CHILDREN OF MEXICAN IMMIGRANTS' COGNITIVE AND NONCOGNITIVE DEVELOPMENT IN TRADITIONAL AND NON-TRADITIONAL U.S. DESTINATIONS

by
Robert Aaron Nathenson

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Abstract

Over the last twenty-five years Mexican communities have spread throughout the United States beyond the traditional southwest ('traditional destinations') to 'non-traditional' destinations west and east of the Mississippi. Little is understood about the consequences of this movement for Mexican immigrant children. This dissertation brings the migration, education, and child development literatures together by (1) conceptualizing living in each destination type as exposure to distinct environmental contexts that are consequential for child development and (2) comparing the cognitive and noncognitive development outcomes of these children between the two destination types. A difference-in-difference approach is used to isolate the influence of living in a non-traditional destination on the Mexican-white development gap. The overall environmental context is further disaggregated into family, school, neighborhood, and state policy components. Data from the 1990 and 2000 censes are employed to construct the destination types and the Educational Childhood Longitudinal Study-Kindergarten Class (1998-2007) is used to examine the impact of destination types on child development. Mixed effects modeling of ten multiply imputed datasets and propensity-score matching are employed. The results indicate that living in a non-traditional destination benefits the noncognitive development of Mexican immigrant children, who exhibit greater self-control, fewer externalizing problem behaviors, and stronger interpersonal skills. Because these behaviors involve engaging with peers, the findings suggest a positive influence of living in non-traditional destinations on the interactive behaviors of Mexican immigrant children. One mechanism that helps explain this influence is school segregation. Mexican immigrant children attend predominantly

Hispanic schools in traditional destinations but they attend schools that are more racial/ethnically and socio-economically diverse in non-traditional destinations. Attending a school that is predominantly Hispanic is negatively associated with cognitive and noncognitive development. Another mechanism stems from differences in the neighborhood setting of Mexican immigrants between the destination types, with lower poverty rates and higher college education attainment in non-traditional destinations.

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For my father.

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Chapter 1. Introduction

The spread of Mexican communities out of their traditional destination areas of settlement within the Southwestern United States and into new, non-traditional destination areas over the last twenty-five years indicates a fundamental population redistribution in the United States (Lichter & Johnson 2009). Hispanic communities have been created in newly emerging destinations (Massey 2008) both west and east of the Mississippi (Smith & Furuseth 2006; Zuniga & Hernandez-Leon 2005), especially in small cities, suburbs, and rural areas (Kandel & Cromartie 2004; Lichter & Johnson 2006; McConnell 2008; Singer 2004). This diffusion has transformed the demographic landscape of the country.

While much research has documented this pervasive demographic phenomenon (Massey 2008; Portes & Rumbaut 2006) and other researchers have studied the economic, political, and social integration of inchoate communities in non-traditional areas in qualitative detail (Smith & Furuseth 2006; Zuniga & Hernandez-Leon 2005), most of this research focuses on the adult sphere. The literature is largely mute on the consequences of this movement for the development of Mexican immigrant children.[1]

In this work I begin to fill this gap in the research. My main objectives are (1) to examine the cognitive and noncognitive developmental consequences of living in a non-traditional destination compared to a traditional destination for Mexican immigrant children; and (2) to investigate to what extent the influence of living in a non-traditional destination may be explained by various environmental contexts, namely the family, school, neighborhood, and state policy. I examine Mexicans specifically because (1)

[1] I define Mexican immigrant children as those children with at least one parent born in Mexico.

Mexican immigrant children perform worse in school than other immigrant and native groups. If a portion of the gap is found to be attributable to structural forces, then this informs policymakers as to potential interventions; (2) Mexicans are the largest immigrant group in the United States at twenty-nine percent of the foreign-born population (Migration Policy Institute 2013); (3) they are the main driver in the increase in the Hispanic foreign-born population, with more than fifty percent of immigrants from Latin America since 1980 being of Mexican origin (MPI 2013); and (4) they make up the lion's share of the Hispanic diffusion out of the Southwest (Massey 2008; Portes & Rumbaut 2006).

I begin by describing the diffusion of Mexicans (and more broadly Hispanics) out of the Southwest, discussing research on the Mexican-white cognitive achievement gap, and providing an overview of previous work on noncognitive development. I then review *Ecological Systems Theory* and *Modes of Incorporation Theory* to conceptualize which factors across the destination types are consequential for child development. I construct a destination dichotomy based upon the longevity and growth of the Mexican population, with traditional destinations limited to states in the Southwest to parallel the historical destination of Mexican immigrants. Non-traditional states include all others with a sizeable Mexican population by the year 2000. In this way, I am able to create a dichotomy of destination types specific to Mexicans. I expect non-traditional destinations provide a more favorable environment for the cognitive and noncognitive development of Mexican immigrant children.

The primary data comes from the Educational Longitudinal Study Kindergarten Class of 1998 (ECLS-K), which follows children from the fall of kindergarten through

the spring of 8th grade (2007). I use the ECLS-K in order to examine differences in development of Mexican immigrant children across the dichotomy from the advent of formal schooling through primary school. I do so as differences in development early in the schooling process can expand over time and have long-term implications (Entwisle & Alexander 1999; Farkas 1996; Pianta & Walsh 1996). I examine descriptive differences on cognitive development, through math and reading scores, and differences on noncognitive development, through the socio-emotional behavior scales of self-control, externalizing problem behavior, internalizing problem behavior, interpersonal skills, and approaches to learning.

I use a difference-in-difference technique to isolate the effect of living in a 'non-traditional' destination, what I call the 'treatment' effect, or 'destination' effect, and mixed effects growth curve modeling with a random intercept and random slope to examine developmental outcomes over time. I use propensity score matching to create a sharper contrast between the two destination types and multiple imputation to deal with missing data.

This research has broad policy significance. More than 7 million Mexican immigrant children reside in the United States, representing over forty percent of the children of immigrants under the age of 18 (MPI 2013). The healthy development of these children is critical as the Mexican population spreads and grows across the country. Previous work has shown Mexican immigrant families to be of low socio-economic status and to exhibit low academic achievement as compared to third generation whites (Crosnoe 2006). Given the growing importance of college degree attainment (Hernandez 2004; Portes & Rumbaut 2001) and the recent emphasis on the benefit of developing 'soft'

skills (Heckman & Kautz 2012**),** it is important to understand how differing environments affect the cognitive and noncognitive development of young Mexican immigrant children. If Mexican immigrant children in non-traditional destinations perform better cognitively and noncognitively, this understanding informs policymakers as to the types of environments most beneficial to the development and, ultimately, social mobility of these children. It provides insight into such influences as residential segregation, school integration, and state immigration policy on the ever-expanding Mexican population.

Chapter 2 discusses mechanisms behind the diffusion of Mexican communities out of the Southwest. It includes a discussion of the immigrant achievement gap between Mexican immigrants and third generation whites. The chapter also discusses recent research on noncognitive, or socio-emotional development. It then discusses *Ecological Systems Theory* to explain how development is shaped by the environment and *Modes of Incorporation* to explain what factors of the environment are critical for the assimilation of immigrants. Together these provide the backbone of the conceptual framework for this research. It ends with generating hypotheses about how living within two different immigrant destination types differentially influence developmental outcomes and how the environmental components of family, school, neighborhood, and state policy contribute to these differences.

Chapter 3 details the Research Design. It describes how the traditional and non-traditional dichotomy is constructed. The chapter then describes the various datasets employed in this research. It details the dependent variables and the key explanatory variables for each section of the analysis. The chapter then discusses the analytic strategies employed in the implementation of this research; namely, the creation of the

analytic sample, the use of a difference-in-difference approach, the multiple imputation procedure, and the propensity score-matching model. It ends by detailing the two-level hierarchical linear model utilized in the research.

Chapter 4 begins with estimating the total influence of living in a non-traditional destination on child development by examining the Mexican immigrant children – third generation white development gap. It does so by examining mean differences in academic achievement and socio-emotional development by group by destination, both in the fall of kindergarten and across the survey timeframe.

The latter half of chapter 4 through chapter 8 disaggregate the influence of living in a non-traditional destination on development into the environmental components attributable to the family, school, neighborhood, and state level factors. The latter half of Chapter 4 examines differences by group and destination for family characteristics, for instance, the average socio-economic status of Mexican immigrant households in traditional and non-traditional destinations. It uses a variance decomposition to examine what proportion of the variation is due to differences between destinations, and what proportion within. The chapter includes an estimate of the difference in the Mexican-white development gap attributable to living in a non-traditional destination through the use of a difference-in-difference term within a multivariate framework, both in the fall of kindergarten and across the survey timeframe. It examines to what extent this influence is attributable to family characteristics and it examines how development is impacted by these characteristics.

Chapters 5, 6, and 7 build on the Family model in Chapter 4 by examining additional school, neighborhood, and state level environmental factors, respectively.

Descriptive differences of these contexts across destinations are examined. The influence of each component on child development is assessed within a multivariate framework. Here the difference-in-difference term is used to estimate the remaining influence of living in a non-traditional destination that is not accounted for by the school, neighborhood, and state level policy contexts, respectively.

Chapter 8 brings Chapters 4 through 7 together. In it, the four environmental contexts are examined jointly in a single multivariate mixed effects model. The chapter examines the change in the influence of living in a non-traditional destination on the Mexican-white development gap when all environmental components are included at once, as well as which environmental components continue to influence child development.

Chapter 9 concludes the dissertation. Key descriptive differences in the environmental settings for Mexican immigrant children between long-standing and recently established Mexican communities are detailed. The chapter then summarizes results from the investigation of the two goals of this research: (1) two examine whether the development gap between Mexican immigrant children and native-born whites (of native born parents) varies by destination; and (2) to what extent the destination influence may be apportioned to the environmental contexts of the family, school, neighborhood, and state policy. Implications of these findings as well as theoretical and methodological contributions of the work follow. Limitations and future research are explored.

Chapter 2. Theory

I discuss the motivation and conceptualization of the research project in this chapter. I begin by discussing the mechanisms behind the diffusion of Mexicans out of the traditional Southwest over the last twenty-five years. I then discuss differences in development between Mexican immigrant children and third generation whites, how development is shaped by a child's environment, and how this environment can vary across long-standing and recently established Mexican immigrant communities. I conclude by generating hypotheses of how the immigration-induced environmental shift could change the Mexican-white development gap.

Mexicans in New Destinations

Mexicans moved to non-traditional destinations owing to a variety of push and pull factors. Anti-immigrant sentiment, which culminated in such state legislation as California's Proposition 187 and Arizona's SB1070, the constant threat of deportation, and the possibility of being crowded out, were all factors that pushed Mexicans out of traditional destinations.[2] The Immigration Reform and Control Act of 1986 (IRCA), a federal law that granted amnesty, i.e. legality, to various agricultural workers and certain illegal immigrants who had resided in the U.S. continuously since 1982, forced immigrants to new destinations by increasing border patrol, which changed the pattern of

[2] California's Proposition 187 was a 1994 ballot measure that forbade undocumented immigrants from using public schools and other social services, compelled police to report all suspected undocumented immigrants to state and federal authorities, and illegalized the trade and use of fake residency papers (Massey 2008). Arizona Senate Bill 1070 was a 2010 bill that affected the daily lives of immigrants through, for example, authorizing police stops based only upon suspicion of the driver's legal status, and creating cumbersome registration/documentation requirements.

Mexican migrant streams. IRCA also drew immigrants to new destinations by granting amnesty, citizenship, and the opportunity for legal employment to thousands of undocumented immigrants (Massey et al. 2002; Massey 2008; Portes & Rumbaut 2006). The relocation of the low-skilled meatpacking industry and the growth of the construction industry also pulled Mexicans to non-traditional destinations (Massey 2008). Communities of Mexicans are now found throughout the United States in locations as varied as Marshalltown, Iowa and Lexington, Kentucky (Zuniga & Hernandez-Leon 2005). Of recent arrivals from Mexico, the proportion going to Texas and California dropped from 78 percent in 1980 to 47.9 percent in 2000 (Massey & Capoferro 2008). For an examination of the diffusion of Mexicans across the United States from 1990 to 2000 see Figures 1 and 2.

Immigrant Achievement Gap

Immigration scholars have found that 1.5 generation (i.e. foreign-born children that come to the U.S. at a young age) and 2nd generation (i.e. native born children of foreign-born parents) immigrant children outperform the modal native-born group in the United States, third generation whites (native-born children of native-born parents) on cognitive skills, such as reading and math.[3] Known as the immigrant paradox, these immigrants perform better in school despite lower socio-economic origins (Acevedo-Garcia, et al. 2005; Georgiades et al., 2007; Sampson, Morenoff, & Raudenbush 2005). However, recent work has challenged this notion, finding that outcomes are far more nuanced, dependent upon both immigrant group and generational status (Glick & White 2003; Hao & Bonstead-Bruns 1998; Hao & Ma 2012). As to Mexicans, evidence points

[3] Here and throughout the rest of the paper the term 'white' refers to third generation non-Hispanic whites.

to no immigrant paradox. Mexican immigrants do not outperform native 3rd generation whites on math or reading (Hao & Bonstead-Bruns 1998; Hao & Ma 2012). High rates of high school dropout, low levels of post-secondary attendance, and low collegiate aspirations relative to other groups have been found among Mexican immigrants (Feliciano 2005c; Portes & Rumbaut 2001; Reardon & Galindo 2009; White & Glick 2009).

A number of factors are implicated in Mexican immigrant children not exhibiting the immigrant paradox. While Mexican immigrant families do have extremely low socio-economic status, on average, low socio-economic status alone does not explain the achievement gap as other immigrant groups with similar socio-economic status have different high school and college academic profiles (Hao & Ma 2012; Hao & Pong 2008). Instead, environmental factors such as discrimination and segregation in addition to unfamiliarity of the American school system and poor English language skills hinder the ability of Mexican immigrant parents to participate in their child's learning process, whether studying in the home or interacting with school officials (Coleman 1988; Crosnoe 2006; Crosnoe, Johnson, & Elder 2004; Drummond & Stipek 2004; Epstein 1987; Hao & Bonstead-Bruns 1998; Hoover-Dempsey et al. 2005; Lareau & Horvat 1999; Pomerantz, Moorman, & Litwack 2007). Moreover, low school quality and student tracking also affect the academic achievement of Mexican immigrant children (Crosnoe 2005; Suarez-Orozco & Suarez-Orozco 2001; Valenzuela 1999).

Socio-emotional Development

Recent research also focuses on the influence of non-cognitive development, the "personality traits, goals, motivations, and preferences," on such outcomes as educational attainment and employment (Heckman & Kautz 2012:451). Often referred to as 'soft skills,' differences in these skills are consequential as they have implications for both school and labor market outcomes (Farkas 2003; Heckman & Kautz 2012). They have been shown to affect earnings and occupational attainment, even as strongly as cognitive skills (Bowles et al. 2001; Bowles & Gintis 2002; Heckman et al. 2006; Jencks et al. 1979; Rosenbaum 2001).

Consequences of varying noncognitive skills emerge at an early age. Even in the beginning of kindergarten differences in work habits and classroom disruption are found across race, class, and gender lines (Denton & West 2002; Lee & Burkam 2002; West et al. 2001). Some soft skills are valued by teachers, such as consistency and perseverance (Bowles & Gintis 1976), and are reflected in the grades assigned (Farkas et al. 1990; Rosenbaum 2001). Therefore, differences in soft skills affect the schooling environment in which both noncognitive and cognitive skills are developed. This feedback loop can result in large differences in non-cognitive development over-time, with long-term implications for academic achievement and labor market success (Heckman & Kautz 2012).

Theoretical Considerations

Why should destination matter for the development of Mexican immigrants? I join the immigration and social psychology literatures to emphasize how context matters

for the cognitive and noncognitive development of immigrant children. I utilize Bronfenbrenner's *Ecological Systems Theory* to identify the importance of such proximal contexts as the family, school, and community, and the distal context of the state regulatory environment for child development. These contexts make up the key components of the 'environmental set,' the overall construct used to encapsulate the ecological and institutional factors affecting child development. I then use Portes and Rumbaut's (1990) *Modes of Incorporation* to identify the means by which the key ecological factors of governmental policy, labor market, and co-ethnic community affect Mexican immigrant children's development across destination types. Therefore, developmental outcomes will be differentiated between destination types. Portes and Zhou's *Segmented Assimilation Theory* is utilized to illustrate how these components govern immigrants' assimilation pathways.

Ecological Systems Theory

In 1935 Kurt Lewin developed a model of human behavior (B) as a function (f) of both personality (P) and Environment, B = f(PE).[4] While many psychologists choose to focus on the personality part of the equation, social psychologists and sociologists emphasize the surrounding environment. Urie Bronfenbrenner developed a systematic theory of the environment known as *Ecological Systems Theory*. He writes:

> The ecology of human development involves the scientific study of the progressive mutual accommodation between an active, growing human being and the changing properties of the immediate setting in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the setting are embedded" (Bronfenbrenner 1979, 21).

[4] As referenced in Urie Bronfenbrenner, *Ecology of Human Development*, p. 73.

Under this ecological framing, a child's development, both cognitive and socio-emotional, is shaped within an environmental context. This context ranges from the local to the global, the proximate to the distal. The local environment, such as the home, the family, the school, and neighborhood all influence the development of a child. So too do state and national policy. Finally, global factors such as economic forces and shifts in political power also influence an individual's environment.

Of the particular factors emphasized by Bronfenbrenner, the family is one of the most important. First used in Blau & Duncan's status attainment model (i.e. father's education to help explain social destination), researchers still look to the influence of the family as a key determinant of educational attainment (Blau & Duncan 1967; Kerckhoff 1989). A great amount of socialization and interaction occurs in and around the home. Unpacking these processes, researchers have shown home resources, such as books, as well as parental involvement in the learning process to be crucial for early educational outcomes (Crosnoe 2007). Therefore, any comprehensive study of children should take into account the contexts of parents and consider the effect of the parental world on the child.

The school is also a critical environmental context for child development. For instance, attending majority-white schools has been shown to improve academic achievement for minority students (Bankston & Caldas 2002; Crain & Manhard 1983; Orfield & Eaton 1996; Pong 1998). Schools with greater structural resources, such as rigorous academic courses, have been shown to boost post-school outcomes such as position in the labor market (Hao & Pong 2008). The quality of teaching, the dynamics between teachers and students, and the relationship between students are also all relevant.

In regards to neighborhoods, another of Bronfenbrenner's proximal contexts of development, disadvantaged neighborhoods can magnify poverty effects by increasing the likelihood of associating with deviant peers, which can manifest in aggression and antisocial behavior (Huston & Bentley 2010). The quality and quantity of resources, such as neighborhood isolation, socio-economic status and adult role models, are important. Living in a highly segregated, concentrated-poverty neighborhood has broad implications for academic outcomes, potentially lowering verbal ability, reading recognition, IQ, GPA high school completion, and college attendance (Leventhal & Brooks-Gunn 2000). Perceived safety and crime rate are also neighborhood environmental factors of note (Briggs 1997a; Coulton et al. 1995).

As relates to immigrants specifically, the regulation of an immigrant's daily life (parent and child alike) largely occurs at the local level. The scenes of regulation – a police officer asking for official identification, private citizens patrolling the U.S./Mexican border, the university letter granting in-state tuition, free healthcare to undocumented dialysis patients – are emphatically local. These scenes and countless other daily interactions play out across such local settings as schools, neighborhoods, and the workplaces of immigrant parents.

While regulatory scenes are local in nature, and the federal government is solely responsible for regulating immigrant entry into the United States ("constitutional preemption"), it is the state that garners national attention when controversial immigration laws are passed (e.g. California's Proposition 187).[5] Moreover, the state dominates policy making, setting the tone for regulation. For instance, although the 1996

[5] California Proposition 187 was a ballot measure that affected immigrants schooling, social services, and interactions with police.

welfare reform act, a.k.a. PRWORA, severely curtailed immigrants' eligibility for public benefits such as welfare and unemployment, the states retained a great amount of authority in deciding how to implement their own welfare programs (Cho 2010).[6] Further, some states have passed laws that require schools to verify the legal status of their students and students' parents, resulting in children staying home for fear that their parents will be deported (AL HB 56).[7] On the other hand, several states have passed their own 'Dream Act,' a law that encourages undocumented children to finish high school and to attend college at in-state tuition rates. Such laws set the tone for local implementation, shaping the day-to-day environment in which immigrants live. Therefore, I use state rather than the local or federal setting as one of the key environmental contexts shaping the development of Mexican immigrant children. In fact, I construct the dichotomy of traditional and non-traditional Mexican immigrant destinations at the state level in order to capture the influence of state policy.

In summation, the child development literature places substantial emphasis on the environments to which a child is exposed. The family, school, and neighborhood are all systems that overlap and interact to shape the context of development. Each of these occurs within and is shaped by state policy, which also shapes the context of development. Therefore, I encompass these various factors into an overall construct, an '*environmental set*.' I theorize that different locations with similar environmental sets should result in similar developmental outcomes while locations with distinct

[6] See section 411 subsection (d) and section 412 subsection (a) of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, for example. For the full text, see http://www.fns.usda.gov/snap/rules/legislation/pdfs/pl_104-193.pdf.

[7] Alabama House Bill 56 was a bill passed in 2011 by the Alabama legislature that is considered one of the strictest pieces of anti-immigrant legislation in the United States. Among other sections, it requires school officials to ascertain the legality of their students, bars undocumented immigrants from state public postsecondary institutions, and allows police to ascertain immigration status while during a legal stop. The legality of ascertaining the legal status of students has been questioned in court.

environmental sets will result in divergent outcomes.

Modes of Incorporation

While *Ecological Systems Theory* specifies the ecological and institutional components important for development, it is the *variability* of these that create unique environments that then may be compared for their differential effect on child development. To identify the key components and how they vary across settlement types, I turn to modes of-incorporation theory (MOI). It highlights three key institutional and contextual factors (Portes & Rumbaut 1990). They are: (1) policies of the host government, whether receptive, neutral, or hostile to immigrants. While policies of the host government are traditionally operationalized at the federal level, I conceptualize policy at the state level; (2) receptiveness of the labor market; and (3) characteristics of the co-ethnic community, the attributes of immigrants' peers. Each of the three factors varies between states with differences in immigration law, labor markets, and size and longevity of the Mexican community.

Government policy and host society reception may be exhibited, on the one hand, by prejudice according to the color of one's skin or support for refugees, for instance. The local occupational structure may either be a hindrance or boon to immigrants, dependent upon the types of jobs available. If the open labor market fails to provide quality employment opportunities, immigrants may still attain upward mobility via their own ethnic enclave. Ethnic communities with a strong entrepreneurial core serve as substitutes to the primary labor market, offering stable employment free from outside discrimination to low-skilled co-ethnics. The co-ethnic community may provide key

resources to new immigrants, including job opportunities via information distribution (newsletters) and co-ethnic institutions (private schools).

Modes of Incorporation relates to Mexicans immigrants in that they are believed to exemplify a downtrodden community. Researchers consider the federal government as impartial to them, the host society biased against them, and their co-ethnic community as 'weak' (Portes & Zhou 1993). Traditional Mexican communities are characterized by such problems as high poverty rates, high school dropout, residential segregation, school quality issues, gang warfare, and safety concerns (Hao 2007; Waldinger & Feliciano 2004). Their skin tone is a vulnerability (Patterson 2004), as is the potential language barrier. Their location in large urban areas is a vulnerability as well as they are exposed in schools and neighborhoods to low-achieving "cholos" and "chicanos," 2nd and 3rd generation Mexican-immigrants perceived to have disengaged from the American educational modality (Matute-Bianchi 1986). This exposure may facilitate children's turning away from the schooling process and towards a street culture in which their norms and self-esteem are no longer based upon academic success (Anderson 1999; Wilson 1996). Immigrant children are particularly susceptible to this (Portes & Rumbaut 2001). Although Portes and Zhou (1993) only discussed legal Mexican immigrants, the context is likely worse for undocumented immigrants excluded from government assistance and legal employment.

The degradation of the environmental context in traditional destinations need not be replicated in non-traditional destinations. The population of Mexicans in non-traditional destinations will be less likely to suffer from the same vulnerabilities exhibited in traditional destinations. The density and segregation of Mexicans should be lower in

non-traditional destinations, creating fewer vulnerabilities in Marshalltown, Iowa, for instance, than Los Angeles, California, limiting the exposure of Mexican youth to "cholos" and "chicanos" (Zuniga & Hernandez-Leon 2005). Although Mexicans find employment in the secondary sector of the open labor market, and are recruited by agricultural and factory firms both in traditional and non-traditional destinations, the extent to which Mexicans own businesses is expected to be greater in non-traditional destinations, due for instance, to Hispanic succession of the Italian landscaping business in the new sun belt (Smith & Furuseth 2006). The level of reception and state policy towards immigrants should also vary with the size and exposure to Mexican communities.

'Resources' and 'vulnerabilities' follow from these different *Modes of Incorporation* (Portes & Zhou 1993). Resources are made available by pro-immigration policies, positive labor market reception, and strong co-ethnic communities, while anti-immigration policies, negative labor market reception, and weak co-ethnic communities dictate vulnerabilities. In particular, the amount and quality of employment opportunities and such neighborhood characteristics as level of segregation and availability of public services determine resources or vulnerabilities. Negative *Modes of Incorporation* reveal host society biases against certain immigrant groups (Portes & Rumbaut 1990).

The theory of *Segmented Assimilation* then translates the resources and vulnerabilities of *Modes of Incorporation* into discrete pathways along which immigrant youth assimilate (Portes & Zhou 1993).[8] The pathways are categorized as straight-line assimilation, with the immigrant following the classic assimilation pathway towards socio-economic mobility and incorporation into the mainstream, segmented assimilation,

[8] Segmented assimilation also recognizes the importance of the political relations between the home and host country as well as the state of the host country's economy.

wherein the immigrant retains portions of his/her cultural identity and ethnic solidarity but adopts part of American culture to experience upward economic mobility, and downward assimilation, where the immigrant ultimately falls into the underclass with few prospects of achieving any semblance of economic stability.

Not all scholars share Portes and Zhou's grim outlook of the Mexican community. Although vulnerabilities abound for Mexicans, the downward assimilation pathway is distinguished by low or non-existent employment levels and, consequently, permanent poverty, a characteristic not found in the Mexican community. If anything, Mexicans are dogged in their devotion to work (Waldinger & Feliciano 2004). Various scholars argue conclusions on the poor state of Mexican assimilation as argued by some schools maybe misleading owing to reliance on incorrect cross-sectional data, which cannot show intergenerational assimilation, a more appropriate test of mobility. An examination of successive cohorts of grandparent-parent-child chains reveals Mexicans to be closing both the educational and wage gaps with native-born whites (Smith 2003). Finally, Portes & Rumbaut and Portes & Zhou wrote their classic texts in 1990 and 1993, respectively, prior to the emergence of Mexican communities in non-traditional destinations. I expect the resources and vulnerabilities experienced by Mexican immigrant youth to differ by destination type, resulting in distinctive assimilation pathways. I now turn to describing how government policy, labor market, co-ethnic community, and the school context vary across destinations.

Conceptual Framework

Drawing from *Ecological Systems Theory* and *Modes of Incorporation Theory*, I conceptualize a framework that details the environmental components that are influential for child development. I then describe how variation in these contexts, especially the family, school, neighborhood, and state policy should vary between long-standing and recently established areas of Mexican settlement and shape child development. I discuss particular characteristics of these contexts, including parent-child interactions for the family context and proportion low-income in the school context.

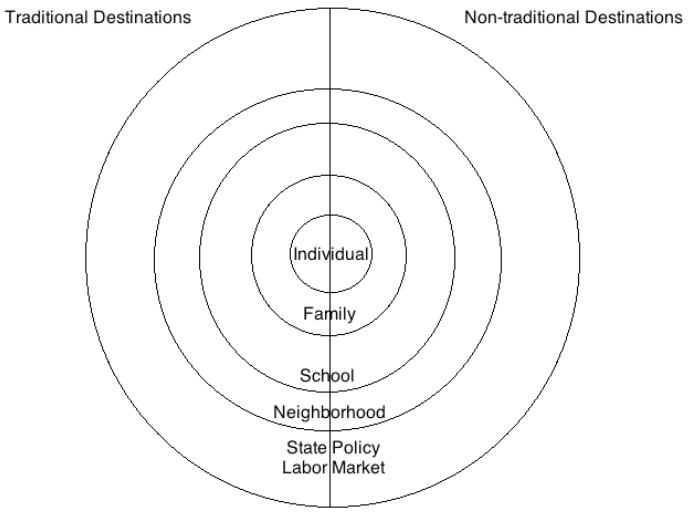
Two Distinct Environmental Sets

My central argument is that, for Mexicans, whether environmental factors are considered vulnerabilities, as Portes & Rumbaut (2006) and Portes & Zhou (1993) believe, or resources depends greatly upon the destination. In turn, these resources or vulnerabilities influence the development of the children of Mexican immigrants and, ultimately, their assimilation pathways. Therefore, Mexican children should experience differential development by destination.

Two categories of Mexican destinations are contrasted – traditional and non-traditional. Traditional destinations are those states with long-standing Mexican communities, such as California and Texas. Non-traditional destinations are those states with small but high growth Mexican communities, e.g. Alabama and Minnesota.

Figure 3 details the conceptualization of the environmental factors that vary by destination - family, school, neighborhood, state policy and labor market components. Together, I call these the 'environmental set.'

Figure 3. Theoretical Framework



As the Hispanic (and Mexican specifically) population is small in many of the non-traditional destination states, the social environment should be quite different across the two destination types. Negative institutional bias towards immigrants, such as traditional states that passed anti-immigrant laws, as well as other vulnerabilities, e.g. segregation and concentrated poverty, will negatively influence the family, school and neighborhood environment for children in traditional states compared to non-traditional states. Therefore, the Mexican-white gaps in academic and socio-emotional development are expected to be smaller in non-traditional destinations than in traditional destinations (H1).[9]

[9] For a table detailing the main concepts and corresponding hypotheses and measurement, see table A-1 in Appendix A. More on Research Design.

Components of the Environment

The Family

As emphasized by *Ecological Systems Theory*, the family plays a fundamental role in child development (Bronfenbrenner 1979). Additionally, many environmental factors affect the role of the family on child development, especially through family resources, generational consonance, and parental involvement.

For family resources, variation in state policies and labor markets across and within destination types influence family income and parental occupation (e.g. family socio-economic status). As an example, the level of Mexican owned businesses may be greater in non-traditional than traditional destinations, due, for instance, to succession of the landscaping business in the new Sunbelt from Italians to Hispanics (Smith & Furuseth 2006). The number of extended kin in the household and trusted friends in the neighborhood affects the child-care capabilities of a family, which can also differ between and within destinations.

At the same time, opportunities to facilitate parent-child interactions are shaped by the environment, which can lead to differences of within-family social capital (Coleman 1988). Generational consonance – that acculturation occurs in the same direction and at the same rate for both immigrant parents and children alike – depends upon opportunity and exposure. For instance, a traditional Mexican community that is highly segregated and densely populated will hinder the exposure and opportunity for Mexican immigrant parents to learn English compared to a non-traditional destination that is less segregated or concentrated. In this scenario, a lack of linguistic consonance between parent and child will hinder effective parenting in other contexts. Parents will

lack the language skills to effectively engage in the schooling process, through an inability to communicate with school officials and through difficulty participating in their children's take-home assignments.

The social environment can also influence parental expectations and involvement. The receptiveness and resources made available by the school district for English Language Learners may influence parents' ability to enroll their child in academic programs, such as Head Start, and engage with the school system as an active participant in their child's education.

Above I hypothesized that Mexicans in non-traditional destinations are expected to have better cognitive and noncognitive development than their traditional peers. This destination influence consists of various environmental components, including the family. Thus, I hypothesize that the inclusion of a set of key environmental family and family-related variables explain a substantial portion of the influence in H1 (H2). These include family socio-economic status, English spoken in the home, parental involvement in school, parental expectations, and not enrolling in head start.

Schools

As children of Mexican immigrants attend school in different destinations, I pay attention to variation in school characteristics, including sector and proportion of students that qualify for free lunch. The average socio-economic status of the schools Mexican immigrant children attend should be higher in non-traditional destinations as more of these students attend suburban rather than urban schools.

At the same time, the percent minority will vary as Mexicans who live in non-

traditional destinations are expected to attend schools with smaller proportions of Mexican (and Hispanic) children. A more heterogeneous school creates greater opportunity for children of Mexican immigrants to interact with non-Mexican-origin peers. Peer influence theory recognizes the importance of these interactions and friendships in the schooling process. Indeed, racial heterophily has been shown to increase aspirations and achievement (Hallinan & Williams 1990).

The influence of teacher-pupil racial matching on child development will be evaluated. Hispanic communities are more likely to employ Hispanic teachers. Increasing the number of co-ethnic teachers may improve parental involvement as Hispanic-immigrant parents often lack the language ability to engage with school authorities, forcing Hispanic families to rely more heavily on teachers as sources of information (Crosnoe, Johnson, & Elder 2004). Increased levels of teacher-pupil racial matching can also elevate student achievement (Meier, Wrinkle, & Plinard 1999; Weiher 2000). At the same time, co-ethnic teachers are perceived to have more favorable perceptions of their co-ethnic students (Ehrenberg, Goldhaber, & Brewer 1995). As longstanding Mexican communities are likely to have a greater preponderance of Hispanic teachers, Mexican immigrant children may benefit from attending schools in these areas.

Conversely, however, Hispanic teachers may not be receptive to serving as an intermediary between the family and school system. As well, teachers in non-traditional destinations have less exposure to biases against children from Mexican families, such as pre-conceived notions of ability and work ethic. As such, Mexican immigrant children may benefit instead from attending schools in recently established areas of Mexican

migration. Therefore, I hypothesize an array of school characteristics and processes explain both between and within-destination differences in developmental outcomes of children with Mexican immigrant parents. These characteristics, including increased socio-economic status of the school, greater racial heterophily, and more teacher-student matches, decrease Mexican-white gaps in child development (H3).

Neighborhoods

The encompassing term *Neighborhood Effects* consists of the totality of neighborhood-level characteristics that can affect child development either directly or through intermediate variables. For example, neighborhood socio-economic status both affects development directly as well as through the school system by setting the school's socio-economic distribution. Safety, racial and foreign-born composition, density, and location (e.g. rural area or large city) are also characteristics. Typical outcomes of interest include educational and socio-emotional development as well as juvenile delinquency and teenage pregnancy, amongst others (Burton & Jarrett 2000).[10]

Neighborhood Effects consists of a variety of distinct concepts. *Neighborhood Resources* focuses on the eponymous characteristics, measured through such variables as poverty rate and neighborhood income (Leventhal & Brooks-Gunn 2000). Mexicans in non-traditional destinations are more likely to live in suburbs or rural areas than their traditional destination peers (Donato et al. 2008). This will reduce the amount of concentrated poverty and raise the mean socio-economic status of the neighborhood in

[10] For a review see Burton & Jarrett 2000. The neighborhood effects frameworks largely ignore the family's role in mediating and moderating the role of the neighborhood. Therefore any research that incorporates neighborhood effects must also account for family processes. This thesis will include neighborhood level characteristics but does so by building upon the children & families analysis.

which Mexican immigrant families live.

Collective Socialization emphasizes, in Elijah Anderson's words, "Old Heads," or those adults who serve as role models and watchful eyes for the younger generation (Anderson 1992). Children living in lower poverty areas will have more successful adults to emulate. Unemployment, the self-employment rate, and the proportion of the neighborhood with a Bachelor's degree measure this concept.

R*elative Deprivation* emphasizes the gap between family socio-economic status and the neighborhood's socio-economic status. It is a measure of relative rather than absolute differences, with negative consequences to families whose resources are below that of the neighborhood.

In summation, I expect that *Neighborhood Effects* explain both between and within-destination differences in developmental outcomes of children from Mexican immigrant families. Greater neighborhood resources (concentrated poverty, mean socio-economic status), stronger collective socialization (self-employment, Bachelor's degrees), and decreasing relative deprivation will contract the gap in Mexican-white developmental outcomes (H4).

State Level Factors

The Modes of Incorporation framework highlights government reception as one of the key mechanisms affecting the assimilation of immigrant parents and children alike. Because many issues of consequence flow from the state, I examine the influence of state government factors on child development. In particular, I assess the impact of state based pro-/neutral and anti-immigrant legislation, the political party majority in the state

legislature, and the political party of the governor. Both the type of immigrant legislation and the political party in power in the state legislature and house are reflections of the public sentiment. Immigrant legislation is a direct measure of the receptiveness of the state towards immigrants. This legislation has immediate impact on immigrant families. For instance, a state 'Dream Act,' that allows in-state college tuition to undocumented children sends a positive message to immigrants of all ages that their presence is valued. A law that requires school's to evaluate the legal status of their students, such as Alabama HB 56, signals to families that they are unwanted.

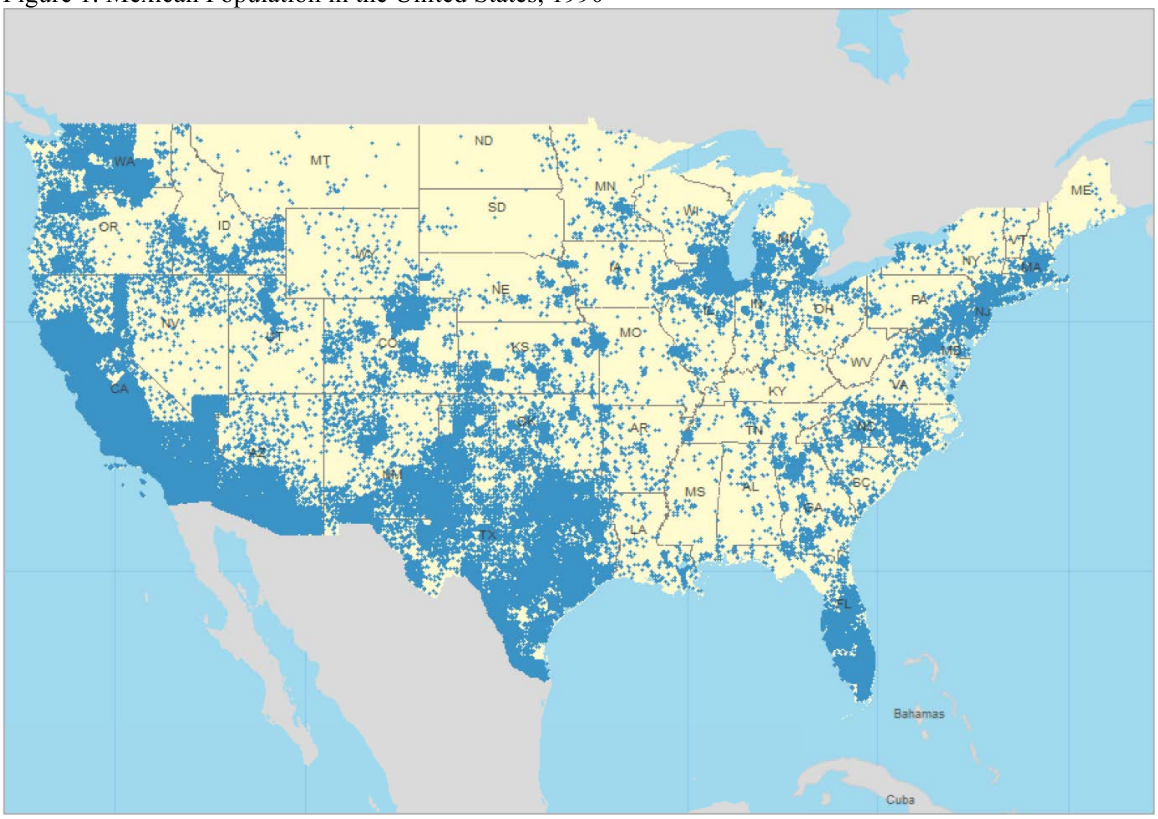
At the same time, the party in control of the state's executive and legislative branches also reflects the state's receptivity. The Republican Party, in general, takes a conservative approach to immigration, favoring restrictive policies towards undocumented immigrants. The Democratic Party takes a more liberal approach, supporting rights, benefits, and a path to citizenship for those living in the United States without legal status. Therefore, the party in the governor house and the party in control of the state legislature influence the government receptivity towards immigrants. As elected officials, they also represent the public will.

Not only does state-based receptivity towards immigrants have a direct and tangible impact on the daily lives of immigrants, it also has an indirect influence through the other environmental components of family, school, and neighborhood. For instance, the amount of English as a Second language funding a state provides changes the learning environment for those children with limited English skills. Child-support funding, eligibility for healthcare, and e-verify requirements for employers, are state policies that are mediated through the family.

I therefore expect that variability in state based pro-/neutral and anti-immigration legislation helps explain differences in development for Mexican immigrant children between long-established and recent Mexican communities. A greater incidence of anti-immigrant legislation and states with Republican controlled legislatures and governors will expand the Mexican-white development gap (H5).

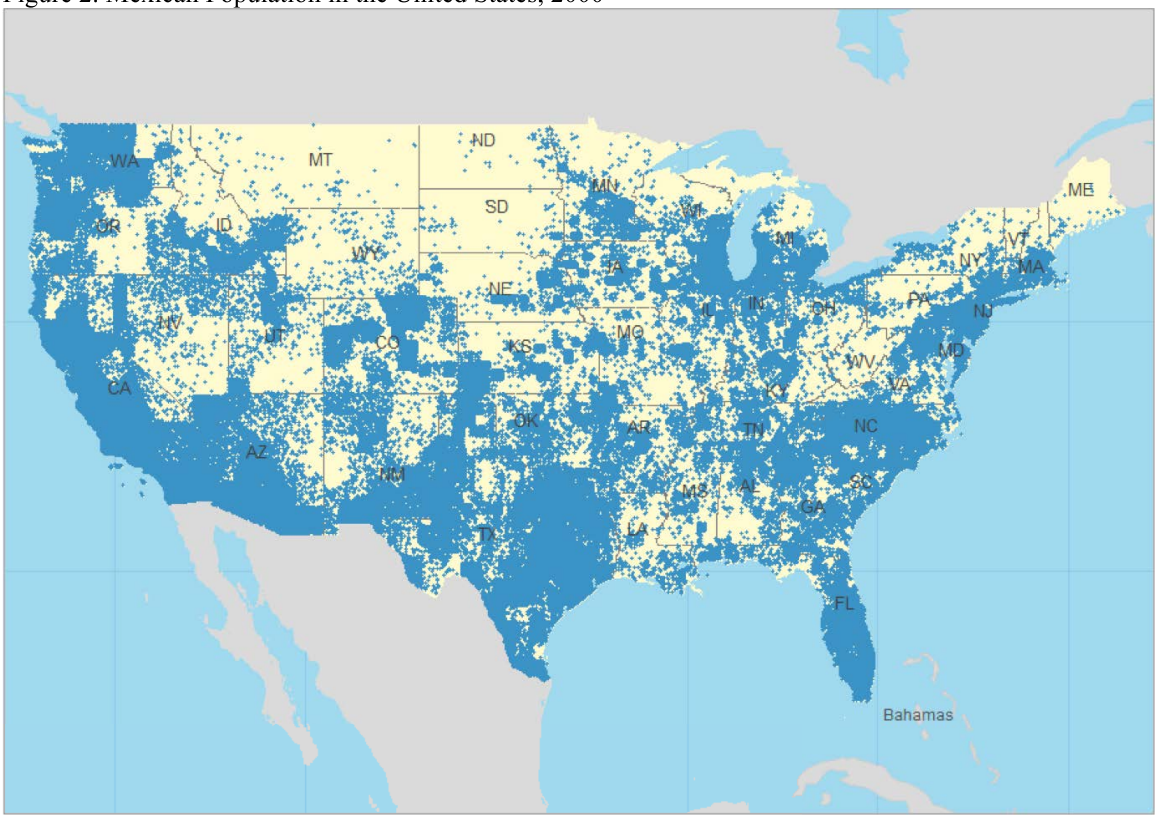
In the next chapter I describe my *Research Design*. In it I describe how I construct the two Mexican immigrant destination categories. I also discuss the data and methods used to examine these hypotheses.

Figure 1. Mexican Population in the United States, 1990[11]



[11] Data from the 1990 census, obtained through Social Explorer, <http://www.socialexplorer.com/>. Each dot represents 10 Mexicans.

Figure 2. Mexican Population in the United States, 2000[12]



[12] Data from the 2000 Census, obtained through Social Explorer, < http://www.socialexplorer.com/>. Each dot represents 10 Mexicans.

Chapter 3. Research Design

The research is designed to fulfill the two goals of this dissertation. First, I am interested in investigating whether the development gap between Mexican immigrant children and native-born whites (of native born parents) varies by where in the country they reside.[13] While Mexican immigrant children lag behind third generation whites on measures of cognitive development, such as math and reading, this gap may vary across Mexican communities. I create a destination dichotomy, dividing Mexican communities into those that are in the traditional Southwest, and therefore large and long established, and those that are newly/more recently formed and outside of the traditional Southwest. As outlined in the *Theory* chapter, the environmental characteristics that shape the circumstances in which immigrant children live and develop are thought to vary by destination. I therefore regard living in, and the environments of, a non-traditional destination to be akin to a 'treatment.' This overall 'treatment,' or destination 'influence' encapsulates all of the environmental factors that are influential for development, directly addressing the consequences that follow from the establishment of new Mexican settlements in recent years. It captures the net reduction (or expansion) in the development gap between Mexican immigrant children and third generation whites due to new areas of settlement (as compared to traditional destinations).

Second, I apportion the destination 'influence' across the various environmental components discussed in the *Theory* chapter – the family, school, neighborhood, and state policy. I ask to what extent the observed influence of living in a non-traditional

[13] For the sake of brevity, I will also refer to the Mexican immigrant children-native-born white development gap as the "Mexican-white" development gap.

destination on the Mexican-white development gap is accounted for by the each of these environmental settings/context components. The remaining destination 'influence' represents the influence of destination on the Mexican-white gap that is not attributable to observable environmental characteristics. I also explore the relationship between each of these environmental components and child development. For example, to what extent does state immigrant legislation affect the development of the Mexican 1.5 and 2nd generation? This will be tested through assessing whether pro-/neutral legislation and anti-immigrant legislation differ between the two destinations of Mexican settlement and have bearing on child development outcomes.

Traditional vs. Non-Traditional Dichotomy

I measure variation in the size and duration of Mexican communities in order to identify traditional, or longstanding, and non-traditional, or recent, Mexican destinations (Massey & Capoferro 2008). While there is potential for intra-state variability in the environmental characteristics that shape the contexts in which immigrant families live (such as differences between urban and rural environments), I define destinations at the stave level because many issues of consequence follow from political processes at this level. As discussed in the *Theory* chapter, welfare, employment, and school funding laws are examples of state policy that influence the environment for immigrant families.[14] Moreover, it is state level policy, not local, which generally garners national attention, making changes in state level policy such as Arizona's SB 1070 much more likely to be

[14] I control for urbanicity in my models in order to capture the influence of living in a large city as compared to other residential types on child development.

communicated across immigrant networks, and affect an immigrant's decision-making process.

To capture the size and growth of Mexican communities across the United States I use data from the 1990 and 2000 national censes.[15] These contain information on country of origin, enabling the identification of Mexican-origin from other Hispanic-origin groups.[16] As described in Tables 3.1 and 3.2, the schema relies on two state level characteristics - the percent Mexican in 1990 and the growth rate of Mexicans between 1990 and 2000.[17] Traditional destinations are areas of longstanding settlement for Mexicans. States with more than a seven percent Mexican lineage population in 1990 are counted as traditional states. They are the six Southwestern states of California, New Mexico, Texas, Arizona, Colorado, and Nevada.

The term non-traditional destinations serves as a catch all term for all states in the United States with a smaller and/or growing Mexican population by 2000 outside the traditional Southwestern destination states. States with less than a one percent Mexican population in 1990 but at least a one percent Mexican population by 2000 are counted as non-traditional destination states. Figures 4 and 5 graphically depict the categorization of this schema. The Mexican population in each of these states at least doubled (AL, AR, DE, GA, IA, MN, MO, NJ, NY, NC, SC, TN, VA). Those states that had less than a one percent Mexican population in 1990 and 2000 but whose Mexican contingency grew by

[15] Data is derived from "Table 253: Race and Hispanic Origin: 1990" in the *1990 Census of Population: General Population Characteristics*, also known as the *1990 CP-1-1* and from the *Census 2000 Summary File 1* Table "QT-P3: Race and Hispanic or Latino: 2000."

[16] This study is not interested in a multi-generational approach to immigration and assimilation. It simply needs to distinguish between the Mexican and other Hispanic populations on a state-by-state basis.

[17] This 10-year growth rate is calculated as the number of Mexicans in 2000 in a given state divided by the number of Mexicans in 1990 in a given state, and then 1 is subtracted from this number. A growth rate of 0 implies there are no more Mexicans in the state in 2000 than there were in 1990. A growth rate of 1 means that the population of Mexicans doubled, growing by 100 percent.

more than fifty percent are also included as non-traditional destinations (CT, KY, MD, MA, MS, NH, OH, PA, RI, SD, VT, WV).

To simplify the schema, the various categories are reduced into a traditional and non-traditional dichotomy, as outlined in Figure 6. Both traditional stable and traditional growth states are included in the traditional destination category. The non-traditional growth and low concentration growth states are part of the non-traditional destination category. The two intermediate types are also placed into the non-traditional destination category in the condensed schema. I also have a low concentration stable category, which is the residual category for those states that did not have a one percent Mexican community in 1990 and did not experience a fifty percent increase in their state's Mexican population (Louisiana, North Dakota, and Maine). These states are excluded from the dichotomy, and, therefore, the analysis. The fundamental comparison that drives this research is, therefore, a comparison between Mexicans residing in the traditional Southwestern United States compared to the rest of the country (with the exception of three states with negligible Mexican populations).

In order to avoid lengthy explanations, I utilize a number of shorthand terms as stand-ins for this broader conceptualization, with 'traditional destinations,' 'the Southwest,' 'longstanding communities,' and 'established communities' all as stand-ins for the six Southwestern states that have large Mexican communities that date back for generations. The terms 'non-traditional,' 'new destination,' and 'recent communities' all refer to states with smaller and less-longstanding Mexican communities. I also use the term 'dichotomy' to represent the distinction between the two categorizations of states.

The dichotomy is crafted specifically to capture the demographic phenomenon of longevity and growth of the Mexican population, not other conditions such as labor market forces, political landscapes, or regional affiliations. It does so, as Figure 7 indicates, with the non-traditional destination states defying simple classification in other terms; they are located in the South, Midwest, and Northeast and contain typically Republican and Democratic states. Descriptive statistics in later chapters will detail how the various environmental contexts vary by destination type. Both the between and within variances will be examined.

Data and Measures

I examine Mexican-white developmental differences across traditional areas of Mexican immigration and new areas of Mexican immigration. The destination dichotomy is based upon the Mexican population and growth from information contained in the 1990 and 2000 Censes. To identify components of the environmental set, the ECLS-K dataset and a database maintained by the National Conference of State Legislatures (NCSL) are used. The variables and measures that represent the key components of the environmental set, such as the family, school, neighborhood, and state policy, are Mexican-destination specific. I examine how these environmental settings vary across destinations, and then how they influence child development.

ECLS-K

The Early Childhood Longitudinal Study-Kindergarten Class of 1998-1999 (ECLS-K) is a nationally representative dataset which follows children from fall of

kindergarten (1998) through spring of 8th grade (2007), with surveys conducted in the fall and spring of kindergarten, fall and spring of first grade, and the springs of third, fifth, and eighth grade. Fall of kindergarten is used as the baseline. All six follow-up waves are used in this study except for fall 1st grade as it contains only a subsample of the original. Children (and their families) were selected through a multi-stage cluster, stratified sampling design that first selected approximately 1,000 schools from counties or groups of counties and then selected about 24 children from each school.

The confidential version of the dataset consists of 21,409 individuals, though there are only 21,260 base-year respondents with valid weights. Ten children were missing on the child sample-weight in Kindergarten and 139 children were added in the wave 4 refresher. I remove those who moved out of the country or were otherwise ineligible (e.g. deceased), those who crossed between destination types across survey waves after they cross, and those intentionally not followed as part of the ECLS-K design. Being followed-up and not crossing to a different destination therefore determine a child's duration in this design. After implementing these requirements, the dataset reduces to 19,552 observations in waves 1 and 2 as I require valid information in both kindergarten waves. The number of observations in subsequent waves is 16,156 in wave 4, 14,045 in wave 5, 10,921 in wave 6, and 8,968 in wave 7.[18]

[18] The ECLS-K sample sizes change across waves not only because of attrition but also because of planning within the research design. The sample added individuals between waves 1 and 2 as some schools that had been selected to participate in the study in wave 1, but had refused to do so, opted in at wave 2. This resulted in a net increase of the full ECLS-K sample in wave 2 compared to wave 1. The sample was freshened in the spring of first grade, adding in 139 new children (though 165 were selected not all participated). At this point the ECLS-K stopped refreshing the sample. Instead, it implemented a planned non-follow-up, where a subsample of children who moved away from their original school was intentionally not followed. This occurred in first, third, and fifth grades. As well, in fifth grade those children who were particularly difficult to find were also excluded.

I am interested in comparing Mexican immigrant children and other Hispanic immigrant children to third generation whites. I therefore keep all white, Mexican, and other Hispanic children in the analysis but exclude Blacks/African Americans, Asians, Native Americans, and non-Hispanics of more than one race. This yields an analytic sample of 14,398 in waves 1 and 2, 12,001 in wave 4, 10,562 in wave 5, 8,354 in wave 6, and 7,045 in wave 7. Although the sample reduces in each wave, 1,012 Mexicans are identified in the final wave (down from 1,658 in wave 1).[19]

The ECLS-K includes a number of measures of child development, including information collected from direct child assessments, teacher interviews, and parent interviews. In particular, it contains questions along two domains of development – academic achievement (i.e. cognitive) and socio-emotional development (i.e. noncognitive). It also contains information obtained from administrative personnel of the schools the children attended, such as principals. Basic demographic information is available, as are parental, family, teacher, and school characteristics. It includes neighborhood characteristics derived from the 2000 U.S. census.

State Level Data

To collect state pro-neutral and anti-immigrant legislation, I utilize a database maintained by the National Conference of State Legislatures (NCSL). The NCSL compiles all immigrant-related laws per year per state, and has done so since 2005. The data are publicly available for use on their website.[20]

[19] As measured by having at least one parent born in Mexico.
[20] See http://www.ncsl.org/research/immigration/state-laws-related-to-immigration-and-immigrants.aspx for more details. Recently, however, the NCSL has taken down the 2005, 2006, and 2007 data. For access contact the NCSL directly.

I merge state immigration legislation data into the ECLS-K. The ECLS-K was first administered in 1998. The final wave in which all developmental measures were assessed (both cognitive and noncognitive) was wave 6, in 2004. I therefore use state immigration legislation data from 2005, the earliest available year. I treat the data as time constant across the ECLS-K timeframe.[21]

I code each 2005 law as being pro-, neutral, or anti-immigrant in its intent. I condense the pro- and neutral categories. I then create a variable that contains the number of pro-/neutral immigrant laws passed per state in 2005 and another variable, likewise, for the incidence of anti-immigration laws. These variables create the necessary variability in state-based immigrant legislation, allowing for the testing of the influence of state-based immigrant legislation on the Mexican-white development gaps.

I also utilize political party affiliation at the state level. *The Book of the States*, an annual periodical published by The Council of State Governments, contains per state per year the number of representatives in the state house and state senate, as well as the political party affiliation of the governor. From the state house and senate information, I create a measure of whether the state legislature was majority Republican, Democrat, Independent, or bipartisan per state per year.[22] Information is obtained for every year of the ECLS-K data.

[21] For a discussion of the limitations of the state immigrant legislation data, see the *State Policy* chapter.
[22] Nebraska has a unicameral legislature. The same principle of majority party still applies.

Measurement

The ECLS-K includes a number of excellent measures of child development. Two domains of development – academic achievement and socio-emotional development – are the focus of this research.

Dependent Variables

I examine both cognitive (i.e. academic) and noncognitive (i.e. socio-emotional) development. Noncognitive development is measured by teacher ratings of socio-emotional behavior. Five individual scales are provided in the ECLS-K, which together make up the teacher social ratings of child socio-emotional development.[23] The five teacher social rating scales are available in all waves except wave 7 and include: Approaches to Learning (e.g. children's ability to profit from the learning environment, Self-Control (e.g. ability to control behavior), Interpersonal Skills (e.g. ability to get along, interact, and socialize positively with peers), Externalizing Problem Behavior (e.g. negative behavior directed outwardly, such as disruptive behavior), and Internalizing Problem Behavior (e.g. internal experiences, such as low self-esteem and anxiety).[24] The self-control, interpersonal skills, and externalizing problem behavior scales each assess different attributes of a child interacting with his peers and/or environment. Approaches to learning and internalizing problem behavior are measures of more internal attributes. Each ranges from 1 to 4 with higher values denoting less behavioral problems.[25]

[23] Teacher ratings are used because the missing cases are relatively smaller (19-20%) than the parental social ratings (45%).
[24] For further details of the teacher social rating scales, see the ECLS-K Base Year User's Manual – Chapter 2 "Description of Data Collection Instruments."
[25] The original externalizing and internalizing problem behavior scales were coded from 1 (never) to 4 (very often) such that a higher score denoted more behavioral problems. I reversed the scale (e.g. 5-var) so that the interpretation of the values is consistent across all five of the socio-emotional scales. It is therefore

Academic achievement is assessed via the theta scores of the Direct Child Assessment (DCA), which assesses language & literacy and mathematics. The direct child assessment (DCA) consists of 12 to 20 multiple choice or open-ended questions in each of the subject areas. The ability of children to be administered the test in English was tested via the Oral Language Development Scale (OLDS). If a child passed the test he/she was administered the full direct assessment in English. An abbreviated version was given to Spanish speakers, as portions of the DCA were also available in Spanish. The ECLS-K also contains teacher academic ratings, the academic rating scale (ARS). I use the DCA as it is a more objective measure of student ability, or 'trait', while the teacher ARS is subjective, potentially measuring a child's 'state' in a particular setting rather than inherent ability (Alexander, Entwisle, & Herman 1999).

Explanatory and Control Variables

The DiD. The key variable of interest is the difference-in-difference (DiD) term, which consists of an interaction between two variables. The first variable involved in the interaction is race/ethnicity and immigration status in which 1.5 and 2nd generation Mexicans are contrasted with 3rd generation whites. The second variable involved in the interaction is the destination dichotomy (discussed previously). Interacting these variables creates a two-by-two categorization:

more accurate to think of externalizing problem behaviors as (lack of) externalizing problem behaviors, with higher scores implying fewer instances of externalizing problem behavior. Likewise, it is better to think of internalizing problem behaviors as (lack of) internalizing problem behaviors. Higher scores also reflect fewer instances of internalizing problem behavior.

	Traditional	Non-Traditional
Third Generation White	(0,0)	(0,1)
Mexican Immigrant Children	(1,0)	(1,1)

By interacting the two variables, I create a 'treatment' group that consists of 1.5 & 2nd generation Mexicans in non-traditional destinations while the 'control' group is made up of 1.5 & 2nd generation Mexicans in traditional destinations as well as 3rd generation whites across both destination types.

