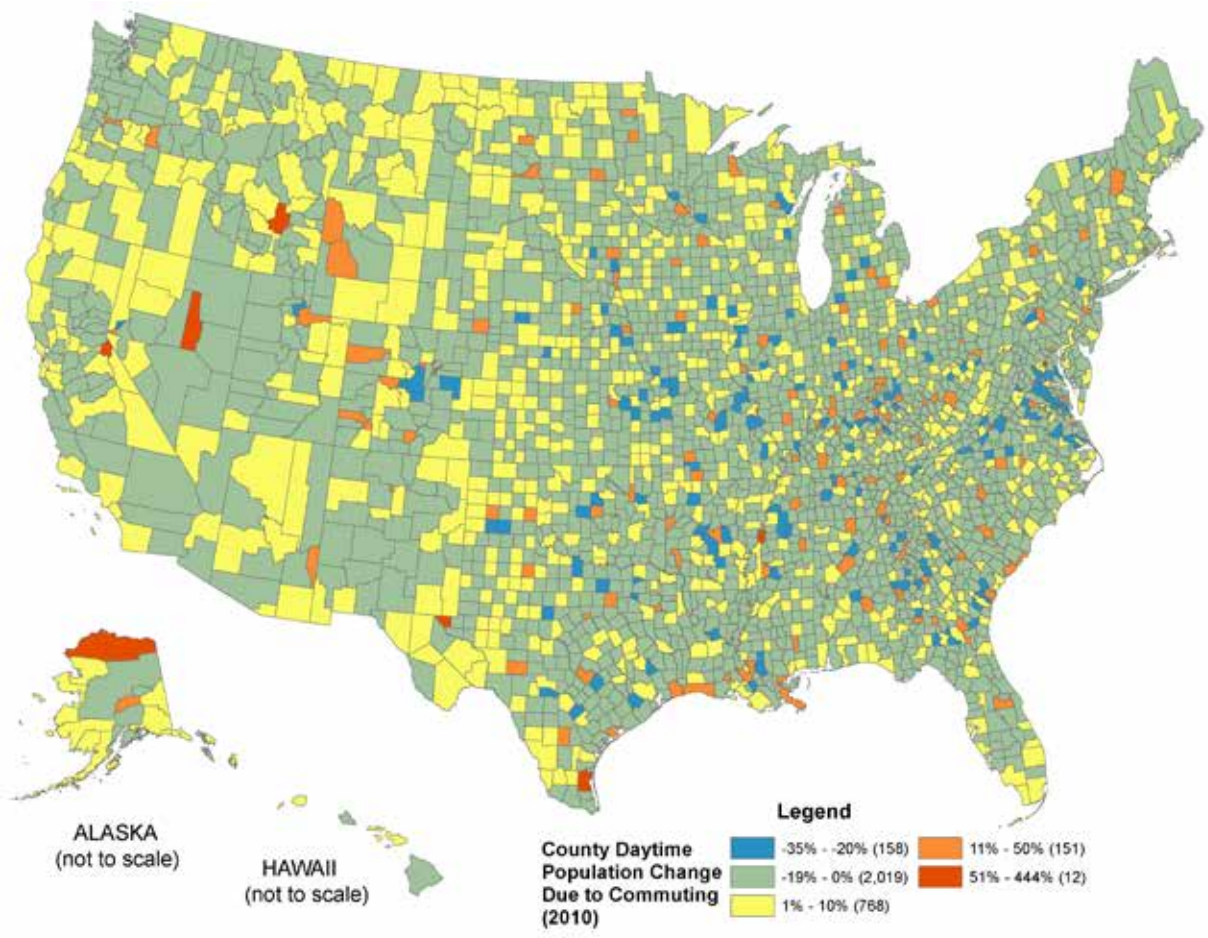

Figure 5-3. Daytime Population Due to Commuting, 2010

Source: Census

Approximately 2/3 of counties have lower daytime population as workers commute to adjacent counties.

Figure 5-4 is a county map of the percent of workers who lived and worked in the same county based on 2000 census data. Higher shares indicate counties whose economic activities are more self-contained, with residents providing a higher share of the workforce.

