

UC Santa Barbara

UC Santa Barbara Previously Published Works

Title

Determinants of Mexican-Origin Dropout: The Roles of Mexican Latino/a Destinations and Immigrant Generation

Permalink

<https://escholarship.org/uc/item/88p546d8>

Journal

Population Research and Policy Review, 36(3)

ISSN

0167-5923

Author

Ackert, Elizabeth

Publication Date

2017-06-01

DOI

10.1007/s11113-016-9422-0

Peer reviewed

Determinants of Mexican-Origin Dropout: The Roles of Mexican Latino/a Destinations and Immigrant Generation

Elizabeth Ackert¹

Received: 24 May 2016 / Accepted: 23 November 2016 / Published online: 3 December 2016
© Springer Science+Business Media Dordrecht 2016

Abstract Adolescents of Mexican origin have higher than average school dropout rates, but the risk of school non-enrollment among this subgroup varies substantially across geographic areas. This study conducts a multilevel logistic regression analysis of data from the 2005–2009 American Community Survey to evaluate whether spatial heterogeneity in school non-enrollment rates among Mexican-origin youth ($n = 71,269$) can be attributed to the histories of states and local areas as Mexican Latino/a receiving gateways. This study also determines whether the association between new destinations and school non-enrollment varies within the Mexican-origin population by nativity and duration of residence. Net of background controls, the risk of non-enrollment does not differ significantly between Mexican-origin youth living in states that are newer Mexican Latino/a gateways versus those in more established destinations, in part because Mexican-origin school non-enrollment rates are heterogeneous across newer destination states. At the more local Public Use Microdata Area level, however, Mexican-origin youth in newer gateways have a higher risk of non-enrollment than those in established destinations, revealing the importance of local-level contexts as venues for integration. The disparity in non-enrollment between Mexican-origin youth in new versus established destination PUMAs is apparent for all generational groups, but is widest among 1.25-generation adolescents who arrived in the country as teenagers, suggesting that local new destinations are particularly ill-equipped to deal with the educational needs of migrant newcomers.

Keywords Immigration/migration · Immigrant destinations · Dropout · Latinos/Hispanics

✉ Elizabeth Ackert
ackert@prc.utexas.edu

¹ Population Research Center, The University of Texas at Austin, 305 E. 23rd Street Stop G1800, Austin, TX 78712-1699, USA

Introduction

School dropout rates have declined in recent decades, but Mexican-origin Latino/a youth have a significantly higher risk of dropping out of school than their peers. Approximately 11.0% of Mexican-origin Latino/a 16–24 year-olds have not obtained a high school diploma and are not enrolled in school—over twice the dropout rate of non-Latino whites (National Center for Education Statistics 2016). Even though poor socioeconomic origins and the difficulties associated with unauthorized status likely contribute to disadvantaged educational outcomes among Mexican-origin youth, there is a growing body of research showing that differences in educational contexts, including the attributes of states, local communities, and schools, create stratified educational outcomes within the Mexican-origin population across the socioeconomic spectrum (Crosnoe 2005; Fischer 2010; Kaushal 2008; Portes and Hao 2004; Potochnick 2014a). This research focuses on immigrant destinations as contextual determinants of school non-enrollment among adolescents of Mexican origin.

Historically, nearly all Mexican-origin adolescents lived in California, Texas, Illinois, and the Southwest (Bean and Tienda 1988; Jaffe et al. 1980), but Mexican-origin families have been increasingly drawn into “new destinations,” including central city, suburban, and non-metropolitan areas across the country (Massey and Capoferro 2008; Singer 2004; Zúñiga and Hernández-León 2005). Amidst the geographic diversification of immigrant settlement, there is concern that Mexican-origin children and youth in new destinations will experience worse educational outcomes than their counterparts in more established gateways due to a lack of institutional supports for immigrant populations in newer immigrant-receiving areas (Lichter 2013; Waters and Jiménez 2005). The prior literature provides a mixed view, however, of how Mexican-origin youth are faring educationally across immigrant destinations. Immigrant youth in new foreign-born destinations have a greater risk of school attrition than those in established foreign-born gateways (Fischer 2010), and Latino/a youth in new destinations also have larger gaps with their non-Latino white peers in levels of college-preparatory course enrollment compared to those in established destinations (Dondero and Muller 2012). Math and reading test scores among the adolescent children of immigrants in high school, however, are higher among those in new gateway states (Potochnick 2014b).

This study evaluates whether Mexican-origin youth living in new destinations have a higher risk of school non-enrollment than Mexican-origin youth in more established gateways, and explores two issues that have not been addressed previously in research on Mexican-origin schooling outcomes across destinations. First, is the potentially negative impact of living in a new destination on Mexican-origin schooling outcomes due to state-level responses to Latino/a newcomers, to local-level processes, or to both? Second, are all Mexican-origin youth living in new destinations equally susceptible to the potentially negative impacts of these places on their educational outcomes, or are some groups—such as immigrant newcomers—more at risk of school non-enrollment in newer versus more established gateways?

The current study answers these questions by conducting multilevel logistic regression analyses of data from the 2005–2009 American Community Survey (ACS). The ACS data contain a sample of $n = 71,269$ Mexican-origin 15–17 year-olds in all U.S. states and in most Public Use Microdata Areas (PUMAs). Using measures of Mexican Latino/a presence in 1990 and Mexican Latino/a population growth from 1990 to 2010, this work determines whether geographic heterogeneity in Mexican-origin non-enrollment rates can be attributed to the histories of states and local areas as newer or more established Mexican Latino/a gateways. This study also determines whether the impact of new destinations on Mexican-origin school non-enrollment varies by immigrant generational status—the combination of nativity and duration of residence. By scrutinizing the dual roles that place and immigrant generation play in shaping differential schooling outcomes among Mexican-origin youth, this work provides greater insight into heterogeneity in patterns of incorporation within the Mexican-origin population.

Educational Outcomes of Mexican-Origin Youth across Immigrant Destinations

Over 1-in-4 Latinos/as now lives outside of an established immigrant destination (Lichter and Johnson 2009). Amidst the dispersion of Latinos/as to new destinations, researchers have begun to assess whether the Latino/a population in newer immigrant gateways—which is largely composed of Latinos/as of Mexican origin (Massey and Capoferro 2008)—is faring better or worse than the population in more established destinations on measures such as educational attainment and neighborhood segregation (see Hall 2013; Lichter et al. 2010; Stamps and Bohon 2006). The ways in which new destinations are shaping the educational outcomes of Mexican-origin youth represent a particularly critical area of inquiry, given high levels of educational disadvantage among this subgroup (Schneider et al. 2006).

New immigrant gateways likely differ from established gateways in ways that are meaningful in shaping Mexican-origin educational outcomes, such as by levels of institutional support for immigrant and minority students and intergroup relations between immigrant-origin and non-immigrant populations (Waters and Jiménez 2005). Mexican-origin youth may experience worse schooling outcomes in new Latino/a gateways because these areas could lack institutional supports for newcomers and/or could have negative intergroup relations between immigrants and non-immigrants (Lichter 2013). Indeed, Latino/a residential segregation from whites is higher in newer gateways than in more established areas (Hall 2013; Lichter et al. 2010), and native-born populations have been shown to flee from areas experiencing rapid foreign-born influxes such as new immigrant destinations (Hall and Crowder 2014).

Whether Mexican-origin youth in newer immigrant gateways are more disadvantaged educationally than their counterparts in more established gateways is a matter of debate. Schools in new destinations attended by Latinos/as and the children of immigrants have, on average, more positive attributes than those in more established gateways, including lower teacher-to-pupil ratios, lower proportions of students in

poverty, lower proportions of minority students, and higher 12th grade graduation and 4-year college enrollment rates (Dondero and Muller 2012; Fry 2011; Potochnick 2014b). These positive school attributes, however, are not necessarily translating into educational advantages for immigrant-origin youth in new destinations.

Foreign-born youth in new immigrant destinations have higher levels of school attrition than those in established maintaining foreign-born gateways (Fischer 2010). Latino/a youth in new destinations also have larger gaps with non-Latino whites in levels of college-preparatory course enrollment than those in established destinations (Dondero and Muller 2012). Nonetheless, one study finds that math and reading test scores among immigrant-origin 10th graders are higher in newer gateway states than in established gateway states (Potochnick 2014b). Given that Mexican-origin youth are not distributed randomly across geographic areas, it is also possible that the relationships between new destinations and Mexican-origin educational outcomes are the result of differential selection into immigrant destinations by background factors that are correlated with educational attainment (see Stamps and Bohon 2006).

The current study provides deeper insight into the educational outcomes of Mexican-origin youth across destinations by focusing on geographic differences in the risk of school non-enrollment among Mexican-origin youth as a specific national origin group of interest. Even though a number of national origin groups now live in new destinations, the dispersion of the Mexican-origin population to non-traditional receiving gateways is largely responsible for the growth of new destinations (Massey and Capoferro 2008; Terrazas 2011). The Latino/a school-age population—which is largely composed of the children of Mexican immigrants and their descendants—is also growing rapidly and will continue to be one of the largest racial/ethnic subgroups in U.S. schools for years to come (Johnson and Lichter 2010). Given these demographic patterns, it is critical to understand how new destinations shape the educational outcomes of Mexican-origin youth.

While not exclusively focused on the Mexican-origin population, Fischer's (2010) analysis of 2000 decennial census data showed that foreign-born Mexican-origin youth in Public Use Microdata Areas (PUMAs) with high foreign-born growth rates—a hallmark of new destinations—had a greater risk of school non-enrollment than U.S.-born youth in PUMAs with low foreign-born growth rates. This analysis extends Fischer's work in several ways, by focusing on all Mexican-origin youth (both foreign- and U.S.-born) and thus conducting an intragroup rather than an intergroup comparison, by defining new destinations not in terms of foreign-born presence but the presence and growth of the co-ethnic Mexican Latino/a population, and by looking at variation in the risk of school non-enrollment across destinations by fractional immigrant generational groups.

