

# Does Migration Cause Income Inequality?

EVIDENCE FROM MEXICO AND THE UNITED STATES\*

Pia M. Orrenius | Federal Reserve Bank of Dallas  
Madeline Zavodny | University of North Florida

## EXECUTIVE SUMMARY

Inequality has been rising across the world in recent decades. Latin America has been an exception to what otherwise seems to be the prevalent trend in the U.S., Europe and Asia. In the U.S. the rise in inequality since the 1970s has coincided with the rise in Mexican immigration. In Mexico, inequality has been declining since the mid-1990s, a period during which emigration to the U.S. first increased to historic highs and then declined steeply.

Our review of the literature suggests that low-skilled immigration to the U.S., much of it from Mexico, has only played a minor role in rising income and wage inequality. To the extent that there is an effect, it has come through the presence of immigrants, and less as a result of immigration's effect on natives' wages. Immigrants' bimodal skill distribution,

with clustering at the top and bottom of the U.S. skill distribution, has widened the overall income distribution slightly.

At the same time, low-skilled immigration to the U.S. and migrants' remittances have played a large role in lowering global inequality by moving millions of low-income Mexican families further away from poverty and closer to the global middle class. Migration also has broader economic benefits in the destination for employers and consumers, especially in light of the aging of the U.S. workforce and rising labor force needs. Hence, our policy recommendations include boosting legal employment-based migration from Mexico to the U.S. We also suggest a host of other initiatives that can decrease inequality, such as increasing education outcomes, workforce training and access to credit.

\* The views expressed here are solely those of the authors and do not reflect those of the Federal Reserve Bank of Dallas or the Federal Reserve System.

## INTRODUCTION

Mexico-U.S. migration has trended sharply upward for the better part of the last four decades. Income inequality has also risen in the United States and declined in Mexico over roughly the same period.<sup>1</sup> Are the two trends causally related? Has emigration from Mexico increased income inequality in the U.S. while lowering it in Mexico?

From an international perspective, migration from poor to rich countries lowers global inequality by significantly increasing the wages of those who are otherwise near the bottom of the world distribution of income. From an economic perspective, reducing global inequality is far more important than what happens within any one country. From a political economy perspective, however, what happens within countries may be all that voters care about and therefore influences immigration policy.<sup>2</sup> Voters and lawmakers in destination countries appear to put little weight on the so-called global gains from migration—the increase in world productivity and output that would follow if workers could freely migrate across international borders.<sup>3</sup>

The potential economic gains from liberalization of immigration are massive; complete freedom of movement could more than double world GDP.<sup>4</sup> Yet these gains remain largely unrealized because of barriers to international migration. Poverty is a barrier to migration for some, but government-erected barriers are far more important. Mexico-U.S. immigration has historically been unusual because it occurred on a large scale despite government-erected barriers to migration. In the more recent period, however, such barriers appear to have become binding, and Mexico-U.S. migration has slowed to a trickle partly as a result.

Public and political opinion around immigration focuses on domestic effects of international migration, particularly whether it helps or hurts relatively low-wage natives. In an era of rising inequality in the U.S. and many other industrialized nations, it may be tempting to attribute rising inequality to immigration. In Mexico, inequality has fallen in the last two decades, and there is little research on how that is related to first the rise and then the fall in emigration during this time. Whether it's the U.S. or Mexico, our review of the inequality literature suggests a host of other contemporaneous trends have played a larger role in driving changes in income inequality, most notably globalization in the form of international trade and skill-biased technological change.

In this article, we explore recent trends in Mexico-U.S. migration and inequality in the two countries. We provide an overview of the economic effects of immigration and emigration in the Mexico-U.S. case. We find that while Mexican migration may have slightly reduced wages for some U.S. workers and slightly increased inequality in the U.S., it raised wages in Mexico. There is some evidence that by raising wages for the lower middle class and stimulating remittances, migration may have lowered Mexican income inequality in recent years once direct and indirect effects are accounted for, but more research is needed.

Given that migration plays only a small role in inequality trends and is beneficial on net for migrants, sending communities, and destination countries, public policy should focus on reducing migration barriers and making international mobility more efficient and less costly.

## TRENDS IN MEXICO-U.S. MIGRATION

Mexico-U.S. migration goes back well over a century. It is deeply rooted in a recurring theme: U.S. employers' need for workers.<sup>5</sup> Whether it was the building of the railroads, settling and farming the western frontier, or bolstering the workforce during and after World War II, Mexican workers were in high demand north of the border. But while inflows were substantial, estimated at 450,000 per year during the height of the Bracero period, return migration was high as well.<sup>6</sup> Mexican workers came largely for seasonal work, leaving their families in Mexico and returning there once their employment stints concluded.

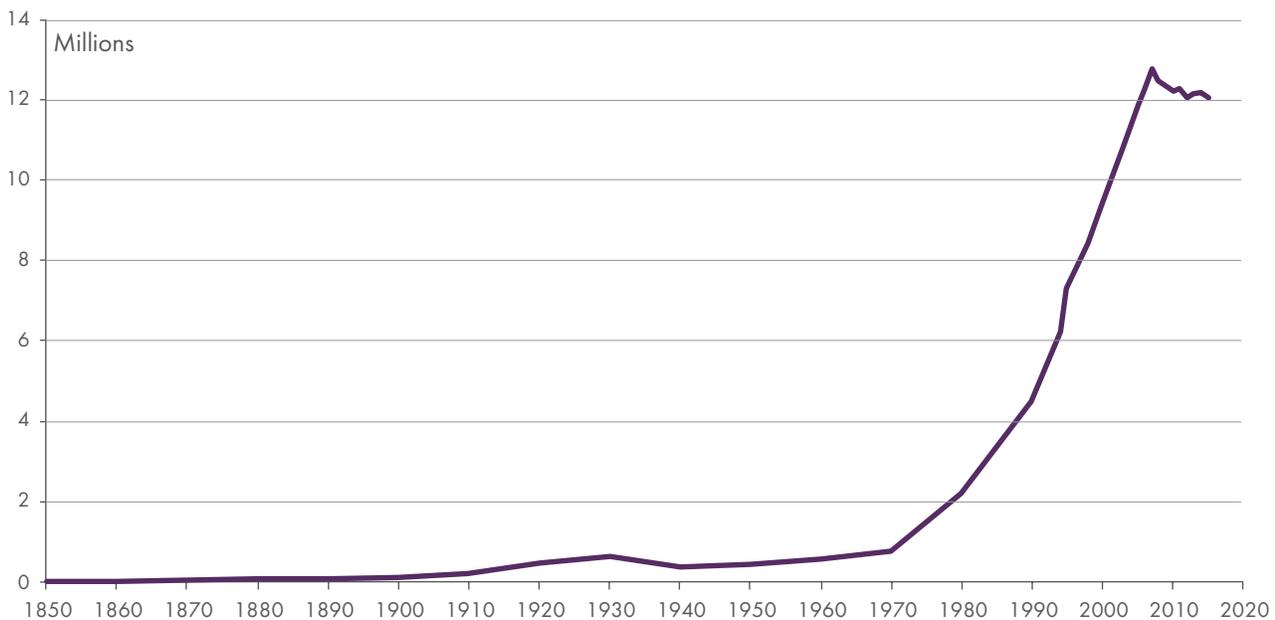
Patterns of return migration among Mexican immigrants began to switch to permanent settlement in the 1970s and 1980s. The change came after the Bracero program ended in 1964 and the 1965 U.S. immigration law limited permanent immigration from the western Hemisphere, including Mexico. Reduced avenues to migrate

legally at the same time as the Mexico population was undergoing a demographic boom and the U.S. economy was growing, launched an era of mass undocumented migration. The increase in unauthorized immigration was followed by a successive buildup in border enforcement as well as a major amnesty in 1986 that granted permanent residence to over 2 million Mexican immigrants.

