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Declining Return Migration from the United States to Mexico in the late-2000s Recession: A Research Note

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Abstract

Researchers in the U.S. and Mexico have variously asserted that return migration from the U.S. to Mexico has increased substantially, remained unchanged, or declined slightly in response to the 2008–2009 U.S. recession and fall 2008 global financial crisis. The present study addresses this debate using microdata through 2009 from a large-scale, quarterly Mexican household survey, the National Survey of Occupation and Employment (ENOE), after first validating the ENOE against return migration estimates from a specialist demographic survey, the National Survey of Demographic Dynamics (ENADID). Declines in annual return migration flows of up to a third between 2007 and 2009 were seen among the predominantly labor-migrant groups of male migrants and all 18 to 40 year old migrants with less than a college education, and a decline in total return migration was seen in the fourth quarter of 2008 (immediately after the triggering of the global financial crisis) compared to the fourth quarter of 2007.

The United States entered in December 2007 a deep recession (Hall 2010), accentuated by the triggering of a global financial crisis in September 2008. In contrast to agreement that immigration flows to the U.S. from Mexico fell substantially in response to these adverse economic conditions (Camarota and Jensenius 2009; Fix et al 2009; Passel and Cohn 2009; Rendall, Brownell, and Kups 2010), researchers have taken dramatically opposing positions about return migration flows to Mexico in response to these macroeconomic events. Examining return-migrant flow data collected in Mexico from an ongoing border survey (the Survey of Migration at the North Border, or 'EMIF,' CONAPO 2009) through mid-2008, Bustamante (2009) argued that the already-massive levels of return migration in recent years have increased substantially. Camarota and Jensenius, applying a residual estimation methodology to annual U.S. Current Population Survey (CPS) data on changes in migrant stocks to 18 to 40 year old Hispanic (approximately two-thirds of whom are Mexican) immigrants with up to a high school education, described a "dramatic increase" (p.14) in return migration. Alarcón et al (2008), like Bustamante using the EMIF, countered that no increase in return migration had occurred or was likely to occur. Fix et al concluded also from EMIF data that "…return migration from the United States appears to have declined…" (p.28). Passel and Cohn estimated no statistically-significant change in return migration in the 2008/09 year through 1st quarter 2009 with a residual estimation methodology that, like Camarota and Jensenius, used CPS data (for more discussion on the differences between the Camarota and Jensenius and Passel and Cohn estimates, see Rendall et al. 2010). In the only peer-reviewed estimates to our knowledge of return migration that includes pre- and in-recession periods, Van Hook and Zhang (2010) applied a quarter-to-quarter residual estimation method to the CPS data and found lower emigration propensities in 2008 than in 2006/07 among 18–64 year olds of Mexican origin, but did not test the statistical significance of differences between these pre-recession and in-recession years.

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U.S.-based residual estimates such as those of Camarota and Jensenius and Passel and Cohn are subject to large sampling and non-sampling errors. Passel and Cohn (p.2) describe sampling errors "in excess of 150,000" in the estimates of emigration as a result of the combined sampling error of their four components. The U.S. Census Bureau (2009a:2) estimate that 256,000 of the decline in the foreign-born Hispanic population between 2007 and 2008 was due to reporting error in the American Community Survey. Ibarraran and Lubotsky (2007) and Moraga (forthcoming) both find substantively-distorting underestimation in the 2000 U.S. Census of low-educated Mexican-born individuals when compared to Mexican data sources on emigrants to the U.S.

Direct estimates of return migration flows using Mexican data are therefore attractive alternatives to consider. Declines in return migration are suggested (INEGI 2009a) using Mexico's equivalent of the CPS, the National Survey of Occupation and Employment (ENOE), although again without supporting statistical tests. Passel and Cohn use the INEGI analyses to support their conclusions of no increase in return migration. Those authors also suggest, however, a fundamental non-comparability of migrant definitions of the ENOE with those of U.S. data sources such as the CPS, due to many of the ENOE's migrants being "…Mexicans who come to the U.S. for short periods and may return home within weeks or months…" (p.3). Camarota and Jensenius (p.15) discount the INEGI results as providing valid estimates of return migration, first because the INEGI results combine returning migrants with immigrant inflows from Central America and elsewhere, and second because they suggest the ENOE underestimates total migration inflows (although the only evidence they cite is that "…new arrivals are equal to less than 1 percent of the [ENOE] sample," footnote 28, p.22).