New Destinations and Mexican-Origin Dropout: State versus Local Impacts

Previous analyses have measured new destinations at the state level (Clotfelter et al. 2012; Massey 2008; Potochnick 2014b) and at sub-state levels including counties, PUMAs, and census-defined places (Dondero and Muller 2012; Fischer 2010; Hall

2013; Kritz et al. 2011; Lichter and Johnson 2009; Singer 2004, 2014; Stamps and Bohon 2006). This analysis considers both state and local (PUMA) profiles as Mexican Latino/a gateways as potential spheres of influence on Mexican-origin non-enrollment. The added value of looking at the more distal state context in addition to local contexts may not be immediately recognized, given that neighborhoods and schools are the most proximate contexts of schooling processes for young people and their families. Yet, assuming that the state context has no role in schooling processes beyond local contexts could lead to mistaken conclusions, because states and local contexts may affect non-enrollment through different mechanisms.

Theoretically, both states and local areas should affect Mexican-origin school non-enrollment patterns. Institutional arrangements may vary across both new and established destination states and local areas in ways that could influence outcomes related to incorporation (Waters and Jiménez 2005). At the state level, these institutional arrangements could include the mix of policies governing the social rights of immigrants, such as the ability to obtain a driver's license, to receive in-state tuition for public higher education, and/or to receive welfare support. These policies could impact Mexican-origin non-enrollment by shaping perceptions of, and responses to, available educational opportunities. Latino/a teenagers with unauthorized status, for example, may disengage from school when state policies limit their ability to access affordable higher education (Bohon et al. 2005; Gonzales 2011). To be sure, a lack of in-state tuition policies for immigrants has been shown to increase high school dropout rates (Potochnick 2014a) and decrease college enrollment and attainment among non-citizen Mexican-origin adolescents and young adults (Kaushal 2008). States also set the minimum dropout age, enact rules governing teacher certification, establish accountability measures that are used to judge school quality, and contribute to school revenues, which indirectly influence student dropout through effects on schools (Fitzpatrick and Yoels 1992).

The level of recent growth of the Latino/a population varies within new destination states, however, and only some communities within new gateways must directly attend to the educational needs of Mexican-origin youth. The local context of reception is likely to have an equal, if not stronger, impact on the risk of school non-enrollment among Mexican-origin youth relative to the state-level context. Local contexts serve as venues for interaction and intergroup relations that may fuel educational disparities between groups (Blau 1977; Sewell et al. 1969). Local-level responses to the presence of Mexican-origin youth, from welcoming versus hostile attitudes toward immigrant-origin newcomers to the provision of ELL services and dropout prevention programs, could ameliorate or exacerbate the risk of school non-enrollment (see, for example, Bohon et al. 2005; Gouveia et al. 2005; Hernández-León and Zúñiga 2005).

Evaluating the association between new destinations and Mexican-origin school non-enrollment at both the state and local levels can thus provide greater insight into the mechanisms that are working to influence patterns of educational incorporation among Mexican-origin youth. If Mexican-origin adolescents in newer Mexican Latino/a destination states have higher levels of non-enrollment than those in established destination states, net of compositional factors influencing non-

enrollment, then this finding would indicate that new destination states have insufficient levels of policy supports for these youth relative to established destination states. If Mexican-origin youth in local areas that have only recently become Mexican Latino/a gateways have higher levels of non-enrollment than those in more established local destinations, then this finding would point to a lack of local institutional supports and potentially negative intergroup relations that are hindering Mexican-origin educational attainment in local new destinations.

New Destinations and Mexican-Origin Dropout: Variation by Immigrant Generation

The Mexican-origin population exhibits high levels of intragroup heterogeneity—it includes both foreign-born recent arrivals and U.S.-born Latinos/as of Mexican descent whose families have been in the country for several generations (Alba et al. 2013). Immigrant generational status, the combination of nativity and duration of residence, is thought to be a particularly important dimension of immigrant integration because it measures the degree of exposure that immigrants and their descendants have had to U.S. institutions (Rumbaut 2004). Both foreign-born and U.S.-born Mexican-origin Latino/a youth have a greater risk of school dropout than non-Latino white youth, but those whom are immigrant newcomers with shorter durations of residence in the country are the most at risk of leaving school (Hirschman 2001; Landale et al. 1998; National Center for Education Statistics 2016). Some Mexican-origin newcomers who arrive in the U.S. as teenagers may not be dropouts from U.S. schools, but rather labor migrants that never enroll in U.S. schools upon arrival (Oropesa and Landale 2009).

Previous analyses of educational outcomes across immigrant destinations have not determined whether some subgroups within the Mexican-origin population are more at risk of experiencing adverse educational outcomes than others when they are living in a new versus a more established gateway. The impact of new destinations on the risk of Mexican-origin dropout could be lower, for example, for Mexican-origin youth that are born in the U.S. relative to those that are foreign born, because these adolescents have had the longest durations of residence in the country and do not have to deal with the barriers to educational attainment that are imposed by unauthorized migration status that are faced by many foreign-born Mexican-origin adolescents (Gonzales 2011). In other words, U.S.-born Mexican-origin youth may be more resilient to the impact of destinations on their educational outcomes.

Susceptibility to contextual impacts on non-enrollment could also vary among foreign-born Mexican-origin youth by duration of residence. Foreign-born Mexican-origin youth with longer durations of residence in the U.S. may have greater household and co-ethnic resources and familiarity with the U.S. education system that could buffer them from the potentially negative impact of new destinations on their educational outcomes. Migrant newcomers with fewer years of residence in the U.S., on the other hand, may be the most susceptible to the negative impact of new destinations on their educational outcomes because of the high likelihood of

unauthorized status in this population and a lack of social connections and familiarity with the U.S. school system. These youth—the 1.25 generation—require the highest level of resources for positive educational incorporation. To the extent that these resources are scarcer in new destinations, the 1.25 generation in new destinations could be the most at risk of non-enrollment.

Research Objectives

This research investigates the “new destinations” hypothesis by determining whether Mexican-origin youth in newer Mexican Latino/a gateways have a higher risk of school non-enrollment than their Mexican-origin peers in more established destinations. The new destinations hypothesis is tested at two geographic levels in order to determine whether Mexican-origin non-enrollment is related to state- or local-level processes related to immigrant destinations. The analysis also examines whether the relationship between living in a newer Mexican Latino/a gateway and the risk of Mexican-origin school non-enrollment is moderated by immigrant generational status—the combination of nativity and duration of residence.

Data and Sample

This research uses data from the 2005–2009 American Community Survey (ACS), from the Integrated Public Use Microdata Series (Ruggles et al. 2010). The 5-year ACS dataset consists of five 1% probability samples from the 2005–2009 ACS surveys, which are merged and re-weighted in order to be representative of the U.S. population from 2005 to 2009. The 5-year ACS is nationally representative and includes fairly large samples of Mexican-origin 15–17 year-olds in all states and nearly all PUMAs. The ACS is a household survey and contains information on every individual living in the household at the time of the survey. This allows for the identification of a parent and/or householder record for most of the young adults in the sample. By merging the records of individual 15–17 year-olds in the ACS with a parent or householder record, it is possible to directly control for household background factors that have been shown to influence school non-enrollment.

To construct the sample for analysis, the records of all non-institutionalized 15–17 year-olds were extracted from the 5-year ACS. For 15–17 year-olds who lived with one or two parents in the household, the parental record/s were merged with the record of the 15–17 year-old. For 15–17 year-olds who did not live with a parent in the household, the householder record was used as a proxy for the parental record. For most 15–17 year-olds that did not live with their parents, the householder was often a parent-like figure, such as a grandparent, aunt, uncle, or older sibling. A small percentage (0.3%) of all 15–17 year-olds lived in a household where no parent was present and the 15–17 year-old was the householder. These cases were included in the sample and flagged using dummy variables in the multivariate analysis. The results presented in this paper are robust to the inclusion or exclusion of youth who are not living with a parent in the household.

For this analysis, three main racial/ethnic subgroups were identified in the 2005–2009 ACS: Mexican-origin adolescents, non-Latino white adolescents, and non-Latino black adolescents. For the multilevel analysis, the sample is restricted to only Mexican-origin youth. In this way, Mexican-origin youth are compared to their co-ethnic peers in other states and PUMAs, rather than to a reference group such as native-born non-Latino whites. This approach helps provide greater insight into intragroup heterogeneity within the Mexican-origin population.

A case in the ACS was considered to be of Mexican origin if he/she met one or more of the following criteria: (1) he/she was born in Mexico; (2) at least one of his/her parents was born in Mexico; and (3) he/she is identified as “Hispanic-Mexican” on the Hispanic origin variable. The final sample includes approximately $n = 71,269$ Mexican-origin cases (11.2% of all 15–17 year-olds in the 2005–2009 ACS). Non-Latino white and black 15–17 year-olds were also identified in the ACS for comparative purposes and to create contextual-level peer dropout variables that are used as controls in multilevel analyses. Non-Latino whites were those individuals that were identified as “non-Hispanic” on the Hispanic origin variable and “White” on the race variable. Non-Latino blacks were those young adults that were identified as “non-Hispanic” on the Hispanic origin variable and “Black” on the race variable.¹ The 2005–2009 ACS includes 410,175 non-Latino white cases (64.4% of the ACS 15–17 year-old sample) and 76,410 non-Latino black cases (12.0% of the ACS 15–17 year-old sample).

Level 1 Variables

The main dependent variable of interest is school non-enrollment. In the ACS, the householder (person that fills out the survey) reports the school enrollment status of each person in the household. The non-enrollment variable in the ACS is measured cross-sectionally, and thus only captures school enrollment at the time of the survey. This variable does not take past or future patterns of enrollment and degree completion into account. Youth who are not enrolled in school in this sample include migrants who arrived in the U.S. and never enrolled in U.S. schools (Oropesa and Landale 2009), youth who may have already completed a high school credential, and/or youth who may re-enroll in school and/or complete a credential at a future point in time.

