## Included in this Brief:

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- Larger population counties are more affected by external migration.
- Border counties would have
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## Texas Migration

With millions of Texans moving each year, a basic question is: Which parts of Texas are most impacted by this migration?

The first brief in this series on Texas migration, TEXAS MOBILITY, described the volumes and types of mobility for the state as a whole. It noted more than four million Texans change residence each year. Of these four million plus movers, 16 percent originated outside of the state - coming from other U.S. states or from abroad - and the remaining 84 percent originated within the state. Together, these streams of external and internal migrants represent an important source of demographic change in Texas.

The present brief expands on the first by examining how these internal and external migration streams are affecting different areas within the state. Toward this end, we use the state's 254 counties as units of analysis.

In terms of political geography, Texas represents a single state that has $27,862,596$ residents living within an area of 261,232 square miles. As a whole, the state gains around a quarter million additional residents a year through domestic migration and immigration. However, not all parts of the state are affected equally by this migration and variations in migration can lead to profound differences in local population growth patterns.

## Migration Terms

## Based on migrant origins and destinations:

- Internal Migration - migration between two Texas counties.
- Domestic Migration - migration between a Texas county and another U.S. state
- International Migration or Immigration - migration from another nation to a Texas county


## Based on migration volume:

- Net Migration - the number of in-migrants minus the number of out-migrants.
- Gross Migration - the number of in-migrants plus the number of out-migrants
Note: Net migration tells us how much population growth or decline occurs through migration. Gross migration counts all of the people who move into and out of a place during a period of time and, as such, provides a gauge of overall population mobility.

Unlike other population events such as births and deaths, when a person moves, it affects both an origin and a destination. That is, one place's inmigrant is another place's out-migrant. When migration is viewed this way, certain areas in Texas have become favorite destinations for other areas' out-migrants.

Here are some highlights:

- Migration patterns vary across Texas counties.
- Smaller population counties are more affected by internal migration.
- Larger population counties are more affected by external migration.
- Border counties would have negative migration if not for strong immigration rates.


## County Volumes and Linkages

Volumes. In general, gross migration volume is proportional to a county's population size. For example, in Table 1, the five most populous Texas counties, Bexar, Dallas, Harris, Tarrant, and Travis, also have the state's five largest total gross migration flows. Similarly, the state's least populated counties rank at the bottom for gross migration. Reflecting the counties' population extremes, Table 1 shows that total gross migration ranges from over 300,000 in Harris County, the state's most populous county, down to less than 20 persons in Kenedy County which ranks $252^{\text {nd }}$ in population size ${ }^{1}$.

The other source of migration is international migration or immigration ${ }^{2}$. Table 1 again shows a close correspondence between county population size and immigration volume. For example, among

Table 1: Selected Migration Characteristics for the 10 Most and 10 Least Populous Counties in Texas, 2009-2013

| County Name | Population |  | Total Gross Migration* |  | Net Internal Migration |  | Net Domestic Migration |  | Total Net Migration* |  | International Migration (Immigration) |  | Total Net Migration* \& Immigration |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Size | Rank | Size | Rank | Size | Rank | Size | Rank | Size | Rank | Size | Rank | Size | Rank |
| Harris | 4,119,266 | 1 | 318,064 | 1 | -18,297 | 253 | 21,693 | 1 | 3,396 | 14 | 38,780 | 1 | 42,176 | 1 |
| Dallas | 2,377,637 | 2 | 241,434 | 2 | -27,155 | 254 | 2,811 | 11 | -24,344 | 254 | 17,992 | 2 | -6,352 | 254 |
| Tarrant | 1,823,073 | 3 | 186,758 | 3 | -363 | 204 | 8,965 | 4 | 8,602 | 6 | 10,782 | 5 | 19,384 | 6 |
| Bexar | 1,728,176 | 4 | 161,793 | 4 | 2,746 | 8 | 9,477 | 2 | 12,223 | 3 | 12,960 | 3 | 25,183 | 2 |
| Travis | 1,047,764 | 5 | 152,850 | 5 | 2,019 | 13 | 9,031 | 3 | 11,050 | 4 | 10,146 | 6 | 21,196 | 4 |
| El Paso | 801,745 | 6 | 66,453 | 10 | -3,493 | 251 | 550 | 26 | -2,943 | 252 | 12,507 | 4 | 9,564 | 9 |
| Collin | 799,867 | 7 | 109,013 | 6 | -1,428 | 246 | 4,587 | 8 | 3,159 | 15 | 5,646 | 9 | 8,805 | 10 |
| Hidalgo | 775,494 | 8 | 38,569 | 17 | -1,667 | 248 | 1,964 | 12 | 297 | 75 | 7,094 | 7 | 7,391 | 15 |
| Denton | 679,254 | 9 | 106,999 | 7 | 13,267 | 1 | 5,000 | 7 | 18,267 | 1 | 4,659 | 12 | 22,926 | 3 |
| Fort Bend | 600,966 | 10 | 66,721 | 9 | 1,304 | 18 | 913 | 19 | 2,217 | 17 | 5,396 | 10 | 7,613 | 14 |
| ...... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Motley | 1,170 | 245 | 315 | 237 | -2 | 120 | -91 | 222 | -93 | 155 | 0 | 211 | -93 | 174 |
| Foard | 1,122 | 246 | 118 | 246 | 2 | 117 | 30 | 141 | 32 | 127 | 0 | 211 | 32 | 144 |
| Roberts | 1,022 | 247 | 198 | 243 | -25 | 130 | 17 | 154 | -8 | 142 | 0 | 211 | -8 | 157 |
| Kent | 887 | 248 | 149 | 244 | 103 | 90 | 42 | 133 | 145 | 93 | 0 | 211 | 145 | 109 |
| Terrell | 825 | 249 | 106 | 248 | 96 | 94 | 0 | 170 | 96 | 106 | 0 | 211 | 96 | 129 |
| Borden | 625 | 250 | 113 | 247 | 49 | 106 | 0 | 170 | 49 | 121 | 2 | 200 | 51 | 140 |
| McMullen | 605 | 251 | 101 | 249 | 22 | 112 | -29 | 203 | -7 | 141 | 0 | 211 | -7 | 156 |
| Kenedy | 507 | 252 | 19 | 254 | -17 | 126 | 0 | 170 | -17 | 143 | 0 | 211 | -17 | 160 |
| King | 319 | 253 | 58 | 251 | 1 | 119 | 1 | 168 | 2 | 137 | 0 | 211 | 2 | 153 |
| Loving | 87 | 254 | 32 | 253 | -26 | 132 | 6 | 163 | -20 | 146 | 0 | 211 | -20 | 161 |