In this research note, we first evaluate the validity of the ENOE as a data source on migrants returning from the U.S. to Mexico, and second use ENOE microdata to compare pre- and in-recession levels of annual and quarterly return migration. The Mexican-born population in the U.S. constituted 30% of the total foreign-born population in 2008 (U.S. Census Bureau 2009b) and its higher fertility and younger age structure promise a large role in future U.S. population growth and composition (Jonsson and Rendall 2004; Johnson and Lichter 2009). Decreases in return migration may increase that role.

VALIDATION OF THE ENOE AGAINST THE ENADID

The ENOE (INEGI 2005) has been conducted since 2005 when it replaced the quarterly National Employment Survey (ENE). Its design is similar to the CPS, being a quarterly survey with a rotating panel of approximately 100,000 residences. Each ENOE residence remains in the survey for five consecutive quarterly interviews. In each of the second through fifth interviews, household members who were not present in the previous interview are identified as "new residents," among whom immigrants can be identified as those who were in "another country" in the previous quarter. In results (not shown) from our analysis the first two quarters of 2004 in the predecessor ENE, 98% of Mexican-born return migrants listed the U.S. as their country of previous residence.

To evaluate the ENOE as a source of return migration estimates, we compare the ENOE's 2005/06 return migration to that in the 2006 National Survey on Demographic Dynamics (Encuesta Nacional de la Dinámica Demográfica, ENADID, INEGI 2009b), and we investigate change in return migration between the 2006 and 2009 ENADID (INEGI 2010). Earlier (1992 and 1997) ENADID surveys were used by, among others, Bean et al. (1998), Massey and Zenteno (2000), Marcelli and Cornelius (2001) and Hill and Wong (2005). The ENADID allows for periodic descriptions and analysis of migration between the U.S. and Mexico in more detail than does the ENOE. Its use is limited, however, for examining the

migration responses to macroeconomic changes because only for the most recent emigration and return migration of the last five years is the date of migration collected. In contrast, the ENOE allows for the construction of a quarterly time series of migration events. We used the 2006 and 2009 ENADIDs to esitmate return migration during the 2005/06 and 2008/09 years from month and year of the most recent return to Mexico of household members who emigrated within the previous 5 years. We found statistically-significant declines in total, male, female, and 18 to 40 year old return migration between the 2005/06 and 2008/09 years (see first two columns of Table 1).

We next compare ENADID return migration from May 2005 through April 2006 to return migration in the ENOE's third quarter of 2005 through the second quarter of 2006 under equivalent definitions of return migrants. Differences between the ENOE and the 2006 ENADID are as follows. Both the ENOE and ENADID's return migrants are restricted to those still in the household at the time of the survey. The ENOE's quarterly frequency, however, provides four occasions to identify a return migration in each year, whereas the ENADID provides only one occasion. The ENOE identifies 'new residents' entering an existing household unit, and therefore it is not possible to identify the return migration of an entire household; in the ENADID this is possible. Finally, the ENADID but not the ENOE collects documentation status of migrants (at the most recent emigration event). All our estimates therefore combine the return migration of documented and undocumented Mexican-born migrants.

We perform two adjustments to produce similar definitions of return migrants between the ENOE and ENADID. First, we adjust the 2006 ENADID to estimate also those migrants returning to Mexico after more than 5 years in the U.S. To do this, we calculated ratios in the 1997 ENADID of (1) all return migrants to (2) return migrants that had been away less than 5 years, and applied these ratios (see Table 1) to 2006 ENADID return migrants. Second, we restricted return migrants in the ENOE to those migrants who returned to Mexico in the 2005/06 year and did not emigrate again before the year-end survey interview (see Rendall et al. 2010 for details).