A number of considerations, including the geographic size of the county and its proximity to adjacent employment and labor force resources, influence the extent to which there is mobility in the workforce between adjacent counties. In Figure 5-4, counties shaded in the blue are least autonomous in terms of residents living and working in the same county. These counties tend to be located in areas that have physically smaller counties near or in large metropolitan areas. At the other end of the spectrum, those counties shaded red have the vast majority of their workers working in the same county. This tends to reflect areas that are economically self-contained, with workers

and jobs resident in the same county and areas where there may not be adjacent employment opportunities. Counties shaded orange and red may also be importing workers from adjacent counties in addition to retaining their own workers. For example, residents in Miami-Dade County in Southeast Florida tend to work in their home county, with geographic constraints on their ability to find nearby employment, but it also imports workers from adjacent counties.

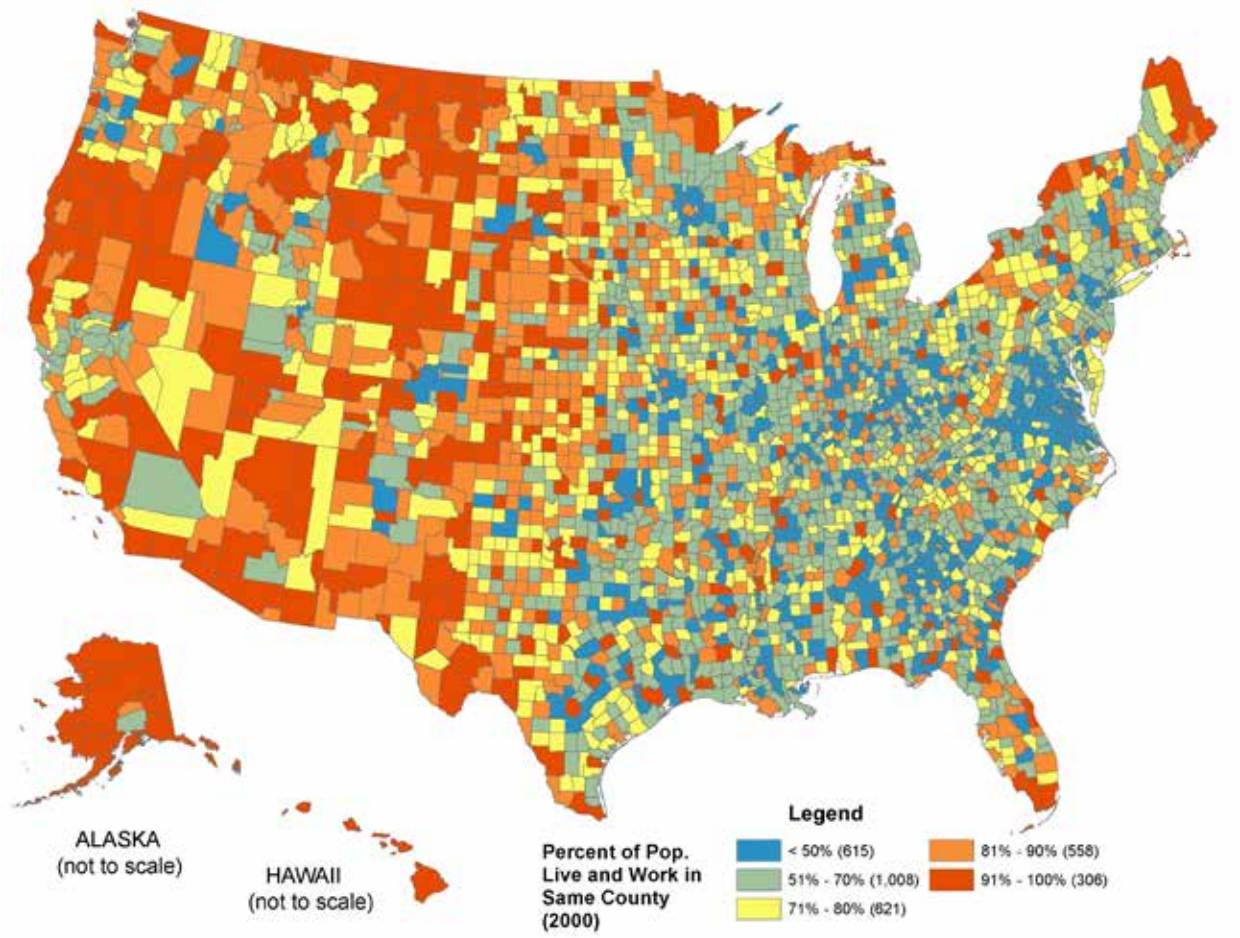

Figure 5-4. Percent of Workers Who Lived and Worked in the Same County, 2000

Source: Census

Figure 5-5 is a companion map with the same information estimated for 2010 based on 2006–2010 American Community Survey data on commuting flows.