Mexican-origin families are not sorted randomly across destinations, and a geographic gradient in non-enrollment will emerge if Mexican-origin youth with greater risk factors for non-enrollment choose to live in particular destinations. For example, research on the demographic and socioeconomic characteristics of migrants to new versus established destinations show that Latino/a migrants in newer gateways have higher levels of educational attainment than those in established destinations, but are less likely to be citizens and also have lower levels

¹ The term “black” in this analysis refers to non-Latino/a blacks. Some Mexican-origin youth may also identify racially as black. However, in this paper, the term black refers to youth who were identified as black on the ACS race question and non-Latino on the Hispanic question.

of English proficiency (Lichter and Johnson 2009; Stamps and Bohon 2006). Additionally, a study of immigrants within the state of North Carolina shows that the risk of low achievement and dropout among Latino/a youth as compared to white youth is largely related to socioeconomic status and age of arrival (Clotfelter et al. 2012).

Multilevel logistic regression models control for several individual and household factors that could predict both selection into destinations and school non-enrollment. Baseline multilevel models control for sex, age, and year, as these factors are likely to influence the process of school non-enrollment. In subsequent models, immigrant generational status is controlled using an approximation of Rumbaut's (2004) typology for fractional immigrant generational groups. The Mexican-origin 15–17 year-old sample was classified into four groups by nativity and age at arrival: The 1.25 generation, 1.5 generation, 1.75 generation, and the U.S.-born 2nd and higher generation.² The 1.25 generation includes foreign-born adolescents that migrated after the age of 12—the most recent arrivals. The 1.5 generation includes foreign-born adolescents who arrived between the ages of 6 and 12, and likely had some schooling in Mexico. The 1.75 generation includes foreign-born youth who arrived in the U.S. by the age of five. A measure of citizenship status is included in descriptive statistics (see Appendix Table 5), but citizen status is not included as a variable in multilevel logistic regression models because of its high correlation with immigrant generational status. Approximately 93.5% of 1.25-generation, 88.4% of 1.5-generation, and 78.4% of 1.75-generation Mexican-origin adolescents in the ACS are non-citizens.

Controls for family status and household socioeconomic status capture social origins, a main driver of disparities in educational attainment (Kao and Thompson 2003). Households were categorized as intact (two parents in the household), mother only, father only, or no parents present. The parent may have been a biological parent, an adoptive parent, or a stepparent. A categorical measure of parental educational attainment was constructed. For youth in intact households, the educational attainment level of the parent with the highest level of education was used to create the attainment measure.³ For single-parent households, the educational attainment level of the parent who was present in the household was used. Finally, for individuals who did not live with parents, the educational

² The U.S.-born category includes both 2nd- and 3rd- and higher-generation Mexican-origin adolescents. The elimination of the parental birthplace question from census questionnaires in 1980 makes it difficult to identify the immigrant 2nd, 3rd, and higher generations in census data (Hirschman 1994). The parental record matching technique helps identify parental birthplace, but only for the subset of adolescents that were living with at least one parent in the household. Because the immigrant generational status of U.S.-born Mexican-origin youth who did not live with a parent in the household, or of those living in single-parent households where the foreign-born parent was not present in the household, cannot be identified, all U.S.-born Mexican-origin youth were classified as members of the U.S.-born 2nd and higher generation.

³ The Bayesian Information Criterion (BIC) was used to identify the level of parental education attainment (mother's attainment, father's attainment, or parent with the highest level of attainment) that provided the best fit for predicting non-enrollment among young adults in intact households (Raftery 1995). In intact households, the educational attainment level of the parent with the highest level of education yielded the lowest BIC value and thus provided the best model fit.

attainment level of the householder was used as a proxy for parental educational attainment. The poverty status variable in the ACS was used as a broad indicator of household income resources. The ACS poverty status variable incorporates information on total family income, family size, number of children, and householder age to determine whether a family's poverty level was higher or lower than 100 percent of the poverty thresholds established by the Social Security Administration.

Student mobility is a major predictor of school dropout (Rumberger and Lim 2008). This analysis includes a dummy variable that captures three types of migration and mobility: intrastate migration, interstate migration, and international migration. The reference category is no mobility. The ACS only gathers information on changes in residence in the previous year, so the mobility variable captures only recent experiences of migration and mobility.

Finally, metropolitan status is controlled as a potential Level 1 predictor of non-enrollment. The multilevel analysis includes controls for both central city status and non-metropolitan status. The reference ("other") category includes households in suburban areas, households where metropolitan status was not identifiable, and households where metropolitan status was identified but central city status was unknown.

Level 2 Variables

New destinations are measured based on the historical presence and growth of the Mexican-origin Latino/a population within states and PUMAs from 1990 to 2010. Rather than measure the historical presence and growth of all foreign-born groups within an area, this work uses a group-specific typology, because some areas have been traditional immigrant destinations but are newer group-specific gateways (see Hall 2013; Kritz et al. 2011). For example, New York City is a traditional immigrant destination that is a newer gateway for Mexican immigrants. Group-specific measures are thus used in this analysis to understand how Mexican-origin school non-enrollment is associated with the historical presence and growth of the co-ethnic Mexican Latino/a population. This approach distinguishes this analysis from Fischer (2010), who looked at the association between foreign-born presence and school attrition among immigrant youth.

Studies that create typologies of immigrant destinations often incorporate measures of foreign-born presence in a baseline year and foreign-born growth rates between the baseline year and a subsequent time period (see Fischer 2010; Lichter et al. 2010; Park and Iceland 2011). Using a similar approach, this study calculated the percent of Mexican-origin Latinos/as within states in 1990 using data from the 1990 decennial census 5% microdata file (Ruggles et al. 2010). Mexican-origin Latino/a population counts from the 1990 decennial census 5% microdata file and the 2010 ACS (Ruggles et al. 2010) were then used to calculate Mexican Latino/a growth rates from 1990 and 2010, respectively.

The same measures of Mexican-origin Latino/a presence and growth were created at the consistent Public Use Microdata Area (PUMA) level, using census 5%

microdata from 1990 and the 2010 ACS. In census microdata, PUMAs are geographically contiguous entities that are nested within states and contain at least 100,000 people (U.S. Census Bureau 2014). Consistent PUMAs are slightly larger than standard PUMAs, but their geographic boundaries do not change over time. Thus, the consistent PUMA is the most detailed geographic area than can be identified for all individuals in microdata samples from 1980 onward (Ruggles et al. 2010). The term “PUMA” is used in this analysis to refer to “consistent PUMAs” for the sake of brevity.

State- and PUMA-level models include controls for variables that may confound the relationship between new destinations measures and Mexican-origin non-enrollment. State-level models include controls for the percent of adults in the state, ages 25 and over, who had attained a bachelor’s degree or higher in 2000 (U.S. Census Bureau 2006), and the average unemployment rate in the state in the years 2005–2009 (U.S. Bureau of Labor Statistics 2013).⁴ PUMA-level controls were created using the same data sources used to create the state-level measures (1990 decennial census 5% microdata, 2005–2009 ACS, 2010 ACS), with two exceptions.⁵ The percent of adults with a B.A. or higher and the percent unemployment at the PUMA level were created using the 2005–2009 ACS microdata instead of the 2000 decennial census and Bureau of Labor Statistics data. Both state- and PUMA-level models incorporate controls for the dropout rates of white and black 15–17 year-olds, calculated using the 2005–2009 ACS, to account for the overall context of school dropout for youth within states and PUMAs.

Analytical Approach

The analysis begins with a descriptive assessment of school non-enrollment rates among Mexican-origin, non-Latino white, and non-Latino black 15–17 year-olds across states. This descriptive analysis is intended to demonstrate the substantial degree of heterogeneity that exists in Mexican-origin school non-enrollment rates across geographic areas. The person weights in the ACS are used in all descriptive statistics. Multilevel logistic regression models, with Mexican-origin 15–17 year-olds “nested” in states or PUMAs, are then used to examine the odds of non-enrollment with the incorporation of the focal new destination variables (% Mexican Latino/a in 1990 and % Mexican Latino/a growth from 1990 to 2010) and controls for individual and household predictors of non-enrollment and state- or PUMA-level

⁴ For the state-level measure of average unemployment, the average yearly BLS and BEA estimates from the years 2005–2009 were used. Many state unemployment rates rose substantially in 2009, due to the Great Recession. Models were estimated separately using average unemployment rates from 2005–2009, the unemployment rate only in 2005 (pre-recession), and the unemployment rate only in 2009 (onset of the recession). The results are robust to the choice of unemployment control variable and are also robust to the inclusion or exclusion of the unemployment rate control, both at the state and PUMA levels. All models also control for year fixed effects, which should account for potential recession-related impacts.

⁵ Some PUMAs in the 2005–2009 ACS did not have any black 15–17 year-old cases. The black youth non-enrollment levels in areas with no black youth were coded as 0.0%. The results are robust to the exclusion of Mexican-origin youth living in PUMAs with fewer than $n = 50$ black 15–17 year-old cases ($n = 17,488$ Mexican-origin cases).

confounders.⁶ In initial results, the odds ratios for the measure of the Mexican-origin Latino/a percent growth rate from 1990 to 2010 were significant but extremely small. For this reason, the Mexican Latino/a growth rate measures were rescaled by dividing the values by 100. A one unit change in the growth rate variable in multivariate models thus represents a 100 percentage point increase in the growth of the Mexican Latino/a population within the state or PUMA.

In the multilevel analysis, all of the state- and PUMA-level variables are centered at their means for the Mexican-origin sample. In addition to the models presented here, multilevel models that interacted the percent Mexican-origin Latino/a in the state or PUMA in 1990 with the Mexican-origin Latino/a growth rate from 1990 to 2010 were investigated. These interactions were not significant in either the baseline or the full models in both the state-level and PUMA-level models.