the top 10 population size counties, nine of these also are in the top 10 immigration counties. As a group, the top 10 received 125,962 immigrants. As with gross migration, the 10 least populated counties are at the bottom for immigration, collectively receiving a total of 2 immigrants.

When net internal migration is examined, the relationship between migration flows and population size is not as straightforward. For example, Dallas County has the state's second largest population but ranks last, at $254^{\text {th }}$, for net internal migration. This occurs because Dallas County lost more than 25,000 persons through net internal migration. Thus, a large gross migration stream does not necessarily lead to large population gains because the outcome depends on the balance between in-migrants and out-migrants.

At the same time, a small net migration flow does not necessarily mean that migration has no impact on local populations. A good example is Harris County. In the process of gaining 3,396 persons through total net migration, 160,730 new residents moved to Harris County while 157,334 established residents moved out of Harris County. Together, this in-migration and out-migration represented a gross migration flow of 318,064 persons or 7.7 percent of the total Harris County population. With this, gross migration produced a 7.7 percent 'turnover' in population even though the 3,396 net migrants represented less than 0.1 percent of the total county population.

Linkages. In addition to migration volume, another way to characterize migration is by linkages. Migration involves a move between an origin and a destination. As such, a migration flow forms a linkage between two places. A primary distinction for migration linkages is whether they are internal (connected within Texas) or external (connected to another state through domestic migration or another country through international migration).

Referring again to Table 1, six of the 10 most populous counties lost population through net internal migration. As a group, the top 10 lost 33,067 persons from migration within Texas. However, all of the top 10 gained population
through domestic migration, collectively gaining 64,991 persons from other U.S. states. In addition, the top 10 gained 125,962 new residents through immigration.

The opposite patterns emerge for the 10 least populated counties. Collectively, the bottom 10 gained 203 persons through internal migration but lost 24 persons through net domestic migration. As a group, the bottom 10 gained 2 residents from immigration.

Table 1 suggests that external migration, from both other states and other nations, is the prime source of migration-based population growth for large population counties. With almost no immigration and negative domestic migration, the group of least populated counties appears to be most affected by internal migration - moves that begin and end in Texas.
Border Counties. Two of the 10 most populated counties, El Paso and Hidalgo, share a border with Mexico. While these counties share some migration similarities with large population counties, they also have some noticeable differences. Both have total gross migration flows that are proportionately small compared to their population sizes. For example, Hidalgo County ranks $8^{\text {th }}$ in population size but $17^{\text {th }}$ in gross domestic migration. These two border counties have relatively small flows of internal and domestic migrants. For example, El Paso County ranks $26^{\text {th }}$ in net domestic migration while Hidalgo County ranks $12^{\text {th }}$. Finally, both border counties have proportionately large population gains from immigration. As an example, El Paso County is $6^{\text {th }}$ in population size but ranks $4^{\text {th }}$ in immigration.

Table 1 has revealed some distinctions among and between the state's 10 most populated and 10 least populated counties. For example: gross migration and immigration flows tend to be proportional to population size; the largest population counties tend to lose population to internal migration and gain population through external migration; and the smallest population counties have an opposite pattern where population is gained through internal migration and
lost through external migration. However, these 20 counties are but a small sample of the state's 254 total counties.

## County Groupings

While it would be informative to examine migration patterns for each of the state's 254 counties, it is difficult to generalize from this amount of detail. One way to examine similarities and differences is to group the counties by size. To further explore the trends noted above, the Texas counties were grouped by population size as follows.

The 254 counties were ranked by population size and divided into quintiles: five groups where each group represents 20 percent of the state's total counties. An additional Border County group was extracted from the five size categories. This resulted in the following six county classifications:

|  | Population |
| :--- | ---: |
| Tier 1 (Smallest): | $87-5,044(N=47)$ |
| Tier 2: | $5,045-12,676(N=49)$ |
| Tier 3: | $12,677-24,461(N=49)$ |
| Tier 4: | $24,462-64,725(N=48)$ |
| Tier 5 (Largest): | $64,726-4,119,266(N=47)$ |
| Border Counties: | $825-801,745(N=14)$ |

These six groups represent all 254 Texas counties. The Border Counties are the 14 Texas counties that share a border with Mexico. In terms of population size, the Border Counties are represented in all five tiers ${ }^{3}$. Please refer to Appendix A for a more detailed description of the county groupings.