At the same time, the U.S. economy was undergoing structural changes that beckoned additional workers. The accelerated transition to a service-based economy after recessions in the 1970s and early 1980s led to a rise in year-round opportunities for low-skilled workers. Mexico-U.S. migration continued to rise throughout the 1990s and into the 2000s as migrant networks facilitated migration, and U.S. employers came to depend on immigrant workers. The Mexico-born population living in the United States rose from 760,000 in 1970 to a peak of 12.7 million in 2007 (Figure 1).

The cumulative effects of such rapid increases in immigration are considerable. By 2007, over

**FIGURE 1.** Mexico-born Population in the United States, 1850-2015



**SOURCES:** For Mexican-born 1850 to 1980: Gibson, Campbell and Kay Jung, "Historical Census Statistics on the Foreign-Born Population of the United States: 1850-2000," U.S. Census Bureau, Population Division, Working Paper No. 81, 2006; for 1980 and 1990: Integrated Public Use Microdata Series (IPUMS-USA); for 1995 to 2003: Pew Hispanic Center estimates based on augmented March Current Population Surveys and 2000 Decennial Census; for 2005 to 2015: Pew Research Center analysis of American Community Survey (1% IPUMS).

10 percent of the Mexico population lived in the U.S. Today, about one-quarter of U.S. immigrants are from Mexico; it's by far the largest source country. While recent inflows of Mexican immigrants are greatly diminished from their peak in the late 1990s and early 2000s, they are still sizable, at around 140,000 new arrivals per year.<sup>7</sup> Nonetheless, the Mexico-born population in the U.S. has declined since the 2007-2009 Great Recession, implying that inflows are closely matched by outflows.<sup>8</sup>

It bears noting that a large share of Mexican immigration has historically been undocumented, which may explain how it has grown so quickly and why it has ebbed and flowed with the U.S. business cycle.<sup>9</sup> It has been less encumbered by the immigration bureaucracy, at least on the front end, than inflows from other nations.

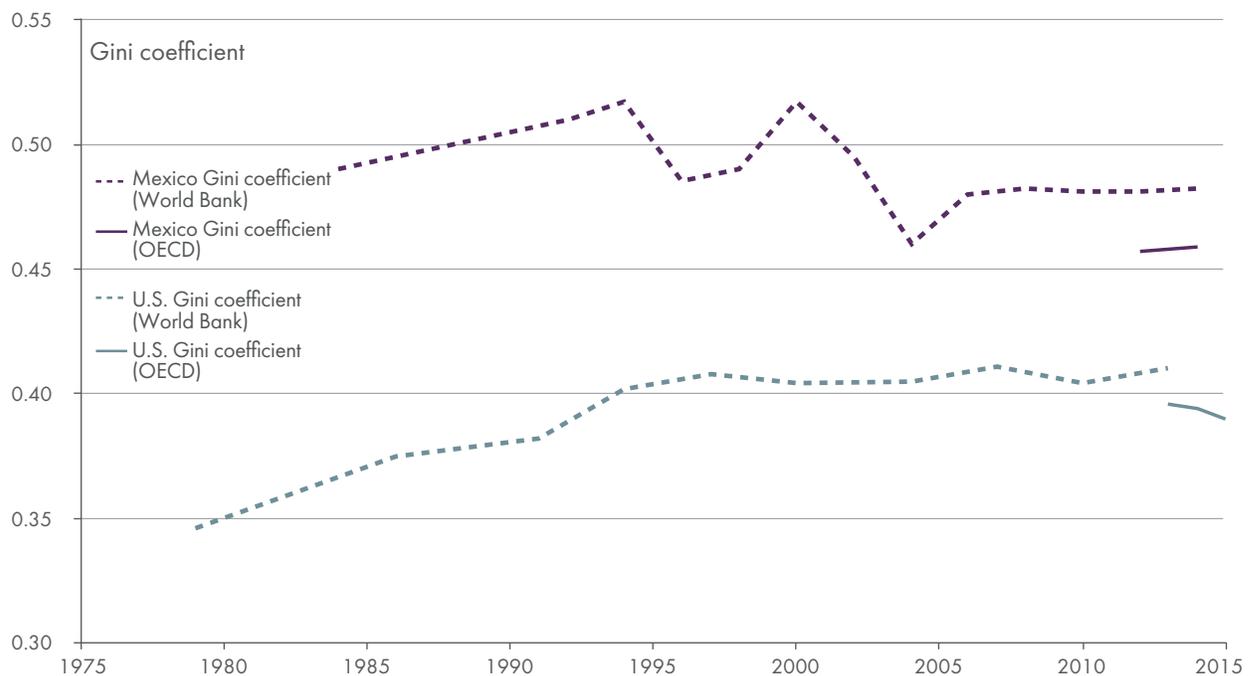
### TRENDS IN INEQUALITY

Concurrent with the rise in emigration from Mexico and subsequent immigration of Mexicans into

the U.S., there has been a steep rise in income inequality in the U.S. and a modest decline in Mexico (Figure 2). Mexico, with a Gini coefficient of 0.48, has higher income inequality than the U.S. (Gini coefficient of 0.42).<sup>10</sup> However, the trends in the chart show that the gap is growing smaller; inequality in the two nations appears to be converging. The evolution of inequality in Mexico is also more varied than in the U.S.; it rises from the 1980s until the mid-1990s and then declines. Other Latin American countries also saw falling income inequality in the 2000s, bucking a global trend of rising inequality.<sup>11</sup>

A large literature documents rising inequality in the U.S. and many other nations over the last three to four decades. Even nations with aggressive redistribution policies, such as the Scandinavian countries, have experienced growing inequality. Higher inequality is caused by an increasing ratio of high-skilled to low-skilled wages, but the drivers of this growing gap are likely a combination of factors. These drivers fall into two major camps, one focused on the forces of

**FIGURE 2.** Inequality in the United States and Mexico: 1980-2015



**SOURCES:** Organization for Economic Co-operation and Development, World Bank.

globalization and the other on skill-biased technological change.

