TEXAS MOVERS - MIGRATION AND INCOME ALONG THE BORDER

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Texas residents are among the most mobile in the nation; 17.2% of Texans moved between counties from 2009 to 2013, higher than the 15% national average.[1] Over a million Texans moved from one county to another within the state, with a significant portion of them settling in one of Texas' major metropolitan areas.[2] This report examines the flow of people into and out of Texas border communities using U.S. Department of Agriculture commuting zones (CZs).[3] Commuting zones are defined as a combination of contiguous counties that encompass a geographic area large enough where most people living within a CZ also work within that CZ, and vice versa. CZs are also intended to be small enough that the commute from home to work within a CZ would be a reasonable undertaking.[4] This report analyses the major migration links for outflows and inflows of households and individuals who lived in each of the commuting zones along the Texas-Mexico border from 2015 to 2016. When families living along the border moved, where did they go? Conversely, when families moved into the border areas, from where did they come?

This report uses tax return data from the Internal Revenue Service (IRS) to track the movement of individuals, which also includes income data. This data is then used to compare the average income of movers relative to that of non-movers in border commuting zones. The IRS data tracks the number of tax filers migrating from county to county in the United States at the household and individual level across two consecutive years through tax returns. This supplies data on the location of the household as well as the adjusted gross income reported by the household.[5]

The border area is important for a number of reasons. According to data from the U.S. Census Bureau, border communities in the United States would have negative migration if not for immigration from foreign countries.[6] Such large migrations raise important questions regarding urban, education, healthcare, and security policy planning at the local and state level.

[1]White, et al., (2016). Texas Mobility, Texas Demographic Center.
[2]White, et al.,(2016). Texas Mobility, Texas Demographic Center.
[3]United States Department of Agriculture, Economic Research Services; Commuting Zones and Labor Market Areas (2012).
[4]CZs are largely centered on urban locations, i.e. El Paso, and define a geographic unit of analysis that corresponds with an urban area and also encompasses all counties including rural areas.
[5]There must be at least ten returns filed in a county-to-county flow in order to be documented, otherwise the Internal Revenue Service suppresses it. These flows are not accounted for in our calculations and does not affect our results in any significant manner.
[6]White, et al., (2017). Texas Migration, Texas Demographic Center.

TEXAS - MEXICO BORDER COMMUTING ZONES MAP

COMMUTING ZONES ON THE TEXAS-MEXICO BORDER AND NON-MOVERS

IRS county level data is aggregated into CZs along the border as defined by the Economic Research Service of the US Department of Agriculture.[7] There are seven CZs along the Texas-Mexico border, constituted by 21 Texas counties and two neighboring counties in New Mexico. This initial summary refers to data on households and individuals who filed tax returns in 2016 and who did not move between tax years 2015 and 2016. The income data referred to is income earned in 2015.

The Rio Grande Valley is the most populous Texas border CZ. It includes Cameron, Hidalgo, Starr, and Willacy counties and is located in the southern-most region of Texas and the eastern edge of the US-Mexico border. Non-movers filed 400,231 tax returns and claimed 1,020,474 personal exemptions, which also provides an estimate of the population of individuals in tax-filing households in this area. The average income per return was $41,825. The second largest CZ on the Texas border in terms of exemptions was the El Paso CZ. Located on the far west side of the Texas border and in the middle of the US border with Mexico, the El Paso CZ includes El Paso and Hudspeth counties in Texas, as well as Dona Ana and Sierra counties in New Mexico. This CZ had 358,353 returns filed with 835,009 tax exemptions and an average income per return of $47,161.

The other five CZs, located between El Paso and the Rio Grande Valley, together filed 158,036 returns and claimed 401,142 personal exemptions. Laredo's CZ reached 92,353 returns and 238,908 exemptions, followed by Eagle Pass where there were 35,928 returns and 91,302 exemptions filed. Laredo had an average income by return of $44,864 for non-migrants; Eagle Pass' reported figure was $43,172. Laredo's CZ is located next to the Rio Grande Valley and includes Jim Hogg, Zapata, and Webb counties. The Eagle Pass CZ includes Dimmit, Maverick, Uvalde and Zavala counties and is located to the northwest of Laredo. In fifth place stands Del

[7]The US Department of Agriculture defines 709 Commuting Zones in their "2000 commuting zones" data set (2012). An additional commuting zone was added to include six counties (or equivalent) in Alaska that were not in the USDA data set. For the original CZs codes visit the USDA Economic Research Service website: https://www.ers.usda.gov/data-products/commuting-zones-and-labor-market-areas/