Data on the percent of population who live and work in the same county for 2010 indicate that the counties were more interdependent in 2010—that is, fewer counties had high levels of population living and working in the same county, and more counties had a lower

percent of the population living and working in the same county. There are 661 counties that have 50 percent or less of the population who live and work in the same county, indicating that "bedroom" suburban counties are still plentiful.

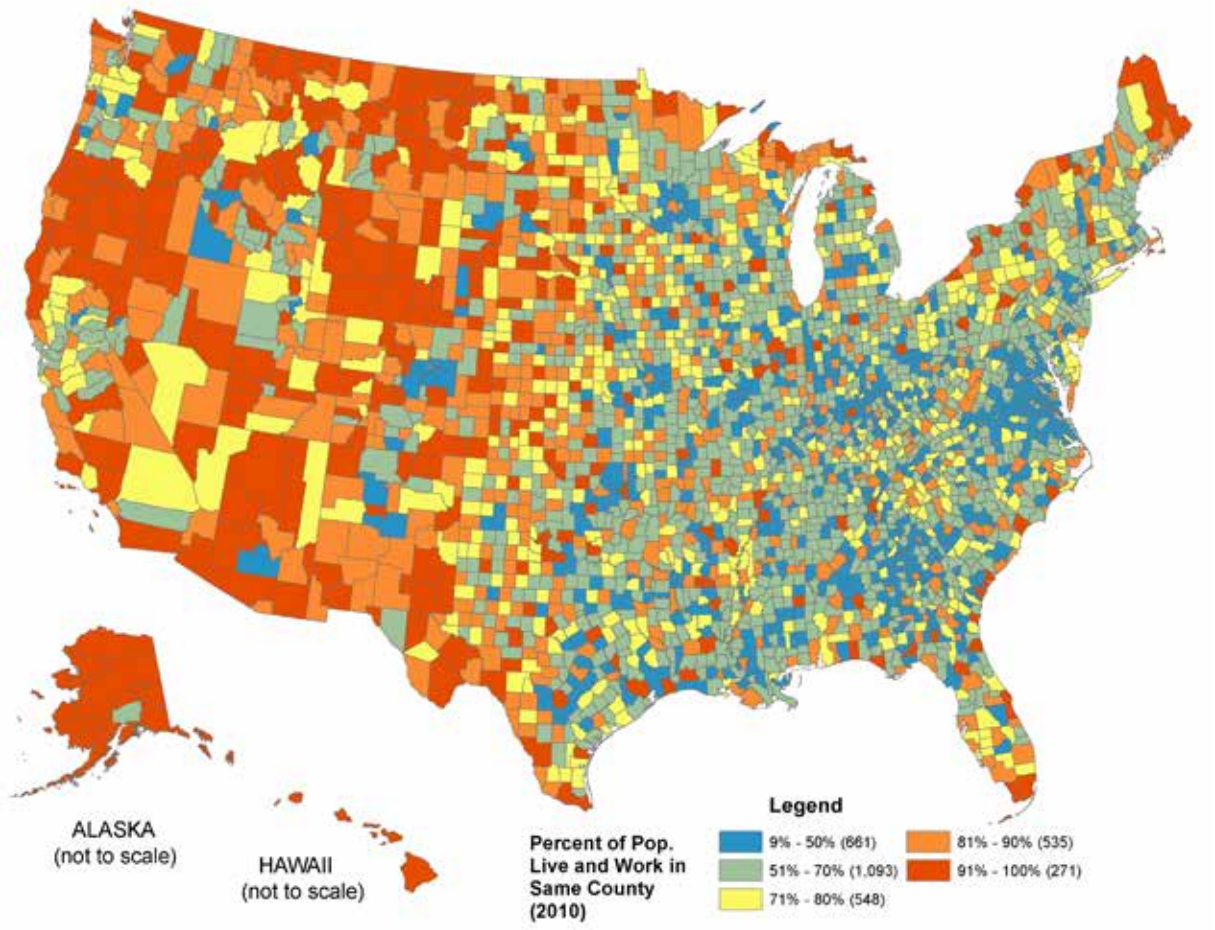

Figure 5-5. Percent of Workers Who Lived and Worked in the Same County, 2010

Source: Census

Figure 5-6 is a county map of the net flow of workers to or from the respective county for 2010. Positive numbers indicate the net percent of workers coming into the county relative to the workers working in the county. A negative number indicates an outflow of workers.