The basic functional form of a multilevel logistic regression model with both Level 1 and Level 2 predictors is as follows:

$$\begin{aligned} \text{logit}(\text{Pr}[\text{nonenroll}_i = 1]) &= \alpha_{\text{state}[j]} + B_{\text{ind}}x_i \\ \alpha_{\text{state}} &\sim N(\gamma_0 + \Gamma_{\text{state}}\mu_{\text{state}}, \sigma_{\text{state}}^2) \end{aligned} \quad (1)$$

In this model, B_{ind} represents the fixed parameter estimates (log-odds) for all individual-level compositional background factors that may be correlated with non-enrollment, and Γ_{state} represents the parameter estimates for state- or PUMA-level predictors. For ease of interpretation, odds ratios are presented rather than log-odds coefficients for each model. Odds ratios above “1.0” indicate that the variable increases the odds of non-enrollment, whereas those below “1.0” indicate that the variable reduces the odds of non-enrollment. The multilevel logistic regression models are varying intercept models; they allow the average log-odds of Mexican-origin non-enrollment to vary by state or by PUMA. If an individual- or contextual-level predictor contributes to between-state or between-PUMA variation in Mexican-origin non-enrollment, then including this variable in the model will reduce the magnitude of the variance of the intercept parameter (α_{state}) relative to its value in the baseline model. The Bayesian Information Criterion (BIC) is included to measure goodness-of-fit for each model (Raftery 1995).

Variation in Mexican-Origin School Non-Enrollment Rates Across States

The analysis begins by examining school non-enrollment rates among Mexican-origin youth across U.S. states. The results in Table 1 show that there is substantial geographic heterogeneity in Mexican-origin school non-enrollment rates, even among states that are considered new Mexican-origin gateways. The average level

⁶ Several PUMAs had few Mexican-origin 15–17 year-old cases. For instance, 200 out of 529 PUMAs (37.8% of all PUMAs) had 10 or fewer Mexican-origin 15–17 year-old cases. These cases were retained in the analysis, given that multilevel models allow for the inclusion of large proportions of level-2 units with small numbers of cases, so long as there is a sufficient number of level-2 units overall (Bell et al. 2010).

Table 1 Percent school non-enrollment for Mexican-origin, non-Latino white, and non-Latino black 15–17 year-olds, 2005–2009 ACS

State	Mexican origin			Non-Latino white			Non-Latino black		
	%	Pop. total	n	%	Pop. total	n	%	Pop. total	n
Alabama	28.1	3779	153	4.6	122,475	6524	4.2	61,298	2751
Alaska	7.3	1153	59	4.7	19,086	835	11.8	1046	43
Arizona	7.4	93,796	4154	4.8	127,250	6406	3.9	11,184	447
Arkansas	16.8	6175	312	5.6	83,543	4312	4.6	23,342	997
California	4.3	629,149	28,723	2.4	555,252	28,778	2.8	111,477	4361
Colorado	11.2	35,320	1569	3.8	128,992	6929	4.1	9019	342
Connecticut	5.0	2240	95	2.2	102,087	5416	5.2	16,874	672
Delaware	16.8	1438	51	4.3	22,258	1084	3.5	9261	333
District of Columbia	0.0	291	10	0.0	2069	107	6.3	14,443	655
Florida	16.3	26,457	1269	4.7	373,321	19,087	4.8	143,008	6138
Georgia	16.1	20,487	827	3.9	216,332	11,352	4.4	145,627	6428
Hawaii	1.4	1447	78	5.8	7783	367	4.6	1032	22
Idaho	11.4	8028	375	3.7	54,915	2957	4.8	294	15
Illinois	6.0	77,592	3128	2.4	322,275	18,460	4.3	100,703	3669
Indiana	7.7	11,792	529	4.1	218,166	11,762	5.3	27,626	1089
Iowa	6.1	4889	219	3.5	109,628	5825	2.3	3759	117
Kansas	8.4	10,814	466	2.7	90,946	5032	5.2	7844	316
Kentucky	16.2	3014	111	4.4	147,776	7698	4.5	15,505	694
Louisiana	12.2	2536	131	4.7	106,223	5540	5.3	74,687	3025
Maine	0.0	222	17	4.2	50,217	2374	10.3	835	26
Maryland	8.4	2945	180	4.0	130,186	7222	4.1	78,978	3175
Massachusetts	10.3	1972	96	2.6	191,514	10,338	4.9	18,699	743
Michigan	5.0	16,162	770	3.5	321,384	17,717	6.0	81,348	2715

Table 1 continued

State	Mexican origin		Non-Latino white		Non-Latino black	
	%	Pop. total	%	Pop. total	%	Pop. total
Minnesota	12.2	7496	2.1	179,443	5.6	10,894
Mississippi	25.1	1616	5.1	66,425	4.5	58,592
Missouri	9.9	6428	4.5	196,096	5.8	36,015
Montana	10.4	1002	6.3	33,924	6.7	238
Nebraska	4.7	5786	2.0	60,938	3.2	4147
Nevada	10.0	26,911	6.4	51,610	4.5	9821
New Hampshire	0.0	441	2.7	52,202	0.0	609
New Jersey	17.4	6955	2.3	213,327	4.3	56,159
New Mexico	7.1	27,059	4.9	26,706	2.8	2065
New York	14.6	17,410	2.7	444,419	3.8	141,273
North Carolina	15.1	16,785	4.5	224,428	4.0	95,502
North Dakota	11.0	498	4.4	22,637	6.6	228
Ohio	4.3	6997	3.3	388,469	4.0	70,905
Oklahoma	9.5	12,100	3.9	97,109	2.7	13,519
Oregon	9.1	17,782	4.7	114,069	0.7	2958
Pennsylvania	15.0	4196	3.9	396,587	3.8	68,501
Rhode Island	9.4	265	2.9	31,128	9.3	2644
South Carolina	19.3	4037	3.9	106,348	3.6	65,414
South Dakota	1.5	971	3.3	27,784	0.0	224
Tennessee	19.0	6333	3.4	181,496	3.7	53,186
Texas	6.2	385,872	3.1	431,102	3.4	135,042
Utah	6.5	11,597	2.6	99,614	0.7	1234
Vermont	0.0	111	3.5	24,734	7.7	286

of school non-enrollment among Mexican-origin youth is 6.7%, but rates of Mexican-origin school non-enrollment reach upwards of 15.0% in over one quarter of all states.⁷ Non-Latino white and black non-enrollment rates also vary across states, but to a lesser degree.

Figure 1 also displays Mexican-origin school non-enrollment rates ordered from highest to lowest by state. Figure 1 further illustrates that there is substantial variation in Mexican-origin school non-enrollment rates across all states, but particularly among states that are commonly considered to be new Mexican-origin gateways. Mexican-origin youth in some newer gateways, such as Nebraska and Wisconsin, have average or lower-than-average levels of non-enrollment, whereas others, such as in the southern states of Alabama and Mississippi, have non-enrollments above 20%. These non-enrollment patterns mirror regional differences in dropout rates among all students, which tend to be higher in southern states.

Interestingly, non-enrollment rates among Mexican-origin adolescents in the top two established gateways of California and Texas are not as high as might be expected, given claims that Mexican-origin youth may be experiencing downward assimilation or racialization in these locations (Portes and Rumbaut 2001; Telles and Ortiz 2008). In fact, Mexican-origin youth in California and Texas have lower levels of non-enrollment than their peers in approximately three quarters of the other states. California and Texas may have more institutional supports for Mexican-origin youth, but the composition of Mexican-origin 15–17 year-olds in these two established gateways could also explain why adolescents in these states have lower rates of dropout than their peers in newer gateways. Multilevel models are next used to evaluate state-level differences in Mexican-origin non-enrollment when compositional differences among the Mexican-origin 15–17 year-old population across states are taken into account.

Explaining State-Level Differences in Mexican-Origin Non-Enrollment Rates

Is heterogeneity in Mexican-origin school non-enrollment rates across states explained by differences in state histories as Mexican Latino/a receiving gateways? Table 2 shows how the percentage of Mexican Latinos/as in the state in 1990 and Mexican Latino/a population growth from 1990 to 2010 relate to Mexican-origin non-enrollment. The results of Models 1 and 2 show that Mexican-origin youth have a lower risk of non-enrollment in more established Mexican Latino/a destinations and a higher risk of non-enrollment in areas with higher Mexican Latino/a growth rates. As can be seen in Model 1, the odds of non-enrollment decline significantly as the percentage of Mexican Latinos/as in the state increases in the year 1990—an indicator that a state is a more established Mexican Latino/a gateway.

⁷ In states with small Mexican-origin populations, such as Maine, Vermont, and Washington D.C., Mexican-origin non-enrollment rates of 0.0% are due to small sample sizes.