Rio, geographically northwest of Eagle Pass, with 17,340 tax returns filed and 42,346 exemptions. Val Verde and Kinney counties comprise the Del Rio CZ, where the mean income per return was $47,677. The Presidio CZ, with four counties (Brewster, Culberson, Jeff Davis and Presidio) and located east of El Paso, had 7,502 returns with 17,063 exemptions. The average income by return in the Presidio CZ was $53,292. The lowest number of exemptions filed among the Texas border CZs was the Terrell CZ, constituted by Pecos and Terrell counties. However, Terrell reported the highest average income of $56,440 on 4,913 tax returns and 11,523 exemptions.

While El Paso and the Rio Grande Valley are both border regions, they are over 800 miles apart by car. El Paso is closer to San Diego, California than it is to the city of Brownsville in Texas' Rio Grande Valley. They were the two most populous border CZs of Texas and are the focus of the analysis below.

<div align="center">COMMUTING ZONES AND MIGRATION FLOWS</div>

Table 1 shows the destination of households when they left the Rio Grande Valley CZ, and also where households originated from when they moved to the Rio Grande Valley CZ. Table 2 reports the same data for the El Paso CZ. The data is shown for households who moved locations between 2015 and 2016. The tables include the six most popular CZ destinations for out-migration and the six most popular destinations for in-migration, as well as a count of those who moved to or from a foreign country. Tax filers were included in the county-to-county migration files if they filed tax returns in both 2015 and 2016. Foreign filers, either immigrants or emigrants, filed U.S. tax returns in both years, including the year they resided in the foreign location.

▌TABLE 1. RIO GRANDE VALLEY COMMUTING ZONE: 2015 - 2016

RIO GRANDE VALLEY	Commuting Zone	Households		Individuals	
		Number	% of total	Number	% of Total
Origination CZs (inflows)	Houston, TX (1)	1,174	26.1%	2,760	28.0%
	San Antonio, TX (2)	680	15.1%	1,346	13.7%
	Austin-Round Rock, TX (3)	640	14.2%	1,254	12.7%
	Corpus Christi, TX (4)	496	11.0%	1,077	10.9%
	Dallas, TX (5)	273	6.1%	599	6.1%
	Laredo, TX (6)	209	4.6%	499	5.1%
	Foreign (8)	108	2.4%	237	2.4%
Destination CZs (outflows)	Houston, TX (1)	1,620	25.6%	3,762	28.0%
	San Antonio, TX (2)	1,479	23.4%	2,947	21.9%
	Austin-Round Rock, TX (3)	899	14.2%	1,597	11.9%
	Corpus Christi, TX (4)	579	9.2%	1,344	10.0%
	Dallas, TX (5)	356	5.6%	718	5.3%
	Fort Worth, TX (6)	205	3.2%	418	3.1%
	Foreign (9)	120	1.9%	246	1.8%

The number of households and individuals who moved into the Rio Grande Valley CZ represented a rounded 1% of the total tax filing population in the CZ in the first year of the matched data. Households who left the Rio Grande Valley represented 1.6% and 1.3% of individuals of the population. Migration to and from the El Paso CZ was more prevalent compared to the Rio Grande Valley CZ. The number of households and individuals that moved to El Paso represented around 3% of the tax-filing population in the first year of the matched data, while outflows were 3.4% and 3.3% of the tax filing population for households and individuals, respectively.

❚ TABLE 2. EL PASO COMMUTING ZONE: 2015 - 2016

EL PASO	Commuting Zone	Households		Individuals	
		Number	% of total	Number	% of Total
Origination CZs (inflows)	Foreign (1)	1,103	10.2%	2,621	10.5%
	Los Angeles, CA (2)	667	6.1%	1,379	5.5%
	Albuquerque, NM (3)	450	4.1%	885	3.5%
	San Antonio, TX (4)	447	4.1%	962	3.8%
	Phoenix, AZ (5)	430	4.0%	873	3.5%
	Alamogordo, NM (6)	424	3.9%	898	3.6%
	Odessa, TX (7)	403	3.7%	953	3.8%
Destination CZs (outflows)	San Antonio, TX (1)	889	7.0%	1,937	6.7%
	Foreign (2)	795	6.3%	1,965	6.8%
	Phoenix, AZ (3)	693	5.5%	1,457	5.1%
	Albuquerque, NM (4)	659	5.2%	1,200	4.2%
	Los Angeles, CA (5)	635	5.0%	1,359	4.7%
	Austin-Round Rock, TX (6)	575	4.5%	987	3.4%
	Dallas, TX (7)	510	4.0%	951	3.3%

Tables 1 and 2 show significant differences in the pattern of inflows and outflows in these two CZs. More than 1 out of 4 individuals and households who moved to the Rio Grande Valley arrived from the Houston CZ. Inflows from Houston to the Rio Grande Valley were almost twice the number of El Paso's top domestic inflows from Los Angeles, 667 households and 1,379 individuals. Regarding outflows, 28% of the people who left the Rio Grande Valley moved to the Houston area.