### Globalization

Some studies place economic and financial globalization at the heart of the factors driving the increase in the ratio of high-skilled to low-skilled wages, arguing that globalization has created more opportunities for high-skilled workers while exposing low-skilled workers (primarily in advanced economies) to competition from foreign (cheaper) labor and eroding their bargaining power.<sup>12</sup>

Globalization involves increased flows of goods, people, and capital across international borders; the increase in flows of goods and capital has far outstripped the increase in international migration. Labor market institutions that might have helped shield low-skilled workers from the effects of globalization have weakened in some countries. In the U.S., for example, the erosion of the real minimum wage and a decline in unionization have contributed to falling wages at the bottom of the income distribution.<sup>13</sup>

At the same time, the globalization of production has likely also increased corporate profits (the return to capital), which has led to higher asset prices (for stocks, property, and land), factors that inflate executive pay and boost wealth inequality as well as income inequality, especially in advanced economies.<sup>14</sup>

In emerging market economies, meanwhile, increased foreign investment and production have lifted the wages of low- and mid-skilled workers relative to their counterparts in advanced economies<sup>15</sup>. While liberalization of trade and investment was initially blamed for rising income inequality in Mexico,<sup>16</sup> recent research reaches more nuanced conclusions. After 2000, Mexican income inequality began to steadily decline, and the middle class began to grow.<sup>17</sup>

### Skill-biased technological change

Next to globalization, skill-biased technological change is one of the most cited explanations for increased wage inequality since the 1970s. Early studies noted that firms' ability to increasingly substitute technology for workers reduced the demand for low-skilled workers, depressing

their wages.<sup>18</sup> Over time, however, this hypothesis proved inconsistent with what emerged as a U-shaped pattern of labor market polarization.

Polarization involves falling employment shares of mid-skill occupations amid rising shares of low- and high-skilled occupations, or an hour-glass-shaped distribution of jobs with regard to skill. A modified version of the skill-biased technological change hypothesis emphasized that technological change complements abstract (high-education) tasks while substituting for routine (middle-education) tasks.<sup>19</sup> Later work showed that this model held not just for the U.S., but also for 16 Western European countries, and was a much more important factor than offshoring—a key part of globalization—in explaining polarization.<sup>20</sup> More recent work has coined the phrase 'routine-biased technological change' to better describe the hollowing out of employment in occupations with routine-type functions.<sup>21</sup>

It bears noting that globalization also does not fit well with the pattern of labor market polarization in advanced economies. According to Lake and Millimet (2016), routine-biased technological change can fully explain polarization, whereas the trade effect is negative across the board, affecting low- and high-skilled workers as much as mid-skilled workers.<sup>22</sup> They find that it's the vulnerability of locations that is driving the adverse effects of trade, not the types of occupations or workers' skills. If their hypothesis bears out, the policy implications are clear, namely to retrain workers in vulnerable areas, not in vulnerable occupations.

## MIGRATION'S EFFECT ON INEQUALITY

Migration fits into both the globalization and technological change hypotheses above. In addition to trade in goods and services, globalization encompasses the movement of factors of production, including labor (migration) and capital (investment). A standard two-country model of migration dictates that workers should move from the labor-rich country where wages are relatively low to the labor-scarce country where wages are relatively high. This describes the Mexico-US case rather well, at least up until the 2007-2009 Great Recession. The resultant effects on income

inequality in the origin and the destination depend on where the migrants fall in the two countries' income distributions and also on the effect of migration on the wages of other workers.

Migration may be related to skill-biased technological change as well. An influx of low-skilled workers may slow the adoption of labor-saving technology by firms; an influx of high-skilled workers may accelerate it. Low- and high-skilled immigrants may be complements or substitutes for native workers, potentially increasing or reducing their wages. To the extent that immigrants lower the cost of the goods and services they produce, they can spur job creation at the extremes of the skill distribution, contributing to the U-shaped pattern of polarization of employment.

### The U.S. Case

Immigrants to the U.S. are at the two ends of the skill distribution. Immigrants from Mexico and developing countries tend to be at the bottom, while immigrants from most of Asia, particularly China and India, tend to be at the top. Figure 3 shows the share of US workers who are foreign born by education level. Immigrants are over represented among high school dropouts and those with professional and graduate degrees. Given this pattern, immigration seems unlikely to be directly related to what is happening in the middle of the skill distribution.

Mass low-skilled immigration (much of it from Mexico) into the U.S. in the 1980s, 1990s, and early 2000s likely had a negative, albeit small, impact on the wages of similarly low-skilled natives.<sup>23</sup> A survey of the evidence indicates that statistically significant negative wage and employment effects on natives are generally only found among high school dropouts, who are a shrinking share of the U.S.-born labor force.<sup>24</sup>

The fact that wage and employment effects, to the extent that they occur, affect the least-educated native workers, is also inconsistent with immigration contributing to the disappearance of mid-skill jobs, the cornerstone of the polarization hypothesis. Of course, immigration is not totally separate from labor market polarization. For example, it's likely that large inflows of low-skilled immigrants contributed to rising employment shares in low-skilled occupations since immigrants provide the

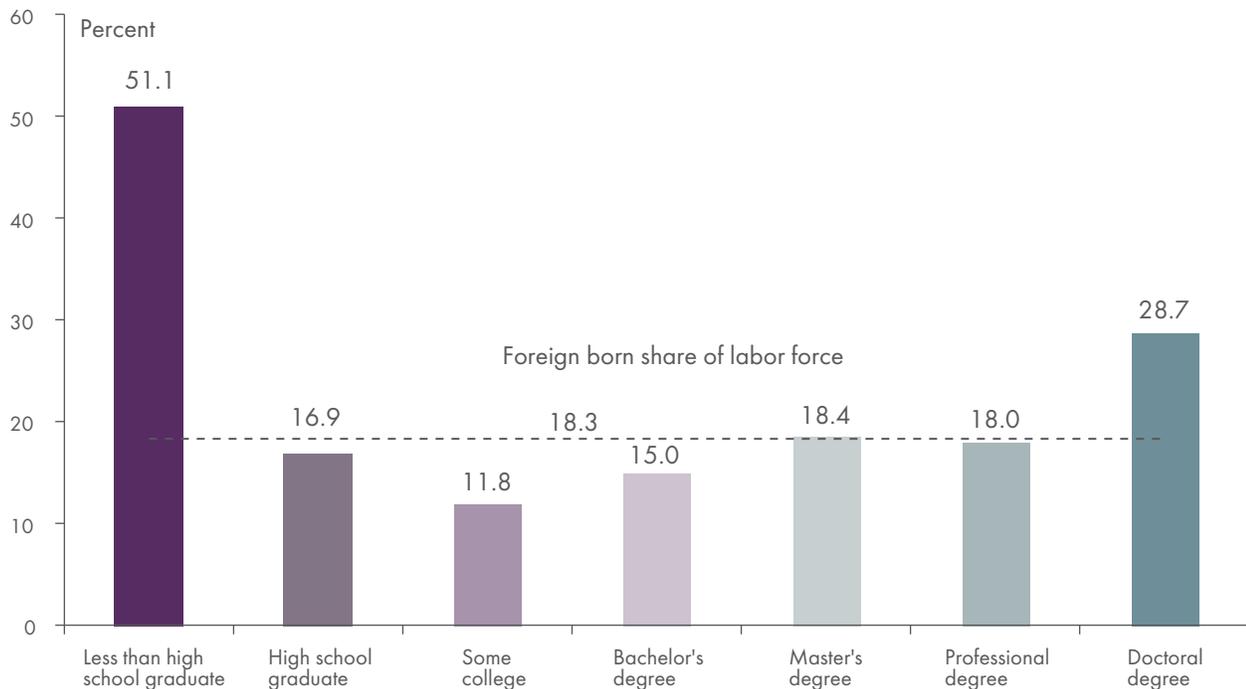
types of services that have experienced rising demand. They may even contribute to rising employment in high-skilled occupations to the extent that they lower the costs of services that, for example, high-skilled married women need to go back to work, such as child care.<sup>25</sup>

Card (2009) is one of the few studies that directly addresses the question of immigration's impact on U.S. wage inequality.<sup>26</sup> He argues that immigration has had a negligible impact on inequality among U.S. natives, largely because immigration has only had minor effects on wage differences across U.S. natives in different skill groups. Nevertheless, overall U.S. wage inequality is higher than it would be without immigration due to compositional effects. Immigrants are clustered at the high and low ends of the education distribution and have higher residual wage inequality than natives; hence their presence accounted for about 5 percent of the increase in wage inequality between 1980 and 2005, according to Card.