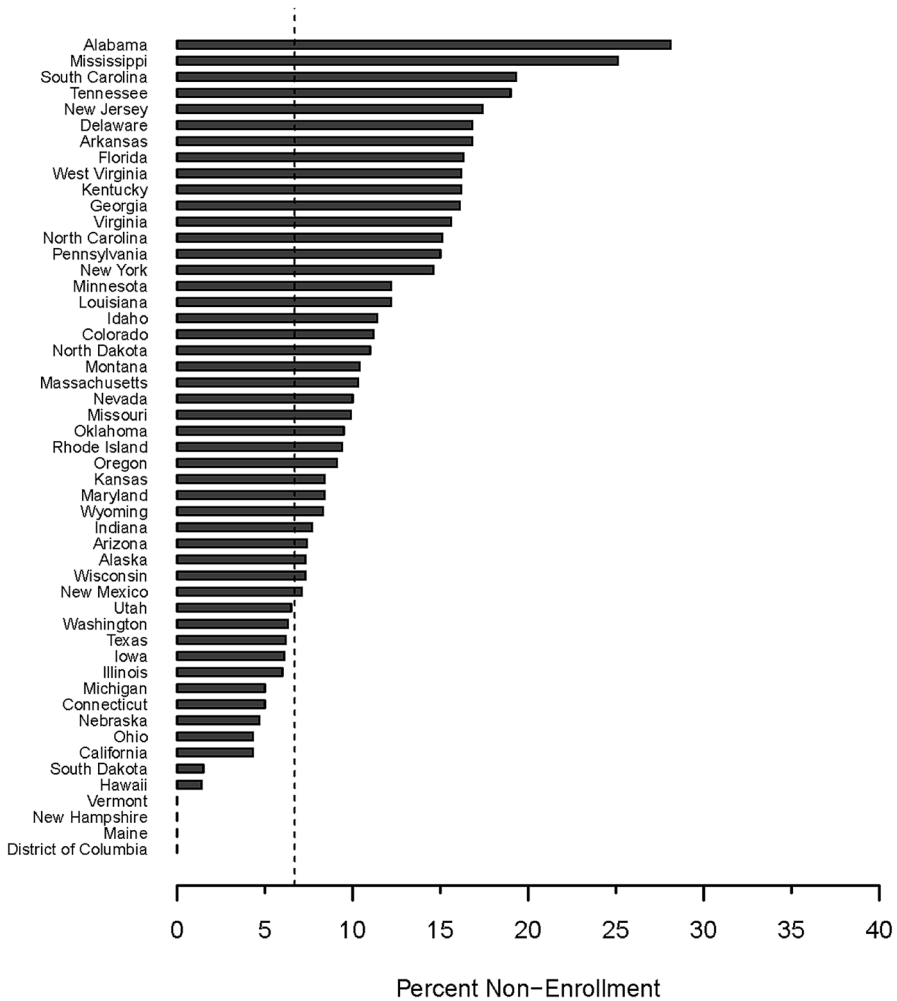


Fig. 1 Percent school non-enrollment among Mexican-origin 15–17 year-olds by state (ordered), 2005–2009 ACS

According to the estimates in Model 2, the odds of non-enrollment also increase significantly with a 100 percentage point increase in Mexican-origin Latino/a growth in the state from 1990 to 2010. When these two state-level destination measures are considered together (Model 3), however, only Mexican-origin Latino/a growth remains positive and significant. Regardless of the percentage of Mexican Latino/as living in the state in 1990, Mexican-origin youth have a higher risk of non-enrollment in states with higher levels of Mexican Latino/a growth from 1990 to 2010—a typical characteristic of new destinations.

Table 2 State-level predictors of Mexican-origin non-enrollment

Fixed effects	Model 1		Model 2		Model 3	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
New destinations measures						
Mexican-origin Latino/a 1990 (%)	0.969	0.010**			0.987	0.008
Mex. origin Latino/a growth 1990–2010			1.090	0.015***	1.079	0.016***
State-level controls						
Adults with B.A. or higher (%)						
Unemployment (%)						
White 15–17 non-enrolled (%)						
Black 15–17 non-enrolled (%)						
Individual-level controls						
Male	1.294	0.043***	1.294	0.043***	1.294	0.043***
(Ref. female)						
Age 16	1.837	0.095***	1.838	0.095***	1.838	0.095***
Age 17	4.365	0.204***	4.364	0.204***	4.365	0.204***
(Ref. age 15)						
Year 2006	0.979	0.051	0.978	0.051	0.978	0.051
Year 2007	1.029	0.053	1.029	0.053	1.030	0.053
Year 2008	0.733	0.039***	0.734	0.039***	0.734	0.039***
Year 2009	0.700	0.038***	0.700	0.038***	0.700	0.038***
(Ref. year 2005)						
1.25 generation						
1.5 Gen.						
1.75 Gen.						
(Ref. 2nd and higher gen.)						
No parents in HH						

Table 2 continued

Fixed effects	Model 1		Model 2		Model 3	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
Mother only HH						
Father only HH						
(Ref. intact HH)						
No parental educational record						
Parent with less than H.S. degree						
Parent with H.S. degree or GED						
Parent with some college						
Parent with AA						
(Ref. Parent with College or Higher)						
Below poverty threshold						
Poverty- 1x-2x threshold						
(Ref. Poverty-2x threshold or higher)						
Metro- central city						
Non-metropolitan area						
(Ref. metro- other)						
Mobility (1 year)						
(Ref. no mobility, 1 year)						
Constant	0.026	0.004***	0.030	0.003***	0.026	0.003***
Random effects	Est.		Est.		Est.	
Intercept (State)	0.142		0.084		0.073	
BIC	28,762		28,740		28,750	
n	71,269		71,269		71,269	

Table 2 continued

Fixed effects	Model 4		Model 5		Model 6	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
New destinations measures						
Mexican-origin Latino/a 1990 (%)	0.993	0.008	0.992	0.009	0.988	0.007
Mex. origin Latino/a growth 1990–2010	1.036	0.015*	1.028	0.016	1.017	0.013
State-level controls						
Adults with B.A. or Higher (%)					1.017	0.014
Unemployment (%)					0.955	0.046
White 15–17 non-enrolled (%)					1.211	0.055***
Black 15–17 non-enrolled (%)					1.015	0.032
Individual-level controls						
Male	1.187	0.042 ***	1.195	0.043***	1.196	0.043***
(Ref. female)						
Age 16	1.670	0.088***	1.623	0.088***	1.623	0.088***
Age 17	3.691	0.177***	3.482	0.171***	3.482	0.171***
(Ref. age 15)						
Year 2006	1.055	0.058	1.052	0.060	1.052	0.060
Year 2007	1.149	0.062**	1.161	0.065**	1.161	0.065**
Year 2008	0.912	0.051	0.979	0.057	0.979	0.057
Year 2009	0.871	0.049*	0.926	0.054	0.925	0.054
(Ref. year 2005)						
1.25 generation	12.691	0.623***	6.614	0.361***	6.644	0.362***
1.5 gen.	2.497	0.129 ***	2.021	0.111***	2.025	0.111

1.75 gen.	1.810	0.107***	1.621	0.099***	1.623	0.100***
(Ref. 2nd and higher gen.)						

Table 2 continued

Fixed effects	Model 4		Model 5		Model 6	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
No parents in HH			4.534	0.219***	4.533	0.218***
Mother only HH			1.594	0.077***	1.593	0.077***
Father only HH			1.986	0.132***	1.986	0.132***
(Ref. intact HH)						
No parental educational record			5.815	0.918***	5.772	0.911***
Parent with less than H.S. degree			2.584	0.220***	2.583	0.220***
Parent with H.S. degree or GED			1.949	0.172***	1.948	0.171***
Parent with some college			1.365	0.130**	1.361	0.130**
Parent with AA			1.265	0.158	1.259	0.157
(Ref. parent with college or higher)						
Below poverty threshold			1.046	0.050	1.047	0.050
Poverty- 1x-2x threshold			1.059	0.048	1.060	0.048
(Ref. poverty- 2x threshold or higher)						
Metro- central city			1.171	0.054***	1.180	0.055***
Non-metropolitan area			0.971	0.057	0.966	0.056
(Ref. metro- other)						
Mobility (1 year)			1.771	0.078***	1.764	0.077***
(Ref. No Mobility, 1 year)						
Constant	0.019	0.002***	0.006	0.001***	0.006	0.001***
Random effects	Est.		Est.		Est.	
Intercept (State)	0.062		0.074		0.032	
BIC	26,406		24,598		24,628	
n	71,269		71,269		71,269	

* $p < .05$; ** $p < .01$; *** $p < .001$

Models 4–6 in Table 2 evaluate whether Mexican-origin growth in the state from 1990 to 2010 remains significantly related to Mexican-origin school non-enrollment once individual- and contextual-level characteristics are taken into account. The results show that Mexican-origin youth in states with higher Mexican-origin growth rates have higher odds of non-enrollment, regardless of differences in nativity and duration of residence (Model 4). When a broader set of factors related to dropout and selection into states is considered, however, Mexican-origin growth rates are no longer the significant predictors of Mexican-origin non-enrollment (Model 5). This pattern persists with the addition of state-level controls (Model 6). Living in a non-intact family, in a household with lower parental education, in a central city, and engaging in mobility in the previous year all increase the risk of Mexican-origin non-enrollment. Controlling for these factors explains away the association between Mexican Latino/a growth and Mexican-origin non-enrollment, suggesting that Mexican-origin youth with these vulnerabilities to dropout may disproportionately live in states that have experienced higher Mexican Latino/a growth.

Notably, the only state-level control that is significantly related to Mexican-origin non-enrollment in the full model is the percent of non-Latino white 15–17 year-olds that are not enrolled in school. A one percentage point increase in the white non-enrollment rate increases the odds of Mexican-origin non-enrollment by 21.1%. This finding suggests that states that have a difficult time ensuring that non-Latino white students stay enrolled in school are also negative educational contexts for Mexican-origin youth.

Explaining Local-Level Differences in Mexican-Origin Non-Enrollment Rates

The same set of models as in the previous section is estimated next, but the unit of analysis now changes to the Public Use Microdata Area (PUMA) in order to represent a more local context of reception. The results of Models 1–3 in Table 3 indicate that Mexican-origin non-enrollment is significantly related to both the level of Mexican-origin Latino/as in the PUMA in 1990 and Mexican Latino/a growth rates in the PUMA from 1990 to 2010. Living in a more established Mexican-origin Latino/a PUMA—areas where there were higher percentages of Mexican-origin Latino/as in 1990—is associated with significantly lower odds of non-enrollment, even net of levels of Mexican Latino/a growth in the area (Model 3). Conversely, Mexican-origin youth in PUMAs with higher Mexican Latino/a growth rates are more likely to be non-enrolled in school, regardless of the percentage of Mexican-origin Latino/as in the PUMA in 1990. Holding constant the percent of Mexican Latino/as in the PUMA in 1990, a 100 percentage point increase in Mexican Latino/a growth in the PUMA is associated with 3.8% higher odds of school non-enrollment among Mexican-origin youth.

