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# **DEPENDENCE ORINVESTMENT IN THE FUTURE?**

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# WELFARE AND THE CHILDREN OF IMMIGRANTS: TRANSMISSION OF DEPENDENCE OR INVESTMENT IN THE FUTURE?

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#### Abstract

The public concern that immigrant families might be using a disproportionate share of social benefits and transmitting some form of public dependency to their children, combined with the rising levels of immigrants entering the country, fueled the passage of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996, which limited public assistance to many immigrant families. This paper uses the National Longitudinal Survey of Youth 1997 to explore the association between exposure to welfare and young adult outcomes of high school graduation, college enrollment and labor force participation with a focus on parental nativity status as well as broad country of origin group. Results indicate a persistent negative association between welfare legacy and high school graduation; a negative association that is most pronounced for children of natives. Results also show the largest benefit of welfare receipt among the most disadvantaged group, the young adult children of immigrants from Mexican and Central American countries. The main finding of this study suggests that the negative impacts of welfare receipt might be lessened and in some cases reversed among the young adults from immigrant families. Such findings challenge the common notion that immigrant families use welfare as a crutch across generations and raise serious concern about U.S. immigration and welfare policies.

#### Introduction

Since 1992, over ten million immigrants have entered the United States and today, an estimated 23 percent of the population is an immigrant or the child of an immigrant (U.S. Census Bureau 2006). An issue that has been debated by both policy makers and researchers alike concerns not only the immediate cost of immigrants coming into the U.S. but also the future costs of their children. The public concern that immigrant families might be using a disproportionate share of social benefits and transmitting some form of public dependency to their children, combined with the rising levels of immigrants entering the country, fueled the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA or Welfare Reform) in 1996. One of the biggest social experiments to be conducted in this country in years, Welfare Reform with its severe immigrant restrictions was intended to reduce the rate of welfare use by immigrants who were already residing in the U.S. and discourage those who might need social assistance from entering. These changes reflect the commonly held notions about the negative effects of welfare on children and families.

This study uses the 1997 National Longitudinal Survey of Youth (NLSY97) to explore the complicated relationship between welfare receipt and intergenerational outcomes among immigrant families. While much scholarly attention has been given to the welfare recipiency patterns of immigrants, this paper focuses on the impact of welfare receipt on a growing population—the children of immigrants. More specifically, this study focuses on the relationship between the receipt of welfare within immigrant families and two key outcomes among the children of immigrants; educational attainment and labor force participation.

An important question underlying the immigrant-welfare debate is whether the native-born children of immigrants will achieve the economic self-sufficiency necessary for social mobility. By examining the effects of welfare receipt on the educational attainment and labor force participation of the young adult children of immigrants, this paper centers on a population in which welfare restrictions could have a significant potential impact on the nation's social and economic future. Most of the research on the intergenerational effects of welfare receipt has focused almost exclusively on native-born parents and native-born children. By placing the emphasis on immigrant families and exploring the effects of welfare receipt on the outcomes of their children, we may begin to understand a key question underlying the welfare and immigration debate; does welfare serve as a crutch for immigrant families characterized by high levels of poverty and low levels of education or does it serve as a means of investment in their children's future?

### Background

#### Prior research on the intergenerational effect of welfare receipt

There are several explanations—structural and cultural—guiding the research on the intergenerational effect of welfare receipt, all of which assume that children raised in welfare homes are likely to be economically disadvantaged. However, the key difference among these perspectives lies in what is identified as the prime element responsible for any impact on children (Wylie 1999). The structural perspectives suggest that a lack of parental resources (Becker 1981; Becker and Tomes 1986); low levels of parental education, family type and limited English language ability (Barthlomae, Fox and McKenry 2004; Corcoran 1995), or neighborhood factors (Brooks-Gunn, Duncan and Aber 1997; Duncan, Brooks-Gunn and Klebanov 1994; Jencks and Mayer 1990) and not parental welfare recipiency *per se* that influences children's subsequent outcomes. The cultural perspective suggests that welfare receipt in and of itself is a key determinant affecting children's outcomes, having a separate effect beyond that of low income. This perspective stems from fears that welfare receipt may have a negative effect on children. It posits the existence of a welfare-culture, whereby welfare receipt among poor families changes the cultural or psychological traits of those families ultimately leading toward lower levels of educational achievement and socioeconomic attainment (Murray 1984). Growing up in a household that receives welfare payments could potentially lower future costs associated with welfare participation by creating a 'welfare culture' within which the stigma associated with welfare use is lessened or removed by later generations (Moffit 1992) or by increasing the amount of information available to the child about the welfare system itself (Rank and Hirshl 1993). Additionally, as welfare parents become less attached to the labor force and more dependent on welfare income, their children may suffer from a lack of information on successful employment, job searching strategies, etc. Subsequently, these children may lack the necessary skills needed for economic independence, putting them at greater risk as adults.