Put another way, the 'difference-in-difference' term is calculated by comparing the difference across these four categories. I first measure the difference in development between Mexican immigrant children and third generation whites living in long-established Mexican communities (D1a). I also measure the same gap for Mexican immigrant children and third generation whites living in recently established communities (D1b). In this way I measure the Mexican-white gap within each of the two Mexican destination areas. This first step parcels out unmeasured factors that affect Mexicans and whites evenly *within* destinations, for instance the school system quality and regional average test scores.

Second, I take the difference of these two differences (D1b – D1a = D2). This second difference eliminates unmeasured effects that are constant *between* the destination types, such as the American racial hierarchy. By comparing the gap between Mexican immigrant children and third generation whites *within* destination types, then *between* types, I am able to control for between *and* within unmeasured sources of bias.

These two steps yield the difference-in-difference term (D2 = D1b – D1a = DiD). Prior to the introduction of family characteristics (and individual-level controls) in a multivariate framework, the DiD term represents the overall treatment 'effect' – the influence of living in a non-traditional destination environment on the Mexican-white developmental gap. After the inclusion of the family (or school, neighborhood, or state policy environmental) characteristics, the DiD term measures the partial 'effect' – the remaining difference in child outcomes attributable to non-traditional destinations that is not explained by the environmental contexts. I also include a difference-in-difference term to measure the other Hispanic immigrant – third generation white development gap to see if the developmental dynamic of Mexican heritage children is distinctive.

Family Characteristics. At the same time, hypothetical explanatory measures are developed for each of the four types of environmental contexts – family, school, neighborhood, and state policy. Family resources are measured by *Parental Socio-Economic Status*, a composite obtained from the father/male guardian's occupation and education, the mother/female guardian's occupation and education, and household income. *Family Poverty status* is a binary measure with a value of 1 for at or below and 0 above the poverty line. Generational consonance in language is captured by *Primary Language Spoken in the Home*, with values for English, Spanish, and other language. This measure indicates the extent to which immigrant parents' English-speaking ability coincides with their children. A *Parental expectation* variable is used to capture time-varying parental expectations for their child's education, which may change according to children's achievement/attitudes towards schooling. It ranges from less than a high

school education to finishing an advanced degree such as a PhD or a MD. I also create a *Parental Involvement* scale that consists of four questions assessing the percent of parents in a child's classroom that are involved in their child's school via attending art/music events, an open house, volunteering regularly, or attending teacher conferences. It has a scale reliability coefficient of .74. I also include *Number of Siblings, Type of Household*, defined as two-parent, one-parent, or another family type, and *Urbanicity*, a set of dummy variables indicating mid-size city, large suburb, mid-size suburb, large town, small town, and rural, with large city as the reference category.

School Characteristics. The portion of the destination influence attributable to the school is examined through the set of school and classroom variables. Socio-economic heterogeneity within the school is measured through the proportion of the student body eligible for *Free Lunch* and the proportion eligible for *Reduced Price Lunch*. Racial heterophily is measured at the school level through the *Percent of Hispanic* students (categorical with categories of less than ten percent, ten to twenty-five percent, twenty-five to fifty percent, fifty to seventy-five percent, and greater than or equal to seventy-five percent Hispanic), the *Percent of Black* students (categorical with the same category breakdowns as the *Hispanic* variable), the *Percent of Asian* students, and the *Percent of White* students in the student body. It is also measured by the proportion of children in the school that are *From the Neighborhood* and the proportion that are *Bussed* in from outside the neighborhood. I include a measure of the percent of students that are *English as a Second Language Learners/Bilingual*.

I measure the receptivity of the school towards immigrants through a composite scale of the *Limited English Proficiency Services* available in the school.[26] I also measure whether the school receives funding for *Migrant Aid* (0,1) and whether the school receives funding for *Bilingual Aid* (0,1).

At the classroom level, racial heterophily is measured through the proportion of *Hispanic Students in the Classroom*, the proportion of *Minority Students in the Classroom,* and whether there is a *Limited English Proficient* (LEP) student in the classroom. I also examine whether the classroom is only taught in English (*English Only*, 0,1).

Teacher-pupil match is measured at the school level through the proportion of *Hispanic Teachers, Black Teachers, and White Teachers*. At the classroom level, I ask whether the student has a *Hispanic Teacher in their Class* (0,1), whether the *Teacher Speaks Spanish* (0,1)*,* and whether a Hispanic student has a Hispanic teacher (*Hispanic Teacher-Pupil Match*, 0,1).

I include a *Sector* measure, which captures the school type (public, Catholic, other religious, and other non-religious private). Finally, the *Social Disorder* scale measures the safety, order, and violence inside and outside of the school.[27]

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[26] The limited English proficiency scale includes indicators of a home visit to the Language Minority (LM) / Limited English Proficiency family, holding non-English parent meetings, the use of an outreach worker, translators, and written translation. It has an alpha of .83.

[27] The social disorder scale assesses the violence, crime, and overall security around the school. Items measure whether there is tension because of differences [sic], if there is a problem with physical attacks or fights, crime in the area, drugs, direct theft from children, gangs, litter, vacant buildings, violent crime, or children bringing weapons to school. These items were assessed in waves 2, 4, 5, and 6, and some were assessed in wave 7. The lowest alpha for this scale is .83 in wave 7. The wave 7 inter-item correlation is .50. The ICC at all other waves ranges between .35 and just over .37.

Neighborhood Characteristics. A set of neighborhood characteristics is developed to assess neighborhood influences on children's development. Most of these measures come from home residence census tract information contained in the 2000 Census, which is merged into the ECLS-K. Unless otherwise noted, they are treated as time-constant. Neighborhood Resources is assessed through the *Neighborhood Poverty Rate* and the *Log of the Median Household Income* in the neighborhood. Measures of Collective Socialization include the proportion of residents ages 25 and older with *Bachelor's Degrees,* the neighborhood *Unemployment Rate* of those ages 16 and older, and the neighborhood *Self-Employment Rate* of those ages 16 and older. *Relative deprivation* is measured as the log of the difference between a family's income and the median income in the neighborhood. I also include a *Neighborhood Safety Scale* and *Self-Reported Neighborhood Safety* (very safe, somewhat safe, not at all safe). *Self-Reported Neighborhood Safety* comes from parents' responses in the ECLS-K while the *Neighborhood Safety Scale* is created from various items in the 2000 census.[28]

I assess a number of other neighborhood characteristics. The *Neighborhood Percent Hispanic* reports the proportion of Hispanics in the neighborhood. Similarly, I include measures of the *Neighborhood Percent Black* and the *Proportion Foreign-Born*. *Linguistic Isolation* measures the proportion of the neighborhood ages 5 and up that live in households in which no adult speaks English "very well" and all adults speak a language other than English.[29] I also examine the proportion of the neighborhood that are

[28] The neighborhood safety scale includes measures of drug use and sales, violent crime, vacant homes, garbage or litter, and burglary/robberies in the area. Items were assessed in waves 2 and 5. The scale reliability coefficients for both waves is .75

[29] For further information, see the guide, "Language Use and Linguistic Isolation: Historical Data and Methodological Issues." It is available online at http://www.census.gov/hhes/socdemo/language/data/census/li-final.pdf

in their late teens (*Age 16 to 19*) as well as the *Dropout Rate* of these 16 to 19 year olds (overall, as well as for whites, Hispanics, and blacks). I include a measure of the proportion of *Family Households* in the neighborhood (i.e. households with two members that are related to each other), the proportion of *Female-Headed Households* in the neighborhood, and the proportion of *Occupied Housing*. I also explore a number of other neighborhood characteristics descriptively.[30]

State Level Factors. Finally, I also disaggregate the destination influence into the component attributable to state level factors. As discussed above, state level factors include the incidence of pro-/neutral and anti-immigrant legislation, which Political Party controls the state legislature and the Party affiliation of the governor.

Covariates. I utilize a number of individual covariates in my analyses as controls. These include *Female*, coded 0 for male and 1 for female, *Disability*, a binary variable for indicating whether the child has a disability, and *Repeat*, a binary variable detailing if a child ever repeated a grade. *Head Start* is coded 0 if the child did not attend a head start program and 1 if the child did attend.

Analytic Strategies

Although an observational study, this research takes rigorous steps to set up a close-to-experiment analytic comparison to minimize the threats to an unbiased average treatment effect (ATE). Achieving an unbiased ATE is the analytic goal as it would

[30] For a full list see Table 6.1 in the *Neighborhood Influence* chapter.

imply that there are no observed or unobserved differences between the Mexican immigrant families living in long-established and recently formed Mexican destinations.

The first step I take towards this goal is to not allow crossover between destination types across the study's timeframe. Although some children change state of residence, if they move across destination types (not within), I stop observation of their outcomes after (and only after) they crossover. This requirement is met by dropping the person-year observations from the study at the point they move to a different destination type.[31] A lack of crossover is critical to the validity of any ATE. Second, the study is interested in child outcomes, while the parents make the choice of destination. The fact that there is no child-level self-selection issue helps reduce bias in the ATE. Third, by utilizing a DiD approach, I control for within destination and between destination unmeasured sources of bias, which moves the research closer to the true ATE. Fourth, I utilize a 2-level hierarchical mixed effects model with person-time nested in person (Raudenbush & Bryk 2002). This modeling technique controls for unobserved time-constant differences across the comparison groups. Fifth, to further improve the validity of the ATE, I use a Propensity Score Matching Method (PSM) to eliminate observed heterogeneity of Mexican immigrant families between the two destination types. Sixth, I employ Multiple Imputation (MI) to deal with missing data.

This design moves the research closer to capturing the true average treatment effect (ATE), the true effect of living in a non-traditional destination environment on the Mexican-white development gap. However, the data is observational rather than

[31] Individuals are kept until they are observed to move because it is only after they move that they are subject to a crossover effect. This design, however, cannot eliminate crossover before the study begins, as the place of residence prior to the beginning of the study was not ascertained. This implies that children may have moved between destinations prior to the beginning of the study. If so, this movement is unobserved.

experimental. It is impossible to conclusively determine a causal relationship between living in a non-traditional destination and developmental outcomes. There may be unmeasured biases not accounted for by my methods since Mexican immigrant families are not randomly assigned to destination type.[32] For example, there may be differences in the motivation of families that elect to move a farther distance from the U.S.-Mexican border to areas with fewer Mexicans. This motivation may be passed from parent to child, which could be reflected in a boost in children's development.

Multiple Imputation

The data employed in this research suffers from missing data. That is, information was not obtained for all children for all questions of interest. Missing data poses a serious threat to validity because it threatens the accuracy of the results. If the missing information is correlated with the outcomes of interest, it could lead to spurious conclusions. For instance, if undocumented Mexican immigrant families were less likely to respond in the ECLS-K and undocumented Mexican children perform worse on math assessments than documented Mexican children, the difference in math achievement between native-born whites and Mexican immigrant children would be underestimated. To counter the threat, multiple imputation (MI) will be employed. MI yields accurate estimates of the parameters as well as the standard errors, unlike alternative missing data methods (e.g. listwise deletion, mean variable adjustment, single imputation; Allison 2001).

[32] Neither statistical controls, hierarchical mixed effects modeling, the difference-in-difference term, nor propensity score matching accounts for time-varying unobserved differences between groups in non-experimental data.

I assume data is Missing at Random (MAR). This is when a non-random pattern is manifest in the data but may be explained and controlled by an observed variable. For instance, if the data for female children is more likely to be missing than male children, including a measure of gender can control for this non-random pattern. MI is appropriately employed when the missingness is MAR.

MI imputes missing data by using information from repeated measures of the same person and from similar individuals across a host of variables (both independent and dependent) in order to maintain the observed multivariate relationship of the data. The procedure is run ten times, generating ten fully imputed datasets. I run multiple iterations of the procedure because there is an inherent variability in generating missing information. Running the procedure ten times accommodates the uncertainty in the method. I average results from the ten imputed datasets in the multivariate analyses. I use the third imputed dataset, which was randomly selected using a random number generator in Stata, to report the descriptive findings.

Propensity Score Matching

The ECLS-K is non-experimental. Propensity Score Matching (PSM) is a method employed with non-experimental data to create more comparable comparison groups, in this research children in traditional and non-traditional destinations. The method matches children across the two destinations on observable information. In doing so, it eliminates the possibility that differences in development are attributable to differences in observable information, such as family socio-economic status across the two samples, for instance. If researchers do not implement this method in non-experimental data, they risk

their two comparison groups not being comparable, which would then invalidate their findings.

Because children were not randomly assigned to destination type, I match children across destinations on observed individual, X_i, and family characteristics, F_i, that do not depend on the destination's environment, such as parental education and immigrant generation. From these inputs, a logit model generates a single distribution [0,1] that describes each child's propensity score, their probability of living in a non-traditional destination compared to a traditional destination. Numerous specifications of the matching model were run to determine the best match (Stuart 2010). I employ a five nearest neighbor matching model with common support.

$$\log\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_i + \beta_2 F_i + \varepsilon_i$$

From the propensity score I calculate the inverse probability of treatment weight (IPTW).[33] I include deciles of the IPTW in the final multivariate analyses to group individuals together with similar IPTW values. By incorporating the IPTW information directly into the model, I am able to account for the potential of observed differences between the traditional and non-traditional destination samples.[34]

The multivariate distributions of the treatment and control groups become similar upon employing the IPTW deciles derived from the PSM model, enabling the comparison of like individuals and minimizing the threat to validity from observed bias. However, propensity-score matching does not transform non-experimental data into randomized

[33] The IPTW is calculated as the $\frac{\#\text{ living in non-traditional}}{propensity\ score} + \frac{\#\text{ living in traditional}}{1-propensity\ score}$

[34] Note that my analytic sample in the appropriate analyses is not restricted to individuals on common support from the PSM model. I do not drop individuals if they are not on common support. Over ninety-seven percent of the sample was on common support.

form, as it does nothing to reduce the threat of unobserved differences between individuals across the destination dichotomy.

Multilevel Modeling

The ECLS-K is longitudinal, with measurements of individual outcomes and covariates across survey waves. I employ a 2-level hierarchical model with person-time nested in person to include individual heterogeneity while also incorporating the growth curve nature of the analysis (Raudenbush & Bryk 2002).[35] Model 1 specifies the destination influence with the inclusion of individual controls. Model 2 adds a set of key environmental family characteristics to examine the extent to which the destination influence is attributable to family components. Similar models are created to explore the influence of school, neighborhood, and state policy.

$$y_{ti} = \pi_{0i} + \pi_{1i}(time) + e_{ti} \qquad \text{(M1 – Level 1)}$$

$$\pi_{0i} = \beta_{00} + \beta_{01}(R)_i + \beta_{02}(D)_i + \beta_{03}(R)_i(D)_i + \beta_{04i}(X)_i + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(R)_i + \beta_{12}(D)_i + \beta_{13}(R)_i(D)_i + \beta_{14i}(X)_i + r_{1i} \qquad \text{(M1 – Level 2)}$$

$$y_{ti} = \pi_{0i} + \pi_{1i}(time) + e_{ti} \qquad \text{(M2 – Level 1)}$$

$$\pi_{0i} = \beta_{00} + \beta_{01}(R)_i + \beta_{02}(D)_i + \beta_{03}(R)_i(D)_i + \beta_{04i}(X)_i + \beta_{05}(F)_i + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(R)_i + \beta_{12}(D)_i + \beta_{13}(R)_i(D)_i + \beta_{14i}(X)_i + \beta_{15}(F)_i + r_{1i} \qquad \text{(M2 – Level 2)}$$

Level 1 is the person-time level, modeling growth within person. The dependent variable, y_{ti}, is the outcome at time t for person i. π_{0i} is the intercept and π_{1i} is the linear slope of person i. The time function is represented as linear, but may be

[35] These models will include random intercepts and a random slope. For a discussion of pooled-cross sectional models versus random effects models see Appendix B – Analytic Strategies.

parameterized as polynomial (square or cubic) or splining instead.[36] The person-time error component is represented in level 1 as e_{ti}.

Level 2 is the person-level. It contains separate equations for each of the coefficients from level 1. π_{0i} is the intercept equation while π_{1i} is the linear slope equation, standing in for all higher-order functional forms. Each of these equations have their own intercept, β_{00} and β_{10}, respectively. At level 2 I specify the race of the individual i, R_i, a binary variable representing the destination dichotomy, D_i, a vector of other individual covariates, X_i, and a vector of key family covariates, F_i. The difference-in-difference term is created through the interaction of R_i and D_i. The terms r_{0i} and r_{1i} represent the person-level component of the error, where r_{0i} and r_{1i} are assumed multivariate normal. Similar models include school and classroom characteristics, S_i, neighborhood characteristics, N_i, and state level factors, P_i, in level 2. By constructing the model in this way, I will be able to discern the influence of living in a non-traditional destination on the Mexican-white development gap, as measured through the interaction of R_i and D_i, after accounting for the main effect of race/ethnicity, R_i, and the main effect of destination, D_i.

$$y_{ti} = \pi_{0i} + \pi_{1i}(time) + e_{ti} \qquad \text{(M3 – Level 1)}$$

$$\pi_{0i} = \beta_{00} + \beta_{01}(R)_i + \beta_{02}(D)_i + \beta_{03}(R)_i(D)_i + \beta_{04i}(X)_i + \beta_{05}(F)_i + \sum_{k=2}^{10}\beta_{0k}(C_k)_i + r_{0i}$$
$$\pi_{1i} = \beta_{10} + \beta_{11}(R)_i + \beta_{12}(D)_i + \beta_{13}(R)_i(D)_i + \beta_{14i}(X)_i + \beta_{15}(F)_i + \sum_{k=2}^{10}\beta_{1k}(C_k)_i + r_{1i} \qquad \text{(M3 – Level 2)}$$

[36] The appropriate functional form of the time function has been tested and applied for each dependent variable.

Model (3) adds the ten inverse probability of treatment weight classes based upon the ordered propensity score model. The deciles for individual i in class k are represented by $(C_k)_i$.

Table 3.1. Mexican Immigrant Destination Classification Schema

	2000 % Mexican					
	< 1% Mexican in 2000			**≥ 1% Mexican in 2000**		
1990 % Mexican	**Growth Rate (# Mexicans 2000 / # Mexicans 1990) - 1**			**Growth Rate (# Mexicans 2000 / # Mexicans 1990) - 1**		
	0 – 50%	50 – 100%	≥ 100%	0 – 50%	50 – 100%	≥ 100%
≥ 7%	N/A	N/A	N/A	Traditional Stable	Traditional Growth	Traditional Growth
1.5 – 7%	N/A	N/A	N/A	Intermediate Type 1	Intermediate Type 1	Intermediate Type 1
1.0 – 1.5%	N/A	N/A	N/A	Intermediate Type 2	Intermediate Type 2	Intermediate Type 2
< 1.0%	Low Concentration Stable	Low Concentration Growth	Low Concentration Growth	Non-traditional Growth	Non-traditional Growth	Non-traditional Growth

Table 3.2. States Assignments to the Mexican Immigrant Destination Classification Schema

	2000 % Mexican					
	< 1% Mexican in 2000			**≥ 1% Mexican in 2000**		
1990 % Mexican	**Growth Rate (# Mexicans 2000 / # Mexicans 1990) - 1**			**Growth Rate (# Mexicans 2000 / # Mexicans 1990) - 1**		
	0 – 50%	50 – 100%	≥ 100%	0 – 50%	50 – 100%	≥ 100%
≥ 7%	N/A	N/A	N/A	CA, NM, TX	AZ, CO	NV
1.5 – 7%	N/A	N/A	N/A	AK, WY	ID, IL, KA	NE, OK, OR, UT, WA
1.0 – 1.5%	N/A	N/A	N/A	HI, MT	MI	FL, IN, WI
< 1.0%	LA, ME, ND	DC, MA, NH, OH, SD, VT, WV	CT, KY, MD, MS, PA, RI	None	None	AL, AR, DE, GA, IA, MN, MO, NJ, NY, NC, SC, TN, VA

Figure 4. Criteria for Construction of Destination Types

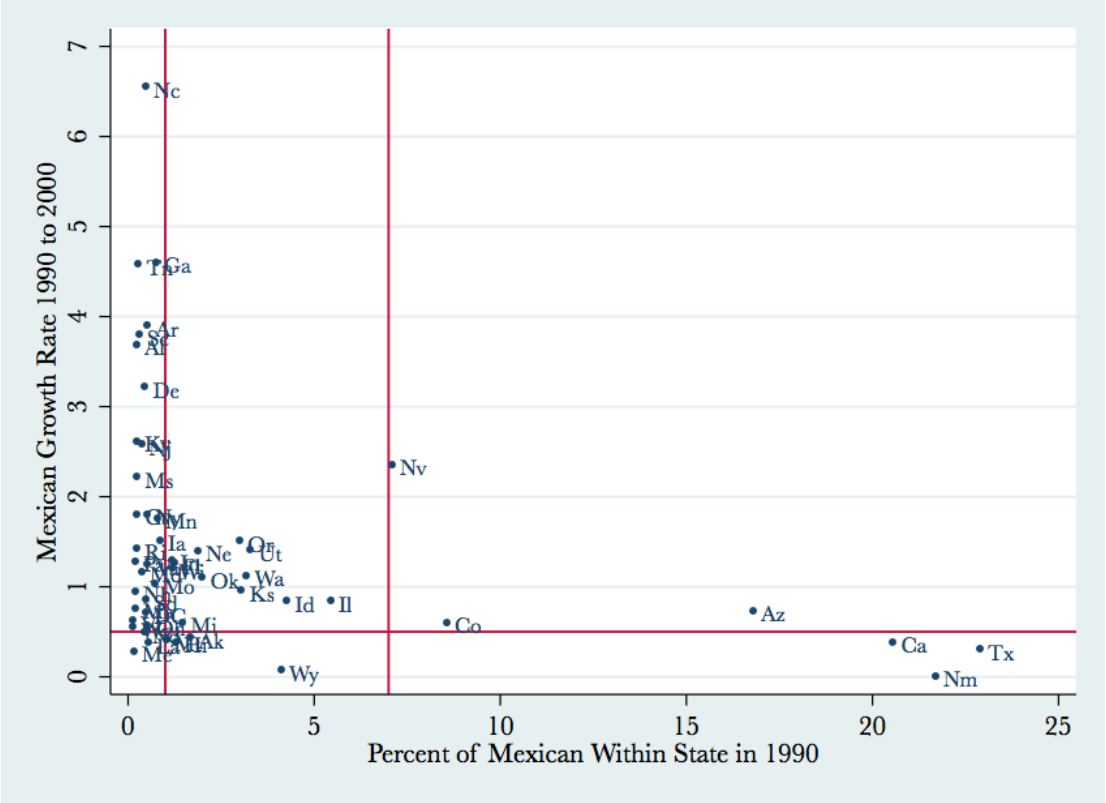


Figure 5. Criteria for Construction of Destination Types, Zoom

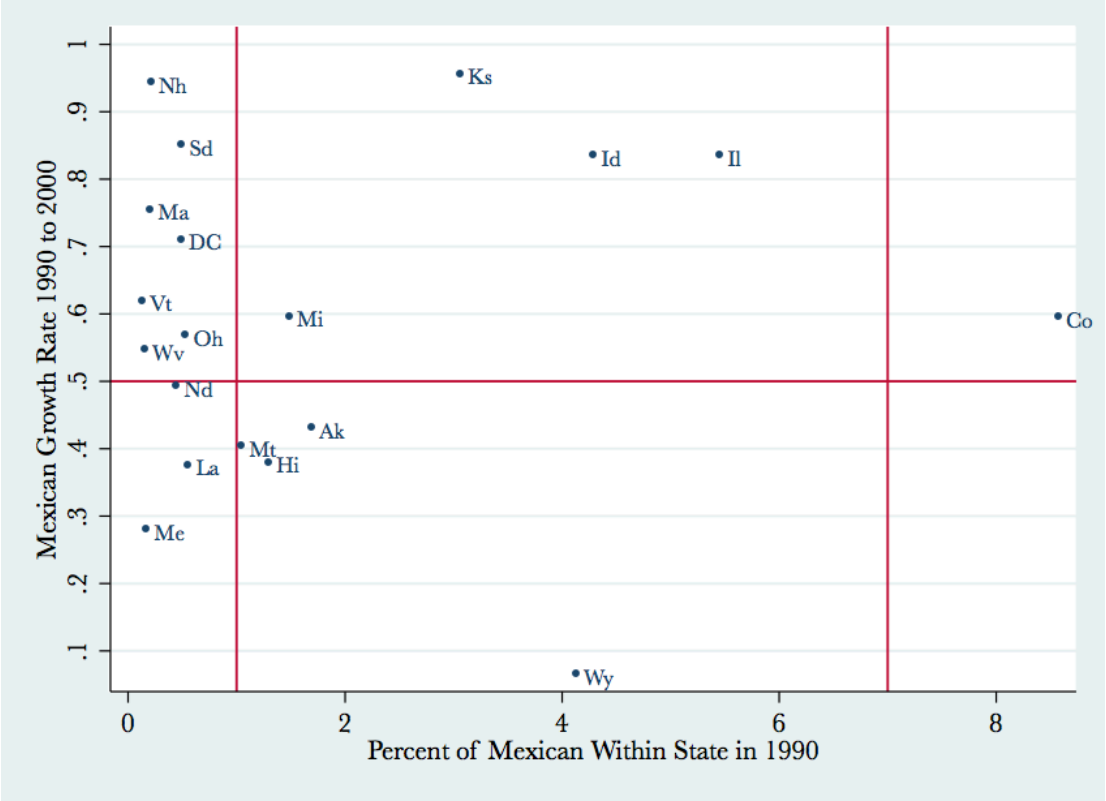
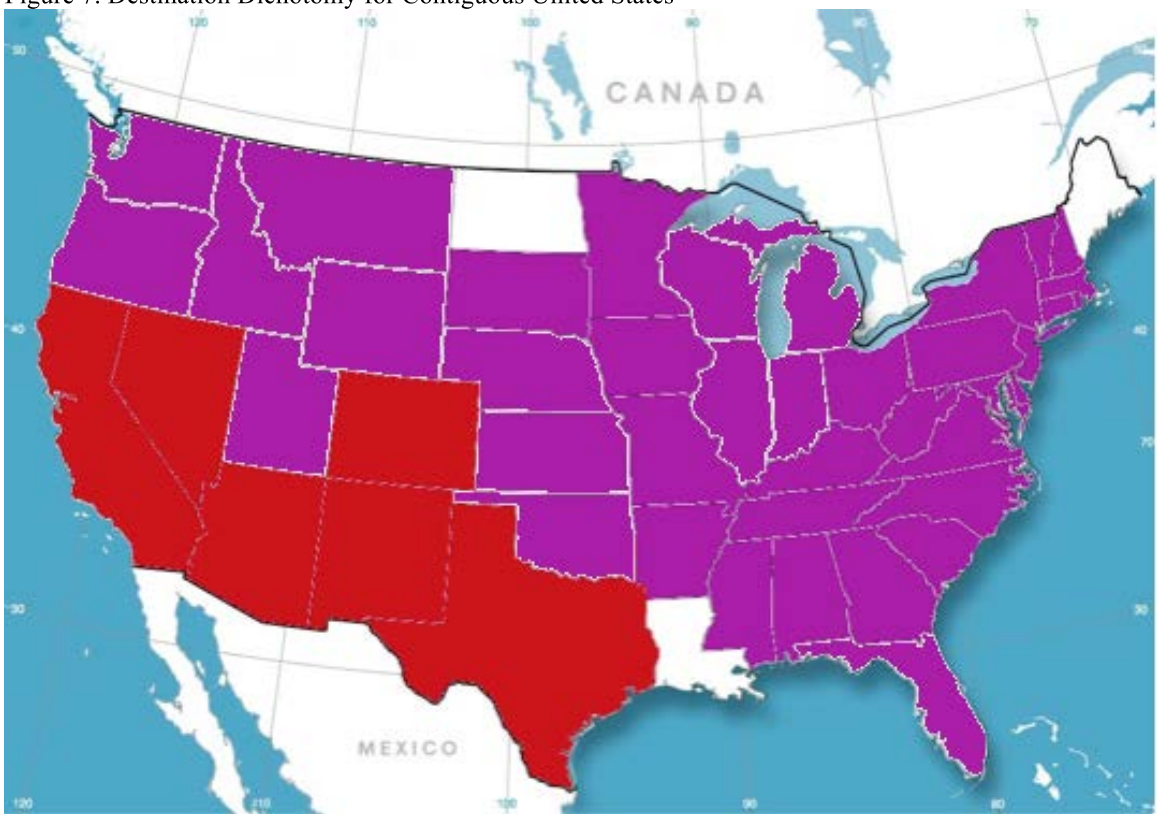


Figure 6. Destination Schema by Selection Criteria

		Percent Mexican in 1990		
		Low (≤1%)	Medium (1≤x<7%)	High(≥7%)
1990 to 2000 Mexican Growth Rate	Growth (≥50%)	Non-Traditional Destinations		Traditional Destinations
	Stable: (0-50%)	Low Concentration States		

Figure 7. Destination Dichotomy for Contiguous United States[37]



[37] Alaska and Hawaii are also non-traditional (i.e. purple) destinations.

Chapter 4. Total Destination Influence and the Family Influence Component

This chapter marks the beginning of my research agenda – to evaluate whether Mexican immigrant children's cognitive and noncognitive development varies across long established (i.e. 'traditional' destinations) and more recent areas of Mexican settlement (i.e. 'non-traditional' destinations). More specifically, I examine whether the development gap between Mexican immigrant children and third generation whites (i.e. the Mexican-white development gap) varies by areas of Mexican settlement. I first explore descriptively the total influence of living in a non-traditional on the Mexican-white development gap. I then examine to what extent this destination influence can be explained by family characteristics, such as socio-economic status and parental expectations.

In order to capture the influence of destination on the Mexican-white development gap I use a difference-in-difference term (DiD), which controls for unobserved same-time-period differences between and within destination (such as regional test score differences and the American racial hierarchy), and which measures the influence of destination. I also include a difference-in-difference term to measure the other Hispanic immigrant – third generation white development gap. Descriptively, the DiD term measures the overall destination 'effect.' After the introduction of family characteristics (and individual-level controls) in a multivariate framework, the DiD term represents the partial 'effect' – the remaining difference in child outcomes attributable to non-traditional destinations that is not explained by these covariates. Other chapters in

this thesis disaggregate the overall influence of destination into the components of school, neighborhood, and state policy.

I use the terms TD and NTD as shorthand for the broader conceptualization of long-established traditional Mexican communities and areas of non-traditional but recent Mexican settlement, where TD can be considered the 'control' area, NTD the 'treatment' area, and the difference in the Mexican-white development gap attributed to living in a NTD as the destination 'effect.'

Cognitive development is measured by direct assessments of math and reading. These scores are normally distributed and increase over time for waves 1 through 7. Five separate socio-emotional scales measure noncognitive development: self-control, externalizing problem behavior, internalizing problem behavior, interpersonal skills, and approaches to learning. Each ranges from 1 to 4 in waves 1 to 6 where higher scores denote better performance on the scale. For instance, a child who received a rating of 3.5 on externalizing problem behaviors exhibited less problem behavior than a child who received a rating of 3.1.

The Total Destination Influence

Mexican-white gaps in academic and socio-emotional development are expected to be smaller in non-traditional destinations than in traditional destinations due to differences in the social environment, including negative institutional bias, greater segregation, and higher concentrated poverty in traditional destinations (H1).

I investigate this hypothesis by exploring differences in over-time development by destination and group, the core focus of this research.[38] First, I describe descriptive differences in cognitive and noncognitive development over the study time frame between Mexican immigrant children of the 1.5 and 2nd generation (MIC), other Hispanic immigrant children (OHIC; also 1.5 and 2nd generation), and third generation white children (TGW), regardless of destination.[39] This descriptive exercise highlights the achievement gap between Mexican (and other Hispanic) immigrants and native-born whites. Second, I discuss within-group differences in developmental level across destinations in the fall of kindergarten, such as whether a difference exists between Mexican immigrant children in traditional and non-traditional destinations. This establishes, at the onset of formal schooling, differences in the developmental level of Mexican immigrant children between the traditional and non-traditional destinations prior to the inclusion of statistical controls. I measure this gap by calculating the standard deviation difference between the two destinations Mexicans' mean development. Third, I examine within-group differences in developmental growth across destinations over-time.

Descriptive Differences in Development between Mexican and white Children

Figures 8 and 9 detail the year-specific means in cognitive (academic) and noncognitive (socio-emotional) outcomes across the survey timeframe for Mexican immigrant children, other Hispanic immigrant children, and third generation whites.[40]

[38] The groups consist of 1.5 & 2nd generation Mexican children, 1.5 & 2nd generation other Hispanic children, and third generation whites.
[39] These descriptive comparisons mirror the multivariate analyses where 1.5 & 2nd generation Mexican (and 1.5 & 2nd generation other Hispanics) are compared to 3rd generation whites.
[40] The math and reading over-time DCA scores represent growth in the academic gap as the DCA scores are based upon theta-scores, whose scaling allows for growth across survey waves and so are capable of

As seen in Figure 8, first and foremost, there is a statistically significant gap in both math and reading measures of academic achievement across the survey timeframe, from the baseline of fall kindergarten through 8th grade ($p<.001$).[41] Third generation whites outperform Mexicans and other Hispanics on direct assessments of both math and reading. This is consistent with other literature that reports an underperformance of Mexican immigrant children on measures of academic achievement. Indeed, Mexicans enter the formal schooling process in the fall of kindergarten more than half a standard deviation below third generation whites on both math and reading.[42] While the Mexican-white achievement gap diminishes over-time, the gap remains significant in every year of the survey. For instance, Mexican immigrant children's academic performance in 8th grade is still more than 3/10 of a standard deviation below that of third generation whites. The significance of the other Hispanic-white achievement gap persists over-time as well, though it diminishes by fifty percent from .35 to .18 standard deviations from the fall of kindergarten to 8th grade. Moreover, though the gap diminishing is an indication that environmental factors including the school and family may facilitate the reduction in the achievement gap, the gap is mostly reduced only in the first few years of schooling, remaining largely consistent after 1st grade.

There is also a substantial and persistent difference in academic achievement between Mexican immigrant children and other Hispanic immigrant children. In the fall

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capturing change over time. The teacher ratings do not grow over time. They represent differences between groups where each wave is restricted to the same range of values [1,4].

[41] Significance based off of t-tests. All results are available upon request. I do not use weights to describe these descriptive statistics. However, with or without weights, the significance levels of the math and reading bivariate comparisons do not change.

[42] Results available upon request.

of kindergarten, MIC significantly underperform on math and reading assessments compared to OHIC. MIC continue to significantly lag behind OHIC through 8th grade.

Second, the gap between Mexican immigrant children and third generation whites (or other Hispanic immigrants and whites) along the noncognitive domain of development is more complicated (Figure 9). The top left panel indicates that third generation whites are rated consistently higher on self-control as compared to immigrant Mexicans and other Hispanics from the fall of kindergarten through 5th grade.[43] There is also a persistent Mexican-white (and Hispanic-white) gap in interpersonal skills (bottom left panel) and approaches to learning (bottom center panel). Mexicans begin the fall of kindergarten .24 standard deviations below native-born whites on measures of interpersonal skills and approaches to learning. This remains significant but reduces to .09 and .19 standard deviations in the spring of 5th grade for interpersonal skills and approaches to learning, respectively. On the other hand, Mexican immigrant children exhibit about 1/10 of a standard deviation improvement in externalizing problem behaviors in kindergarten and 1st grade (significant at $p<.01$). By third grade this advantage dissipates, however.

In summary, Mexican immigrant children lag behind third generation whites academic development both at the beginning of formal schooling and through 8th grade. So too do other Hispanic immigrant children. There is also a persistent noncognitive development gap between MIC and TGW for self-control, interpersonal skills, and approaches to learning. Interesting, over-time there is no gap in measures of externalizing or internalizing problem behavior between MIC and TGW. I next examine

[43] This difference is only approximately 1/10 of a standard deviation, however. The Socio-emotional scores were only assessed from Wave 1 to wave 6.

differences in development for the same group (e.g. MIC) across destinations in the fall of kindergarten and through 8th grade.

Within-Group Differences Across Destinations, Baseline

I now turn to the primary interest of this study – differences in the development gap by destination. In the multivariate analyses this is measured through the difference-in-difference term. Descriptively, the difference-in-difference term may be decomposed into (1) within group differences across destinations and (2) the difference of these differences. For example, part (1) consists of the difference in math achievement between Mexican immigrant children in traditional and non-traditional destinations, a Mexican-Mexican gap (difference 1a). Part 1 also consists of the difference in math achievement between third generation white children in traditional and non-traditional destinations, a white-white gap (difference 1b), which indicates whether third generation whites have greater levels of development in one of the two destinations. Part (2) consists of the difference of these differences, i.e. 1a – 1b. I focus on part (1) here. Figure 10 details the descriptive results for the three groups of interest across destinations in the fall of kindergarten. For instance, the 0.1 value for the red bar under math assessment implies that Mexicans in non-traditional destinations scored .1 standard deviations higher than their traditional destination peers in the fall of kindergarten ($p<.05$).

Mexican immigrant children in non-traditional destinations outperform their peers in traditional destinations on both measures of academic achievement in the fall of kindergarten. MIC outside of traditional destinations, therefore, enter the formal

schooling process at an advantage compared to their traditional destination peers. However, these differences are minimal at .1 to .13 standard deviations. Moreover, as seen below, they are eliminated as the children age.

Along the noncognitive domain of development, Mexican immigrant children outside of the traditional Southwest also outperform their traditional destination peers on measures of self-control ($p<.05$), externalizing problem behavior ($p<.001$), and interpersonal skills ($p<.1$). While these results also point to an early advantage to Mexicans outside the traditional Southwest, the advantage by destination is also found in the native-born white comparison. Similar to Mexicans, whites in non-traditional destinations are rated as exhibiting greater self-control ($p<.001$) and fewer externalizing problem behaviors ($p<.01$). They are also rated higher on approaches to learning ($p<.01$). Because both Mexicans and whites exhibit a net non-traditional destination advantage, the results favor an interpretation of destination specific contextual influences. One such influence is regional variation in test scores. Traditional destinations are made up of the Southwestern states of California, Texas, Nevada, Colorado, Arizona, and New Mexico. All other states are in non-traditional destinations, including the Northeast, which generally outperforms the rest of the country, and the South, which often lags behind.[44]

Before controls, there appears to be a small association between living in non-traditional destinations and improved academic preparation at the onset of formal schooling for Mexican immigrant children. Socio-emotionally, while Mexicans in non-traditional destinations do perform better on three of the five scales, whites living in non-

[44] Other than Louisiana, North Dakota, and Maine, whose Mexican populations' size and growth from 1990 to 2000 were too small to be regarded as areas of recent Mexican settlement.

traditional destinations perform better on two of these scales as well as a third. I next conduct the same comparisons but across the kindergarten-8th grade time frame.

Differences in Development by Destination and Group, Over-time

I now examine over-time differences in development for Mexican immigrant children and native-born whites.[45] Figures 11 and 12 detail MIC and TGW's mean academic and socio-emotional development by destination across the survey timeframe. They include differences within-groups across the two Mexican destinations and also between-group differences within destination. These four components include all the information necessary to create the descriptive DiD. I discuss differences between MIC across the traditional/non-traditional divide, TGW across the two destinations, and differences between Mexicans and whites, before combining the results for a discussion of the descriptive DiD.

Academic Achievement

Mexican Immigrant Children. The left panel in Figure 11 shows that the minor net math advantage (.1 standard deviations, $p<.05$ in Figure 10) at baseline exhibited by MIC in NTD as compared to TD disappears as soon as the spring of kindergarten, within the same school year. It does not reappear at any point during the survey time frame. While the destination gap in reading for Mexicans is no longer detected by the spring of kindergarten as well, and no difference is detected in the spring of 1st grade either, by 3rd grade the difference reemerges and stays through the final waves of spring 5th grade and

[45] I exclude other Hispanic immigrant children to provide greater clarity on the Mexican-white development gap.

spring of 8th grade. This difference is quite small, however, at no more than .1 standard deviations, and should not be considered substantively important.

Third Generation Whites. In every wave after baseline, traditional destination whites barely (but statistically significantly) outperform their non-traditional destination peers on math (left panel, Figure 11). These differences are extremely minor, ranging from .05 to .08 standard deviations. Similarly, they outperform non-traditional whites on reading (right panel, Figure 11), but these results are even smaller and diminish over-time from .05 to .02 standard deviations from wave 1 to 7. That these differences are significant likely is due to large sample sizes rather than any substantive difference in the two samples.

Mexican-White Gap. Turning to between-group cognitive development differences within destinations, Figure 11 shows that in both destinations the Mexican-white development gap is maintained. At every wave from the fall of kindergarten through the spring of 8th grade Mexican immigrant children exhibit lower levels of math and reading achievement than native-born whites ($p<.001$ in each wave). The existence of a cognitive gap is consistent regardless of area of Mexican destination. However, the Mexican-white gap does diminish over-time in the first few years of school. It decreases from .4 standard deviations in non-traditional destinations in the fall of kindergarten to .24 standard deviations in the spring of 3rd grade, where it remains through 8th grade. Similarly, in traditional destinations, the gap diminishes from over one-half a standard deviation in the fall of kindergarten to one-third a standard deviation in the spring of 1st

grade, before it increases slightly each year up to .39 standard deviations in the spring of 8th grade.

Noncognitive Development

Mexican Immigrant Children. Switching to the socio-emotional domain of development in Figure 12, non-traditional destination Mexican immigrant children consistently are rated higher than their traditional destination peers. Consistent with the baseline results, in every wave they are rated as having significantly better self-control (top left panel), fewer indicators of externalized problem behavior (top middle panel), and better interpersonal skills (bottom right panel, except wave 2). For instance, in wave 6 Mexicans in NTD have .17, .17, and .20 standard deviations better behavioral ratings than their TD peers for self-control, externalizing problem behavior, and interpersonal skills, respectively. These three socio-emotional scales are interactive in nature, involving active engagement with others.[46] Neither approaches to learning nor internalizing problem behavior are interactive in nature.[47] TGW in non-traditional destinations compared to TGW in traditional destinations also have significantly higher ratings consistently on self-control, periodically on externalized problem behavior, and, in the earlier waves, on approaches to learning.

[46] For instance, Self-control includes a teacher assessment of a child's ability to control his/her temper. Externalizing Problem Behaviors assesses such questions as if the child disturbs ongoing activities where fewer disturbances are given a higher score. The Interpersonal Skills scale includes an assessment of the child's sensitivity to other children's feelings.

[47] The Approaches to Learning scale asks about, for instance, a child's eagerness to learn. The Internalizing Problem Behavior scale assesses the self-esteem, anxiety, and depression of a child. Higher scores on the scale indicate fewer indicators of depression and fewer issues with self-esteem, for instance. While being withdrawn is an indication of a child avoiding interactive behavior, this scale does not measure a child's actions *while* engaging with others, unlike the self-control, externalizing problem behavior, and interpersonal skills scales. I therefore do not interpret the internalizing problem behavior scale as one that is interactive.

Mexican-White Gap and DiD Results. Turning to differences within destinations on the noncognitive development gap between Mexicans and whites (also in Figure 12), I find that there are differences in the gap across the survey time frame. Mexicans in non-traditional destinations are consistently rated as exhibiting greater self-control than their white peers, though this positive gap is only significant in the spring of 3rd grade (.14 standard deviations, $p<.05$). However, Mexicans in traditional destinations are regularly rated as exhibiting lower amounts of self-control as compared to their white peers. The difference is statistically significant in the springs of 1st and 3rd grade (approximately .12 standard deviations, $p<.05$). The opposite direction of this development gap by destination is interesting.

An alternate (but equivalent) measure of the DiD is to (1) subtract Mexican immigrant children scores from third generation white scores in traditional destinations and to do the same in non-traditional destinations; and (2) to subtract these differences. Measuring the DiD through this technique illustrates that there is, descriptively, a destination-specific difference in the magnitude of the Mexican-white self-control development gap.

The significant difference between MIC and TGW in ratings of externalized problem behavior found at baseline persist in non-traditional destinations (e.g., .15 standard deviations, $p<.05$ in wave 6). After kindergarten there is no difference for Mexicans and whites in traditional destinations, however (e.g., .05 standard deviations, $p>.2$ for wave 4 and .04 standard deviations, $p>.45$ for wave 6). Because MIC in non-traditional destinations outperform their TGW counterparts, while MIC in traditional

destinations do not, these results also support the notion of a positive DiD, i.e. a positive influence of living in a non-traditional destination on development.

Similarly, the pattern at baseline for interpersonal skills also persists. MIC in traditional destinations are rated as having worse interpersonal skills than their traditional destination TGW peers (.26 standard deviations, $p<.001$ at baseline, .12 standard deviations, $p<.05$ in spring of 5th grade). Though Mexican immigrant children in non-traditional destinations have no difference in ratings as compared to their third generation white counterparts, this is actually an improvement compared to the gap in traditional destinations. This too is evidence supporting a positive influence of living in a non-traditional destination, in so far as it pertains to the development of socio-emotional behavior that is interactive in nature.

There is no persistent difference in the Mexican-white gap by destination for internalizing problem behaviors, however. In the spring of 1st grade there is a .04 standard deviation difference between MIC and TGW in non-traditional destinations ($p>.5$) and .008 standard deviations between MIC and TGW in traditional destinations ($p>.8$).

Finally, while MIC in both destinations are rated as having worse approaches to learning than TGW, this statistically significant difference only persists after kindergarten for MIC in traditional destinations (.21 standard deviations, $p<.001$ in spring of 8th grade). After kindergarten, MIC in non-traditional destinations have similar ratings to non-traditional destination TGW ($p>.45$ in spring of 8th grade).

Summary

Put together, Mexican immigrant children in non-traditional destinations exhibit consistently more favorable levels of noncognitive development in relation to Mexican immigrant children in traditional destinations, especially those behaviors and skills that are interactive in nature. They are consistently rated as less prone to externalizing problem behaviors, having superior interpersonal skills, and maintaining greater mastery over their own self-control. Moreover, the gap in externalizing problem behavior and self-control between Mexican immigrant children and third generation whites favors Mexican immigrant children in non-traditional destinations. They outperform all other groups with fewer markers of externalized problem behavior and are rated similar to TGW on interpersonal skills, whereas their traditional destination counterparts are rated as worse than TGW. These results suggest, prior to the evaluation of family, school, neighborhood, and state policy environmental factors, that there is a positive destination influence on the development of Mexican immigrant children in social domains.

That Mexican immigrant children residing in areas of new settlement outperform their traditional destination peers over-time on socio-emotional development is compelling. Moreover, these differences in socio-emotional development can have large ramifications for overall achievement, academic and otherwise. James Heckman, for example, establishes that noncognitive skills are as important in labor market success as cognitive skills (Heckman & Kautz 2012), while differences in these skills are apparent as early as in kindergarten (Denton & West 2002; Lee & Burkam 2002; West et al. 2001).

The data presented to this point describes bivariate differences in development by group and destination, creating a descriptive DiD that shows whether living in a non-

traditional destination is associated with a development gap. I am interested in the extent to which this gap remains after the inclusion of family and other environmental factors. I now turn to descriptive statistics of family characteristics for MIC, OHIC, and TGW across TD and NTD. From there I describe multivariate baseline and growth models that account for family factors in the levels of the DiD.

Family Influence: A Component of the Total Destination Influence

Bronfenbrenner's *Ecological Systems Theory* emphasizes the family as a key setting for child development. Portes and Rumbaut also emphasize the role of the family in *Modes of Incorporation*, their theory of the key characteristics affecting immigrant incorporation. I therefore place the family at the center of the 'environmental set,' my conceptualization of the environmental characteristics that influence the development of Mexican immigrant children by destination type. From a child's perspective, family income, parental occupation (e.g. family socio-economic status), and family resources are preconditions shaping this development.

As opportunities to facilitate interactions between parents and their children are shaped by the environment, differences of within-family social capital can emerge. Generational consonance – that acculturation occurs in the same direction and at the same rate for both immigrant parents and children alike – depends upon opportunity and exposure. If parents lack the opportunity to learn English at the same rate as their children, this will limit parents' ability to engage in their children's learning experience. Living in a traditional Mexican community that is highly segregated and densely populated hinders Mexican immigrant parents' opportunity to develop English skills.

The social environment also influences parental expectations and affects parents' ability, for example, to enroll their child in Head Start. I therefore hypothesize a set of key family variables differ between as well as within destination types and that lower values of these family variables (including family socio-economic status, English spoken in the home, and parental expectations), and not enrolling in Head Start, enlarge the Mexican-white developmental gap (H2).

Family-Level Covariates

The family largely sets the environment in which a child develops. At the same time, the family is nested within the broader social environment. I therefore explore the influence of family characteristics, such as resources in the home, parental involvement, and acculturation as well as the place of residence, on child development. Although the longevity of Mexican communities will vary across well-established and inchoate settlement areas, other characteristics attributable to the family should be similar, such as household type and parental expectations.[48] Table 4.1 details family level characteristics for 1.5 & 2nd generation Mexicans, other 1.5 & 2nd generation Hispanics, and 3rd generation whites in the fall of 1998 (baseline) across the destination dichotomy. The results are weighted, and therefore represent the broader population in the fall of 1998.[49]

As noted in the *Research Design* chapter, the size and history of Mexican populations vary across traditional and non-traditional destinations. Traditional destinations still have the lion's share of Mexican immigrants, as discussed by Portes,

[48] This is especially true if there is no selectivity issue across the two destinations.
[49] For more information on the weighting in the ECLS-K, please see section 10.4 of the public use User's Manual. Available online at https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2009004. Alternatively, similar information is available in section 4.3 of the ECLS-K Restricted-Use Base Year Data Files and Electronic Codebook.

Rumbaut, and Massey (Massey 2008; Portes & Rumbaut 2006). The first wave of the ECLS-K is representative of families with children attending kindergarten in the United States in the fall of 1998. Using the baseline population child-parent-teacher weights, nearly fifty percent of all Hispanic children attending kindergarten in the fall of 1998 are of Mexican origin. Over 4/5 of them attend kindergarten in the six traditional destination states. That's over 630,000 compared to only 150,000 in TD and NTD, respectively.[50] The first column of Table 4.1 under the *Mexican* heading shows that over 2/3 of Mexican children in traditional destinations are of the 2nd generation, defined as having been born in the United States to at least one parent who was born in Mexico. Another ¼ are of the 3rd generation, U.S.-born children with U.S.-born parents. Less than eight percent were born in Mexico and moved to the United States prior to kindergarten. Of the more than 150,000 Mexican children attending kindergarten outside of the traditional destination states, eleven percent were born abroad, which is a slightly higher percentage than in traditional destinations, but far fewer in number (7,700 vs. 23,500)[51]. Over fifty percent are of the 2nd generation, and an additional 1/3 are of the 3rd generation. Although a smaller percentage in NTD is of the 2nd generation and a larger percentage in NTD is of the 3rd generation, the multivariate models control for variation in generational status.

For the rest of the Hispanic kindergarten-attending population in the United States, which totals over 900,000, forty percent live in traditional destinations.[52] The first column in Table 4.1 under the *Hispanic* heading shows that over eight in ten of other-Hispanic immigrant children (OHIC) in TD's are of the 3rd generation. In non-

[50] I use Stata's svy: total and svy: proportion commands to calculate these values.
[51] Size of the population not reported. It is calculated using the svy: commands in Stata.
[52] Size not reported.

traditional destinations, only half are of the third generation. An additional thirty-seven percent are of the 2nd generation.

To summarize, the size and length of the Mexican community in 1998 varies by destination type, with communities in non-traditional destinations smaller but with a larger number of young Mexico-born immigrants. For other Hispanics, on the other hand, the largest and most well established communities are in non-traditional destinations. Other key environmental factors flow from the differences in these Mexican communities, such as community support structures and levels of segregation.

The types of environments in which Mexicans reside also are quite different across the destination dichotomy. Almost fifty percent of Mexicans in traditional destinations live in large cities whereas only one-third in new destinations do so (see results under the *Mexican* heading of Table 4.1). Mexicans in non-traditional destinations, compared to their traditional destination peers, are less likely to live in large suburbs (not significant) but more likely to live in midsize suburbs, small towns, and rural areas. Indeed, eleven percent of Mexicans in new settlement areas live in rural environments (as compared to two-and-a-half percent in traditional destinations).[53]

There is evidence that differences in home resources also exist for Mexican families across destinations. More than half of Mexican families in traditional settlement areas are below the poverty line as compared to just over 1/3 in new settlement areas in the fall of kindergarten (.51 vs. .36, $p<.001$). This difference is not a phenomenon specific to Mexican families. Rather, it reflects regional differences, as more white

[53] Lichter et al. have shown that segregation levels actually increase in non-traditional Hispanic destinations at the block level for Hispanics (Lichter et al. 2009). That said, residential segregation does not imply school segregation, as discussed later in the *School Influence* chapter. I examine the influence of both neighborhood and school factors on child development.

families are below the poverty line in new settlement areas than in traditional areas. At the same time, Mexicans and other Hispanics both average higher household socio-economic status in non-traditional destinations. Mexican families in new settlement areas are more likely to be two-parent households (90 percent vs. 83 percent). There is no difference in number of children in the home.

Generational consonance reduces tension between parents as differences between parents and their host-country-born children are likely to be less pronounced. Language spoken in the home is one indicator of general consonance as it measures the parent's language preference. Assuming children develop English skills in school and other settings outside the home, measuring a parent's language preference indicates to what extent their English development matches their children's. This is important because language acquisition is a key indicator of assimilation and acculturation (Gordon 1964). Results indicate that nearly fifty percent more Mexicans speak English as their primary language in non-traditional destinations (18 percent vs. 13 percent, $p<.05$, see results under *Mexican* heading in Table 4.1). Though this difference is significant, the use of English remains low as in both destinations fewer than one in five Mexican immigrant families speak English as their primary language in the home.

Parental expectations and involvement can influence a child's motivation and achievement. That said, there is no difference in the expectations for Mexicans across long-established and recent areas of Mexican migration. Indeed, all parents, on average, expect their child to obtain a bachelor's degree (where a BA degree is coded as 16 years of education). Nor are there differences in the school-based actions parents take to foster their child's education scores – the parental involvement scales are similar.

In conclusion, differences are found in the residential patterns, socio-economic profile, and family configurations of Mexican families between those who reside in traditional and non-traditional destinations. First, non-traditional Mexican families are less likely to live in large population centers and more likely to live in smaller locations, such as towns and rural environments. Second, the resources in the home vary for Mexican families across the destinations. Families in non-traditional destinations are better off socio-economically, with higher socio-economic status and a lower percent below the poverty line.[54] Although Mexican families are worse off financially than other Hispanic families, Mexican families have a higher percent of two-parent household than other Hispanics and even whites, with Mexicans in non-traditional destinations holding the highest percent of all. There are no differences, however, in the family resources in direct support of children's schooling, including parental expectations and involvement.

Ultimately, this thesis asks whether family factors contribute to the observed regional differences (as discussed above) in cognitive and noncognitive development between the Southwest and other parts of the country. Do varying family characteristics create different environments for the children? I document differences in socio-economic status, poverty, urban environment, English spoken in the home, and type of household, which affect children's environment growing up. However, parents do not vary on expectations for or involvement in their child's schooling across destinations.

[54] These descriptive results do not help to determine whether the difference is attributable to selectivity or greater opportunity of Mexican immigrant families in non-traditional destinations. I discuss the potential of selectivity bias in the context of the multivariate results.

Multivariate Results of Family Influence

I utilize multivariate modeling with ten multiply imputed datasets in order to examine the overall 'effect' of living in a non-traditional destination on the Mexican-white development gap (and other Hispanic-white development gap) in the fall of kindergarten. I then replicate the multivariate analyses for the entire survey time frame in order to examine differences in development over-time.[55] The models are mixed effect models with random intercepts and random slopes. In order to create a sharper contrast between the 'treatment' of non-traditional destinations and the 'control' of traditional destinations, I estimate a propensity score-matching model (PSM). The PSM model matches children across destinations on individual controls and family characteristics. Utilizing this approach minimizes observed differences between the samples in each destination, which reduces the potential bias of non-comparable comparison groups in an observational study. From the propensity score I calculate an inverse probability of treatment weight [0.1]. I derive ten deciles from the inverse probability of treatment weight and insert them into the regression equation in order to directly incorporate differences in likelihood of living in a non-traditional destination. In this way, I help minimize observed bias between families in the traditional and non-traditional destinations, creating a sharp contrast for the destination 'effect.'

Results at Baseline

I first examine differences in development in the fall of kindergarten, the baseline wave of the ECLS-K. Using a multivariate framework allows for the coding and testing

[55] Wave 3 is omitted, as it is a subsample of the ECLS-K. For cognitive development measures, years include fall of kindergarten (wave 1), spring of kindergarten (wave 2), spring of 1st grade (wave 4), spring of 3rd grade (wave 5), spring of 5th grade (wave 6), and spring of 8th grade (wave 7). For noncognitive development years include fall of kindergarten through spring of 5th grade (waves 1, 2, 4, 5, and 6).

of the difference-in-difference term. The Mexican DiD term isolates the consequences of living in a non-traditional destination for 1.5 and 2nd generation Mexican children. It compares this group to a joint group of 1.5 & 2nd generation Mexicans in traditional destinations as well as third generation whites in both destinations. In this way, the 'effect' of new destinations is captured for 1.5 & 2nd generation Mexicans. The DiD term controls for unobserved time-constant differences within and between destinations. A separate DID term created in the same manner is included for Hispanics.

I include baseline results from three separate models. Results are derived from 10 multiply imputed datasets. Model 1 includes variables for race/ethnicity (immigrant Mexican, immigrant other Hispanic, third generation white – the reference category, and a residual category), a dummy variable for non-traditional destination (as compared to traditional), the Mexican-White Difference-in-Difference term, and the other Hispanic-White Difference-in-Difference term. Here the Mexican difference-in-difference term represents the overall influence of living in a new destination on the Mexican-white development gap.

Model 2 adds the individual controls of gender, if the child has a disability, if the child repeated a grade, and if the child attended Head Start. These individual controls do not substantially vary by destination for Mexican immigrants.[56] Model 3 adds the family characteristics of household type, language spoken in the home, socio-economic status, a poverty indicator, number of siblings, parental expectations, parental involvement, and urbanicity. Here the difference-in-difference term represents the remainder of the

[56] The proportion female does vary across destination for the Mexican population with females 46% of Mexican immigrant children in traditional destinations but 57% in non-traditional destinations. When I include third generation children of Mexican descent the proportions become 47% and 53% for traditional and non-traditional, respectively. Both sets of numbers include fifty percent within the 95% confidence interval.

influence of non-traditional destinations on the Mexican-white development gap *net* of family covariates and individual controls, i.e. the partial destination 'effect.'