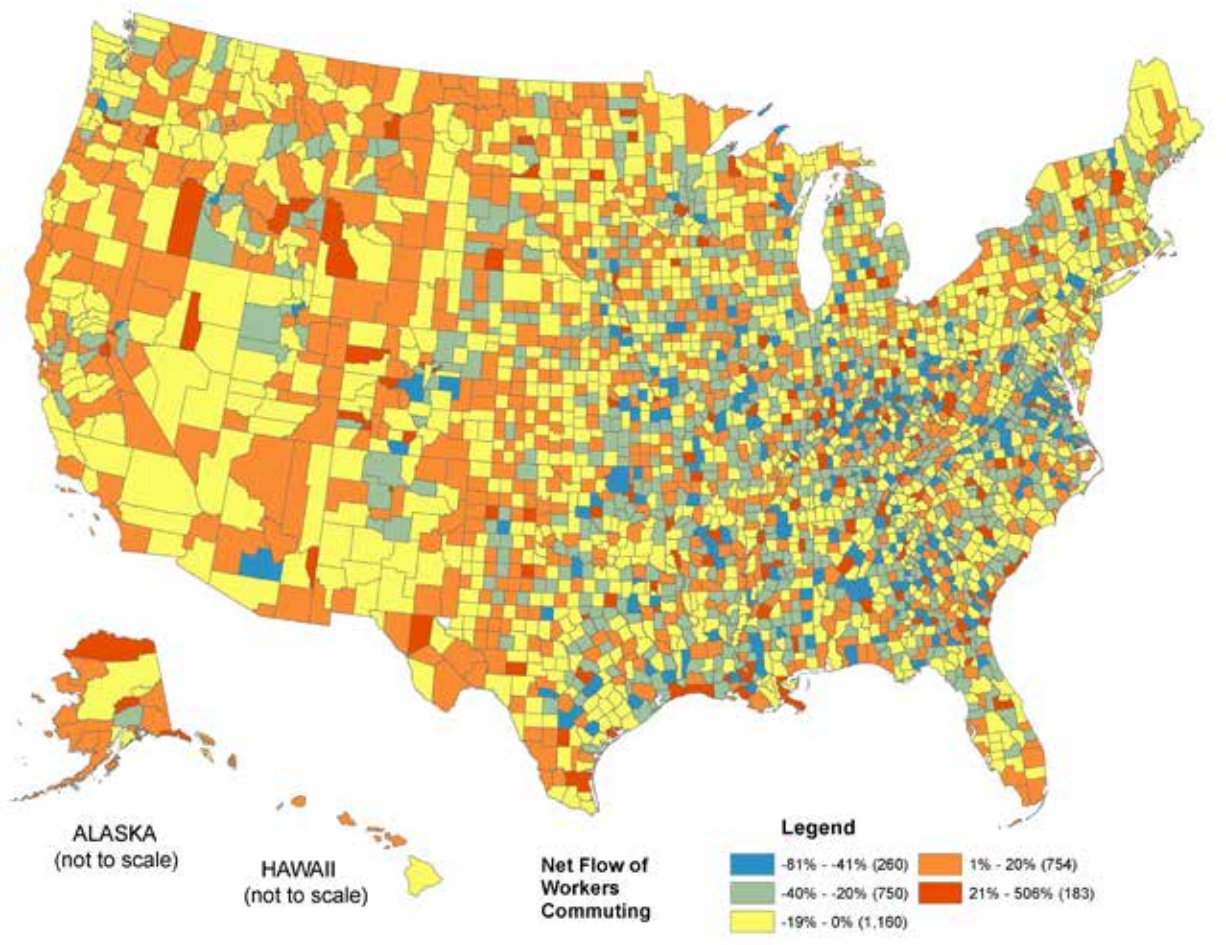

Figure 5-6. Net Flow of Workers to or from the Respective County, 2010

Source: Census

Counties with blue, green, and yellow shading export workers to adjacent counties, some of which are typically net importers of workers and shaded orange or red. One third of counties are net importers of workers. Rural counties that have a major employment site can also be significant importers of workers from low-density surrounding areas.