Card's findings are consistent with the consensus report by the National Academies (2016) and several other studies.<sup>27</sup> Rienzo (2014) also finds that residual wage inequality is higher among immigrants than among natives, but that immigration has not been the major force behind the increase in such inequality in the U.S. (or the UK).<sup>28</sup> Gould (2015) agrees that the direct effect of immigration on inequality is not significant, but in areas experiencing a manufacturing decline, an influx of low-skilled immigrants tends to increase inequality.<sup>29</sup>

Hibbs and Hong (2015) do not consider wages, but rather correlations of changes in the Gini index with immigrant shares in U.S. metropolitan areas.<sup>30</sup> They conclude that immigration between 1990 and 2000 explains 24 percent of the increase in overall income inequality during this time; however, they find that low-skilled immigration, as proxied by Mexican immigration, played no role in this increase. In their study of the same time period but considering only rural U.S. counties, Parrado and Kandel (2010) find little relationship between growth in the Hispanic population and changes in income inequality.<sup>31</sup>

George Borjas is a long-time critic of the cross-area (spatial) analysis that most studies rely on to estimate the wage, employment, and inequality effects of immigration. He argues that

**FIGURE 3.** Share Foreign-Born Workers in U.S. Labor Force by Education

**NOTE:** Chart shows percentage immigrants in U.S. labor force over age 25 at each education level.

**SOURCE:** 2016 American Community Survey.

natives leave areas that experience immigration in a way that biases spatial estimates away from finding an adverse impact on natives. In Aydemir and Borjas (2007), the authors estimate wage and employment effects at the national level and find much larger negative wage effects on U.S. natives than do other studies.<sup>32</sup> Of course, their approach, while not subject to spatial bias, requires making more assumptions about the composition of education/experience groups and who competes with whom. These statistical modeling constraints tend to result in more-adverse wage effects than is found in studies that do not impose such strict assumptions. In any case, Aydemir and Borjas (2007) conclude that low-skilled immigration to the US has accounted for about one-fifth of the decline in the real wages of high school dropout men between 1980 and 2000.<sup>33</sup> Low-skilled immigration has therefore contributed to higher wage inequality but, again, it has not been a primary driver.

### The Mexican Case

If migration lowers wages for competing workers in the destination country, it should raise wages for comparable workers in the origin country. Several studies find positive wage effects as a consequence of Mexican emigration to the U.S. Mishra (2007) estimates that 16 percent of the Mexican labor force was working in the U.S. in 2000, and the outflow of Mexican workers to the U.S. between 1970 and 2000 increased the wage of the average Mexican worker by 8 percent.<sup>34</sup>

One might be tempted to conclude that higher wages in the wake of emigration reduces income inequality, but it is not so straightforward. The impact on inequality depends on where the emigrants are in the skill/wage distribution. The Roy model, a favorite tool of economists studying migrant selection, predicts that migrants from Mexico to the U.S. will be negatively selected, drawn from the bottom of the skill/wage distribution.<sup>35</sup> The early empirical research on self-selection, howev-

er, found that Mexican migrants' education levels were about average or, in other words, not that different from non-migrants.<sup>36</sup> Later work that considered wages rather than education, found some evidence of negative selection.<sup>37</sup>

One rationale for why the Roy model may have failed to hold in the Mexican case is discussed by McKenzie and Rapoport (2007), who posit that the ability to pay the costs of migration is correlated with skill, and low-skill workers simply cannot afford to migrate.<sup>38</sup> The authors proxy for the costs of migration with access to migrant networks and find that, indeed, Mexican migrants from villages with extensive migrant networks are more negatively selected than those from vi-

llages with limited migrant networks. This evolution of migrant networks and the impact on the skill levels of migrants has potentially important effects on inequality. As migrants become increasingly negatively selected, the positive wage effects should move down the skill distribution and reduce inequality. No empirical work that we know of has demonstrated this effect, however.

Mishra (2007) and Aydemir and Borjas (2007) both extend their analyses of the positive wage effects of emigration to estimate the impact on Mexican wage inequality in 1990-2000.<sup>39</sup> They both find that while emigration increased the wages of high school dropouts, their wages still declined relative to high school graduates, with



## The Texas Case

Texas is the second most popular destination after California for Mexican immigrants. There were about 2.7 million immigrants from Mexico living in Texas in 2016; they make up 52 percent of the state's immigrant population.<sup>59</sup> Mexican immigrants in Texas have relatively low levels of education, much like they do in the rest of the U.S. and are concentrated in relatively low-wage sectors such as construction, leisure and hospitality, agriculture, and domestic service. A significant share of Mexican immigrants in Texas is undocumented, perhaps over one-half.

Mexican immigration to Texas sped up in the 1970s and 1980s, years when the oil sector was booming and other parts of the U.S. were in recession. Although immigration slowed when the oil price collapsed in 1986, it picked up again in the 1990s. Between 1990 and 2010, the immigrant share of the state population rose from 9 to 16 percent, much of that driven by Mexico.<sup>60</sup> At the

same time, employment grew at twice the rate of the nation while wages kept pace with the nation despite the large influx of workers.

Periods of rapid economic growth are often accompanied by higher inequality, yet most measures suggest that inequality in Texas did not grow as fast as it did in the rest of the nation. The income share of the top 1 percent increased in Texas between 1979 and 2007 but not as fast as in the rest of the nation.<sup>61</sup> State-level Gini coefficients also suggest that Texas inequality has lagged the increases in other large states since 1970 (Figure 4).

In sum, the Texas experience suggests Mexican immigration did not materially contribute to increased income inequality in the state. If it had been a major contributor, Texas measures of inequality should have been as high as or higher than those of the other large states.

migration accounting for over one-third of the change. The counterintuitive result may partly be an artifact of the short and unique time period under study, 1990-2000.<sup>40</sup> Another problem is the definition of educational categories.