As expected, the Rio Grande Valley tended to send and receive people from within the state of Texas. Foreign inflows and outflows were far greater in amount and proportion when compared to the Rio Grande Valley. One of every 10 individuals from a tax-paying household who migrated to El Paso was from a foreign location, making it the top source of immigrants for 2015 to 2016. Regarding outflows, San Antonio was the top destination for households from El Paso, but with just 28 additional exemptions, there was a larger flow of individuals to foreign destinations. A foreign link in outflows was also present in the Rio Grande Valley in the ninth position, with 1.9% and 1.8% of households and individuals, respectively. In total, there were 6,325 households and 13,431 individuals emigrating from the Rio Grande Valley to 26 different CZs; immigrants who moved to the Rio Grande Valley came from 25 CZs and included 4,498 households and 9,854 individuals. In El Paso, there were 86 different destinations for its 12,685 emigrating households and 27,732 individuals; there were 77 CZs from which 10,846 households and 25,003 individuals immigrated to El Paso.[8]

<div align="center">

INCOME

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Figures 1 and 2 illustrate the relationship between a CZ's average migrant and non-migrant income.[9] The figures include 645 CZs with red depicting the CZs of the Texas border, blue for Texas non-border CZs and gray for the remaining CZs.[10] The vertical axis plots the ratio of the mean income of emigrants relative to the mean income of non-movers, and the horizontal axis plots the ratio of the mean income of immigrants relative to the mean income of non-movers. Each CZ is a circle on the graph where the size of the circles represent the 'population' of each CZ, which is measured by the number of exemptions filed.

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[8]The relative rankings of the origin and destination CZs for El Paso and the Rio Grande Valley migrants change from year to year.
[9]For a county-level depiction, see Migration Nation, *PERCspectives on Policy*, Private Enterprise Research Center (2016).
[10]Of the USDA-defined CZs, 645 had county-to-county migration data. Commuting Zones excluded are those with non-existent inflows and/or outflows, or those with county-to-county flows that had less than ten tax returns and were consequentially suppressed by the IRS.