Figure 5-7 is a county map that displays the ratio of job growth to population growth between 2000 and 2010 as a percent. The counties are further categorized by whether or not there is job and population growth. Blue shading indicates counties with declining jobs. Green shading indicates counties that had job growth but declining population; this may be locations where natural resources or other conditions have created jobs, but the area's attractiveness has not resulted in natural growth or migration offsetting deaths in the population. Yellow shading indicates jobs growing slightly more quickly than population up to a 2 percent job/population growth ratio; these are emerging employment areas where

population growth may not have kept pace with job growth. Orange and red shading indicate areas with dramatically more job growth than population growth; these may be unique situations, such as exploration for natural resources or a major new factory/facility in a small market that creates large percentage increases in employment relative to short-term population growth.

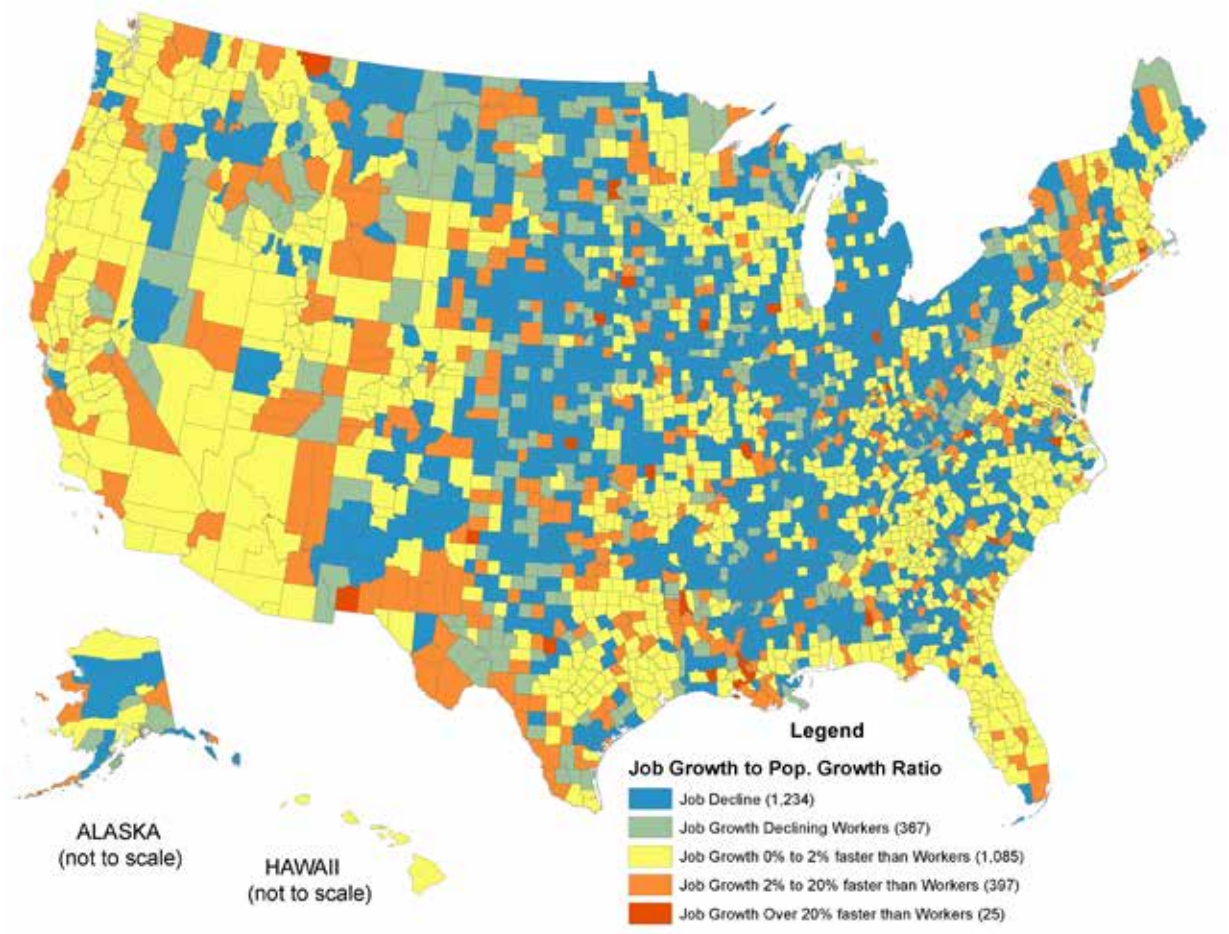

Figure 5-7. Ratio of Job Growth to Population Growth, 2000–2010

Source: Census

Figure 5-8 is a similar map that shows the ratio of job growth to worker growth (as opposed to population growth in Figure 5-7) for the same 2000–2010 period. The counties are further categorized by whether or not there is job growth. Blue shading indicates counties with declining jobs. Green shading indicates counties with job growth but declining resident workers. Yellow shading indicates jobs growing relatively more quickly than resident worker growth up to a 50 percent job/worker growth ratio; these are emerging

employment areas where resident worker growth may not have kept pace with job growth. Orange and red shading indicate areas with dramatically more job growth than worker growth; these may be unique situations, such as exploration for natural resources or major new factories/facilities in a small market that creates large percentage increases in employment relative to resident worker growth.

Approximately 1/3 of counties had no job growth between 2000 and 2010.

Figure 5-8 is similar to Figure 5-7. More than 1/3 of counties had no job growth in the decade. In approximately half of the counties, jobs grew faster than workers, indicating that these counties would need to draw workforce from adjacent counties and or may be attracting population in the future based on job prospects. A handful of counties had dramatically faster growth in jobs than workers, indicating unique circumstances where job growth outpaced worker growth.