# Support for Transmission Theories

Empirical evaluations of the structural and cultural perspectives typically assess whether parental welfare use is correlated with subsequent outcomes among their children while controlling for the influence of other spurious factors (Bartholomae, Fox and McKenry 2004; Corcoran 1995; Rank and Cheng 1995). There has been mixed support for both the structural and cultural perspectives. For example, parental welfare receipt is positively associated with a child's later welfare receipt, even after controlling for family income and background characteristics (An, Haveman and Wolfe 1993; Antel 1992; Duncan, Hill, and Hoffman 1988; Gottschalk 1992;

McLanahan 1988; Pepper 1995; Solon, Corcoran, Gordon and Larsen 1988). Yet, Levine and Zimmerman (1996) find that at least three-quarters of the intergenerational correlation between generations of welfare use can be attributed to the expected intergenerational correlation between income and other family characteristics, providing evidence of a cycle of poverty rather than a cycle of welfare dependence.

Several scholars have investigated whether growing up in a welfare household reduces children's educational attainment (Boggess 1998; Duncan, Yeung 1995; Duncan and Brooks-Gunn 1997; Duncan 1994; Haveman, Wolfe and Spaulding 1991; Ku and Plotnick 2003), finding that children who grow up in households that have received welfare acquire fewer years of schooling and are less likely to graduate from high school compared to children whose parents did not receive welfare, net of family income. That is, after controlling for family income, results suggest that there is an adverse effect of welfare receipt as a source of income. However, the evidence is somewhat mixed, particularly with regard to differences in the age of exposure. Haveman, Wolfe and Spaulding (1991) tested the timing of welfare receipt, finding that the combination of parental welfare use and poverty during early adolescence (12 to 15) was a significant predictor of high school dropout whereas welfare use at earlier periods was not. Ku et al. (2003), using the PSID and sibling fixed effects methods, found similar results, namely that children receiving welfare during late childhood and early adolescence attained lower levels of education. On the other hand, Teachman et al. (1997) found no evidence that welfare receipt, net of family income, family structure and IQ scores, is related to high school graduation, total number of years schooling and college enrollment.

Prior research on the effect of parental welfare receipt on child's later labor force participation and earnings is also mixed. Several studies found a small negative effect of parental welfare receipt on (mostly son's) later labor force participation but the impact was not always significant, varied in size, and different studies had varying effects with respect to race and ethnicity. Early research suggested that parental welfare receipt, net of total family income, has no effect on the labor force participation and wage rate of young men (Hill and Duncan 1987). However, later research by Corcoran, Gordon, Larsen, and Solon (1992) using the Panel Study of Income Dynamics (PSID), examined the impact of both family and community welfare receipt on young men's earnings, finding a strong negative association. Peters and Mullis (1997) examined the role of welfare as a source of family income on the subsequent labor force participation of both young men and women using the NLSY79. After controlling for the possible endogeneity of family welfare receipt, the authors found that parental welfare receipt was negatively associated with subsequent labor market experience.

#### Welfare and Immigrants

Limited research has attempted to ascertain the effect of immigrant family welfare receipt on later generations, most specifically on the likelihood of welfare receipt in later generations. For example, Butcher and Hu (1999) addressed the question of intergenerational correlation in welfare receipt among the foreign born by using 1970 Census data on the immigrant generation (the first generation) combined with second generation data taken from the Current Population Survey (1994-1996). Given that the data used in their analysis were cross sectional, Butcher and Hu were unable to link parents with children. Instead, they utilized a group-estimation procedure similar to Borjas' (1999) ethnic effects models, estimating county of origin group-level measures of mean food stamps receipt for the first and second generations. Results indicated that while there was a positive and significant correlation between welfare receipt of the first and second generations, once education levels of the second generation are controlled, the relationship disappears, suggesting that the intergenerational transmission of the effects of welfare operate through the transmission of group skill levels.

While the previous research has shown that there may be an intergenerational correlation concerning welfare receipt, the causal links have not been firmly established (Moffit 1992), nor has the role of nativity status (or for that matter, the role of citizenship) been sufficiently explained. For example, we do not know what the effect of limiting welfare access or welfare amounts for the parent's generation has on the child's later outcomes, particularly among the children of immigrants. There may be a causal link between generations, but the observed correlation may be due to the simple fact that children of immigrants and their parents face similar circumstances and limitations. From the perspective of the 1996 immigrant restrictions in welfare laws, which limited access to a wide range of public benefits based on nativity status, removing welfare access from the immigrant parents could potentially influence the outcomes of the second generation in harmful ways.