These patterns persist even when individual and household background factors related to selection into destinations and PUMA-level control factors are taken into account (Models 4–6). There is a net enrollment disadvantage associated with living in a new destination PUMA, as indicated by the additive effects of lower levels of

Table 3 PUMA- and individual-level predictors of Mexican-origin non-enrollment

	Model 1		Model 2		Model 3	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
Fixed effects						
New destinations measures						
Mexican-origin Latino/a 1990 (%)	0.982	0.003***	1.045	0.005***	0.988	0.002***
Mex. origin Latino/a growth 1990–2010					1.038	0.005***
PUMA-level controls						
Adults with B.A. or higher (%)						
Unemployment (%)						
White 15–17 non-enrolled (%)						
Black 15–17 non-enrolled (%)						
Individual-level controls						
Sex, age, year	Yes		Yes		Yes	
Immigrant generation	No		No		No	
Family status, parental education, poverty status, metropolitan status, mobility	No		No		No	
Random effects	Est.		Est.		Est.	
Intercept (PUMA)	0.233		0.215		0.162	
BIC	28,782		28,747		28,738	
<i>n</i>	71,269		71,269		71,269	
Fixed effects						
New destinations measures						
Mexican-origin Latino/a 1990 (%)	0.992	0.002***	0.991	0.002***	0.991	0.002***
Mex. origin Latino/a growth 1990–2010	1.018	0.005***	1.014	0.005**	1.011	0.005*
PUMA-level controls						

Table 3 continued

Fixed effects	Model 4		Model 5		Model 6	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
Adults with B.A. or higher (%)					0.997	0.004
Unemployment (%)					0.967	0.017
White 15–17 non-enrolled (%)					1.057	0.019**
Black 15–17 non-enrolled (%)					1.008	0.004*
Individual-level controls						
Sex, age, year	Yes		Yes		Yes	
Immigrant generation	Yes		Yes		Yes	
Family status, parental education, poverty status, metropolitan status, mobility	No		Yes		Yes	
Random effects	Est.		Est.		Est.	
Intercept (PUMA)	0.098		0.091		0.065	
BIC	26,430		24,644		24,670	
<i>n</i>	71,269		71,269		71,269	

* $p < .05$; ** $p < .01$; *** $p < .001$

Mexican Latinos/as in the PUMA in 1990 and higher Mexican Latino/a growth rates from 1990 to 2010. Mexican-origin youth in PUMAs with higher levels of white and black peers that are not enrolled in school also have a significantly greater risk of non-enrollment in the full model (Model 6), which echoes the state-level results above. Contexts where white and black adolescents are more likely to non-enroll are thus also places where Mexican-origin youth are at greater risk of experiencing school non-enrollment.

Differences in Mexican-Origin Non-Enrollment across Destinations by Immigrant Generational Status

The next set of models evaluates whether the associations between new Mexican Latino/a destination measures and non-enrollment among Mexican-origin youth are moderated by immigrant generational status. The models in Table 4 interact the new destinations measures with the fractional immigrant generational status variable. In these models, the odds ratios for the new destinations variables now represent the odds ratios for these measures for the Mexican-origin 2nd and higher generation (the immigrant generation reference group). The interaction terms indicate the degree to which the relationship between new destinations measures and the odds of non-enrollment differs for other immigrant generation groups relative to the 2nd and higher generation. Note that Models “a” control only for age, sex, and year, whereas Models “b” control for all individual- and contextual-level covariates.

In the state-level models, none of the interaction terms is significant (Table 4, Models 1a and 1b). There is not a significant relationship between new destination measures and non-enrollment for the Mexican-origin 2nd and higher generation, or for other generational subgroups. In the PUMA-level models, however, 2nd- and higher-generation Mexican-origin youth have significantly lower odds of dropout as the percentage of Mexican-origin Latino/as in the PUMA in 1990 increases (Table 4, Models 2a and 2b). Second- and higher-generation Mexican-origin youth in more established destinations are thus significantly less likely to be non-enrolled in school than those in newer gateways. In the full model (Model 2b), the interaction term for the percent of Mexican Latinos/as in the PUMA in 1990 and 1.5 and 1.75 generational status are not significant. In other words, the negative association between the percent of Latinos/as in the PUMA in 1990 and non-enrollment that is observed for the Mexican-origin 2nd and higher generation does not differ significantly for the 1.5 or 1.75 generation.

The advantage of living in a more established destination PUMA versus a new destination in terms of lower odds of non-enrollment is even greater, however, for the Mexican-origin 1.25 generation. For the Mexican-origin 2nd and higher generation, the odds ratio of non-enrollment is reduced by approximately 0.08% for each percentage point increase in the percent Mexican Latino/a population in the PUMA in 1990. For the Mexican-origin 1.25 generation, however, the odds ratio is 0.982 (= 0.992 * 0.990), indicating that a one percentage point increase in Mexican Latinos/as in the PUMA in 1990 (a marker of established destinations) reduces the odds of non-enrollment by 1.8%. In other words, while all generational groups

Table 4 Odds ratios of non-enrollment, interactions between new destination measures and immigrant generational status

	State models			
	Model 1a		Model 1b	
	Odds ratio	SE	Odds ratio	SE
New destinations measures				
Mex. Latino/a 1990 (%)	0.991	0.008	0.986	0.007
Mex. origin Latino/a growth 1990–2010	1.024	0.018	1.010	0.017
Immigrant generation				
1.25 gen.	12.060	0.628***	6.392	0.367***
1.5 gen.	2.532	0.139***	2.061	0.119***
1.75 gen.	1.875	0.112***	1.680	0.105***
New destinations × immigrant generation				
Mex. Latino/a 1990 × 1.25 gen.	0.995	0.007	0.999	0.007
Mex. Latino/a 1990 × 1.5 gen.	1.004	0.007	1.005	0.008
Mex. Latino/a 1990 × 1.75 gen.	1.014	0.009	1.015	0.009
Mex. Latino/a growth × 1.25 gen.	1.030	0.019	1.025	0.020
Mex. Latino/a growth × 1.5 gen.	1.007	0.020	1.004	0.021
Mex. Latino/a growth × 1.75 gen.	1.002	0.025	0.999	0.026
Individual-level controls				
Sex, age, year	Yes		Yes	
Family status, parental education, household poverty, metro status, mobility	No		Yes	
Contextual controls				
B.A. or higher (%), unemployment (%), white 15–17 non-enrollment, black 15–17 non-enrollment	No		Yes	
Random effects				
Intercept (State)	0.0637		0.032	

Table 4 continued

		State models	
		Model 1a	Model 1b
		Odds ratio	SE
Fixed effects			
Intercept (PUMA)			
BIC		26,457	24,684
<i>n</i>		71,269	71,269
PUMA models			
Model 2a		Model 2b	
	Odds ratio	SE	SE
New destinations measures			
Mex. Latino/a 1990 (%)	0.993	0.002**	0.002**
Mex. origin Latino/a growth 1990–2010	1.009	0.007	0.007
Immigrant generation			
1.25 gen.	11.393	0.620***	0.365***
1.5 gen.	2.490	0.138***	0.119***
1.75 gen.	1.839	0.112***	0.105***
New destinations × immigrant generation			
Mex. Latino/a 1990 × 1.25 gen.	0.985	0.003***	0.004**
Mex. Latino/a 1990 × 1.5 gen.	1.000	0.003	0.004
Mex. Latino/a 1990 × 1.75 gen.	1.002	0.004	0.004
Mex. Latino/a growth × 1.25 gen.	1.015	0.010	0.010
Mex. Latino/a growth × 1.5 gen.	1.010	0.010	0.011
Mex. Latino/a growth × 1.75 gen.	0.996	0.013	0.014

Table 4 continued

	PUMA models			
	Model 2a		Model 2b	
	Odds ratio	SE	Odds ratio	SE
Individual-level controls				
Sex, age, year	Yes		Yes	
Family status, parental education, household poverty, metro status, mobility	No		Yes	
Contextual controls				
B.A. or higher (%), unemployment (%), white 15–17 non-enrollment, black 15–17 non-enrollment	No		Yes	
Random effects				
Intercept (State)				
Intercept (PUMA)	0.099		0.065	
BIC	26,460		24,717	
<i>n</i>	71,269		71,269	

* $p < .05$; ** $p < .01$; *** $p < .001$

living in more established destination PUMAs have lower odds of non-enrollment than their counterparts in new destinations, this gap is steepest among members of the 1.25 generation—teenage migrant newcomers.

To further illustrate this point, the coefficients from the full interaction model (Model 2b in Table 4) are used to calculate the predicted probabilities of non-enrollment for Mexican-origin youth by destination type and immigrant generational status. For the purposes of calculating predicted values, established destinations are considered PUMAs where 15% of the population was Mexican Latino/a in 1990 and where the Mexican Latino/a growth rate was 100%, whereas new destination PUMAs are considered areas where the Mexican Latino/a population was approximately 2% of the total population in 1990 and where the growth rate of Mexican Latinos/as from 1990 to 2010 was 2000% (which was not an atypical level of growth for many new destinations). All other covariates are held at their mean values for the Mexican-origin Latino/a sample.

It can be demonstrated from Fig. 2 that all Mexican-origin immigrant generational subgroups in new destinations have higher predicted probabilities of non-enrollment than their counterparts in established destinations. The disparity in the predicted probability of non-enrollment, however, is the most striking among the Mexican-origin 1.25 generation—youth that migrated to the U.S. after the age of 12. While all 1.25-generation Mexican-origin youth have high levels of non-enrollment relative to other Mexican-origin generational subgroups, the Mexican-origin 1.25 generation in new Mexican Latino/a destinations has a nearly 10 percentage point higher predicted probability of non-enrollment than the 1.25 generation in established destinations. These results suggest that new local Mexican Latino/a

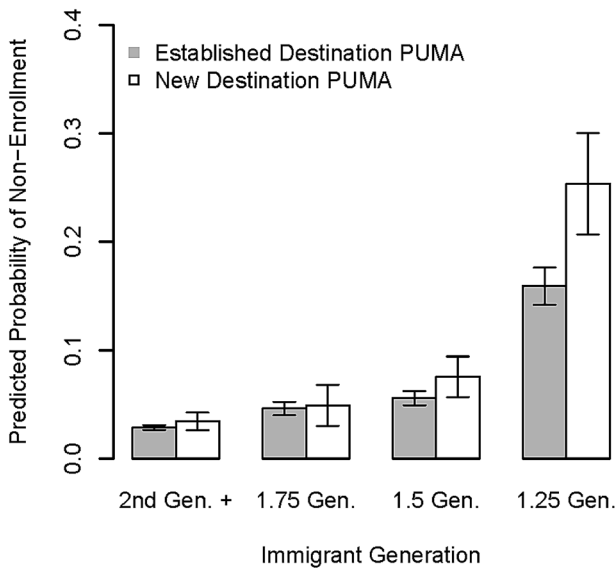


Fig. 2 Predicted probability of school non-enrollment among Mexican-origin 15–17 year-olds by immigrant generational status and PUMA destination status

destinations have been challenged to meet the educational needs of all Mexican-origin youth, but particularly the needs of the subgroup most at risk of school non-enrollment within this subpopulation—migrant newcomers with few years of experience in the U.S. school system.