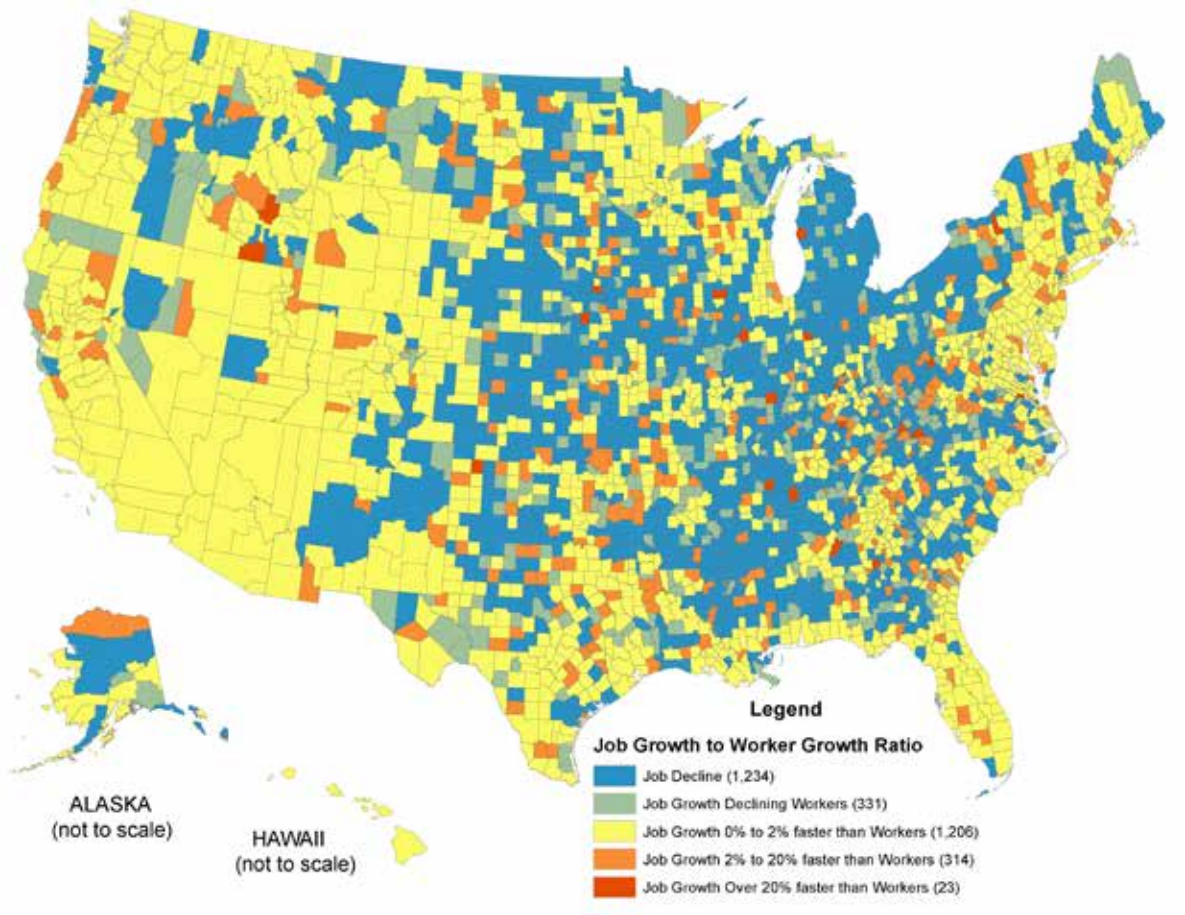

Figure 5-8. Ratio of Job Growth to Worker Growth, 2010

Source: Census

Job Dynamics

While net changes in employment and workers in a given geography are relatively modest due to the fixed location of housing and employment infrastructure, the actual opportunity for changes in commuting flows is impacted by the dynamics of employment and residential location turnover. Figure 5-9 illustrates the significant opportunity for redistribution of the workforce based on the pace of changes in employment. The graphic presents gross job gains, consisting of new business formations (openings) and companies expanding their workforce, and gross job losses, consisting of companies going out of business (closings) or simply contracting. The key point in the figure is how much activity goes on that is masked by the relatively small net changes in jobs. In the relatively stable period before the recession, the typical quarterly pattern was a gross change on the order of roughly 7.5 million job losses and a similar level of gains each quarter. The