The DiD Results. Table 4.2 reports the Mexican-white DiD values for each developmental outcome for each model. These results are of primary interest as they correspond to the key research question – the extent to which living in a non-traditional destination influences the Mexican-white development gap. A significantly positive DiD value denotes a net positive difference in the Mexican-white developmental gap associated with living in a non-traditional destination in the fall of kindergarten. For instance, Model 1 reports that the math achievement gap between Mexican immigrant children and third generation whites is .066 units smaller in non-traditional than traditional destinations ($p<.1$). Similarly the gap shrinks .113 units for reading ($p<.05$). The positive association between non-traditional destinations and the size of the academic achievement gap was also seen with the descriptive results above. However, this positive influence is eliminated with the inclusion of family characteristics in Model 3. Similarly, most of the significant positive associations between non-traditional destinations and noncognitive development (noted in the descriptive results) are not found in the multivariate models. In Model 3 of Table 4.2 the only term that is (marginally) significant is for externalizing problem behaviors (β =.095, $p<.1$). In summation, the inclusion of family characteristics (and individual controls) eliminates the positive association between living in a non-traditional destination and the size of the Mexican-white development gap discussed in the descriptive results.

The Hispanic DID term (not reported) is not significant for eight of the nine developmental outcomes (significant for the reading direct assessment at $p<.1$). These results support my conception that there are few differences between Mexican children's developmental levels across destinations as they begin the schooling process.

The Selectivity Debate. These results suggest that there is little unobserved selectivity for Mexicans across the two destination types. Theoretically, Mexican immigrant parents who choose to move away from traditional Mexican destinations in the southwest and/or choose to live in non-traditional destinations may be positively selected. This motivation or selection process then carries over to the children. If selectivity is occurring, then it should be reflected in the preparation of these children at the onset of formal schooling. In particular, these children would be expected to exhibit higher levels of cognitive development as measured through math and reading. Although the descriptive comparison between Mexicans across the dichotomy does show greater cognitive *and* noncognitive development for non-traditional destination Mexicans, I am able to account for this in the multivariate model. As discussed above, after the inclusion of family characteristics (and individual controls) in Model 3, the positive association between non-traditional destinations and the Mexican-white development gap (as measured through the DiD term) is eliminated. Therefore, even if selectivity is occurring, the observed information contained in the ECLS-K questionnaire allows me to account for it.

Race/Ethnicity and Destination. Table 4.3 reports the full multivariate results for Models 1 through 3 for math direct assessment and absence of externalizing problem behavior. The table details the association between family characteristics and child development in the fall of kindergarten. Table 4.3 also carries over the relevant DiD terms from Table 4.2. The other developmental outcomes are reported in Appendix Table C-1. Results are displayed in their original metric. They are *not* standardized.

There is substantial evidence that both Mexican immigrants and other Hispanic immigrants lag behind academically at the onset of formal schooling. For instance, in Model 3 Mexicans, on average, perform .153 units below whites in math ($p<.001$). Other Hispanic immigrants lag by .165 units ($p<.001$).[57] This holds not just in the final baseline model (Model 3), but in Models 2 and 1 as well. These results accord with the literature on the achievement gap between Hispanics and whites (Hao & Bonstead-Bruns 1998; Hao & Ma 2012).

In the socio-emotional development domain, there is no overall trend at baseline. Mexican immigrant children perform better on some outcomes and worse on others as compared to native-born whites at the onset of formal schooling. Mexicans (but not other Hispanics) are rated as better in terms of externalizing problem behaviors in Model 3 (β=.089, $p<.01$ of Table 4.3), as well as in models 1 and 2. Externalizing problem behavior measures such actions as disturbing ongoing classroom activities. Mexican immigrant children are also rated as having fewer indicators of internalizing problem

[57] Results are not standardized but when translated these differences are more than .2 standard deviations in Model 1, generally. For instance the Mexican immigrant coefficient of -.482 in Model 1 becomes -.281 when the models are run using standardized dependent and independent variables. The Hispanic immigrant coefficient of -.357 in Model 1 becomes -.166.

behaviors in Model 3 (higher scores denote fewer indicators; see Appendix Table C-1 for these results).

On the other hand, in Model 1, which is prior to the inclusion of family covariates (and individual controls), both Mexican immigrants and other Hispanic immigrants exhibit fewer interpersonal skills and less favorable approaches to learning in the fall of kindergarten ($p<.05$, see Appendix Table C-1). However, with the inclusion of family covariates in Model 3, the differences dissipate. As well, there is no difference in self-control between Mexican immigrant children and third generation whites. Other Hispanic immigrant children are rated as having worse self-control than whites, although this significance decreases to borderline significance at $p<.1$ in Model 3 (see Appendix Table C-1).

Across Table 4.3 and Appendix Table C-1, children who reside in non-traditional destinations are better prepared for the schooling process as judged by their academic scores and four of the five socio-emotional scores (internalized problem behavior is the only exception). There is a .070 unit boost in math scores (Model 3, $p<.001$) and a .071 unit higher rating of externalizing problem behavior (Model 3, $p<.001$) associated with living in a non-traditional destination. Because the six traditional destination states are located in the Southwest, these results accord with known regional differences in academic preparation and achievement (NAEP 2013).[58] Placed together with the results on the Mexican-white achievement gap, the findings imply a hierarchy of preparation at the onset of formal schooling in which whites and Mexicans in non-traditional

[58] For current and historical information on differences in math and reading by region of country, see http://nationsreportcard.gov/.

destinations exhibit higher levels of development than those in traditional destinations while maintaining the Mexican-white achievement gap.

The Role of Family Characteristics. The descriptive results discussed earlier in the chapter detail differences in the urban to rural residential patterns across the two destinations. That discussion also detailed differences across destinations in family characteristics. Here I examine the influence of these characteristics on child development. As Table 4.3 and Appendix Table C-1 make clear, some family characteristics have substantial influence on the cognitive and noncognitive levels of children in kindergarten (see the 'Family Characteristics' heading in Model 3).

First, the level of resources in the home matters. The socio-economic status of the household dramatically impacts the level of development, especially cognitive development, prior to formal schooling. In Model 3, there is a .151 increase in math scores in the fall of kindergarten ($p<.001$) associated with a 1-unit increase in household socio-economic status. As well, children of two-parent households are the best prepared academically and socio-emotionally. Having a larger number of siblings is associated with weaker academic preparation (β=-.016, $p<.001$) for math scores) but more favorable socio-emotional development (β=.052, $p<.001$) in terms of externalizing problem behavior in the fall of kindergarten.

Put together, children of two-parent, high socio-economic status households with fewer siblings are the best prepared academically in the fall of kindergarten. Families of Mexican descent (as identified by one parent having been born in Mexico), while often two-parent households, are likely to be of lower socio-economic status and, as Catholics,

larger in size. This helps explain the persistent academic achievement gap. That said, having more siblings improves socio-emotional development, an impact that may be attributable to children experiencing more frequent age-relevant interactions throughout the entire day, not just during school hours.

Second, the care and attention a parent places on a child's schooling is important. Parental expectations and parental involvement under the 'Family Characteristics' heading in Model 3 have direct consequences for child development. Both expectations (β=.017, p<.001) and involvement (β=.041, p<.001) are consequential for academic preparation at kindergarten. Parental expectations also influence socio-emotional development, although moderately so.

Third, language acts as a barrier. Non-English speakers have lower cognitive assessments in the fall of kindergarten. For instance, children whose families speak Spanish as the primary language in the home score, on average, .204 units lower on math assessments (p<.001). Approaches to learning and interpersonal skills also are weaker among children whose parents do not speak English as the primary language in the home (see Appendix Table C-1). The language barrier, therefore, hinders both the formal education and the socialization processes. Moreover, difficulty interacting or understanding peers, teachers, and other representatives of the school system may negatively impact how these children view the educational system. Ultimately, students could disengage. The importance of language at the beginning of the education process is therefore highly consequential.

Finally, there are substantial differences in academic preparation and socio-emotional development contingent on urbanicity. Being from a large city, on average, is

better than any other residential environment for academic achievement at the start of kindergarten. For example, living in a midsize suburb is associated with a .106 reduction in math scores ($p<.001$). Though being in a large city seems most conducive to socio-emotional development as well, the influence of residence on noncognitive development is more complicated. First, there is very little positive influence of living outside a large city on socio-emotional outcomes. The only positive association is for internalizing problem behaviors - living in a rural area is associated with a reduction in such behaviors as anxiety and depression (see Appendix Table C-1). On the other hand, a rural residence is worse for the other socio-emotional measures. Second, students who live in a midsize suburb or a large town do not vary significantly in their socio-emotional development from children in large cities. Third, living in a mid-size city is worse on four of five socio-emotional outcomes. Finally, those students in large suburbs have mixed results as they are rated no differently on self-control, internalizing problem behavior, or externalizing problem behavior ($p>.1$), but worse on interpersonal skills and approaches to learning.

These differences are substantial for Mexican immigrant families due to the varying residential patterns of Mexican communities across traditional and non-traditional destinations. Nearly half of Mexicans in traditional areas live in large cities, which is associated with higher cognitive and development scores in the fall of kindergarten. Only one third of Mexicans families in new destinations live in large cities, however. Moreover, seventeen percent of Mexicans in new destinations live in small towns or rural communities, which is shown to negatively affect socio-emotional

development in the fall of kindergarten, compared with three percent of Mexicans in traditional destinations.

In the fall of kindergarten there are significant contributions of family characteristics to child development, including family resources, language spoken in the home, and parental expectations. Residential location also is associated with varying development. I now turn to examining to what extent these characteristics and the DiD influence child development over-time.

Growth Models

I now explore the influence of non-traditional destinations on the Mexican-white development gap beyond kindergarten. Table 4.4 reports the key variable of interest, the Mexican-white DiD term, for all seven developmental outcomes for each of the over-time models (similar to Table 4.2). The table is constructed in this way to focus on how the DiD terms change with the addition of blocks of covariates. Tables 4.5 and 4.6 show the covariate coefficients for math direct assessment and externalizing problem behaviors to help guide the interpretation. They detail the influence of family characteristics on child development. All other results are located in Appendix Table C-6.

In Tables 4.4, 4.5, and 4.6, Models 4, 5, and 6 include the same individual controls and family covariates as models 1, 2, and 3, respectively, in the baseline case. However, these models include all appropriate waves, rather than just the baseline wave. These models are specified as a two-level hierarchical random effects model with child-time nested in child.[59] The individual controls and family characteristics are specified at

[59] This modeling strategy enables the measuring of the effect of various levels of characteristics on time-varying child developmental outcomes. It also allows variables to be fit either as fixed or as random effects.

the individual level. Recall that the direct child assessment (DCA) math and reading scores are derived from the theta-scores, whose scaling allows for growth across the survey waves. They assess how differences between groups develop over-time. The other developmental outcomes maintain the same range in all waves, reflecting whether gaps persist between groups, but not how the gaps change across the survey timeframe. The DCA scores were assessed from kindergarten through 8th grade while the socio-emotional scores were assessed from kindergarten through 5th grade. Results are reported in their original metric.

Model 7 is specified as a mixed effects model with random intercepts and random slopes. After examining a variety of key family characteristics, I chose socio-economic status to specify random slopes because of the potential variation in its effects across families. I also specify a cross-level interaction between socio-economic status and time. Model 7 can be considered the final model for the interpretation of the family covariates and individual controls, including, for instance, the main effect of destination, the main effect of being a Mexican immigrant child, gender, Head Start, family status, and residential type.

Model 8 is the final model for the difference-in-difference term. It is also a mixed effects model. However, it substitutes deciles derived from the inverse probability of treatment weight (IPTW) in lieu of family covariates and individual controls. The IPTW represents each child's likelihood of being in a new destination (as compared to a traditional destination). It ranges from 0 to 1 where a value of 1 represents the certainty the child resides in non-traditional destinations. The IPTW is calculated from a five

nearest neighbor with common support propensity score matching model.[60] The propensity score model includes the matching by destination on individual and family variables.[61] I include individual and family variables as the propensity score method is designed to minimize bias between the two destination samples' observed characteristics.[62] Put another way, it reduces the differences between the two groups on such characteristics as socio-economic status and language in the home. By doing so, the propensity score model is able to deal with observed selectivity between the groups that is related to the included individual and family characteristics. Therefore the model creates a sharper contrast between the treatment and control groups, and, consequently, a better estimate of the difference in the Mexican-white achievement gap (as measured by the difference-in-difference term). All five model results are based on ten multiply imputed datasets.

The DiD. I now turn to the difference-in-difference terms, as shown in Table 4.4. Model 4 details the DiD terms with only the inclusion of race/ethnicity and destination. Significant results are found for reading direct assessment (β=-.060, p<.1) as well as the three interactive behavior scores of self-control (β=.084, p<.05)), externalized problem behavior (β=.115, p<.01)), and interpersonal skills (β.085, p<.05). With the addition of individual controls in Model 5, the math direct assessment DiD term is also significant

[60] After the estimation of a variety of matching models, I conclude that a five nearest neighbor matching model with common support yields the best match. This model specification reduces the most bias between observed characteristics of families living in traditional and non-traditional destinations.
[61] The Model includes immigrant generation, race, gender, disability, whether the child repeated a grade, whether the child participated in Head Start, the type of household, language spoken in the home, a mean over-time poverty indicator, mean over-time socio-economic status, mean over-time number of siblings, mean over-time parental expectations, parental involvement, and urbanicity.
[62] I include individual controls and family characteristics but not school, neighborhood, or state policy characteristics, as the propensity score model is designed to reduce child- and family-based differences in each destination, not environmental characteristics of the destinations.

(β=.067, p<.05). However, the inclusion of family covariates in Model 6, including parental socio-economic status, number of siblings, and language spoken in the home, eliminates the positive influence of non-traditional destinations for both the math and reading assessments. There are no significant DiD results for cognitive development in Models 7 or 8, either. In other words, in the cognitive development domain, the influence of non-traditional destinations on the Mexican-white achievement gap is attributed to family characteristics.

Nevertheless, there are persistent results for noncognitive development from Model 4 through Model 8, which I consider to be the final model because it creates the sharpest assessment of the partial influence of destination on the Mexican-white development gap after controlling for family and individual variables through the IPTW deciles. In model 8 I still find that living in a non-traditional destination lowers the gap on the three socio-emotional scores that are interactive in nature – self-control (β.152, p<.01), externalizing problem behaviors (β=.218, p<.001), and interpersonal skills (β=.130, p<.05).

In addition to the results for the three interactive behavior scores, there is a negative impact of living in a non-traditional destination on the Mexican-white development gap for internalizing problem behaviors in Models 6 and 7 (β=-.053, p<.1 and β=-.057, p<.05, respectively). However, the significant influence on the internalizing problem behavior DiD is eliminated with the inclusion of the IPTW deciles.

Race/Ethnicity & Destination. Tables 4.5, 4.6, and Appendix Table C-6 detail the over-time models for math scores and externalizing problem behavior ratings.[63] As in the baseline results, Mexicans and Hispanic immigrants perform consistently worse on academic achievement than third generation whites. For instance, Mexican immigrant children score .046 units lower in math achievement, on average, across the kindergarten-8th grade time frame (see Table 4.5 model 7, $p<.001$). This implies that gaps at the beginning of the schooling process persist over-time. Mexican and other Hispanic immigrant children do not close the cognitive gap between kindergarten and eighth grade.

On the other hand, the socio-emotional trend established in the fall of kindergarten for Mexican immigrant children is maintained as they continue to exhibit fewer indicators of externalized problem behavior ($\beta=.078$, $p<.01$ in Model 7, Table 4.6) and internalized problem behavior ($p<.001$, see Appendix Table C-6) than third generation whites.[64] This holds regardless of model specification. For instance, in the externalized problem behavior models the coefficient for Mexican immigrant children in Model 4 is .055 and .078 in Model 7, both of which are significant at $p<.01$. These children also are rated higher on self-control across the K-5 timeframe ($p<.1$) in Model 7. However, the inclusion of family covariates and individual controls eliminates the disadvantage of Mexican immigrant children as compared to third generation whites on interpersonal skills and approaches to learning.

Destination remains significant for academic achievement in the over-time models, especially after the inclusion of family characteristics and individual controls. The main effect of destination on math achievement, for example, is .039 ($p<.001$, Model

[63] The over-time results for the other development outcomes can be found in Appendix Table C-6.
[64] The interpretation of the main effect of Mexican immigrant children is in Model 7, not Model 8, as discussed above.

7, Table 4.5). Moreover, regardless of the covariates or model specification, destination has a significant impact on all five measures of socio-emotional development (β=.061, p<.001 for externalizing problem behavior, Model 7, Table 4.6). This bolsters the evidence in support of regional differences in cognitive and noncognitive development.

The Role of Family Characteristics. Model 7 in tables 4.5 and 4.6 show that the results for urbanicity are largely consistent with the baseline results. Children from large cities perform best academically. Even living in a midsize city is associated with lower development (-.047, p<.001 for math direct assessment, Model 7, and -.026, p<.05 for externalizing problem behaviors, Model 7). While the noncognitive results vary somewhat across socio-emotional measures, the highest ratings are consistently observed for large cities. The only positive association for those living outside large cities is the reduction in internalizing problem behavior associated with living in a rural environment seen in the baseline model. Its significance is eliminated in the longitudinal model.

The importance of a variety of family characteristics carries over from the fall of kindergarten to the longitudinal models. Socio-economic status influences math (β.122, p<.01 in Model 7), reading, and socio-emotional development across the entirety of primary school (β=.023, p<.001 for Model 7 of externalizing problem behaviors). The poverty indicator, not significant in the fall of kindergarten model, is associated with elevated internalizing problem behavior levels. Speaking Spanish as the primary language at home continues to be negatively associated with math (β=-.186, p<001) and reading scores as well as interpersonal skills and approaches to learning. Children in two-parent households continue to exhibit the highest levels of cognitive and

noncognitive development. The effect of number of siblings on socio-emotional development largely remains – an increase in the number of siblings improves development on all socio-emotional measures except for internalizing problem behaviors. However, in a reversal from the baseline model, an increase in the number of siblings improves math scores (β=.017, p<.001), although not substantially. The influence of parental expectations and parental involvement, on academic outcomes especially, remains.

Models 7 and 8 in Tables 4.5 and 4.6 and Appendix Table C-6 specify a random slope for socio-economic status. For most of the developmental outcomes, the likelihood ratio test shows that the standard deviation significantly varies from zero, implying that the effect of socio-economic status on the growth curve differs across families. To allow the SES effects to change over time, I also specify a cross-level interaction between time and socio-economic status. I find that the influence of socio-economic status increases over-time for three of the socio-emotional outcomes (self-control, externalizing problem behaviors, and internalizing problem behaviors). For instance, the interaction of time by SES in Model 8 of Table 4.6 has a coefficient of .001 (p<.001), which indicates that the influence of SES increases over-time for externalizing problem behaviors.

Discussion

This chapter begins the empirical research into whether differences in development for Mexican immigrant children exist between traditional Southwestern destinations and recent areas of settlement outside the Southwest. I examine descriptive differences between Mexican immigrant children and third generation whites across the

two types of destinations, both descriptively and through multivariate analyses. I hypothesized that there should be a net positive influence of living in a non-traditional destination on the Mexican-white development gap (H1).

I find evidence that supports a positive destination influence on noncognitive interactive behaviors. Specifically, as measured through the difference-in-difference terms, Mexican immigrant children in non-traditional destinations have greater amounts of self-control, fewer signs of externalizing problem behavior, and greater interpersonal skills. I do not find evidence to support this pattern for the socio-emotional outcomes of approaches to learning or internalizing problem behaviors. Nor is there evidence of a net positive destination influence on cognitive development. Although Mexicans in non-traditional destinations do exhibit slightly higher levels of cognitive development, this overall destination difference is explained (and eliminated) by the inclusion of family covariates.

The persistent findings of greater self-control, fewer indicators of externalizing problem behavior, and better interpersonal skills for Mexican immigrant children in non-traditional destinations are particularly noteworthy as these behaviors are interactive in nature. They involve reactions to or mingling with others, including such behavior as respecting property rights, maintaining friendships, not getting into fights, not disturbing activities, accepting input from peers, and being sensitive to others' feelings. Therefore, Mexican immigrant children living outside the traditional Southwest exhibit greater socialization than those living within it.

The consequences of diverging socio-emotional development can have far reaching implications. Recent research has shown non-cognitive skills, or 'soft' skills, as

critical to success – there are educational and labor market consequences to the development of noncognitive skills (Farkas 2003; Heckman & Kautz 2012). Self-control helps to explain the gender GPA gap (Duckworth & Seligman 2006). These soft skills also substantially influence labor market earnings (Heckman et al. 2006).

Mexican immigrant children residing in new destinations are raised in communities that are fundamentally different, ranging from the urbanicity and segregation to the racial makeup of their schools, themes that may positively influence development. I explore these contexts in the following chapters. As discussed above, because Mexicans in non-traditional destinations are more likely to live in small towns and rural environments, their school districts should be larger in size and, therefore, include a greater mix of racial/ethnic groups. In the following *School Influence* chapter I find that Mexicans attend far fewer hypersegregated schools in non-traditional destinations. Exposure to a larger variety of racial and ethnic groups on a day-to-day basis may improve a child's socialization process.

There may be negative consequences to this exposure as well. Mexican immigrant children are, on average, less well prepared academically for school than their 3rd generation white peers. An increase in the proportion of white classmates may lead to feelings of isolation and a sense of under-preparedness. The language barrier will be more difficult to overcome in schools that are unaccustomed to or place less emphasis on English as a Second Language learners. This may help explain why in Table 4.4, Models 6 and 7 the Mexican DiD term for internalizing problem behaviors is negative and significant.

Summary

There is no evidence that Mexican immigrant children living in NTD perform better on math achievement than Mexican immigrant children in TD through 8th grade. There is inconsistent evidence on reading achievement. There are minor, if any, differences in third generation whites' math and reading scores between destinations. Mexican immigrant children's cognitive development lags behind third generation whites regardless of destination. Placed together, there is no evidence that living in a non-traditional destination diminishes the Mexican-white achievement gap.

On the other hand, Mexican immigrant children in NTD are rated as having greater self-control, fewer externalizing problem behaviors, and better interpersonal skills than their TD counterparts. At the same time, the gap between MIC and TGW self-control, externalizing problem behaviors, and interpersonal skills favors MIC in NTD. Therefore, descriptively, the difference-in-difference term calculation finds evidence that living in a non-traditional destination positively influences the Mexican-white noncognitive development gap.

I include family characteristics (and individual controls) in a multivariate framework to examine to what extent the influence of destination can be explained by family characteristics. In the fall of kindergarten there is no evidence of a positive influence of living in a non-traditional destination on child development. Over-time, however, living in a non-traditional destination positively influences self-control, externalizing problem behaviors, and interpersonal skills. Therefore, the influence of living in a NTD on noncognitive development is not accounted for by variation in family

characteristics. I next examine to what extent the positive influence of non-traditional destinations is explained by the school environmental context.

Figure 8. Academic Achievement Over-Time

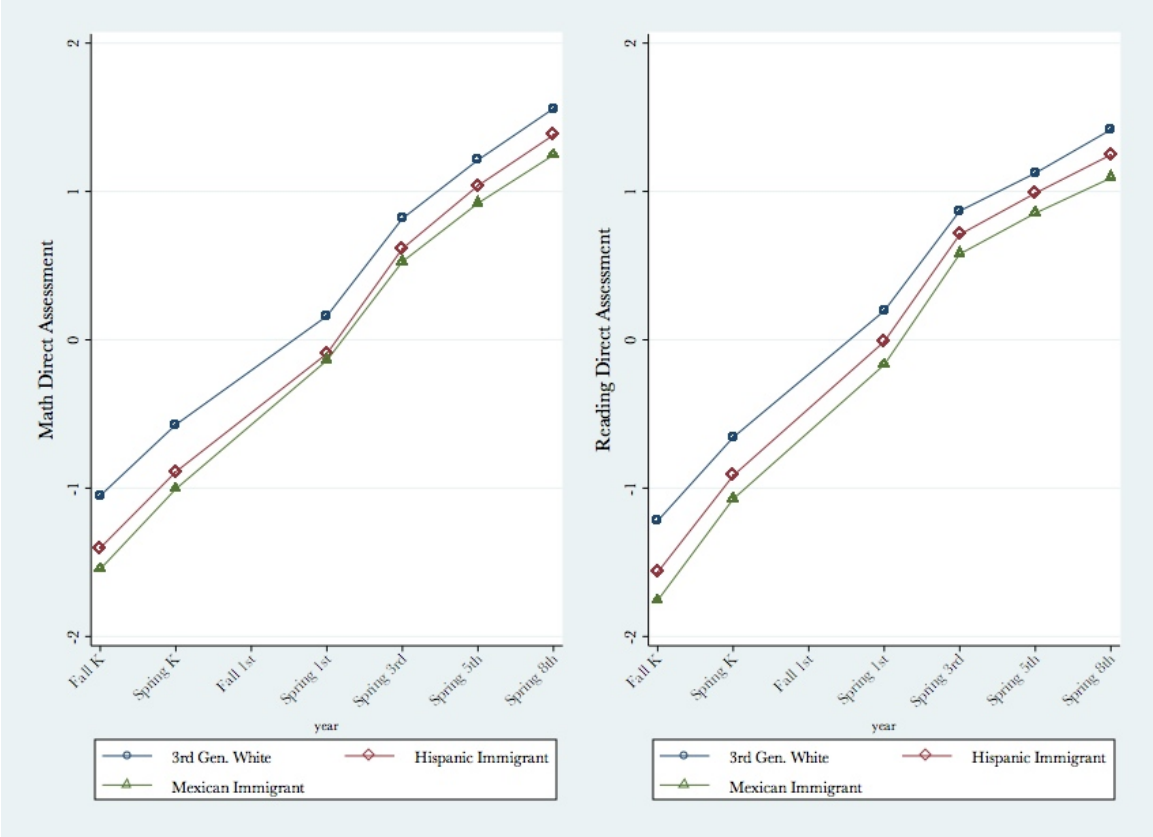


Figure 9. Socio-Emotional Development Over-Time

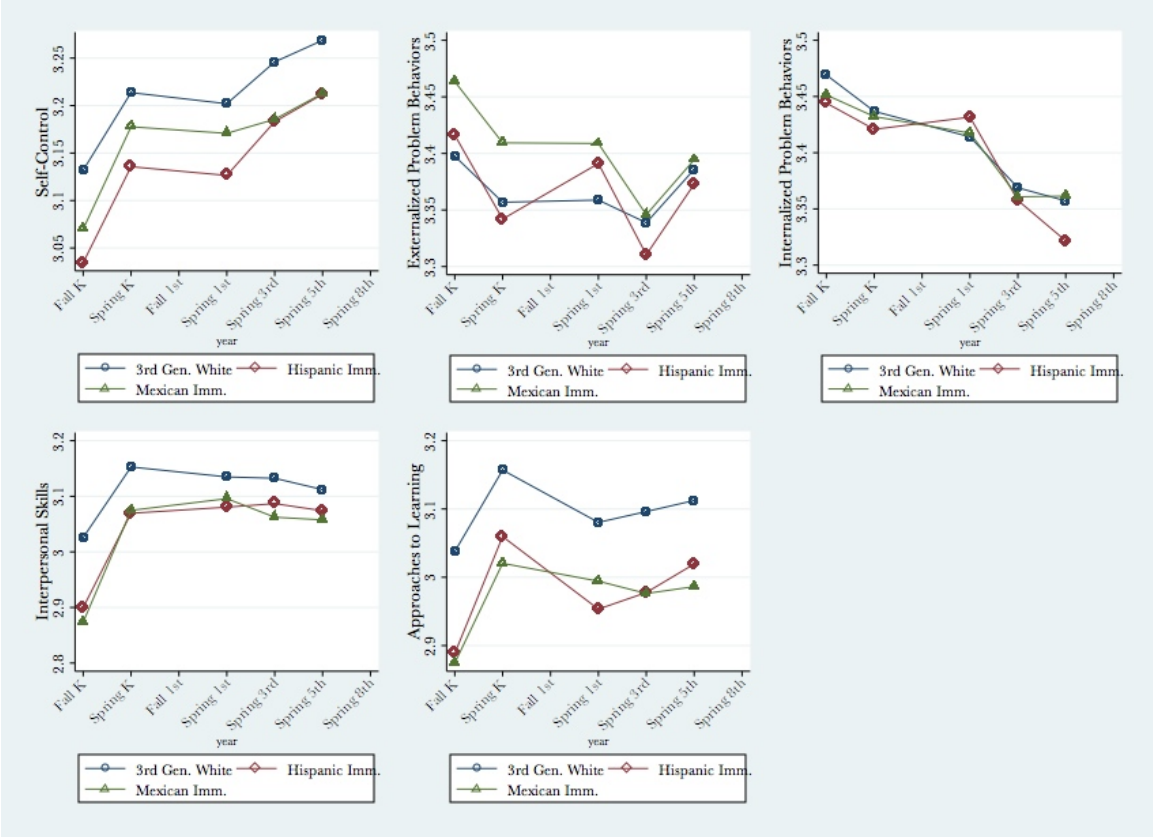
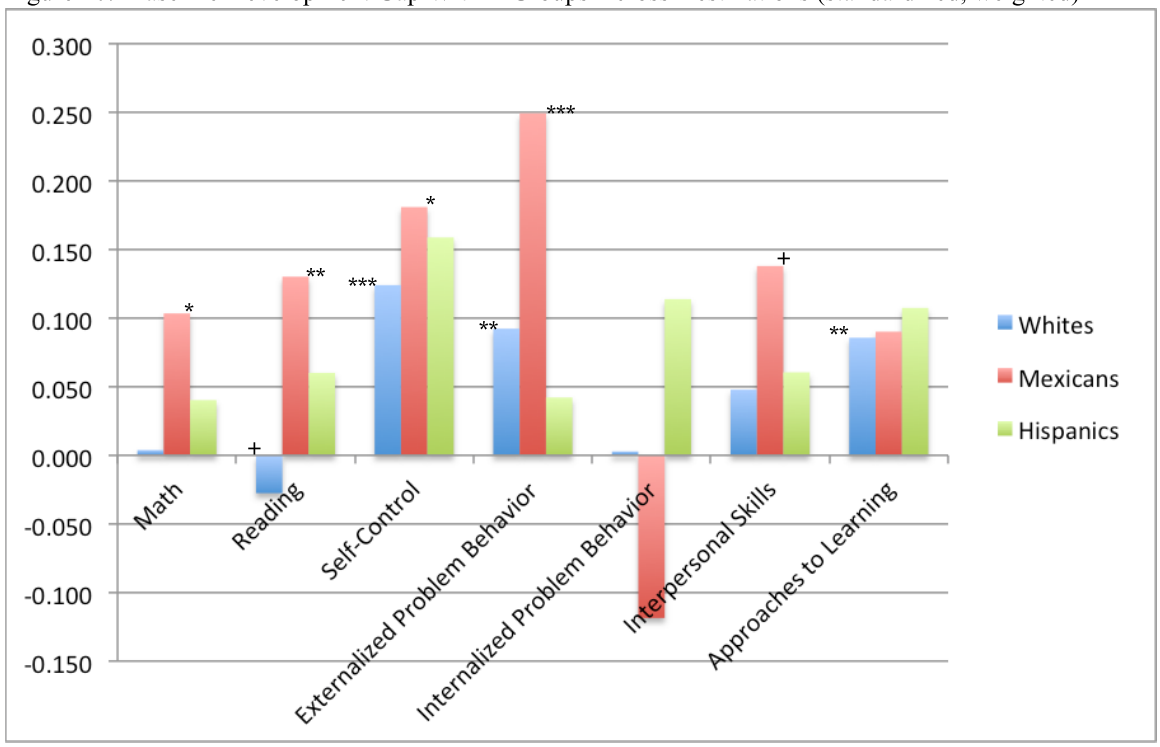


Figure 10. Baseline Development Gap Within-Groups Across Destinations (standardized, weighted)[65]



+ p<.1
* p<.05
** p<.05
*** p<.05

[65] I derived these values by (1) calculating the weighted mean for each group in wave 1; (2) calculating the difference between the same group across destinations; and (3) dividing by the standard deviation of the outcome of interest, which is the standard deviation across all three groups and all waves.

Figure 11. Mean Academic Achievement by Group and Destination Over-Time

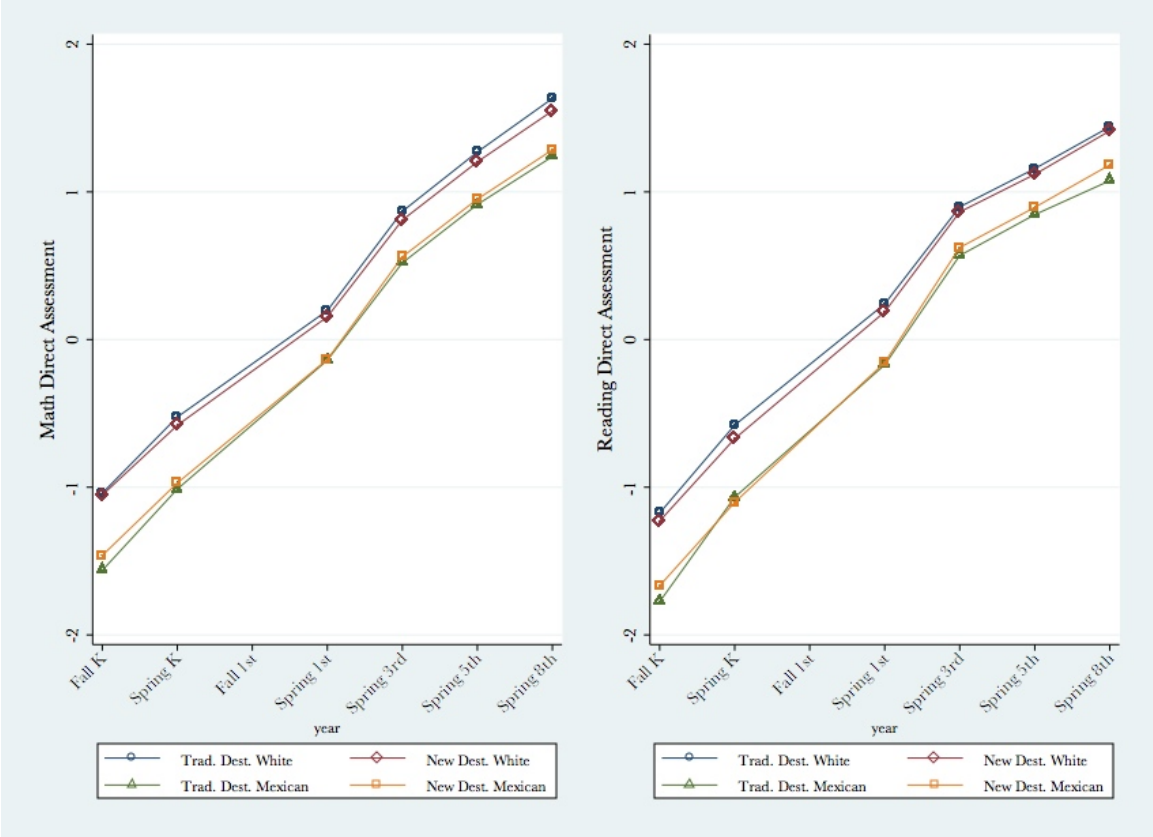


Figure 12. Mean Socio-Emotional Development by Group and Destination Over-Time

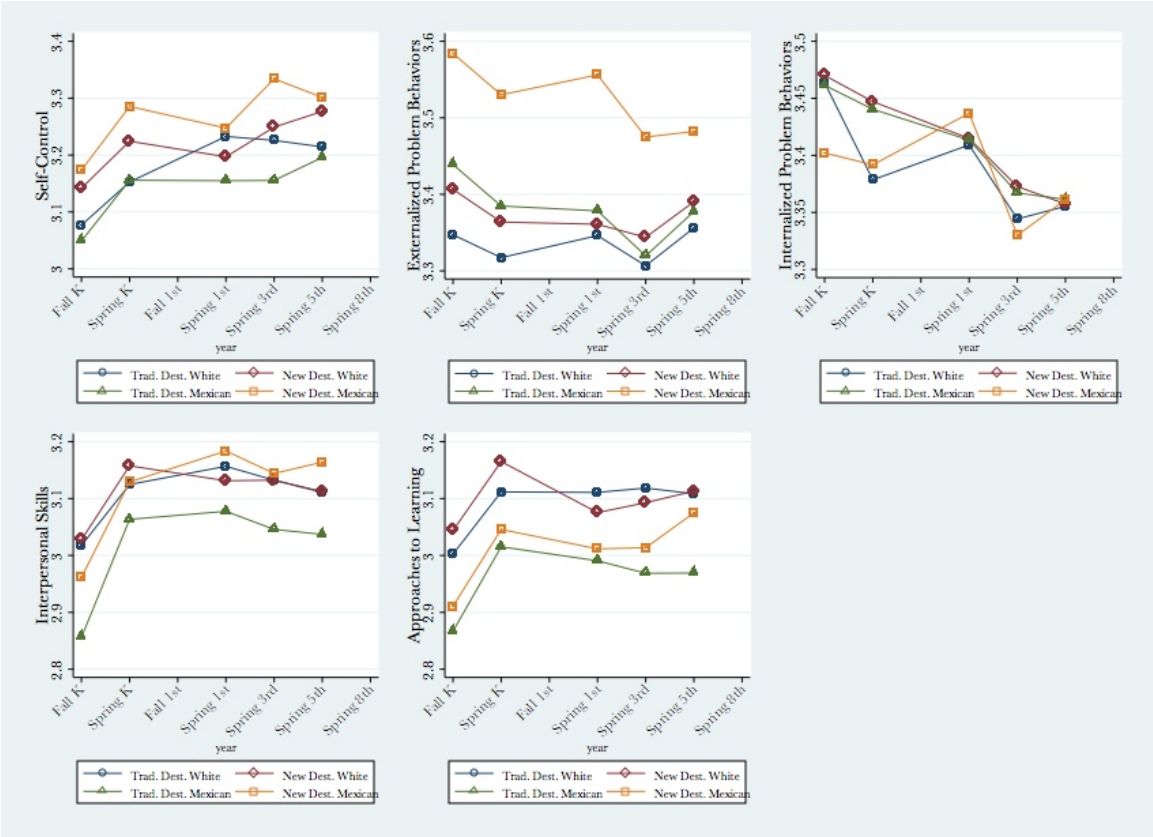


Table 4.1. Family Characteristics by Race/Ethnicity and Destination Type at Baseline, Weighted

	Mexican		Other Hispanic		White	
Family Characteristics	**Trad**	**New**	**Trad**	**New**	**Trad**	**New**
Generation: 1.5[1]	0.08	0.11	0.04	0.11 ***	0.01	0.01
2nd Generation[1]	0.68	0.55 ***	0.15	0.37 ***	0.07	0.05 +
3rd Generation[1]	0.24	0.34 **	0.81	0.52 ***	0.92	0.93
Household: Two-parent	0.83	0.90 **	0.78	0.70 +	0.84	0.84
Single-Parent	0.16	0.09 **	0.21	0.29 +	0.15	0.15
Other Family Type	0.01	0.01	0.01	0.01	0.01	0.01
Language in the Home: English	0.13	0.18 +	0.29	0.27	0.99	1.00 +
Spanish	0.87	0.82 +	0.71	0.73	0.00	0.00
Other Language	0.00	0.00	0.00	0.00	0.00	0.00
Socio-Economic Status	-0.72	-0.62 *	-0.50	-0.24 **	0.34	0.17 ***
Below the Poverty Line	0.51	0.36 ***	0.21	0.27	0.07	0.10 **
Number of Siblings	1.81	1.72	1.37	1.30	1.39	1.36 ***
Parental Expecations	16.87	16.81	17.33	17.25	16.12	15.80 ***
Parental Involvement	3.36	3.32	3.39	3.22 *	3.93	3.68 ***
Urbanicity: Large City	0.47	0.33 ***	0.59	0.37 ***	0.20	0.06 ***
Midsize City	0.16	0.16	0.11	0.22 ***	0.28	0.16 ***
Large Suburb	0.30	0.24	0.26	0.26	0.42	0.32 ***
Midsize Suburb	0.04	0.08 +	0.00	0.10 ***	0.03	0.12 ***
Large Town	0.00	0.02	0.00	0.01 +	0.00	0.04 ***
Small Town	0.01	0.07 **	0.03	0.04	0.03	0.13 ***
Rural	0.02	0.11 **	0.01	0.00	0.04	0.17 ***

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

N=10,080 except for immigrant generation status, where N=12,001

[1] 1.5, 2nd, and 3rd generation results are based off of all Mexicans, other Hispanics, and whites in the ECLS-K at baseline. All other results are based off of Mexican immigrant children, other Hispanic immigrant children, and third generation whites exclusively.

Table 4.2. Mexican-White Difference-in-Difference Terms at Baseline

Outcome	Model 1[2]		Model 2[3]		Model 3[4]	
Math Direct Assessment	0.066	+	0.083	*	0.034	
Reading Direct Assessment	0.113	*	0.122	**	0.064	
Self-Control	0.074		0.070		0.065	
Externalized Problem Behavior	0.106	*	0.099	*	0.095	+
Internalized Problem Behavior	-0.058		-0.053		-0.064	
Interpersonal Skills	0.085	+	0.082		0.066	
Approaches to Learning	-0.010		-0.005		-0.024	

N = 14,400 per each of 10 Multiply Imputed Datasets

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-white DiD term.

[3] Model 2 adds the individual characteristics of gender, disability, held back, and head start.

[4] Model 3 adds the family characterstics of family type, language spoken in the home, socio-economic status, poverty line, number of siblings, parental expectations, parental involvement, and urbanicity.

$^{+}$p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 4.3. Math Direct Assessment and Externalized Problem Behavior at Baseline

	Math Direct Assessment			Externalized Problem Behavior		
Variable	**Model 1[2]**	**Model 2[3]**	**Model 3[4]**	**Model 1[2]**	**Model 2[3]**	**Model 3[4]**
Hispanic Immigrant	-0.357 ***	-0.347 ***	-0.165 ***	0.041	0.039	0.057
Mexican Immigrant	-0.482 ***	-0.456 ***	-0.153 ***	0.076 **	0.100 ***	0.089 **
Other	-0.172 ***	-0.145 ***	-0.085 ***	-0.008	0.002	0.005
Non-Traditional Destination	0.034 **	0.042	0.070 ***	0.048 ***	0.057 ***	0.071 ***
Mexican-White DiD	0.066 +	0.083 *	0.034	0.106 *	0.099 *	0.095 +
Hispanic-White DiD	0.009	0.040	0.038	-0.022	-0.001	-0.007
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --
Female		-0.034 ***	-0.031 ***		0.233 ***	0.233 ***
Disability		-0.108 ***	-0.104 ***		-0.098 ***	-0.100 ***
Repeat a Grade		-0.330 ***	-0.267 ***		-0.158 ***	-0.150 ***
Head Start		-0.174 ***	-0.055 ***		-0.141 ***	-0.111 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent			-0.031 **			-0.095 ***
Household Type: Other			-0.066 **			-0.149 ***
Language in the Home: Spanish			-0.204 ***			-0.023
Language in the Home: Other			-0.106 +			0.012
Socio-Economic Status			0.151 ***			0.021 *
Below the Poverty Line			-0.002			0.016
Number of Siblings			-0.016 ***			0.052 ***
Parental Expectations			0.017 ***			0.006 *
Parental Involvement			0.041 ***			-0.005
Urbanicity: Midsize City			-0.070 ***			-0.047 **
Large Suburb			-0.042 ***			-0.008
Midsize Suburb			-0.106 ***			-0.008
Large Town			-0.103 ***			-0.089 **
Small Town			-0.080 ***			-0.103 ***
Rural			-0.115 ***			-0.056 **
Constant	-1.080 ***	-0.949 ***	-1.355 ***	3.357 ***	3.318 ***	3.200 ***
N = 14,400 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-white DiD term.

[3] Model 2 adds the individual characteristics of gender, disability, held back, and head start.

[4] Model 3 adds the family characterstics of family type, language spoken in the home, socio-economic status, poverty line, number of siblings, parental expectations, parental involvement, and urbanicity.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 4.4. Mexican-White Difference-in-Difference Terms from Mixed Effects Modeling

Outcome	Model 4[2]		Model 5[3]		Model 6[4]		Model 7[5]		Model 8[6]	
Math Direct Assessment	0.045		0.067	*	0.029		0.029		-0.033	
Reading Direct Assessment	0.060	+	0.076	**	0.033		0.035		0.004	
Self-Control	0.084	*	0.080	*	0.067	*	0.066	*	0.152	**
Externalized Problem Behavior	0.115	**	0.108	**	0.096	*	0.094	*	0.218	***
Internalized Problem Behavior	-0.041		-0.036		-0.053	+	-0.057	*	0.039	
Interpersonal Skills	0.085	*	0.081	*	0.060	+	0.059	+	0.130	*
Approaches to Learning	0.022		0.025		-0.000		-0.002		0.086	

N = 66,760 for math and reading and 59,710 for all 5 socio-emotional outcomes per each of 10 Multiply Imputed Datasets.

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 4 includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-white DiD term. It is a random effects model.

[3] Model 5 adds the individual characteristics of gender, disability, held back, and head start.

[4] Model 6 adds the family characterstics of family type, language spoken in the home, socio-economic

[5] Model 7 specifies the model as mixed effects with random intercepts and a random slope for socio-economic status.

[6] Model 8 includes deciles of the inverse probability of treatment weight as a substitute of the individual and family covariates.

$^{+}$p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 4.5. Growth Curve Model of Math Direct Assessment[1]

	Math Direct Assessment									
Variable	**Model 4[2]**		**Model 5[3]**		**Model 6[4]**		**Model 7[5]**		**Model 8[6]**	
Hispanic Immigrant	-0.289	***	-0.276	***	-0.104	***	-0.103	***	-0.269	***
Mexican Immigrant	-0.324	***	-0.300	***	-0.044	*	-0.046	*	-0.254	***
Other	-0.153	***	-0.124	***	-0.071	***	-0.070	***	-0.158	***
Non-Traditional Destination	0.015		0.018	*	0.039	***	0.039	***	0.047	**
Mexican-White DiD	0.045		0.067	*	0.029		0.029		-0.033	
Hispanic-White DiD	0.053		0.084	*	0.094	**	0.093	**	0.020	
Individual Characteristics	--	--	--	--	--	--	--	--	--	--
Female			-0.067	***	-0.063	***	-0.063	***		
Disability			-0.080	***	-0.080	***	-0.080	***		
Repeat a Grade			-0.343	***	-0.294	***	-0.294	***		
Head Start			-0.172	***	-0.086	***	-0.086	***		
Family Characteristics	--	--	--	--	--	--	--	--	--	--
Household Type: One Parent					-0.024	**	-0.024	**		
Household Type: Other					-0.093	***	-0.094	***		
Language in the Home: Spanish					-0.188	***	-0.186	***		
Language in the Home: Other					-0.158	**	-0.157	**		
Socio-Economic Status					0.117	***	0.122	**		
Below the Poverty Line					0.006		0.004			
Number of Siblings					0.017	***	0.017	***		
Parental Expectations					0.007	***	0.007	***		
Parental Involvement					0.036	***	0.036	***		
Urbanicity: Midsize City					-0.047	***	-0.047	***		
Large Suburb					-0.031	***	-0.030	***		
Midsize Suburb					-0.074	***	-0.072	***		
Large Town					-0.074	***	-0.072	***		
Small Town					-0.068	***	-0.066	***		
Rural					-0.066	***	-0.065	***		
Time	0.026	***	0.026	***	0.027	***	0.027	***	0.026	***
Time*SES	--	--	--	--	--	--	-0.000	*	0.001	***
Constant	-0.705	***	-0.562	***	-0.846	***	-0.847	***	-0.806	***
Error Components										
Individual	0.322		0.285		0.250					
Idiosyncratic	0.419		0.418		0.417					
Random Effects										
SES							0.078	(.011)	0.15	(.008)
Constant							0.245	(.003)	0.29	(.003)
Residual							0.420	(.420)	0.42	(.001)
IPTW Decile										
1									-0.018	
2									0.091	***
3									-0.008	
4									0.049	**
5									0.092	***
6									0.151	***
7									0.142	***
8									0.072	***
9									0.098	***
N = 66,760 per each of 10 Multiply Imputed Datasets										

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 4 includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-white DiD term.

[3] Model 5 adds the individual characteristics of gender, disability, held back, and head start.

[4] Model 6 adds the family characterstics of family type, language spoken in the home, socio-economic status, poverty line, number of siblings, parental expectations, parental involvement, and urbanicity.

[5] Model 7 specifies the model as mixed effects with random intercepts and a random slope for socio-economic status.

[6] Model 8 includes deciles of the inverse probability of treatment weight as a substitute of the individual and family covariates.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 4.6. Mixed Effects Model of Externalixed Problem Behavior

	Externalized Problem Behavior					
Variable	**Model 4[2]**	**Model 5[3]**	**Model 6[4]**	**Model 7[5]**	**Model 8[6]**	
Hispanic Immigrant	0.033	0.031	0.050	0.050	0.054	
Mexican Immigrant	0.055 **	0.078 ***	0.075 **	0.078 **	0.029	
Other	-0.013	-0.002	0.003	0.003	-0.014	
Non-Traditional Destination	0.038 ***	0.046 ***	0.061 ***	0.061 ***	-0.008	
Mexican-White DiD	0.115 **	0.108 **	0.096 *	0.094 *	0.218 ***	
Hispanic-White DiD	-0.027	-0.005	-0.015	-0.013	-0.059	
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	
Female		0.240 ***	0.241 ***	0.242 ***		
Disability		-0.091 ***	-0.090 ***	-0.090 ***		
Repeat a Grade		-0.163 ***	-0.146 ***	-0.146 ***		
Head Start		-0.140 ***	-0.100 ***	-0.101 ***		
Family Characteristics	-- --	-- --	-- --	-- --	-- --	
Household Type: One Parent			-0.106 ***	-0.107 ***		
Household Type: Other			-0.156 ***	-0.157 ***		
Language in the Home: Spanish			0.007	0.006		
Language in the Home: Other			0.064	0.061		
Socio-Economic Status			0.033 ***	0.023 ***		
Below the Poverty Line			0.006	0.008		
Number of Siblings			0.031 ***	0.031 ***		
Parental Expectations			0.005 **	0.004 **		
Parental Involvement			0.005	0.005		
Urbanicity: Midsize City			-0.026 +	-0.026 +		
Large Suburb			-0.003	-0.003		
Midsize Suburb			-0.027	-0.027		
Large Town			-0.056 *	-0.057 *		
Small Town			-0.068 ***	-0.068 ***		
Rural			-0.049 **	-0.049 **		
Time	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	
Time*SES	-- --	-- --	-- --	0.001 ***	0.001 ***	
Constant	3.343 ***	3.299 ***	3.181 ***	3.185 ***	3.335 ***	
Error Components						
Individual	0.458	0.428	0.420			
Idiosyncratic	0.412	0.412	0.412			
Random Effects						
SES				0.072 (.019)	0.076 (.021)	
Constant				0.412 (.004)	0.447 (.004)	
Residual				0.412 (.002)	0.412 (.002)	
IPTW Decile						
1					0.014	
2					0.054 *	
3					0.035 +	
4					0.058 **	
5					0.084 ***	
6					0.117 ***	
7					0.091 ***	
8					-0.004	
9					-0.014	
N = 59,710 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 4 includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-white DiD term.

[3] Model 5 adds the individual characteristics of gender, disability, held back, and head start.

[4] Model 6 adds the family characterstics of family type, language spoken in the home, socio-economic status, poverty line, number of siblings, parental expectations, parental involvement, and urbanicity.

[5] Model 7 specifies the model as mixed effects with random intercepts and a random slope for socio-economic status.

[6] Model 8 includes deciles of the inverse probability of treatment weight as a substitute of the individual and family covariates.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Chapter 5. School Influence

The school is another important setting for child development. What takes place within schools has enormous ramifications for the children who attend them. The quality of teaching, the dynamics between teachers and students, and the interactions between students can have profound implications on child development. Because the dichotomy of traditional and new Mexican destinations is constructed by size and longevity of the Mexican community, I expect the schools Mexican immigrant children attend to substantially vary between destinations on key characteristics, such as percent Hispanic, teacher-pupil match, and socio-economic status.

Predicting which environment is more conducive to child development is not obvious. On the one hand, children may benefit from attending schools in recently established destinations. In non-traditional destinations the average school socio-economic status may be higher as more Mexican immigrant children attend suburban rather than urban schools. At the same time, the proportion of Hispanic students will be reduced because student bodies are populated from the surrounding area and Mexicans in non-traditional destinations live in areas that are less densely populated and segregated than Mexicans in traditional destinations (as shown in the *Neighborhood Influence* chapter). This change in the racial and ethnic diversity of the school, i.e. racial heterophily, has consequences for child development as a more heterogeneous school creates greater opportunities for children of Mexican immigrants to interact with non-Mexican-origin peers. Peer influence theory recognizes the importance of these interactions and friendships in the schooling process. Indeed, racial and socio-economic

heterophily has been shown to increase aspirations and achievement (Hallinan & Williams 1990; Kahlenberg 2012).

On the other hand, children may benefit from attending schools in traditional destinations, which have a long history of educating students of Mexican origin. The proportion of Hispanic teachers employed by the school varies by destination, as heavily Hispanic communities are more likely to employ Hispanic teachers. A greater number of co-ethnic teachers may improve parental involvement as Hispanic-immigrant parents often lack the language ability to engage with school authorities, forcing Hispanic families to rely more heavily on teachers as sources of information (Crosnoe, Johnson, & Elder 2004). Increased levels of teacher-pupil racial matching can also elevate student achievement (Meier, Wrinkle, & Plinard 1999; Weiher 2000). At the same time, co-ethnic teachers are perceived to have more favorable perceptions of their co-ethnic students (Ehrenberg, Goldhaber, & Brewer 1995). If traditional destinations contain a higher proportion of Hispanic teachers, then traditional destinations may have the advantage. Yet, non-Hispanic teachers in non-traditional destinations have less exposure to negative associations with Mexican children and may be less likely to exhibit statistical discrimination against them, which would positively influence Mexican immigrant children in non-traditional destinations.

I therefore hypothesize an array of school characteristics and processes explain both between and within-destination differences in developmental outcomes of children with Mexican immigrant parents. I anticipate that Mexican-white gaps in child development will be smaller in schools with a higher socio-economic status student body, greater racial heterophily, and more teacher-student matches (H3).

In this chapter I continue the analysis of the influence of non-traditional destinations on the Mexican-white development gap. Recall that in Chapter 4 I first explored the influence of living in non-traditional destinations on the Mexican-white achievement gap prior to the inclusion of covariates – the overall destination 'effect' – through the difference-in-difference term, and then examined how much of the DiD was explained by family covariates and individual controls. I continue this here by examining the influence of school and classroom characteristics on child development *and* changes in the DiD after the inclusion of these additional characteristics.

I first discuss variation in school and classroom characteristics across the two destinations for Mexican-immigrant children (MIC), other Hispanic immigrant children (OHIC), and third generation whites (TGW). Second, I examine the association between school and classroom covariates and child developmental levels within a multivariate framework in the fall of kindergarten (the first survey wave). These characteristics are added to the family covariates (and individual controls) included in the *Family Influence* section of Chapter 4. The same difference-in-difference terms are used to capture the influence of destination on the Mexican-white development gap. Here the DiD represents the net influence of destination on the Mexican-white development gap not attributable to school and classroom characteristics, family characteristics, or individual controls. Ten multiply imputed datasets are employed; results are obtained by Rubin's rule based upon estimates using the ten datasets.

Lastly, I examine the influence of school and classroom covariates on child development through mixed effects modeling of panel data with random intercepts and random slopes. These over-time analyses track child development from kindergarten

through 8th (or 5th) grade.[66] I employ the same inverse probability of the treatment weights as in the *Family Influence* section of Chapter 4 in order to reduce observed bias between families in traditional and non-traditional destinations, and, therefore, create a sharper estimate of the influence of non-traditional destinations on the Mexican-white development gap net of school and classroom characteristics.

Descriptive Variation in School and Classroom Characteristics

School Variation between Destinations, Baseline

Because long-standing and recently established Mexican destinations are constructed at the state level, and states contain a large amount of heterogeneity, a majority of the variance should be contained within each destination type (''WV' – within variation) rather than between destinations ('BV' – between variation). For instance, aggregation to destination type hides the variation between urban and rural areas within a state, such as California, and, more broadly, within destinations. As well, family and individual characteristics are not expected to vary greatly across destinations because these characteristics are a reflection of the child and/or household, not environmental characteristics such as the school or neighborhood. Therefore, it is not surprising that in the ECLS-K more than ninety-six percent of variation in family and individual characteristics is attributable to within destinations ('WV'). Such characteristics as parental socio-economic status and type of household do not vary much across destinations.

[66] The cognitive development measures were assessed through 8th grade in the ECLS-K. The noncognitive development measures were assessed through 5th grade.

However, this is not the case for school characteristics as they reflect forces exogenous to an individual household. Because the destination dichotomy was constructed to capture the size and longevity of Mexican immigrant populations, a substantial proportion of school variation is expected to be attributable to variation between destinations. Note that the unit of analysis here is the school (or classroom). I examine variation in school and classroom characteristics for Mexican immigrant children across the two destinations, and then the influence of these characteristics on their development.

Racial Composition

I find evidence to support school variation across destinations. A school's percent Hispanic is measured categorically, with less than ten percent, ten to twenty-five percent, twenty-five to fifty percent, fifty to seventy-five percent, and above seventy-five percent. For the schools Mexican immigrant children attend, one fifth of the variance for the less than ten percent Hispanic category is attributable to variation between the two destination types (BV).[67] Twenty percent of the variation explained across destinations is an extremely large value when compared to the four percent BV for family characteristics. Also for Mexican immigrant children, more than sixteen percent of the variance in their schools' proportion of white students and fourteen percent of the variation in their schools' percent English as a second language/Bilingual also traces to the between destination variation. This implies that there are substantive regional differences in the racial makeup of the schools Mexican immigrant children attend.

[67] Results from the variation decomposition are available upon request.

Table 5.1 details weighted mean differences in school and classroom characteristics by destination and group in the fall of kindergarten.[68] Through it I examine the direction of the variation described in the variance decomposition. Looking under the *Mexican* heading, the substantial between-destination variation for proportion whites is due to nearly a one standard deviation difference between destinations, 16.64 percent in TD vs. 44.33 percent in NTD.

Also under the *Mexican* heading, the large amount of between-destination variation in the less than ten percent Hispanic category and the English as a second language/Bilingual measure is due to a small presence of Hispanic children in non-traditional destination schools. More specifically, fifty-one percent of Mexican immigrant children in traditional destinations attend schools that are at least seventy-five percent Hispanic and an additional twenty-three percent attend schools that are fifty to seventy-five percent Hispanic. In contrast, only twenty percent of Mexican immigrant children in non-traditional destinations attend schools that are more than seventy-five percent Hispanic, a difference of sixty percent. Rather, these children attend schools that have far fewer Hispanics: Thirty-seven percent attend schools that are less than ten percent Hispanic, with an additional twelve percent attending schools that are ten to twenty-five percent Hispanic. For Mexicans in traditional destinations, the values are only two and six percent, respectively.