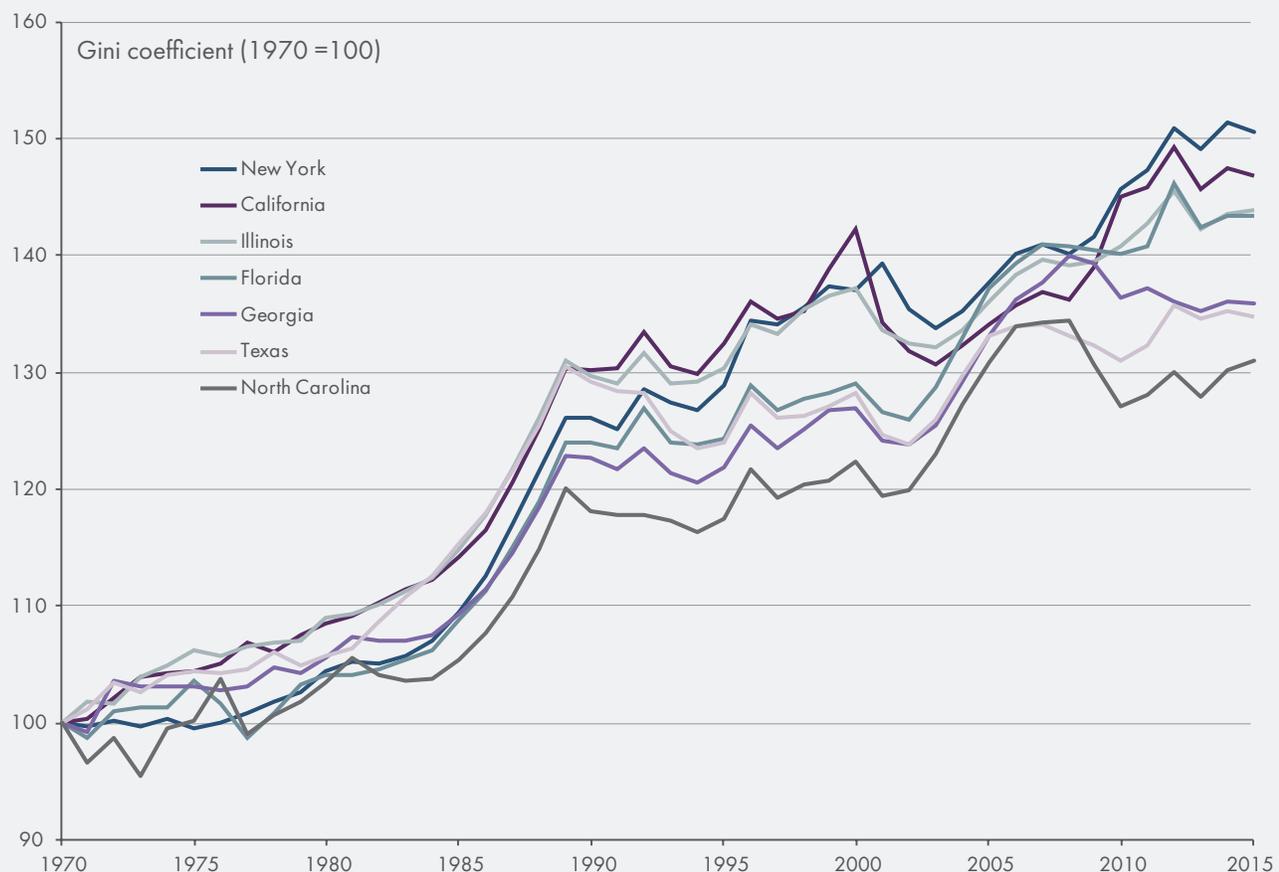
U.S. researchers tend to lump all low-skilled workers into a ‘high school dropout’ category for comparability with the U.S. and Canada labor markets. But this is not appropriate in the Mexican case where, since the 1970s, the modal educational category was initially primary school (6 to 8 years of school)<sup>41</sup> and then secondary school (9 to 11 years education).<sup>42</sup> In other words, the great majority of Mexican workers still today have less than a high school diploma. To capture the effect

on income inequality would require breaking up the ‘high school dropout’ group into much finer gradations.

Studies of migration and inequality in the Mexican case also do not consider the compositional impact of mass emigration of middle-class Mexicans on wage inequality. The great majority of migrants had between 6 and 11 years of education, putting many of them in the middle class there (although in the lower socioeconomic class in the U.S.). This exodus must have created a hole in the income distribution that resulted in more wage inequality despite raising wages on average.

In general, there is a need for additional studies on Mexican emigration and changes in inequality.

**FIGURE 4.** Inequality Rises More Slowly in Texas than in Other Large States



**SOURCE:** Frank-Sommeiller-Price series.

Moreover, given recent Mexican trends, more research is needed on the economic effects of return migration and rising Central American migration. From 2009-2014, one million Mexicans and their families returned to Mexico, some involuntarily.<sup>43</sup> There is mixed evidence on the success of their reintegration.<sup>44</sup> And although the volume of Central American migration is small at the national level, there are significant inflows of Guatemalan workers in Chiapas, for instance.<sup>45</sup>

### Role of Remittances

Remittances, migrants' money transfers back home, represent an additional way in which migration can affect inequality. Mexico is the largest recipient of remittances in Latin America and took in a record \$29 billion in 2017.<sup>46</sup> Remittances, while sizable, represent only about 2.7 percent of Mexico GDP, since it's a large economy. In poorer states with heavy emigration, however, the impact is much larger. Remittances represent 11.1 and 9.5 percent of GDP in Michoacán and Guerrero, respectively.<sup>47</sup>

About three-quarters of Mexico remittances go to households in the bottom half of the income distribution, which suggests they have a role to play in suppressing income inequality.<sup>48</sup> In addition, remittances make up over half of the income of the poorest decile of Mexican households.

Studies that measure the effect of remittances on poverty and inequality tend to show the impacts are helpful but small; for example, in Latin America on average, a 1 percentage point increase in remittances as a share of GDP reduces inequality (as measured by the Gini coefficient) by about 0.08 percent and poverty by 0.37 percent.<sup>49</sup> In the Mexican case, receiving remittances reduces a household's probability of being in poverty by 6 to 10 percentage points.<sup>50</sup> The evidence on inequality is more mixed, however. Mora-Rivera (2005) shows that international remittances increase the Gini coefficient in rural Mexican communities.<sup>51</sup>

Arslan and Taylor (2012) find that the impact of remittances on rural inequality depends on the extent of migration prevalence in the community.<sup>52</sup> At lower levels, remittances 'equalize' the income distribution; at higher levels, they have the opposite effect. Meanwhile, Orrenius et al.

(2012) use state-level data to show that remittances likely decrease wage inequality; remittances reduce the share of lowest-paid workers, those earning one minimum wage, and raise the share of higher-paid workers, those earning either 2-3 or 3-5 times the minimum wage.<sup>53</sup> There are additional benefits in high-migration states, where remittances also increase employment and reduce the unemployment rate.

### INEQUALITY'S EFFECT ON MIGRATION

Throughout this policy brief, we have focused on the impact of migration on inequality but there is a literature that posits the causality can also run the other way. Relative deprivation captures the idea that a household's relative income rather than its absolute income can also spur migration. Stark and Taylor (1989) find evidence that family members migrate in order to improve their household's income position relative to households in their reference group.<sup>54</sup> Controlling for expected absolute income changes, the greater a household's initial relative deprivation, the higher the probability of Mexico-U.S. migration. The exception occurs at the very bottom of the community's income distribution, likely among households that cannot afford to migrate.

### POLICY IMPLICATIONS

Inequality has many roots, and it's not always bad. For example, periods of rapid economic growth are often accompanied by higher inequality, while recessions are typically accompanied by declining inequality. We clearly should not engineer recessions in order to suppress inequality. Under communism, people were equally poor; again, not a worthwhile tradeoff. The eradication of inequality should not be a policy maker's primary goal.

Instead, policymakers should focus on getting society closer to equality of opportunity, also referred to as income or socioeconomic mobility. Is a child who is born poor doomed to always be poor, or does he have a realistic shot at joining the middle class? There are a number of policy prescriptions that apply to safeguarding or spurring income mobility, including early childhood education for at-risk kids and high-quality

public schools. Workforce training and apprenticeship programs can help workers adjust to labor market changes. Safety net programs can sustain families who are hit by shocks, such as unemployment or a health crisis. Financial literacy and innovative banking regulations can boost access to credit. Payments that help people move to areas where jobs are plentiful, from areas where they are not, can help spur socioeconomic mobility with a country.