gross impact could be as much as 10 percent of the total job complement. In addition, there is additional turnover of employment within stable firms and turnover in housing locations independent of employment conditions. Collectively, these dynamics create significant opportunity for changes in the home-to-work commute patterns. The reality, however, is that these patterns remain relatively stable over time. Understanding the dynamics in employment is relevant to the extent that it signals the presence of an opportunity for more dramatic commute pattern changes if, for example, a dramatic increase in travel costs ($10/gallon for gasoline) resulted in stronger motivations to leverage workforce dynamics to minimize commute travel by having commuting consequences play a more important part of job location and housing location decisions.

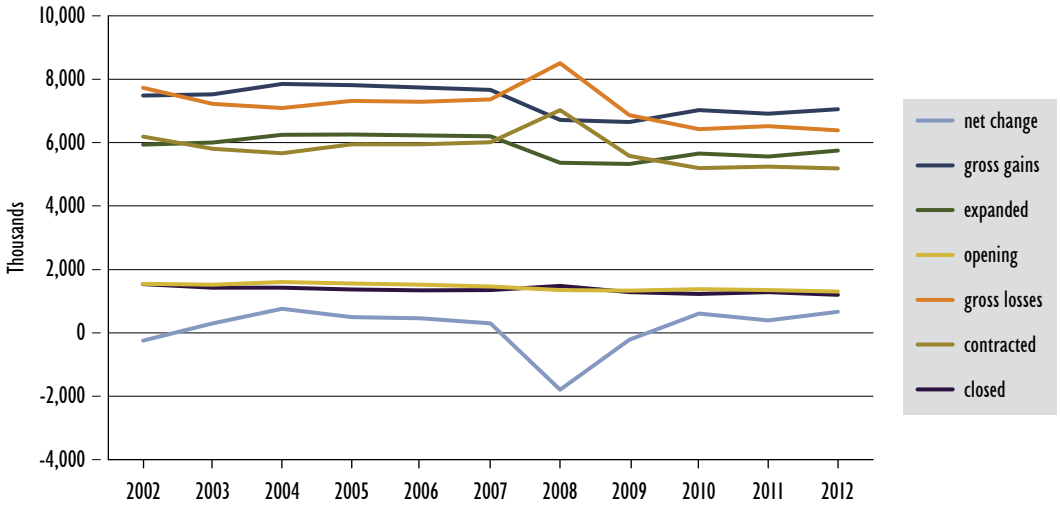

Figure 5-9. Business Job Gains and Losses in Fourth Quarter by Year, 2002–2012

Source: Business Employment Dynamics, Bureau of Labor Statistics, based on 4th quarter statistics in each annual period.