Much of the literature on the children of immigrants consistently points to the possibility that family income, parental education, and even the social networks of the immigrants' community, are strong determinants of the success of the children of immigrants. For example, like children born to natives, the children coming from immigrant families with more economic resources are more likely to receive better grades in school (Kao 2004; Kao and Tienda 1995; Portes and MacLeod 1999), to remain enrolled in high school (Hirschman 2001) and to have higher overall educational attainment and earnings (Card , Di Nardo and Estes 2001). Yet, there is evidence that Hispanic immigrants (the largest immigrant group to the U.S.) and their descendants do not converge to native levels

of education and earnings as quickly as non-Hispanic immigrants and their descendents. It could be that welfare may play a role in the subsequent attainments of the children of immigrants in ways not predicted by the welfare or structural models.

#### **Contributions to Research**

This study uses the 1997 National Longitudinal Survey of Youth (NLSY97) to explore how much parentgeneration welfare use is correlated with second-generation young adult outcomes (high school graduation and college enrollment) as well as the adult children's transition to the labor force and to examine how this relationship varies by nativity status of the parents. While most of the children of immigrants do go on to achieve higher levels of education than their parents (Chiswick and DebBurman 2003), the role that welfare receipt plays in this transition is not known. Empirical studies on the effects of welfare receipt on children find, for the most part, a negative correlation between parents' receipt and children's educational outcomes (Boggess 1998; Brooks-Gunn, Guo, and Furstenburg 1993; Duncan 1994; Duncan and Yeung 1995; Haveman and Wolfe 1994; Haveman, Wolfe, and Spaulding 1991; Hill and Duncan 1987; Ku and Plotnick 2003; McLanahan 1985; Peters and Mullis 1997; Teachman, Paasch, Day and Carver 1997). Yet research in this area has been limited by a lack of attention to immigrant families and an inability to establish causal links. The role that parental welfare receipt plays in children's future educational outcomes is likely different for immigrant families than it is for native families. This represents a serious gap in the literature on immigrant families because a majority of the children of immigrants are citizens and are eligible for social benefits, social benefits that may play an important role in their development.

How might the welfare frameworks—cultural and structural—predict outcomes for the children of immigrants? In other words, would welfare affect all children the same regardless of the nativity status of their parents? Alternatively, could welfare receipt have a differential effect even among the children of immigrants? To answer these questions, a comparison is made between the children of immigrants and the children of natives, as well as an estimate of any differences between welfare recipients and non-recipients among just the children of immigrants. Welfare culture models suggest an additional negative effect of welfare receipt above and beyond that of income. That is, the negative relationship between welfare and children's outcomes remains even after parental income levels are controlled. Cultural models emphasize values, attitudes and behaviors that persist among concentrated areas of poverty (Bane and Elwood 1994). According to this model, children of immigrants and the children of natives with a legacy of welfare will have lower outcomes net of family income. While support for this hypothesis has been limited, this idea that children may become dependent on welfare as adults because of a shift in values, and more specifically, that immigrant children would assimilate into welfare was a key focus of the immigrant restrictions in PWRORA. Some scholars and policy makers felt that welfare was acting as a magnet, pulling welfare-prone immigrants to the U.S. and that their children would become the same; welfare dependent, low skilled and under educated.

These ideas stemmed from the fact that there is wide variation across country of origin on a number of family characteristics (i.e. mother's education, poverty, linguistic isolation, and growing up in a single parent family). For example, two-thirds of Mexican-origin immigrant mothers, and over half of Central American-origin mothers have less than a high school education, compared with less than 10 percent of European or Chinese mothers, and 18 percent of Caribbean mothers (Hernandez 2004). Research has also examined the combined levels of risk factors such as low maternal education, poverty, linguistic isolation, and single-parent families among the children of immigrants (Hernandez 2004), finding higher rates of risk factors for children whose parents are from immigrant groups with low education levels (i.e. Mexico and Central America) compared with children whose parents are from immigrant groups with high education levels (i.e. India, Canada) and medium education levels (i.e. China, Caribbean). For example, roughly 61 percent of children from low education groups have at least two out of four risk factors, compared with 26 percent for those from medium education groups, and 12 percent from high education groups.

The effect of welfare on the children of immigrants might vary across immigrants groups; there could be a decline in outcomes for those children who assimilate into the underclass or an improvement in outcomes for those children who assimilate toward the middle class. Segmented assimilation theory suggests that across generation, some group's exhibit declines in outcomes such as education or socioeconomic status, while others show improvements. Groups that are highly urbanized or have darker skin color, such as the children of Caribbean immigrants, are likely to follow a downward mobility pattern (Waters 1994). In contrast, other children who come from immigrant families with more resources follow a path of upward mobility; either adopting the values of the mainstream middle class or retaining immigrant values and solidarity while achieving economic security. This type of strategy has been documented among the Vietnamese (Zhou and Bankston 1994), the Punjab Indians (Gibson 1988) as well as the Koreans and Chinese (Zhou 2001). Given these ideas, it could be that the outcomes of the children of immigrants might vary across differences in group characteristics.