Comparing "ENOE-equivalent-definition" 2005/06 ENADID return migrants with "ENADID-equivalent-definition" 2005/06 ENOE return migrants, the ENOE estimate of 360,431 total return migrants is very close to the ENADID estimate of 355,673. Our estimates of ENADID return migrants for the two groups that are expected to have the most dynamic migration profiles (that is, higher rates of emigration and more frequent return migration), male migrants and migrants aged 18 to 40, are relatively little affected by the adjustment for migrants returning after more than 5 years away (adding only 13% to each). After these adjustments, approximately 10% fewer ENADID than ENOE migrants in these two groups are estimated, differences that are not statistically significant. The adjusted ENADID female return migration estimate of 101,447, however, is statistically higher than the ENOE's 66,473.

We also compare in Table 1 the subset of "ENADID-equivalent" return migrants in the ENOE with all return migrants. The difference equals the number of return migrants that subsequently re-emigrated by the end of the second quarter of 2006. These "re-emigrant" additions include all those returning in the winter months and re-emigrating by the end of the quarter of peak summer emigration, and thereby constitute a plausible estimate of the number of seasonal circular migrants. Including them (see the far-right column of Table 1) increases return migrants by only 13%, from 360,431 to 406,367. Consistent with previous evidence of longer trip durations among female than male migrants (Reyes 2001), most of these circular migrants are men; return migrant women increase by only 7% from 66,473 to 71,330 after including re-emigrants.

ANNUAL AND QUARTERLY CHANGE IN RETURN MIGRATION IN THE ENOE, 2006 TO 2009

Having shown that the ENOE-based estimates compare reasonably to estimates from the better-known ENADID, we now use the ENOE to address our substantive research question: whether return migration to Mexico increased, remained unchanged, or decreased since the onsets of the U.S. recession beginning in late-2007 and the global financial crisis beginning in September 2008. We derive estimates of *Mexican-born* return migration from all households in their second through fifth interviews in a given quarter.

Annual return migration flows between the pre-recession year 2007 and the recession years 2008 and 2009 (Table 2) show similar levels of overall decline as those in the INEGI (2009a; 2009c) estimates that include migrants from all countries of birth. The declines between 2007 and 2009 are statistically significant at the .05 level for male migrants and for 18–40 year olds migrants with less than college education. The 32% decline from the 266,490 returners in 2007 to 179,895 returners in 2009 among 18 to 40 year old Mexican-born individuals with less than college education stands out. It is in sharp contrast to Camarota and Jensenius's residual-estimate finding of a 'dramatic increase' in return migration for all Hispanic immigrants with up to a high school education between the pre-recession year 2006/2007 and the recession year 2008/2009.

The decline in male return migration between 2007 and 2009 is statistically different from the negligible level of change in return migration estimated for females between 2007 and 2009. This is the only qualitative difference from the ENADID estimates of change in return migration (see again Table 1), in which female return migration was found to decline similarly to male return migration. This may be due to differences noted above in capturing return migration of whole households (only captured in the ENADID) or in capturing migrants of more than 5 years duration (only captured in the ENOE).

The seasonal nature of Mexico-U.S. migration flows makes it important to compare each quarter not to the immediate previous quarter(s) but to the equivalent quarter in the previous years (see Table 3). Comparing flows of return migrants in the 2008 and 2009 in-recession quarters with the equivalent pre-recession 2007 quarters, the only statistically-significant changes are the declines from 133,490 return migrants in the pre-recession fourth quarter of 2007 to 95,238 and 79,959 respectively in the fourth quarters of 2008 and 2009. The fourth quarter of 2008 followed the onset of the global financial crisis, suggesting a dampening effect of the crisis on return migration. The decline is also consistent, however, with a reduction in seasonality of migration flows during the recession (INEGI 2009c).