Mobility Versus Migration. Local moves are a change of residence within the same county. These moves within a county represent mobility but not migration. This is because local moves inside a county have no impact on the size or composition of that county's total population.

Figure 1 presents local moves, in-migration, and total mobility rates per 1,000 residents using the six county classifications described above. The in-migration rate includes all inflows by combining internal migration, domestic migration, and immigration. The total mobility rate combines local moves and in-migration to derive an overall gauge of mobility. By using rates instead of absolute values, migration patterns can be compared directly across the different county groupings.

Figure 1 also shows some general relationships between mobility patterns and county classification.

Figure 1: Local Moves, In-Migration, and Total Mobility Rates per 1,000 Residents in Texas Counties, 2009-2013


Large population counties have higher total mobility than smaller population counties. Tier 5 has the highest rate of total mobility at 181.3 movers per 1,000 residents while Tier 1 has the least at 133.9.

In general, the rate of local moves increases as county population size increases. Tier 5 has the highest rate of local moves at 112.1 movers per 1,000 residents while Tier 1 has the lowest rate at 51.6. In Tiers 1-4, the lower local moves rates could be due to differences in housing availability, employment opportunities, and age structures that exist between the low- and high-population counties.

Tiers 1-4 have in-migration rates that exceed their local moves rates. The smallest population counties in Tier 1 have the highest in-migration rate of 82.3 in-migrants per 1,000 residents. The largest population counties in Tier 5 have an in-migration rate of 69.2.

For Tiers 1-5, higher rates of local moves are associated with higher total mobility rates. The Border Counties do not follow this pattern. These counties have the second highest rate of local moves (94.0) but the second lowest rate of total
mobility (135.2). Total mobility is low because the Border Counties have the lowest in-migration rate, 41.2 in-migrants per 1,000 residents.

Migration Flows. Figure 2 has the percentage shares by in-migration type for the six county categories. The types are: internal in-migrants (originating in another Texas county); domestic inmigrants (originating in another U.S. state); and immigrant in-migrants (originating in another country). These are the three migration flows that can alter the size and composition of a county's population.

For the less populated counties in Tiers 1-4, around 74 to 79 percent of all in-migrants are internal in-migrants, originating from other counties within Texas. This compares to 57.5 percent for the most populated counties in Tier 5. Internal in-migration is least important in the Border Counties where it comprises 32.3 percent of all in-migration.

Domestic in-migration is most substantial in the Border Counties where 40.4 percent of all inmigrants originated from other U.S. states. For the top population counties of Tier 5, domestic migration is 31.7 percent of all in-migration.

Figure 2: Percentage Shares of Internal, Domestic and International In-Migration in Texas Counties, 2009-2013


Domestic migration is least important in Tiers 1-4 where it ranges from 16.3 to 21.7 percent.

As for immigrant in-migrants, the Border Counties are most impacted with 27.3 percent of all in-migrants originating in another country. Tier 5 has the next highest share at 10.8 percent while Tiers 1-4 have immigrant in-migration shares of less than 5.0 percent.

Based on the patterns in Figures 1 and 2, several generalizations can be made:

- Tiers 1-4, the smaller population counties, are more connected with migrants originating within Texas.
- Tier 5, the largest population counties, is more affected by in-migration from outside of Texas.
- The 14 Border Counties are characterized by relatively high immigration from other countries.
Net Migration. The in-migration data in Figure 2 identified the origins of people moving into Texas counties. However, in-migration data alone do not capture the full effects of migration. Another gauge of migration is net migration which describes the total or net effect of in-migration and out-migration flows.

Figure 3 presents net migration rates for internal, domestic, and total net migration (Note: total net migration is internal and domestic net migration combined). Here, we see that the rate of population gain from total net migration is closely related to population size:

- Tier 5, with the largest population counties, had the highest total net rate at 5.8 net migrants per 1,000 residents.
- Conversely, in Tier 1, the smallest population group, had the lowest total net rate of -6.9.
Figure 3 also suggests the sources of net migration vary by county category:
- All county categories gained population from domestic migration.
- Four county categories, Tiers 1-3 and the Border Counties, had negative or flat net internal migration rates.
- In Tier 4, internal migration represented 63.1 percent of the total net migration rate.
- In Tier 5 domestic migration made up close to 90.0 percent of the total net migration rate.

Figure 3: Net Migration Rates per 1,000 Residents for Counties in Texas, 2009-2013


Table 2: Percentage of Counties with Positive Net Migration in Texas, 2009-2013

|  | Positive Internal | Positive Domestic | Positive Combined |
| ---: | :---: | :---: | :---: |
| (Smallest) Tier 1: $(\mathrm{N}=47)$ | $46.80 \%$ | $59.60 \%$ | $53.20 \%$ |
| Tier 2: $(\mathrm{N}=49)$ | $40.80 \%$ | $63.30 \%$ | $51.00 \%$ |
| Tier 3: $(\mathrm{N}=49)$ | $44.90 \%$ | $65.30 \%$ | $49.00 \%$ |
| Tier 4: $(\mathrm{N}=48)$ | $52.10 \%$ | $60.40 \%$ | $56.30 \%$ |
| (Largest) Tier 5: $(\mathrm{N}=47)$ | $59.60 \%$ | $91.50 \%$ | $74.50 \%$ |
| Border: $(\mathrm{N}=14)$ | $21.40 \%$ | $64.30 \%$ | $28.60 \%$ |
| All: $(\mathrm{N}=254)$ | $47.20 \%$ | $67.70 \%$ | $55.10 \%$ |

Source: U.S. Census Bureau, 2014. ACS 5-Year Summary Data, 2009-2013

Table 2 has the percentage of counties with positive net migration. It shows the share of counties in each group that gained population from internal and domestic migration as well as internal and domestic migration combined.