Under the structural framework, the relationship between a parent's welfare use and children's subsequent outcomes vanishes after income, parental and neighborhood characteristics are controlled. That is, the connection between parent's welfare use and children's subsequent attainments is the result of parents' lower economic background, education, etc. However, it is unclear how these factors might influence the children of immigrants. Some scholars suggest that all immigrants (both legal and illegal) are positively self-selected from their country of origin on characteristics like self-efficacy, ambition, and work ethic (Chiskwick 1978; Portes and Rumbaut 1996; Feliciano 2005). Therefore, the structural models might not operate in the same manner among immigrant families as among native families even though immigrant parents are more likely than native parents to have high levels of poverty, lack a high school degree, and live in neighborhoods with few resources.

Recent research has shown that while immigrants may use welfare at higher rates than natives may when they are new arrivals, ten years later they have lower rates of welfare use than do natives (Bean and Van Hook 2006). It could be that immigrant families pool income from multiple sources to maximize income, and minimize risk. For example, they might assemble income from extended family, as well as from formal and informal sources of income (Fuligni and Yoshikawa 2002; Tienda and Raijman 2000) thus increasing their ability to invest in the attainments of their children. Based on these ideas, we might find children of immigrants fare better than the children of natives, regardless of parental income, neighborhood characteristics, and parental human capital; welfare might actually function as settlement assistance among immigrant families. It could be that the children of immigrants will have better outcomes than the children of natives, net of parental welfare history and structural characteristics.

Some have argued that the differential outcomes experienced by the children of immigrants stems from the distinctive familial strategies that different country of origin groups have developed to help their children develop human capital (Mollenkopf, Waters, Holdaway, Kasinitz 2004). While this may be the case, the purpose of this paper is to try to understand the possible effect that welfare receipt may have on the children of immigrants. This provides the groundwork to examine later in detail strategies of coping with the immigrant experience.

#### Data

The NLSY97 is a longitudinal study conducted by the United States Bureau of Labor Statistics that follows a nationally representative sample of approximately nine thousand children. I use the first seven rounds of data beginning in 1997. The initial interview was conducted when the youths were between 12 to 16 years of age as of

December 31, 1996. In the first round, both the youth and the youth's parents received hour-long personal interviews. The surveys collected considerable retrospective and contemporaneous information on educational attainment, work history and parental program participation. In addition, an extensive two-part questionnaire was administered that gathered demographic information on members of the youth's household and on his or her immediate family members living elsewhere. Given that the NLSY97 is designed to document the transition from school to work and into adulthood, it collects detailed information about youths' labor market behavior and educational experiences over time (Center for Human Resource Research, 1993).

#### Analytic Sample

In the NLSY97, the children of immigrants are defined as children having at least one foreign-born parent (or stepparent) residing in the household in the first year of the survey.<sup>1</sup> The children of immigrants are divided into those who are native born to at least one resident foreign-born parent and those who are foreign born to foreign-born parent(s). The children of natives are all native born to native-born parents. In this sample, there are 324 children who are immigrants (children who were born outside the U.S. to immigrant parents). Of these 324 children, 143 arrived in the U.S. prior to age seven. I group foreign born youth respondents who entered the country prior to age 7 with the native born children of immigrants because they will have spent the majority of their life in the U.S. Given that most previous studies on educational achievement have found that first-and second generation students are very similar in terms of performance (Fuligni, 1997; Fuligni and Witgow 2004; Kao and Tienda 1995) these two generations therefore are collapsed in the analyses to form a single group of children of immigrants compared with children of native born parents. Given that the research emphasis is on the native-born children of immigrants, remaining foreign-born youth respondents who arrived in the country after age 7 are excluded from the sample.

A final restriction placed on the analytic sample concerns the age of assessment for the key dependent variables: high school graduation, college enrollment and labor force participation. Much of the prior research on the educational attainment of young adults has focused on the total number of years schooling achieved by a specific age (e.g., Sandefeur, McLanahan, and Wojtkiewicz 1993), usually age 19. In the present analysis, outcome measures are also assessed with respect to age but the measure is more refined; educational attainment is measured during the last month of the 19<sup>th</sup> year. The sample is therefore restricted to those youth respondents who have complete information

<sup>&</sup>lt;sup>1</sup> Those children who were born in Puerto Rico or those children born of Puerto Rican parents are not defined as immigrants because they are U.S. citizens and may not face the same kinds of barriers regarding admission to the U.S., citizenship and welfare eligibility that children from immigrant families may face.

on educational attainment and enrollment status up to and including the last month of their 19<sup>th</sup> year. The resulting sample size is 5,736 with 790 children of immigrants and 4,946 children of natives.