There are also differences in the broader racial/ethnic makeup of the schools Mexican immigrant children attend. There is less than a ten percent black enrollment in eighty percent of Mexican-attended schools in traditional destinations. This value falls

[68] Mexican refers to 1.5 & 2nd generation Mexican immigrants, other Hispanic refers to 1.5 & 2nd generation Hispanic immigrants who are not of Mexican descent, and white refers to third generation whites.

one quarter to sixty-one percent in non-traditional destinations. There are fewer Asians in these non-traditional destination schools (2.66 percent vs. 3.81 percent). On the other hand, there are no significant differences in the percent that are bussed from outside the neighborhood (not reported in Table 5.1).

The same general trend of less Hispanics, more whites, and more blacks is also found for other Hispanic immigrant children across the dichotomy (as seen in the *Other Hispanic* heading of Table 5.1), which is consistent with demographic differences by region of country.

Low-Income School Enrollment

The mean socio-economic level of the student body in Mexican-attended schools varies across destinations. In recently established communities, a lower percentage of students receive free lunch (43 percent vs. 60 percent), a difference of .66 standard deviations. This implies the average socio-economic status of students in Mexican-attended schools is higher in non-traditional than traditional destinations.

Teacher-Pupil Match

Teacher-pupil match is theorized to be a key school-level factor that influences child development. In other words, if both a student and his/her teacher are of the same race/ethnicity, this is considered to be beneficial to student outcomes, particularly for minority students (Meier, Wrinkle, & Plinard 1999). In the schools Mexican immigrant children attend, over ninety-four percent of the teaching staff are white, black, or Hispanic. The percent of teachers that are Hispanic is 1/3 in traditional destinations and

1/10 in non-traditional destinations, a contrast of 1.73 standard deviations (see results under the *Mexican* heading in Table 5.1). Not surprisingly, the percent of white teachers is higher in non-traditional destinations (eighty vs. fifty-six percent), a difference of 1.15 standard deviations. The percent of black teachers also is higher (eight vs. five percent). Similar trends are found for other Hispanic immigrant children.

Language Resources

Mexican immigrant children in non-traditional destinations attend schools with fewer resources for non-native speakers. A scale that measures services available for Limited English Proficiency students (LEP) shows that, on average, sixty-one percent of schools have LEP services in traditional destinations, whereas only forty-six percent do in non-traditional destinations.[69] This is a difference of .47 standard deviations. The proportion of schools that receive bilingual aid or migrant aid is also smaller, with 3/4 of schools in traditional destinations but only 2/5 of schools in new destinations receiving bilingual aid. Similarly, the proportion for migrant funding is forty-three and fifteen percent, respectively. These differences likely follow from regional differences in the percent of students that are English as a 2nd language learners (ESL); twenty-two percent in non-traditional destination as against fifty-five percent in traditional destinations (1.49 standard deviation difference). For other Hispanic immigrant children, the proportion of the school that is ESL is also smaller in non-traditional destinations. However, there is

[69] The School Limited English Proficiency scale is made up of six items assessed at wave 2. They are whether or not there was a home visit to a language minority-limited English proficiency (LM-LEP) student, special meeting for a non-English speaking parent, help from an outreach worker, availability of a LM-LEP translator, a LM-LEP written translator, and other LM-LEP services. The scale has a reliability coefficient of .83 and an average inter-item covariance of .08.

no significant difference in LEP services provided across destinations, hovering in the mid-forty percent range (see results under the *Other Hispanic* heading).

School Sector

Mexican immigrant children attending schools in new destinations are significantly less likely to attend public schools (91 percent vs. 97 percent under the *Mexican* heading in Table 5.1) and more likely to attend private Catholic schools (7 percent vs. 2 percent). The disorder of the school varies, with those in new destinations ranking significantly better on a scale of disorder by .35 standard deviations.[70]

Classroom Variation between Destinations, Baseline

Differences in racial makeup for Mexican immigrant children (and other Hispanic immigrant children) are also found at the classroom level. Seventeen percent of the variation in classroom percent Hispanic and sixteen percent of the classroom percent minority is attributable to the between destination variance (not reported). This translates to a difference in the classroom percent Hispanic of seventy-nine vs. forty-three percent (1.28 standard deviations) and the percent of classrooms with an LEP student of eighty-eight vs. sixty-nine percent (.44 standard deviations) for traditional as compared to non-traditional destinations (results described under the *Mexican* heading in Table 5.1). The classroom's percent minority also differs between traditional (eighty-nine percent) and

[70] The social disorder scale consists of questions that assess the violence, crime, and overall security around the school. Items include whether there is tension because of differences [sic], if there is a problem with physical attacks or fights, crime in the area, drugs, direct theft from children, gangs, litter, vacant buildings, violent crime, or children bringing weapons to school. These items were assessed in waves 2, 4, 5, and 6, and some were assessed in wave 7. The lowest alpha for this scale is .83 in wave 7. The wave 7 inter-item correlation is .50. The ICC at all other waves ranges between .35 and just over .37.

non-traditional destinations (sixty-one percent; .86 standard deviations). The teaching style of the class differs with a higher rate of English-only classrooms in non-traditional destination schools (seventy percent vs. forty-five percent; .83 standard deviations).

Results from Table 5.1 also show differences in teacher characteristics at the classroom level. Nearly fifty percent of classroom teachers in Mexican-attended schools in traditional destinations are Hispanic, compared to just over twenty percent in non-traditional destinations, a contrast of 1.14 standard deviations (fourteen percent of the variance is attributable to between destinations). Similarly, the likelihood a teacher speaks Spanish varies by 1.31 standard deviations, from almost 4/5 to less than 1/3 (also fourteen percent of the variance is attributable to between destinations). Even the likelihood of having a Hispanic principal is different, a fifty percent variation between thirty-one and twenty percent (.62 standard deviations). Examining characteristics of the schools other Hispanic immigrant children attend, there is not a difference in the proportion of Hispanic teachers at the classroom level between traditional and non-traditional destinations, but there is a lower level of Spanish speaking ability of classroom teachers and a smaller proportion of Hispanic principals in non-traditional destinations.

School Differences by Race/Ethnicity

I also compare the overall differences between third generation whites (TGW), Mexican immigrant children (MIC), and other Hispanic immigrant children (OHIC). As seen by comparing values under each of the 'Trad' headings in Table 5.1 (similarly for the 'New' headings), a higher percentage of Mexican and other Hispanic immigrant children attend public schools than of whites. For example, in non-traditional

destinations ninety-one percent of MIC and ninety percent of OHIC attend public schools, whereas only eighty-two percent of TGW do. Also, the schools MIC attend rate worse on the disorder scale. A higher proportion of Mexican-attended schools receive funding from migrant aid and bilingual aid.

The student bodies in Mexican-attended and OHIC-attended schools had a higher proportion that qualified for free lunch programs (e.g. 60 percent for MIC, 41 percent for OHIC, and 22 percent for TGW in traditional destinations), were a much higher percent Hispanic, higher percent Asian, less percent white, and higher percent ESL/bilingual. The same is true at the classroom level, with far more minority students (89 percent, 81 percent, and 31 percent for MIC, OHIC, and TGW in traditional destinations, respectively), and Hispanics specifically, a greater likelihood of having a LEP student in the class (not reported), and fewer English-only classrooms. These students had schools with fewer white teachers, more Hispanic teachers, more black teachers, and teachers more likely to know Spanish (77 percent for MIC, 65 percent for OHIC, and 15 percent for TGW in traditional destinations, for example). Their schools were more likely to have a Hispanic principal; twenty percent of the schools in non-traditional destinations compared to one percent for third generation whites.

Discussion

The schools Mexican immigrant children attend are quite different across destinations when examined through the lenses of socio-economic heterogeneity, racial heterophily, and teacher-pupil match. The non-traditional destination schools have a more well-to-do student body as a lower proportion of students qualify for free lunch.

They are more diverse, with Mexicans attending majority-minority schools in recently established destinations but hyper-segregated schools in long-established destinations. The schools in non-traditional destinations have more white and black students, but fewer Asians, than schools in traditional destinations. These results suggest that Mexican immigrant children in new destinations interact with a more diverse and higher socio-economic status student body than their traditional destination peers.

Attending a school with a more eclectic group of peers with higher average socio-economic status may prove to be advantageous for the development of these children. In particular, they may benefit from having a set of peers distinctive to the co-ethnic community. Diversity of social networks may improve social and interactive behavior. Mexican immigrant children in traditional destinations do not benefit from a diversity of peers in the school setting due to hyper-segregation in their schools.

While the schools Mexican immigrant children attend in new destinations contain more diverse and well-to-do student bodies, minority teachers are fewer in number. Having a teacher that is of the same race/ethnicity as the student may improve a student's academic achievement (Meier, Wrinkle, & Plinard 1999). A potential mechanism could be that students feel they have an ally within the educational system, something 1st and 2nd generation children may not be accustomed to having. Moreover, the likelihood the teacher speaks Spanish is lower in non-traditional destinations. This implies that the ESL/bilingual students, as many Mexican immigrant children surely are, will have a harder time communicating with and understanding their teacher, potentially alienating them from the schooling process. Moreover, the number of English-only classrooms in non-traditional destinations is nearly seventy-percent, as compared to forty-five percent

in traditional destinations, which only increases the difficulty of the learning process for non-native English speakers. This is also reflected in fewer LEP services and lower funding from bilingual and migrant aid. Finally, the likelihood of having a Hispanic principal is also lower, implying that many Mexican immigrant school children lose a highly influential co-ethnic advocate. Having fewer Hispanic-friendly principals, teachers, and resources may offset the potential development gains of a greater variety of daily interactions Mexican immigrant children experience in new destination areas. I now turn to investigating the impact of school characteristics on child development in a multivariate framework.

Multivariate Results

Baseline

I investigate the influence of school and classroom characteristics on academic and socio-emotional development within a multivariate framework. I examine baseline results in the fall of kindergarten first, then over the elementary school years and into the middle grades. The influence of destination is measured through the difference-in-difference term. It represents the effect attributable to non-traditional destinations on the Mexican-white development gap that is not accounted for by school, classroom, and family characteristics (and individual controls). It assesses whether the partial DiD term changes with the addition of school and classroom characteristics. The analysis also examines the influence of school and classroom characteristics on both domains of development. A similar DiD term is also used to examine differences between other Hispanic immigrant children and third generation whites.

As discussed previously, academic development is measured through direct assessments of math and reading. Socio-emotional development is measured through the five scales of self-control, externalizing problem behaviors, internalizing problem behaviors, interpersonal skills, and approaches to learning.

In the baseline analyses I include four models, a replication from the final model in the *Family Influence* section of Chapter 4, which includes family characteristics and individual controls (Model 1).[71] Model 2 adds variables that capture the effect of low-income school enrollment, school sector, sources of funding, and social disorder. Model 3 adds measures of racial diversity at the school and classroom levels, including the proportion Hispanic in the school and the proportion minority in the classroom. In Model 4 I insert measures of teacher-pupil match, including the proportion of the school's teachers that are Hispanic and whether the classroom teacher speaks Spanish. I discuss results for each of the seven development outcomes, but for brevity report results only for direct math assessment and externalized problem behavior in tables 5.2 and 5.3, respectively. Results for the other developmental outcomes are located in Appendix Table C-2.

The DiD

Results for the difference-in-difference term may be compared by contrasting school and classroom models (Models 2-4) to the final *Family Influence* model (Model 1) in Tables 5.2, 5.3, and Appendix Table C-2. Consistent with results found in the *Family Influence* section of Chapter 4, the DiD term remains non-significant with the addition of school and classroom characteristics in Models 2-4 for math (Table 5.2) and reading

[71] Model 3 in Chapter 4.

achievement (Appendix Table C-2). Put another way, there is no influence of living in a non-traditional destination on the Mexican-white achievement gap at the onset of formal schooling.

Along the noncognitive domain of development, results from the *Family Influence* section of Chapter 4 (Model 1) reveal almost no significant influence of living in a non-traditional destination on the Mexican-white socio-emotional development gap in the fall of kindergarten. The only term that approaches significance is the DiD for externalizing problem behavior ($p<.1$, Model 1 in Table 5.3). With the addition of school and classroom characteristics in Models 2-4, the DiD terms largely remain non-significant (Table 5.3; Appendix Table C-2). For instance, the significance of the externalizing problem behavior DiD is no longer significant by Model 4 (Table 5.3). The only exception is for internalizing problem behavior. With the inclusion of school and classroom characteristics (Model 4), Mexicans in non-traditional destinations are rated worse on the internalizing problem behavior scale. The other Hispanic DiD terms are not significant for any of the cognitive and noncognitive development measures.

Race/Ethnicity and Destination

The overall gap in academic preparation between third generation whites and Mexican immigrant children (and third generation whites compared to other Hispanic immigrant children) at the beginning of kindergarten is maintained. Third generation whites perform better on math and reading. For instance, Table 5.2 shows a -.153 association between Mexican immigrant children and math scores in Model 1.[72] The inclusion of school and classroom characteristics does not change this fundamental gap in

[72] For the reading assessment results, please see Appendix Table C-2.

academic preparation. There remains a -.112 association between Mexican immigrant children and math attainment in Model 4.

The same socio-emotional trends found in Chapter 4 are maintained with the inclusion of school level characteristics. Results from Table 5.3 indicate that Mexican immigrant children are rated as performing better on externalizing problem behavior ($p<.001$) than third generation whites, and their advantage increases from .089 in Model 1 to .117 in Model 4 ($p<.001$), after the inclusion of school and classroom characteristics. They also rate as having fewer signs of internalizing problem behavior ($p<.05$) than third generation whites. Other Hispanic immigrant children rate worse on approaches to learning at trend ($p<.1$) but, unlike in the previous chapter, no longer are rated worse on self-control.[73]

The significant differences in academic and socio-emotional development by destination detected in Chapter 4 are largely maintained after the inclusion of school and classroom level characteristics. Children living outside of the traditional Southwest perform better on math (e.g. β=.040, $p<.001$ in Model 4 of Table 5.2) and are rated higher on all socio-emotional scales except for internalizing problem behavior (no significant difference, Appendix Table C-2). The only change in the results is for reading, where a significant difference is no longer detected (Appendix Table C-2).

Influence of School and Classroom Characteristics

Various school and classroom characteristics influence child development in the fall of kindergarten. At the beginning of this chapter, I discussed the potential impact of such characteristics as low-income school enrollment, racial heterophily, and teacher-

[73] See Appendix Table C-2 for the other socio-emotional outcomes.

pupil match. Before turning to these, I discuss social disorder, type of school, bilingual aid, and migrant aid.

The level of social disorder in and around the school impacts child development. Higher (i.e. better) scores on the social disorder scale are related to improved math and reading assessments. The results are significant for math direct assessment in Models 2, 3, and 4 of Table 5.2 ($p<.05$). The effect is small, however. A one-unit improvement in the social disorder scale (which ranges from -4.6 to 2.4) only improves math by .014 points (Model 4).

The type of school a child attends matters. Attending a private school is associated with higher math and reading scores. For instance, there is a .040 boost in math scores of children who attend a Catholic school and a .131 boost for children who attend a non-religious private school ($p<.001$, Model 4 in Table 5.2). The relationship between school type and noncognitive development is more complicated, however. There is a negative relationship between attending any private school and both self-control and approaches to learning in the fall of kindergarten (see Appendix Table C-2). However, Catholic schools, which are a subset of private schools, are positively associated with internalizing problem behaviors when compared to public schools. This distinguishes Catholic schools from other private schools (religious or otherwise). As well, all private schools except Catholic schools are negatively associated with externalizing problem behaviors. For instance, attending a non-denominational private school is associated with a -.086 penalty in externalizing problem behaviors at the beginning of the formal schooling process ($p<.001$, Model 4 in Table 5.3).

I also investigate the impact of a school receiving funding for bilingual aid and migrant aid. Bilingual aid is associated with improved reading scores though it has a negative relationship with self-control and interpersonal skills (see Appendix Table C-2). Migrant aid has a negative impact on externalizing (not reported in Table 5.3 but available upon request) and internalizing problem behaviors.

Low-Income School Enrollment. Moving to the investigation of the key school components, I find that a school's socio-economic status matters. I measure the average socio-economic status of the student body with the proportions of students that qualify for free or reduced price lunch. A higher proportion of free lunch students are associated with lower academic achievement in the fall of kindergarten for individuals (β=-.001, p<.001 for math achievement in Models 2, 3, and 4 in Table 5.3). While a coefficient of .001 appears small, consider its potential influence for Mexican immigrant children across destinations. In longstanding Mexican communities the mean number of students that qualify for free lunch in Mexican-attended schools is sixty percent against forty-three percent in newly established communities (See Table 5.1). This seventeen-percentage point difference translates to an increase in math scores of .017. The mean math scores in the fall of kindergarten for the two Mexican samples are -1.562 and -1.457 in traditional and non-traditional destinations, respectively, a .105 gap favoring non-traditional destinations. This difference in the proportion of students qualifying for free lunch therefore accounts for sixteen percent of the difference in mean math scores (.017/.105). The free lunch percentage difference is similarly associated with lower levels of self-

control, externalizing problem behaviors (β=-.001, p<.001 in Models 2, 3, and 4 in Table 5.3), and approaches to learning.

Racial Composition. Racial composition impacts child development. Higher enrollments of Hispanic students are associated with lower cognitive assessments in the fall of kindergarten. When compared to schools with less than a ten percent Hispanic population, math achievement averages are .023, .052, .071, and .102 lower for the 10-25 percent, 25-50 percent, 50-75 percent, and more than 75 percent categories, respectively (see Model 4 in Table 5.2). Segregation level thus has considerable bearing on the academic performance of Mexican immigrant school children. In fact, the difference between attending a less than ten percent Hispanic school and a school that is more than seventy-five percent Hispanic is .102, nearly the .105 math achievement gap between Mexicans in new and old destinations.[74] There are real consequences for whether or not a Mexican child attends a hyper-segregated school in a traditional destination or a far more heterogeneous school in a non-traditional destination.

The racial makeup of the school also matters for socio-emotional development. Children receive worse ratings of self-control, interpersonal skills, and approaches to learning in schools that are at least fifty percent Hispanic. For instance, there is a .283 penalty in approaches to learning associated with attending schools that are seventy-five percent Hispanic (see Appendix Table C-2). Lower ratings of self-control, interpersonal

[74] The .102 and .105 values are based on the direct math assessment theta score at baseline. The .102 value represents the decline in math scores associated with attending a school that is seventy-five percent Hispanic as compared to one that is less than ten percent Hispanic. The .105 value represents the weighted difference in math achievement between Mexican immigrant children in non-traditional and traditional destinations in the fall of kindergarten. The direct math assessment score in the fall of kindergarten ranges from -2.800 to .6839, with a standard deviation of .478 and a mean of -1.

skills, and approaches to learning are also associated with schools that are at least seventy-five percent black as compared to less than ten percent black (Appendix Table C-2).

Other racial and ethnic dynamics are consequential for child development. The proportion of English as a Second Language learners (ESL)/bilingual learners negatively correlates with self-control and internalizing problem behaviors. However, the amount of Limited English Proficiency services dramatically improves math (β=.033, p<.05 in Model 4, Table 5.2), reading, and self-control. This indicates that policies implemented to foster the learning process of students with limited English skills are working.

Teacher-Pupil Match. I also explore the influence of the race/ethnicity of the teacher. At the school level, an increase in the percentage of the school whose teachers are Hispanic is associated with math improvement (β=.001, p<.05, Model 4 Table 5.2) but not reading. An increase in the percentage of African American teachers is associated with improvements in math (β=.001, p<.05, Model 4 Table 5.2), reading, externalizing problem behavior (β=.002, p<.1 in Model 4 of Table 5.3), and interpersonal skills (Appendix Table C-2).

At the classroom level in the fall of kindergarten, having a Spanish-speaking teacher is associated with lower levels of internalizing problem behaviors. A Hispanic teacher-pupil match, which measures whether a Hispanic student has a Hispanic teacher, is negatively associated with externalizing (β=-.099, p<.1 in Model 4 of Table 5.3) and internalizing problem behaviors.

Discussion

There is no evidence that living in a non-traditional destination positively influences the Mexican-white developmental gap in the fall of kindergarten, even with the inclusion of school and classroom characteristics. Of all seven developmental outcomes, the only significant result is actually negative – living in non-traditional destinations is associated with expanding the internalizing problem behavior gap.

There persists an overall hierarchy of achievement in which Mexican and other Hispanic immigrant children lag behind third generation whites in their preparation for school. As well, all children who live outside the Southwest enter the schooling process with more self-control, fewer signs of externalizing problem behavior, and greater approaches to learning. The improvement in reading preparation associated with living in non-traditional destinations, found in the *Family Influence* section of Chapter 4, is explained by the racial/ethnic population and Limited English Proficiency services offered by the school (Model 3).[75] The difference in availability of LEP programs across the two destinations is striking, with schools in traditional destinations providing twice as many services (.46 vs. .23). The fact that there is no net reading advantage for students in non-traditional destinations points, in part, to the lack of LEP programs.

The socio-economic level of the student body has important consequences for child development. A higher proportion of students receiving free lunch correlates negatively with academic achievement in the fall of kindergarten. Similarly, a low-income student body is associated with less self-control, greater externalizing problem behavior, and worse approaches to learning.

[75] The scale has an alpha of .83. It consists of such measures as home visit to the Language Minority (LM) / Limited English Proficiency family, holding non-English parent meetings, the use of an outreach worker, translators, and written translation.

Racial diversity is associated with developmental levels in the fall of kindergarten. There are net benefits to Mexican and other Hispanic children attending schools that are more heterogeneous, as the academic achievement scores of children are lower in schools with larger amounts of Hispanic students. Moreover, there are negative consequences to enrolling in schools that are more than fifty percent Hispanic or African American for socio-emotional development. In traditional destination cities, where rampant segregation leads to high levels of school segregation, integration along lines of race/ethnicity is unlikely. In non-traditional destinations, however, Mexicans are less likely to live in highly segregated areas and are therefore less likely to attend highly segregated schools, which translates to an advantage in cognitive development.[76]

As regards the teaching staff, there is some evidence that diversity here too improves development. Academic scores are positively associated with greater proportions of Hispanic or black teachers. As well, higher proportions of black teachers are associated with greater interpersonal skills and fewer internalizing problem behaviors. This is interesting as it may imply that minority students have an easier time adjusting to the formal schooling process when their teachers are of similar racial/ethnic groups. But where tested by creating a variable that measures if both a student and their teacher are of Hispanic origin – a 'match,' there is no benefit to Hispanic students having a Hispanic teacher. In fact, there is actually a negative association with both externalizing and internalizing problem behaviors. Whether Hispanic teachers are more demanding of their Hispanic pupils, less sympathetic, or better at assessing their students' true behavior, there does not appear to be a boost to Hispanic children having a Hispanic teacher.

[76] Neighborhood segregation and other neighborhood characteristics are explored in the following chapter.

I also find evidence that school programs aimed at supporting the integration and learning process of limited English speakers are working. While there is a negative association between the proportion of limited English proficiency (LEP) students in the school and child development, this is expected given the language barriers these children face. Providing LEP services helps combat these difficulties, improving reading, especially, as well as math and self-control in the fall of kindergarten.

Finally, there are differences in the preparation of students by the types of schools they attend. Students that are enrolled in private schools test higher on academic scores at the onset of formal schooling. This includes Catholic schools, other religious schools, and non-denominational private schools. Socio-emotionally, however, these students generally have worse skills than their public school counterparts. The one exception is Catholic school students, who at least at the beginning of school exhibit fewer signs of internalizing problem behaviors.

Growth Models

While the baseline models are able to reveal relationships between characteristics and development at the onset of formal schooling, panel data models are more aptly suited for evaluating the influence of these characteristics on the developmental process throughout primary school. These next analyses examine the influence of school and classroom characteristics on cognitive and noncognitive development from kindergarten through 8th grade. Models are specified as two-level hierarchical mixed effects models with child-time nest in child. All models include a random intercept and a random slope for socio-economic status. Socio-economic status is chosen to specify the random slope

due to the potential variation in its effects across families. The model includes a cross-level interaction between time and socio-economic status. Results are discussed for all of the developmental outcomes. Results from the direct math assessment and externalized problem behavior models are located in tables 5.5 and 5.6, respectively, while the other results are located in Appendix Table C-7.[77]

Model 5 is a duplicate of a model from the *Family Influence* section of Chapter 4. It includes only family covariates and individual controls. Model 6 introduces all school and classroom characteristics. Model 7 is the final model for the interpretation of the influence of living in a non-traditional destination on the Mexican-white development gap net of family and school characteristics, what I call the partial destination 'effect,' as well as for the school and classroom characteristics. In it I introduce deciles calculated from the inverse probability of treatment weights (IPTW). These are the same deciles utilized in Chapter 4. Recall that the IPTW represents the likelihood a child lives in a non-traditional destination with values ranging from 0 to 1. This model also includes the same family covariates and individual controls as Models 5 and 6.[78]

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[77] To streamline results, I only report one academic and one socio-emotional outcome at the end of the chapter. Appendix Table C-7 reports Model 7 for all seven developmental outcomes.

[78] Note that this varies from the *Family Influence* section of Chapter 4. In Chapter 4, the final model for the interpretation of family covariates did *not* include IPTW deciles. The IPTW deciles are derived from the propensity-score matching model, which is derived from matching family and individual variables across the destination dichotomy. Therefore, the IPTW deciles capture part of the association from each family and individual variable. The coefficient of parental socio-economic status, for instance, represents the partial association of parental SES that is not accounted for in the IPTW deciles. It does *not* represent the full relationship. Therefore, the final model for the family covariates must be one that does not contain the IPTW deciles. The final model for the partial destination influence in Chapter 4, however, does include the IPTW deciles, as this creates a sharper contrast between the two destinations. Likewise, the final model for the partial destination influence in the *School Influence* chapter, also includes IPTW deciles.

What varies is that the final interpretation of the school and classroom covariates is also from the model with the IPTW deciles, which is not the case for Chapter 4. In order to evaluate the influence of school and classroom characteristics, the model must first include family characteristics (and individual controls). The IPTW does not capture all of the influence of these variables. Therefore, they must be included directly in the model, even though their coefficients only represent a portion of the association. I do not interpret the coefficients for the family covariates in this model, but they must be included. The final interpretation of the family covariates in these models is Model 6.

The DiD

Table 5.4 reports the Mexican difference-in-difference terms for Models 5, 6, and 7. No destination influence exists for the Mexican immigrant children – third generation white cognitive development gap (Model 5). This finding persists after the introduction of school and classroom characteristics in Model 6. While there is a positive result for reading development, it is significant only at the 90 percent confidence level. Moreover, it is eliminated in Model 7, which provides the clearest contrast between destinations.

Destination does, however, significantly influence the Mexican-white noncognitive development gap. First, there is a net benefit of living in a non-traditional destination on the reported self-control of Mexican immigrant children after accounting for family covariates and individual controls in Model 5 (β=.066, p<.05). Though this influence appears to be explained by various school and classroom characteristics (Model 6), recall that Model 7 is the final model for the interpretation of the destination influence as it introduces IPTW deciles to create a sharper contrast between the destinations. The partial destination influence of self-control reappears and has a larger magnitude in this final model (β=.116, p<.05). I also find positive destination influences for externalizing problem behaviors and interpersonal skills. These persist across all three model specifications.

Interestingly, there is initial evidence of a negative destination influence on internalizing problem behaviors. In both Models 5 and 6 the DiD is negative, implying that the Mexican-white internalizing problem behaviors gap is larger in non-traditional destinations (β=-.067, p<.05 in Model 6). The inclusion of school and classroom characteristics does not explain this finding as the term remains significant, growing in

magnitude from Model 5 to Model 6. However, the term is no longer significant in Model 7, which adds the IPTW deciles. After accounting for an individual's likelihood of being in one destination as compared to another, there is no evidence of a destination influence on the Mexican-white internalizing problem behaviors gap. Recall as well that in Chapter 4, the inclusion of the IPTW deciles also eliminated the significance of the internalizing problem behavior DiD (see Table 4.4 in Chapter 4).

After creating a sharper contrast between the destinations, there remain partial destination influences for three noncognitive development measures that are unexplained by school, classroom, and family covariates. That said, the size of the DiD effect is diminished approximately twenty percent from the final IPTW deciles model in the *Family Influence* section of Chapter 4 to the final IPTW deciles in this chapter; self-control reduces from .152 (Model 8 in Table 4.4) to .116 (Model 7 in Table 5.4), externalizing problem behavior reduces from .218 to .178, and interpersonal skills reduces from .130 to .102. Part but not all of the destination influence on the Mexican-white development gap is explained by school and classroom characteristics.

Race/Ethnicity and Destination

Tables 5.5 and 5.6 report the multivariate panel data results for Models 5, 6, and 7 for math direct assessment and externalizing problem behavior, respectively.[79] I interpret differences in development by race/ethnicity and destination in Model 6, and the influence of the DiD and school characteristics in Model 7.

The racial/ethnic hierarchy in academic achievement is maintained over-time with 1.5 & 2nd generation Mexicans (β=-.056, p<.01 in Model 6 of Table 5.5) and other

[79] See Table C-7 in the Appendix for results for the other developmental outcomes.

Hispanics performing worse than 3rd generation whites from kindergarten through 8th grade, which supports previous literature on an ongoing achievement gap between Hispanics and whites (Reardon & Galindo 2009).

Along the noncognitive domain of development, the gaps between third generation whites and Mexican immigrant children originally found in Chapter 4 increase slightly after the inclusion of school and classroom covariates (e.g. β=.100, p<.001 in Model 6 of Table 5.6 vs. β=.078, p<.05 in Model 7 of Table 4.6). Mexicans are rated as having greater amounts of self-control, fewer externalizing problem behaviors, and greater interpersonal skills. However, they are seen as having worse internalizing problem behaviors.

While the main effect of living in a non-traditional destination has a significant impact on all development outcomes when family covariates are included in the model (Model 5), the inclusion of school and classroom characteristics eliminates this effect for math, reading, and interpersonal skills (Model 6). The positive association of living in a non-traditional destination is explained by such school characteristics as proportion Hispanic and free lunch. The positive main effect of destination remains for the other four measures of socio-emotional behavior. For instance, β=.048, p<.001 for externalizing problem behaviors (Model 6 in Table 5.6).

Influence of School and Classroom Characteristics.

Model 7 reports the influence of school and classroom characteristics on cognitive and noncognitive development for the kindergarten to 8th grade period. I begin with a

discussion of social disorder, school type, and bilingual & migrant aid before moving on to socio-economic level, racial composition, and teacher-pupil match.

Improvement in social disorder (a higher score is better) positively correlates with math (β=.014, p<.01 in Model 7) and reading (p<.001). It has no influence, however, on socio-emotional development. While there is barely a descriptive difference in the social disorder levels across destinations in the fall of kindergarten (p<.094), the difference expands over-time. When all waves are pooled the bivariate difference in social disorder between the two destinations is significant at p<.001.

There is large variability in benefits by school type. Over-time, attending a Catholic school is negatively associated with math development (β=-.021, p<.05), but not reading. Attending a non-religious private school, however, significantly improves math and reading.

Socio-emotionally, Catholic schools stand out as the only school type that significantly reduces internalized problem behaviors as compared to public schools, which is consistent with the baseline models (Appendix Table C-7). In fact, attending a non-religious private school is related to worse ratings of internalized problem behavior. More broadly, all of the non-public schools are associated with worse ratings of self-control, and worse or no difference in ratings of externalized problem behavior. Non-Catholic religious private schools are also negatively associated with interpersonal skills and approaches to learning. One possibility for these negative findings is that children who attend private schools were less socially adept to begin with. Their parents thus chose to place them in private schools, which may provide more nurturing environments than a public school. Alternatively, there is often a financial barrier to attending private

schools, which implies private schools, on average, have a more affluent student population. Public schools therefore expose students to a wider variety of income-levels. This variety may improve socio-emotional behavior (Kahlenberg 2012).

Bilingual aid impacts development over-time in a way not detected in the baseline models. It has a negative association with math (β=-.023, p<.05) and reading scores (p<.01), but a positive one with internalizing problem behaviors (p<.1). The negative association between self-control and interpersonal skills at baseline dissipates, as does any influence of migrant aid on cognitive and noncognitive outcomes.

I now turn to assessing the influence of socio-economic and racial composition as well as teacher-pupil match on child development, as theorized at the beginning of this chapter. I first examine socio-economic levels.

Low-Income School Enrollment. An increase in the proportion of low-income students is negatively associated with development, lowering math (β=-.001, p<.001 in Model 7) and reading scores. There is no influence of reduced lunch on cognitive outcomes. Proportion of free lunch students is also associated with lower ratings of self-control and externalizing problem behaviors (β=-.001, p<.01).

Racial Composition. The racial makeup of the school has large consequences for children's development across the primary school years. Increasing the proportion of the Hispanic student body adversely and dramatically influences both math and reading development. For example, there is a -.181 penalty in math scores associated with attending a school that is ten to twenty-five percent Hispanic as compared to a school that

is less than ten percent Hispanic (Model 7, Table 5.5). Moreover, as the proportion of Hispanic students increases from less than ten percent to more than seventy-five percent Hispanic, the magnitude of the coefficient multiplies by more than two-and-a-half times. Students attending a school that is at least seventy-five percent Hispanic have, on average, .448 lower math scores ($p<.001$) than children attending schools that are less than ten percent Hispanic, a difference of over .4 standard deviations. The same trend occurs for an increase in a school's percent African American. Broadly, then, there are real consequences for academic achievement as a school changes from no majority racial/ethnic group to predominantly Hispanic or African American. Because a majority of the schools Mexicans attend in traditional destinations are overwhelmingly Hispanic, but the schools they attend in non-traditional destinations are not (see Table 5.1), the effects of school racial/ethnic segregation are more pronounced in traditional destinations.[80]

The racial and ethnic heterogeneity of the school also impacts noncognitive development. As the school's percent Hispanic increases, there are increasingly negative implications for self-control, interpersonal skills, and approaches to learning (Appendix Table C7). Conversely, there is a positive influence of attending a school that is more than ten percent Hispanic on externalizing problem behaviors, with the influence increasing as the percent Hispanic increases. For instance, Model 7 in Table 5.6 indicates that there is a .037 benefit to children attending schools that are ten to twenty-five percent Hispanic ($p<.001$) rather than schools that are less than ten percent Hispanic. This benefit increases to .057 ($p<.01$) for children in schools that are at least seventy-five

[80] Recall that nearly seventy-five percent of Mexicans in traditional destinations attend schools that are at least fifty percent Hispanic. Nearly fifty percent of Mexicans in non-traditional destinations attend schools that are less than twenty-five percent Hispanic.

percent Hispanic. The same trend is found for a school's percent black; as the proportion of the student body that is black increases, so too do ratings of externalizing problem behavior (Table 5.6). At the same time, there may be a threshold point for internalized problem behavior because children who attend schools that are at least seventy-five percent Hispanic are rated better on the internalized problem behavior scale (Appendix Table C7).

I also explore the influence of the percent of a school's enrollment that is ESL/bilingual and a scale of the LEP services available in the school. An increase in the percent of students that are ESL/Bilingual is positively associated with math and reading, but these differences are small. Indeed, they are order of magnitudes smaller than the effect of LEP services. The coefficient for LEP services is .17 and .21 for math and reading, respectively. The coefficients for ESL/Bilingual do not surpass .0004, which is a three order of magnitude difference.

Socio-emotionally, there is a positive association between increased LEP services and both self-control ($p<.01$) and interpersonal skills ($p<.1$; Appendix Table C7). There is a negative association between the percent of ESL students in a school and self-control.

Teacher-Pupil Match. The final theoretically relevant mechanism in development within schools that I explore is teacher-pupil match. At the school level, I measure the percent of teachers that are Hispanic and black. Model 7 of Table 5.6 shows that an increase in the percent of teachers that are Hispanic is negatively associated with math (β=-.001, $p<.01$) and reading achievement. On the other hand, an increase in the percent of black teachers positively influences math and reading.

Socio-emotionally, an increase in a school's percent of teachers that are Hispanic is negatively associated with interpersonal skills and approaches to learning (Appendix Table C7). An increase in the school's percent of black teachers is related to worse measures of self-control.

In the classroom, having a Hispanic teacher (β=-.032, p<.05) or a teacher that speaks Spanish (β=-.094, p<.001) is negatively associated with math. Both measures are also negatively associated with reading scores. For noncognitive development, having a Hispanic teacher is positively associated with externalizing (β=.051, p<.05 in Model 7 of Table 5.6) and internalizing problem behaviors. However, being a Hispanic student with a Hispanic teacher is negatively associated with externalizing (β=-.053, p<.05 in Model 7 of Table 5.6) and internalizing problem behaviors. Having a teacher that speaks Spanish is also negatively associated with internalizing problem behaviors, but positively associated with self-control.

These models are specified with a random slope for socio-economic status. As shown by likelihood ratio tests, the standard deviation significantly varies from zero for all outcomes except interpersonal skills. This suggests that the influence of socio-economic status on the slope of the growth curve varies across families, especially for internalizing problem behaviors, externalizing problem behaviors, and reading. In order to let the effect of socio-economic status change over time, I specify a cross-level interaction between socio-economic status and time. The influence of socio-economic status increases over-time for self-control, externalizing problem behaviors (β=.0005, p<.001 for Model 7 of Table 5.6), and internalizing problem behaviors. It decreases over-time for reading.

Discussion: Multivariate Growth Patterns

I find partial evidence to support my conceptualization that living outside of traditional Mexican destination states improves development. As measured through the difference-in-difference terms, the socio-emotional results found in the individual and family models (Chapter 4) are maintained even after the inclusion of school and classroom level characteristics. The significant and positive influence of living in a non-traditional destination on the self-control ($p<.05$), externalizing problem behaviors ($p<.001$) and interpersonal skills ($p<.05$) Mexican-white development gaps remains. That said, the size of the relationship is reduced by approximately twenty percent, which implies that a portion of the destination 'effect' on the Mexican-white development gap is explained by school and classroom factors such as racial heterophily, low-income school enrollment, and teacher-pupil match. The eighty percent of the DiD that is not explained by school and family characteristics suggests that there remains substantial gains in positive interactive behaviors for Mexican immigrant children attributable to living in a non-traditional destination.

I find a number of key school and classroom characteristics influence child development. First, a school's socio-economic status matters. A higher proportion of free lunch students is associated with lower cognitive development. An increase in the proportion of free lunch students also is negatively associated with such noncognitive development measures as self-control and externalizing problem behaviors.

The influence of racial diversity cannot be overstated. The reduction in math and reading scores associated with an increase in the percent of a school that is Hispanic or

black from less than ten percent to more than seventy-five percent is dramatic. These implications are enormous as it is direct evidence that attending segregated or hypersegregated schools negatively influences cognitive development. The fact that an increase in the proportion of white or Asian students also lowers achievement points to the idea that any group being the overwhelming majority of the school's population has negative consequences. Stated differently, schools with no clear racial or ethnic majority appear to be the best suited for fostering cognitive development.

These findings are of high importance for Mexicans across traditional and non-traditional destinations. In a way, the dichotomy provides a naturally designed approximation to a desegregation policy as the average percent Hispanic of a school reduces from 50-75 percent in traditional destinations to 25-50 percent in new destinations. The relationship between a school's percent Hispanic and black and cognitive development point to the extreme consequences of attending hypersegregated schools and the benefits to attending schools that have a more eclectic student body.

The influence of the racial/ethnic makeup of a school on children's noncognitive development is more complex. The discussion in the *Family Influence* section of Chapter 4 briefly broached the idea that one of the mechanisms driving the significance in the socio-emotional DiD terms could be the racial makeup of the school. Findings from this chapter support this idea, as attending schools with a lower proportion of Hispanics benefits self-control, interpersonal skills, and approaches to learning. As mentioned above, after the inclusion of school and classroom level characteristics, the magnitude of the DiD term is diminished approximately twenty percent.

At the same time, attending a school that is increasingly black or Hispanic tends to reduce externalizing problem behaviors. This is a puzzle to be further examined in the future.

Results from Chapter 4 indicated a negative association between living in a non-traditional destination and the Mexican-white internalizing problem behavior gap. Conceivably, attending schools with fewer Hispanics or other minorities, but more whites, could worsen internalizing problem behaviors. In this situation, minority students find themselves surrounded by students who are better academically prepared, which could lead to anxiety, low self-esteem, and depression. In support, students attending schools that are seventy-five percent Hispanic have fewer internalized problem behaviors. However, in the final model of this chapter the significance of the internalizing problem behavior DiD term is eliminated.

I also hypothesized that teacher-pupil match would positively influence development. The best test of this is the student-teacher dyad, which in the results actually worsens externalizing and internalizing problem behaviors, the opposite of the hypothesized effect.

A number of other interesting findings are found in the school and classroom level data. Schools characterized by lower levels of social disorder have higher math and reading scores, although the salutary effect of this facet of school context has little influence on socio-emotional development. Because the social disorder scale assesses such factors as violence, gangs, crime, drugs, and litter around the school, this finding suggests improvements in these factors helps elevate academic performance, but not non-cognitive development.

Attending a non-denominational private school as compared to a public school is positively associated with academic measures. Enrolling in a Catholic school lowers internalizing problem behaviors, such as anxiety and depression.

Finally, the funding and effort schools put into providing services to students with limited English skills are paying off – investing in LEP services improves both math and reading attainment. The magnitude of the relationship is quite large; of all school and classroom characteristics it is second in size only to a school's proportion Hispanic and proportion black. An increase in LEP services also improves self-control and interpersonal skills, which helps offset the effect that an increase in the proportion of ESL students lowers self-control.

Summary

In short, there is a great deal of variability in the schools Mexican immigrant children attend across long-established and recently established Mexican communities. Mexicans in non-traditional destinations attend less segregated schools with more resources, which both positively benefit child development. I therefore find evidence to support (H2) – that variation in school characteristics by destination will decrease the Mexican-white development gap. The significant benefit to living in a non-traditional destination on the interactive behavior scores of self-control, externalizing problem behaviors, and interpersonal skills are only partially explained by the school context. I now turn to examining the influence of neighborhood characteristics on child development.

Table 5.1. School and Classroom Characteristics by Race/Ethnicity and Destination Type at Baseline, Weighted (Select)

	Mexican[1]			Other Hispanic			White		
Variable	**Trad[2]**	**New**		**Trad**	**New**		**Trad**	**New**	
Social Disorder	-0.47	-0.35	+	-0.43	-0.25	+	0.17	0.13	*
Bilingual Aid	0.76	0.39	***	0.62	0.41	***	0.42	0.09	***
Migrant	0.43	0.15	***	0.29	0.09	***	0.17	0.09	***
School Type: Public	0.97	0.91	**	0.83	0.90	+	0.79	0.82	**
Catholic	0.02	0.07	*	0.06	0.05		0.04	0.07	***
Other Religious	0.00	0.02		0.04	0.04		0.12	0.06	***
Other Private	0.01	0.00		0.07	0.01	*	0.06	0.04	+
Student Body: Proportion Free Lunch	59.90	42.83	***	41.32	38.76		22.09	22.78	
Reduced Lunch	11.03	10.69		7.59	9.59		7.88	7.87	
Bussed from Outside the Neighborhood	3.82	4.94		4.05	4.83		2.62	2.29	
From the Neighborhood	89.15	90.28		90.56	86.45		84.47	86.84	**
Asian	3.81	2.66	*	5.84	4.87		4.25	1.96	***
White	16.64	44.33	***	25.14	38.79	***	67.63	84.20	***
Black	1.29	1.73		1.29	1.97		1.23	1.43	
Hispanic	4.14	2.72		3.74	2.79		2.01	1.14	
Below 10% Hispanic	0.02	0.37	***	0.08	0.29	***	0.44	0.90	***
10-25% Hispanic	0.06	0.12	*	0.08	0.11		0.25	0.07	***
25-50% Hispanic	0.18	0.13		0.26	0.27		0.21	0.02	***
50-75% Hispanic	0.23	0.17		0.17	0.19		0.09	0.00	***
75%+ Hispanic	0.51	0.20	***	0.41	0.14	***	0.02	0.00	***
Below 10% Black	0.80	0.61	***	0.80	0.45	***	0.81	0.72	***
10-25% Black	0.14	0.15		0.14	0.26	**	0.16	0.16	
25-50% Black	0.04	0.15	***	0.04	0.19	***	0.03	0.08	***
50-75% Black	0.01	0.08	***	0.00	0.06	***	0.00	0.03	***
75%+ Black	0.01	0.01	***	0.02	0.04	***	0.00	0.01	***
Percent ESL/Bilingual	55.17	22.02	***	36.42	17.82	***	8.01	2.32	***
Limited English Proficiency Services	0.61	0.46	***	0.47	0.42		0.34	0.17	***
Classroom: Proportion Hispanic	79.00	43.30	***	61.93	44.84	***	18.79	3.73	***
Minority	89.08	61.46	***	81.18	66.99	***	31.25	15.82	***
English Only	0.45	0.70	***	0.63	0.79	**	0.93	0.95	**
LEP Student in Classroom	0.88	0.69	***	0.78	0.71		0.36	0.17	***
Teacher Population: Proportion White	55.68	79.57	***	63.22	72.15	**	89.04	94.36	***
Black	4.66	7.92	**	5.01	11.27	***	1.67	2.90	***
Hispanic	33.64	9.55	***	24.87	10.22	***	7.03	0.50	***
Principal is Hispanic	0.31	0.20	**	0.24	0.17		0.06	0.01	***
Classroom: Teacher Hispanic	0.49	0.21	***	0.24	0.21		0.06	0.01	***
Teacher Speaks Spanish	0.77	0.30	***	0.65	0.42	***	0.15	0.04	***

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

N=10,080

[1] Mexican refers to Mexican immigrant children of the 1.5 and 2nd generation. Other Hispanic refers to non-Mexican Hispanic immigrant children, also of the 1.5 and 2nd generation. White refers to third generation whites.

[2] Trad refers to traditional Mexican destinations. New refers to non-traditional Mexican destinations.

Table 5.2. Math Direct Assessment at Baseline

	Math Direct Assessment			
Variable	**Model 1[2]**	**Model 2[3]**	**Model 3[4]**	**Model 4[5]**
Hispanic Immigrant	-0.165 ***	-0.160 ***	-0.140 ***	-0.141 ***
Mexican Immigrant	-0.153 ***	-0.131 ***	-0.108 ***	-0.112 ***
Other	-0.085 ***	-0.078 ***	-0.066 ***	-0.067 ***
Non-Traditional Destination	0.070 ***	0.058 ***	0.039 ***	0.040 ***
Mexican-White DiD	0.034	0.017	0.004	0.010
Hispanic-White DiD	0.038	0.039	0.041	0.041
Individual Characteristics	-- --	-- --	-- --	-- --
Female	-0.031 ***	-0.032 ***	-0.033 ***	-0.033 ***
Disability	-0.104 ***	-0.099 ***	-0.100 ***	-0.100 ***
Repeat a Grade	-0.267 ***	-0.274 ***	-0.275 ***	-0.275 ***
Head Start	-0.055 ***	-0.044 ***	-0.044 ***	-0.043 ***
Family Characteristics	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.031 **	-0.030 **	-0.030 *	-0.030 **
Household Type: Other	-0.066 **	-0.059 **	-0.059 *	-0.059 **
Language in the Home: Spanish	-0.204 ***	-0.187 ***	-0.160 ***	-0.162 ***
Language in the Home: Other	-0.106 +	-0.112 +	-0.105 +	-0.104 +
Socio-Economic Status	0.151 ***	0.132 ***	0.130 ***	0.130 ***
Below the Poverty Line	-0.002	0.004	0.006	0.005
Number of Siblings	-0.016 ***	-0.014 ***	-0.014 ***	-0.014 ***
Parental Expectations	0.017 ***	0.017 ***	0.017 ***	0.017 ***
Parental Involvement	0.041 ***	0.021 ***	0.021 ***	0.021 ***
Urbanicity: Midsize City	-0.070 ***	-0.068 ***	-0.079 ***	-0.075 ***
Large Suburb	-0.042 ***	-0.050 ***	-0.057 ***	-0.054 ***
Midsize Suburb	-0.106 ***	-0.101 ***	-0.108 ***	-0.105 ***
Large Town	-0.103 ***	-0.085 ***	-0.107 ***	-0.105 ***
Small Town	-0.080 ***	-0.073 ***	-0.080 ***	-0.074 ***
Rural	-0.115 ***	-0.100 ***	-0.108 ***	-0.107 ***
School & Classroom Characteristics	-- --	-- --	-- --	-- --
Social Disorder		0.017 *	0.013 +	0.014 +
School Type: Catholic		0.028 *	0.040 ***	0.040 ***
Other Religious		0.051 ***	0.056 ***	0.055 ***
Other Private		0.123 ***	0.133 ***	0.131 ***
Student Body: Proportion Free Lunch		-0.001 ***	-0.001 ***	-0.001 ***
Asian			0.000	0.000
White			-0.001 +	-0.001 +
10-25% Hispanic			-0.024 -	-0.023 +
25-50% Hispanic			-0.051 *	-0.052 *
50-75% Hispanic			-0.065 *	-0.071 *
75%+ Hispanic			-0.083 *	-0.102 *
10-25% Black			0.011	0.006
25-50% Black			0.019	0.010
50-75% Black			0.025	0.003
75%+ Black			-0.004	-0.050
Limited English Proficiency Services			0.038 *	0.033 +
Classroom: Proportion Hispanic			0.000	0.000
Minority			-0.001 *	-0.001 *
English Only			0.005	0.007
LEP Student in Classroom			-0.019 +	-0.019
Teacher Population: Proportion White				0.000
Black				0.001 *
Hispanic				0.001 *
Classroom: Teacher Hispanic				-0.030
Hispanic Teacher-Pupil Match				0.035
Constant	-1.355 ***	-1.256 ***	-1.172 ***	-1.219 ***
N = 14,400 per each of 10 Multiply Imputed Datasets				

[1] Sample includes Mexicans, other Hispanics, and whites.
[2] Model 1 includes family covariates and individual controls.
[3] Model 2 adds socio-economic heterogeneity and other school characteristics.
[4] Model 3 introduces measures of racial heterophily.
[5] Model 4 includes indicators of teacher-pupil match.
+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 5.3. Externalized Problem Behavior at Baseline

	Externalized Problem Behavior			
Variable	**Model 1[2]**	**Model 2[3]**	**Model 3[4]**	**Model 4[5]**
Hispanic Immigrant	0.057	0.056	0.065	0.068
Mexican Immigrant	0.089 **	0.102 ***	0.107 ***	0.117 ***
Other	0.005	0.009	0.010	0.015
Non-Traditional Destination	0.071 ***	0.055 ***	0.056 **	0.054 **
Mexican-White DiD	0.095 +	0.083 +	0.079	0.068
Hispanic-White DiD	-0.007	-0.005	-0.013	-0.014
Individual Characteristics	-- --	-- --	-- --	-- --
Female	0.233 ***	0.234 ***	0.234 ***	0.234 ***
Disability	-0.100 ***	-0.103 ***	-0.104 ***	-0.103 ***
Repeat a Grade	-0.150 ***	-0.141 ***	-0.143 ***	-0.144 ***
Head Start	-0.111 ***	-0.110 ***	-0.110 ***	-0.109 ***
Family Characteristics	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.095 ***	-0.093 ***	-0.095 ***	-0.094 ***
Household Type: Other	-0.149 ***	-0.149 ***	-0.152 ***	-0.152 ***
Language in the Home: Spanish	-0.023	-0.018	-0.015	-0.018
Language in the Home: Other	0.012	0.014	0.027	0.024
Socio-Economic Status	0.021 *	0.024 *	0.024 *	0.023 *
Below the Poverty Line	0.016	0.019	0.021	0.020
Number of Siblings	0.052 ***	0.052 ***	0.052 ***	0.052 ***
Parental Expectations	0.006 *	0.007 *	0.007 *	0.007 *
Parental Involvement	-0.005	-0.010	-0.008	-0.007
Urbanicity: Midsize City	-0.047 **	-0.047 *	-0.048 **	-0.049 *
Large Suburb	-0.008	-0.018	-0.013	-0.016
Midsize Suburb	-0.008	-0.022	-0.015	-0.016
Large Town	-0.089 **	-0.085 *	-0.089 *	-0.089 *
Small Town	-0.103 ***	-0.098 ***	-0.091 ***	-0.085 ***
Rural	-0.056 **	-0.058 **	-0.056 *	-0.054 *
School & Classroom Characteristics	-- --	-- --	-- --	-- --
Social Disorder		-0.015	-0.016	-0.015
School Type: Catholic		-0.029 +	-0.027	-0.026
Other Religious		-0.128 ***	-0.124 ***	-0.124 ***
Other Private		-0.109 ***	-0.097 ***	-0.086 **
Student Body: Proportion Free Lunch		-0.001 ***	-0.001 ***	-0.001 ***
Asian			-0.001	-0.001
White			-0.001 *	-0.001 **
10-25% Hispanic			0.004	0.001
25-50% Hispanic			-0.013	-0.015
50-75% Hispanic			-0.062	-0.049
75%+ Hispanic			-0.076	-0.030
10-25% Black			-0.013	-0.017 *
25-50% Black			-0.013 **	0.064
50-75% Black			-0.062	-0.058
75%+ Black			-0.003	-0.044
Limited English Proficiency Services			-0.002	0.000
Classroom: Proportion Hispanic			0.001 *	0.001 *
Minority			-0.001 *	-0.001 *
English Only			0.018	0.017
LEP Student in Classroom			-0.021	-0.028
Teacher Population: Proportion White				0.001 *
Black				0.002 +
Hispanic				0.000
Classroom: Teacher Hispanic				0.089 +
Hispanic Teacher-Pupil Match				-0.099 +
Constant	3.200 ***	3.273 ***	3.357 ***	3.265 ***
N = 14,400 per each of 10 Multiply Imputed Datasets				

[1] Sample includes Mexicans, other Hispanics, and whites.
[2] Model 1 includes family covariates and individual controls.
[3] Model 2 adds socio-economic heterogeneity and other school characteristics.
[4] Model 4 introduces measures of racial heterophily.
[5] Model 4 includes indicators of teacher-pupil match.
+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 5.4. Mexican-White Difference-in-Difference Terms from Mixed Effects Modeling

Outcome	Model 5[2]	Model 6[3]	Model 7[4]
Math Direct Assessment	0.029	0.047	-0.032
Reading Direct Assessment	0.035	0.047 +	-0.015
Self-Control	0.066 *	0.052	0.116 *
Externalized Problem Behavior	0.094 *	0.080 *	0.178 ***
Internalized Problem Behavior	-0.057 *	-0.067 *	0.021
Interpersonal Skills	0.059 +	0.063 +	0.102 *
Approaches to Learning	-0.002	0.005	0.062

N = 66,760 for math and reading and 59,710 for each socio-emotional outcomes per each of 10 Multiply Imputed Datasets.

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 5 includes family covariates and individual controls.

[3] Model 6 adds school and classroom characteristics.

[4] Model 7 adds inverse probability of treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 5.5. Growth Curve Model of Math Direct Assessment

	Math Direct Assessment					
Variable	**Model 5[2]**		**Model 6[3]**		**Model 7[4]**	
Hispanic Immigrant	-0.103	***	-0.109	***	-0.115	***
Mexican Immigrant	-0.046	*	-0.056	**	-0.023	
Other	-0.070	***	-0.062	***	-0.061	***
Non-Traditional Destination	0.039	***	0.016		0.049	***
Mexican-White DiD	0.029		0.047	+	-0.032	
Hispanic-White DiD	0.093	*	0.117	***	0.124	***
School & Classroom Characteristics	--	--	--	--	--	--
Social Disorder			0.015	**	0.014	**
Bilingual Aid			-0.023	*	-0.023	*
Migrant Aid			-0.010		-0.009	
School Type: Catholic			-0.022	*	-0.021	*
Other Religious			-0.011		-0.011	
Other Private			0.048	**	0.048	**
Student Body: Proportion Free Lunch			-0.001	***	-0.001	***
Reduced Lunch			-0.000		-0.000	
Bussed from Outside the Neighborhood			-0.000		-0.000	
From the Neighborhood			-0.002	***	-0.002	***
Asian			-0.003	***	-0.003	***
White			-0.003	***	-0.003	***
10-25% Hispanic			-0.180	***	-0.181	***
25-50% Hispanic			-0.274	***	-0.275	***
50-75% Hispanic			-0.345	***	-0.346	***
75%+ Hispanic			-0.448	***	-0.448	***
10-25% Black			-0.200	***	-0.200	***
25-50% Black			-0.258	***	-0.258	***
50-75% Black			-0.337	***	-0.337	***
75%+ Black			-0.481	***	-0.481	***
Percent ESL/Bilingual			0.000	***	0.000	***
Limited English Proficiency Services			0.171	***	0.170	***
Classroom: Proportion Hispanic			0.001	***	0.001	***
Minority			0.000	**	0.000	**
English Only			0.031	**	0.031	*
LEP Student in Classroom			-0.004		-0.004	
Teacher Population: Proportion White			-0.001	***	-0.001	***
Black			0.003	***	0.003	***
Hispanic			-0.001	**	-0.001	**
Classroom: Teacher Hispanic			-0.030	*	-0.032	*
Teacher Speaks Spanish			-0.094	***	-0.094	***
Hispanic Teacher-Pupil Match			-0.028		-0.025	
Time	0.027	***	0.030	***	0.030	***
Time*SES	-0.000	*	0.000		0.000	
Constant	-0.847	***	-0.142	***	-0.179	***
Random Effects						
SES	0.078	(.011)	0.072	(.012)	0.071	(.012)
Constant	0.245	(.003)	0.266	(.003)	0.266	(.003)
Residual	0.420	(.420)	0.394	(.001)	0.394	(.001)
IPTW Decile						
1					-0.005	
2					0.024	
3					-0.003	
4					0.012	
5					0.010	
6					0.023	
7					0.010	
8					0.040	
9					0.063	*
N = 66,760 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 5 includes family covariates and individual controls.

[3] Model 6 adds school and classroom characteristics.