For the state as a whole, 140 of the 254 counties or 55.1 percent gained population from both internal and domestic migration. Tiers 1-4 had similar proportions gaining population, ranging from 49.0 to 56.3 percent. The largest population counties in Tier 5 had close to 75 percent gaining population from both internal and domestic migration while the proportion for Border Counties was only 28.6 percent.

Each of the county categories had more counties gaining population from domestic migration than from internal migration. The
difference between internal and domestic sources is most apparent in the top population tier. For Tier 5, 91.5 percent of the counties gained from domestic migration while 59.6 gained from internal migration.

Among the smaller population counties, Tiers 1 -3 had less than 50 percent gaining population from internal migration. This means that more than half of the counties in Tiers 1-3 lost population due to migration within Texas. For the Border Counties, 21.4 percent gained population from internal migration and, as such, almost 80 percent lost population from migration within Texas.

Immigration's Contribution. Figure 4 shows how immigration interacts with internal and domestic net migration. In Figure 4, Total Net Migration is net internal and net domestic migration combined. Figure 4: Total Net Migration, Immigration, and Combined Migration Rates, 2009-2013


[^0]Here are some highlights:

- Immigration rates are highest in the largest counties (Tier 5) and the Border Counties at 7.5 and 11.2 immigrants per 1,000 residents respectively. For Tier 5, the 7.5 immigration rate helps this group have the highest combined migration rate (13.3).
- The Border Counties would have lost population from migration were it not for strong immigration. Without immigration, the total net migration rate was negative at -5.0 migrants per 1,000 residents. The 11.2 immigration rate was enough to make the combined migration rate positive at 6.2 migrants per 1,000.
- In contrast, the 3.3 immigration rate in the least populated group (Tier 1) is not enough to make its combined migration rate positive.
Migration Connectivity. One last way to examine migration is to look at the linkages between county pairs. Figure 5 shows the net migrants per county-to-county link. Here, a link represents one or more persons moving between a pair of counties. For example, each of Texas' 254 counties could have up to 253 internal migration links. This would occur if a
county shared at least one in-migrant or outmigrant with each of the other 253 Texas counties. Similarly, for domestic migration, each Texas county could have up to 2,889 links to all counties and county equivalents in the other 49 states. In this way, migrants per link data provide information on the counties' degree of connectivity as well as the efficiency of migration links.

Figure 5 indicates that the number of links ranges from 955 in Tier 1 up to 18,053 in Tier 5. This large difference occurs because the number of links is closely related to the volume of gross migration and Tier 5 counties have much higher gross migration than Tier 1 counties. When viewed as a per capita rate, the relationship between migration links and population size reverses. For example, the number of links per 1,000 residents is 7.8 in the Tier 1 counties and 0.9 in the Tier 5 county group.

In Figure 5, the number of net migrants per link is a gauge for link efficiency. Using this concept, Tier 5 has the most efficient internal migration connectivity with 2.0 net internal migrants per county-to-county link. For domestic migration, Tier 5 also leads the way with 8.2 net migrants per link.

Figure 5: Net Internal and Net Domestic Migrants per County-to-County Link, 2009-2013


Source: U.S. Census Bureau, 2014. ACS 5-Year Summary Data, 2009-2013

The Border Counties have the least efficient internal migration, losing 18.9 net migrants for each internal link. The Border Counties and Tier 1 counties have the least efficient domestic migration connectivity, with each group gaining 1.2 net domestic migrants per domestic link.

Figure 5 again illustrates how migration from outside of Texas predominates in the largest population counties. Tier 5 gains 8.2 domestic migrants per each external link compared to 2.0 migrants per each internal link. As with other measures, the connectivity data suggest that the smallest population counties are characterized by population loss through internal migration. Tier 1 loses 1.6 migrants for each county-to-county link within Texas while it gains 1.2 migrants per domestic link.

Tables 3 and 4 examine linkages at the individual county level. Table 3 shows net internal migration while Table 4 presents net domestic migration. Each table shows the three counties with the largest losses or largest gains from net
migration as well as each county's five largest migration links.

In Table 3, all of the top three loss and top three gain counties are Tier 5 in population size. In Table 3A, the two largest losses from internal migration occur in the state's two most populous counties: Dallas and Harris. The third largest loss is in Cameron County, a border county that ranks 13th in population size. For each of these three counties, the largest county-to-county population losses are to adjacent counties: Dallas to Denton; Harris to Montgomery; and, Cameron to Hidalgo.

Table 3B has the three counties with the largest net internal migration gains. The counties gaining from internal migration also have large populations but of the three, only Denton Country is among the state's ten most populous counties. For Denton and Williamson Counties, the largest county -to-county population gains are from adjacent counties: Denton from Dallas; and, Williamson from Travis.