#### Dependent Variables

<u>Youth Respondent Educational Attainment/Labor Force Participation</u>. A key dependent variable is educational attainment measured during the last month of the 19<sup>th</sup> year. High school graduation is measured as either graduating with a diploma or a GED by the last month of the 19<sup>th</sup> year. Most of the youth respondents who do graduate from high school do so with a diploma, not a GED. For example, among the youth respondent's who graduated from high school by age 19, just 5.5 percent did so by obtaining a GED. A second dependent variable in the analysis is college enrollment that is, ever enrolling in college by the last month of their 19<sup>th</sup> year.

In order to capture the simultaneity of schooling and employment decisions, a third dependent variable measures college enrollment and labor force participation during a 12 month time period which begins the month after high school graduation and ends eleven months later. For those individuals with no high school degree, and therefore no date of graduation, the 'start date' begins the month after their last month of high school enrollment and ends eleven months later. Status is measured by three mutually exclusive categories; enrolled in college full or part time, full or part time employed (no college enrollment), and minimal activity (no college enrollment, minimal or no employment). These measures were created using event history files, which detail monthly educational enrollment status, as well as weekly labor force participation.

To be considered enrolled in college the youth respondent must be enrolled for at least 6 months during the 12 month time period. Among those enrolled in college, a clear majority (79%) have experienced at minimum 6 months of enrollment. Nearly 47-percent of the weighted analytic sample had ever been enrolled in college prior to the last month of their 19<sup>th</sup> year.<sup>2</sup> For those not enrolled in college for at least six or more months, labor force participation was measured. For those who were engaged in the labor force, the total number of hours worked during the 52-week time period was obtained and the total hours worked was divided into terciles. Based on the distribution of total hours worked, those who had worked over 441 hours (the top two-thirds) during the 52-week period are categorized as "working." The number of hours worked averaged over a 50-week work year yields

<sup>&</sup>lt;sup>2</sup> I compared this figure to cross-sectional data from the March Supplement of the CPS finding that 47 percent of 19-year olds in that survey were currently enrolled in college.

roughly a 30-hour workweek for the top third, and an average of 15 hours a week for the middle third. Those youth respondents who reported working between zero and 441 hours are categorized as "inactive."<sup>3</sup>

#### Key Independent Variables

<u>Parental Welfare Legacy and Nativity Status.</u> In round one of the NLSY parent survey, retrospective data were collected on the parent's employment, marriage histories, and history of participation in government programs for low-income households (e.g., AFDC or ADC, SSI, food stamps). A series of questions recorded the number of years during the previous five years that a responding parent participated in various government programs targeting low income households, and whether the parent had ever received government assistance (AFDC, Medicaid, Food Stamps, and SSI) from the time that their sample youth was born to the present

These retrospective data enable the construction of several pre-Reform measures of previous childhood exposure to welfare for the children of immigrants and the children of natives. First, a broad measure indicates any parental welfare receipt history from the time the child was born to the first year of the survey (i.e. ever/never exposed to welfare). Prior research has shown that exposure to welfare during adolescence has the strongest negative effect on children's achievement; therefore one additional measure of parental welfare legacy is included in the analysis, a dichotomous measure indicating family welfare participation in the last five years prior to the first year of the survey. This measure is referred to as 'recent welfare use'. These measures are interacted in the multivariate models with the dichotomous indicator for child of immigrant status (1=youth respondent from immigrant family, 0=youth respondent from native family).

#### **Control Variables**

Parental Income and Education Levels. In order to evaluate whether family income has a net effect independent of welfare receipt on the outcomes of children, the analysis includes family income as a key independent variable in multivariate models. The NLSY97 contains a measure of total family income as reported by the parents or household head, for each year the youth respondent is in the survey. In this analysis, a base year measure of parental income is taken from the 1997 parent survey. To account for the relationship of family income to family size, the analysis includes an income to poverty ratio collapsed into an indicator of poverty status. In addition, parental education is measured based as the maximum number of years attained by the residential parents.

<sup>&</sup>lt;sup>3</sup> Eleven percent of the total youth respondent sample reported working zero hours. They compose the majority of the inactive group (59%).