Mexico's period of falling income inequality coincides with a number of these policy initiatives and their associated outcomes. For example, Mexico has experienced rising educational attainment. Federal and local authorities have also worked on extending the social safety net with both welfare programs (Prospera, previously known as Oportunidades) and universal health care (Seguro Popular).<sup>55</sup> More recent reforms to bring workers into the formal sector where they are covered by government benefits, such as social security, are also helpful. And banking regulators have been aggressive in developing blueprints for new types of financial institutions that specialize in lending to low-income families and small businesses.<sup>56</sup>

We can add managed migration to this list of policy prescriptions. Whether it's a temporary worker program or other arrangement, legal and employment-based migration can be a win-win for sending and destination country. After all, Mexico-US migration has created millions of middle class families in the US among people who originally came from modest means in Mexico. International migration is a large, effective anti-poverty program that doesn't cost the government much additional resources and, at the same time, generates gains for consumers and businesses who employ these workers.

One concern might be that migration, while adding workers and consumers to the U.S. economy, subtracts them from the Mexican economy. There are two ways to mitigate this concern. One is through remittances, which studies have shown more than make up for the lost income of migrant workers who have left Mexico (GDP lost to emigration). Another is to implement migration programs that encourage return migration. Migrants who are intent on returning will invest in Mexico, whether it's buying a house,

paying taxes or otherwise contributing to economic development in their home communities, through programs like *Tres por Uno*, or at other destinations.

Additional solutions that have been proposed in the U.S. include more funding for community colleges, state mandated parental leave, and child care subsidies. Some academics have proposed programs to compensate native workers who lose out from immigration. These programs exist for workers displaced by trade and could be set up for workers that could show they were adversely impacted by immigration.<sup>57</sup>

Last but not least, a comprehensive approach to immigration and inequality has to address the large undocumented immigrant population in the U.S. These immigrants are unlikely to return to Mexico, and their lack of legal status adversely affects not only their wages and employment, but also the socioeconomic outcomes and income mobility of their U.S.-born children.<sup>58</sup>

## FINAL REMARKS

Inequality has been rising across the world in recent decades. Latin America has been an exception to what otherwise seems to be the prevalent trend in the U.S., Europe and Asia. In the U.S., the rise in inequality since the 1970s has coincided with the rise in Mexican immigration. In Mexico, inequality has been declining since the mid-1990s, a period during which emigration first increased to historic highs and then declined steeply.

Our review of the literature suggests that low-skilled immigration to the U.S., much of it from Mexico, has only played a minor role in rising income and wage inequality. To the extent that there is an effect, it has come through the presence of immigrants, and less as a result of immigration's effect on natives' wages. Immigrants' bimodal skill distribution, with clustering at the top and bottom of the U.S. skill distribution, has widened the overall income distribution slightly.

At the same time, low-skilled immigration to the U.S., and migrants' remittances, have played a large role in lowering global inequality by moving millions of low-income Mexican families further away from poverty and closer to the global middle class.

Migration from poor to rich countries represents a reallocation of labor that increases the wage of the migrant while also raising wages in the sending country. It moves labor to capital-rich countries where businesses readily employ it. Productivity and output rise. As long as business investment responds to the worker influx, wage effects on native workers will be limited.

Migration is the last frontier of globalization. Removing barriers to international mobility would

result in large economic gains that far outweigh any costs. The problem policymakers face is not that migration doesn't create gains, it's who gets the gains. In the policy discussion, we noted a number of policies that help alleviate wage and income inequality, including managed, legal avenues for work-based migration. Innovative policy tools can redistribute the gains from migration; this is preferable to cutting it off.

## ABOUT THE AUTHORS

---

**PIA ORRENIUS** is Vice President and Senior Economist in the Research Department at the Federal Reserve Bank of Dallas, Adjunct Professor at the Hankamer School of Business, Baylor University, and Research Fellow of the Institute of Labor Economics in Bonn, Germany, and the Tower Center for Political Studies at Southern Methodist University. Her research focuses on the labor market impacts of immigration, unauthorized immigration, and U.S. immigration policy, and she is coauthor of the book *Beside the Golden Door: U.S. Immigration Reform in a New Era of Globalization* (2010, AEI Press). Orrenius was senior economist on the Council of Economic Advisers in the Executive Office of the President, Washington D.C. in 2004-2005. She received her Ph.D. in economics from the University of California at Los Angeles, and B.A. degrees in economics and Spanish from the University of Illinois at Urbana-Champaign.

**MADLINE ZAVODNY** is Professor of Economics at the University of North Florida. She is also a Research Fellow of the Institute of Labor Economics in Bonn, Germany and a Co-Editor of the *Southern Economic Journal*. Her research focuses on the economic determinants and effects of immigration. She is coauthor of the books *Beside the Golden Door: U.S. Immigration Reform in a New Era of Globalization* (2010, AEI Press) and *The Economics of Immigration* (2015, Routledge). She received her Ph.D. in economics from the Massachusetts Institute of Technology and a B.A. in economics from Claremont McKenna College.