FIGURE 1. RELATIONSHIP BETWEEN COMMUTING ZONES' AVERAGE MIGRANT AND NON-MIGRANT INCOMES, YEARS 2015 - 2016: HOUSEHOLDS
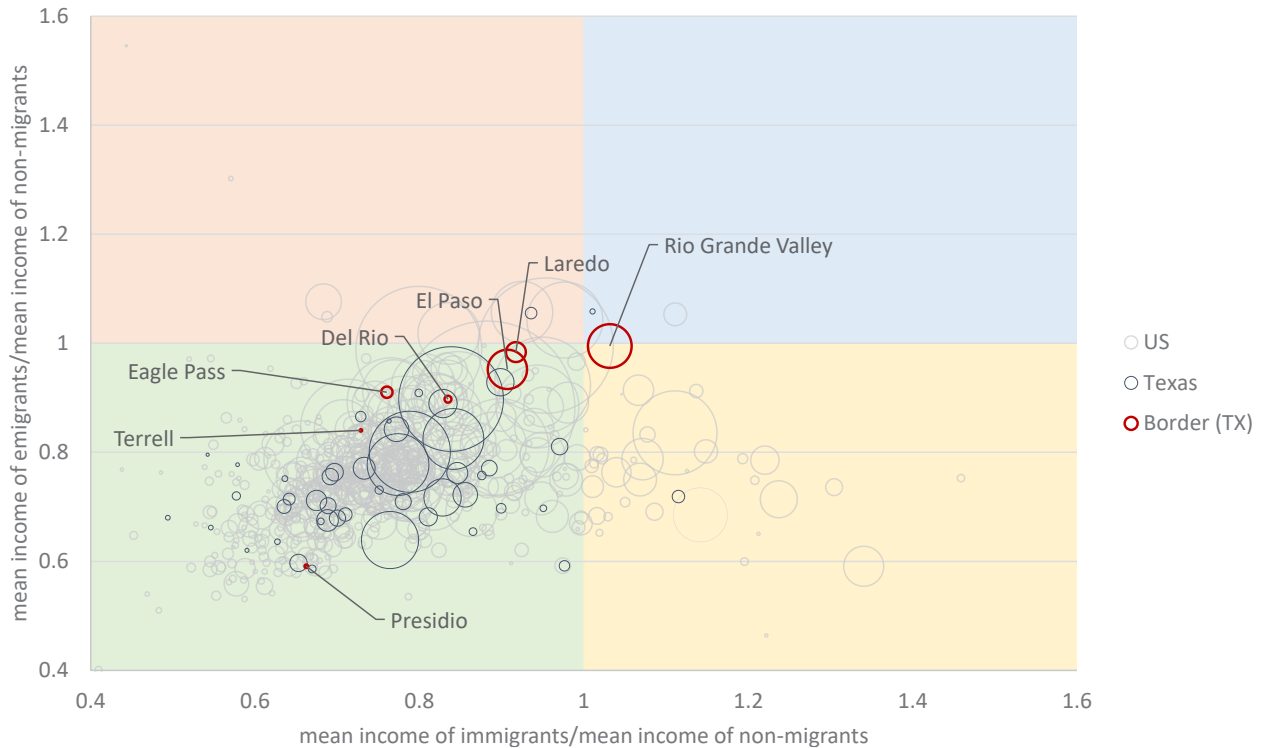
Notes: Averages for the Years 2015-2016 in all commuting zones. Income earned in 2015. Data from Internal Revenue Service, Statistics of Income, County-to-county migration data: www.irs.gov/statistics/soi-tax-stats-migration-data

The CZs in the upper-right (blue) area are those where migrants, both incoming and outgoing, had a higher average income than non-migrants. In contrast, the lower-left quadrant (green) shows where migrants had a lower mean income relative to that of non-migrants. The quadrant in the upper-left area of the figure (red) includes CZs where, on average, emigrant income was higher than non-migrant income and non-migrant income was higher than immigrant income. The yellow quadrant in the lower-right corner represents CZs where non-migrant mean income was larger than emigrant mean income but less than immigrant mean income.

In Figure 1, the ratios are calculated based on household income. With an average non-migrant household income of $41,825 and with emigrant household income of $41,617, the Rio Grande Valley's ratio of emigrant to non-migrant income ratio was 0.99. Households who immigrated to the Rio Grande Valley had an average income level of $43,143 resulting in a ratio of immigrant income to non-mover income of 1.03.

It is clear in Figure 1 that in most CZs, migrant household incomes were less than non-migrant household incomes. For El Paso, the CZ is displayed in the green quadrant, where migrants had lower incomes than non-migrants, on average. El Paso's non-migrant household income averaged $47,161, while the mean emigrating household income was $44,905. El Paso's emigrant to non-migrant ratio of income was 0.95. El Paso displayed an immigrant to non-migrant ratio of income of 0.90 at the household level, given the average income of incoming households was $42,770. Of note is the difference in the mean income of immigrating and emigrating households between the two CZs. Also, the non-migrant income in El Paso was higher than in the Rio Grande Valley.

Figure 2 repeats this analysis, but uses the number of exemptions to calculate per-capita income. This figure displays a higher level of dispersion towards the upper-right quadrant compared to Figure 1. When looking at individual incomes, the Rio Grande Valley experienced higher ratios of migrant over non-migrant incomes, which is shown by a significant shift into the blue quadrant. The average income of individuals migrating to and from the Rio Grande Valley was considerably higher than that of non-migrants. This was also true for the