Individual and Family Characteristics. The race/ethnicity of the youth respondent is included in the multivariate models, as well as the gender of the youth because males are less likely to graduate from high school (Haveman and Wolfe 1995). A set of variables for birth-year cohort is also included in the multivariate models to control for any possible secular trend in educational attainments. A dummy variable included in the models controls for the possibility that a youth respondent became a parent during high school, a condition that prior research has found to negatively affect educational attainment (Haveman and Wolfe 1995; Klepinger, Lundberg and Plotnick 1995). The structure of the youth respondent's family at age 12; two parent biological family, two parent step family, single mother family, single father family is also included. Prior research has shown that children from two parent homes have higher educational outcomes than children from other family forms (Downey 1995; Haveman and Wolfe 1994; Haveman and Wolfe 1995, Haveman, Wolfe and Spaulding 1991; Teachman 1987). In addition, the models include an indicator of a language other than English being spoken in the home because research has shown that children coming from homes with a non-English speaking parent have in some cases lower educational outcomes (Behrman 2004; Feliciano 2001).

<u>County and State-level Characteristics.</u> County- and state-level characteristics are obtained from the restricted use Geocode CD made available by the NLSY97. These include local area unemployment rates for the youth respondent residence in 1997, as well as the county poverty rate and county rates of household cash welfare receipt. Also included is one state-level welfare characteristic, average level of AFDC guarantee for a family of three averaged over the years 1991 through 1996. Dummy variables for region of the country are also included in the models.

#### Analytic Plan

A potential problem with standard regression models is that parental welfare receipt is likely to be endogenous. That is, the correlation could be driven by the unobserved characteristics of welfare families. Families (either immigrant or native) that receive welfare may be systematically different from families that do not due to unobserved characteristics associated with both parental welfare receipt and with the children's outcomes. Prior research has dealt with this issue using fixed effects models (Currie and Cole 1993; Ku and Plotnick 2003; Levine and Zimmerman 2005) and instrumental variable techniques (Levine, et al. 2005; Peters and Mullis 1997). In addition, research has shown that there are situations in which IV estimators are severely biased (Klepinger, Lundberg and Plotnick 1995).

On the other hand, other research (Rank and Cheng 1995; Bartholomae, et al. 2004) has assessed the influence of parental welfare legacy on outcome measures among adults by using standard linear or non-linear probability models. In this paper, analyses were conducted using both two stage least squares techniques and OLS, however, sensitivity tests revealed that 2SLS was not the optimal technique so the multivariate analyses shown are based on binary logistic regression (for the educational outcomes) and multinomial logistic regression (for the combined outcomes of college, work and inactivity) using actual measures of welfare legacy rather than the predicted measures. The models presented in the following sections regress the educational and labor force outcomes on a full set of characteristics discussed in the preceding sections.

#### **Univariate and Bivariate Results**

Appendix Table A presents a descriptive portrait of all variables used in the multivariate analyses across the two groups of interest: young adult children of immigrants and children of natives. The results suggest that while the children of immigrants and the children of natives have similar levels of high school graduation, the former group has higher levels of college enrollment among high school graduates than do the latter (.57 compared to .49). There are other unadjusted differences between the two groups. The children of immigrants are less likely to come from families with a welfare legacy. Just under half the children of immigrants identify as Hispanic compared to 7 percent of the children of natives. Likewise, seventeen percent of the children of natives in the sample are non-Hispanic black compared to just 8 percent of the children of immigrants. The children of immigrants tend to come from families with higher levels of poverty and lower levels of parental education than do the children of natives. They are also more likely to live in a home where a language other than English is spoken, are more likely to live with both biological parents, and less likely to live with a single mother. The children of immigrants are more likely to be concentrated in western states and to reside in an urban county. In addition, the children of immigrants tend to reside in counties that have high levels of unemployment and high rates of welfare use. Further, the young adults from immigrant families are more likely to come from states with higher average levels of AFDC guarantees. Finally, among the children of immigrants, a large proportion (42 percent), have parents who originate from Mexico or other Central American countries. The remaining 58 percent are from other areas such as European, African, Caribbean and Asian countries.

Table 1 presents the level of high school graduation, college enrollment and labor force participation for the children of immigrants and the children of natives by parental welfare legacy in order to answer the question: Do

children with a welfare legacy have lower levels of educational attainment and does this vary by nativity group? The data show lower levels of educational attainment for those young adults with a parental welfare legacy compared to those who have never experienced welfare, regardless of parental nativity. In addition, for both nativity groups, lower levels of educational attainment are seen for those who have experienced welfare during some part of their late childhood and early adolescence, captured by the measure of recent welfare exposure.