## NOTES

- 1 Inequality in this article refers to both income inequality and wage inequality.
- 2 Mayda, Anna Maria. 2006. "Who is Against Immigration?" *The Review of Economics and Statistics*, 88(3): 510-530.
- 3 Rodrik, Dani. 2012. "The Globalization Paradox: Democracy and the Future of the World Economy." W.W. Norton & Company, New York.
- 4 Clemens, Michael. 2011. "Economics and Emigration: Trillion Dollar Bills on the Sidewalk?" *Journal of Economic Perspectives*, 25(3): 83-106.
- 5 Orrenius, Pia. 2016. "The Real Story behind Mexican Immigration: And What It Means for the U.S. Economy." [www.bushcenter.org/publications/articles/2016/07/the-real-story-behind-mexican-immigration.html](http://www.bushcenter.org/publications/articles/2016/07/the-real-story-behind-mexican-immigration.html).
- 6 Massey, Douglas, and Karen Pren. 2012. "Unintended Consequences of US Immigration Policy: Explaining the Post-1965 Surge from Latin America." *Population Development Review* 38(1): 1-29.
- 7 This estimate is based on the American Community Survey, which some studies suggest may undercount recently arrived unauthorized Mexican immigrants by as much as 20 percent. Warren, Robert, and John R. Warren (2013). "Unauthorized Immigration to the United States: Annual Estimates and Components of Change, by State, 1990 to 2010." *International Migration Review* 47: 296-329.
- 8 Passel, Jeffrey, D'Vera Cohn and Gonzalez-Barrera. 2012. "Net Migration from Mexico Falls to Zero—and Perhaps Less." Pew Research Center. [www.pewhispanic.org/2012/04/23/net-migration-from-mexico-falls-to-zero-and-perhaps-less/](http://www.pewhispanic.org/2012/04/23/net-migration-from-mexico-falls-to-zero-and-perhaps-less/); Gonzalez-Barrera, Ana. 2015. "More Mexicans Leaving than Coming to the U.S." Pew Research Center. [www.pewhispanic.org/2015/11/19/more-mexicans-leaving-than-coming-to-the-u-s/](http://www.pewhispanic.org/2015/11/19/more-mexicans-leaving-than-coming-to-the-u-s/).
- 9 Hanson, Gordon. 2007. "The Economic Logic of Illegal Immigration." Council Special Report, *Council on Foreign Relations Press*. <https://www.cfr.org/report/economic-logic-illegal-immigration>
- 10 The Gini coefficient is one of the most common ways to measure income inequality. It varies from zero (perfect equality—everyone has the same income) to one (complete inequality—one person has all the income). The median Gini coefficient in the world is about 0.39. Mexico and the US both lie in the top one-third of countries when it comes to income inequality.
- 11 Ferreira, Francisco HG, Julian Messina, Jamele Rigolini, Luis-Felipe López-Calva, Maria Ana Lugo, Renos Vakis, and Luis Felipe Ló. 2013. "Economic Mobility and the Rise of the Latin American Middle Class." The World Bank. [siteresources.worldbank.org/LACEXT/Resources/English\\_Report\\_midclass.pdf](http://siteresources.worldbank.org/LACEXT/Resources/English_Report_midclass.pdf).
- 12 Domanski, Deitrich, Michela Scatigna and Anna Zabai. 2016. "Wealth Inequality and Monetary Policy." *Bank for International Settlements Quarterly Review*, first quarter. [https://www.bis.org/publ/qtrpdf/r\\_qt1603f.pdf](https://www.bis.org/publ/qtrpdf/r_qt1603f.pdf)
- 13 DiNardo, John, Nicole Fortin, and Thomas Lemieux. 1996. "Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach." *Econometrica* 64(5): 1001-1044; Gordon, Robert, and Ian Dew-Becker. 2008. "Controversies about the rise of American inequality: A survey." No. 13982. *National Bureau of Economic Research*.
- 14 Piketty, Thomas. 2014. "Capital in the Twenty-first Century." Harvard University Press; Stiglitz, Joseph. 2016. "Joseph Stiglitz Says Standard Economics Is Wrong. Inequality and Unearned Income Kills the Economy." [economics.com/joseph-stiglitz-inequality-unearned-income/](http://economics.com/joseph-stiglitz-inequality-unearned-income/).
- 15 Domanski, Deitrich, Michela Scatigna and Anna Zabai. 2016. "Wealth Inequality and Monetary Policy." *Bank for International Settlements Quarterly Review*, first quarter. [https://www.bis.org/publ/qtrpdf/r\\_qt1603f.pdf](https://www.bis.org/publ/qtrpdf/r_qt1603f.pdf)
- 16 Harrison, Ann, and Gordon Hanson. 1999. "Who gains from trade reform? Some remaining puzzles." *Journal of Development Economics*, 59(1): 125-154.
- 17 World Bank Group. 2012. "Mexican Middle Class Grows Over Past Decade." The World Bank. [www.worldbank.org/en/news/feature/2012/11/13/mexico-middle-class-grows-over-past-decade](http://www.worldbank.org/en/news/feature/2012/11/13/mexico-middle-class-grows-over-past-decade)
- 18 Berman, Eli, John Bound and Stephen Machin. 1998. "Implication of Skill-Biased Technological Change: International Evidence." *The Quarterly Journal of Economics*, 1245-1279.
- 19 Autor, David, Lawrence Katz and Melissa Kearney. 2008. Trends in U.S. Wage Inequality: Revising the Revisionists." *Review of Economics and Statistics*, 90(2): 300-323.
- 20 Goos, Maarten, Alan Manning, and Anna Salomons. 2014. "Explaining Job Polarization: Routine-biased Technological Change and Offshoring." *American Economic Review*, 104(8): 2509-26. Offshoring refers to the relocation of part of a firm's operations to another country in order to reduce costs.
- 21 Lake, James, and Daniel Millimet. 2016. "Good jobs, Bad Jobs: What's Trade Got to Do with It?" Institute for the Study of Labor (IZA) DP. <http://ftp.iza.org/dp9814.pdf>
- 22 Lake, James, and Daniel Millimet. 2016. "Good jobs, Bad Jobs: What's Trade Got to Do with It?" Institute for the Study of Labor (IZA) DP. <http://ftp.iza.org/dp9814.pdf>
- 23 Orrenius, Pia, and Madeline Zavodny. 2007. "Does Immigration Affect Wages? A Look at Occupation-Level Evidence." *Labour Economics* 14(5): 757-773.