Table 3: Select County-to-County Links for Texas Internal Migration, 2009-2013
Table 3A: Top Three Population Losses from Net Internal Migration with Five Largest Negative Links

|  | Cameron County, TX Internal Links=102 <br> Net Internal Migration=-3,979 |  | Dallas County, TX <br> Internal Links=203 <br> Net Internal Migration=-27,155 |  | Harris County, TX <br> Internal Links=199 <br> Net Internal Migration=-18,297 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Top 5 | Name | Net | Name | Net | Name | Net |
| 1 | Hidalgo County, TX | -957 | Denton County, TX | -7,669 | Montgomery County, TX | -3,398 |
| 2 | Bexar County, TX | -660 | Tarrant County, TX | -7,588 | Travis County, TX | -2,552 |
| 3 | Nueces County, TX | -592 | Collin County, TX | -1,088 | Liberty County, TX | -1,775 |
| 4 | Hays County, TX | -309 | Smith County, TX | -1,021 | Fort Bend County, TX | -1,706 |
| 5 | Williamson County, TX | -294 | Travis County, TX | -799 | Hays County, TX | -1,149 |

Source: U.S. Census Bureau, 2015a. County-to-County Migration Flows: 2009-2013 ACS

Table 3B: Top Three Population Gains from Net Internal Migration with Five Largest Positive Links

|  | Brazos County, TX <br> Internal Links=158 <br> Net Internal Migration=8,132 |  | Denton County, TX <br> Internal Links=143 <br> Net Internal Migration=13,267 |  | Williamson County, TX <br> Internal Links=140 <br> Net Internal Migration=8,658 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Top 5 | Name | Net | Name | Net | Name | Net |
| 1 | Bexar County, TX | 767 | Dallas County, TX | 7,669 | Travis County, TX | 4,250 |
| 2 | Tarrant County, TX | 637 | Tarrant County, TX | 1,575 | Bell County, TX | 955 |
| 3 | Grimes County, TX | 544 | Collin County, TX | 1,342 | McLennan County, TX | 482 |
| 4 | Burleson County, TX | 374 | Rockwall County, TX | 641 | Dallas County, TX | 380 |
| 5 | Brazoria County, TX | 362 | Harris County, TX | 625 | Hidalgo County, TX | 340 |

Table 4: Select County-to-County Links for Texas Domestic Migration, 2009-2013
Table 4A: Top 3 Population Losses from Net Domestic Migration with Five Largest Negative Links

|  | Cameron County, TX <br> Domestic Links=231 <br> Net Domestic Migration=-884 |  | Johnson County, TX <br> Domestic Links=125 <br> Net Domestic Migration=-673 |  | Val Verde County, TX Domestic Links=76 <br> Net Domestic Migration=-702 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Top 5 | Name | Net | Name | Net | Name | Net |
| 1 | Lee County, FL | -374 | Lancaster County, NE | -198 | San Bernardino County, CA | -435 |
| 2 | Maricopa County, AZ | -278 | Grady County, OK | -129 | Hamilton County, IN | -128 |
| 3 | Kandiyohi County, MN | -204 | Berkeley County, SC | -116 | Broward County, FL | -117 |
| 4 | Alexandria city, VA | -203 | Ward County, ND | -66 | Olmsted County, MN | -102 |
| 5 | Terrebonne Parish, LA | -137 | Lincoln County, OK | -54 | Chaves County, NM | -80 |

Table 4B: Top 3 Population Gains from Net Domestic Migration with Five Largest Positive Links

|  | Bexar County, TX <br> Domestic Links=944 <br> Net Domestic Migration=9,477 |  | Harris County, TXDomestic Links $=1,032$Net Domestic Migration $=21,693$ |  | Travis County, TX <br> Domestic Links=628 <br> Net Domestic Migration=9,031 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Top 5 | Name | Net | Name | Net | Name | Net |
| 1 | Los Angeles County, CA | 813 | Los Angeles County, CA | 3,073 | Los Angeles County, CA | 733 |
| 2 | Cook County, IL | 586 | Cook County, IL | 1,200 | Fulton County, GA | 645 |
| 3 | Orange County, CA | 576 | Miami-Dade County, FL | 1,001 | Cook County, IL | 573 |
| 4 | Cochise County, AZ | 522 | Fairbanks North Star, AK | 967 | Orange County, CA | 493 |
| 5 | Hillsborough County, FL | 515 | Queens County, NY | 657 | Miami-Dade County, FL | 386 |

Source: U.S. Census Bureau, 2015a. County-to-County Migration Flows: 2009-2013 ACS

Table 4 shows the largest negative and positive net domestic migration links for individual Texas counties. Table 4A has the top three domestic migration loss counties. None is among the top ten most populous. Two of these, Cameron and Val Verde, are Border Counties. In terms of population size, the top domestic migration losses are small when compared to the top internal migration losses. County-to-county links for the top three domestic loss counties are dispersed. The 15 negative links involve 12 different states and 15 different counties.

In Table 4B, the top domestic migration gains occur in three of the state's top five most populous counties. In terms of absolute size, the top domestic gains are much larger than the top domestic losses. Compared to the domestic loss counties, the county-to-county links for the top gainers are more concentrated. The 15 positive links involve seven states and nine counties. Many of these links are with other major U.S.
metropolitan areas. Los Angeles County (Los Angeles) is the largest domestic link for all three top gaining Texas counties. Cook County (Chicago), Orange County (Anaheim), and Miami-Dade (Miami) are other major sources of domestic migration gain.

Overall, the county-to-county links suggest that the state's most populated counties are impacted by migration in two ways. In the first instance, internal migration redistributes people from the state's most populated counties to less-populated, adjacent counties. In the second instance, domestic migration from major U.S. metropolitan areas adds people to the state's most populated counties. With this, the state's most populous counties are losing existing residents from internal migration while simultaneously gaining new residents from domestic migration. Moreover, these same counties are primary destinations for new immigrants. A continuation of these trends promises to reshape both the population
distributions and population compositions of the state's most populated areas. We examine this interplay more closely in Part 3 of this series, TEXAS MIGRATION AND URBANIZATION, which explores how migration is redistributing the population within and between Texas' 25 metropolitan areas.