Conclusion

Mexican-origin youth are now present in a broad range of schooling contexts due to the dispersion of the Mexican-origin population to new Mexican Latino/a destinations. Amidst the rise of new destinations, a major question is whether Mexican-origin youth in newer destinations are faring better or worse educationally than their peers in more established gateways. This study demonstrates that the answer to this question depends on both the geographic unit of analysis as well as nativity and duration of residence.

In states with higher Mexican-origin Latino/a growth rates from 1990 to 2010—a typical characteristic of new destinations—adolescents of Mexican origin have a greater risk of school non-enrollment than those in states with lower Mexican Latino/a growth rates during this same time period. This pattern, however, is an outcome of the differential sorting of Mexican-origin youth into destinations with high growth by background characteristics related to non-enrollment, such as family structure, parental educational attainment, and prior mobility. Once these factors taken into account, there is not a significant relationship between residence in a higher-growth Mexican Latino/a gateway state and the risk of Mexican-origin school non-enrollment.

Nonetheless, Mexican-origin youth in newer Mexican Latino/a local areas, as measured by the percent of Mexican Latinos/as in the PUMA in 1990, have a higher risk of school non-enrollment than their peers in more established PUMAs, even net of factors related to selection into destinations and contextual control variables. These results largely echo the findings of Fischer (2010), who shows that foreign-born Mexican-origin youth in places with higher local foreign-born growth rates are more at risk of school attrition than those in places with lower foreign-born growth rates. The results of this analysis thus point to the importance of local-level contexts as venues for educational incorporation among Mexican-origin youth.

At the PUMA level, the new versus established destination distinction appears to be the most salient for 1.25-generation Mexican migrant newcomers. Even though all Mexican-origin immigrant generation subgroups have higher odds of non-enrollment in newer local destinations, the disparity in the probability of non-enrollment between those in new versus established gateway PUMAs is widest among the Mexican-origin 1.25 generation. Living in a newer local destination thus appears to be the most harmful for foreign-born Mexican-origin youth who arrive in the country as teenagers, a group that is already more at risk of school non-enrollment than their Mexican-origin counterparts who were born in the U.S. or who are foreign born but have longer durations of residence in the country.

One reason for the non-significant relationship between living in a new destination state and Mexican-origin non-enrollment could be the fact that new

destination states are themselves heterogeneous in terms of policy supports for education and immigrant incorporation. Nebraska and North Carolina, for example, are both new destination states, but Nebraska mandates compulsory schooling until age 18 and provides in-state tuition for unauthorized students, whereas North Carolina has a minimum dropout age of 16 and does not grant in-state tuition to unauthorized residents. These differences could explain why Mexican-origin youth in Nebraska have much lower rates of non-enrollment than those in North Carolina. Levels of Mexican Latino/a concentration and growth within states are also heterogeneous, and there is likely variability in how state-level policies and practices are actually implemented at the local level.

In contrast, there may be commonalities in local-level policies and practices across new destination communities that are generating a heightened risk of school non-enrollment among Mexican-origin youth in local new destinations, especially among teenage migrants. Local new destinations could attract higher proportions of teenage migrants who come to the U.S. to work and not to enroll in school (Oropesa and Landale 2009). Many new destinations emerged because of a demand for low-skilled workers in industries such as small manufacturing, meat packing, and food processing (Zúñiga and Hernández-León 2005). Teenage migrants from Mexico could be drawn into new destinations in order to work in these industries rather than to attend school.

Institutions and intergroup relations in local new destinations may also be ill-equipped to meet the educational needs of Mexican-origin youth. New destinations have only a recent history of adapting to the presence of immigrant minorities in schools, and they may lack adequate supports to keep Mexican-origin youth engaged in school. To be sure, prior qualitative research has shown how Latino/a youth in new destinations can face multiple barriers to educational attainment, including insufficient support in schools and a lack of access to higher education (Bohon et al. 2005). Future work should identify other factors associated with local new destinations that are leading to adverse enrollment outcomes, especially among Mexican-origin migrant newcomers, and determine whether new destinations are improving their levels of educational support for Mexican-origin youth over time.

Overall, this study confirms that the dispersion of the Mexican-origin population to new destinations has generated spatial heterogeneity in Mexican-origin schooling outcomes. In the literature on immigrant incorporation, the Mexican-origin population has been referred to as a “paradigm” of intragroup heterogeneity due to its diversity in terms of mixed ancestry, intermarriage, spatial mobility, and residential attainment (Alba et al. 2013). The rise of new destinations has further increased place-based diversity in Mexican-origin educational outcomes, which must be taken into account in discussions of modes of incorporation among this subgroup. Even though this study did not specifically seek to compare modes of incorporation across destinations, the findings suggest that Mexican-origin youth in local new destinations face greater barriers to educational incorporation in U.S. society than those in more established gateways. Future work should assess whether high levels of non-enrollment exhibited by Mexican-origin youth in newer gateways, especially among teenage immigrants, result in fewer opportunities for upward mobility among their children and grandchildren.

This study has several limitations associated with the use of non-randomized cross-sectional census data that must be acknowledged. The non-enrollment variable in the 2005–2009 ACS is cross-sectional. It is possible that Mexican-origin youth who were not enrolled at the time of the survey will re-enroll in school at some point in the future. While this analysis sheds light on differences in the risk of non-enrollment among immigrant generational subgroups within the Mexican-origin adolescent population across destinations, it is not possible to distinguish between the Mexican-origin 2nd and 3rd and higher generations using the ACS data. There is not a question about parental or grandparent nativity in the ACS, which precludes an analysis of heterogeneity in outcomes within the U.S.-born Mexican-origin population.

Any study of the relationship between contextual-level factors and individual-level outcomes using non-randomized data may also overestimate the magnitude of contextual influences on individual outcomes, due to an inability to properly account for unobserved heterogeneity associated with selection into contexts. Mexican-origin youth are not sorted randomly across destinations. Even though this analysis has controlled for a range of factors that likely influence the process of selection into destinations among Mexican-origin families and youth, there may be unmeasured variables that are creating a significant relationship between new destination measures at the PUMA level and the odds of non-enrollment among Mexican-origin youth. Nonetheless, it is difficult to think of an additional unmeasured variable that is uniform within PUMAs but heterogeneous across PUMAs that would create an artificial relationship between new destinations measures and Mexican-origin non-enrollment.

From a policy standpoint, this analysis highlights a need for local-level interventions to promote school enrollment among the most vulnerable group of Mexican-origin youth—migrants who arrive after the age of 12 and live in newer local Mexican Latino/a destinations. This study estimates that 1-in-4 Mexican-origin youth who arrive in the country after the age of 12 and live in newer destination PUMAs are not enrolled in school. Addressing these high levels of non-enrollment among Mexican teenage newcomers will require local-level outreach efforts. Schools or local non-profit organizations in new destinations with high numbers of Mexican teen migrants could contact these youth in their homes and/or workplaces to tell them about schooling opportunities in the community. These outreach efforts, however, would need to be paired with targeted supports within schools to meet the educational needs of teenage migrant arrivals. Variation in schooling laws may also be creating contexts in some new destinations that promote teenage employment over school enrollment. Boosting school enrollment levels among 1.25-generation Mexican-origin youth in local new gateways may require the enforcement of school dropout laws at the local level and/or raising the minimum dropout age to 18 at the state level. Promoting greater awareness of the struggles faced by teenage Mexican migrants in new destinations, however, is a critical first step to improving outcomes among this group.

Acknowledgements Funding was provided by the Institute of Education Sciences (Grant Nos. R305B090012, R305A150027) and the National Institute of Child Health and Human Development (Grant Nos. R24 HD042828, T32 HD007543, R24 HD42849, T32 HD007081-35).

Appendix

See Table 5.