FIGURE 2. RELATIONSHIP BETWEEN COMMUTING ZONES' AVERAGE MIGRANT AND NON-MIGRANT INCOMES, YEARS 2015 - 2016: INDIVIDUALS
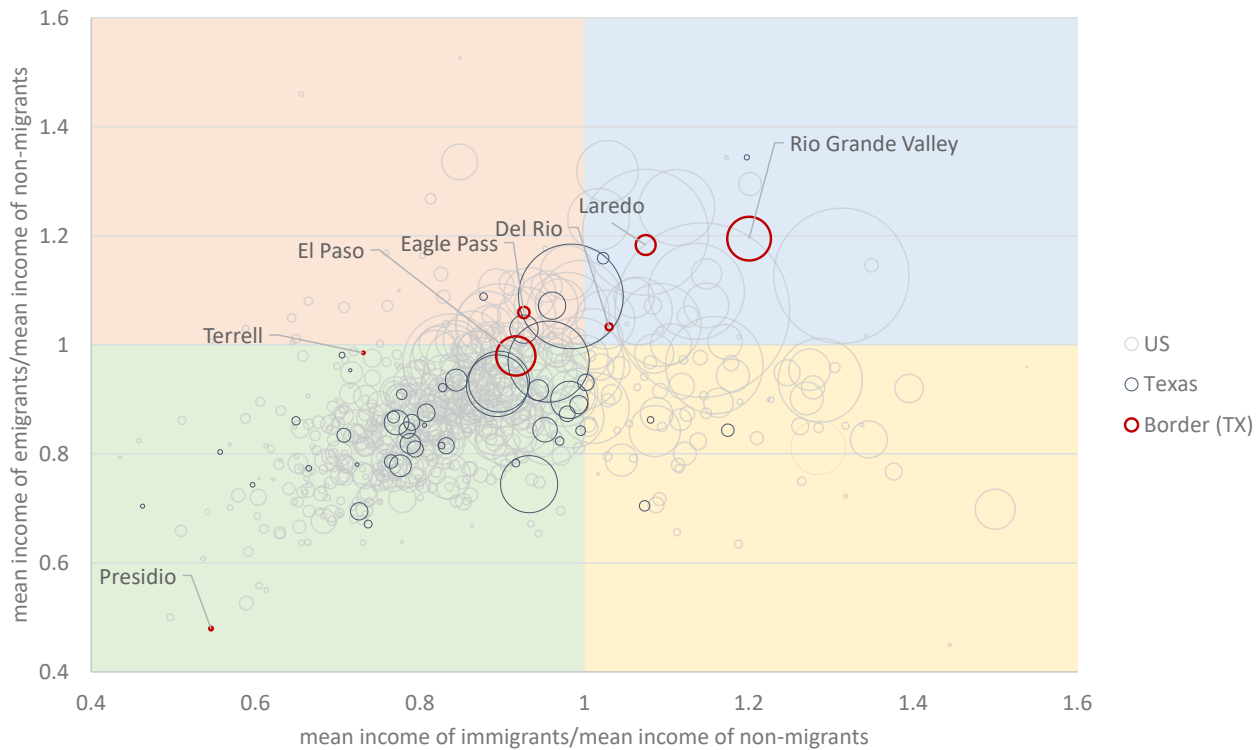
Notes: Averages for the Years 2015-2016 in all commuting zones. Income earned in 2015. Data from Internal Revenue Service, Statistics of Income, County-to-county migration data: www.irs.gov/statistics/soi-tax-stats-migration-data

CZs of Laredo and Del Rio. At the household level, Del Rio and Laredo's immigrating households were, on average, at a lower income level than non-migrants. However, at individual average income levels, migrating individuals to Laredo and Del Rio had higher incomes than non-migrant individuals. This could be interpreted that migrating households were smaller in family size than non-moving households. The Rio Grande Valley's average income for non-migrant individuals was $16,400, $19,590 for emigrants and $19,690 for immigrants with a migrant over non-migrant income ratio of a rounded 1.2 for both immigrants and emigrants.

Compared to the rest of Texas and the United States, the Rio Grande Valley tended to have higher-income movers relative to its non-migrants. In contrast, movers in El Paso had, on average, lower income levels than non-migrants. At the individual level, all of the Texas border CZs showed higher incomes for emigrants than for non-movers, with the exception of El Paso, Presidio, and Terrell. While El Paso's analysis on individual income experienced a shift towards higher ratios, the non-migrant average income was higher at the individual level, as were those at the household level.

CONCLUSION

This brief analysis brings to light significant migration differences between the most populous border CZs of Texas, a region popularly perceived to be homogeneous. The report used migration data from the IRS on migration flows 2015 to 2016. While El Paso's population that "stays put" was, on average, more affluent than those moving, in the Rio Grande Valley, individuals who moved in and out had higher incomes than non-migrants. People from the Rio Grande Valley tended to come and go within the state of Texas, with a considerable link to the Houston area. El Paso's migrants were not as concentrated in origin or destination, where movers moved to and from a larger number of CZs and included CZs that were further away. El Paso also displayed foreign locations as a top source of immigrants and as a destination for emigrants. These findings show that along the Texas border, migration patterns vary considerably.

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