DISCUSSION

We used microdata from the National Survey of Occupation and Employment (ENOE) to address the empirical debate on whether return migration increased, decreased, or remained unchanged as the U.S. entered a severe and extended recession in 2008 through 2009. We first evaluated the ENOE against the better-known National Survey of Demographic Dynamics (ENADID), and found neither evidence of the ENOE's undercounting migrants nor of distortions through confounding return migrants with new immigrants from other countries, both of which were suggested by Camarota and Jensenius in their discounting of the ENOE as a valid source of return migration estimates. Declines in return migration between the 2005/06 and 2008/09 years in the ENADID also generally mirrored the ENOE declines estimated between those two particular years. We also found relatively small differences between the subset of ENOE return migrants who did not re-emigrate and all ENOE return migrants, contradicting Passel and Cohn's claim that their CPS estimates of

migration are much lower than ENOE estimates due to the large numbers of circular migrants in the ENOE. We found that including circular migrants in 2005/06 added only 13% to total return migration, consistent with Massey, Pren, and Durand's (2009:121) estimate from the Mexican Migration Project that only 12% of undocumented emigrants in 2006 returned to Mexico within a year. Together, these results give us substantial confidence in the validity of the ENOE as a source of return-migration estimates.

Substantively, our analyses of the ENOE showed declines in annual return migration among the predominantly labor-migrant groups of male migrants and 18 to 40 year old migrants with less than college education, and a decline in total return migration in the fourth quarter of 2008, immediately after the triggering of the global financial crisis. These results are consistent with findings in Europe of no exodus of immigrants in France and Germany when the 1973 Oil Crisis hit Europe (Hollifield 1994; Dustmann 1996), nor of immigrants in Spain in the current economic crisis (Martin 2009), even when financial incentives for return were provided by the host country. Our results are also broadly consistent with earlier Mexico-U.S. findings of no clear effects on return migration of the U.S. recessions of the early 1970s, 1980s, and 1990s (Massey, Durand, and Malone 2002; Reyes 2004; Riosmena 2004). The declining return-migration propensity estimates into 2008 of Van Hook and Zhang may also be viewed as complementary to the evidence of declining return-migration flows in the present study. A plausible explanation for the findings of the present and previous studies of continued and even lengthened stays during recession periods is the "target earner hypothesis" (Portes and Bach 1985). Lindstrom (1996) previously used this hypothesis to explain slower return migration among Mexican immigrants living in U.S. states with higher unemployment.

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Table 1

Return migration to Mexico compared between the 2006 National Survey of Demographic Dynamics (ENADID) and the National Survey of Occupation and Employment (ENOE), 2005/2006[1]; and between the 2006 and 2009 ENADID

	2009 ENADID Return Migrants[2]	2006 ENADID Return Migrants[3]	factor to include return migratnts away > 5 years[4]	2006 ENADID Return Migrants (ENOE-equivalent definition)[4]	2005/06 ENOE Return Migrants (ENADID-equivalent definition)[5]	2005/06 ENOE Return Migrants, including re-emigrants[6]
All ages, both genders	220,291 [−3.51] **	299,488	1.19	355,673	360,431 [0.14]	406,367
Male	180,097 [−2.66] **	225,842	1.13	255,909	294,015 [1.38]	335,093
Female	40,194 [−3.04] **	73,646	1.38	101,447	66,473 * [−2.30]	71,330
18–40 year olds	145,794 [−2.70] **	190,647	1.13	216,207	236,162 [0.86]	248,397
Unweighted return migrants	787	517		n.a	648	729

Note: Numbers in square brackets are *z* scores for tests of difference. These differences are respectively between the 2006 and 2009 ENADIDs and between the ENADID (ENOE-equivalent definition) ENOE (ENADID-equivalent definition).

Source: Authors' calculations from ENOE and ENADID data.

[1] "2005/2006" is defined as the 3rd quarter of 2005 to the 2nd quarter of 2006 in the ENOE, and as May 2005 to April 2006 in the ENADID.

[2] 2009 ENADID Return Migrants are those who emigrated to the U.S. within the last 5 years and returned in the last 12 months and who are still present in the household at survey date in May/June 2009.