## Summary and Conclusions

Summary. In recent years, Texas has become a favorite destination for domestic and international migrants, adding close to 250,000 people a year through migration. In addition to this external migration, over a million Texans move from one county to another within the state. Together, these migration streams produce a substantial population redistribution within Texas every year.

Though contemporary Texas consistently adds population through migration, the same is not true for all of the state's 254 counties. Population change from migration has been uneven and the sources of migration have varied across the state.

This brief has examined migration in Texas counties by total mobility, migration flows, net migration, immigration, and connectivity. With each of these migration measures, there is a strong contrast between the largest population counties and the smallest population counties in Texas. In addition, the group of 14 Border Counties has its own distinctive migration characteristics.

Population change from migration in Texas can be generalized as follows:

- Smaller population counties are more affected by internal migration - movements beginning and ending in Texas. The three least populated tiers had population loss or zero growth from internal migration. They also tend to have flat or low rates of domestic and international migration. As for migration linkages, these counties are less connected to other counties than the largest population counties and tend to gain fewer migrants per county-to-county link.
- The largest population counties tend to have the highest mobility rates, greatest
migration volumes, highest overall migration rates, and highest overall connectivity with other counties. Larger population counties are most affected by domestic and international migration flows. More than 90 percent of the total net migration in these counties comes from external sources that originate outside of Texas. At the same time, some of the state's most populated counties are losing population through internal migration to nearby counties.
- Border counties have low volumes and low rates of internal and domestic migration and, as a group, experience negative total net migration. Were it not for high immigration rates, these counties would have negative overall migration rates.
Conclusions. It has long been believed that migration is associated with basic social change and cultural diffusion (Bogue 1959; Bogue et al 1982). Given this dynamic, the state's major metropolitan areas have become the focal points of substantial change. While all of Texas is affected by migration, the counties encompassed by major metropolitan areas are experiencing large population increases through the in-migration of people from other states and nations. This growth from external migration sources suggests a future with increasingly heterogeneous populations, both demographically and culturally, residing in the state's major metropolitan areas.

At the same time, some of the state's least populated counties are losing population through both internal and domestic migration. Because migrants tend to be young adults, this pattern of youth outmigration can lead to increasingly older populations remaining in these counties. In turn, this 'aging in place' can inhibit economic development, restrain community vitality, and reduce population growth through natural increase. To the extent this pattern of out-migration continues, some of the state's least populated counties will face continuing population loss.

In many respects, the Texas counties that share a border with Mexico are an enigma. Domestic
migration is minimal and negative in 10 of the 14 counties. As a group, their total net migration rate is -5.0 per 1,000 residents. At the same time, this group gains 11.2 persons per 1,000 residents through immigration. Thus, the border counties are experiencing population gain through immigration and losing population from internal and domestic migration. Yet, even with this, some of these counties are among the fastest growing in the state. This is because high fertility rates are producing large population gains through natural increase. Thus, while the loss of population from migration is similar to that of the state's least populated counties, the border counties are growing rapidly from immigration and natural increase. If these trends persist, these counties will continue to have populations that are younger and more international than the state as a whole.

Given the differences in these three types of counties, it might be said that Texas is one state with three demographic destinies. As a whole, Texans are very mobile and Texas is growing from migration. But, within the state, the sifting and sorting of these population movements is uneven. These trends underlie a reshaping of the state's population geography with some counties losing population while others gain population, some counties growing older while others are attracting young people, and some counties becoming more heterogeneous while others fail to thrive. Should these trends persist, Texas could see a future where migration sharpens the state's geographical differences in opportunities and challenges.

## Endnotes

${ }^{1}$ Data used in this report are derived from the 2014 5 -Year American Community Survey (ACS). The 2014 5-Year ACS Summary File covers the 20092013 time period. With this, five years of data are accumulated on a continuous basis. This is done to increase the sample size, which improves the survey's accuracy and permits the inclusion of geographic areas with populations of less than 20,000 persons. Conceptually, these period surveys measure the average characteristics of a geographic area over five years (U.S. Census Bureau 2008).

As with all survey data, the ACS is subject to sampling error which occurs when a random sample does not fully represent the whole population that is being evaluated. Sampling error becomes less problematic with larger sample sizes. For a more detailed description of the ACS data accuracy, please see the U.S. Census Bureau (2015b) reference.
${ }^{2}$ Here we use the terms international migration and immigration interchangeably. The American Community Survey does not have data on net international migration. The U.S. Census Bureau produces several annual reports that include the mobility patterns of Americans. Two of the primary sources are surveys: The American Community Survey and the annual supplement to the Current Population Survey. The other primary source, Population Estimates, is not a survey. The Population Estimates Program uses various data sources to produce annual estimates of the population and components of population change. Using various estimation techniques, the Population Estimates are able to calculate Net International Migration as well as Net Domestic Migration. By contrast, the surveys are based on respondents' answers. Because these surveys are administered only in the United States and its territories, they do not get information on persons who emigrate from the U.S. to other countries.
${ }^{3}$ The 14 border counties and their respective population tiers (quintiles) are as follows: Hudspeth (Tier 1); Jeff Davis (Tier 1); Kinney (Tier 1); Terrell
(Tier 1); Brewster (Tier 2); Presidio (Tier 2); Zapata (Tier 3); Maverick (Tier 4); Starr (Tier 4); Val Verde (Tier 4); Cameron (Tier 5); El Paso (Tier 5); Hidalgo (Tier 5); and, Webb (Tier 5). For more information, please refer to Appendix A.