[4] Model 7 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 5.6. Mixed Effects Model of Externalized Problem Behavior

	Externalized Problem Behavior					
Variable	**Model 5[2]**		**Model 6[3]**		**Model 7[4]**	
Hispanic Immigrant	0.050		0.059		0.071	+
Mexican Immigrant	0.078	**	0.100	***	0.058	+
Other	0.003		0.010		0.017	
Non-Traditional Destination	0.061	***	0.048	***	-0.000	
Mexican-White DiD	0.094	*	0.080	*	0.178	***
Hispanic-White DiD	-0.013		-0.017		-0.033	
School & Classroom Characteristics	--	--	--	--	--	--
Social Disorder			-0.002		-0.002	
Bilingual Aid			-0.001		-0.001	
Migrant Aid			-0.024		-0.025	+
School Type: Catholic			-0.006		-0.007	
Other Religious			-0.104	***	-0.102	***
Other Private			-0.120	***	-0.121	***
Student Body: Proportion Free Lunch			-0.001	**	-0.001	**
Reduced Lunch			0.000		0.000	
Bussed from Outside the Neighborhood			-0.000		-0.000	
From the Neighborhood			-0.000		-0.000	
Asian			0.000		0.000	
White			0.000	+	0.000	
10-25% Hispanic			0.037	***	0.037	***
25-50% Hispanic			0.035	**	0.036	**
50-75% Hispanic			0.027	+	0.028	+
75%+ Hispanic			0.057	**	0.057	**
10-25% Black			0.024	**	0.025	**
25-50% Black			0.041	**	0.041	***
50-75% Black			0.049	**	0.049	**
75%+ Black			0.067	**	0.067	**
Percent ESL/Bilingual			-0.000		-0.000	
Limited English Proficiency Services			0.009		0.008	
Classroom: Proportion Hispanic			-0.000		-0.000	
Minority			-0.000		-0.000	
English Only			-0.004		-0.001	
LEP Student in Classroom			-0.042	***	-0.042	***
Teacher Population: Proportion White			-0.000		-0.000	
Black			0.000		0.000	
Hispanic			0.000		0.000	
Classroom: Teacher Hispanic			0.051	*	0.051	*
Teacher Speaks Spanish			0.018		0.018	
Hispanic Teacher-Pupil Match			-0.052	*	-0.053	*
Time	-0.001	***	-0.002	***	-0.002	***
Time*SES	0.001	***	0.000	***	0.000	***
Constant	3.185	***	3.211	***	3.252	***
Random Effects						
SES	0.072	(.019)	0.071	(.019)	0.072	(.019)
Constant	0.412	(.004)	0.410	(.004)	0.410	(.004)
Residual	0.412	(.002)	0.411	(.002)	0.411	(.002)
IPTW Decile						
1					-0.002	
2					-0.008	
3					0.006	
4					0.016	
5					0.018	
6					0.028	
7					0.003	
8					-0.049	
9					-0.053	
N = 59,710 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 5 includes family covariates and individual controls.

[3] Model 6 adds school and classroom characteristics.

[4] Model 7 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Chapter 6. Neighborhood Influence

The neighborhood defines the setting relevant to children's development outside the home in my version of *Ecological Systems Theory*. Neighborhood also is emphasized in *Modes of Incorporation Theory*, which highlights the role of the co-ethnic community in the adaptation and assimilation of immigrants. The variety of neighborhood-level characteristics that can affect child development either directly or through intermediating variables are encompassed within the concept *Neighborhood effects*. Factors examined that influence the character of the neighborhood, and therefore child development, include population density, linguistic isolation, neighborhood socio-economic status, and adult role models. So too do perceived safety and the crime rate. The neighborhood is also intertwined with other environmental elements, as households are nested within them and many schools are coterminous with them.

A number of distinct processes within the *Neighborhood Effects* literature identify influences on child development. *Neighborhood Resources*, for one, emphasizes the importance of a neighborhood's poverty level, socio-economic status, and dropout rate (Leventhal & Brooks-Gunn 2000). *Collective Socialization* emphasizes adult role models, who can lookout for and offer assistance to the younger generation (Anderson 1992). *Relative Deprivation* highlights differences between a family's resources and that of the neighborhood, with families that are farther below the norm suffering from this gap.

These and other neighborhood concepts could vary between the traditional and non-traditional destinations of Mexican immigrants. For instance, Mexicans in non-traditional destinations are more likely to live in suburbs or rural areas than their

traditional destination peers, as shown in the *School Influence* chapter (also see Donato et al. 2008). This will reduce the amount of concentrated poverty and raise the mean neighborhood socio-economic status of their neighborhoods of residence. Job opportunities also vary across destinations. Established communities may contain co-ethnic businesses and older generations who can provide employment opportunities for youth. Non-traditional destinations provide opportunities too, though in low-skilled manufacturing plants in the Southeastern United States. For instance, seafood processing and fishery businesses in North Carolina actively recruit workers directly from Mexico (Griffith 2005).

I therefore expect that *Neighborhood Effects* explain both between and within-destination differences in developmental outcomes of Mexican immigrant children. Greater *Neighborhood Resources*, more *Collective Socialization*, and decreasing levels of *Relative Deprivation* will moderate the gap in Mexican-white development (H4).

I first examine descriptive differences in neighborhood characteristics across the traditional/non-traditional destination divide for Mexican immigrant children (MIC), other Hispanic immigrant children, (OHIC) and third generation whites (TGW). I then analyze to what extent the Mexican-white development gap is reduced by various neighborhood characteristics. I do so by comparing the coefficients on the Mexican immigrant difference-in-difference terms (DiD) before and after the inclusion of neighborhood characteristics. I also discuss the influence of neighborhood variables themselves on cognitive and noncognitive development. I conduct these analyses in the fall of kindergarten and across the kindergarten to 8th grade timeframe in the same manner as in the *School Influence* chapter, with mixed effects modeling, random

intercepts, and random slopes. I employ deciles from the inverse probability of the treatment weights of a propensity-score matching model to create a sharper contrast between long-standing and recently established Mexican destinations. Results are averaged across ten multiply imputed datasets. Neighborhood data comes from the 2000 census tract files and is merged with each wave of the ECLS-K data. I treat this data as time-constant.

Between-Destination Differences in Neighborhoods

I examine descriptive differences in neighborhood characteristics across the destination dichotomy for Mexican immigrant children, other Hispanic immigrant children, and third generation whites in Table 6.1. In particular, I examine neighborhood characteristics identified in the processes of *Neighborhood Resources, Collective Socialization,* and *Relative Deprivation*. I also examine such neighborhood characteristics as safety and percent Hispanic. I begin with *Neighborhood Resources*.

Neighborhood Resources

The proportion of the neighborhood below the poverty line, the median income of the neighborhood, median rent, and the proportion receiving public assistance are evaluated in Table 6.1. There is some evidence that the level of neighborhood resources varies for Mexican communities across the destination dichotomy (*Mexican* heading under Table 6.1).[81] For example, five percent of the variation in the proportion of residents in poverty is located between destinations. This corresponds to a statistically

[81] The term "Mexican communities" does not necessarily denote communities that are majority Mexican. Rather, I use it as shorthand to represent the characteristics of the communities in which Mexican immigrants reside.

significant difference in the poverty rate of twenty-two percent in traditional compared with sixteen percent ($p<.001$) in non-traditional destinations. The poverty rate also differs for the neighborhoods in which other Hispanic immigrants live (20 percent vs. 17 percent).

The poverty rate of specific groups also varies by destination. The Hispanic poverty rate is lower in non-traditional destinations.[82] In Mexican communities, the proportion of Hispanics living in poverty varies from one in four in traditional to just over one in five in non-traditional destinations (25 percent vs. 21.0 percent, $p<.01$ in Table 6.1). The difference is not substantial in the neighborhoods in which other Hispanic immigrants (24 percent vs. 23 percent, not significant under the *Other Hispanic* heading) or third generation whites live (14 percent vs. 12 percent, $p<.05$ under the *White* heading). This implies that Mexican immigrants, specifically, live in communities with fewer co-ethnics in poverty if they reside in areas outside of the traditional Southwest. At the same time, in Mexican communities the black and white poverty rates are also lower in non-traditional destinations. So too is the proportion of the community that receives public assistance, a fifty percent difference (7.5 percent vs. 5 percent, $p<.01$). Mexican immigrant families in recently established destinations encounter less poverty overall than their counterparts in traditional destinations.

Mexicans in non-traditional destinations live in more affluent neighborhoods. The median income of all households in Mexican non-traditional communities is more than $2,700 higher than in traditional communities ($38,400 vs. $35,700, and more than $2,800 higher for the subset of Hispanic households ($37,300 vs. $34,400). On the other

[82] The Hispanic poverty rate measures the poverty rate of Hispanics in, for instance, the neighborhoods of Mexican immigrants. This differs from the poverty rate discussed in the previous paragraph, which measures the poverty rate of the entire neighborhood, not just one subset of people within it.

hand, the median income of black households is lower in non-traditional Mexican destinations. Despite these income differences, though, the median rental price and the median value of all owner occupied units (e.g. home owners) do not vary by destination. While other Hispanic immigrants in non-traditional destinations also live in more affluent communities ($41,100 vs. $38,000, p<.1), this increase is not due to differences in their own income ($37,900 vs. $35,700, not significant) but to other residents within the neighborhood. The median income of the neighborhood ($49,600 vs. $56,000) and median income of Hispanic households actually are lower in white communities outside traditional destinations. I next examine the influence of *Collective Socialization* measures on child development.

Collective Socialization

Employment characteristics and the education level of the community are examined as potential sources of *Collective Socialization*, my reasoning being that where the resources/assets are more abundant it is easier to socialize children to value education and instill a strong work ethic. My results indicate that Mexican communities in non-traditional destinations have the advantage in both. Table 6.1 shows that the unemployment rate is twenty percent lower in non-traditional as compared to traditional Mexican communities (8.5 percent vs. 11 percent p<.001). While 8.5 percent is still twice the national average of 3.9 percent in January 2001 and 4.1 percent in June 2000 (Local Area Unemployment Statistics, Bureau of Labor Statistics), the 2.5 percentage point gap represents a substantial difference for a measure that is particularly difficult to

move.[83] There is no difference in the unemployment rate for other Hispanic immigrant communities across the two destinations. At the same time, the proportion not in the labor force is lower (38 percent vs. 42 percent; five percent of the variance is attributable to these between destination differences), while the proportion employed in the for-profit industry is higher (77 percent vs. 76 percent, $p<.1$). The proportion self-employed is lower (five percent vs. seven percent), but it is also lower for the non-traditional communities in which other Hispanic immigrant and third generation whites live.

The average education level of the communities in which Mexican immigrants reside is higher in non-traditional destinations, with a 1/3 advantage in BA holders (ten percent vs. seven-and-a-half percent, $p<.001$) and nearly fifty percent more Hispanic BA holders (5.4 percent vs. 3.7 percent, $p<.01$ under the *Mexican* heading in Table 6.1). The average education level of the communities in which other Hispanic immigrants live also differs across destinations. In particular, the proportion of Hispanics with Bachelor degrees in these communities is double in non-traditional destinations that in traditional destinations (9.4 percent vs. 4.7 percent, $p<.001$). The average education level in the communities in which third generation whites live is lower in non-traditional destinations.

On the opposite end of the education spectrum, there is no difference overall in the neighborhood dropout rate of Mexican communities by destination, but there are departures for specific groups. The dropout rate of white children living in these communities is higher in non-traditional destinations (16.4 percent vs. 7.4 percent; 4.5 percent of the variance is explained by between destinations). The Hispanic dropout rate is higher as well, but significant only at the 90 percent confidence level (24 percent vs. 20

[83] Unemployment information available at the Bureau of Labor Statistics, Local Area Unemployment Statistics website: http://www.bls.gov/lau/.

percent under the *Mexican* heading in Table 6.1). I now turn to measuring the influence of *Relative Deprivation* and other neighborhood characteristics on child development.

Relative Deprivation

The difference between a family's income (or log) and the mean neighborhood income (or log) measures *Relative Deprivation*. A greater gap between a household's income and the surrounding environment may adversely affect the development of youth. I find no difference in the *Relative Deprivation* for Mexican immigrant families across destinations. Though the gap is smaller in non-traditional destinations than traditional destinations (-$8,600 vs. -$10,200), the change is not significant.[84]

Other Neighborhood Characteristics of Mexican Communities

The most striking differences between Mexican communities in traditional and non-traditional destinations come from the racial and ethnic demographics. As detailed in Table 6.1, over sixty percent of residents in Mexican communities in traditional destinations are of Hispanic-descent, compared to 1/3 in non-traditional destinations, nearly a fifty percent difference ($p<.001$, see *Mexican* heading in Table 6.1; seventeen percent of the variance). Correspondingly, the percent foreign-born is also higher in long-standing Mexican communities (33 percent vs. 23 percent, $p<.001$; seven percent of the variance). While there are differences in *Neighborhood Resources* and *Collective Socialization* by destination for Mexican immigrant families, they are less substantial than these dramatic differences in racial and ethnic makeup of the neighborhood.

[84] Relative deprivation is measured as the income of the household subtracted by the median household income in the neighborhood. The log of relative deprivation is measured as the log of the household income subtracted by the log median household income in the neighborhood.

Linguistic isolation measures the proportion of the neighborhood ages 5 and up that live in households in which no adult speaks English "very well" and all adults speak a language other than English.[85] The linguistic isolation of those aged 5 and above differs by more than 1/3 from nineteen percent in long-standing Mexican communities to twelve percent in recently established Mexican communities ($p<.001$; seven percent of the variance). The linguistic isolation of children in Mexican communities (ages 5 to 17) also is lower in new destinations. This difference may be a function of non-traditional Mexican communities' percent Hispanic, population density, and building type. First, the lower proportion of Hispanics indicates a greater opportunity for both Mexican immigrant adults and children to interact with English speakers. Second, the population density is fifty percent higher in non-traditional Mexican communities (12,400 vs. 8,100; see the *Mexican* heading in Table 6.1). As a corollary, the proportion living in single-family units is lower (53 percent vs. 67 percent) and the amount of residential buildings that are 2-to-4 units is higher (25 percent vs. 9 percent; sixteen percent of the variance). The opportunity to interact with non-Spanish speakers should be greater as a result of having more neighbors, a higher proportion of these neighbors being non-Hispanic, and a closer proximity to neighbors when there are fewer single unit homes.

Household demographics also vary across the destination dichotomy. The proportion of family households is lower in non-traditional Mexican communities (69 percent vs. 78 percent, $p<.001$ under the *Mexican* heading in Table 6.1; nine percent of the variance) and lower for the subset of Hispanic family households (82 percent vs. 87

[85] For further information, see the guide, "Language Use and Linguistic Isolation: Historical Data and Methodological Issues." It is available online at http://www.census.gov/hhes/socdemo/language/data/census/li-final.pdf.

percent).[86] The likelihood of Hispanic family households being led by single-mothers remains consistent, however, at eleven to twelve percent of all family households.

There are differences in the age distribution of Mexican communities across destinations. A lower proportion of the population is young (ages 0-17) in new destinations (28 percent vs. 33 percent, $p<.001$ under the *Mexican* heading in Table 6.1; almost ten percent of the variance) and a greater proportion is elderly. This is consistent with fewer households, in general, being family units in the new destination Mexican communities. New destinations house older populations because there have been fewer cycles of replenishment of youth through immigration, as well as fewer immigrants in general, who tend to have higher rates of birth than the native-born population.

Neighborhood Characteristics for Other Hispanic Immigrants

Turning to other Hispanic immigrants, I observe very few differences in *Neighborhood Resources* between other Hispanic communities across destinations. The overall poverty rate is lower in non-traditional destinations (17 percent vs. 20 percent, $p<.1$ under the *Other Hispanic* heading in Table 6.1) but the Hispanic poverty rate is not different.

Similarly, there are few differences by employment and education. Where differences do occur, they are similar to those seen in the Mexican immigrant neighborhoods across destinations. More Hispanics (and more residents in the neighborhood overall) hold BA degrees in non-traditional destinations. In fact, the proportion of Hispanics holding a Bachelor's degree doubles from 4.7 percent to 9.4

[86] Family household is defined in the Census as a household with at least two people related by birth, marriage or adoption. Definitions are available at the Current Population Survey "Definitions" website: http://www.census.gov/cps/about/cpsdef.html.

percent ($p<.001$). There is a higher proportion working but a lower proportion self-employed. Unlike in the Mexican case, there are fewer dropouts overall and fewer Hispanic dropouts (17.5 percent vs. 21.8 percent, $p<.05$ under the *Other Hispanic* heading in Table 6.1).

Similar to the differences in Mexican immigrant neighborhoods, other Hispanic immigrants in non-traditional destinations live in communities with a much smaller presence of Hispanics than their traditional destination peers (a 1/3 difference from 52 percent to 34 percent, $p<.001$). The percent foreign born, linguistic isolation levels, and number of young are lower, while the number of elderly is higher. There are fewer family households overall and for Hispanics. However, there are more black family households, more female-headed households (unlike the Mexican community case), and more Hispanic female-headed households. Finally, similar to the Mexican case, less residents live in single and more residents live in 2-4 unit housing (18.5 percent vs. 8 percent, $p<.001$).

Discussion: Destination Differences in Neighborhoods

The non-traditional destination communities of Mexican immigrants for the most part have decided advantages for supporting children's academic and emotional development. Along the *Neighborhood Resources* dimension, they have fewer families below the poverty line, fewer families on public assistance, and a household median income that is $2,700 higher (although this might be attributable to differences in cost-of-living adjusted wages) than traditional destination Mexican neighborhoods.

There is a greater abundance of *Collective Socialization* in Mexican communities

in non-traditional destinations due to higher education levels overall (i.e. greater proportion of residents with Bachelor degrees), higher levels of education for the Hispanic population, and lower unemployment rates than Mexican communities in long-established destinations. A strong labor market and presence of college-educated residents convey to youth the value of education and the norm of full-time employment in the formal economy, which facilitates orientation towards and focus on learning.

There are no differences in *Relative Deprivation* across the two types of Mexican communities. While relative deprivation may significantly impact the development process of a child, there is no evidence that it systematically varies by destination for Mexican immigrant families.

Most importantly, in newer destination Mexican communities the segregation level is far lower than in traditional destination communities. The proportion of residents in Mexican communities that are of Hispanic origin is much smaller in recently established destinations. These communities have a correspondingly higher proportion of white residents. Mexicans living in non-traditional destinations are therefore less isolated than Mexicans in traditional destinations.

The reduction in segregation can have dramatic consequences on the daily lives of parents and children alike. One proximal measure is linguistic isolation. The amount of linguistic isolation of both children (ages 5 to 17) and the entire population (age 5 and up) is lower in newer areas of Mexican migration. Linguistic isolation may also fall due to the greater population density, smaller share of single unit housing, and greater presence of multi-unit residential buildings in new destinations. Whatever the root cause, it is clear that there is less linguistic isolation in non-traditional destinations. This implies that

children and adults have more opportunity to be exposed to English speakers. Increasing these interactions can foster the socialization and integration process into the American mainstream, which could have direct influence on more distal outcomes such as school achievement.

I do note one interesting peculiarity. The dropout rate for white students actually is higher in non-traditional than traditional Mexican communities. As discussed in the *School Influence* chapter, the percent of the student body that is white is higher in non-traditional destinations. If a greater proportion of the student body is white, and a greater portion of these students dropout of school, this could negatively influence student engagement and achievement. This example illustrates how there are competing influences, some of which positively affect, while others negatively affect, the development of Mexican immigrant children in non-traditional as compared to traditional destinations.

Multivariate Results

Baseline Models

In order to assess the impact of neighborhood characteristics on cognitive and noncognitive development, I begin, as before, with children's cognitive assessment and socio-emotional ratings in kindergarten. This is followed by analyses that track their development all through elementary school, and for their cognitive development, into the middle grades. The influence of non-traditional destinations on the Mexican-white development gap not accounted for by neighborhood and family covariates, is measured through the difference-in-difference term. I examine whether the DiD term changes after

the inclusion of neighborhood characteristics. I also evaluate a DiD term for other Hispanic immigrant children. Academic achievement is measured through direct assessments of children's math and reading scores. Scales of self-control, externalizing problem behaviors, internalizing problem behaviors, interpersonal skills, and approaches to learning measure socio-emotional development. Higher scores of externalizing and internalizing problem behaviors indicate lower levels of the behavior. A positive coefficient, therefore, signifies more favorable development.

The baseline analyses include five models. Model 1 repeats the final model in chapter 4. It includes family characteristics and individual controls. Models 2 through 5 include neighborhood characteristics in addition to the family characteristics (and individual controls) in Model 1. Model 2 adds various neighborhood characteristics, including measures of neighborhood safety, proportion Hispanic, and population density. Model 3 includes measures of *Neighborhood Resources*, including the neighborhood poverty rate and log of the median household income in the neighborhood. Measures of *Collective Socialization*, such as the unemployment rate and proportion of the neighborhood with a Bachelor's degree, are added in Model 4. Model 5 includes a measure of *Relative Deprivation*.[87] As in the other substantive chapters, I report results for direct assessments of math achievement and externalizing problem behaviors (Table 6.2). Results for the other developmental outcomes may be found in Appendix Table C-3. I only include select neighborhood variables in the multivariate analyses. Variables that were not of key substantive interest or that were not significant in preliminary analyses

[87] The log of relative deprivation is used. It is measured as the log of the household income subtracted by the log median household income in the neighborhood.

were eliminated for parsimony.[88]

The DiD

The only significant (and positive) difference-in-difference term is for externalizing problem behaviors (β=.097, p<.05 in Model 5 of Table 6.2). This finding holds across all five model specifications and is consistent with the results found in Chapter 4 (replicated here in Table 6.2's Model 1, β=.095, p<.1). None of the other Mexican-white DiD terms are significant across any of the models, nor are the other Hispanic DiD terms.

Race/Ethnicity and Destination

The overall Mexican-white and Hispanic-white cognitive achievement gaps are maintained, with both groups reporting lower math and reading scores in the fall of kindergarten than 3rd generation whites in each model. For instance, there is a -.126 lag in math achievement at baseline for Mexicans after all neighborhood characteristics are included in the model (p<.001, Model 5 of Table 6.2). These findings are consistent with both the family and school results (chapters 4 and 5, respectively).

For noncognitive development, results are as expected – they are also consistent with the previous chapters. Mexican immigrant children are rated as exhibiting fewer signs of externalized (β=.093, p<.01 in Model 5) and internalized problem behavior than

[88] I keep the neighborhood safety scale, self-reports of neighborhood safety, the proportion Hispanic, the proportion Black, the proportion foreign-born, linguistic isolation (ages 5 and up), the proportion ages 16 to 19, the overall dropout rate, the overall proportion of family households and female headed-households, the proportion of housing that is occupied, the poverty rate, the log of median income, the unemployment rate, the self-employment rate, the proportion with a Bachelor's degree, and the relative deprivation (log) score. All other neighborhood characteristics, such as the Hispanic poverty rate, and the white dropout rate, are removed.

third generation whites.[89] There is no development gap detected for self-control, interpersonal skills, or approaches to learning (Appendix C3).

I also examine the overall influence of destination on all individuals in the analysis. This measures whether development differs across the dichotomy, not a change in the Mexican-white development gap. Children in non-traditional destinations have higher measures of math (β=.085, p<.001 for Model 5), reading, and four of five socio-emotional outcomes (the exception is internalized problem behaviors) at the onset of formal schooling. The results ditto those in Chapter 4 (replicated in Model 1 of Table 6.2). That destination still significantly impacts reading development after the inclusion of neighborhood characteristics is interesting as it is eliminated in the *School Influence* chapter with the inclusion of school and classroom characteristics.

Neighborhood Demographics

I now turn to evaluating the influence of *Neighborhood Resources*, *Collective Socialization*, *Relative Deprivation*, and other neighborhood characteristics on the cognitive and noncognitive development of children in the fall of kindergarten (Table 6.2). I first discuss the influence of neighborhood demographics before moving on to these other conceptualizations drawn from the *Neighborhood Effects* literature.

Along the cognitive side of development, I find that self-reports of neighborhood safety level (somewhat safe or not safe (as compared to very safe)) are associated with lower math achievement (p<.1), but not reading in the fall of kindergarten, e.g., math scores are .043 lower in neighborhoods said to be unsafe (p<.1 in Model 5). Both a

[89] Recall that higher scores denote better behavioral ratings. A higher score on the externalizing problem behaviors scale implies fewer signs of this behavior.

neighborhood's percent Hispanic (β=.001, p<.05) and the proportion aged 16 to 19 (β=.005, p<.05) are associated with higher math scores, while an increase in the neighborhood's proportion of foreign-born students is associated with lower math scores (β=-.002, p<.05). The magnitudes of these associations are small, however. There are no significant influences of neighborhood demographic characteristics on reading in the fall of kindergarten, including linguistic isolation, the neighborhood dropout rate, proportion of family households, proportion of female-headed households, and occupancy rate.

Neighborhood characteristics seem to have more bearing on children's noncognitive development than for their cognitive development. First, teachers report greater levels of internalizing problem behaviors in neighborhoods that are reported as somewhat or not safe (Appendix Table C-3). As internalizing problem behaviors measures anxiety and depression, it is feasible that a less safe neighborhood increases these feelings (Sharkey 2010). There is no influence of perceived neighborhood safety on the other socio-emotional outcomes. A higher dropout rate is also associated with worse ratings of internalizing problem behaviors (p<.05; Appendix Table C-3). A larger foreign-born population is associated with lower self-control (p<.1), internalizing problem behaviors (p<.1) and approaches to learning (p<.001). A larger black population is tied to lower approaches to learning (p<.1), though the magnitude of the association is quite small. Approaches to learning, on the other hand, improve with a greater proportion of female-headed households (p<.05; Appendix Table C-3).

Neighborhood Resources

In the multivariate analyses I use the overall poverty rate of the neighborhood and the log of median income to capture *Neighborhood Resources*. Although the poverty rate is lower and the median income is higher in recently established Mexican communities (as seen in Table 6.1), there is no net benefit of these resources on cognitive development. In the fall of kindergarten neither the log of the median income nor the poverty rate significantly influences math or reading development. Nor is there an impact on noncognitive development in the fall of kindergarten.

Collective Socialization

Collective Socialization is measured through the unemployment rate, self-employment rate, and proportion of the neighborhood that holds a Bachelor's degree. Math performance is lower in neighborhoods with higher unemployment rates (β=-.004, p<.01 in Model 5 of Table 6.2) but higher in neighborhoods with higher self-employment rates (β=.004, p<.01) in the fall of kindergarten. An increase in the overall education level of the neighborhood is positively associated with both math (β=.003, p<.001) and reading development, one of only two neighborhood-level characteristics that are significant for both cognitive development measures. When I run standardized models, the coefficient for the proportion of the neighborhood with Bachelor's degrees is larger than those for any of the other neighborhood measures. A one standard deviation increase in the percent of the neighborhood with a Bachelor's degree is associated with a .03 and .04 standard deviation increase in math and reading scores, respectively.

The measures of *Collective Socialization* also influence socio-emotional

development. An increase in the percent of Bachelor degree holders in the neighborhood positively influences self-control and interpersonal skills. An increase in the self-employment rate is associated with lower socio-emotional outcomes for four of the five measures – self-control ($p<.001$), approaches to learning ($p<.05$), interpersonal skills ($p<.1$), and internalized problem behaviors ($p<.1$; see Appendix Table C-3). Peculiarly, there is a positive association between the unemployment rate and self-control ($p<.1$) and interpersonal skills ($p<.1$).

Relative Deprivation

I capture *Relative Deprivation* through a variable that deviates the log of the household income from the log median household income in the neighborhood. Positive scores, accordingly, denote a household with more income than the median neighborhood income. Negative scores represent households with less income. An increase in the gap between a household's income and the median neighborhood income is associated with .017 lower math scores ($p<.001$ in Model 5 of Table 6.2) and lower reading development (see Appendix Table C-3). For socio-emotional development, a larger gap is associated with lower ratings of interpersonal skills and approaches to learning in the fall of kindergarten (Appendix Table C-3).

Discussion: Baseline Patterns

I find some evidence that neighborhood-level variables are associated with the cognitive and noncognitive development of children at the beginning of formal schooling.

Results suggest that education and workforce characteristics are important while income is less crucial.

There is no indication that *Neighborhood Resources* influence child development. No significant findings are found for the poverty rate or the log of the median household income. These null results are interesting in and of themselves as they imply that neighborhood-level financial resources are not associated with cognitive development. While household socio-economic status is highly significant for both domains of development (see Chapter 4), it appears that the broader context of neighborhood poverty and income are less consequential. These findings suggest children may be resilient to contexts of poverty, at least in so far as they extend to the beginning of the formal schooling process.

A higher self-employment rate is positively associated, while a higher unemployment rate is negatively associated with cognitive development. Perhaps a decrease in employment opportunities discourages students from the schooling process while witnessing the success of self-employed community members encourages students to succeed in the schooling process.

Self-employment is generally portrayed positively in the literature and in the media because it is thought to afford jobs for co-ethnics in ethnic enclaves. However, the characteristics of a successful entrepreneur do not necessarily translate to the stringency of the school setting. The self-employed need to be self-motivating starters. This may not align well with measures of self-control or approaches to learning, especially.

Findings point to the positive influence of living in a highly educated environment on child development. A one standard deviation increase in the proportion of Bachelor

degree holders has a larger influence on both math and reading achievement than any of the other neighborhood characteristics. Similarly, a more educated neighborhood is positively associated with improvements in self-control and interpersonal skills. Educated adults can help orient children towards the schooling process and serve as resources in their development.

It is also interesting that only education appears to have an influence on child development at the neighborhood level. Although socio-economic status is a composite of education, occupation, and income, and socio-economic status at the individual level is positively associated with both cognitive and noncognitive development, there is no significant influence of neighborhood income on development, as discussed above.

While median income and proportion of families in poverty do not significantly influence child development in the fall of kindergarten, *Relative Deprivation* does. The gap between (log) household income and (log) neighborhood median household income is negatively associated with both cognitive (math, reading) and noncognitive development (interpersonal skills, approaches to learning). This finding suggests that differences in economic resources between a family and the neighborhood hinder child development.

An array of other neighborhood characteristics also influences child development. First, neighborhood safety is important. Children are associated with higher math scores and less feelings of anxiety and depression when they live in neighborhoods reported to be "very safe." Second, an increase in the proportion of families that are female-headed is associated with greater approaches to learning. Perhaps single parent, and female single parents in particular, through their struggle to raise a child on their own, convey

greater urgency and motivation to their children to excel in school. Third, I find that an increase in the foreign-born population is associated with lower cognitive (math) and noncognitive preparation in the fall of kindergarten. Lower math scores may be a function of the language barrier. An increase in the foreign-born population, given the unfamiliarity with the school system and the language barrier, may decrease a child's orientation towards school and other socio-emotional measures.

An increase in the proportion of a neighborhood that is Hispanic is found to moderately influence math development. Perhaps a Spanish-speaking student who is learning English as a Second Language (ESL) benefits from an increase in his/her peers that speak Spanish, as this makes it easier to discuss lessons with other students who are also learning English. Finally, a higher dropout rate is associated with worse ratings of internalizing problem behaviors. Living in a neighborhood with a higher dropout rate could lead to feelings of futility towards the schooling process, and therefore anxiety about one's own educational opportunities.

In conclusion, there is evidence that neighborhood characteristics are consequential for child development in the fall of kindergarten, though results vary by development outcome. In particular, a neighborhood's education level and employment characteristics are important for all children's socialization process. Widening gaps in income between a poor family and the neighborhood's median level has a negative impact on development, though median income in-and-of-itself does not. Neighborhood safety also predicts development.

Growth Models

I use panel data models to further explore the influence of neighborhood characteristics on child development. The panel models move beyond the baseline models by mapping the associations across the survey timeframe and parceling out the time-constant component of the error. As in Chapters 4 and 5, I fit a two-level hierarchical intercepts and slopes as outcomes model with child-time nested in child. These models contain a random intercept and a random slope for socio-economic status in order to model the potential variation in socio-economic status' impact across families. A cross-level interaction between time and socio-economic status is also included. All seven developmental outcomes are assessed, though for brevity I only report results for direct math assessment and externalized problem behavior in tables 6.4 and 6.5. For the other developmental results, see Appendix C-8.

Model 6 includes only family covariates and individual controls. It is a duplicate of Model 7 in the *Family Influence* section of Chapter 4, which is the same as Model 5 in the *School Influence* chapter. In this way, each analysis uses the same model as a starting point. Model 7 introduces all neighborhood characteristics. Comparing results from Models 7 to Model 6 shows how the influences of family characteristics change with the inclusion of neighborhood-level variables. Model 8 is the final model for the evaluation of the DiD and neighborhood characteristics. It includes the same family covariates and individual controls as Models 6 and 7, though the final model for the interpretation of the family covariates is Model 7.[90] Model 8 also introduces deciles calculated from the

[90] Note that this varies from the *Family Influence* section of Chapter 4. In Chapter 4, the final model for the interpretation of family covariates did *not* include IPTW deciles. The IPTW deciles are based off of the propensity-score matching model, which is derived from matching family and individual variables across the destination dichotomy. Therefore, the IPTW deciles capture part of the association from each family

inverse probability of treatment weights (IPTW) to create a sharper contrast between the traditional and non-traditional destination groups. These deciles are the same as those used in the analysis of family and school as contexts for child development.

The DiD

With the inclusion of neighborhood characteristics and the IPTW deciles, there continues to be a benefit to living in a non-traditional destination on the Mexican-white development gap for self-control (β=.112, p<.05 for Model 8 in Table 6.3), externalizing problem behaviors (β=.181, p<.001), and interpersonal skills (β=.094, p<.1). These results are largely consistent with the results prior to the inclusion of neighborhood characteristics (see Model 6 in Table 6.3) as well as the results from the *School Influence* chapter, and so reveal that the positive destination influence on the self-control, externalizing problem behaviors, and interpersonal skills Mexican-white development gaps are robust even after accounting for family, school, and neighborhood characteristics. The only difference is that the negative DiD for internalizing problem behaviors is no longer significant with the introduction of neighborhood characteristics and IPTW deciles. The other Hispanic DiD terms show a net positive influence on the

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and individual variable. The coefficient of parental socio-economic status, for instance, represents the partial association of parental SES that is not accounted for in the IPTW deciles. It does *not* represent the full relationship. Therefore, the final model for the family covariates must be one that does not contain the IPTW deciles. The final model for the partial destination influence in the *Family Influence* section of Chapter 4, however, does include the IPTW deciles, as this creates a sharper contrast between the two destinations. Likewise, the final model for the partial destination influence in the *School Influence* chapter, also includes IPTW deciles.

What varies is that the final interpretation of the neighborhood characteristics is also from the model with the IPTW deciles, which is not the case for Chapter 4. In order to evaluate the influence of neighborhood characteristics, the model must first include family characteristics (and individual controls). The IPTW does not capture all of the influence of these variables. Therefore, they must be included directly in the model, even though their coefficients only represent a portion of the association. I do not interpret the coefficients for the family covariates in this model, but they must be included. The final interpretation of the family covariates in these models is Model 7.

Other Hispanic immigrant-third generation white achievement gap for both math and reading. There are no differences for the noncognitive development measures. This also is consistent with results from Chapter 4.

Although the significance of the DiD for self-control, externalizing problem behaviors, and interpersonal skills are consistent across models that include family, school, and neighborhood characteristics, I find that neighborhood characteristics are able to explain a substantial portion of the change in the Mexican-white development gap. The DiD for self-control reduces more than twenty-five percent from .152 ($p<.01$, Model 8 of Table 4.4) to .112 ($p<.05$, Model 8 of Table 6.3). The DiD for externalizing problem behaviors drops to .181 ($p<.001$) from .218 ($p<.001$), a seventeen percent reduction. Finally, the interpersonal skills DiD decreases almost thirty-percent in size (.094 vs. 130) and declines in magnitude (.1 vs. .05).

Race/Ethnicity and Destination

In tables 6.4, 6.5, and Appendix Table C-8, I focus on the influence of neighborhood characteristics on child development over-time, and not just how this inclusion affects the Mexican-white DiD. The overall achievement gap between Mexican immigrant children and third generation whites as well as other Hispanic immigrant children and third generation whites are altered with the inclusion of neighborhood characteristics (Model 7 vs. Model 6 in Table 6.4). More specifically, the math and reading gaps between Mexican immigrant children and third generation whites in Model 6 is eliminated after the inclusion of neighborhood characteristics in Model 7. For example, the lag in math development associated with being Mexican declines from -.046

(p<.05) to -.018 (not significant) from Model 6 to Model 7. This represents a stark change to the results from both the *Family Influence* section of Chapter 4 and the *School Influence* chapter, as well as the baseline models in this chapter, where the Mexican-white achievement gap is maintained, which implies that differences in neighborhood contexts might account for much of the achievement gap.

For noncognitive development, the inclusion of neighborhood characteristics expands the advantage Mexican immigrant children enjoy over third generation whites. Mexican immigrant children have better ratings of self-control, externalizing problem behaviors (β=.095, p<.001 in Model 7 of Table 6.5), and internalizing problem behaviors. For each of these measures, the coefficient that captures the influence of being a Mexican immigrant child becomes either greater in magnitude or in significance (or both) in Model 7. There is no difference between Other Hispanic immigrant children and third generation whites for any of the noncognitive development scales.

I also investigate the main influence of destination (which is separate from the DiD). In the *Family Influence* analysis in Chapter 4, living in a non-traditional destination was positively associated with greater development for each of the seven development outcomes (see Model 6). The inclusion of neighborhood characteristics in Model 7 does not change the results.

Neighborhood Processes

I now examine the three key *Neighborhood Effects* processes of *Collective Socialization, Neighborhood Resources, and Relative Deprivation* on child development using Model 8, which includes the IPTW deciles. As in the kindergarten model,

Collective Socialization influences academic development. An increase in the education level of the neighborhood positively influences both math (β=.004, p<.001 in Model 8 of Table 6.4) and reading development, as does a greater incidence of self-employed individuals (β=.004, p<.001) An increase in the unemployment rate has the opposite association, lowering math (β=-.003, p<.01) and reading achievement.

Unlike in the kindergarten models, there is essentially no negative influence of *Relative Deprivation* on cognitive development. The term is not significant on math development and barely significant for reading (p<.095). *Neighborhood resources* also do not influence development. As in the baseline models, they here are non-significant.

Along the noncognitive domain of development, the most important neighborhood characteristic is level of education. A net increase in the proportion of neighbors with a Bachelor's degree is positively associated with all five socio-emotional outcomes at the 90 percent confidence level (at least). For instance, for every unit increase in the proportion of Bachelor degrees in the neighborhood, there is a corresponding improvement in externalizing problem behaviors by .002 (p<.05). There is no influence of measures of *Neighborhood Resources* or *Relative Deprivation* on noncognitive development, just as in the kindergarten results.

Neighborhood Demographics

A number of other neighborhood characteristics do influence cognitive development though. Self-reported levels of neighborhood safety continue to play an important role in math achievement. Living in a neighborhood that is deemed less than "safe" negatively influences math attainment. The magnitude doubles in size from

somewhat safe (β=-.021, p<.01 in Model 8 of Table 6.4) to not safe (β=-.042, p<.05). An increase in the foreign-born population lowers math achievement while an increase in the Hispanic population and the proportion of 16 to 19 year olds increases it. Surprisingly, an increase in a neighborhood's percent black increases reading scores.

Finally, noncognitive development is affected by some neighborhood characteristics not captured by the three *Neighborhood Effects* processes. Living in a not safe neighborhood has a negative influence on internalizing problem behaviors, interpersonal skills, and approaches to learning. A higher foreign-born proportion negatively influences self-control, internalizing problem behaviors, and approaches to learning. A higher percentage of black residents negatively influences self-control (p<.1) while an increase in the percent Hispanic is associated with worse ratings of externalizing problem behaviors (β=-.001, p<.05 in Model 8 of Table 6.5). More family households tend to lower externalizing problem behaviors (β=.001, p<.05). So too does a higher occupancy rate, which is also associated with worse ratings of internalizing problem behaviors.

The mixed effects models include a random slope for socio-economic status. Likelihood ratio tests show that the standard deviation significantly varies from zero for all outcomes except interpersonal skills, suggesting that the impact of socio-economic status on the slope of the growth curve varies across families. I also assess the cross-level interaction term of socio-economic status by time in order to capture the change in influence of socio-economic status. The influence diminishes over-time for math and reading, but increases for self-control, externalizing problem behaviors (β=.001, p<.001 in Model 8 of Table 6.5), and internalizing problem behaviors.

Discussion: Growth Patterns

One of the aims of this research is to detect whether there is a net benefit to living in non-traditional destinations on the Mexican-white development gaps. I find that there is a net positive destination influence on the Mexican-white development gap for self-control, externalizing problem behaviors, and interpersonal skills. These findings are consistent across model specifications that include the neighborhood, school, and/or family contexts. Interestingly, each of these socio-emotional measures is interactive in that they require the student to engage with peers.

I also explore the overall gap in development between Mexican immigrant children and third generation whites.[91] In the *Family Influence* analysis in Chapter 4 and in the *School Influence* chapter, there is evidence of a persistent underperformance of Mexican immigrant children compared to third generation whites. This gap appears to be eliminated with the inclusion of neighborhood level characteristics. The results from this chapter's set of analyses detect no significant difference between Mexican immigrant children and third generation whites on math or reading net of neighborhood characteristics. This suggests that a key mechanism behind the Mexican-white achievement gap is derived from neighborhood influences. The gap persists after including family socio-economic status, family type, and urbanicity. It persists with the inclusion of such school characteristics as the percent of low-income enrollment, percent Hispanic, and provision of Limited English Proficiency Services. But the gap is eliminated with the inclusion of neighborhood characteristics. These results point to the

[91] The main effect measures the overall gap in achievement between Mexican immigrant children and third generation whites. The DiD measures changes in the gap.

impact of the neighborhood context on academic development, a context that is both exogenous to the family and to the school. At the same time, the inclusion of neighborhood characteristics also reveals an even greater socio-emotional development gap in favor of Mexican immigrants as compared to third generation whites.

I explore three particular *Neighborhood Effects* processes, *Neighborhood Resources, Collective Socialization,* and *Relative Deprivation*. I also explore the influence of such demographic characteristics as the neighborhood's percent foreign-born and percent below the poverty line. The most influential neighborhood characteristic is the education level of the neighborhood, a measure of *Collective Socialization*. Living in a neighborhood where a higher proportion of the residents have college degrees improves math, reading, and all five socio-emotional outcomes.

A potential mechanism is that highly educated neighbors act as resources and serve as role models. The physical presence of a highly educated population may help children internalize high educational aspirations, making the expectation of high scholastic achievement normative. The noncognitive skills necessary to succeed through postsecondary schooling, and, presumably, in the jobs these individuals hold, may also be transmitted from adult to child in the same manner in which cognitive skills are transferred.

I also find that self-employment has a positive influence on both math and reading development. The motivation and drive, perseverance and hard work an entrepreneur exhibits are transferable from the labor market to the learning process. Interestingly, however, an increase in the self-employment rate has a negative influence on self-control. It is possible that the necessary skills for being an entrepreneur do not translate well to

self-control, which measures such behavior as a child's ability to respect property rights and accept peers' ideas. The self-employed may not 'play well with others.'

An increase in the unemployment rate has the opposite impact of self-employment on cognitive development, lowering math and reading scores. An increase in the population that does not work, or work in the formal labor market, provides a different socialization experience to children than a neighborhood of entrepreneurs. The normative experience moves away from full-time employment and high educational attainment and towards poor employment experiences in the labor market. That said, the negative influence of the unemployment rate on cognitive development does not carry over to noncognitive development. There is no negative repercussion on any of the socio-emotional outcomes, including internalizing problem behaviors and approaches to learning.

I do not find support for the hypothesis that *Relative Deprivation* lowers cognitive or noncognitive development. While there is evidence that an increase in the relative deprivation of a child lowers math and reading at the onset of formal schooling (fall of kindergarten), this result does not persist over-time or for socio-emotional outcomes. Nor is there evidence that *Neighborhood Resources*, such as the median income level of a neighborhood or the proportion below the poverty line, influence either domain of development.

Other neighborhood characteristics impact cognitive development. Perceptions of neighborhood safety are important. Self-reporting not living in a very safe neighborhood negatively affects math achievement as well as internalizing problem behaviors,

interpersonal skills, and approaches to learning. Perception of safety, independent of the reality, has real consequences for child development.

The racial, ethnic, and generational mix of the neighborhood matters. It appears that living in a neighborhood with many foreign-born students negatively impacts cognitive and noncognitive development directly. At the same time, worse teacher perceptions of self-control for students that originate in heavily foreign-born or African American neighborhoods is consequential, as a lack of self-control can shape teachers' perception of the student, including their ability and eagerness to learn. Such stigmas can follow a child from year-to-year, hindering the learning process.

An increase in a neighborhood's percent Hispanic, but not foreign-born, improves math. This may imply that Hispanic children are able to learn from each other, especially if they understand the language of instruction. Foreign-born children are less likely to be able to participate during instruction or periods of peer interaction due to the language barrier. Alternatively, foreign-born parents may be less likely to interact with the school system due to linguistic isolation, lack of knowledge of American culture, and inexperience with the American school system. Higher proportions of the foreign-born, therefore, may lower a child's eagerness to learn and other aspects of approaches to learning due to linguistic and knowledge barriers. These children may feel more anxious, as exhibited by worse internalizing problem behavior scores. They may also lash out, as exhibited by worse ratings of self-control. Worse ratings of self-control are seen with black children as well. Perhaps children feel more comfortable acting out when surrounded by a greater number of their racial and ethnic peers. Finally, children living in neighborhoods that have more families, have a higher occupancy rate, and have more

female-headed households are reported to have fewer signs of externalizing problem behaviors. A higher proportion of families living in a close proximity to one another may increase the amount of day-to-day inter-family interactions of children and adults. This can facilitate the social development of these children.

Summary

The communities in which Mexican immigrants reside vary between traditional and non-traditional destinations, with fewer residents below the poverty line, a higher median household income, and less segregation in the non-traditional destinations. Accounting for neighborhood characteristics appears to eliminate the cognitive development gap between Mexican immigrant children and third generation whites. At the same time, such neighborhood characteristics as the level of education, unemployment rate, and proportion foreign-born all influence child development directly. Together, these neighborhood characteristics explain approximately twenty-five percent of the Mexican-white development gap for the interactive behaviors of self-control, externalizing problem behaviors, and interpersonal skills. These findings provide support for (H4), that improvements in neighborhood characteristics decrease the Mexican-white development gap. I next examine the influence of state policy on child development.

Table 6.1. Neighborhood Characteristics by Race/Ethnicity and Destination Type at Baseline, Weighted

	Mexican			Other Hispanic			White		
Variable	**Trad**	**New**		**Trad**	**New**		**Trad**	**New**	
Neighborhood Resources	--	--	--	--	--		--	--	--
Neighborhood Poverty Rate (%)	21.76	15.97	***	20.25	17.17	*	9.34	8.75	**
Hispanic Poverty Rate	25.40	20.97	**	23.82	22.95		13.85	12.74	*
Black Poverty Rate	21.75	17.19	*	25.22	19.52	+	14.42	11.80	***
White Poverty Rate	16.33	13.31	*	14.10	12.04		7.16	7.96	**
Proportion that receive public assistance	7.49	5.01	***	7.04	6.46		2.64	2.40	**
Median Income of Neighborhood	35,684.03	38,430.39	*	38,038.50	41,125.06	+	56,043.18	49,604.62	***
Hispanic Median Income	34,447.06	37,270.38	*	35,723.97	37,904.48		52,677.81	42,444.45	***
Black Median Income	34,733.07	30,901.16	*	33,996.97	36,571.70		42,516.71	37,226.22	***
Median Rent	625.85	598.95		663.20	681.37		798.86	623.29	***
Median value of all owner occupied units	125,213.29	117,012.57		151,783.48	141,381.53		186,735.54	127,929.11	***
Collective Socialization	--	--	--	--	--		--	--	--
Proportion Unemployed	10.76	8.51	***	8.87	8.45		4.90	4.55	***
Proportion age 16+ not in labor force	41.84	37.65	***	40.76	38.81	*	33.78	33.17	*
Of those age 16+ and employed: proportion employed in for-profit industry	75.77	77.13	+	75.62	74.04	*	69.35	71.96	***
Proportion self-employed	6.15	5.08	***	6.96	5.05	***	8.56	6.84	***
Proportion of residents (age 25+) with a Bachelor degree	7.49	10.28	***	10.31	12.85	**	19.82	15.85	***
Proportion of Hispanics with a Bachelor degree	3.66	5.42	**	4.72	9.44	***	12.64	10.34	***
Proportion of Blacks with a Bachelor degree	9.18	9.71		11.63	10.83		15.32	11.77	***
Relative Deprivation	--	--	--	--	--		--	--	--
Relative Deprivation	-10,188.62	-8,575.47		-4,113.36	-1,890.87		16,501.87	11,370.61	**
Log of Relative Deprivation	-0.72	-0.59		-0.85	-0.43		-0.02	-0.04	
Other Neighborhood Characteristics	--	--	--	--	--		--	--	--
Scale of Neighborhood safety	2.78	2.76		2.86	2.80	+	2.94	2.94	
Self reported safety: Very safe	0.44	0.41		0.50	0.45		0.75	0.81	***
Somewhat safe	0.43	0.47		0.39	0.41		0.23	0.17	***
Not safe	0.13	0.12		0.12	0.14		0.02	0.01	
Population Density	8,085.12	12,424.14	**	11,658.30	15,420.56	+	3,829.23	2,337.32	***
Percent of neighborhood: Hispanic	61.31	32.77	***	52.10	34.06	***	19.90	3.96	***
Black	7.50	10.65	*	7.14	15.02	***	4.26	5.80	***
American Indian	0.50	0.34	*	0.54	0.40		0.53	0.39	***
Asian	5.82	3.45	***	8.21	4.21	***	4.74	1.91	***
Foreign Born	33.32	23.08	***	33.50	27.93	**	12.18	5.16	***
Proportion linguistic isolation: Age 5 and up	19.45	11.99	***	18.02	12.89	***	4.60	1.66	***
Age 5 to 17	27.50	21.41	***	25.31	18.42	***	18.48	12.91	***
Percent of neighborhood: Age 0 to 17	32.56	27.90	***	30.01	26.33	***	27.44	25.58	***
Age 16 to 19	6.65	5.81	***	6.15	5.44	***	5.58	5.35	***
Age 65 and over	8.60	10.51	***	9.49	11.66	***	10.82	12.89	***
Neighborhood dropout rate	16.97	18.34		17.40	12.82	***	7.92	8.09	
Hispanic dropout rate	20.05	24.21	+	21.84	17.49	*	12.37	10.62	**
Black dropout rate	8.12	9.38		5.90	8.76		3.72	4.57	+
White dropout rate	7.37	16.39	***	7.26	10.05	+	6.00	7.52	***
Proportion of family households in the neighborhood	78.55	69.74	***	74.22	70.21	***	72.82	71.73	**
For Hispanic residents	87.04	82.29	**	84.62	78.47	***	82.27	70.58	***
For Black residents	64.93	59.21	*	62.15	68.75	*	62.33	58.85	**
For White residents	60.27	59.94		58.85	58.97		70.06	70.79	+
For Asian residents	70.37	65.91		65.24	63.27		73.08	58.66	***
For American Indian residents	67.26	50.12	***	63.47	38.03	***	48.67	35.70	***
Proportion of households headed by females	10.06	8.35	***	9.47	10.54	*	6.23	5.73	***
Of Hispanic households, proportion headed by females	11.26	12.31		11.34	15.08	***	9.12	8.38	*
Of Black households, proportion headed by females	16.32	14.94		15.99	17.70		10.55	11.75	*
Of White households, proportion headed by housing	5.19	5.48		5.18	5.53		5.12	4.75	***
Proportion of housing onccupied	94.91	93.20	***	94.38	93.93		94.66	93.23	***
Proportion of housing that is occupied by the owner	54.33	55.17		51.59	51.76		71.25	75.07	***
Proportion of housing stock that is single family	66.97	52.86	***	61.05	52.02	**	76.35	76.03	
Proportion of housing stock that are 2-4 unit buildings	8.80	24.75	***	8.18	18.49	***	4.75	7.17	***

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

N=10,080

Table 6.2. Math Direct Assessment and Externalized Problem Behavior Development at Baseline

	Math Direct Assessment			Externalized Problem Behavior		
Variable	**Model 1[2]**	**Model 2[3]**	**Model 5[4]**	**Model 1[2]**	**Model 2[3]**	**Model 5[4]**
Hispanic Immigrant	-0.165 ***	-0.144 ***	-0.139 ***	0.057	0.066	0.067
Mexican Immigrant	-0.153 ***	-0.136 ***	-0.126 ***	0.089 **	0.095 **	0.093 **
Other	-0.085 ***	-0.074 ***	-0.074 ***	0.005	0.010	0.009
Non-Traditional Destination	0.070 ***	0.063 ***	0.085 ***	0.071 ***	0.065 ***	0.060 ***
Mexican-White DiD	0.034	0.035	0.023	0.095 +	0.100 *	0.097 *
Hispanic-White DiD	0.038	0.043	0.033	-0.007	-0.004	-0.006
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.031 ***	-0.031 ***	-0.031 ***	0.233 ***	0.232 ***	0.232 ***
Disability	-0.104 ***	-0.104 ***	-0.104 ***	-0.100 ***	-0.100 ***	-0.100 ***
Repeat a Grade	-0.267 ***	-0.266 ***	-0.267 ***	-0.150 ***	-0.151 ***	-0.152 ***
Head Start	-0.055 ***	-0.052 ***	-0.051 ***	-0.111 ***	-0.107 ***	-0.105 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.031 **	-0.029 **	-0.034 **	-0.095 ***	-0.093 ***	-0.092 ***
Household Type: Other	-0.066 **	-0.065 **	-0.066 **	-0.149 ***	-0.150 ***	-0.149 ***
Language in the Home: Spanish	-0.204 ***	-0.186 ***	-0.188 ***	-0.023	-0.016	-0.017
Language in the Home: Other	-0.106 +	-0.097	-0.098	0.012	0.015	0.013
Socio-Economic Status	0.151 ***	0.145 ***	0.151 ***	0.021 *	0.018 *	0.012
Below the Poverty Line	-0.002	0.004	-0.021	0.016	0.020	0.025
Number of Siblings	-0.016 ***	-0.017 ***	-0.016 ***	0.052 ***	0.052 ***	0.052 ***
Parental Expectations	0.017 ***	0.017 ***	0.017 ***	0.006 *	0.006 *	0.006 *
Parental Involvement	0.041 ***	0.036 ***	0.030 ***	-0.005	-0.008	-0.010
Urbanicity: Midsize City	-0.070 ***	-0.084 ***	-0.073 ***	-0.047 **	-0.054 **	-0.053 **
Large Suburb	-0.042 ***	-0.058 ***	-0.048 ***	-0.008	-0.022	-0.022
Midsize Suburb	-0.106 ***	-0.125 ***	-0.109 ***	-0.008	-0.018	-0.016
Large Town	-0.103 ***	-0.120 ***	-0.106 ***	-0.089 **	-0.090 *	-0.082 *
Small Town	-0.080 ***	-0.100 ***	-0.081 ***	-0.103 ***	-0.106 ***	-0.094 ***
Rural	-0.115 ***	-0.137 ***	-0.116 ***	-0.056 **	-0.064 **	-0.048 +
Neighborhood Characteristics	-- --	-- --	-- --	-- --	-- --	-- --
Neighborhood Safety Scale		-0.019	-0.020		-0.014	-0.015
Self-reported Neighborhood Safety: Somewhat Safe		-0.022 *	-0.018 +		-0.008	-0.009
Not Safe		-0.045 +	-0.043 +		-0.024	-0.025
Neighborhood: Percent Hispanic		0.000	0.001 *		0.000	0.000
Black		-0.002	0.000		0.000	0.000
Foreign-Born		-0.001 *	-0.002 **		-0.001	-0.001
Linguistic Isolation Ages 5 and Up		0.000	0.001		0.001	0.001
Age 16 to 19		0.002	0.005 *		-0.002	-0.003
Dropout Rate		-0.001 **	-0.001		-0.001	-0.001
Proportion of Family Households		0.000	0.000		0.001	0.001
Proportion of Female Headed-Households		-0.001	0.002		0.001	0.001
Proportion of Housing that is Occupied		0.002 *	0.001 +		0.002 *	0.002
Poverty Rate			0.000			-0.002
Log of Median Income			-0.017			0.006
Unemployment Rate			-0.004 **			0.003
Self-Employment Rate			0.004 **			-0.002
Proportion with a Bachelor's Degree			0.003 ***			0.001
Relative Deprivation (log)			-0.017 ***			0.003
Constant	-1.355 ***	-1.404 ***	-1.286 ***	3.200 ***	2.996 ***	3.009 ***
N = 14,400 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes family covariates and individual controls.

[3] Model 2 adds neighborhood demographic information.

[4] Model 3 introduces measures of *neighborhood resources*. Model 4 adds measurs of *collective socialization*. Model 5 includes a measure of *relative deprivation*. I report model 5.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 6.3. Mexican-White Difference-in-Difference Terms from Mixed Effects Modeling

Outcome	Model 6[2]		Model 7[3]		Model 8[4]	
Math Direct Assessment	0.029		0.016		-0.034	
Reading Direct Assessment	0.035		0.018		-0.013	
Self-Control	0.066	*	0.056	+	0.112	*
Externalized Problem Behavior	0.094	*	0.091	*	0.181	***
Internalized Problem Behavior	-0.057	*	-0.050	+	0.030	
Interpersonal Skills	0.059	+	0.054		0.094	+
Approaches to Learning	-0.002		0.002		0.043	

N = 66,758 for math and reading and 59,713 for each socio-emotional outcomes per each of 10 Multiply Imputed Datasets.

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 6 includes family covariates and individual controls.

[3] Model 7 adds neighborhood characteristics.