However, are there differences between parental nativity groups? For young adults with no welfare legacy, there appears to be no difference in high school graduation, college enrollment or post-high school inactivity by parental nativity. However, for those respondents *with* a parental welfare legacy, there are some measurable differences. First, among children with more recent welfare exposure, children with immigrant parents have significantly higher levels of high school graduation than do children of natives (.73 versus .66, difference=.06, p $\leq$  .07). An even larger difference is seen for college enrollment (.37 versus .25). In addition, after leaving high school, children from immigrant families are less likely than children from native families with recent welfare exposure to be inactive as it is defined here (i.e. working very little and not enrolled in college). In sum, initial unadjusted results indicate two key findings: 1) there is a significant negative association between parental welfare legacy and the outcomes of young adults; and 2) this association differs between young adults from immigrant families. This difference in the relationship between welfare legacy and educational outcomes could be occurring because of a lack of controls on other contemporaneous family or neighborhood information occurring at the same time as the welfare receipt. Therefore, the following section details findings from the multivariate models.

#### **Multivariate Results**

The models presented in the following sections regress the educational and labor force outcomes on a full set of characteristics discussed in the preceding sections. Table 2 presents the results from a series of logistic regression models;

logit 
$$[\theta(\mathbf{y})] = \begin{pmatrix} \underline{\theta(\mathbf{y})} \\ 1 - \theta(\mathbf{y}) \end{pmatrix} = \alpha + \beta_1 \mathbf{N} + \beta_2 \mathbf{W} + \beta_3 \mathbf{N} \mathbf{W} + \beta_4 \mathbf{Z}$$

where y represents a dichotomous indicator of the educational outcome,  $\theta$  is the probability of y being 1; N represents a dichotomous indicator of parental nativity status, W is an indicator of welfare history (either ever or

recent exposure); **NW** is the cross product of parental nativity status and welfare history; and **Z** represents a vector of control variables.

Given that the primary interest here is on the effects of parental welfare legacy and nativity status, the only model coefficients (and associated odds ratios) that are presented in the following tables are those for the main effects of welfare legacy ( $\beta_2$ ) and parental nativity status ( $\beta_1$ ) along with the corresponding interaction coefficients ( $\beta_3$ ). Results presented in Appendix Table 2 show that all neighborhood, family, individual and parental characteristics significantly correlate with the educational and labor force outcomes (in this example, high school graduation) in the predicted directions and as seen in previous research.

#### The Effect of Parental Welfare Legacy on Educational Attainment

Table 2 presents the results for four sets of models which describe the relationship between A) parental nativity and any welfare legacy, B) parental nativity and recent welfare exposure, C) parental nativity groups and any welfare legacy, and D) parental nativity groups and recent welfare exposure. As expected based on the bivariate results, those respondents with a history of welfare use have significantly lower odds of graduating from high school than do young adults with no welfare history, and notably the odds of high school graduation are higher for the native born children of immigrants than the children of natives on average (Model 1). To assess whether the impact of prior welfare receipt on educational attainment is different for the children of immigrants net of the set of full characteristics, Model 2 includes the cross-product terms of welfare history by parental nativity status. The interaction term is significant ( $p \le .007$ ) indicating that the negative impact of a welfare history on the odds of high school graduation, net a full set of characteristics, is lessened for the children of immigrants ( $e^{-.627 + .604}=.98$ ), compared to the impact on native children ( $e^{(-.627)}=.534$ ). Thus, having a welfare legacy lowers the odds of high school graduation by 47% [100\*(1-.53)] for children of natives, by only by 2% [100\*(1-.98)] for children of immigrants.

Turning to college enrollment, results from the main effects model (Model 3) show that net of individual, family and neighborhood characteristics, young adults with a welfare history have lower odds of attending college after graduating from high school. Further, the children of immigrants have higher odds of attending college than do the children of natives net of other characteristics. Adding the interaction between welfare history and parental nativity status (Model 4), indicate that the odds of college enrollment for the children of immigrants with a welfare legacy is reduced to ( $e^{(-.625+.454)}=.843$ ), compared to the children from native families ( $e^{(-.625)}=.536$ ). Thus, welfare

exposure reduces the odds of college enrollment by 44% for children of natives, but only by 16% for children of immigrants.

Panel B presents the results for a more recent exposure to welfare. Overall, the results follow the same pattern, showing a significant negative association between more recent welfare exposure and educational attainments. It is interesting to note that the multiplicative impact of welfare on the odds of high school graduation (Model 2, Panel B) reverses the direction of the main effect of welfare legacy ( $e^{(-.593 + .813)}=1.25$ ). That is, having recently received welfare increases the odds of completing high school by 25% among children of immigrants, while among children of natives, recent welfare receipt decreases the odds by 45%.