## References

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ACS Accuracy of Data 2014.pdf 09/12/2016)

Tier 1
FIPS Name Population*

| 48011 | Armstrong | 1,768 |
| :--- | :--- | ---: |
| 48023 | Baylor | 3,641 |
| 48033 | Borden | 625 |

$\begin{array}{llr}48033 & \text { Borden } & 625 \\ 48045 & \text { Briscoe } & 1,598\end{array}$
48079 Cochran 3,028
48081 Coke 3,233
48087 Collingsworth 3,033
48095 Concho 4,048
48101 Cottle $\quad 1,530$
48103 Crane $\quad 4,375$
48105 Crockett 3,811
48109 Culberson 2,345
$\begin{array}{lll}48129 & \text { Dickens } & 2,358 \\ \text { Donley } & 3,598\end{array}$
48137 Edwards 2,070
48151 Fisher $\quad 3,898$
48173 Glasscock 1,176
48191 Hall 3,286
48197 Hardeman 4,035
48211 Hemphill 3,884
$\begin{array}{llr}48235 & \text { Irion } & 1,595 \\ 48261 & \text { Kenedy } & 507\end{array}$
48263 Kent 887
48267 Kimble 4,543
$\begin{array}{llr}48269 & \text { King } & 319 \\ 48275 & \text { Knox } & 3,711\end{array}$
48295 Lipscomb 3,283
$\begin{array}{llr}48301 & \text { Loving } & 87 \\ 48311 & \text { McMullen } & 605\end{array}$
48317 Martin 4,898
48319 Mason 3,991
48327 Menard 2,187
48333 Mills 4,851
$\begin{array}{lll}48345 & \text { Motley } & 1,170 \\ 48359 & \text { Oldham } & 2,042\end{array}$
48383 Reagan 3,422
48385 Real 3,322
48393 Roberts 1,022
48413 Schleicher 3,316
48417 Shackelford 3,333
48421 Sherman 3,020
48431 Sterling $\quad 1,338$
48433 Stonewall 1,347
48435 Sutton 4,026
48447 Throckmorton 1,603
48461 Upton 3,272

Tier 2

| FIPS | Name | Population* | FIPS | Name | Population* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 48009 | Archer | 8,786 | 48003 | Andrews | 15,300 |
| 48017 | Bailey | 7,053 | 48007 | Aransas | 23,388 |
| 48031 | Blanco | 10,500 | 48019 | Bandera | 20,344 |
| 48047 | Brooks | 7,110 | 48035 | Bosque | 18,005 |
| 48063 | Camp | 12,166 | 48051 | Burleson | 16,966 |
| 48065 | Carson | 6,078 | 48057 | Calhoun | 21,111 |
| 48069 | Castro | 7,864 | 48059 | Callahan | 13,427 |
| 48075 | Childress | 6,978 | 48089 | Colorado | 20,591 |
| 48077 | Clay | 10,539 | 48093 | Comanche | 13,603 |
| 48083 | Coleman | 8,558 | 48115 | Dawson | 13,695 |
| 48107 | Crosby | 5,985 | 48117 | Deaf Smith | 18,721 |
| 48111 | Dallam | 6,709 | 48123 | DeWitt | 20,121 |
| 48119 | Delta | 5,143 | 48133 | Eastland | 18,241 |
| 48127 | Dimmit | 10,001 | 48145 | Falls | 17,529 |
| 48131 | Duval | 11,604 | 48161 | Freestone | 19,494 |
| 48153 | Floyd | 6,315 | 48163 | Frio | 17,329 |
| 48159 | Franklin | 10,496 | 48165 | Gaines | 17,573 |
| 48169 | Garza | 6,324 | 48177 | Gonzales | 19,631 |
| 48175 | Goliad | 7,204 | 48179 | Gray | 22,519 |
| 48193 | Hamilton | 8,348 | 48219 | Hockley | 22,775 |
| 48195 | Hansford | 5,503 | 48225 | Houston | 23,176 |
| 48205 | Hartley | 6,029 | 48233 | Hutchinson | 21,770 |
| 48207 | Haskell | 5,791 | 48239 | Jackson | 13,970 |
| 48237 | Jack | 8,921 | 48253 | Jones | 19,943 |
| 48247 | Jim Hogg | 5,179 | 48255 | Karnes | 14,742 |
| 48283 | La Salle | 6,830 | 48279 | Lamb | 13,717 |
| 48297 | Live Oak | 11,468 | 48281 | Lampasas | 19,692 |
| 48305 | Lynn | 5,811 | 48285 | Lavaca | 19,126 |
| 48307 | McCulloch | 8,187 | 48287 | Lee | 16,406 |
| 48315 | Marion | 10,383 | 48289 | Leon | 16,513 |
| 48335 | Mitchell | 9,263 | 48293 | Limestone | 23,219 |
| 48357 | Ochiltree | 10,301 | 48299 | Llano | 19,052 |
| 48369 | Parmer | 9,988 | 48313 | Madison | 13,511 |
| 48379 | Rains | 10,851 | 48331 | Milam | 24,135 |
| 48387 | Red River | 12,661 | 48337 | Montague | 19,358 |
| 48391 | Refugio | 7,192 | 48341 | Moore | 21,637 |
| 48399 | Runnels | 10,250 | 48343 | Morris | 12,743 |
| 48403 | Sabine | 10,557 | 48351 | Newton | 14,172 |
| 48405 | San Augustine | 8,788 | 48353 | Nolan | 14,856 |
| 48411 | San Saba | 5,953 | 48365 | Panola | 23,609 |
| 48425 | Somervell | 8,429 | 48371 | Pecos | 15,482 |
| 48429 | Stephens | 9,373 | 48389 | Reeves | 13,571 |
| 48437 | Swisher | 7,712 | 48395 | Robertson | 16,351 |
| 48445 | Terry | 12,625 | 48415 | Scurry | 16,737 |
| 48475 | Ward | 10,678 | 48455 | Trinity | 14,314 |
| 48483 | Wheeler | 5,469 | 48457 | Tyler | 21,314 |
| 48495 | Winkler | 7,120 |  |  |  |
| 48501 | Yoakum | 7,865 |  |  |  |
| 48507 | Zavala | 11,690 |  |  |  |