Table 5 Mean individual and household characteristics of Mexican-origin, non-Latino white, and non-Latino black 15–17 year-olds, 2005–2009 ACS

	Mexican origin	Non-Latino white	Non-Latino black
Demographics			
Age	16.0	16.0	16.0
Female (%)	48.4	48.6	49.8
Immigrant generation			
1.25 generation (%)	4.4	0.4	1.1
1.5 generation (%)	8.7	0.9	2.0
1.75 generation (%)	8.1	1.3	1.6
Native-born (%)	78.8	97.4	95.3
Citizenship status			
Non-citizen (%)	18.4	1.1	2.7
Household family status			
No parents in HH (%)	8.9	4.6	12.1
Intact (mother and father) (%)	60.3	70.4	31.8
Mother, no father (%)	24.3	18.4	49.6
Father, no mother (%)	6.6	6.6	6.5
Parental educational attainment			
No parental or householder record (%)	0.4	0.2	0.4
Less than HS (%)	40.6	4.8	14.4
HS degree or GED (%)	25.8	22.4	31.3
Some college (%)	17.3	22.4	26.8
AA (%)	5.7	11.5	9.7
BA (%)	7.0	22.4	11.2
BA+ (%)	3.2	16.3	6.1
Poverty status			
Below poverty (%)	25.9	9.4	29.8
1-2x poverty threshold (%)	32.3	14.5	26.8
2x+ poverty threshold (%)	41.8	76.2	43.4
Metropolitan status			
Central city (%)	20.9	7.0	31.5
Non-metropolitan (%)	9.5	20.2	10.8
Other (other metro or not identifiable) (%)	69.6	72.8	57.7
Mobility (1-year)			
Recent mobility (in last year) (%)	13.9	9.4	16.9
<i>n</i>	71,269	410,175	76,410

References

- Alba, R., Jiménez, T. R., & Marrow, H. B. (2013). Mexican Americans as a paradigm for contemporary intra-group heterogeneity. *Ethnic and Racial Studies*, *37*(3), 446–466.
- Bean, F. D., & Tienda, M. (1988). *Hispanic population of the United States*. New York: Russell Sage Foundation.
- Bell, B. A., Morgan, G. B., Kromrey, J. D., & Ferron, J. M. (2010). The impact of small cluster size on multilevel models: A Monte Carlo examination of two-level models with binary and continuous predictors. Retrieved from http://www.amstat.org/sections/srms/Proceedings/y2010/Files/308112_60089.pdf.
- Blau, P. M. (1977). A macrosociological theory of social structure. *American Journal of Sociology*, *83*(1), 26–54.
- Bohon, S. A., Macpherson, H., & Atilas, J. H. (2005). Educational barriers for new Latinos in Georgia. *Journal of Latinos and Education*, *4*(1), 43–58.
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2012). New destinations, new trajectories? The educational progress of Hispanic youth in North Carolina. *Child Development*, *83*(5), 1608–1622.
- Crosnoe, R. (2005). Double disadvantage or signs of resilience? The elementary school contexts of children from Mexican immigrant families. *American Educational Research Journal*, *42*(2), 269–303.
- Dondero, M., & Muller, C. (2012). School stratification in new and established Latino destinations. *Social Forces*, *91*(2), 477–502.
- Fischer, M. J. (2010). Immigrant educational outcomes in new destinations: an exploration of high school attrition. *Social Science Research*, *39*(4), 627–641.
- Fitzpatrick, K. M., & Yoels, W. C. (1992). Policy, school structure, and sociodemographic effects on statewide high school dropout rates. *Sociology of Education*, *65*, 76–93.
- Fry, R. (2011). The Hispanic diaspora and the public schools: Educating Hispanics. In *Latinos and the economy* (pp. 15–36). New York: Springer.
- Gonzales, R. G. (2011). Learning to be illegal: undocumented youth and shifting legal contexts in the transition to adulthood. *American Sociological Review*, *76*(4), 602–619.
- Gouveia, L., Carranza, M. A., & Cogua, J. (2005). The Great Plains migration: Mexicanos and Latinos in Nebraska. In V. Zúñiga & R. Hernández-León (Eds.), *New destinations: Mexican immigration in the United States* (pp. 23–49). New York: Russell Sage Foundation.
- Hall, M. (2013). Residential integration on the new frontier: Immigrant segregation in established and new destinations. *Demography*, *50*(5), 1873–1896.
- Hall, M., & Crowder, K. (2014). Native out-migration and neighborhood immigration in new destinations. *Demography*, *51*(6), 2179–2202.
- Hernández-León, R., & Zúñiga, V. (2005). Appalachia meets Aztlan: Mexican immigration and intergroup relations in Dalton, Georgia. In V. Zúñiga & R. Hernández-León (Eds.), *New destinations: Mexican immigration in the United States* (pp. 244–274). New York: Russell Sage Foundation.
- Hirschman, C. (1994). Problems and prospects of studying immigrant adaptation from the 1990 population census: From generational comparisons to the process of “becoming American”. *The International Migration Review*, *28*(4), 690–713.
- Hirschman, C. (2001). The educational enrollment of immigrant youth: A test of the segmented-assimilation hypothesis. *Demography*, *38*(3), 317–336.
- Jaffe, A. J., Cullen, R. M., & Boswell, T. D. (1980). *The changing demography of Spanish Americans*. New York: Academic Press.
- Johnson, K. M., & Lichter, D. T. (2010). Growing diversity among America’s children and youth: Spatial and temporal dimensions. *Population and Development Review*, *36*(1), 151–176.
- Kao, G., & Thompson, J. S. (2003). Racial and ethnic stratification in educational achievement and attainment. *Annual Review of Sociology*, *29*, 417–442.
- Kaushal, N. (2008). In-state tuition for the undocumented: Education effects on Mexican young adults. *Journal of Policy Analysis and Management*, *27*(4), 771–792.
- Kritz, M. M., Gurak, D. T., & Lee, M.-A. (2011). Will they stay? Foreign-born out-migration from new U.S. destinations. *Population Research and Policy Review*, *30*(4), 537–567.
- Landale, N. S., Oropesa, R. S., & Llanes, D. (1998). Schooling, work, and idleness among Mexican and non-Latino white adolescents. *Social Science Research*, *27*(4), 457–480.

- Lichter, D. T. (2013). Integration or fragmentation? Racial diversity and the American future. *Demography*, *50*(2), 359–391.
- Lichter, D. T., & Johnson, K. M. (2009). Immigrant gateways and Hispanic migration to new destinations. *International Migration Review*, *43*(3), 496–518.
- Lichter, D. T., Parisi, D., Taquino, M. C., & Grice, S. M. (2010). Residential segregation in new Hispanic destinations: Cities, suburbs, and rural communities compared. *Social Science Research*, *39*(2), 215–230.
- Massey, D. S. (2008). *New faces in new places: The changing geography of american immigration*. New York: Russell Sage Foundation.
- Massey, D. S., & Capoferro, C. (2008). The geographic diversification of American immigration. In D. S. Massey (Ed.), *New faces in new places: The changing geography of american immigration* (pp. 25–50). New York: Russell Sage Foundation.
- National Center for Education Statistics. (2016). The condition of education—Elementary and secondary education—Student effort, persistence and progress—Status dropout rates—Indicator May (2016). Retrieved from http://nces.ed.gov/programs/coe/indicator_coj.asp.
- Oropesa, R. S., & Landale, N. S. (2009). Why do immigrant youths who never enroll in US schools matter? School enrollment among Mexicans and non-Hispanic Whites. *Sociology of Education*, *82*(3), 240–266.
- Park, J., & Iceland, J. (2011). Residential segregation in metropolitan established immigrant gateways and new destinations, 1990–2000. *Social Science Research*, *40*(3), 811–821.
- Portes, A., & Hao, L. (2004). The schooling of children of immigrants: Contextual effects on the educational attainment of the second generation. *Proceedings of the National Academy of Sciences of the United States of America*, *101*(33), 11920–11927.
- Portes, A., & Rumbaut, R. G. (2001). *Legacies: The story of the immigrant second generation*. Berkeley: University of California Press.
- Potochnick, S. (2014a). How states can reduce the dropout rate for undocumented immigrant youth: The effects of in-state resident tuition policies. *Social Science Research*, *45*, 18–32.
- Potochnick, S. (2014b). The academic adaptation of children of immigrants in new and established settlement states: The role of family, schools, and neighborhoods. *Population Research and Policy Review*, *33*(3), 335–364.
- Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology*, *25*, 111–164.
- Ruggles, S. J., Alexander, J. T., Genadek, K., Goeken, R., Schroeder, M. B., & Sobek, M. (2010). *Integrated public use microdata series: Version 5.0 [Machine-readable database]*. Minneapolis: University of Minnesota.
- Rumbaut, R. G. (2004). Ages, life stages, and generational cohorts: Decomposing the immigrant first and second generations in the United States. *International Migration Review*, *38*(3), 1160–1205.
- Rumberger, R., & Lim, S. A. (2008). *Why students drop out of school: A review of 25 years of research*. Santa Barbara, CA: California Dropout Research Project. Retrieved from <http://inpathways.net/researchreport15.pdf>.
- Schneider, B., Martinez, S., & Owens, A. (2006). Barriers to educational opportunities for Hispanics in the United States. In M. Tienda & F. Mitchell (Eds.), *Hispanics and the future of America* (pp. 179–227). Washington, DC: The National Academies Press.
- Sewell, W. H., Haller, A. O., & Portes, A. (1969). The educational and early occupational attainment process. *American Sociological Review*, *34*, 82–92.
- Singer, A. (2004). The rise of new immigrant gateways. Retrieved from <http://www.brookings.edu/research/reports/2004/02/demographics-singer>.
- Singer, A. (2014). Metropolitan immigrant gateways revisited, 2014. Retrieved from <http://www.brookings.edu/research/papers/2015/12/01-metropolitan-immigrant-gateways-revisited-singer>.
- Stamps, K., & Bohon, S. A. (2006). Educational attainment in new and established Latino metropolitan destinations. *Social Science Quarterly*, *87*(5), 1225–1240.
- Telles, E. M., & Ortiz, V. (2008). *Generations of exclusion: Mexican-Americans, assimilation, and race*. New York: Russell Sage Foundation.
- Terrazas, A. (2011). Immigrants in new-destination states. Retrieved from <http://www.migrationpolicy.org/article/immigrants-new-destination-states>.
- U.S. Bureau of Labor Statistics. (2013). Employment status of the civilian noninstitutional population by sex, race, Hispanic or Latino ethnicity, marital status, and detailed age, 2005 annual averages

- [table]. Geographic profile of employment and unemployment. Retrieved from <http://www.bls.gov/gps/#tables>.
- U.S. Census Bureau. (2006). Percent of the total population 25 years and over with a Bachelor's degree or higher by sex, for the United States, regions, and states: 1940 to 2000 [table]. Census 2000 PHC-T-41. Retrieved from <http://www.census.gov/hhes/socdemo/education/data/census/halfcentury/tables.html>.
- U.S. Census Bureau. (2014). Public use microdata areas (PUMAs). Retrieved from <https://www.census.gov/geo/reference/puma.html>.
- Waters, M. C., & Jiménez, T. R. (2005). Assessing immigrant assimilation: New empirical and theoretical challenges. *Annual Review of Sociology*, *31*, 105–125.
- Zúñiga, V., & Hernández-León, R. (2005). *New destinations: Mexican immigration in the United States*. New York: Russell Sage Foundation.