Summary

Data availability and changing urban geographies complicate consistent analysis of trends in workers and jobs. Available data do allow analysis by metropolitan area classification and by county. The fundamental, now centuries-old, tradition of employment being clustered in activity centers with residents and workers more dispersed and commuting to these activity centers remains intact. Core cities remain relatively job-rich and worker-poor. Suburbs remain a significant source of workers, and rural areas have high labor force participation, with some of those workers commuting to metropolitan areas. Core cities are not the only concentration of employment, as additional principal cities have become employment activity centers, perhaps transitioning from more traditional suburbs into emerging employment nodes.

The dynamics of employment, with its obvious implications to commuting, become clear when recognizing that approximately $^{1}/_{3}$ of counties in the U.S. had declining employment from 2000–2010. The dynamics of urban growth and development are compounded by broader demographic and economic trends that are resulting in employment and population changes. Some of these include the historical trends in migration to the South; others, such as the surge in employment in North Dakota resulting from energy exploration, are more context-specific. These macro trends, coupled with the firm-level employment dynamics of growth and decline of individual companies and job turnover within employers, results in significant opportunities for changes in commute patterns. However, overall commuting patterns have shown only modest change over time. The long-established inventory of housing and employment site assets and the relative consistency in the home and work location choice preferences of individuals have mitigated against rapid change in commuting patterns.

Commuting in America 2013 Briefs Series

The *CIA 2013* series will include the briefs listed below as well as a *CIA 2013* Executive Summary and supporting data files, all available at the CIA 2013 website *traveltrends.transportation.org*. The website also includes a glossary of terms, documentation of data sources, and additional resources. The series of briefs included in *CIA 2013* are:

1. **Overview**—establishes institutional context, objectives, importance, data sources, and products to be produced.
2. **The Role of Commuting in Overall Travel**—presents national trend data on the relative role of commuting in overall person travel; explores commuting as a share of trips, miles of travel, and travel time at the national level.
3. **Population and Worker Trends**—provides very basic and key national demographic data.
4. **Population and Worker Dynamics**—focuses on the dynamics of the population and workforce, including data on migration, immigration, and differential rates of growth.
5. **The Nature and Pattern of Jobs**—defines employment and describes it in terms of its temporal, geographic, and other features.
6. **Job Dynamics**—looks at trends as they relate to jobs, including work at home, full-time versus part-time, job mobility, and changes in the nature and distribution of job types.
7. **Vehicle and Transit Availability**—reports on vehicle ownership and licensure levels and the availability of transit services. It also references factors influencing the availability of bike, walk, and carpool commute options.
8. **Consumer Spending on Transportation**—reports on various trends related to household spending on transportation.
9. **How Commuting Influences Travel**—explores how commuting travel influences overall travel trends temporally and geographically.
10. **Commuting Mode Choice**—provides a summary of mode choice for commuting (including work at home).
11. **Commuting Departure Time and Trip Time**—reports descriptive information on travel time and time left home, including national and selected additional data for metro area sizes.
12. **Auto Commuting**—addresses trends in privately-owned vehicle (POV) and shared-ride commuting.
13. **Transit Commuting**—addresses transit commuting.
14. **Bicycling and Walking Commuting**—addresses bicycling and walking as commuting modes.
15. **Commuting Flow Patterns**—addresses commuting flow patterns for metro area geographic classifications.
16. **The Evolving Role of Commuting**—synthesizes and interprets materials developed in the prior briefs to paint a picture of the current role of commuting in overall travel and evolving trends to watch going forward.

ES. CIA 2013 Executive Summary

**American Association of State
Highway and Transportation Officials**
444 North Capitol Street, N.W.; Suite 249
Washington, DC 20001

www.transportation.org
ctpp.transportation.org
traveltrends.transportation.org

Pub Code: CA05-4

ISBN: 978-1-56051-575-3