[4] Model 8 adds inverse probability of treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 6.4. Growth Curve Model of Math Direct Assessment

	Math Direct Assessment					
Variable	**Model 6[2]**		**Model 7[3]**		**Model 8[4]**	
Hispanic Immigrant	-0.103	***	-0.078	**	-0.081	**
Mexican Immigrant	-0.046	*	-0.018		0.004	
Other	-0.070	***	-0.058	***	-0.059	***
Non-Traditional Destination	0.039	***	0.050	***	0.071	***
Mexican-White DiD	0.029		0.016		-0.034	
Hispanic-White DiD	0.093	*	0.086	**	0.087	**
Individual Characteristics	--	--	--	--	--	--
Female	-0.063	***	-0.062	***	-0.062	***
Disability	-0.080	***	-0.080	***	-0.077	***
Repeat a Grade	-0.294	***	-0.294	***	-0.294	***
Head Start	-0.086	***	-0.078	***	-0.079	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.024	**	-0.021	*	-0.022	**
Household Type: Other	-0.094	***	-0.090	***	-0.092	***
Language in the Home: Spanish	-0.186	***	-0.171	***	-0.171	***
Language in the Home: Other	-0.157	**	-0.155	**	-0.092	**
Socio-Economic Status	0.122	***	0.103	***	0.102	***
Below the Poverty Line	0.004		0.003		0.003	
Number of Siblings	0.017	***	0.017	***	0.017	***
Parental Expectations	0.007	***	0.007	***	0.007	***
Parental Involvement	0.036	***	0.024	***	0.020	***
Urbanicity: Midsize City	-0.047	***	-0.044	***	-0.044	***
Large Suburb	-0.030	***	-0.035	***	-0.033	***
Midsize Suburb	-0.072	***	-0.069	***	-0.072	***
Large Town	-0.072	***	-0.068	***	-0.070	***
Small Town	-0.066	***	-0.062	***	-0.045	+
Rural	-0.065	***	-0.061	***	-0.064	***
Neighborhood Characteristics	--	--	--	--	--	--
Neighborhood Safety Scale			0.006		0.065	
Self-reported Neighborhood Safety: Somewhat Safe			-0.021	**	-0.021	**
Not Safe			-0.042	*	-0.042	*
Neighborhood: Percent Hispanic			0.001	*	0.001	*
Black			0.000		0.000	
Foreign-Born			-0.001	*	-0.001	*
Linguistic Isolation Ages 5 and Up			0.000		0.000	
Age 16 to 19			0.003	+	0.003	+
Dropout Rate			-0.000		-0.000	
Proportion of Family Households			-0.000		-0.000	
Proportion of Female Headed-Households			-0.000		-0.003	
Proportion of Housing that is Occupied			0.001		0.001	
Poverty Rate			-0.000		-0.000	
Log of Median Income			-0.006		-0.006	
Unemployment Rate			-0.003	**	-0.003	**
Self-Employment Rate			0.004	***	0.004	***
Proportion with Bachelor's Degrees			0.004	***	0.004	***
Relative Deprivation (log)			-0.001		-0.001	
Time	0.027	***	0.026	***	0.026	***
Time*SES	-0.000	*	-0.000	*	-0.000	*
Constant	-0.847	***	-0.894	***	-0.919	***
Random Effects						
SES	0.078	(.011)	0.073	(.012)	0.072	(.012)
Constant	0.245	(.003)	0.243	(.003)	0.243	(.003)
Residual	0.420	(.420)	0.420	(.001)	0.420	(.001)
IPTW Decile						
1					0.016	
2					0.034	
3					-0.001	
4					0.013	
5					0.017	
6					0.031	
7					0.022	
8					0.034	
9					0.050	+
N = 66,760 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.
[2] Model 6 includes family covariates and individual controls.
[3] Model 7 adds neighborhood characteristics.
[4] Model 8 adds inverse probability of the treatment weight deciles.
+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 6.5. Mixed Effects Model of Externalized Problem Behavior

	Externalized Problem Behavior					
Variable	**Model 6[2]**		**Model 7[3]**		**Model 8[4]**	
Hispanic Immigrant	0.050		0.065		0.075	+
Mexican Immigrant	0.078	**	0.095	***	0.053	+
Other	0.003		0.014		0.021	
Non-Traditional Destination	0.061	***	0.047	***	0.004	
Mexican-White DiD	0.094	*	0.091	*	0.181	***
Hispanic-White DiD	-0.013		-0.006		-0.021	
Individual Characteristics	--	--	--	--	--	--
Female	0.242	***	0.241	***	0.241	***
Disability	-0.090	***	-0.090	***	-0.090	***
Repeat a Grade	-0.146	***	-0.147	***	-0.146	***
Head Start	-0.101	***	-0.095	***	-0.094	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.107	***	-0.101	***	-0.100	***
Household Type: Other	-0.157	***	-0.152	***	-0.152	***
Language in the Home: Spanish	0.006		0.023		0.025	
Language in the Home: Other	0.061		0.060		0.072	
Socio-Economic Status	0.023	***	0.014	*	0.014	*
Below the Poverty Line	0.008		0.009		0.009	
Number of Siblings	0.031	***	0.031	***	0.031	***
Parental Expectations	0.004	**	0.004	**	0.004	**
Parental Involvement	0.005		-0.002		-0.003	
Urbanicity: Midsize City	-0.026	+	-0.032	*	-0.031	*
Large Suburb	-0.003		-0.017		-0.018	
Midsize Suburb	-0.027		-0.037	+	-0.028	
Large Town	-0.057	*	-0.056	*	-0.057	*
Small Town	-0.068	***	-0.067	***	-0.051	
Rural	-0.049	**	-0.051	*	-0.041	+
Neighborhood Characteristics	--	--	--	--	--	--
Neighborhood Safety Scale			-0.010		-0.010	
Self-reported Neighborhood Safety: Somewhat Safe			0.006		0.007	
Not Safe			-0.037		-0.037	
Neighborhood: Percent Hispanic			-0.001	+	-0.001	*
Black			-0.000		-0.001	
Foreign-Born			-0.001		-0.001	
Linguistic Isolation Ages 5 and Up			0.002		0.002	
Age 16 to 19			-0.000		-0.000	
Dropout Rate			-0.000		-0.000	
Proportion of Family Households			0.001	*	0.001	*
Proportion of Female Headed-Households			-0.001		-0.001	
Proportion of Housing that is Occupied			0.002	+	0.002	+
Poverty Rate			0.000		0.004	
Log of Median Income			0.006		0.006	
Unemployment Rate			0.001		0.001	
Self-Employment Rate			-0.001		-0.001	
Proportion with Bachelor's Degrees			0.002	*	0.002	*
Relative Deprivation (log)			0.004		0.004	
Time	-0.001	***	-0.001	***	-0.001	***
Time*SES	0.001	***	0.001	***	0.001	***
Constant	3.185	***	2.964	***	2.998	***
Random Effects						
SES	0.072	(.019)	0.070	(.020)	0.071	(.020)
Constant	0.412	(.004)	0.411	(.004)	0.411	(.004)
Residual	0.412	(.002)	0.412	(.002)	0.412	(.002)
IPTW Decile						
1					0.012	
2					0.005	
3					0.015	
4					0.023	
5					0.022	
6					0.031	
7					0.009	
8					-0.040	
9					-0.038	
N = 59,710 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.
[2] Model 6 includes family covariates and individual controls.
[3] Model 7 adds neighborhood characteristics.
[4] Model 8 adds inverse probability of the treatment weight deciles.
+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Chapter 7. State Policy Influence

While the family, school, and neighborhood contexts are all critical settings for child development, each occurs within, and is shaped by, state policy. State policy is one of the contexts emphasized in my version of *Ecological Systems Theory*. The policies of the host government are also highlighted as a key factor for immigrant assimilation and incorporation in *Modes of Incorporation* (MOI) theory. Though MOI focuses on governmental policy at the federal level, it is distinctions in state immigration policy that demarcate differing environmental contexts. Many issues of significance follow from political processes at the state level, including welfare eligibility and in-state postsecondary tuition rates for undocumented children. Moreover, state level policy often garners national attention, including coverage of Arizona and Alabama's recent anti-immigration laws (SB 1070, HB 56, respectively). I therefore analyze the influence of state factors on child development.

Because so many issues of consequence flow from state policy, I choose to focus on the role of the state legislature. Composed of elected officials, the state legislature is a proxy for the public sentiment, i.e. host society reception. As such, the passing of immigration laws, whether pro- or anti-, reflects the will of the people.[92] In particular, such superbly restrictive immigration legislation as Arizona's SB1070 and Alabama's HB56 must have garnered public support. If not, those legislators would have faced stiff competition in the following election cycle. Yet, the Republican Party remains in power in both of these states. Maryland's Dream Act, SB167, also had public support as it passed the legislature as well as a voter referendum.

[92] Or at least those who voted.

It is as if the state legislature acts as a prism. It gathers the public sentiment, acting in conjunction with constituents, and enacts policy that affects immigrants' lives, such as public assistance for unemployment, right to in-state tuition in postsecondary schooling, and access to a driver's license. Therefore, the passage of immigrant legislation should be viewed as a reflection of host society sentiment at the state level.

A state's population is often aligned closer to one of the two major political parties.[93] Voters that identify as Republican (and those states that are majority Republican) often take a conservative approach to immigration. Their stance can be classified as "jus soli," or "birth by right," defined as all individuals born or naturalized in the United States in Section 1 Clause 1 of the 14th Amendment to the Constitution.[94] This stance posits that immigrants without the legal right to reside in the United States should not be granted the same rights allotted to lawful state residents, such as in-state tuition, public benefits, and the right to work.[95] Conversely, voters that identify as Democrat (and those states that are majority Democrat) typically take a more liberal approach to immigration, believing that individual rights should not solely be predicated upon an individual's legality, especially for undocumented children who came to the United States at a young age. From this perspective, Republican dominated legislatures should be more likely to pass anti- and Democrat-led legislatures should be more likely to pass pro/neutral-immigrant legislation. More broadly, as legislatures reflect public sentiment, a Republican led-legislature stands in for a host society less receptive to

[93] This is not to discount the large heterogeneity in a state's voting population, nor the divide between urban, suburban, and rural residents. However, only certain states are considered competitive in any Presidential election.
[94] Those born abroad to U.S. born parents can generally receive citizenship as well.
[95] Not to be confused with "right to work" legislation.

immigrants while a majority Democrat legislature is indicative of a more receptive society. The same holds for Republican and Democratic Governors.

I therefore hypothesize that the political party affiliation of the state legislature, the political party affiliation of the Governor, and the passage of pro/neutral and anti-immigrant legislation varies within and between destinations. This variation at the state level influences Mexican-white gaps in development (H5).

In this chapter I continue to disaggregate the influence of non-traditional destinations on child development. I examine to what extent the destination 'effect' on the Mexican-white development gap is accounted for by state level factors. I also examine the direct influence of state level factors on child development. I begin the chapter with a discussion of the patterning of pro-/neutral and anti-immigrant legislation by destination and group, along with the political party affiliation of the state legislature and governor by destination and group.[96] I then examine the influence of legislation, legislature, and governor on child development in a multivariate framework. I first run a naïve multivariate regression model to examine the relationship between immigrant legislation and development prior to the inclusion of other environmental factors. The results give a sense of the relationship between these state level factors and development, but the approach is naïve in that it does not account for relevant individual level factors, including household socio-economic status.[97] I therefore utilize a mixed effects model with difference-in-difference terms (DiD), family covariates, individual controls, random intercepts, and random slopes. I also include the same inverse probability of treatment weights that were used in the other substantive chapters in order to create a sharper

[96] Mexican immigrant children, other Hispanic immigrant children, and third generation whites.
[97] When looking at individual outcomes it is imperative to include individual level covariates. Otherwise the results potentially suffer from the *Ecological Fallacy*.

estimate of the influence of non-traditional destinations on the Mexican-white development gap – the DiD.

Data for this chapter was obtained from two additional sources. First, immigration policy comes from a database maintained by the National Conference of State Legislatures (NCSL) that records immigrant legislation passed in a given state in a given year. This database includes legislation for 2005 to 2012. I rate each law as either anti- or pro-/neutral, from which a summary measure is derived for each state for each year from 2005 to 2011.[98] As the ECLS-K was administered from 1998 to 2007, I merge the 2005 data into the ECLS-K at wave 6. I treat this data as constant across the other waves. There is a temporal order flaw with this technique, so results from the analyses should be interpreted as exploratory rather than causal.

Information on the state's governor and legislature come from *The Book of the States*. This publication lists the political party affiliation of the governor, house, and senate for each year. Information on the majority party in the state House and Senate identify whether the legislature is majority Republican, Democrat, mixed, or some other category (e.g. unicameral). The Governor is either a Democrat, a Republican, or an Independent. These measures are time-varying and are available for each survey wave in the ECLS-K.

[98] My collection and coding of the data occurred before the 2012 data became available.

Descriptive Results

State Immigration Laws

I conduct a state-level analysis of immigrant legislation to describe differences in the incidence of pro-/neutral and anti-immigration legislation across traditional and non-traditional states. I then discuss a person-level analysis based upon the ECLS-K sample in order to examine the landscape of individual exposure.

At the state level, traditional destination states (CA, TX, AZ, CO, NV, NM) passed, on average, .83 pro-/neutral and .5 anti-immigration laws in 2005, which is higher than the .41 and .19 incidence for pro-neutral and anti-immigration laws, respectively, for non-traditional states.[99] As recently established destination areas are often unaccustomed to high levels of immigration (e.g. North Dakota), it is less likely they have the need to pass either pro-/neutral or anti-immigrant legislation.

The person-level data provides a sense of the immigrant-legislative landscape for families. It differs from the state-level analysis as each child rather than each state is given equal weight. Because many more individuals live in California than Colorado, for instance, this type of analysis more accurately represents the exposure of families to immigrant legislation.

Table 7.1 details the mean number of 2005 pro-/neutral and anti-immigration laws passed at the person-level, as merged with the wave 6 analytic sample. The mean number of pro-/neutral laws passed for the analytic sample in wave 6 was .47, with range [0,4]. The mean number of anti-immigrant laws passed was .22, with range [0,3]. It is more common for a state to pass a pro-/neutral than an anti-immigrant law.

[99] Results available upon request.

There is substantial variability in the passage of pro-/neutral and anti-immigration legislation between destinations, however. The mean number of pro- and neutral laws passed is .36 and .50 for individuals residing in traditional and non-traditional destinations, respectively in 2005 (Table 7.1). The mean number of anti-immigration laws passed is .43 and .15, respectively. These differences are highly significant ($p<.001$). In 2005, children living in traditional Mexican destinations experience the passage of fewer pro- and neutral, and more anti-immigrant laws, on average, than children living in non-traditional Mexican destinations.

When I examine Mexican immigrants specifically, the differences are even starker. Traditional destinations passed one-tenth the number of pro-/neutral immigrant laws (.15) of non-traditional destinations (1.58; $p<.001$ under the *Mexican* heading of Table 7.1), while also passing more anti-immigrant legislation (.42 vs. .24, respectively; $p<.01$). A variance decomposition shows that 23 percent of the variance in the passage of pro-/neutral immigrant legislation in 2005 occurs between traditional and non-traditional destinations. A similar trend is exhibited for other Hispanic immigrants. The traditional states in which they reside passed far fewer pro-neutral (.05 vs. .58, $p<.001$) but more anti-immigration laws (.26 vs. .05, $p<.001$) on average. The results suggest that Mexicans and other Hispanics are concentrated in traditional destination states that pass few pro-/neutral immigration laws but are more likely to pass anti-immigration laws.

For third generation whites, the traditional destination states in which they reside actually passed more pro-immigration laws than the non-traditional states in 2005 (.63 vs. .46, $p<.001$). Even so, whites in traditional destinations live in states that are also

more likely to pass a greater incidence of anti-immigrant legislation than non-traditional destinations states (.45 vs. .16, $p<.001$).

My interest in state immigration policy goes beyond which destination passes more pro-/neutral or anti-immigrant legislation. I am ultimately interested in the impact of state immigration policy on child development. There is a positive relationship between each of the seven developmental outcomes and pro-/neutral immigration laws (not reported). Where the number of pro-neutral immigration laws is high, so too are children's level of cognitive and noncognitive development. The converse holds for anti-immigration laws (not reported): with high numbers of anti-immigration laws, academic and socio-emotional scores are low. These, though, are simple correlational comparisons. To determine whether the relationships are causal requires a different approach.

Legislature and Governor

I now turn to examining descriptive differences in the state legislature and governor. This data is time-varying and observed for every wave in the ECLS-K. Table 7.2 details the over-time means by destination and group.

For Mexican immigrants in traditional destinations, the state legislature were majority Democratic from 1998 through 2007 (.59 percent of the time). Nineteen percent of state legislatures were Republican, while just under a quarter were mixed.[100] In non-traditional destinations, the modal affiliation was mixed (.43 percent of the time). For other Hispanic immigrants in traditional destinations the state legislatures were largely majority-Democrat as well (.67 percent). However, in non-traditional destinations, the

[100] A mixed legislature implies that the house was dominated by one party and the senate another, no majority in either house, or no majority in a unicameral legislature.

legislatures were majority Republican more often than any other category (.45 percent). For third generation whites, too, the modal political party of state legislatures was Democrat (.40 percent). In non-traditional destinations, the distribution was nearly split in thirds between Democratic, Republican, and mixed.

Most children in the analytic sample had a Republican governor. Across the 1998 to 2007 time frame, more than three-quarters of all Mexican immigrant children, other Hispanic immigrant children, and third generation whites living in traditional states had a Republican governor. The likelihood of having a Republican governor decreases from long-established to recent Mexican destinations (e.g. .77 to .50 for Mexican immigrant children, $p<.001$), but the modal governor category was still Republican in non-traditional destinations.

Discussion: Destination Differences in State Legislation

The immigrant legislation data reveals the substantial variability in the passage of pro-/neutral and anti-immigrant laws by areas of Mexican destination. As far less pro-/neutral laws and more anti-immigrant laws are passed in traditional destinations, this parallels media coverage detailing the passage of highly virulent anti-immigration legislation, such as Arizona's SB 1070.[101] That Mexican immigrants in traditional destinations live in states that pass one-tenth the number of pro-neutral laws and twice as many anti-immigration laws as non-traditional destination states may have large ramifications for child development. If the passage of immigrant legislation is a proxy

[101] That said, this type of legislation is not exclusive to traditional Mexican destinations. New destinations have also passed anti-immigration legislation, e.g. AL HB 56, though an analysis of recent immigrant legislation is beyond the scope of this research due to the constraints in the ECLS-K. More current national datasets would be better suited for this type of analysis.

for the state's receptivity towards immigrants, these differences should factor down to the family, school, and neighborhood, and have bearing on immigrant children's development.

I also note that although the average is less than a single bill passed per state in 2005, once on the books, laws remain in effect (unless challenged and overturned), and so their consequences can last for many years. Immigration laws signal to immigrant parents and children alike how receptive the state is to their presence, not just at their initial passage but also across years.

The differences in state legislature and governor are also interesting, with the traditional destinations dominated by Democratically controlled legislatures but Republican-held governorships. Whether these differences in state legislature impact child development will be explored further in multivariate analyses.

Multivariate Analyses

Preliminary Regression Models

I include both types of legislation as independent variables and each developmental outcome as a dependent variable (Model 1). I then add in Model 2 political party affiliation of the legislature and governor.[102] For the academic outcomes of math and reading, I run a random effects model with only waves 6 and 7, as wave 6 (2004) corresponds closely to the 2005 source of the immigration legislation data and wave 7 (2007) follows it. For the socio-emotional outcomes, I only examine the data at wave 6 as these outcomes were not assessed in wave 7. Results are reported in Tables

[102] These models serve to demonstrate the association between state level factors and developmental outcomes. As they do not include individual-level variables, they potentially suffer from the *Ecological Fallacy*. They should only be interpreted as correlations at a particular snapshot in time.

7.3 and 7.4 for academic and socio-emotional outcomes, respectively.

As Model 1 of Table 7.3 shows, a greater amount of pro-/neutral immigrant legislation is associated with improvements in math and reading scores in 5th and 8th grade (β=.015, p<.001 for math and β=.017, p<.001 for reading). Conversely, the passage of more anti-immigrant legislation is affiliated with lower math and reading scores (β=-.048, p<.001 for math and β=-.045, p<.001 for reading). In Model 2 I introduce state legislature and governor information. The association between each type of immigrant legislation and math development is accounted for by measures of state political party affiliation. However, the relationship, though diminished in size and magnitude, remains significant for reading in 5th and 8th grade. Pro-/neutral immigrant legislation continues to positively impact reading development (β=.008, p<.05) while anti-immigrant legislation negatively influences it (β=-.014, p<.05). Having a Democratically controlled legislature or a Republican governor are also associated with lower math and reading scores (Model 2).

Along the noncognitive domain of development (Table 7.4), I find a negative association between the amount of anti-immigrant legislation and ratings of noncognitive behavior (Model 1). For instance, there is a .029 penalty for self-control associated with the passage of each additional anti-immigrant law (p<.05). This finding holds for all socio-emotional outcomes except approaches to learning. Though there are significant impacts of anti-immigrant legislation on socio-emotional development, there is little association between pro-/neutral immigration legislation and noncognitive development. The sole instance is for approaches to learning, where a positive association exists in both Models 1 and 2 (β=.017, p<.05 in Model 2).

Half of the associations between anti-immigrant legislation and noncognitive development found in Model 1 are explained by the introduction of party affiliation of the legislature and governor in Model 2 (Table 7.4). The negative association between anti-immigrant legislation and (1) self-control and (2) interpersonal skills can be explained by the state having a Republican-majority legislature; Republican legislatures are more likely to pass anti-immigration laws than Democratic legislatures. The negative association of anti-immigration legislation on externalizing problem behaviors and internalizing problem behaviors remain. For example, the magnitude decreases from -.051 ($p<.001$) to -.044 ($p<.001$) from Model 1 to Model 2 for externalizing problem behaviors. I also find a negative association between a majority Republican legislator and externalizing problem behaviors.

Discussion: Preliminary Regression Models

These models regress state-level data on individual outcomes, and therefore suffer from the potential of the *Ecological Fallacy* of assigning state level trends to individual outcomes without including individual covariates. Nevertheless, the associations in these models are as expected. An increase in the incidence of pro-/neutral immigrant legislation is associated with improved math scores, reading scores, and ratings of approaches to learning. Pro- immigrant legislation can send a signal to schoolchildren that they are welcome, which will help orient the children towards the learning process. If so, this will be observed through their academic engagement (i.e. approaches to learning) as well as their achievement scores. The negative association in Model 1

between anti-immigrant legislation and six of the seven developmental outcomes works in the opposite direction – sending a signal to children that they are unwelcome.

The reduction (or elimination) of the significant findings of the immigration policy variables with the introduction of state legislature information in Model 2 may be explained by Republican legislatures being more likely to pass anti-immigrant legislation than Democratic legislatures. At the same time, it is possible that the measures of state legislature and state-based immigration policy are both reflections of the same underlying construct – receptivity of the host society to immigrants. This construct may be better represented by the state legislature than immigration laws, as the makeup of the legislature is more constant over-time than the ebb and flow of immigration agendas.[103] I continue to evaluate both sets of state level factors in the next section on multivariate analyses. In it I explore whether the consistent negative findings of anti-immigrant legislation and majority-Republican legislature dissipate after the inclusion of family covariates and individual controls.

Growth Models

Utilizing the panel data nature of the ECLS-K, I fit a two-level hierarchical mixed effects model with child-time nested in child. The models include a random intercept and a random slope of socio-economic status, which was chosen due to the potential variation in its effects across families. I also specify a cross-level interaction term of time by

[103] It is unlikely that a state legislature in consecutive years will pass a large number of immigration laws, as once a law is passed there should be little need to revisit the same subject in the short-term. This also makes measures of the state legislature perhaps a better measure for the host society sentiment towards immigrants, even though immigration legislation is a more direct measure than just the affiliation of gerrymandered state legislatures. Finally, the state legislature data is of a better quality than the immigrant legislation data as it is matched to each survey wave, and therefore time-varying, while the immigrant legislation data is taken from 2005 and treated as time-constant across all ECLS-K waves.

socio-economic status. Though models were run for all of the developmental outcomes, for parsimony I only report results for math direct assessment and externalized problem behavior in tables 7.5 and 7.6, respectively.[104]

Model 3 replicates the same over-time model used in each of the other substantive chapters. It includes family covariates and individual controls. Model 4 adds pro-/neutral and anti-immigrant measures of state policy, which are treated as time constant. It also includes time-varying measures of political party affiliation of the state legislature and political party affiliation of the governor. Model 5 includes the same inverse probability of the treatment weight deciles (IPTW) used in the *Family Influence* section of Chapter 4 as well as the *School Influence* and *Neighborhood Influence* chapters. These deciles capture a family's likelihood of living in a non-traditional destination, with values ranging between 0 and 1. It is the final model for the interpretation of the state level factors and the DiD, the influence of living in a non-traditional destination on the Mexican-white development gap.[105]

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[104] Please see Appendix Table C-9 for the panel data results and Appendix Table C-4 for the baseline results.

[105] Note that this varies from the *Family Influence* section of Chapter 4. In Chapter 4, the final model for the interpretation of family covariates did *not* include IPTW deciles. The IPTW deciles are based off of the propensity-score matching model, which is derived from matching family and individual variables across the destination dichotomy. Therefore, the IPTW deciles capture part of the association from each family and individual variable. The coefficient of parental socio-economic status, for instance, represents the partial association of parental SES that is not accounted for in the IPTW deciles. It does *not* represent the full relationship. Therefore, the final model for the family covariates must be one that does not contain the IPTW deciles. The final model for the partial destination influence in Chapter 4, however, does include the IPTW deciles, as this creates a sharper contrast between the two destinations. Likewise, the final model for the partial destination influence in the *State Policy* chapter, also includes IPTW deciles.

What varies is that the final interpretation of the state level factors is also from the model with the IPTW deciles, which is not the case for Chapter 4. In order to evaluate the influence of state level factors, the model must first include family characteristics (and individual controls). The IPTW does not capture all of the influence of these variables. Therefore, they must be included directly in the model, even though their coefficients only represent a portion of the association. I do not interpret the coefficients for the family covariates in this model, but they must be included. The final interpretation of the family covariates in these models is Model 4.

The DiD

The difference-in-difference results are largely consistent with the findings reported in the other substantive chapters. There is no net benefit to living in a non-traditional destination on the cognitive Mexican-white development gap (see Model 5 in Table 7.5). There remains a positive destination influence on the Mexican-white development gap for self-control ($p<.01$; see Appendix Table C-9), externalizing problem behaviors ($\beta=.192$, $p<.001$ in Model 5 of Table 7.6), and interpersonal skills ($p<.1$; Appendix Table C-9).

Though state level factors do not fully explain the positive influence of living in a non-traditional destination on the Mexican-white development gaps, these factors do reduce the magnitude of the relationships. A comparison of the final Chapter 4 model to Model 5 in this chapter shows a reduction in the Mexican-white DiD coefficients from .152 to .126 for self-control, a seventeen percent reduction, .218 to .192 for externalizing problem behaviors, a twelve percent reduction, and .130 to .098 for interpersonal skills, a twenty-five percent reduction. Part of the observed influence of destination on the Mexican-white gap, therefore, can be explained by state level factors.

Race/Ethnicity and Destination

I also investigate differences in development by race/ethnicity and destination. Model 4 is the final model for the interpretation for these covariates.[106] The achievement

[106] For a full explanation of why, see Footnote 105. Note that the main destination influence is applicable to all children in the sample living in non-traditional destinations regardless of if they are Mexican, other Hispanic, or white, and regardless of their immigrant generation status. The main destination influence varies from the partial (or overall) destination influence that is measured through the difference-in-difference terms. The Mexican DiD term captures the effect specific to Mexican immigrant children of living in a non-traditional destination by measuring the difference in the Mexican immigrant children-third generation white development gap. The other Hispanic DiD term does the same, but for the other Hispanic

hierarchy observed with only family covariates (Model 3) is maintained after the inclusion of state level factors in Model 4. Third generation whites record higher math and reading test scores than either Mexican immigrant children or other Hispanic immigrant children. The significance and magnitude of the gap is reduced, however. The lag in math scores for Mexican-immigrant children reduces from -.046 ($p<.05$ in Model 3 of Table 7.5) to -.031 ($p<.1$ in Model 4).

With the inclusion of state level factors, Mexican immigrant children are rated as exhibiting fewer signs of externalizing problem behaviors (β=.075, $p<.01$ in Model 4 of Table 7.6) but more markers of internalizing problem behaviors than third generation whites. Their higher ratings on self-control ($p<.1$) in Model 3 are eliminated with the inclusion of state level factors (Appendix Table C-9).

In the *Family Influence* section of Chapter 4, the main effect of destination is found to be significant on all development outcomes. This is still the case for the five noncognitive development outcomes after the inclusion of state level factors. For example, there is a .056 improvement in externalizing problem behaviors associated with living in a non-traditional destination (β=.056, $p<.001$ in Model 4 of Table 7.6). However, the positive destination influence is eliminated for cognitive development, which is similar to the results found in the *Neighborhood Influence* chapter.

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immigrant children-third generation white development gap. The main destination influence does not measure differences in gaps.

State Policy

As regards the direct influence of state level factors on developmental outcomes, I find no impact of state-immigrant legislation on either math or reading development.[107] This differs from the preliminary models detailed earlier in which there was a positive association between pro-/neutral immigrant legislation and reading, as well as a negative association between anti-immigrant legislation and reading development (Table 7.3). The association is explained by the inclusion of family covariates and individual controls (see Model 4 in Table 7.5).[108]

It is much the same for noncognitive development. Though the preliminary results indicated a negative association between anti-immigrant legislation and both externalizing and internalizing problem behaviors (Table 7.4), in the final models the only outcome for which immigrant legislation is significant is for externalizing problem behaviors (Table 7.6). States that pass a greater amount of anti-immigrant legislation are associated with children exhibiting more signs of externalizing problem behavior, such as getting into fights with others and disturbing classroom activities (β=-.020, p<.05 in Model 5 of Table 7.6).

[107] Note that the results for state immigration policy may only be discussed in terms of statistical relationships as the 2005 legislative data is treated as time constant throughout the ECLS-K. The observed number of pro/neutral and anti-immigration laws passed in a given state in 2005 is assumed to be the same number that state passed in each of the ECLS-K waves. This assumption is likely incorrect. State-based immigrant legislation increased in the 2000's, not the late 1990's. In the short-term, the number of immigration laws passed should take on a bell curve. The number of laws increases as the topic gains popularity at the national level. It should then decrease both as a product of waning political interest and because a state that passes immigration laws in a given year will not have the same need to pass similar legislation in the next few years as this type of legislation often does not require annual renewals. That said, in so far as state-based immigrant legislation can be considered a physical manifestation of public sentiment towards immigrants, as discussed at the beginning of this chapter, legislation serves as a good proxy for this sentiment. This sentiment is more consistent over-time. Therefore, the 2005 snapshot of immigrant legislation can be considered to represent a more consistent physical manifestation of public sentiment towards immigrants. A better measure, perhaps, would be an average of the number of immigration laws passed across a number of years. Unfortunately, the source of the data (the National Conference of State Legislatures), only began collecting data in 2005, near the end of the ECLS-K.

[108] Indeed, the results from the final models largely do not resemble the naïve results, not surprisingly.

Turning to the state political apparatus, there are some indications that the makeup of the state legislature and Governor are associated with child development. Living in a state with a non-Democratic legislature is associated with greater cognitive development. There is a .117 ($p<.001$) benefit to living in a state with a Republican legislature and a .078 ($p<.001$) benefit to living in a state with no majority legislature ('Mixed'; Model 5 of Table 7.5) on math achievement. However, living in a state with a Republican governor is associated with lower cognitive development scores. There is a -.086 ($p<.001$) penalty on math scores, for example (Model 5, Table 7.5). For noncognitive development, the largest consistent influence is of state legislatures that have no majority political party. Living in a state in which no political party dominates the state legislature (e.g. one party controls the house, the other the senate) is positively associated with greater self-control ($p<.05$), marginally fewer signs of externalizing problem behavior (β=, $p<.1$ in Model 5 of Table 7.6), and better approaches to learning ($p<.01$; see Appendix Table C-9). Living in a state with a Republican-majority legislature ($p<.01$) or Republican governor (marginally, $p<.1$) is associated with fewer indications of internalizing problem behavior, such as acting sad or showing low self-esteem. However, living in a state with a Republican-held legislature is marginally associated with worse interpersonal skills ($p<.1$).

Discussion: Growth Patterns

Though bivariate analyses suggest a positive association between pro-/neutral immigrant legislation and development and a negative association between anti-immigrant legislation and development, these associations are largely explained by

family-level factors. There is a single exception - a greater incidence of anti-immigrant legislation is associated with worse ratings of externalizing problem behaviors, even after the incorporation of family covariates into the model. Perhaps using time-constant instead of time-varying legislation prevents the variation necessary to observe the true associations. Alternately, as immigrant legislation is theorized to represent a manifestation of public sentiment in the state towards immigrants, and the political party affiliation of the state legislature and governor may also represent the public will, the inclusion of both sets of variables may eliminate the association between legislation and outcome by spreading out the effect.[109]

There is greater evidence that the state legislature and governor are associated with child development. There is a positive association between states that do not have a Democratic majority legislature and cognitive development. However, there is no clear indication that majority-Republican legislatures or governors consistently improve child development as they are associated with increased scores on some developmental outcomes but lower scores on others.

Living in a state with a legislature that has no majority is positively associated with self-control, externalizing problem behaviors, and approaches to learning. On five of the seven developmental outcomes, then, states without a majority-dominated legislature have children with better developmental outcome scores and ratings. Mutual

[109] This suggests that the sets of variables may be multicollinear. I do not find much evidence of this, with no association between state legislature or governor and legislation exceeding .16. That said, there is a negative association between democratically controlled legislatures and the passage of pro-/neutral (-.16) immigrant legislation, which might reflect the lack of immigrant populations in many democrat states. There is a negative association between the passage of anti-immigrant legislation and a democratic governor (-.14) and a democrat-majority legislature (-.15), but a positive association with a republican governor (.14).

collaboration in the legislature may be indicative of a broader environment of respect that permeates into other settings, including the school environment.

I must give a word of caution for these results, however. First, the association between anti-immigration legislation and externalizing problem behaviors is at best an association given the flawed nature of the data. The NCSL immigration database does not contain legislation for 1998 to 2004 (waves 1-6 in the ECLS-K). I therefore treated the 2005 legislation as time-constant, assigning 2005 legislation values to each child in each wave. Time-varying data, if it existed, would provide a more accurate representation of the immigrant legislative landscape from 1998 to 2007. Second, while the state legislature data is time-varying and therefore does not suffer from the same issues as the state immigrant-legislation data, the estimated effects on noncognitive development are small as compared to other variables, such as the DiD terms, gender, and family type.[110] They are smaller, in fact, than the affect of urbanicity, which implies the importance of the results should not be overstated. Third, the term for independent governor is not interpretable due to an extremely small cell size. It is just a residual category. Fourth, before final judgments as to the influence of state factors on child development can be determined, these factors should be assessed jointly with the more proximal environmental factors of school and neighborhood.

Summary

Descriptively, Mexican immigrant children in recently established destinations outside the Southwest live in states that pass fewer anti-immigrant legislation and more

[110] The magnitude of the effects on cognitive development are not small as compared to those of other covariates.

pro-/neutral legislation. There are improvements in development associated with living in a state not dominated by a single political party, which may represent an ethos of cooperation within the state. In order to assess the influence of state policy with the other environmental contexts previously examined, in the next chapter I jointly examine the influence of family, school, neighborhood, and state factors on child development.

Table 7.1. Mean Number of Immigration Laws Passed in 2005, by Destination

					Mexican			Other Hispanic			White		
Immigration Legislation	**Overall**	**Trad**	**New**		**Trad**	**New**		**Trad**	**New**		**Trad**	**New**	
Pro/Neutral	0.470	0.357	0.504	***	0.151	1.580	***	0.047	0.575	***	0.631	0.463	***
Anti	0.216	0.425	0.153	***	0.417	0.241	**	0.259	0.048	***	0.454	0.158	***

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

N=7,170

Table 7.2. State Legislature and Governor by Race/Ethnicity and Destination Type Over-Time, Weighted

	Mexican			Other Hispanic			White		
Variable	**Trad**	**New**		**Trad**	**New**		**Trad**	**New**	
Legislature: Democractic	0.585	0.204	***	0.671	0.304	***	0.395	0.328	***
Republican	0.185	0.362	***	0.129	0.445	***	0.307	0.328	
Mixed	0.231	0.434	***	0.201	0.251		0.298	0.344	**
Governor: Democractic	0.233	0.492	***	0.237	0.315	*	0.238	0.471	***
Republican	0.767	0.502	***	0.763	0.685	*	0.762	0.523	***
Independent	0.000	0.006		0.000	0.000		0.000	0.005	***

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

N=27,890

Table 7.3. Influence of State Level Factors on Cognitive Development

	Math Direct Assessment				Reading Direct Assessment			
Variable	**Model 1**		**Model 2**		**Model 1**		**Model 2**	
Pro-/Neutral Immigration Legislation	0.015	***	0.006		0.017	***	0.008	*
Anti-Immigration Legislation	-0.048	***	-0.007		-0.045	***	-0.014	*
Legislature: Republican Majority			-0.122	***			-0.089	***
No Majority			-0.031	***			-0.032	***
Governor: Republican			-0.106	***			-0.096	***
Constant	1.308	***	1.410	***	1.200	***	1.285	***
Error Components								
Individual	0.340		0.345		0.252		0.257	
Idiosyncratic	0.286		0.269		0.253		0.240	

N = 15,400 from waves 6 and 7 of 3rd imputed dataset.

[1] Sample includes Mexicans, other Hispanics, and whites.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 7.4. Influence of State Level Factors on Noncognitive Development

	Self-Control				Externalized Problem Behavior				Internalized Problem Behavior				Interpersonal Skills				Approaches to Learning			
Variable	**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
Pro-/Neutral Immigration Legislation	0.009		0.006		0.008		0.009		0.004		0.006		0.011		0.012		0.019	**	0.017	*
Anti-Immigration Legislation	-0.029	*	-0.017		-0.051	***	-0.044	***	-0.031	***	-0.026	*	-0.025	+	-0.013		-0.015		-0.014	
Legislature: Republican Majority			-0.044	**			-0.030	+			-0.022				-0.049	**			-0.001	
No Majority			0.018				-0.000				-0.005				0.014				-0.010	
Governor: Republican			-0.014				0.003				0.010				0.011				-0.030	+
Constant	3.257	***	3.277	***	3.390	***	3.400	***	3.363	***	3.366	***	3.102	***	3.111	***	3.077	***	3.097	***

N = 8,350 from wave 6 of 3rd imputed dataset.

[1] Sample includes Mexicans, other Hispanics, and whites.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 7.5. Growth Curve Model of Math Direct Assessment

	Math Direct Assessment					
Variable	**Model 3[2]**		**Model 4[3]**		**Model 5[4]**	
Hispanic Immigrant	-0.103	***	-0.080	**	-0.082	**
Mexican Immigrant	-0.046	*	-0.031	+	-0.015	
Other	-0.070	***	-0.064	***	-0.065	***
Non-Traditional Destination	0.039	***	0.001		0.014	
Mexican-White DiD	0.029		0.005		-0.032	
Hispanic-White DiD	0.093	*	0.072	*	0.070	*
Individual Characteristics	--	--	--	--	--	--
Female	-0.063	***	-0.063	***	-0.063	***
Disability	-0.080	***	-0.083	***	-0.077	***
Repeat a Grade	-0.294	***	-0.287	***	-0.287	***
Head Start	-0.086	***	-0.090	***	-0.091	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.024	**	-0.024	**	-0.026	**
Household Type: Other	-0.094	***	-0.093	***	-0.095	***
Language in the Home: Spanish	-0.186	***	-0.181	***	-0.181	***
Language in the Home: Other	-0.157	**	-0.142	**	-0.144	**
Socio-Economic Status	0.122	***	0.124	***	0.123	***
Below the Poverty Line	0.004		0.005		0.004	
Number of Sibilings	0.017	***	0.017	***	0.123	***
Parental Expectations	0.007	***	0.008	***	0.004	***
Parental Involvement	0.036	***	0.031	***	0.026	***
Urbanicity: Midsize City	-0.047	***	-0.028	**	-0.028	**
Large Suburb	-0.030	***	-0.011		-0.007	
Midsize Suburb	-0.072	***	-0.056	***	-0.051	**
Large Town	-0.072	***	-0.079	***	-0.082	***
Small Town	-0.066	***	-0.066	***	-0.042	+
Rural	-0.065	***	-0.048	***	-0.043	**
State Level Factors	--	--	--	--	--	--
Pro-/Neutral Immigration Laws			0.004		0.003	
Anti-Immigration Laws			0.004		0.004	
Legislature: Republican			0.117	***	0.117	***
Mixed			0.079	***	0.078	***
Governor: Republican			-0.086	***	-0.086	***
Independent			0.356	***	0.357	***
Time	0.027	***	0.026	***	0.026	***
Time*SES	-0.000	*	-0.000	*	-0.000	*
Constant	-0.847	***	-0.826	***	-0.840	***
Random Effects						
SES	0.078	(.011)	0.084	(.010)	0.083	(.010)
Constant	0.245	(.003)	0.245	(.003)	0.245	(.003)
Residual	0.420	(.420)	0.417	(.001)	0.417	(.001)
IPTW Decile						
1					0.010	
2					0.040	+
3					0.002	
4					0.017	
5					0.024	
6					0.045	+
7					0.030	
8					0.033	
9					0.046	+
N = 66,760 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes family covariates and individual controls.

[3] Model 2 adds state-level factors.

[4] Model 3 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 7.6. Mixed Effects Model of Externalized Problem Behavior.

	Externalized Problem Behavior					
Variable	**Model 3[2]**		**Model 4[3]**		**Model 5[4]**	
Hispanic Immigrant	0.050		0.046		0.056	
Mexican Immigrant	0.078	**	0.075	**	0.034	
Other	0.003		0.002		0.011	
Non-Traditional Destination	0.061	***	0.056	***	0.012	
Mexican-White DiD	0.094	*	0.102	**	0.192	***
Hispanic-White DiD	-0.013		-0.011		-0.026	
Individual Characteristics	--	--	--	--	--	--
Female	0.242	***	0.242	***	0.241	***
Disability	-0.090	***	-0.089	***	-0.089	***
Repeat a Grade	-0.146	***	-0.146	***	-0.145	***
Head Start	-0.101	***	-0.100	***	-0.099	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.107	***	-0.106	***	-0.105	***
Household Type: Other	-0.157	***	-0.157	***	-0.157	***
Language in the Home: Spanish	0.006		0.005		0.008	
Language in the Home: Other	0.061		0.058		0.072	
Socio-Economic Status	0.023	***	0.023	***	0.023	***
Below the Poverty Line	0.008		0.008		0.008	
Number of Sibilings	0.031	***	0.031	***	0.031	***
Parental Expectations	0.004	**	0.004	**	0.004	**
Parental Involvement	0.005		0.004		0.003	
Urbanicity: Midsize City	-0.026	+	-0.027	*	-0.027	*
Large Suburb	-0.003		-0.005		-0.006	
Midsize Suburb	-0.027		-0.025		-0.015	
Large Town	-0.057	*	-0.055	*	-0.057	*
Small Town	-0.068	***	-0.068	***	-0.057	
Rural	-0.049	**	-0.050	**	-0.040	+
State Level Factors	--	--	--	--	--	--
Pro-/Neutral Immigration Laws			-0.008		-0.007	
Anti-Immigration Laws			-0.020	*	-0.020	*
Legislature: Republican			0.002		0.003	
Mixed			0.014	+	0.015	+
Governor: Republican			0.008		0.008	
Independent			-0.047		-0.048	
Time	-0.001	***	-0.001	***	-0.001	***
Time*SES	0.001	***	0.001	***	0.001	***
Constant	3.185	***	3.192	***	3.225	***
Random Effects						
SES	0.072	(.019)	0.072	(.019)	0.072	(.019)
Constant	0.412	(.004)	0.411	(.004)	0.411	(.004)
Residual	0.412	(.002)	0.412	(.002)	0.412	(.002)
IPTW Decile						
1					0.004	
2					-0.002	
3					0.012	
4					0.020	
5					0.018	
6					0.029	
7					0.003	
8					-0.045	
9					-0.041	
N = 59,710 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes family covariates and individual controls.

[3] Model 2 adds state-level factors.

[4] Model 3 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Chapter 8. The Influence of All Environmental Contexts and The Remaining Destination Influence

In the previous chapters I explored the separate influences of school, neighborhood, and state level environments, in addition to family influences, on child development, more specifically, the Mexican-white development gap. In reality these contextual components comingle, creating overlapping influences. In this chapter I examine the influence of the various environmental contexts jointly and evaluate the remaining destination influence.

Because examinations in earlier chapters find few significant differences in the DiD term at baseline, and because the significant findings that Mexican immigrant children in non-traditional destinations are rated higher on the social interactions of self-control, externalizing problem behaviors, and interpersonal skills are found in the growth models, this chapter focuses on the over-time results when all environmental components are examined simultaneously.

My analysis uses mixed effects modeling with random intercepts and random slopes. I also include the same difference-in-difference terms and inverse probability of treatment weight deciles (IPTW; based on a propensity score-matching model) that are used in the other chapters. This reduces observed bias between children across the two destination types, which then creates a sharper contrast of the partial destination influence. All sets of models are fit to ten multiply imputed datasets. As not all of the environmental measures in the previous chapters significantly influenced development, I

exclude non-significant covariates while retaining key explanatory variables for each ecological institution for the sake of parsimony.

Growth Models Results

DiD Re-examined

I fit a two-level hierarchical mixed effects model to the data in which test scores at each wave are nested within children. It includes random intercepts, random slopes for socio-economic status in order to allow for potential variation in its effects between families, and a cross-level interaction between time and socio-economic status. Results for the difference-in-difference (DiD) are examined for each of the seven developmental outcomes with references to the total DiD (Column 1), the DiD effect after controlling for family variables (Columns 2-3), the DiD effect after controlling for family and school variables (Column 4), the DiD effect after controlling for family variables and neighborhood characteristics (Column 5), and the DiD effect after controlling for family variables and state level policy (Column 6). Columns 7 and 8 report the DiD coefficients representing the influence of living in a non-traditional destination on the Mexican-white development gap after the inclusion of family, school, neighborhood, and state policy characteristics jointly. Table 8.1 reports these results.[111]

The most surprising result is that none of the cognitive development DiD's is significant with contextual controls. There is no change in the Mexican-white math or

[111] The model reported in the 2nd column includes family covariates and individual controls, but does not include inverse probability of the treatment weight deciles (IPTW). The DiD term here represents the destination influence before I match individuals across destinations through a propensity score model. The results reported in the third column include the IPTW deciles. Columns 7 and 8 report results that include select characteristics from each of the previous models. Column 7 does not contain IPTW deciles while Column 8 does.

reading gap based on destination. That is to say after the inclusion of these key environmental contexts, I find no difference in the cognitive development gap between Mexican immigrant children and third generation whites comparing traditional and non-traditional destinations.

Results for noncognitive development are different, however. There remains a positive influence of living in recent Mexican destination areas on self-control, externalizing problem behaviors, and interpersonal skills after all ecological components are taken into account. These benefits first present themselves in the overall DiD in the first column of Table 8.1. For instance, Mexican immigrant children living outside longstanding traditional Southwest destinations exhibit greater levels of self-control (as rated by teachers) than their peers in the traditional Southwest (vis-à-vis a comparison with third generation whites; β=.084, $p<.05$ for self-control). These advantages persist with the addition of family characteristics in the 'Fam DiD (no IPTW)' column, with each term still significant at a 90 percent significance level. They are, though, reduced, from .084 to .066 for self-control, for instance. When I add IPTW deciles into the model (Column 3), the magnitude and significance of the coefficients increase. It is the IPTW decile models that I interpret for the remainder of this DiD discussion because they provide the sharpest comparison among the traditional and non-traditional destinations.

The remaining models (Columns 4 through 8), except for the 'Full DiD (no IPTW)' one (Column 7), contain IPTW deciles. The goal here is to determine the extent to which the influence of living in a non-traditional destination on the interactive behavior gap that remains after family factors have been controlled (Column 3 in Table

8.1) can be accounted for by the inclusion of school, neighborhood, and state policy factors individually or jointly.

I find a nearly twenty-five percent reduction in size of the self-control DiD term after the inclusion of school covariates (β down to .116 in the 'School DiD' column from .152 in the 'Fam DiD' column). The term remains significant, but reduces from $p<.01$ to $p<.05$. This informs us that, for self-control, nearly a quarter of the influence of destination on the Mexican-white development gap can be attributed to variation in school level factors across destinations. Similarly, over a quarter of the destination influence can be attributed to neighborhood characteristics (β down to .112 from .152). There is also a reduction when state level factors are included, though the reduction is smaller. Finally, when school, neighborhood, and state level factors are included jointly, the relationship between destination and Mexican immigrant children's self-control remains significant, but is reduced from .152 to .124 (see the 'Full DiD' model in Column 8 of Table 8.1).

There are very similar patterns for externalizing problem behaviors and interpersonal skills. The DiD reduces from .218 ($p<.001$) to .194 ($p<.001$) for externalizing problem behaviors from the 'Fam DiD' results to the 'Full DiD' results. The reduction is from .130 ($p<.05$) to .108 ($p<.05$) for interpersonal skills across these two model specifications.

The underlying characteristics that influence child development, such as host society reception, are manifested across the settings of school, neighborhood, and state policy. Therefore, it might have been expected that the DiD coefficient would drop steadily with the sequential addition of environmental components to the model.

However, the self-control DiD coefficient is actually larger in the 'Full DiD' model than in the 'School DiD' and 'Neighborhood DiD' models. Likewise, the externalizing problem behaviors and interpersonal skills DiD's are larger in the 'Full DiD' model than the School, Neighborhood, and Policy DiD models. I investigate the mechanism behind this peculiarity. In building the final model for the set of analyses in this chapter, I first include a model only with family covariates, individual controls, and IPTW deciles. I then add, in order, school characteristics, neighborhood characteristics, and state level factors. The DiD term reduces with the addition of school characteristics. It does not change substantially with the inclusion of neighborhood characteristics. It then increases with policy factors. Further investigation reveals that this increase is largely due to the inclusion of pro-/neutral and anti-immigrant legislation, which is indication of a "suppression" effect.[112]

More importantly, regardless of the specific size of the DiD coefficient and its increase or decrease in magnitude with the inclusion of various environmental components, the narrative is consistent. The inclusion of school, neighborhood, and policy factors reduce the DiD term for noncognitive interactive behaviors. The DiD terms for self-control, externalizing problem behaviors, and interpersonal skills reduce eighteen, eleven, and seventeen percent from the 'Fam DiD' model to the 'Full DiD' model. Yet, the significant impact of living in a non-traditional destination remains. Moreover, whether or not I employ IPTW deciles, the positive destination influence on these three interactive behaviors holds (see the last two columns of Table 8.1).[113]

[112] I discuss the "suppression" effect in the *State Influence* subsection of *The Role of Ecological Institutions Considered Jointly in Noncognitive Development* section of this chapter.
[113] There is a negative relationship between living in a non-traditional Mexican destination and Mexican immigrant children's internalized problem behavior when the IPTW deciles are not included. Mexican

The Role of Ecological Institutions Considered Jointly in Cognitive Development

Family Influence

I now turn to assessing the influence of environmental characteristics on child development when all environmental settings are included jointly in the model.[114] I discuss significant findings for the cognitive development outcomes, and then discuss significant findings for the noncognitive development outcomes. Tables 8.2 and 8.3 report results from the math assessment and externalized problem behaviors models, respectively, highlighting only the key variables of interest. I report the other developmental outcome results in Appendix Table C-10 for parsimony.

Model 1 is a duplicate from the *Family Influence* section of Chapter 4 and includes family covariates with individual controls.[115] Model 2 includes all school, neighborhood, and policy measures. Model 3 includes the IPTW deciles. It is the final model for the interpretation of the DiD terms as well as all school, neighborhood, and policy factors.[116] I am interested in differences in development by race/ethnicity and whether living in a non-traditional destination, regardless of race/ethnicity, improves development. The results for these interpretations come from Model 2. For cognitive development, I find that there is no longer a net advantage to being a child of native-born

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immigrant children who live outside the traditional Southwest are rated as exhibiting more internalized problem behaviors, such as signs of loneliness and anxiety, than their traditional peers. While it is possible that Mexican immigrant children in new destinations feel more anxious in their schools that have fewer Hispanics, this effect is not significant in the final models that include the IPTW deciles.

[114] Due to overlap across the ecological contexts, the explanatory power of each context is reduced.

[115] I also ran models for the fall of kindergarten, but they are not reported here. For these results, see Appendix Table C-5.

[116] Model 2 is the final model for the interpretation of family characteristics. Family characteristics should not be interpreted in Model 3 because in Model 3 family characteristics are captured both directly through their respective terms and through the IPTW deciles. This means that the influence of these characteristics on child development is manifested in two different variables within the statistical model. The overall influence per measure cannot be reconstructed. For a full explanation see Footnote 78 in the *School Influence* chapter.

white parents as compared to a Mexican immigrant child with the inclusion of all sets of environmental components (see Table 8.2 Model 2, β=-.029 p>.1). This parallels the results found in the *Neighborhood Influence* chapter as there, too, the Mexican lag in academic achievement was eliminated. The other Hispanic-white gaps on cognitive development, on the other hand, persist (β=-.077, p<.01).

Interestingly, I find a negative influence of living in a new destination area on reading in Model 2 (Appendix Table C-10). This is in stark contrast to the results from Chapter 4, where there was a net positive influence of living in a non-traditional destination on reading. However, that positive influence was eliminated with the inclusion of school characteristics and state policy factors (as noted in their respective chapters), and so it is not surprising that the influence turns negative after the inclusion of all the environmental components. Holding these environmental contexts constant indicates that children living in traditional destinations actually exhibit greater reading development than children in non-traditional destinations. I also find that there is no destination influence on direct assessments of math, unlike in Chapter 4, but consistent with the results from both the *School Influence* and State *Policy* chapters.

The final joint model confirms results from other chapters. There is a disadvantage to being female for math achievement but an advantage for reading attainment (Table 8.2, Appendix Table C-10). Living in a single-parent household is negatively associated with cognitive development. Parental socio-economic status substantially influences cognitive development, with higher socio-economic status related to higher math and reading scores. Higher parental expectations also positively influence development. Speaking any language other than English as the primary language in the

home negatively influences math and reading development. For instance, speaking Spanish as the primary language in the home is associated with a .153 penalty in math achievement ($p<.001$, Model 2, Table 8.2). Even after accounting for school, neighborhood, and policy factors, living outside a large city is associated with lower math and reading scores.

School Influence

Turning to Model 3, I discuss the influence of school, neighborhood, and state policy factors on cognitive development in turn. At the school level, a more orderly environment is associated with positive cognitive development (Table 8.2, $\beta=.013$, $p<.01$).[117] Attending a non-religious private school is also associated with higher math and reading scores. Attending a Catholic school is associated with higher reading scores as well.

I also investigate the influence of three distinct school-level theories – *Low-Income School Enrollment, Racial Composition,* and *Teacher-Pupil Match*. An increase in students that are low-income, as reflected in eligibility for free lunch, is negatively associated with math (Table 8.2, Model 3, $\beta=-.001$, $p<.001$) and reading.

Racial Composition is measured by the proportion of students who are white, Asian, Hispanic (categorical), and black (categorical). Most importantly, the higher the proportion Hispanic, the lower the math and reading score, and the differences are large. For instance, in Model 3 of Table 8.2, the coefficient of attending a school that is ten to twenty-five percent Hispanic as compared to a school that is less than ten percent Hispanic (the omitted category), is -.175 ($p<.001$). The associated impact of attending a

[117] In the social disorder scale higher ratings imply less disorder.

school that is more than seventy-five percent Hispanic is nearly two-and-a-half times as strong, at -.414 ($p<.001$). These findings hold for both math and reading. A similar negative trend is found for the proportion of black students in the school. As the school's proportion black rises, the negative influence on math and reading more than doubles. Attending schools that are dominated by Hispanics or Blacks has negative repercussions for cognitive development.

Though there are negative associations between the proportion of Hispanic students and student cognitive development, a school providing limited English proficiency services helps combat this trend. There is a large positive association with the amount of Limited English Proficiency services a school provides and both student math ($\beta=.152$, $p<.001$) and reading.

Teacher-pupil Match examines whether having a Hispanic teacher improves a child's development, especially that of a Hispanic child (tested by way of an interaction term). I find that there is no evidence of this. At the school level, an increase in the proportion of teachers who are Hispanic negatively influences math and reading, as does an increase in the proportion of white teachers. In contrast, an increase in the proportion of black teachers positively influences math ($\beta=.003$, $p<.05$) and reading ($\beta=-.004$, $p<.05$). At the classroom level, having a Hispanic teacher negatively influences math (Table 8.2, Model 3, $\beta=-.030$, $p<.05$) and reading ($\beta=-.043$, $p<.05$). Moreover, there is no indication that having a Hispanic teacher improves the math and reading development of Hispanic children specifically (as measured through the 'Hispanic Teacher-Pupil Match variable').

Neighborhood Influence

At the neighborhood level, I measure such concepts as *Neighborhood Resources, Collective Socialization*, and *Relative Deprivation*. *Neighborhood Resources* is measured by the proportion of families below the poverty line and the log of the median income of households in the neighborhood. There is no net influence of the log of the median income on cognitive development. There is a small influence of the poverty rate, but it is too small to be of substantive interest. *Collective Socialization* examines the influence of such neighborhood characteristics as employment and education. I find that an increase in the unemployment rate negatively influences cognitive development, while an increase in the self-employment rate increases it for both math (β=.002, $p<.05$) and reading (β=.002, $p<.1$). An increase in the proportion of neighborhood residents with a Bachelor's degree is also associated with increases in math and reading scores. There is no evidence of *Relative Deprivation* – that having a lower income than the median household income in the neighborhood has a negative connotation for the children in those families.

I also explore the influence of other neighborhood characteristics on cognitive development. Living in a neighborhood that is not rated very safe (i.e. not safe or somewhat safe) negatively influences math (β =-.017 for somewhat safe, $p<.05$) but not reading development. An increase in the neighborhood's percent foreign-born negatively influences children's math scores.

State Policy Influence

Finally, I also explore the state level factors of pro-/neutral and anti-immigration laws, the majority party in the legislature, and the party affiliation of the governor. There is no influence of immigrant legislation on child development. Children who live in states with non-Democratic legislatures have higher math and reading scores than those children who live in Democratically controlled legislatures. However, living in a state with a Republican governor is negatively associated with cognitive development (β=-.068, $p<.001$ for math development).

The Role of Ecological Institutions Considered Jointly in Noncognitive Development

Family Influence

I now turn to the influence of the various environmental components on noncognitive development. Results for externalizing problem behaviors are located in Table 8.3, while results for the other socio-emotional outcomes are presented in Appendix Table C-10. I explore differences in development by race/ethnicity and destination (Model 2). There is less evidence of a persistent benefit to living outside of the traditional Southwest after the inclusion of all the environmental contexts. There remains a benefit to approaches to learning and externalizing problem behaviors. However, the benefit is reduced to marginal significance ($p<.1$) for self-control and interpersonal skills and there is no longer a benefit for internalizing problem behaviors. This contrasts with results in the *Family Influence* section of Chapter 4, where highly significant positive benefits were evident for all five of the noncognitive developmental outcomes.

As Model 2 shows, girls have the advantage over boys for noncognitive development on all five measures. Also paralleling the cognitive results, living in a single-parent household is negatively associated with noncognitive behavior. Speaking Spanish as the primary language in the home is associated with fewer interpersonal skills and less favorable approaches (i.e. orientation) to learning, though there is no association with self-control, externalizing problem behaviors, or internalizing problem behaviors. Children of families below the poverty line exhibit greater amounts of anxiety and depression. While the influence is not as strong for the noncognitive domain of development, living outside of a large city is negatively associated with development (β=-.032, $p<.032$ in Model 2 for a midsize city for externalizing problem behaviors). Socio-economic status positively influences all measures of noncognitive development. Parental expectations positively influences noncognitive development as well (β=.005 for externalizing problem behaviors, $p<.004$). Finally, a larger number of siblings positively influences all measures other than internalizing problem behaviors.

School Influence

I interpret the influence of school, neighborhood, and state policy on noncognitive development through the results outlined in Model 3. Attending a Catholic school is associated with a reduction in internalizing problem behaviors. Attending other religious or other private schools are negatively associated with noncognitive behavior, including worse self-control and more signs of externalizing problem behaviors (β=-.122, $p<.001$ for non-denominational private school in Model 3 of Table 8.3). Unlike for cognitive development, increasing the proportion of students that qualify for free lunch largely does

not affect noncognitive development. It is, however, associated with marginally higher externalizing problem behavior ratings (β=-.0004, p<.001).

The influence of *Racial Composition* on noncognitive development also differs from the cognitive results. An increase in the proportion Hispanic is negatively associated with self-control, but only after the school becomes majority Hispanic (i.e. fifty percent of the school). An increase in the proportion Hispanic is related to lower interpersonal skills ratings. However, interestingly, and consistent with results from other chapters, an increase in the proportion Hispanic is associated with fewer (i.e. better) signs of externalizing problem behaviors (β =.039, p<.001 for ten to twenty-five percent Hispanic and β=.067, p<.001 for seventy-five percent Hispanic or above) and internalizing problem behavior ratings. An increase in the proportion black has essentially no association with noncognitive behavior, which stands in stark contrast to the negative association with the proportion black on cognitive development. An increase in the percent of students that is English as a Second Language/Bilingual lowers, while an increase in the Limited English Proficiency services offered at the school increases self-control.