[3] 2006 ENADID Return Migrants are those who emigrated to the U.S. within the last 5 years and returned in the last 12 months and who are still present in the household at survey date in April/May 2006.

[4] Ratio calculated from the 1997 ENADID of all migrants returning from the U.S. in the last year to migrants returning from the U.S. in the last year that had been away less than 5 years (authors calculations from the 1997 ENADID). This ratio, applied to the 2006 ENADID migrants (all of whom had left in the last 5 years), produces the estimated "ENOE-equivalent definition" number of 2005/06 return migrants from the ENADID.

[5] The ENOE sample consists of households whose interview number makes them eligible for interview up to the 2nd quarter of 2006. Return Migrants (ENADID equivalent) exclude those return migrants in the 3rd or 4th quarter of 2005 or 1st quarter of 2006 who emigrated again by the 2nd quarter of 2006.

[6] The estimate here differs from the full-sample ENOE estimates of Table 2 due to its being estimated from a sample consisting only of households whose interview number (rotation group) makes them eligible for interview up to the 2nd quarter of 2006. The estimate, however, is scaled up to adjust for the omitted rotation groups, and therefore is an unbiased estimator of the total return migrants in 2005/2006.

* $p < .05$,

** $p < .01$

Table 2

Annual return migration from the U.S. to Mexico, 2006 to 2009, National Survey of Occupation and Employment (ENOE)[1]

Annual return migrants	Total	Male	Female	Age 18–40, less than college education	Total return migrants, unweighted
2005	399,481 [−0.53]	328,679 [−0.43]	70,803 [−0.44]	270,749 [0.18]	1,158
2006	434,774 [0.65]	349,073 [0.37]	85,701 [0.83]	295,489 [1.24]	1,232
2007	415,039	339,473	75,566	266,490	1,182
2008	367,914 [−1.71]†	297,891 [−1.77]†	70,023 [−0.50]	237,478 [−1.41]	1,122
2009	357,983 [−1.93]†	281,769 [−2.48]*	76,214 [0.05]	179,895 [−4.09]**	1,013
2008 – 2007	−47,125†	−41,581†	−5,544 {−1.38}	−29,013	
2009 – 2007	−57,056†	−57,704*	648 {−2.14}*	−86,595	

Note: Numbers in square brackets are the z-values of the tests of difference, given by (Number of migrants[Comparison]-Number of migrants[2007])/Standard Error of Difference. Numbers in curly brackets are the z-values of the tests of difference of women's change in return migration versus men's change in return migration. Standard errors account for stratification by state and for clustering in primary sampling units, and assume independence between time periods.

Source: Authors' calculations from ENOE data.

[1] Return Migrants are defined as Mexican-born individuals who returned from abroad between quarters to a household in the ENOE. Annual return migration sums over the 1st quarter of the year to the 4th quarter (inclusive)

† $p < .10$;

* $p < .05$;

** $p < .01$, respectively for change since 2007 and for female versus male difference in this change.

Table 3

Quarterly Return Migration from the U.S. to Mexico, National Survey of Occupation and Employment (ENOE)[1]

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
2006	132,441	81,585	103,628	117,120
2007	127,024	79,369	75,156	133,490
2008	107,165 [−1.38]	85,513 [0.49]	79,999 [0.43]	95,238 [−2.34]*
2009	110,078 [−1.13]	77,434 [−0.14]	90,513 [1.01]	79,959 [−3.50]**

Note: Numbers in brackets are the z-value of the tests of difference, given by (Number of migrants[in-recession quarter]-Number of migrants[pre-recession quarter 2007])/Standard Error of Difference. The statistical tests compare the difference between the in-recession quarters in 2008 and 2009 migrant estimates with the equivalent pre-recession 2007 quarter's estimate. We define the first in-recession quarter to be the 1st quarter of 2008. Standard errors account for stratification by state and for clustering in primary sampling units, and assume independence between time periods.

Source: Authors' calculations from ENOE data.

[1] Return Migrants are defined as Mexican-born individuals who returned from abroad between quarters to a household in the ENOE.

* $p < .05$;

** $p < .01$.