- 24 National Academies of Science, Engineering and Math. 2016. Economic and Fiscal Consequences of Immigration. National Academies, Washington DC. Adverse effects are also found among prior immigrants.
- 25 Cortes, Patricia, and Jose Tessada. 2011. "Low-Skilled Immigration and the Labor Supply of Highly Skilled Women." *American Economic Journal: Applied Economics* 3(3): 88-123.
- 26 Card, David. 2009. "Immigration and Inequality." *American Economic Review*, 99(2): 1-21.
- 27 National Academies of Science, Engineering and Math. 2016. Economic and Fiscal Consequences of Immigration. National Academies, Washington DC.
- 28 Rienzo, Cinzia. 2014. "Residual Wage Inequality and Immigration in the USA and the UK." *Labour*, 28(3): 288-308.
- 29 Gould, Eric. 2015. Explaining the Unexplained: Residual Wage Inequality, Manufacturing Decline, and Low-Skilled Immigration." IZA Institute of Labor DP 9107.
- 30 Hibbs, Brian, and Gihoon Hong. 2015. "An Examination of the Effect of Immigration on Income Inequality: A Gini Index Approach." *Economics Bulletin*, 35(1), 650-656.
- 31 Parrado, Emilio A., and William A. Kandel. 2010. "Hispanic Population Growth and Rural Income Inequality." *Social Forces*, 88(3): 1421-1450.
- 32 Aydemir, Abdurrahman and George J. Borjas. 2007. "Cross-country Variation in the Impact of International Migration: Canada, Mexico, and the United States." *Journal of the European Economic Association*, 5(4): 663-708.
- 33 This estimate is based on the long-run simulation results (see p. 700 of Aydemir, Abdurrahman and George J. Borjas. 2007. "Cross-country variation in the impact of international migration: Canada, Mexico, and the United States." *Journal of the European Economic Association*, 5(4): 663-708).
- 34 Mishra, Prachi. 2007. "Emigration and Wages in Source Countries: Evidence from Mexico." *Journal of Development Economics*, 82: 180-199. Aydemir and Borjas (2007) find similar estimates for the Mexican case. Aydemir, Abdurrahman and George J. Borjas. 2007. "Cross-country variation in the impact of international migration: Canada, Mexico, and the United States." *Journal of the European Economic Association*, 5(4): 663-708.
- 35 Borjas, George. 1987. "Self-Selection and the Earnings of Immigrants." *American Economic Review*, 77(4): 531-553.
- 36 Chiquiar, Daniel, and Gordon Hanson. 2005. "International Migration, Self-Selection, and the Distribution of Wage: Evidence from Mexico and the United States." *Journal of Political Economy*, 113(2): 239-281; Orrenius, Pia, and Madeline Zavodny. 2005. "Self-selection among undocumented immigrants from Mexico." *Journal of Development Economics*, 78(1): 215-240.
- 37 Moraga, Jesus Fernandez-Huertas. 2011. "New Evidence on Emigrant Selection." *Review of Economics and Statistics*, 93(1): 72-96; Ambrosini, William, and Giovanni Peri. 2012. "The Determinants and the Selection of Mexico-US Migrants." *The World Economy*, 35(2): 111-151; Kaestner, Robert, and Ofer Malamud. 2014. "Self-selection and international migration: New evidence from Mexico." *Review of Economics and Statistics*, 96(1): 78-91.
- 38 McKenzie, David, and Hillel Rapoport. 2007. "Network Effects and the Dynamics of Migration and Inequality: Theory and Evidence from Mexico." *Journal of Development Economics*, 84(1): 1-24.
- 39 Mishra, Prachi. 2007. "Emigration and Wages in Source Countries: Evidence from Mexico." *Journal of Development Economics*, 82: 180-199; Aydemir, Abdurrahman and George J. Borjas. 2007. "Cross-country variation in the impact of international migration: Canada, Mexico, and the United States." *Journal of the European Economic Association*, 5(4): 663-708.
- 40 In the 1990s, Mexico first went through a credit bubble and bust, widespread bank failures, and peso devaluation, followed by implementation of NAFTA and a new era of macroeconomic stability post-1995.
- 41 Orrenius, Pia, and Madeline Zavodny. 2005. "Self-selection among undocumented immigrants from Mexico." *Journal of Development Economics*, 78(1): 215-240.
- 42 Campos-Vazquez, Raymundo, and Horacio Sobarzo. 2012. "The Development and Fiscal Effects of Emigration on Mexico." Migration Policy Institute. [www.migrationpolicy.org/research/RMSG-development-fiscal-effects-emigration-mexico](http://www.migrationpolicy.org/research/RMSG-development-fiscal-effects-emigration-mexico).
- 43 Gonzalez-Barrera, Ana. 2015. "More Mexicans Leaving than Coming to the U.S." Pew Research Center. [www.pewhispanic.org/2015/11/19/more-mexicans-leaving-than-coming-to-the-u-s/](http://www.pewhispanic.org/2015/11/19/more-mexicans-leaving-than-coming-to-the-u-s/).
- 44 Masferrer, Claudia and Bryan Roberts. 2012. "Going Back Home: Changing Demography and Geography of Mexican Return Migration." *Population Research and Policy Review* 31(4): 465-496. and Parrado, E.A. and Gutierrez, E.Y., 2016. The changing nature of return migration to Mexico, 1990–2010: Implications for labor market incorporation and development. *Sociology of Development*, 2(2), pp.93-118.
- 45 Meza, Liliana. 2016. "Guatemalan Migration to Chiapas: Effects on Wages and Hours Worked." CANAMID Policy Brief#9. <http://canamid.org/publication?id=PB09>.
- 46 Remittance data is total remittances to Mexico of which about 95 percent is from the US (Banco de México).
- 47 Banco de México and Instituto Nacional de Estadística, Geografía e Informática (INEGI).
- 48 Campos-Vazquez, Raymundo, and Horacio Sobarzo. 2012. "The Development and Fiscal Effects of Emigration on Mexico." Migration Policy Institute. [www.migrationpolicy.org/research/RMSG-development-fiscal-effects-emigration-mexico](http://www.migrationpolicy.org/research/RMSG-development-fiscal-effects-emigration-mexico).
- 49 Acosta, Pablo, Cesar Calderon, Pablo Fajnzylber and Humberto Lopez. 2008. "What is the Impact of International Remittances on Poverty and Inequality in Latin America?" *World Development*, 36(1): 89-114.

- 50 Esquivel, Gerardo, and Alejandra Huerta-Pineda. 2007. "Remittances and Poverty in Mexico: A Propensity Score Matching Approach." *Integration and Trade Journal*, 27(11): 45-57. López-Córdova, Ernesto. 2004. "Economic Integration and Manufacturing Performance in Mexico: Is Chinese Competition to Blame?" *Latin America/Caribbean and Asia/Pacific Economics and Business Association Working Paper* 23.
- 51 Mora-Rivera, José. 2005. "The Impact of Migration and Remittances on Distribution and Sources Income: The Mexican Rural Case." United Nations Expert Group Meeting on International Migration and Development. [www.un.org/esa/population/meetings/ittmigdev2005/P06-MoraRivera.pdf](http://www.un.org/esa/population/meetings/ittmigdev2005/P06-MoraRivera.pdf).
- 52 Arslan, Aslihan, and J. Edward Taylor. 2012. "Transforming Rural Economies: Migration, Income Generation and Inequality in Rural Mexico." *The Journal of Development Studies*, 48(8): 1156-1176.
- 53 Orrenius, Pia, Madeline Zavodny, Jesus Canas and Roberto Coronado. 2012. "Remittances as an Economic Development Engine." In *Migration and Remittances from Mexico: Trends, Impacts and New Challenges*. Alfredo Cuecuecha and Carla Pederzini, editors. Lexington Books.
- 54 Stark, Oded, and J. Edward Taylor. 1989. "Relative Deprivation and International Migration." *Demography*, 26(1): 1-14.
- 55 Orrenius, Pia and Melissa LoPalo. 2013. "As Mexico's Social Safety Net Grows, Issues Arise." Federal Reserve Bank of Dallas, *Southwest Economy*, second quarter. <https://www.dallasfed.org/~media/documents/research/swe/2013/swe1302e.pdf>
- 56 Perez, Michael and Kelsey Reichow. 2017. "Mexico's SOFOM Finance Firms Attempt to Broaden Loan Availability." Federal Reserve Bank of Dallas *Southwest Economy*, fourth quarter. <https://www.dallasfed.org/~media/documents/research/swe/2017/swe1704e.pdf>.
- 57 Scheve, Kenneth, and Matthew Slaughter. 2007. "A New Deal for Globalization." *Foreign Affairs* (July/August).
- 58 Bean, Frank, Susan Brown, and James Bachmeier. 2015. *Parents without Papers: The Progress and Pitfalls of Mexican-American Integration*. Russell Sage Foundation, New York.
- 59 Orrenius, Pia, Alex Abraham and Stephanie Gullo. 2018. "Gone to Texas: Migration Vital to Growth in the Lone Star State." Federal Reserve Bank of Dallas, *Southwest Economy*, first quarter. [www.dallasfed.org/~media/documents/research/swe/2018/swe1801b.pdf](http://www.dallasfed.org/~media/documents/research/swe/2018/swe1801b.pdf).
- 60 Orrenius, Pia, Madeline Zavodny and Melissa LoPalo. 2013. "Gone to Texas: Immigration and the Transformation of the Texas Economy." Federal Reserve Bank of Dallas. [www.dallasfed.org/~media/documents/research/pubs/gonetx.pdf](http://www.dallasfed.org/~media/documents/research/pubs/gonetx.pdf).
- 61 Sommeiller, Estelle, and Mark Price. 2015. "The Increasingly Unequal States of America: Income Inequality by State, 1917 to 2011." Economic Analysis Research Network. [www.epi.org/files/2014/Income-Inequality-by-State-Final.pdf](http://www.epi.org/files/2014/Income-Inequality-by-State-Final.pdf).

EDITOR OF THE SERIES: Claudia Masferrer | May 2018

MIGDEP thanks the funding granted by the MISSION FOODS TEXAS-MEXICO CENTER.