For teacher-pupil match, I find that overall, having a Hispanic teacher actually improves children's problem behaviors, both externalized (β=.053, p<.01) and internalized, yet, for Hispanic students who have Hispanic teachers it is the opposite. These students receive worse ratings on both externalized (β=-.054, p<.05) and internalized problem behavior. At the school level, an increase in the proportion of teachers who are white or Hispanic negatively influences interpersonal skills and approaches to learning.

Neighborhood Influence

At the neighborhood level, I first examine *Neighborhood Resources*. There is essentially no evidence that *Neighborhood Resources* influence noncognitive development. An increase in the proportion below the poverty line is associated with improvements in internalizing problem behaviors (β=.002, $p<.05$, Appendix Table C-10). There is no influence of a neighborhood's log income. For *Collective Socialization*, an increase in the proportion of the neighborhood with Bachelor's degrees positively influences noncognitive development (except for approaches to learning). This finding is particularly noteworthy as it is one of only a handful of findings that are significant across both domains of development. There is no influence of the unemployment, self-employment, or *Relative Deprivation* measure on noncognitive development.

Living in a not safe or somewhat safe neighborhood is associated with worse noncognitive development, especially internalizing problem behaviors. The proportion foreign-born negatively influences all but externalizing problem behaviors.

State Policy Influence

Finally, I explore the influence of state level factors on noncognitive development. An increase in anti-immigration legislation is associated with slightly greater signs of externalizing problem behaviors (β=-.020, $p<.05$). There are few consistent results for the influence of state legislature or governor party affiliation on noncognitive development. One finding that does stand out is the superior performance of children living in states that have no majority legislature. These children exhibit greater self-

control, fewer signs of externalizing problem behaviors, (β=.017, $p<.05$) and stronger approaches to learning.

As discussed above, the inclusion of state policy factors actually increases the magnitude of the DiD term. This is due to a suppressor effect in which the inclusion of an independent variable with little correlation with the dependent variable but correlated with an independent variable increases the variance explained in the model (Friedman & Wall 2005). A suppressor effect occurs here from the inclusion of state policy because there is little correlation between state policy and child development (other than the results discussed above), state policy is correlated with the Mexican-white DiD term, and the variance explained increases. In essence, including state policy information in the model increases the predictive validity of the DiD term.

Random Effects

I also specify a random slope for socio-economic status. The standard deviation significantly varies from zero for all outcomes other than interpersonal skills and approaches to learning (as tested through likelihood ratio tests), indicating that the influence of socio-economic status on the growth curve varies across families. I also specify a cross-level interaction between time and socio-economic status. The influence of socio-economic status over-time decreases for reading (Model 3, $p<.001$), but increases for math, self-control, externalizing problem behaviors, internalizing problem behaviors, and interpersonal skills.

Discussion: All Contexts Considered

In this chapter I examine the various environmental settings jointly. The results for each setting are mostly consistent with those reported in their respective chapters. Foremost, I find that there remains a significant and positive influence of living in a non-traditional destination on the Mexican-white development gap – Mexicans in non-traditional destinations relative to their traditional destination peers have greater self-control, fewer signs of externalizing problem behaviors, and better interpersonal skills.

At the family level, parental socio-economic status positively influences all developmental outcomes.[118] More broadly, the average education level in the community also matters. An increase in the proportion of the neighborhood that holds Bachelor's degrees increases both academic achievement and socio-emotional development.

The importance of the education level estimate supports the theory of *Collective Socialization* outlined in the *Neighborhood Influence* chapter. Being surrounded by individuals that value education and have a strong work ethic, I suggested, would positively influence development. I find even more support of this through the labor market measures. An increase in the self-employment rate is positively associated with cognitive development while an increase in the unemployment rate is negatively associated with academic achievement.

There is evidence of a language barrier hindering child development. Speaking Spanish as the primary language in the home is negatively associated with math and reading achievement. It also has a negative influence on both interpersonal skills and approaches to learning.

[118] Socio-economic status is a composite of mother and father's education, occupational prestige, and household income.

There appears to be a value to sending a child to a non-denominational private school. This school type is associated with improvements in academic achievement. However, there is a tradeoff, as attending this type of school is negatively associated with socio-emotional behavior.

The racial diversity of the school matters for development. An increase in the proportion of the student body that is Hispanic or Black is associated with lower cognitive development. These findings support the previous literature that finds diversity of the student body has a positive influence on children's learning (Hallinan & Williams 1990). However, I also find that an increase in the proportion Hispanic improves both externalizing and internalizing problem behaviors, which suggests attending a school with co-ethnic peers is associated with better mental health. That said, an increase in the proportion Hispanic is negatively associated with interpersonal skills. As well, there is some evidence of a threshold effect; attending a school that is more than fifty percent Hispanic is associated with worse self-control. Even though having a Hispanic teacher is associated with lower levels of internalizing (and externalizing) problem behaviors, the opposite is true for Hispanic students who have Hispanic teachers.

Several environmental factors hinder cognitive development and increase levels of anxiety, signs of depression, and low self-esteem. Unsafe neighborhood conditions and disorder surrounding the school (e.g. crime, drugs, violence, gang activity, litter, and vacancy) are associated with lower cognitive development. High poverty and unsafe neighborhood conditions are associated with worse internalizing problem behaviors.

Finally, there is evidence that living in a state that is not controlled by one political party is beneficial across a variety of developmental outcomes: math, reading,

self-control, externalizing problem behaviors, and approaches to learning. The scenario of a mixed legislature is most likely to occur when the state house is controlled by one party and the state senate by another. Perhaps division between the houses in the legislature forces political compromise. An air of compromise may permeate the state, leading to an environment more conducive to improvements in child development. Alternately, states with a more receptive citizenry may be less likely to vote a straight party line

Summary

In summary, there are positive benefits to Mexican immigrant children living outside traditional destination states. They exhibit greater self-control, fewer externalizing problem behaviors, and stronger interpersonal skills, which all involve interacting with others. The analyses trace the improvement to a number of considerations: lower school segregation levels, higher levels of education in the neighborhood, and a collaborative political atmosphere, as reflected in mixed-party state legislatures. But also, there is a strong benefit to residing in non-traditional destinations that remains unexplained by the joint examination of school, neighborhood, and state policy contexts. In the concluding chapter, I discuss the implications of these findings, as well as theoretical and methodological contributions of this research to the migration, education, and child development fields.

Table 8.1. Mexican-White Difference-in-Difference Terms from Mixed Effects Modeling

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Outcome	**Overall DiD (no IPTW)[2]**	**Fam DiD (no IPTW)[3]**	**Fam DiD[4]**	**School DiD[5]**	**Neighborhood DiD[6]**	**Policy DiD[7]**	**Full DiD (no IPTW)[8]**	**Full DiD[9]**
Math Direct Assessment	0.045	0.029	-0.033	-0.032	-0.034	-0.032	0.023	-0.028
Reading Direct Assessment	0.060 +	0.035	0.004	-0.015	-0.013	-0.011	0.026	-0.014
Self-Control	0.084 *	0.066 *	0.152 **	0.116 *	0.112 *	0.126 **	0.061 +	0.124 **
Externalized Problem Behavior	0.115 **	0.094 *	0.218 ***	0.178 ***	0.181 ***	0.192 ***	0.091 *	0.194 ***
Internalized Problem Behavior	-0.041	-0.057 *	0.039	0.021	0.030	0.028	-0.057 *	0.029
Interpersonal Skills	0.085 *	0.059 +	0.130 *	0.102 *	0.094 +	0.098 +	0.074 *	0.108 *
Approaches to Learning	0.022	-0.002	0.086	0.062	0.043	0.049	0.009	0.065

N = 66,760 for math and reading and 59,710 for all five of the socio-emotional outcomes per each of ten Multiply Imputed Datasets.

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] The Overall DiD model includes only dummy variables for race, destination, the Mexican-White DiD term, and the Hispanic-White DiD term. It is a random effects model. It does not include IPTW deciles.

[3] The Fam DiD (no IPTW) model includes family characteristics and individual controls. It is a mixed effects with random intercepts and a random slope for socio-economic status.

[4] The Fam DiD model substitutes deciles of the inverse probability of treatment weight (IPTW) for the family covariates and individual controls.

[5] The School DiD model includes school characteristics along with family covariates, individual controls, and IPTW deciles

[6] The Neighborhood DiD model includes neighborhood characteristics along with family covariates, individual controls, and IPTW deciles.

[7] The Policy DiD model includes state level factors along with family covariates, individual controls, and IPTW deciles.

[8] The Full DiD (no IPTW) model includes a selection of school, neighborhood, and state level factors along with family covariates and individual controls. It does NOT include IPTW deciles.

[9] The Full DiD model includes a selection of school, neighborhood, and state level factors along with family covariates, individual controls, and IPTW declies.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 8.2. Growth Curve Mixed Effects Model of Math Direct Assessment

	Math Direct Assessment					
Outcome	**Model 1[2]**		**Model 2[3]**		**Model 3[4]**	
Hispanic Immigrant	-0.103	***	-0.077	**	-0.083	**
Mexican Immigrant	-0.046	*	-0.029		-0.010	
Other	-0.070	***	-0.053	***	-0.052	***
Non-Traditional Destination	0.039	***	-0.004		0.020	
Mexican-White DiD	0.029		0.023		-0.028	
Hispanic-White DiD	0.093	*	0.093	**	0.099	**
Individual Characteristics	--	--	--	--	--	--
Female	-0.063	***	-0.066	***	-0.066	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.024	**	-0.021	*	-0.021	*
Household Type: Other	-0.094	***	-0.090	***	-0.091	***
Language in the Home: Spanish	-0.186	***	-0.153	***	-0.153	***
Language in the Home: Other	-0.157	**	-0.136	**	-0.137	**
Socio-Economic Status	0.122	***	0.083	***	0.082	***
Below the Poverty Line	0.004		0.002		0.002	
Number of Sibilings	0.017	***	0.018	***	0.017	***
Parental Expectations	0.007	***	0.006	***	0.006	***
Urbanicity: Midsize City	-0.047	***	-0.029	**	-0.030	**
Large Suburb	-0.030	***	-0.019	+	-0.019	+
Midsize Suburb	-0.072	***	-0.061	***	-0.061	***
Large Town	-0.072	***	-0.058	**	-0.059	***
Small Town	-0.066	***	-0.101	***	-0.096	***
Rural	-0.065	***	-0.066	***	-0.067	***
School & Classroom Characteristics	--	--	--	--	--	--
Social Disorder			0.013	**	0.013	**
School Type: Catholic			0.002		0.003	
Other Religious			0.001		0.001	
Other Private			0.057	***	0.057	***
Student Body: Proportion Free Lunch			-0.001	***	-0.001	***
10-25% Hispanic			-0.174	***	-0.175	***
25-50% Hispanic			-0.257	***	-0.258	***
50-75% Hispanic			-0.328	***	-0.328	***
75%+ Hispanic			-0.414	***	-0.414	***
10-25% Black			-0.201	***	-0.201	***
25-50% Black			-0.257	***	-0.257	***
50-75% Black			-0.335	***	-0.336	***
75%+ Black			-0.482	***	-0.483	***
Percent ESL/Bilingual			0.000	***	0.000	***
Limited English Proficiency Services			0.152	***	0.152	***
Teacher Population: Proportion White			-0.001	***	-0.001	***
Black			0.003	***	0.003	***
Hispanic			-0.001	*	-0.001	*
Classroom: Teacher Hispanic			-0.029	+	-0.030	*
Teacher Speaks Spanish			-0.097	***	-0.096	***
Hispanic Teacher-Pupil Match			-0.032		-0.030	
Neighborhood Characteristics	--	--	--	--	--	--
Self-reported Neighborhood Safety: Somewhat Safe			-0.017	*	-0.017	*
Not Safe			-0.036	*	-0.036	*
Neighborhood: Percent Foreign-Born			-0.001	+	-0.001	*
Poverty Rate			0.002	*	0.002	*
Log of Median Income			-0.001		-0.001	
Unemployment Rate			-0.003	*	-0.003	*
Self-Employment Rate			0.002	*	0.002	*
Proportion with Bachelor's Degrees			0.004	***	0.004	***
Relative Deprivation (log)			-0.000		0.000	
State Level Factors	--	--	--	--	--	--
Pro-/Neutral Immigration Laws			0.002		0.001	
Anti-Immigration Laws			-0.003		-0.003	
Legislature: Republican			0.117	***	0.116	***
Mixed			0.076	***	0.075	***
Governor: Republican			-0.068	***	-0.068	***
Independent			0.213	***	0.213	***
Time	0.027	***	0.030	***	0.030	***
Time*SES	-0.000	*	0.000	+	0.000	+
Constant	-0.847	***	-0.194	+	-0.216	*
Random Effects						
SES	0.078	(.011)	0.075	(.011)	0.074	(.011)
Constant	0.245	(.003)	0.266	(.003)	0.265	(.003)
Residual	0.420	(.420)	0.391	(.001)	0.391	(.001)

N = 66,760 per each of 10 Multiply Imputed Datasets

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes family covariates and individual controls.

[3] Model 2 adds school, neighborhood, and state level characteristics..

[4] Model 3 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table 8.3. Mixed Effects Model of Externalized Problem Behavior

	Externalized Problem Behavior					
Variable	**Model 1**[2]		**Model 2**[3]		**Model 3**[4]	
Hispanic Immigrant	0.050		0.060		0.071	+
Mexican Immigrant	0.078	**	0.103	***	0.057	+
Other	0.003		0.013		0.021	
Non-Traditional Destination	0.061	***	0.037	*	-0.013	
Mexican-White DiD	0.094	*	0.091	*	0.194	***
Hispanic-White DiD	-0.013		-0.013		-0.029	
Individual Characteristics	--	--	--	--	--	--
Female	0.242	***	0.243	***	0.243	***
Family Characteristics	--	--	--	--	--	--
Household Type: One Parent	-0.107	***	-0.100	***	-0.099	***
Household Type: Other	-0.157	***	-0.155	***	-0.155	***
Language in the Home: Spanish	0.006		0.027		0.030	
Language in the Home: Other	0.061		0.058		0.070	
Socio-Economic Status	0.023	***	0.018	**	0.018	**
Below the Poverty Line	0.008		0.010		0.010	
Number of Sibilings	0.031	***	0.031	***	0.032	***
Parental Expectations	0.004	**	0.005	**	0.004	**
Urbanicity: Midsize City	-0.026	+	-0.031	*	-0.031	*
Large Suburb	-0.003		-0.019		-0.020	
Midsize Suburb	-0.027		-0.039	*	-0.030	
Large Town	-0.057	*	-0.058	*	-0.058	*
Small Town	-0.068	***	-0.058	**	-0.048	
Rural	-0.049	**	-0.052	*	-0.042	+
School & Classroom Characteristics	--	--	--	--	--	--
Social Disorder			-0.004		-0.004	
School Type: Catholic			0.001		0.000	
Other Religious			-0.103	***	-0.102	***
Other Private			-0.122	***	-0.122	***
Student Body: Proportion Free Lunch			-0.000	**	-0.000	**
10-25% Hispanic			0.038	***	0.039	***
25-50% Hispanic			0.040	***	0.041	***
50-75% Hispanic			0.033	*	0.034	*
75%+ Hispanic			0.067	***	0.067	***
10-25% Black			0.022	**	0.023	**
25-50% Black			0.037	**	0.038	**
50-75% Black			0.043	*	0.044	*
75%+ Black			0.059	*	0.060	*
Percent ESL/Bilingual			-0.000		-0.000	
Limited English Proficiency Services			0.006		0.006	
Teacher Population: Proportion White			-0.000		-0.000	
Black			0.000		0.000	
Hispanic			0.000		0.000	
Classroom: Teacher Hispanic			0.052	**	0.053	**
Teacher Speaks Spanish			0.017		0.017	
Hispanic Teacher-Pupil Match			-0.052	*	-0.054	*
Neighborhood Characteristics	--	--	--	--	--	--
Self-reported Neighborhood Safety: Somewhat Safe			0.007		0.008	
Not Safe			-0.035		-0.034	
Neighborhood: Percent Foreign-Born			0.001		0.001	
Poverty Rate			0.000		0.000	
Log of Median Income			0.006		0.006	
Unemployment Rate			0.000		0.001	
Self-Employment Rate			-0.001		-0.001	
Proportion with Bachelor's Degrees			0.002	**	0.002	**
Relative Deprivation (log)			0.004		0.004	
State Level Factors	--	--	--	--	--	--
Pro-/Neutral Immigration Laws			-0.010	+	-0.009	+
Anti-Immigration Laws			-0.020	*	-0.020	*
Legislature: Republican			0.004		0.005	
Mixed			0.015	+	0.017	*
Governor: Republican			0.006		0.006	
Independent			-0.031		-0.032	
Time	-0.001	***	-0.002	***	-0.002	***
Time*SES	0.001	***	0.000	***	0.000	***
Constant	3.185	***	3.089	***	3.132	***
Random Effects						
SES	0.072	(.019)	0.069	(.019)	0.070	(.019)
Constant	0.412	(.004)	0.410	(.004)	0.409	(.004)
Residual	0.412	(.002)	0.411	(.002)	0.411	(.002)
N = 59,710 per each of 10 Multiply Imputed Datasets						

[1] Sample includes Mexicans, other Hispanics, and whites.

[2] Model 1 includes family covariates and individual controls.

[3] Model 2 adds school, neighborhood, and state level characteristics..

[4] Model 3 adds inverse probability of the treatment weight deciles.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Chapter 9. Conclusions

Two Cases

Picture two Mexican immigrant families. The first lives in Los Angeles. The parents immigrated to Los Angeles from Mexico in the early 1990's because they knew family and ex-town members who lived in Los Angeles. Upon arrival, the father seeks and finds employment, though it is low pay, has no benefits, and there is little growth potential. They move into a small unit in a duplex within a densely populated neighborhood. The neighborhood is highly segregated, with mostly Mexicans and other Hispanic immigrants from Central America. Their children attend the neighborhood school, which is also highly segregated. More than fifty percent of the school is Hispanic and over sixty-percent of the school qualifies for free lunch.

A second family also recently emigrated from Mexico. Representatives of the North Carolina fishery business recruited the parents directly from Mexico, like other members of their hometown. Upon arrival the parents seek and find employment in the fishery business. The work is low-pay, but job openings are plentiful in this and other manufacturing industries. The family lives in a small rented apartment in a not densely populated suburb of the city. The neighborhood is minority Hispanic, though the population of Mexicans and other Hispanic immigrants is growing. The children attend the local school. This school is more racially and ethnically diverse and has fewer low-income students than the school in Los Angeles due to the diversity in the neighborhood. Only forty percent of the school qualifies for free lunch. The school is twenty-five percent Hispanic.

The fictional examples of these two families are indicative of the typical environments of real Mexican immigrant families in California, as well as Arizona and Texas, on the one hand, and North Carolina, Iowa, Pennsylvania, and Alabama, on the other. More broadly, they represent the settings of Mexican immigrant families in the long-standing traditional destinations of Mexicans in the Southwestern United States and the newly established settlement areas in the South, Midwest, and Northeast. Differences in the labor market opportunities available to the parents, resources of the neighborhood, and characteristics of the local schools shape the environmental setting in which Mexican immigrant children learn and grow.

Differences in these environments are consequential for their cognitive and noncognitive development. As these children move through high school, possibly college, and into the labor market, the divergence in social behavior skills (as indicated in this research) and exposure (or lack thereof) to socio-economic and racial/ethnic diversity will have dramatic consequences. On the one hand, children of the Los Angeles family will find it increasingly difficult to connect with non-Hispanics through limited exposure in school and in the neighborhood. When seeking employment their social network will be restricted to the spatial confines of their neighborhood, lacking the necessary connections to bridge to broader networks. They will lack the cultural capital necessary to bond with non co-ethnics during the few opportunities to do so. If they attend college, they are likely to attend one close to their neighborhood. Ultimately, their job prospects will be limited to low-end work in and around the community in which they grew up. Children of the North Carolina family, on the other hand, will gain important interpersonal 'soft' skills through their exposure to non co-ethnics in the school and

neighborhood. They will employ these skills in their diverse social network to gather college information and to seek employment opportunities. They will be more likely to attend college outside their neighborhood and will attain greater labor market success than their peers in Los Angeles.

Variation in Environment by Destination

I use the Educational Longitudinal Study-Kindergarten Class of 1998 to investigate differences in the environmental contexts of Mexican immigrant families across the two destinations. For Mexican immigrant families in non-traditional destinations, descriptive results indicate that Mexican immigrant parents have slightly higher socio-economic status (Chapter 4). Employment rates in their neighborhoods are higher and there are more neighbors who completed college (Chapter 6). Fewer Mexican families live in densely populated, concentrated poverty, and Spanish-speaking neighborhoods isolated by language such as Los Angeles. Instead they tend to reside in more racially/ethnically diverse neighborhoods (Chapter 6) in rural and suburban areas (Chapter 4). Their children attend schools with a greater racial diversity and higher economic status, contrasting with the hypersegregation characteristic of schools in traditional destinations. Three-quarters of Mexican immigrant children in traditional destinations attend schools that are at least fifty percent Hispanic. Traditional destination schools do, however, offer more English proficiency services for immigrant children with poor English skills (Chapter 5).

From the available but limited state legislation data, traditional destination states are more likely to pass anti-immigrant legislation and less likely to pass pro- or neutral

immigrant legislation than new destination states. Traditional destination states are more likely to have a Democratic legislature and a Republican governor. Non-traditional destination states tend to have bipartisan legislatures and no preference for the political party affiliation of the governor (Chapter 7).

Theoretical Contributions

By examining the developmental outcome gaps of racial and ethnic groups in the school-age population between two distinct sets of destinations, it is possible to estimate the influence of the destination environment on child development. The analysis captures the overall destination influence, and then what remains after accounting for the influence that is attributable to the family, school, neighborhood, and state policy components. Child development and immigration scholars typically investigate the influence of either the family, the school, or the neighborhood, often using Bronfenbrenner's *Ecological Systems Theory* to identify the environmental contexts key to development. Immigration scholars utilize Portes and Rumbaut's *Modes of Incorporation Theory* to identify the contexts of governmental policy, labor market, and co-ethnic community that bear upon immigrant assimilation and incorporation. While I use these theories to identify which environmental contexts to empirically investigate in my substantive chapters of the family, school, neighborhood, and state policy, my research goes one step further. I subsume these specific contexts within broader geographical destinations, distinguishing the areas of long-standing Mexican migration from recently established areas of migration. I identify an overall destination 'effect,' the

totality of environmental characteristics, both observed and unobserved, that shape child development.

Unlike other studies that separately examine one environmental component at a time, this research captures the entirety of the influence of the environmental context and so speaks to the consequences of Mexican immigrant's geographic place of residence for their children's development. My detailed investigation into the four main components (family, school, neighborhood, and state policy) shows that these components only partially explain the total location effect. Therefore, much more work is necessary to identify further mechanisms behind variation in development by place of destination, though the analyses presented succeed in identifying some of these mechanisms.

I also expand upon *Modes of Incorporation* by showing that the policy of the host government may also be conceptualized at the state level. The significant results of the political party affiliation of the state legislature and governor support this conceptualization.

Methodological Contributions

This research contributes to methodological techniques utilized in non-experimental studies. At its heart, this research is a comparison of the development of Mexican children in long-standing and recently established Mexican communities. However, the ECLS-K is an observational study and therefore suffers from the potential of typical threats to validity, including unobserved selection bias. In order to combat these threats I implement a difference-in-difference approach (DiD). This approach allows me to eliminate unobserved differences within each destination and between the

two destinations that do not change over time, such as the American racial hierarchy within each destination and differences in regional test scores across the destinations. I implement this technique by first measuring the developmental gap (cognitive and noncognitive) between Mexican immigrant children and third generation whites, with the latter serving as the comparison group, in traditional destinations (Difference 1a = D1a). I also measure a similar gap between Mexican immigrant children and third generation whites in non-traditional destinations (Difference 1b = D1b). Subtracting D1a from D1b yields D2, the difference-in-difference term. By eliminating the potential of unobserved time-constant differences within and between destinations, this technique creates a more rigorous estimate of the benefit to living in a non-traditional destination than is possible through regular ordinary least squares regression of non-experimental data.

In order to reduce bias further in the observational data, I utilize propensity-score matching. PSM reduces observed bias between the samples in traditional and non-traditional destinations by matching children and families across the two destination types on such measures as parental expectations and family type. This technique is superior to statistical controls as it ensures that the two samples are similar on observed information, such as socio-economic status. Without this technique observational data risks the two samples exhibiting highly dissimilar demographic profiles.

In the technique each child is assigned a propensity score, i.e. a likelihood of living in either the traditional or non-traditional destination [0,1] where 1 represents a one hundred percent likelihood of living in a traditional destination. From the propensity score I calculate the likelihood of living in a non-traditional destination compared to a traditional destination, also known as the inverse probability of treatment weight (IPTW).

I split the IPTW scores into ten decile classes. The ten deciles are then incorporated into the multivariate analyses. Through them the child's likelihood of living in a non-traditional destination compared to a traditional destination is incorporated directly into the model, which minimizes observed differences between the two samples. This technique, like the use of the difference-in-difference approach, improves the estimate of the true benefit to living in a non-traditional destination on child development.

Key Findings

Turning to the key questions of interest, this research examines the consequences of growing up outside the traditional destination states for the development of Mexican immigrant children. First, I ask to what extent the cognitive and noncognitive development of Mexican immigrant children vary across traditional and non-traditional destinations. Second, I disaggregate this difference between the two types of destinations by asking what is the specific influence of the environmental factors of family, school, neighborhood, and state policy that can explain away the total difference in child development by destinations.

I find that Mexican immigrant children living outside the traditional Southwestern destinations states have greater self-control, fewer signs of externalizing problem behaviors, and stronger interpersonal skills than Mexican immigrant children in long-established communities in the Southwest. Each of these behavioral scores measures a different dimension of a child's interaction with his or her peers.

I also find that the inclusion of school, neighborhood, or state policy factors reduces the benefit in non-cognitive development attributed to living in a non-traditional

destination by approximately twenty percent, which implies that these ecological contexts identify environmental factors that are essential to noncognitive development. The total destination difference in non-cognitive development is not eliminated, however. This means that although I am able to examine the environmental contexts of the family, school, neighborhood, and state policy, I am unable to capture all of the considerations that influence child development.

Some of these may involve features of ecological contexts not well captured in the measures I use. For instance, at the family level I do not include child-care arrangements, whether the parents read to their children, and educational resources in the home. At the school level, I would be interested in examining better measures of social, emotional, and informational support available to the students, as well as social network information. At the neighborhood level, I use census data to construct neighborhoods at the census tract level, which may or may not overlap actual neighborhoods Alternative "ecometric" measures of neighborhoods include direct observation and interviews of key informants (Raudenbush & Sampson 1999a; Savitz & Raudenbush. These alternative sources of information would enable the measurement of neighborhood information not contained in census accounts, including cohesion, physical decay, and crime data.

The research would also benefit from information on services and resources provided prior to kindergarten. Finally, better data is needed to examine in greater depth the influence of state policy on child development. The research would benefit from more years of data, as a single year of immigration legislation does not truly capture the state government's receptivity towards the immigrant population. More direct measures

of a state's receptivity towards immigrants, such as public opinion data, would also be useful.

I find that less social disorder, lower levels of school segregation, a higher socio-economic status of the school, and more limited English proficiency services, all support children's cognitive and noncognitive development (Chapter 5). An increase in the neighborhood's proportion with Bachelor's degrees and better ratings of perceived neighborhood safety also benefit cognitive and noncognitive development (Chapter 6). Living in states with bipartisan legislatures improves noncognitive development (Chapter 7). For the most part, non-traditional destinations rate higher on each of these factors, indicating that the non-traditional communities in which Mexican immigrant children live foster more positive child development than communities in traditional destinations. Interestingly, there is no developmental benefit to Hispanic students having a Hispanic teacher (Chapter 5).

Implications

There are seven million children of Mexican descent in the United States. This represents nearly forty percent of all immigrant children and almost ten percent of all children in the United States (Stoney & Batalova 2013; Federal Interagency Forum on Child and Family Statistics 2013). Understanding the factors that influence their development is critical to their successful integration into mainstream U.S. society, as well as the health of the country given their size, growth, and widespread diffusion.

The positive influence of living in a non-traditional destination on the Mexican-white noncognitive development gap is particularly important, as there is a growing

recognition in the educational field of the importance of noncognitive factors on educational development and eventual labor market success. The "personality traits, goals, motivations, and preferences" of an individual, often called 'soft skills,' influence educational attainment and employment (Farkas 2003; Heckman & Kautz 2012). For instance, a portion of the gender GPA gap is explained by girls' greater ability to regulate self-control. Greater self-control is awarded throughout the schooling process (Duckworth & Seligman 2006; Duckworth, Quinn, & Tsukayama 2011). In the labor market, soft skills have been shown to influence earnings and occupational attainment as much as cognitive skills, and that holds especially in the non-college sector of the labor market (Bowles et al. 2001; Bowles & Gintis 2002; Heckman et al. 2006; Jencks et al. 1979; Rosenbaum 2001).

Differences in noncognitive development are evident even at the beginning of the formal schooling process. In kindergarten there are documented differences by race, class, and gender in work habits and classroom disruption (Denton & West 2002; Lee & Burkam 2002; West et al. 2001). Teachers value such soft skills as perseverance and consistency (Bowles & Gintis 1976), which are reflected in the grades students receive (Farkas et al. 1990; Rosenbaum 2001). Small differences at the beginning of school can cascade into large gaps over-time.

With growing recognition of the importance of noncognitive development, there is a compelling argument that these skills should be actively cultivated. Where a noncognitive development gap exists, steps should be taken to close this gap. Yet, it is difficult to try to close this gap in the classroom, as these soft skills are not part of the daily lesson plan. They may occur during group-work assigned as part of a lecture or

during recess, but they are not the focus of the educational system and though psychologists can work with individual children to improve social skills and reduce anxiety, this does not scale.

My research indicates that there are implementable policy decisions that can improve the noncognitive development of Mexican immigrant children. As a large-scale natural experiment that assesses the influence of the totality of the environment on child development, I find that living in non-traditional destinations improves interactive noncognitive development. When I disaggregate the environment into its key component contexts, I find that the component that both significantly influences development and is most adaptable to a policy change is school segregation. Integrated schools by-and-large improve the interactive noncognitive development (and cognitive development) of Mexican immigrant children. If policymakers are looking for a scalable intervention for the improvement of noncognitive skills, my findings suggest they revisit efforts to desegregate America's schools.

Limitations

The research reported in this dissertation is based upon observational data. Ideally, instead, the data would come from a randomized experiment. Randomly assigning Mexican immigrant children to highly segregated and desegregated schools who live in the same state and neighborhood would control for variation in the other environmental contexts. It would isolate the influence of the school setting on cognitive and noncognitive development without the threat of unobserved selectivity. An even more interesting design would be to have multiple pairs of highly segregated and low

segregated sites across both traditional and non-traditional destinations. Perhaps a design that matched schools in Texas to the nearby state of Mississippi (there were too few Mexicans in Louisiana to be of interest) or California to neighboring Utah, the only Southwestern state that did not have enough Mexicans to be classified as a traditional destination state, would provide a natural experiment that controlled for local labor market conditions.

The most interesting findings are derived from potentially biased sources. Teachers provided the noncognitive development ratings. Bias in these ratings is a potential threat to the validity of the results. An improvement would be to have school psychologists administer objective tests to the children. Alternatively, subtracting the teacher-ratings of socio-emotional behavior from the parent-ratings would be a way to capture, and then account for, this bias.

The noncognitive development results in the ECLS-K only consist of ratings from kindergarten through 5th grade. Most children are no more than eleven years old at the end of elementary school. It is in the teen years that children become the most oppositional, exhibiting greater problem behaviors, oppositional culture, and reactive ethnicity. Whether the positive influence of non-traditional destinations persists as children enter their teen years has yet to be determined. A better design would be to carry these measures through the end of high school and to begin these measures earlier than kindergarten.

Finally, the results are based upon a snapshot in time. I constructed the destination dichotomy using 1990 and 2000 census data. The geographic dispersion of the Mexican population will have changed by 2010, however. My results may differ if

the same analyses were conducted with more recent data. As Mexican communities increase in new destinations, they may become more isolated and segregated, and begin to more closely resemble Mexican communities in traditional destinations. The ECLSK: 2011 will provide the necessary information to examine this possibility once the subsequent follow-up waves are collected (through 2016).

Future Research

Future work will examine whether the net positive benefits associated with living in a non-traditional destination persist over-time. This will inform researchers as to whether Mexican settlements in new destinations are converging towards the traditional case of densely populated, highly segregated neighborhoods with underperforming Mexican youth, or evolving into a different type of Mexican community altogether. Future research will also focus on explaining what causal mechanisms explain the remaining positive influence of non-traditional destinations on the noncognitive development gap. I account for numerous family, school, neighborhood, and state level factors, yet a large portion of the effect is unaccounted for. Perhaps forms of emotional, personal, and informational support within the school help explain the difference. I also have imperfect measures of state immigration policy. Future research will more accurately disaggregate the influence of state policy through better measures of state immigration law.

Appendix A. More on Research Design

Full Destination Schema

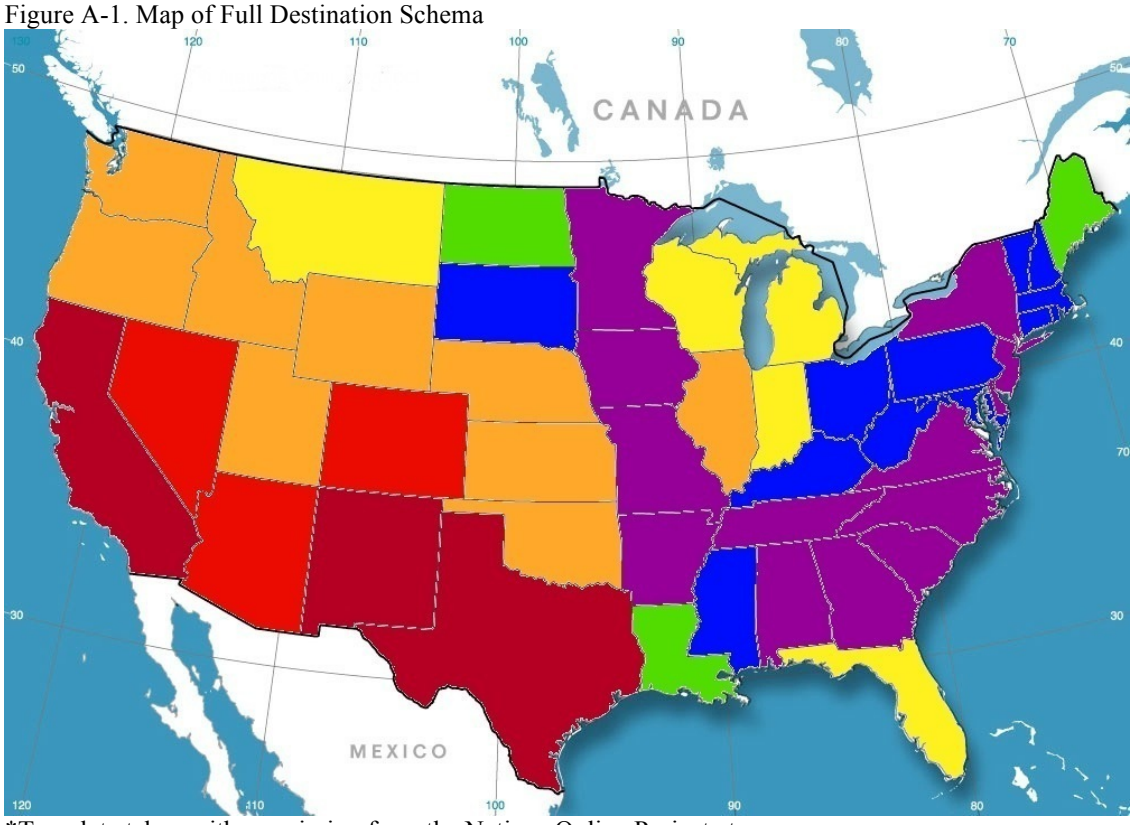
This appendix describes additional aspects of the research design. It includes a figure that outlines the full destination schema, elaborates on the development outcomes, and includes a table that aligns the key concepts in this research to corresponding hypotheses and measures.

Figure A-1 graphically represents the full schema across the United States. The traditional states are located in the Southwest (dark red for traditional stable and light red for traditional growth). Those intermediate states with a sizeable Mexican population in 1990 but not as much as the traditional states are coded orange (intermediate type I) and those with just over 1 percent Mexican in 1990 are yellow (intermediate type II). The low concentration stable states are coded green, low concentration growth as blue, and non-traditional growth as purple.

The oldest and largest Mexican populations are found in traditional states. Smaller but sizeable communities are located in the rest of the West and Mountain regions. Moving east, the size and duration of the Mexican communities diminish. While Illinois was over 5 percent Mexican and Michigan, Indiana, Wisconsin, and Florida were slightly more than 1 percent Mexican in 1990, no other states east of the Mississippi had sizeable Mexican communities at that time. Since then, Mexican communities have sprung up in almost every state in the nation. Most of the South is part of the non-traditional growth area as are Delaware, New Jersey, and New York. The majority of the Mid-Atlantic and the rest of the Northeastern states also witnessed an

increase in their Mexican population between 1990 and 2000, but not quite to 1 percent of the state population.

Figure A-1. Map of Full Destination Schema



*Template taken with permission from the Nations Online Project at http://www.nationsonline.org/oneworld/usa__blank_map.htm

Key:
Dark red – traditional stable
Light red – traditional growth
Orange – intermediate type I
Yellow – intermediate type II
Green – low concentration stable
Blue – low concentration growth
Purple – non-traditional growth

More on Data

I elaborate on the developmental outcomes of interest. First, I utilize the Language & Literacy and Mathematical Thinking components of the Direct Child Assessment to investigate the cognitive development of school children from kindergarten through 8th grade. The Language & Literacy portion of the Direct Child

Assessment asks about basic reading skills and comprehension. The Mathematical Thinking component addresses both conceptual and procedural knowledge as well as problem solving. For further information on the DCA see the ECLS-K Base Year User's Manual – Chapter 2 "Description of Data Collection Instruments."

Second, I utilize the Teacher Social Rating scale to assess children's noncognitive development. The Teacher Social Rating Scale is made up of five different scales – approaches to learning, self-control, interpersonal skills, externalizing problem behaviors, and internalizing problem behaviors. They are defined in the ECLS-K user's manual as follows:

The Approaches to Learning Scale (Teacher SRS) measures behaviors that affect the ease with which children can benefit from the learning environment. It includes six items that rate the child's attentiveness, task persistence, eagerness to learn, learning independence, flexibility, and organization.

The Self-Control (Teacher SRS) Scale has four items that indicate the child's ability to control behavior by respecting the property rights of others, controlling temper, accepting peer ideas for group activities, and responding appropriately to pressure from peers.

The five Interpersonal Skills (Teacher SRS) items rate the child's skill in forming and maintaining friendships, getting along with people who are different, comforting or helping other children, expressing feelings, ideas and opinions in positive ways, and showing sensitivity to the feelings of others.

Externalizing Problem Behaviors (Teacher SRS) include acting out behaviors. Five items on this scale rate the frequency with which a child argues, fights, gets angry, acts impulsively, and disturbs ongoing activities.

The Internalizing Problem Behaviors (Teacher SRS) Scale asks about the apparent presence of anxiety, loneliness, low self-esteem, and sadness.

Aligning Concepts, Hypotheses, and Measurement

Applied social scientists are interested in evaluating theory through analysis. In order to evaluate theory, the theory must be conceptualized, hypotheses constructed, and relevant measures selected for analysis. Table A-1 outlines the key concepts examined in this dissertation. The corresponding hypotheses and variables used for measurement are also described. For example, I evaluate the influence of *Neighborhood Effects*, including the processes of *Neighborhood Resources*, *Collective Socialization*, and *Relative Deprivation*, on child development. I expect that *Neighborhood Effects* explain both between and within-destination differences in developmental outcomes of children from Mexican immigrant families. Greater *Neighborhood Resources*, stronger *Collective Socialization*, and decreasing *Relative Deprivation* will contract the gap in Mexican-white developmental outcomes (H4). I use the neighborhood poverty rate and the log of median income in the neighborhood to assess the influence of *Neighborhood Resources* on child development. Similarly, I use the education level and employment characteristics to evaluate *Collective Socialization* and the difference between a household's and the neighborhood's income to assess the influence of *Relative Deprivation*.

Table A-1. Key Concepts, Hypotheses, and Measurement

Concept	**Hypothesis**	**Measurement**
The 'Environmental Set,' an overall construct that subsumes destination characteristics relevant to children's development. Exposure to different environmental sets is expected to result in differential development outcomes.	The Mexican-white gaps in academic and socio-emotional development are expected to be smaller in non-traditional destinations than in traditional destinations (H1).	Difference-in-difference term. Derived from an interaction between race/immigration generation and destination.
Unpacking the Environmental Set		
Family Characteristics Family Resources General Consonance Parental Involvement Other	I hypothesize that the inclusion of a set of key environmental family and family-related variables explain a substantial portion of the influence in H1 (H2). These include family socio-economic status, English spoken in the home, parental involvement in school, parental expectations, and not enrolling in head start.	**Family Resources**: Poverty Status; Household SES **General Consonance**: English Spoken in the Home **Parental Involvement**: Involvement in School (e.g. attend a PTA or open house) Other: Head Start; Parental Expectations
School Characteristics Socio-economic Heterogeneity Racial Heterophily Teacher-Pupil Match Other	I hypothesize an array of school characteristics and processes explain both between and within-destination differences in developmental outcomes of children with Mexican immigrant parents. I anticipate that Mexican-white gaps in child development will be smaller in schools with a higher socio-economic status student body, greater racial heterophily, and more teacher-student matches (H3).	**Socio-Economic Heterogeneity**: School-level economic status; Proportion Eligible for Free Price Lunch **Racial Heterophily**: Proportion Minority Students; Proportion Latino **Teacher-Pupil Match**: Whether Hispanic students have Hispanic teachers Other: Sector; Sources of Funding
Neighborhood Effects Neighborhood Resources Collective Socialization Relative Deprivation Other	I expect that Neighborhood Effects explain both between and within-destination differences in developmental outcomes of children from Mexican immigrant families. Greater neighborhood resources (concentrated poverty, mean socio-economic status), stronger collective socialization (self-employment, Bachelor's degrees), and decreasing relative deprivation will contract the gap in Mexican-white developmental outcomes (H4).	**Neighborhood Resources**: Proportion Below Poverty Line; Log of Median Household Income **Collective Socialization**: Proportion in Neighborhood Ages 25 and up with a Bachelor's Degree; Proportion Ages 16 and up Self-Employed; Proportion Ages 16 and Up Unemployed **Relative Deprivation**: A variable measuring the gap between a household's income and the neighborhood's median income Other: Including but not limited to: Residential Pattern; Self-reported Neighborhood Safety; Population density; Proportion Hispanic; Proportion Black; Proportion Foreign-Born
State-Based Immigration Policy	I expect that variability in state based pro-/neutral and anti-immigration legislation helps explain differences in development for Mexican immigrant children between long-established and recent Mexican communities. A greater incidence of anti-immigrant legislation and states with Republican controlled legislatures and governors will expand the Mexican-white development gap (H5).	Incidence of Pro-/Neutral Immigrant Legislation; Incidence of Anti-Immigrant Legislation; Political Party Affiliation of the Legislature; Political Party Affiliation of the Governor

Appendix B. Pooled-Cross Sectional versus Random Effects Models

In this appendix I discuss a pooled cross-sectional model. I discuss the flaws in this design and how a panel data model accounts for these flaws.

$$y_{it} = \beta_0 + \beta_1 D_i + \beta_2 R_i + \beta_3 R_i D_i + \beta_4 X_{it} + \beta_5 F_{it} + \beta_6 S_{it} + \beta_7 N_{it} + \beta_8 P_{it} + \lambda t_{it} + \varepsilon_{it} \qquad \text{(A1)}$$

Model A1 describes a pooled-cross sectional fit to the data. Let y_{it} represent the development outcome for individual i at time t. The βs and λ are parameters that are estimated from the model. The t associated with λ represents the time function, how the effect of the passage of time is captured in the model. It is measured with time in months at time of assessment in each wave. Fall of kindergarten is the baseline so every child has a value of 0 for t_0 in the fall of kindergarten. The value of t_{i1} is equal to the time elapsed between the fall kindergarten and spring kindergarten assessments for child i, likewise for t_2, and so on. Here the time function is represented as linear, but depending on the dependent variable it is parameterized as square, cubic, or splining as the appropriate functional form of the time function was tested for all of the dependent variables.

I specify a binary variable representing the destination placement of child i, D_i. It is time-invariant because I do not allow for crossover between destination types. However, left-truncation may occur as the destination prior to fall of kindergarten was not available. R_i is the child's race. The difference-in-difference term is created through

the interaction of R_i and D_i. I also include X_{it}, a vector of other individual covariates, F_{it}, a vector of key family covariates, S_{it}, a vector of time-varying classroom and school characteristics, N_{it}, a vector of time-varying neighborhood characteristics, P_{it}, a vector of state policy factors, and ε_{it} the error term.

A pooled-cross sectional model of longitudinal data cannot deal with individual heterogeneity, i.e., that the over-time observations within individuals are correlated, violating the independent and identically distributed (i.i.d.) assumption. The issue lies in the pooled cross-sectional model's inability to distinguish this part of the error term from the rest. The composite error term, ε_{it}, may be partitioned into parts, c_i, the person-level component, accounting for individual heterogeneity, and e_{it}, the person-time component. As an example for c_i, consider the possibility that being left-handed has a negative effect on teacher's perceptions of children's behavior and approaches to learning. If teachers believe that using the right hand is the proper hand for writing and arithmetic (as used to be the belief) and look down on left-handedness, then there is a bias towards right-handers that is constant across the years. Being right-handed, then, puts right-handed students at an advantage in each and every year. However, if the survey fails to ask students their hand preference, then the importance of hand choice falls into the error term. This is just one example that highlights the possibility of unobserved time-constant individual heterogeneity. This unobserved time-constant heterogeneity needs to be separated from unobserved time-varying effects, such as how teacher's ability varies from year to year depending on which teacher the student is assigned. Misspecification

of the model through not accounting for this part of the error results in the possibility of too small standard errors as well as biased estimates.

A random effects model, on the other hand, is able to account for c_i as a random variable under the assumption that covariates and c_i are uncorrelated. By accounting for unobserved individual heterogeneity, the issue of correlated error is resolved. The person-year-level component, e_{it}, is now assumed to be homoskedastic. Note that the composite error as a whole can still be correlated and heteroskedastic because of c_i. Therefore when there is no individual heterogeneity, the pooled cross-sectional model is appropriate whereas when there is individual heterogeneity, the random-effects model is appropriate if the uncorrelated heterogeneity assumption holds. With the partitioned error term, the random-effects model with the DiD interaction term is specified as follows:

$$y_{it} = \beta_0 + \beta_1 D_i + \beta_2 R_i + \beta_3 R_i D_i + \beta_4 X_{it} + \beta_5 F_{it} + \beta_6 S_{it} + \beta_7 N_{it} + \beta_8 P_{it} + \lambda t_{it} + (c_i + e_{it}) \quad \text{(A2)}$$

Appendix C. Additional Multivariate Results

Table C-1. Family Covariates in Multivariate Baseline Model

Variable	Math Direct Assessment[2]	Reading Direct Assessment	Self-Control	Externalized Problem Behavior	Internalized Problem Behavior	Interpersonal Skills	Approaches to Learning
Hispanic Immigrant	-0.165 ***	-0.173 ***	-0.084 +	0.057	-0.014	-0.080	-0.106 +
Mexican Immigrant	-0.153 ***	-0.174 ***	0.010	0.089 **	0.056 *	-0.025	0.009
Other	-0.085 ***	-0.067 ***	-0.016	0.005	-0.006	-0.024	-0.036 *
Non-Traditional Destination	0.070 ***	0.045 ***	0.078 ***	0.071 ***	0.005	0.046 **	0.074 ***
Mexican-White DiD	0.034	0.064	0.065	0.095 +	-0.064	0.066	-0.024
Hispanic-White DiD	0.038	0.076 +	0.052	-0.007	0.046	0.066	0.069
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.031 ***	0.056 ***	0.182 ***	0.233 ***	0.007	0.196 ***	0.223 ***
Disability	-0.104 ***	-0.091 ***	-0.097 ***	-0.100 ***	-0.078 ***	-0.096 ***	-0.166 ***
Repeat a Grade	-0.267 ***	-0.209 ***	-0.161 ***	-0.150 ***	-0.121 ***	-0.174 ***	-0.339 ***
Head Start	-0.055 ***	-0.070 ***	-0.115 ***	-0.111 ***	-0.045 **	-0.104 ***	-0.115 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.031 **	-0.055 ***	-0.088 ***	-0.095 ***	-0.067 ***	-0.077 ***	-0.093 ***
Household Type: Other	-0.066 **	-0.095 ***	-0.164 ***	-0.149 ***	-0.069 *	-0.139 ***	-0.148 ***
Language in the Home: Spanish	-0.204 ***	-0.233 ***	-0.031	-0.023	-0.031	-0.098 ***	-0.090 ***
Language in the Home: Other	-0.106 +	-0.141 +	-0.044	0.012	-0.147 +	-0.155	-0.175 *
Socio-Economic Status	0.151 ***	0.178 ***	0.027 **	0.021 *	0.038 ***	0.056 ***	0.078 ***
Below the Poverty Line	-0.002	0.017	0.005	0.016	-0.023	0.014	0.018
Number of Siblings	-0.016 ***	-0.046 ***	0.037 ***	0.052 ***	-0.002	0.017 ***	0.015 **
Parental Expectations	0.017 ***	0.017 ***	0.008 **	0.006 *	0.008 ***	0.011 ***	0.019 ***
Parental Involvement	0.041 ***	0.043 ***	0.006	-0.005	-0.019 **	0.006	0.002
Urbanicity: Midsize City	-0.070 ***	-0.085 ***	-0.055 **	-0.047 *	-0.011	-0.069 ***	-0.076 ***
Large Suburb	-0.042 ***	-0.037 **	-0.006	-0.008	0.000	-0.052 **	-0.044 **
Midsize Suburb	-0.106 ***	-0.134 ***	0.019	-0.008	-0.001	-0.046 +	-0.003
Large Town	-0.103 ***	-0.109 ***	0.008	-0.089 *	-0.007	-0.033	-0.032
Small Town	-0.080 ***	-0.122 ***	-0.078 ***	-0.103 ***	-0.027	-0.142 ***	-0.118 ***
Rural	-0.115 ***	-0.132 ***	-0.035	-0.056 *	0.031 +	-0.053 *	-0.054 *
Constant	-1.355 ***	-1.518 ***	2.892 ***	3.200 ***	3.474 ***	2.804 ***	2.735 ***

[1] N = 14,400 per each of 10 Multiply Imputed Datasets

[2] Model 3 specifies family covariates and individual controls at baseline, the fall of kindergarten.