*Population is from the 2009-2013 5-Year ACS Summary Data for the population 1 year of age and older.
TIER POPULATION KEY
Tier 1
Tier 2
Tier 3
Tier 4
Tier $5 \quad$ Border Counties
Population 87-5,044
$5,045-12,676 \quad 12,677-24,461 \quad 24,462-64,725 \quad 64,726-4,119,266$
$825-801,745$

APPENDIX A: COUNTY CLASSIFICATIONS (continued)

Tier 4
FIPS Name Population*

| 48001 | Anderson | 57,722 |
| :--- | :--- | :--- |
| 48013 | Atascosa | 45,173 |

48015 Austin $\quad 28,339$

48025 Bee
48049 Brown
48053 Burnet
48055 Caldwell 38,128
48067 Cass 30,064
48071 Chambers 35,086
$\begin{array}{lll}48073 & \text { Cherokee } & 50,311 \\ 48097 & \text { Cooke } & 38,096\end{array}$
48143 Erath 38,400
$\begin{array}{lll}48147 & \text { Fannin } & 33,452 \\ 48149 & \text { Fayette } & 24,544\end{array}$
48171 Gillespie 24,707
48185 Grimes 26,487
$\begin{array}{lll}48189 & \text { Hale } & 35,686 \\ 48199 & \text { Hardin } & 54,341\end{array}$
48217 Hill 34,591
48221 Hood 51,196
48223 Hopkins 34,836
$\begin{array}{lll}48227 & \text { Howard } & 34,838 \\ 48241 & \text { Jasper } & 35,378\end{array}$
48249 Jim Wells 40,436
48259 Kendall 34,595
48265 Kerr
48273 Kleberg 31,529

48277 Lamar
48321 Matagorda 36,083
48325 Medina 45,983
48347 Nacogdoches 64,116
48349 Navarro 47,173
48363 Palo Pinto 27,789
48373 Polk $\quad 45,230$
48401 Rusk
48407 San Jacinto 26,348
48409 San Patricio
48419 Shelby
48449 Titus
48459 Upshur
48463 Uvalde
48467 Van Zandt
48473 Waller
48477 Washington
48481 Wharton
48493 Wilson
48497 Wise
48499 Wood

Tier 5
FIPS Name Population*

48005

| Angelina | 85,910 |
| :--- | :--- |
| Bastrop | 73,842 |

48021 Bastrop 73,842
48027 Bell 311,127
48029 B
48037
48041
48091
48099
48121
48139
48157
48181
48187
48201
48209
48213
48245
48257
48291
48309
48329
48339
48355
48367
48375
48397
48423
48439
48451
48453
48469
48471
48485
48491

Border Counties

| FIPS | Name | Population* | Tier |
| :---: | :--- | ---: | :---: |
| 48043 | Brewster | 9,136 | 2 |
| 48061 | Cameron | 404,024 | 5 |
| 48141 | El Paso | 801,745 | 5 |
| 48215 | Hidalgo | 775,494 | 5 |
| 48229 | Hudspeth | 3,327 | 1 |
| 48243 | Jeff Davis | 2,290 | 1 |
| 48271 | Kinney | 3,563 | 1 |
| 48323 | Maverick | 53,743 | 4 |
| 48377 | Presidio | 7,495 | 2 |
| 48427 | Starr | 60,423 | 4 |

*Population is from the 2009-2013 5-Year ACS Summary Data for the population 1 year of age and older.

|  | TIER POPULATION KEY |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tier 1 | Tier 2 | Tier 3 | Tier 4 | Tier 5 | Border Counties |
| Population | $87-5,044$ | $5,045-12,676$ | $12,677-24,461$ | $24,462-64,725$ | $64,726-4,119,266$ | $825-801,745$ |

## TEXAS MIGRATION

To see more details about how Texas counties are affected differently by migration, go to our brief Texas Migration.
Texas consistently has added population through migration in recent years but the same is not true for all of the state's 254 counties. Among the counties, population change from migration has been uneven and the sources of migration have varied across the state.
$\Rightarrow$ Smaller counties more affected by internal migration.
$\Rightarrow$ Larger counties more affected by external migration.
$\Rightarrow$ Border counties would have negative migration if not for strong immigration.

## Texas County Population Tiers by Migration Type per Tier for Select Counties

Migration Type
$\square$ Internal Migrants
Domestic Migrants
$\square$ Immigrant Migrants

County Population Tiers
$\square$ Tier 1 (Pop. < 5,045)
Tier 2 (Pop. 5,045-12,676)
Tier 3 (Pop. 12,677-24,461)
Tier 4 (Pop. 24,462-64,725)
Tier 5 (Pop. > 64,726)
Border (Pop. 825-801,745)


[^0]:    Source: U.S. Census Bureau, 2014. ACS 5-Year Summary Data, 2009-2013