+ p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-2. School Covariates in Multivariate Baseline Model

Variable	Math Direct Assessment[2]	Reading Direct Assessment	Self-Control	Externalized Problem Behavior	Internalized Problem Behavior	Interpersonal Skills	Approaches to Learning
Hispanic Immigrant	-0.141 ***	-0.154 ***	-0.073	0.068	-0.002	-0.068	-0.105 +
Mexican Immigrant	-0.112 ***	-0.125 ***	0.036	0.117 ***	0.074 *	-0.008	0.004
Other	-0.067 ***	-0.054 ***	-0.009	0.015	-0.002	-0.022	-0.037 *
Non-Traditional Destination	0.040 ***	0.014	0.061 ***	0.054 **	-0.001	0.030	0.076 ***
Mexican-White DiD	0.010	0.019	0.042	0.068	-0.093 *	0.046	-0.018
Hispanic-White DiD	0.041	0.067	0.050	-0.014	0.030	0.047	0.060
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.033 ***	0.053 ***	0.183 ***	0.234 ***	0.006	0.196 ***	0.224 ***
Disability	-0.100 ***	-0.086 ***	-0.101 ***	-0.103 ***	-0.078 ***	-0.096 ***	-0.167 ***
Repeat a Grade	-0.275 ***	-0.225 ***	-0.156 ***	-0.144 ***	-0.121 ***	-0.176 ***	-0.339 ***
Head Start	-0.043 ***	-0.054 ***	-0.115 ***	-0.109 ***	-0.043 **	-0.105 ***	-0.116 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.030 **	-0.055 ***	-0.088 ***	-0.094 ***	-0.065 ***	-0.079 ***	-0.094 ***
Household Type: Other	-0.059 **	-0.089 ***	-0.164 ***	-0.152 ***	-0.070 *	-0.143 ***	-0.151 ***
Language in the Home: Spanish	-0.162 ***	-0.183 ***	-0.024	-0.018	-0.025	-0.094 ***	-0.105 ***
Language in the Home: Other	-0.104 +	-0.146 *	-0.029	0.024	-0.138 +	-0.140	-0.156 *
Socio-Economic Status	0.130 ***	0.151 ***	0.030 ***	0.023 *	0.038 ***	0.059 ***	0.081 ***
Below the Poverty Line	0.005	0.024 +	0.008	0.020	-0.021	0.015	0.015
Number of Siblings	-0.014 ***	-0.042 ***	0.038 ***	0.052 ***	-0.003	0.018 ***	0.015 **
Parental Expectations	0.017 ***	0.017 ***	0.009 ***	0.007 *	0.008 ***	0.012 ***	0.019 ***
Parental Involvement	0.021 ***	0.025 ***	0.006	-0.007	-0.019 **	0.016 +	0.008
Urbanicity: Midsize City	-0.075 ***	-0.090 ***	-0.073 ***	-0.049 *	-0.021	-0.074 ***	-0.081 ***
Large Suburb	-0.054 ***	-0.048 ***	-0.025	-0.016	-0.006	-0.052 **	-0.043 *
Midsize Suburb	-0.105 ***	-0.122 ***	-0.015	-0.016	-0.009	-0.058 *	-0.002
Large Town	-0.105 ***	-0.098 ***	-0.018	-0.089 *	0.012	-0.037	-0.037
Small Town	-0.074 ***	-0.104 ***	-0.087 ***	-0.085 ***	-0.027	-0.139 ***	-0.109 ***
Rural	-0.107 ***	-0.105 ***	-0.057 *	-0.054 *	0.029	-0.058 *	-0.052 *
School & Classroom Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Social Disorder	0.014 +	0.025 **	-0.015	-0.015	0.008	0.004	-0.018
Bilingual Aid	0.017	0.023 +	-0.031	0.011	0.019	-0.036	-0.011
Migrant	-0.017	-0.021	0.006	-0.037 +	-0.031 +	0.009	0.019
School Type: Catholic	0.040 ***	0.056 ***	-0.048 **	-0.026	0.038 *	-0.022	-0.050 *
Other Religious	0.055 ***	0.066 ***	-0.145 ***	-0.124 ***	-0.012	-0.093 ***	-0.055 *
Other Private	0.131 ***	0.182 ***	-0.082 **	-0.086 **	-0.016	-0.010	-0.028
Student Body: Proportion Free Lunch	-0.001 ***	-0.001 ***	-0.001 ***	-0.001 ***	0.000	0.000	-0.001 **
Reduced Lunch	-0.001	-0.001	0.001 *	0.003	0.001 +	0.002 *	0.000
Bussed from Outside the Neighborhood	0.000	-0.001 *	-0.001	0.000	0.000	-0.001	-0.001
From the Neighborhood	0.000	0.000 +	0.000	0.000	0.000	0.000	-0.001 *
Asian	0.000	0.001	-0.003 **	-0.001	-0.002 *	-0.005 ***	-0.005 ***
White	-0.001 +	0.000	-0.001 *	-0.001 **	0.000	-0.001 *	-0.002 ***
10-25% Hispanic	-0.023 +	-0.035 *	-0.018	0.001	-0.038 +	-0.010	-0.030
25-50% Hispanic	-0.052 *	-0.045 *	-0.038	-0.015	0.019	-0.020	-0.047
50-75% Hispanic	-0.071 *	-0.078 *	-0.154 ***	-0.049	-0.044	-0.131 **	-0.170 ***
75%+ Hispanic	-0.102 *	-0.130 *	-0.227 ***	-0.030	-0.035	-0.211 ***	-0.283 ***
10-25% Black	0.006	0.011	-0.034 +	-0.017 *	-0.017	-0.028	-0.027
25-50% Black	0.010	0.038 +	0.028	0.064	0.002	0.007	0.021
50-75% Black	0.003	0.023	-0.086 +	-0.058	-0.054	-0.098 +	-0.092
75%+ Black	-0.050	-0.048	-0.150 +	-0.044	-0.090	-0.186 *	-0.167 +
Percent ESL/Bilingual	0.000	0.000	-0.001 ***	0.000	0.000	-0.001 *	0.000
Limited English Proficiency Services	0.033 +	0.071 ***	0.059 *	0.000	0.025	0.030	-0.005
Classroom: Proportion Hispanic	0.000	0.000	0.002 ***	0.001 *	0.001	0.001 +	0.002 ***
Minority	-0.001 *	0.000	-0.001	-0.001 *	0.001 *	0.000	-0.001
English Only	0.007	-0.001	-0.045 *	0.017	0.018	-0.020	-0.005
LEP Student in Classroom	-0.019	-0.034 **	-0.046 **	-0.028	-0.004	-0.021	-0.053 **
Teacher Population: Proportion White	0.000	0.000	0.000	0.001 *	0.000	-0.001 +	-0.001
Black	0.001 *	0.003 ***	0.001	0.002 +	0.001	0.002 +	0.001
Hispanic	0.001 *	0.001	0.000	0.000	-0.001	-0.001	0.000
Classroom: Teacher Hispanic	-0.030	-0.041	-0.136 **	0.089 +	0.147 **	-0.070	-0.092
Teacher Speaks Spanish	0.007	-0.002	0.038	0.012	-0.072 ***	0.032	0.032
Hispanic Teacher-Pupil Match	0.035	0.014	0.077	-0.099 +	-0.114 *	0.069	0.066
Constant	-1.219 ***	-1.413 ***	3.159 ***	3.265 ***	3.363 ***	3.034 ***	3.047 ***

[1] N = 14,400 per each of 10 Multiply Imputed Datasets

[2] Model 4 specifies school characteristics, family covariates, and individual controls at baseline, the fall of kindergarten.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-3. Neighborhood Covariates in Multivariate Baseline Model

Variable	Math Direct Assessment[2]	Reading Direct Assessment	Self-Control	Externalized Problem Behavior	Internalized Problem Behavior	Interpersonal Skills	Approaches to Learning
Hispanic Immigrant	-0.139 ***	-0.151 ***	-0.054	0.067	0.003	-0.056	-0.085
Mexican Immigrant	-0.126 ***	-0.141 ***	0.031	0.093 **	0.060 *	-0.010	0.011
Other	-0.074 ***	-0.057 ***	-0.005	0.009	-0.003	-0.019	-0.032 +
Non-Traditional Destination	0.085 ***	0.045 ***	0.056 ***	0.060 ***	-0.003	0.040 *	0.072 ***
Mexican-White DiD	0.023	0.041	0.055	0.097 *	-0.055	0.056	-0.015
Hispanic-White DiD	0.033	0.066	0.053	-0.006	0.044	0.058	0.069
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.031 ***	0.056 ***	0.182 ***	0.232 ***	0.007	0.196 ***	0.222 ***
Disability	-0.104 ***	-0.091 ***	-0.099 ***	-0.100 ***	-0.079 ***	-0.096 ***	-0.167 ***
Repeat a Grade	-0.267 ***	-0.212 ***	-0.162 ***	-0.152 ***	-0.122 ***	-0.176 ***	-0.340 ***
Head Start	-0.051 ***	-0.065 ***	-0.113 ***	-0.105 ***	-0.046 **	-0.105 ***	-0.118 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.034 **	-0.061 ***	-0.087 ***	-0.092 ***	-0.067 ***	-0.080 ***	-0.097 ***
Household Type: Other	-0.066 **	-0.094 ***	-0.159 ***	-0.149 ***	-0.072 *	-0.138 ***	-0.151 ***
Language in the Home: Spanish	-0.188 ***	-0.213 ***	-0.003	-0.017	-0.020	-0.080 **	-0.078 **
Language in the Home: Other	-0.098	-0.142 +	-0.026	0.013	-0.140 +	-0.138	-0.152 +
Socio-Economic Status	0.151 ***	0.178 ***	0.020 +	0.012	0.034 ***	0.059 ***	0.093 ***
Below the Poverty Line	-0.021	-0.006	0.008	0.025	-0.023	0.003	0.002
Number of Siblings	-0.016 ***	-0.046 ***	0.037 ***	0.052 ***	-0.003	0.017 ***	0.014 **
Parental Expectations	0.017 ***	0.016 ***	0.009 **	0.006 *	0.008 ***	0.012 ***	0.019 ***
Parental Involvement	0.030 ***	0.033 ***	-0.001	-0.010	-0.019 **	0.002	0.002
Urbanicity: Midsize City	-0.073 ***	-0.079 ***	-0.076 ***	-0.053 **	-0.019	-0.081 ***	-0.098 ***
Large Suburb	-0.048 ***	-0.034 *	-0.025	-0.022	0.001	-0.053 **	-0.052 **
Midsize Suburb	-0.109 ***	-0.121 ***	-0.005	-0.016	-0.004	-0.054 *	-0.022
Large Town	-0.106 ***	-0.099 ***	-0.008	-0.082 *	-0.018	-0.045	-0.053
Small Town	-0.081 ***	-0.098 ***	-0.078 **	-0.094 ***	-0.029	-0.135 ***	-0.123 ***
Rural	-0.116 ***	-0.107 ***	-0.029	-0.048 +	0.031	-0.039	-0.055 *
Neighborhood Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Neighborhood Safety Scale	-0.020	-0.020	0.004	-0.015	-0.027	-0.022	-0.011
Self-reported Neighborhood Safety: Somewhat Safe	-0.018 +	-0.010	-0.012	-0.009	-0.030 *	-0.018	-0.012
Not Safe	-0.043 +	-0.009	-0.017	-0.025	-0.076 **	-0.043	-0.025
Neighborhood: Percent Hispanic	0.001 *	0.000	0.000	0.000	0.000	0.001	0.001
Black	0.000	0.001 +	-0.001	0.000	0.000	0.000	-0.001 +
Foreign-Born	-0.002 **	-0.001	-0.002 +	-0.001	-0.002 +	-0.002	-0.003 ***
Linguistic Isolation Ages 5 and Up	0.001	0.000	-0.002	0.001	0.000	-0.002	0.001
Age 16 to 19	0.005 *	0.005	-0.001	-0.003	-0.001	-0.001	-0.001
Dropout Rate	-0.001	0.000	0.000	-0.001	-0.002 *	0.000	-0.001
Proportion of Family Households	0.000	0.000	0.000	0.001	0.000	0.000	0.001
Proportion of Female Headed-Households	0.002	0.001	0.002	0.001	-0.001	0.003	0.004 *
Proportion of Housing that is Occupied	0.001 +	0.000	-0.001	0.002	-0.001	-0.002	0.000
Poverty Rate	0.000	0.000	-0.002	-0.002	0.001	-0.002	0.000
Log of Median Income	-0.017	-0.017	-0.002	0.006	-0.004	-0.015	-0.011
Unemployment Rate	-0.004 **	-0.003 +	0.004 +	0.003	0.002	0.005 +	0.003
Self-Employment Rate	0.004 **	0.002	-0.007 ***	-0.002	-0.003 +	-0.003 +	-0.005 *
Proportion with Bachelor's Degrees	0.003 ***	0.004 ***	0.002 **	0.001	0.001	0.003 **	0.001
Relative Deprivation (log)	-0.017 ***	-0.018 ***	-0.002	0.003	0.001	-0.009 *	-0.013 **
Constant	-1.286 ***	-1.302 ***	3.044 ***	3.009 ***	3.713 ***	3.219 ***	2.889 ***

[1]N = 14,400 per each of 10 Multiply Imputed Datasets

[2]Model 5 specifies neighborhood characteristics, family covariates, and individual controls at baseline, the fall of kindergarten.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-4. State Policy Factors in Multivariate Baseline Model

Variable	Math Direct Assessment[2]	Reading Direct Assessment	Self-Control	Externalized Problem Behavior	Internalized Problem Behavior	Interpersonal Skills	Approaches to Learning
Hispanic Immigrant	-0.147 ***	-0.152 ***	-0.075	0.058	-0.011	-0.074	-0.101 +
Mexican Immigrant	-0.140 ***	-0.161 ***	0.014	0.088 **	0.060 *	-0.022	0.010
Other	-0.082 ***	-0.062 ***	-0.016	0.004	-0.007	-0.022	-0.036 *
Non-Traditional Destination	0.057 ***	0.037 **	0.072 ***	0.063 ***	0.001	0.055 ***	0.068 ***
Mexican-White DiD	0.003	0.036	0.050	0.094 +	-0.068	0.060	-0.033
Hispanic-White DiD	0.015	0.054	0.044	-0.009	0.039	0.064	0.064
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.031 ***	0.056 ***	0.182 ***	0.233 ***	0.006	0.196 ***	0.223 ***
Disability	-0.105 ***	-0.092 ***	-0.098 ***	-0.099 ***	-0.079 ***	-0.096 ***	-0.166 ***
Repeat a Grade	-0.263 ***	-0.207 ***	-0.159 ***	-0.150 ***	-0.119 ***	-0.174 ***	-0.338 ***
Head Start	-0.056 ***	-0.070 ***	-0.113 ***	-0.109 ***	-0.048 **	-0.105 ***	-0.115 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.031 **	-0.055 ***	-0.088 ***	-0.094 ***	-0.067 ***	-0.077 ***	-0.093 ***
Household Type: Other	-0.066 **	-0.094 ***	-0.165 ***	-0.150 ***	-0.069 *	-0.139 ***	-0.151 ***
Language in the Home: Spanish	-0.203 ***	-0.230 ***	-0.031	-0.024	-0.031	-0.096 ***	-0.090 ***
Language in the Home: Other	-0.102 +	-0.138 +	-0.046	0.009	-0.142 +	-0.153	-0.175 *
Socio-Economic Status	0.152 ***	0.177 ***	0.027 **	0.022 *	0.038 ***	0.055 ***	0.079 ***
Below the Poverty Line	-0.001	0.017	0.005	0.017	-0.023	0.013	0.020
Number of Siblings	-0.016 ***	-0.046 ***	0.037 ***	0.052 ***	-0.003	0.017 ***	0.014 **
Parental Expectations	0.017 ***	0.017 ***	0.008 **	0.006 *	0.008 ***	0.011 ***	0.019 ***
Parental Involvement	0.040 ***	0.044 ***	0.004	-0.007	-0.020 **	0.009	-0.001
Urbanicity: Midsize City	-0.062 ***	-0.078 ***	-0.052 **	-0.047 **	-0.008	-0.068 ***	-0.073 ***
Large Suburb	-0.030 **	-0.021	0.002	-0.006	0.000	-0.047 **	-0.038 *
Midsize Suburb	-0.100 ***	-0.128 ***	0.022	-0.004	-0.001	-0.047 +	0.000
Large Town	-0.098 ***	-0.116 ***	0.012	-0.086 *	-0.001	-0.037	-0.019
Small Town	-0.070 ***	-0.124 ***	-0.072 **	-0.101 ***	-0.019	-0.144 ***	-0.104 ***
Rural	-0.100 ***	-0.124 ***	-0.029	-0.055 *	0.038 *	-0.053 *	-0.044 *
State Level Factors	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Pro-/Neutral Immigration Laws	0.011 *	0.006	0.003	-0.004	0.004	0.002	-0.001
Anti-Immigration Laws	0.015 +	0.027 **	0.003	-0.016	0.002	0.026 +	-0.002
Legislature: Republican	0.044 ***	0.018 +	0.006	0.006	0.036 **	-0.010	0.028 *
Mixed	0.040 ***	0.037 ***	0.036 *	0.026 +	-0.001	-0.005	0.039 **
Governor: Republican	-0.032 ***	-0.065 ***	-0.017	-0.007	0.016	-0.011	0.016
Constant	-1.365 ***	-1.506 ***	2.891 ***	3.210 ***	3.453 ***	2.794 ***	2.709 ***

[1]N = 14,400 per each of 10 Multiply Imputed Datasets

[2]The models specify state policy factors, family covariates, and individual controls at baseline, the fall of kindergarten.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-5. All Environmental Contexts in Multivariate Baseline Model (select)

Variable	Math Direct Assessment[2]	Reading Direct Assessment	Self-Control	Externalized Problem Behavior	Internalized Problem Behavior	Interpersonal Skills	Approaches to Learning
Hispanic Immigrant	-0.120 ***	-0.132 ***	-0.064	0.066	0.006	-0.057	-0.098 +
Mexican Immigrant	-0.094 ***	-0.107 ***	0.032	0.109 ***	0.072 *	-0.012	0.001
Other	-0.066 ***	-0.053 ***	-0.008	0.015	-0.002	-0.023	-0.039 *
Non-Traditional Destination	0.055 ***	0.028 +	0.047 *	0.037 +	-0.009	0.049 *	0.066 ***
Mexican-White DiD	-0.022	-0.013	0.039	0.079	-0.082 +	0.043	-0.015
Hispanic-White DiD	0.014	0.038	0.047	-0.013	0.028	0.040	0.059
Individual Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Female	-0.032 ***	0.054 ***	0.184 ***	0.234 ***	0.006	0.198 ***	0.224 ***
Disability	-0.100 ***	-0.086 ***	-0.101 ***	-0.103 ***	-0.079 ***	-0.096 ***	-0.167 ***
Repeat a Grade	-0.272 ***	-0.222 ***	-0.157 ***	-0.146 ***	-0.121 ***	-0.178 ***	-0.341 ***
Head Start	-0.043 ***	-0.054 ***	-0.111 ***	-0.104 ***	-0.045 **	-0.104 ***	-0.116 ***
Family Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Household Type: One Parent	-0.033 **	-0.060 ***	-0.087 ***	-0.091 ***	-0.066 ***	-0.081 ***	-0.097 ***
Household Type: Other	-0.060 **	-0.089 ***	-0.163 ***	-0.153 ***	-0.074 *	-0.143 ***	-0.156 ***
Language in the Home: Spanish	-0.160 ***	-0.183 ***	-0.019	-0.018	-0.019	-0.089 **	-0.099 ***
Language in the Home: Other	-0.096	-0.143 +	-0.029	0.017	-0.141 +	-0.134	-0.148 *
Socio-Economic Status	0.136 ***	0.158 ***	0.027 *	0.018 +	0.034 ***	0.062 ***	0.095 ***
Below the Poverty Line	-0.015	0.000	0.007	0.025	-0.022	0.003	0.001
Number of Siblings	-0.014 ***	-0.041 ***	0.037 ***	0.052 ***	-0.004	0.018 ***	0.014 **
Parental Expectations	0.017 ***	0.016 ***	0.009 ***	0.007 *	0.008 ***	0.012 ***	0.020 ***
Parental Involvement	0.014 *	0.020 **	0.002	-0.009	-0.022 **	0.013	0.004
Urbanicity: Midsize City	-0.063 ***	-0.071 ***	-0.074 ***	-0.052 **	-0.025	-0.076 ***	-0.089 ***
Large Suburb	-0.038 **	-0.021	-0.027	-0.024	-0.005	-0.050 *	-0.044 *
Midsize Suburb	-0.092 ***	-0.101 ***	-0.009	-0.019	-0.010	-0.051 +	-0.005
Large Town	-0.091 ***	-0.089 ***	-0.008	-0.083 *	-0.015	-0.036	-0.028
Small Town	-0.057 **	-0.083 ***	-0.065 *	-0.081 **	-0.017	-0.124 ***	-0.091 **
Rural	-0.087 ***	-0.074 ***	-0.029	-0.053 +	0.040 +	-0.032	-0.038
School & Classroom Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Social Disorder	0.007	0.018 *	-0.019 +	-0.016	0.013	0.001	-0.018
School Type: Catholic	0.054 ***	0.067 ***	-0.037 *	-0.025	0.037 *	-0.010	-0.043 *
Other Religious	0.055 ***	0.059 ***	-0.143 ***	-0.132 ***	-0.005	-0.085 ***	-0.052 *
Other Private	0.130 ***	0.176 ***	-0.072 **	-0.087 **	-0.018	-0.006	-0.017
Student Body: Proportion Free Lunch	-0.001 **	-0.001 ***	-0.001 *	-0.001 ***	0.000	0.000	-0.001 *
Bussed from Outside the Neighborhood	0.000	-0.001 **	0.000	0.000	0.000	0.000	-0.001
From the Neighborhood	0.000	0.000 *	0.000	0.000	0.000	0.000	-0.001 *
Asian	0.001	0.002 +	-0.003 *	-0.002	-0.002	-0.004 ***	-0.004 **
White	0.000	0.000	-0.001 *	-0.001 *	0.000	-0.001 *	-0.002 ***
10-25% Hispanic	-0.017	-0.025	-0.015	0.003	-0.031	-0.011	-0.031
25-50% Hispanic	-0.035	-0.020	-0.029	-0.009	0.035	-0.027	-0.048
50-75% Hispanic	-0.058	-0.052	-0.139 **	-0.050	-0.020	-0.143 **	-0.168 ***
75%+ Hispanic	-0.090 +	-0.103 +	-0.217 ***	-0.044	-0.002	-0.242 ***	-0.276 ***
10-25% Black	0.007	0.004	-0.033 +	-0.020	-0.015	-0.020	-0.024
25-50% Black	0.019	0.038 +	0.029	0.068 *	0.009	0.014	0.022
50-75% Black	0.010	0.021	-0.078	-0.060	-0.047	-0.075	-0.096
75%+ Black	-0.017	-0.020	-0.153 +	-0.045	-0.097	-0.172 +	-0.182 *
Percent ESL/Bilingual	0.000	0.000	-0.001 ***	0.000	0.000	-0.001 *	0.000
Limited English Proficiency Services	0.018	0.045 *	0.036	-0.012	0.032	0.014	-0.004
Classroom: Proportion Hispanic	0.000	0.000	0.002 ***	0.001 *	0.001	0.001 +	0.002 ***
Minority	-0.001 *	0.000	-0.001	-0.001 *	0.001 *	0.000	-0.001
English Only	0.002	-0.005	-0.041 *	0.016	0.022	-0.014	-0.003
LEP Student in Classroom	-0.017	-0.034 **	-0.045 **	-0.028	0.002	-0.019	-0.048 **
Teacher Population: Proportion White	0.000	0.000	-0.001	0.001 *	0.000	-0.001	-0.001
Black	0.001 *	0.003 **	0.001	0.002	0.001	0.002	0.001
Hispanic	0.001 +	0.001	0.000	0.000	-0.001	-0.001 *	-0.001
Classroom: Teacher Hispanic	-0.036	-0.047	-0.133 **	0.095 +	0.151 **	-0.071	-0.091
Teacher Speaks Spanish	0.008	-0.003	0.038	0.008	-0.074 ***	0.037	0.035
Hispanic Teacher-Pupil Match	0.037	0.016	0.074	-0.102 +	-0.117 *	0.068	0.062
Neighborhood Characteristics	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Self-reported Neighborhood Safety: Somewhat Safe	-0.014	-0.006	-0.013	-0.006	-0.029 *	-0.016	-0.012
Not Safe	-0.027	0.007	-0.020	-0.016	-0.065 *	-0.038	-0.026
Neighborhood: Percent Hispanic	0.002 ***	0.001 **	0.000	-0.001	0.000	0.002 *	0.001
Foreign-Born	-0.001	-0.001	-0.001	0.001	-0.001	-0.002 +	-0.002 *
Age 16 to 19	0.004 +	0.000	-0.001	-0.003	-0.001	-0.002	-0.002
Proportion of Family Households	0.001	0.000	0.000	0.001 *	0.000	0.000	0.001 +
Poverty Rate	0.001	0.001	-0.002 +	-0.001	0.001	-0.002	0.001
Log of Median Income	-0.014	-0.014	-0.002	0.004	-0.004	-0.015	-0.013
Unemployment Rate	-0.003 *	-0.002	0.004 +	0.004	0.003	0.005 *	0.003
Self-Employment Rate	0.002 +	0.001	-0.005 **	-0.003	-0.003	-0.003	-0.004 *
Proportion with Bachelor's Degrees	0.003 ***	0.003 ***	0.002 *	0.001	0.001 +	0.002 *	0.001
Relative Deprivation (log)	-0.016 ***	-0.017 ***	-0.002	0.003	0.000	-0.009 *	-0.013 **
State Level Factors	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Pro-/Neutral Immigration Laws	0.012 *	0.006	0.000	-0.007	0.003	0.001	-0.001
Anti-Immigration Laws	0.013	0.029 **	-0.004	-0.013	-0.003	0.019	-0.010
Legislature: Republican	0.045 ***	0.027 *	0.001	0.007	0.035 **	-0.017	0.019
Mixed	0.036 ***	0.037 ***	0.025 +	0.027 +	-0.004	-0.016	0.025 +
Governor: Republican	-0.020 *	-0.049 ***	-0.014	-0.011	0.021 +	-0.003	0.019
Constant	-1.226 ***	-1.347 ***	3.183 ***	3.187 ***	3.376 ***	3.154 ***	3.088 ***

[1]N = 14,400 per each of 10 Multiply Imputed Datasets

[2]The models specify school characteristics, neighborhood characteristics, state policy factors, family covariates, and individual controls at baseline, the fall of kindergarten.

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-6. Mixed Effects Model for Family Covariates and IPTW Deciles

	Math Direct Assessment[1]				Reading Direct Assessment[1]				Self-Control[2]				Externalized Problem Behavior[2]				Internalized Problem Behavior[2]				Interpersonal Skills[2]				Approaches to Learning[2]			
Variable	**M7[3]**		**M8[4]**		**M7**		**M8**		**M7**		**M8**		**M7**		**M8**		**M7**		**M8**		**M7**		**M8**		**M7**		**M8**	
Hispanic Immigrant	-0.103	***	-0.269	***	-0.092	**	-0.264	***	-0.007		-0.034		0.050		0.054		0.018		0.003		-0.031		-0.066		-0.031		-0.075	
Mexican Immigrant	-0.046	.	-0.254	***	-0.049	**	-0.289	***	0.038	.	-0.033		0.078	**	0.029		0.102	***	0.026		0.025		-0.069	**	0.033		-0.092	**
Other	-0.070	***	-0.158	***	-0.048	***	-0.143	***	-0.015		-0.046	***	0.003		-0.014		0.008		-0.028	.	-0.021	.	-0.062	***	-0.030	.	-0.095	***
Non-Traditional Destination	0.039	***	0.047	**	0.030	***	0.030	.	0.056	***	0.008		0.061	***	-0.008		0.030	***	-0.019		0.040	***	-0.007		0.055	***	-0.003	
Mexican-White DiD	0.029		-0.033		0.035		0.004		0.066	.	0.152	**	0.094	.	0.218	***	-0.057	.	0.039		0.059	.	0.130	.	-0.002		0.086	
Hispanic-White DiD	0.093	**	0.020		0.126	***	0.054		-0.003		-0.052		-0.013		-0.059		0.034		-0.006		0.037		-0.023		0.019		-0.064	
Individual Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Female	-0.063	***			0.046	***			0.195	***			0.242	***			0.013	.			0.226	***			0.251	***		
Disability	-0.080	***			-0.077	***			-0.099	***			-0.090	***			-0.116	***			-0.111	***			-0.197	***		
Repeat a Grade	-0.294	***			-0.277	***			-0.146	***			-0.146	***			-0.125	***			-0.169	***			-0.330	***		
Head Start	-0.086	***			-0.075	***			-0.110	***			-0.101	***			-0.058	***			-0.107	***			-0.121	***		
Family Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Household Type: One Parent	-0.024	**			-0.032	***			-0.104	***			-0.107	***			-0.075	***			-0.091	***			-0.099	***		
Household Type: Other	-0.094	***			-0.103	***			-0.153	***			-0.157	***			-0.089	***			-0.129	***			-0.152	***		
Language in the Home: Spanish	-0.186	***			-0.196	***			-0.027				0.006				-0.010				-0.059	***			-0.065	***		
Language in the Home: Other	-0.157	**			-0.188	***			0.001				0.061				-0.035				-0.094				-0.085			
Socio-Economic Status	0.122	**			0.144	***			0.040	***			0.023	***			0.036	***			0.057	***			0.077	***		
Below the Poverty Line	0.004				0.002				0.012				0.008				-0.040	***			0.003				0.007			
Number of Siblings	0.017	***			-0.006	.			0.026	***			0.031	***			0.001				0.020	***			0.009	.		
Parental Expectations	0.007	***			0.010	***			0.006	***			0.004	**			0.007	***			0.009	***			0.016	***		
Parental Involvement	0.036	***			0.036	***			0.006				0.005				-0.005				0.006				0.002			
Urbanicity: Midsize City	-0.047	***			-0.050	***			-0.011				-0.026	.			-0.007				-0.036	**			-0.040	**		
Large Suburb	-0.030	***			-0.029	***			0.006				-0.003				-0.017	.			-0.046	***			-0.031	.		
Midsize Suburb	-0.072	***			-0.088	***			0.024				-0.027				-0.021				-0.036	.			-0.008			
Large Town	-0.072	***			-0.055	***			-0.016				-0.057	.			-0.015				-0.071	**			-0.035			
Small Town	-0.066	***			-0.077	***			-0.025				-0.068	***			-0.014				-0.095	***			-0.069	***		
Rural	-0.065	***			-0.076	***			-0.032	.			-0.049	**			0.015				-0.063	***			-0.044	.		
Time	0.027	***	0.026	***	0.027	***	0.027	***	0.001	***	0.001	***	-0.001	***	-0.001	***	-0.002	***	-0.002	***	0.001	***	0.001	***	-0.000		-0.000	
Time*SES	-0.000	.	0.001	***	-0.001	***	0.001	***	0.000	.	0.001	***	0.001	***	0.001	***	0.000	***	0.001	***	0.000		0.001	***	0.000		0.001	***
Constant	-0.847	***	-0.806	***	-0.967	***	-0.871	***	2.969	***	3.126	***	3.185	***	3.335	***	3.423	***	3.454	***	2.898	***	3.032	***	2.837	***	3.019	***
Random Effects																												
SES	0.078	(.011)	0.149	(.008)	0.084	(.010)	0.156	(.008)	0.052	(.021)	0.056	(.025)	0.072	(.019)	0.076	(.021)	0.086	(.001)	0.096	(.010)	0.060	(.021)	0.068	(.023)	0.068	(.023)	0.091	(.023)
Constant	0.245	(.003)	0.295	(.003)	0.175	(.004)	0.243	(.004)	0.347	(.004)	0.382	(.004)	0.412	(.004)	0.447	(.004)	0.256	(.003)	0.274	(.003)	0.347	(.004)	0.390	(.004)	0.395	(.004)	0.470	(.004)
Residual	0.420	(.420)	0.419	(.001)	0.519	(.002)	0.518	(.002)	0.463	(.002)	0.463	(.002)	0.412	(.002)	0.412	(.002)	0.439	(.002)	0.439	(.002)	0.495	(.002)	0.495	(.002)	0.474	(.002)	0.473	(.002)
IPTW Decile																												
1			-0.018				-0.022				0.006				0.014				-0.005				0.020				0.019	
2			0.091	***			0.099	***			0.047	.			0.054	.			0.032	.			0.080	***			0.106	***
3			-0.008				0.022				-0.009				0.035	.			-0.015				0.015				-0.014	
4			0.049	**			0.070	***			0.037	.			0.058	**			-0.003				0.054	**			0.054	.
5			0.092	***			0.111	***			0.060	***			0.084	***			0.029	.			0.091	***			0.110	***
6			0.151	***			0.168	***			0.102	***			0.117	***			0.064	***			0.147	***			0.167	***
7			0.142	***			0.160	***			0.076	***			0.091	***			0.049	**			0.132	***			0.167	***
8			0.072	***			0.089	***			-0.007				-0.004				-0.001				0.033				0.044	
9			0.098	***			0.095	***			-0.015				-0.014				-0.054	.			0.025				0.008	

[1] N = 66,760 per each of 10 Multiply Imputed Datasets

[2] N = 59,710 per each of 10 Multiply Imputed Datasets

[3] Model 7 specifies the model as mixed effects with random intercepts and a random slope for socio-economic status.

[4] Model 8 includes deciles of the inverse probability of treatment weight as a substitute for the individual and family covariates.

. p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-7. Mixed Effects Model for School Covariates and IPTW Deciles

Variable	Math Direct Assessment[1]		Reading Direct Assessment[1]		Self-Control[2]		Externalized Problem Behavior[2]		Internalized Problem Behavior[2]		Interpersonal Skills[2]		Approaches to Learning[2]	
Hispanic Immigrant	-0.115	***	-0.109	***	0.014		0.071	+	0.028		-0.020		-0.022	
Mexican Immigrant	-0.023		-0.026		0.037		0.058	+	0.077	**	0.014		0.012	
Other	-0.061	***	-0.045	***	-0.001		0.017		0.006		-0.014		-0.030	*
Non-Traditional Destination	0.049	***	0.022		-0.007		-0.000		-0.019		-0.014		0.006	
Mexican-White DiD	-0.032		-0.015		0.116	*	0.178	***	0.021		0.102	*	0.062	
Hispanic-White DiD	0.124	***	0.168	***	-0.007		-0.033		0.021		0.032		0.008	
Individual Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Female	-0.066	***	0.041	***	0.195	***	0.243	***	0.013	*	0.226	***	0.251	***
Disability	-0.079	***	-0.072	***	-0.100	***	-0.093	***	-0.114	***	-0.107	***	-0.192	***
Repeat a Grade	-0.293	***	-0.280	***	-0.143	***	-0.139	***	-0.122	***	-0.169	***	-0.331	***
Head Start	-0.075	***	-0.065	***	-0.112	***	-0.101	***	-0.058	***	-0.108	***	-0.123	***
Family Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Household Type: One Parent	-0.023	**	-0.032	***	-0.103	***	-0.104	***	-0.074	***	-0.092	***	-0.102	***
Household Type: Other	-0.094	***	-0.104	***	-0.153	***	-0.158	***	-0.089	***	-0.132	***	-0.158	***
Language in the Home: Spanish	-0.161	***	-0.161	***	-0.003		0.027		0.000		-0.044	*	-0.069	***
Language in the Home: Other	-0.152	**	-0.189	***	0.019		0.077		-0.023		-0.071		-0.065	
Socio-Economic Status	0.093	***	0.107	***	0.043	***	0.027	***	0.035	***	0.057	***	0.078	***
Below the Poverty Line	0.003		0.001		0.012		0.010		-0.039	***	0.001		0.004	
Number of Siblings	0.018	***	-0.003		0.025	***	0.032	***	0.001		0.020	***	0.009	*
Parental Expectations	0.006	***	0.008	***	0.006	***	0.005	**	0.007	***	0.009	***	0.016	***
Parental Involvement	0.008		0.004		0.006		0.004		-0.010	+	0.004		0.001	
Urbanicity: Midsize City	-0.053	***	-0.063	***	-0.027	*	-0.031	*	-0.008		-0.037	**	-0.034	*
Large Suburb	-0.043	***	-0.047	***	-0.011		-0.010		-0.012		-0.042	**	-0.020	
Midsize Suburb	-0.085	***	-0.096	***	0.000		-0.026		-0.002		-0.029		0.007	
Large Town	-0.060	***	-0.048	**	-0.047	*	-0.068	**	-0.016		-0.081	**	-0.036	
Small Town	-0.099	***	-0.111	***	-0.029		-0.053		-0.005		-0.077	*	-0.021	
Rural	-0.089	***	-0.099	***	-0.053	*	-0.041	+	0.032	+	-0.056	*	-0.026	
School & Classroom Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Social Disorder	0.014	**	0.021	***	0.002		-0.002		0.002		0.005		-0.001	
Bilingual Aid	-0.023	*	-0.028	**	-0.014		-0.001		0.021	+	-0.018		-0.013	
Migrant	-0.009		-0.001		-0.011		-0.025	+	-0.019	+	-0.006		-0.020	
School Type: Catholic	-0.021	*	0.004		-0.024	+	-0.007		0.027	**	0.005		-0.016	
Other Religious	-0.011		-0.002		-0.123	***	-0.102	***	-0.013		-0.092	***	-0.035	+
Other Private	0.048	**	0.071	***	-0.071	***	-0.121	***	-0.038	*	-0.001		0.002	
Student Body: Proportion Free Lunch	-0.001	***	-0.001	***	-0.000	*	-0.001	**	-0.000		-0.000		-0.000	
Reduced Lunch	-0.000		0.000		0.001	*	0.000		0.000		0.001	+	0.000	
Bussed from Outside the Neighborhood	-0.000		-0.001	***	-0.000		-0.000		-0.000		0.000		0.000	
From the Neighborhood	-0.002	***	-0.002	***	0.000		-0.000		-0.000		-0.000		-0.000	
Asian	-0.003	***	-0.003	***	-0.002	*	0.000		0.000		-0.002	**	-0.003	**
White	-0.003	***	-0.004	***	-0.000	+	0.000		0.001	**	-0.001	**	-0.000	+
10-25% Hispanic	-0.181	***	-0.234	***	-0.014		0.037	***	0.005		-0.034	***	-0.014	
25-50% Hispanic	-0.275	***	-0.361	***	-0.026	*	0.036	**	0.019		-0.050	***	-0.017	
50-75% Hispanic	-0.346	***	-0.472	***	-0.065	***	0.028	+	0.010		-0.095	***	-0.035	*
75%+ Hispanic	-0.448	***	-0.650	***	-0.081	***	0.057	**	0.053	**	-0.111	***	-0.035	+
10-25% Black	-0.200	***	-0.248	***	-0.012		0.025	**	0.001		-0.027	**	0.001	
25-50% Black	-0.258	***	-0.308	***	0.016		0.041	***	0.017		0.003		0.014	
50-75% Black	-0.337	***	-0.424	***	0.009		0.049	**	0.010		-0.026		0.010	
75%+ Black	-0.481	***	-0.620	***	0.024		0.067	**	-0.006		-0.031		0.029	
Percent ESL/Bilingual	0.000	***	0.000	**	-0.000	*	-0.000		-0.000		-0.000		0.000	
Limited English Proficiency Services	0.170	***	0.213	***	0.040	**	0.008		0.009		0.025	+	-0.006	
Classroom: Proportion Hispanic	0.001	***	0.001	***	-0.000		-0.000		-0.000		-0.000		0.000	
Minority	0.000	**	0.001	***	0.000		-0.000		0.000	+	0.000		0.000	
English Only	0.031	*	0.038	***	-0.017		-0.001		-0.005		-0.003		0.006	
LEP Student in Classroom	-0.004		-0.014	+	-0.033	***	-0.042	***	-0.032	***	-0.012		-0.016	*
Teacher Population: Proportion White	-0.001	***	-0.002	***	-0.000		-0.000		-0.000		-0.001	***	-0.000	**
Black	0.003	***	0.004	***	-0.001	+	0.000		0.001		-0.000		0.000	
Hispanic	-0.001	**	-0.001	***	-0.000		0.000		-0.000		-0.001	*	-0.001	
Classroom: Teacher Hispanic	-0.032	*	-0.046	*	-0.030		0.051	*	0.077	***	0.022		0.006	+
Teacher Speaks Spanish	-0.094	***	-0.106	***	0.020	+	0.018		-0.028	**	0.007		0.009	
Hispanic Teacher-Pupil Match	-0.025		-0.039		-0.000		-0.053	*	0.077	*	0.005		-0.014	
Time	0.030	***	0.031	***	0.002	***	-0.002	***	-0.002	***	0.001	***	0.000	
Time*SES	0.000		-0.000	***	0.000	*	0.000	***	0.000	***	0.000		0.000	
Constant	-0.179	***	-0.134	**	3.113	***	3.252	***	3.452	***	3.080	***	2.948	***
Random Effects														
SES	0.071	(.012)	0.078	(.012)	0.050	(.022)	0.072	(.019)	0.086	(.010)	0.059	(.021)	0.067	(.023)
Constant	0.266	(.003)	0.223	(.004)	0.345	(.004)	0.410	(.004)	0.255	(.003)	0.346	(.004)	0.394	(.004)
Residual	0.394	(.001)	0.479	(.002)	0.463	(.002)	0.411	(.002)	0.438	(.002)	0.494	(.002)	0.474	(.002)
IPTW Decile														
1	-0.005		-0.001		0.011		-0.002		-0.017		0.004		0.025	
2	0.024		0.043	+	0.007		-0.008		-0.007		0.011		0.031	
3	-0.003		0.021		-0.009		0.006		0.001		-0.003		0.004	
4	0.012		0.034		0.021		0.016		0.002		0.018		0.043	
5	0.010		0.028		0.019		0.018		0.012		0.022		0.048	
6	0.023		0.038		0.035		0.028		0.020		0.044		0.054	
7	0.010		0.029		0.014		0.003		-0.003		0.029		0.041	
8	0.040		0.063	*	-0.020		-0.049		-0.017		-0.010		0.010	
9	0.063	*	0.066	*	-0.033		-0.053		-0.062	*	-0.011		-0.011	

[1]N = 66,760 per each of 10 Multiply Imputed Datasets

[2]N = 59,710 per each of 10 Multiply Imputed Datasets

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-8. Mixed Effects Model for Neighborhood Covariates and IPTW Deciles

Variable	Math Direct Assessment[1]		Reading Direct Assessment[1]		Self-Control[2]		Externalized Problem Behavior[2]		Internalized Problem Behavior[2]		Interpersonal Skills[2]		Approaches to Learning[2]	
Hispanic Immigrant	-0.081	**	-0.079	**	0.028		0.075	+	0.037		-0.004		-0.004	
Mexican Immigrant	0.004		-0.009		0.044		0.053	+	0.078	***	0.024		0.029	
Other	-0.059	***	-0.047	***	0.004		0.021		0.008		-0.012		-0.025	+
Non-Traditional Destination	0.071	***	0.041	**	0.005		0.004		-0.013		0.014		0.026	
Mexican-White DiD	-0.034		-0.013		0.112	*	0.181	***	0.030		0.094	+	0.043	
Hispanic-White DiD	0.087	**	0.122	***	-0.005		-0.021		0.033		0.022		0.013	
Individual Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Female	-0.062	***	0.047	***	0.194	***	0.241	***	0.013	*	0.226	***	0.251	***
Disability	-0.077	***	-0.072	***	-0.098	***	-0.090	***	-0.114	***	-0.107	***	-0.193	***
Repeat a Grade	-0.294	***	-0.278	***	-0.146	***	-0.146	***	-0.125	***	-0.169	***	-0.330	***
Head Start	-0.079	***	-0.071	***	-0.107	***	-0.094	***	-0.060	***	-0.107	***	-0.123	***
Family Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Household Type: One Parent	-0.022	**	-0.035	***	-0.099	***	-0.100	***	-0.072	***	-0.091	***	-0.098	***
Household Type: Other	-0.092	***	-0.103	***	-0.148	***	-0.152	***	-0.089	***	-0.130	***	-0.153	***
Language in the Home: Spanish	-0.171	***	-0.180	***	0.004		0.025		0.001		-0.044	*	-0.051	*
Language in the Home: Other	-0.092	**	-0.198	***	0.017		0.072		-0.024		-0.081		-0.065	
Socio-Economic Status	0.102	***	0.130	***	0.030	***	0.014	*	0.031	***	0.049	***	0.075	***
Below the Poverty Line	0.003		-0.001		0.014		0.009		-0.040	***	0.001		0.006	
Number of Siblings	0.017	***	-0.007	*	0.025	***	0.031	***	0.001		0.019	***	0.008	*
Parental Expectations	0.007	***	0.009	***	0.006	***	0.004	**	0.007	***	0.008	***	0.016	***
Parental Involvement	0.020	***	0.022	***	-0.005		-0.003		-0.008		-0.004		-0.007	
Urbanicity: Midsize City	-0.044	***	-0.048	***	-0.028	*	-0.031	*	-0.018		-0.041	**	-0.056	***
Large Suburb	-0.033	***	-0.029	**	-0.010		-0.018		-0.019	+	-0.043	**	-0.036	*
Midsize Suburb	-0.072	***	-0.074	***	0.005		-0.028		-0.017		-0.029		-0.018	
Large Town	-0.070	***	-0.056	***	-0.032		-0.057	*	-0.031		-0.081	**	-0.057	*
Small Town	-0.045	+	-0.032		-0.018		-0.051		-0.029		-0.076	*	-0.048	
Rural	-0.064	***	-0.063	***	-0.038	+	-0.041	+	0.010		-0.050	*	-0.047	+
Neighborhood Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Neighborhood Safety Scale	0.065		0.019		0.007		-0.010		-0.002		-0.003		-0.019	
Self-reported Neighborhood Safety: Somewhat Safe	-0.021	**	-0.009		0.000		0.007		-0.018	*	-0.010		-0.009	
Not Safe	-0.042	*	-0.025		-0.033		-0.037		-0.067	***	-0.060	*	-0.043	+
Neighborhood: Percent Hispanic	0.001	*	-0.000		-0.001		-0.001	*	0.000		0.000		0.000	
Black	0.000		0.001	*	-0.001	+	-0.001		-0.000		-0.000		-0.000	
Foreign-Born	-0.001	*	-0.000		-0.002	*	-0.001		-0.001	*	-0.001		-0.002	**
Linguistic Isolation Ages 5 and Up	0.000		-0.000		-0.000		0.002		0.000		-0.001		0.001	
Age 16 to 19	0.003	+	0.002		-0.000		-0.000		0.001		0.000		0.001	
Dropout Rate	-0.000		-0.000		0.000		-0.000		-0.001		0.000		-0.000	
Proportion of Family Households	-0.000		-0.000		0.001		0.001	*	0.001		0.000		0.001	
Proportion of Female Headed-Households	-0.003		0.000		0.000		-0.001		-0.000		0.001		0.002	
Proportion of Housing that is Occupied	0.001		0.000		-0.000		0.002	+	-0.002	**	-0.001		0.000	
Poverty Rate	-0.000		-0.000		-0.000		0.004		0.001		0.000		0.000	
Log of Median Income	-0.006		-0.009		0.003		0.006		-0.001		-0.004		0.003	
Unemployment Rate	-0.003	**	-0.003	*	0.001		0.001		0.000		0.002		0.001	
Self-Employment Rate	0.004	***	0.003	**	-0.003	*	-0.001		-0.001		-0.001		-0.002	
Proportion with Bachelor's Degrees	0.004	***	0.003	***	0.002	***	0.002	*	0.001	+	0.003	***	0.001	+
Relative Deprivation (log)	-0.001		-0.004		0.003		0.004		0.003		0.001		0.002	
Time	0.026	***	0.027	***	0.001	***	-0.001	***	-0.002	***	0.001	***	-0.000	
Time*SES	-0.000	*	-0.001	***	0.000	*	0.001	***	0.001	***	0.000		0.000	
Constant	-0.919	***	-0.992	***	3.000	***	2.998	***	3.632	***	3.021	***	2.827	***
Random Effects														
SES	0.072	(.012)	0.080	(.010)	0.050	(.022)	0.071	(.020)	0.085	(.010)	0.059	(.022)	0.068	(.025)
Constant	0.243	(.003)	0.174	(.004)	0.346	(.004)	0.411	(.004)	0.255	(.003)	0.346	(.004)	0.394	(.004)
Residual	0.420	(.001)	0.519	(.002)	0.463	(.002)	0.412	(.002)	0.439	(.002)	0.495	(.002)	0.474	(.002)
IPTW Decile														
1	0.016		0.025		0.019		0.012		-0.021		0.005		0.026	
2	0.034		0.056	*	0.012		0.005		-0.013		0.011		0.031	
3	-0.001		0.029		-0.006		0.015		-0.004		-0.005		-0.000	
4	0.013		0.042	+	0.023		0.023		-0.005		0.014		0.039	
5	0.017		0.043	+	0.019		0.022		0.006		0.019		0.044	
6	0.031		0.058	*	0.035		0.031		0.014		0.041		0.050	
7	0.022		0.053	*	0.014		0.009		-0.007		0.026		0.041	
8	0.034		0.066	**	-0.017		-0.040		-0.018		-0.013		0.015	
9	0.050	+	0.057	*	-0.023		-0.038		-0.061	*	-0.013		-0.003	

[1]N = 66,760 per each of 10 Multiply Imputed Datasets

[2]N = 59,710 per each of 10 Multiply Imputed Datasets

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-9. Mixed Effects Model for State Level Factors and IPTW Deciles

Variable	Math Direct Assessment[1]		Reading Direct Assessment[1]		Self-Control[2]		Externalized Problem Behavior[2]		Internalized Problem Behavior[2]		Interpersonal Skills[2]		Approaches to Learning[2]	
Hispanic Immigrant	-0.082	**	-0.077	*	-0.001		0.056		0.023		-0.026		-0.021	
Mexican Immigrant	-0.015		-0.027		0.013		0.034		0.069	**	0.009		0.015	
Other	-0.065	***	-0.050	***	-0.010		0.011		0.001		-0.018		-0.033	*
Non-Traditional Destination	0.014		0.002		0.022		0.012		-0.017		0.025		0.023	
Mexican-White DiD	-0.032		-0.011		0.126	**	0.192	***	0.028		0.098	+	0.049	
Hispanic-White DiD	0.070	*	0.113	***	-0.011		-0.026		0.024		0.028		0.004	
Individual Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Female	-0.063	***	0.047	***	0.195	***	0.241	***	0.013	*	0.226	***	0.251	***
Disability	-0.077	***	-0.072	***	-0.096	***	-0.089	***	-0.113	***	-0.106	***	-0.192	***
Repeat a Grade	-0.287	***	-0.270	***	-0.145	***	-0.145	***	-0.123	***	-0.169	***	-0.328	***
Head Start	-0.091	***	-0.079	***	-0.109	***	-0.099	***	-0.060	***	-0.107	***	-0.122	***
Family Characteristics	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Household Type: One Parent	-0.026	**	-0.035	***	-0.104	***	-0.105	***	-0.075	***	-0.092	***	-0.100	***
Household Type: Other	-0.095	***	-0.105	***	-0.155	***	-0.157	***	-0.089	***	-0.132	***	-0.155	***
Language in the Home: Spanish	-0.181	***	-0.191	***	-0.025		0.008		-0.013		-0.057	***	-0.065	***
Language in the Home: Other	-0.144	**	-0.180	**	0.006		0.072		-0.031		-0.090		-0.082	
Socio-Economic Status	0.123	***	0.147	***	0.040	***	0.023	***	0.037	***	0.057	***	0.078	***
Below the Poverty Line	0.004		0.001		0.011		0.008		-0.041	***	0.001		0.005	
Number of Siblings	0.123	***	-0.007	**	0.026	***	0.031	***	0.001		0.020	***	0.009	*
Parental Expectations	0.004	***	0.009	***	0.005	***	0.004	**	0.007	***	0.008	***	0.015	***
Parental Involvement	0.026	***	0.025	***	0.002		0.003		-0.009	+	0.001		-0.006	
Urbanicity: Midsize City	-0.028	**	-0.031	**	-0.010		-0.027	*	-0.005		-0.036	**	-0.036	*
Large Suburb	-0.007		-0.007		0.009		-0.006		-0.013		-0.040	**	-0.021	
Midsize Suburb	-0.051	**	-0.054	***	0.034		-0.015		-0.006		-0.021		0.006	
Large Town	-0.082	***	-0.074	***	-0.020		-0.057	*	-0.012		-0.077	***	-0.036	
Small Town	-0.042	+	-0.037	+	-0.007		-0.057		-0.007		-0.074	*	-0.027	
Rural	-0.043	**	-0.050	***	-0.026		-0.040	+	0.033	*	-0.052	*	-0.028	
State Level Factors	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pro-/Neutral Immigration Laws	0.003		0.001		-0.005		-0.007		0.000		-0.007	+	-0.004	
Anti-Immigration Laws	0.004		0.004		-0.006		-0.020	*	-0.007		0.006		0.003	
Legislature: Republican	0.117	***	0.089	***	-0.004		0.003		0.020	**	-0.017	+	0.013	
Mixed	0.078	***	0.076	***	0.019	*	0.015	+	0.004		0.005		0.026	**
Governor: Republican	-0.086	***	-0.111	***	-0.006		0.008		0.008	+	-0.001		0.001	
Independent	0.357	***	0.422	***	0.015		-0.048		0.010		-0.021		-0.046	
Time	0.026	***	0.026	***	0.001	***	-0.001	***	-0.002	***	0.001	***	-0.000	
Time*SES	-0.000	*	-0.001	***	0.000	*	0.001	***	0.000	***	0.000		0.000	
Constant	-0.840	***	-0.947	***	3.000	***	3.225	***	3.469	***	2.915	***	2.844	***
Random Effects														
SES	0.083	(.010)	0.087	(.010)	0.053	(.021)	0.072	(.019)	0.086	(.010)	0.060	(.021)	0.068	(.023)
Constant	0.245	(.003)	0.178	(.004)	0.347	(.004)	0.411	(.004)	0.255	(.003)	0.347	(.004)	0.395	(.004)
Residual	0.417	(.001)	0.514	(.002)	0.463	(.002)	0.412	(.002)	0.439	(.002)	0.495	(.002)	0.474	(.002)
IPTW Decile														
1	0.010		0.020		0.017		0.004		-0.018		0.007		0.028	
2	0.040	+	0.063	**	0.014		-0.002		-0.010		0.015		0.037	
3	0.002		0.030		-0.001		0.012		-0.003		0.001		0.008	
4	0.017		0.045	*	0.030		0.020		-0.003		0.023		0.047	
5	0.024		0.049	*	0.024		0.018		0.008		0.026		0.051	
6	0.045	+	0.069	**	0.041		0.029		0.018		0.050		0.057	
7	0.030		0.058	*	0.016		0.003		-0.003		0.032		0.046	
8	0.033		0.068	**	-0.017		-0.045		-0.018		-0.005		0.015	
9	0.046	+	0.057	*	-0.019		-0.041		-0.063	*	-0.002		-0.005	

[1]N = 66,760 per each of 10 Multiply Imputed Datasets

[2]N = 59,710 per each of 10 Multiply Imputed Datasets

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

Table C-10. Mixed Effects Model for All Characteristics and IPTW Deciles (select)

Variable	Math Direct Assessment[1]		Reading Direct Assessment[1]		Self-Control[2]		Externalized Problem Behavior[2]		Internalized Problem Behavior[2]		Interpersonal Skills[2]		Approaches to Learning[2]	
Hispanic Immigrant	-0.083	**	-0.085	**	0.020		0.071	+	0.038		-0.015		-0.009	
Mexican Immigrant	-0.010		-0.019		0.037		0.057	+	0.081	***	0.012		0.014	
Other	-0.052	***	-0.038	***	0.003		0.021		0.009		-0.012		-0.026	+
Non-Traditional Destination	0.020		-0.005		-0.009		-0.013		-0.023		0.005		0.007	
Mexican-White DiD	-0.028		-0.014		0.124	**	0.194	***	0.029		0.108	+	0.065	
Hispanic-White DiD	0.099	**	0.150	***	0.001		-0.029		0.023		0.035		0.012	
Individual Characteristics	--	--					--	--						
Female	-0.066	***	0.042	***	0.196	***	0.243	***	0.013	+	0.227	***	0.251	***
Disability	-0.080	***	-0.073	***	-0.100	***	-0.093	***	-0.114	***	-0.108	***	-0.193	***
Repeat a Grade	-0.286	***	-0.275	***	-0.143	***	-0.140	***	-0.122	***	-0.170	***	-0.331	***
Head Start	-0.076	***	-0.068	***	-0.107	***	-0.094	***	-0.058	***	-0.106	***	-0.122	***
Family Characteristics	--	--					--	--						
Household Type: One Parent	-0.021	+	-0.033	***	-0.099	***	-0.099	***	-0.072	***	-0.091	***	-0.097	***
Household Type: Other	-0.091	***	-0.104	***	-0.150	***	-0.155	***	-0.090	***	-0.132	***	-0.157	***
Language in the Home: Spanish	-0.153	***	-0.156	***	0.004		0.030		0.007		-0.040	+	-0.059	**
Language in the Home: Other	-0.137	**	-0.177	***	0.021		0.070		-0.016		-0.070		-0.053	
Socio-Economic Status	0.082	***	0.103	***	0.034	***	0.018	**	0.030	***	0.050	***	0.074	***
Below the Poverty Line	0.002		-0.002		0.014		0.010		-0.038	***	0.000		0.006	
Number of Siblings	0.017	***	-0.003		0.025	***	0.032	***	0.000		0.020	***	0.008	+
Parental Expectations	0.006	***	0.008	***	0.006	***	0.004	**	0.007	***	0.008	***	0.016	***
Parental Involvement	-0.002		-0.002		0.002		-0.001		-0.012	+	0.002		-0.000	
Urbanicity: Midsize City	-0.030	**	-0.041	***	-0.028	+	-0.031	+	-0.015		-0.038	**	-0.044	**
Large Suburb	-0.019	+	-0.020	+	-0.016		-0.020		-0.014		-0.040	**	-0.025	
Midsize Suburb	-0.061	***	-0.066	***	-0.001		-0.030		-0.012		-0.026		-0.004	
Large Town	-0.059	***	-0.057	**	-0.043	+	-0.058	+	-0.023		-0.080	***	-0.043	
Small Town	-0.096	***	-0.113	***	-0.023		-0.048		-0.018		-0.074	+	-0.033	
Rural	-0.067	***	-0.081	***	-0.046	+	-0.042	+	0.021		-0.049	+	-0.035	
School & Classroom Characteristics	--	--					--	--						
Social Disorder	0.013	**	0.021	***	0.000		-0.004		0.003		0.003		-0.001	
School Type: Catholic	0.003		0.022	+	-0.014		0.000		0.027	**	0.013		-0.006	
Other Religious	0.001		0.005		-0.118	***	-0.102	***	-0.009		-0.088	***	-0.027	
Other Private	0.057	***	0.082	***	-0.067	***	-0.122	***	-0.039	+	-0.001		0.010	
Student Body: Proportion Free Lunch	-0.001	***	-0.001	***	-0.000		-0.000	**	-0.000		0.000		-0.000	
Bussed from Outside the Neighborhood	-0.000		-0.001	***	-0.000		-0.000		-0.000		0.000		0.000	
From the Neighborhood	-0.002	***	-0.002	***	0.000		-0.000		-0.000		-0.000		-0.000	
Asian	-0.002	**	-0.003	***	-0.002	+	-0.001		0.001		-0.002	+	-0.002	+
White	-0.003	***	-0.004	***	-0.000	+	0.000		0.000	+	-0.001	**	-0.001	+
10-25% Hispanic	-0.175	***	-0.227	***	-0.012		0.039	***	0.010		-0.034	**	-0.013	
25-50% Hispanic	-0.258	***	-0.345	***	-0.020		0.041	***	0.028	+	-0.050	**	-0.013	
50-75% Hispanic	-0.328	***	-0.451	***	-0.057	***	0.034	+	0.020		-0.095	***	-0.029	+
75%+ Hispanic	-0.414	***	-0.611	***	-0.069	***	0.067	***	0.067	***	-0.113	***	-0.023	
10-25% Black	-0.201	***	-0.252	***	-0.014		0.023	**	-0.003		-0.028	**	-0.001	
25-50% Black	-0.257	***	-0.308	***	0.012		0.038	**	0.010		0.001		0.009	
50-75% Black	-0.336	***	-0.422	***	0.004		0.044	+	-0.001		-0.027		0.003	
75%+ Black	-0.483	***	-0.621	***	0.016		0.060	+	-0.021		-0.035		0.018	
Percent ESL/Bilingual	0.000	***	0.000	+	-0.000	+	-0.000		-0.000		-0.000		0.000	
Limited English Proficiency Services	0.152	***	0.191	***	0.033	+	0.006		0.012		0.019		-0.011	
Classroom: Proportion Hispanic	0.001	***	0.001	***	0.000		-0.000		-0.000		-0.000		0.000	
Minority	0.001	***	0.001	***	0.000		-0.000		0.000	+	0.000		0.000	
English Only	0.032	+	0.040	***	-0.014		0.000		-0.004		0.001		0.008	
LEP Student in Classroom	-0.005		-0.014	+	-0.033	***	-0.042	***	-0.029	***	-0.012		-0.015	+
Teacher Population: Proportion White	-0.001	***	-0.002	***	-0.000		-0.000		-0.000		-0.001	***	-0.001	**
Black	0.003	***	0.004	***	-0.001		0.000		0.001		-0.000		0.000	
Hispanic	-0.001	+	-0.001	***	-0.000		0.000		-0.000		-0.001	+	-0.001	+
Classroom: Teacher Hispanic	-0.030	+	-0.043	+	-0.028		0.053	**	0.079	***	0.022		0.007	
Teacher Speaks Spanish	-0.096	***	-0.108	***	0.020	+	0.017		-0.029	**	0.008		0.009	
Hispanic Teacher-Pupil Match	-0.030		-0.045	+	-0.002		-0.054	+	-0.060	**	0.004		-0.016	
Neighborhood Characteristics	--	--					--	--						
Self-reported Neighborhood Safety: Somewhat Safe	-0.017	+	-0.006		-0.002		0.008		-0.018	+	-0.009		-0.008	
Not Safe	-0.036	+	-0.024		-0.037	+	-0.034		-0.068	***	-0.061	**	-0.039	
Neighborhood: Percent Hispanic	-0.000		-0.000		-0.000		-0.001	+	-0.000		0.001		-0.000	
Foreign-Born	-0.001	+	-0.001		-0.001	+	0.001		-0.001	**	-0.001	+	-0.002	**
Age 16 to 19	0.002		0.001		0.000		0.000		0.000		0.000		0.001	
Proportion of Family Households	-0.000		-0.000		0.000		0.001	+	0.001		0.000		0.001	+
Poverty Rate	0.002	+	0.002	**	-0.001		0.000		0.002	+	-0.000		0.000	
Log of Median Income	-0.001		-0.004		0.003		0.006		-0.001		-0.004		0.004	
Unemployment Rate	-0.003	+	-0.002	+	0.000		0.001		0.000		0.001		0.001	
Self-Employment Rate	0.002	+	0.002	+	-0.002	+	-0.001		-0.000		-0.001		-0.002	
Proportion with Bachelor's Degrees	0.004	***	0.002	***	0.002	***	0.002	**	0.001	+	0.002	***	0.001	
Relative Deprivation (log)	0.000		-0.002		0.003		0.004		0.003		0.001		0.002	
State Level Factors	--	--					--	--						
Pro-/Neutral Immigration Laws	0.001		-0.002		-0.007		-0.009	+	-0.000		-0.008	+	-0.003	
Anti-Immigration Laws	-0.003		-0.002		-0.011		-0.020	+	-0.010		0.003		-0.001	
Legislature: Republican	0.116	***	0.093	***	-0.005		0.005		0.022	**	-0.017	+	0.012	
Mixed	0.075	***	0.077	***	0.015	+	0.017	+	0.005		0.004		0.024	**
Governor: Republican	-0.068	***	-0.088	***	-0.003		0.006		0.008		0.006		0.002	
Independent	0.213	***	0.258	***	0.005		-0.032		0.011		-0.039		-0.051	
Time	0.030	***	0.031	***	0.001	***	-0.002	***	-0.002	***	0.001	***	0.000	
Time*SES	0.000	+	-0.000	***	0.000	+	0.000	***	0.001	***	0.000		0.000	+
Constant	-0.216	+	-0.106		3.071	***	3.132	***	3.425	***	3.081	***	2.854	***
Random Effects														
SES	0.074	(.011)	0.081	(.011)	0.049	(.022)	0.070	(.019)	0.085	(.010)	0.059	(.022)	0.066	(.026)
Constant	0.265	(.003)	0.224	(.004)	0.344	(.004)	0.409	(.004)	0.254	(.003)	0.346	(.004)	0.394	(.004)
Residual	0.391	(.001)	0.476	(.002)	0.463	(.002)	0.411	(.002)	0.438	(.002)	0.494	(.002)	0.473	(.002)
IPTW Decile														
1	-0.005		-0.000		0.014		0.004		-0.019		0.006		0.025	
2	0.026		0.047	+	0.005		-0.005		-0.012		0.009		0.028	
3	-0.005		0.022		-0.012		0.007		-0.005		-0.004		0.000	
4	0.005		0.033		0.017		0.016		-0.006		0.016		0.038	
5	0.005		0.028		0.012		0.015		0.004		0.018		0.041	
6	0.016		0.038		0.029		0.024		0.012		0.039		0.046	
7	0.000		0.023		0.006		-0.000		-0.010		0.022		0.033	
8	0.027		0.056	+	-0.024		-0.052		-0.024		-0.012		0.005	
9	0.042		0.054	+	-0.035		-0.055		-0.067	+	-0.011		-0.015	

[1]N = 66,760 per each of 10 Multiply Imputed Datasets

[2]N = 59,710 per each of 10 Multiply Imputed Datasets

+p<.1 * p<0.05 ** p<0.01 *** p<0.001

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Curriculum Vita

Robert Nathenson was born in Pittsburgh, Pennsylvania on January 5, 1983. He completed his undergraduate training in History and American Culture Studies at Washington University in St. Louis before completing a Master's degree in Sociology at the University of Oxford. He joined the Johns Hopkins Sociology Department as an Institute of Education Sciences Predoctoral Trainee in 2008. In 2010 he enrolled in the joint degree program in Applied Math & Statistics. He graduated in 2014 from Johns Hopkins University with a Master's in Engineering in Applied Math & Statistics and a Doctor of Philosophy in Sociology. His research interests include migration, education, child development, stratification, health, and the application of quantitative methods.