But could this effect be due to a differential relationship between welfare legacy and the country of origin group of the parents? That is, could the effect of welfare on the children of immigrants vary across immigrants groups? Unfortunately, there are not enough cases to divide the sample into distinct country of origin groups. However, the children of immigrant sample can be divided into two groups; the first composed of the native born children of immigrants whose parents originated from either Mexico or Central American countries; the second composed of the remainder of the children of immigrants whose parents originated from Mexican/Central American (M/CA) families are more than three times as likely to have a welfare legacy as their counterparts from non-Mexican/Central American (non-M/CA) families. For example, 43 percent of the M/CA group indicates a welfare legacy compared with 12 percent of the non-M/CA group.

Panels C and D in Table 2 present the results in which the above analyses are repeated with one substitution the dichotomous indicator of parental nativity status is replaced by a set of dummy variables representing the two country of origin groups. Again, the groups compared in this analysis are 1) young adult children of immigrants from Mexico/Central American countries; 2) young adult children of immigrants from other areas; and 3) young adult children of natives. These models help to understand whether the effect of welfare on the children of immigrants might vary across immigrants groups. The findings indicate that the odds of high school graduation for both origin groups are higher than that of natives, net of welfare legacy and controls (Model 1) but subsequent

<sup>&</sup>lt;sup>4</sup> In the event that the youth had one parent from Mexico or Central American country and another from a non-Central American country, origin status was based on that of the mother. It is important to also note that the NLSY97 oversampled blacks and Hispanics, not Asians. Therefore, the children of Asian immigrants appear to be under represented in the sample.

analyses (not shown) indicate that there is no difference between the two immigrant groups in the odds of high school graduation net of welfare legacy and controls. Interestingly, results from the interaction model (Model 2) indicate that the effect of welfare on high school graduation does vary by the country of origin group of the parents. While the set of 'origin group x welfare legacy' interaction terms is a significant addition to the main effects model ( $p \le 0.03$ ), the only significant term appears in the case of young adults with Mexican/Central American parents indicating that the negative effect of welfare on high school completion among the children of natives ( $e^{(-.635)}=.530$ ) is reversed for the children of Mexican/Central American immigrant parents ( $e^{(-.635+..792)}=1.17$ ).

The same pattern of association appears for more recent welfare exposure (panel D). Model 2 adds the two-way interaction of Central American origin and parental welfare legacy. Here, the significant interaction coefficient (.998) represents the additional effect of recent welfare receipt, net of all controls, on the log odds of high school graduation by age 19 for the children of Mexican or Central American immigrants ( $e^{(.998 - .606)} = =1.48$ ), compared with the effect for the children of natives ( $e^{(.606)}=.546$ ). Therefore, these findings indicate that more recent welfare exposure has a net positive association with high school graduation for the children of Mexican/Central American immigrants; it increases the odds by 48 percent. By contrast, recent welfare exposure reduces the odds that the children of natives complete high school by 45 percent. The coefficient for the interaction of non-Mexican/Central American origin with recent welfare use is not significant, suggesting that welfare may act the in the same way among native-born families as it does in non-Mexican/Central American families. The effect of welfare exposure on the children of natives, particularly for those with more recent exposure, mirrors findings from other research finding that the negative impact of welfare is particularly strong when exposure occurs during adolescence.

The pattern of results is similar for college enrollment as that of high school graduation (Models 4 and 5). Net of controls and welfare history there are statistically significant differences between the odds of college enrollment for M/CA youth ( $e^{(.397)} = =1.487$ , p $\leq .028$ ) and native youth (Model 3). In addition, switching the reference category (e.g., from native to M/CA) suggests that there is no statistically significant difference on the odds of college enrollment for M/CA and non-M/CA youth. Model 4 includes a set of interaction terms for the children of immigrant nativity groups and parental welfare legacy. The term for Mexican-Central American youth ( $e^{(.591)} = =1.806$ , p $\leq .02$ ) indicates that there is a significant difference between this group and natives, but the addition of the block of interaction terms does not significantly improve the fit of the model (indicated by a non-significant increase in the likelihood ratio Chi-square). A similar pattern is seen in the lower panel of Table 2 which consistently shows

a negative association between recent welfare receipt and college enrollment. However, an examination of Model 3 yields an interesting finding. While changing the reference category shows that there is no difference in the odds of college enrollment between the two children of immigrant groups, there is a significant difference between each group and the native born—both have higher odds of college enrollment. Introducing the interaction of nativity groups and recent welfare exposure (Model 4) produces marginally significant results, with the only significant term appearing in the case of Mexican/Central American-origin young adults. Yet, the addition of the block of interaction terms is not significant (LR  $\chi 2[2]=4.4$ , p $\leq .11$ ). This could mean that welfare may have its largest effect on whether the children of immigrants, particularly the children of Mexican/Central American immigrants make it through high school graduation, and that once that threshold is achieved the effects of welfare exposure are the same as that of natives.

## The Effect of Parental Welfare Legacy on Labor Force Participation

To explore the simultaneity of schooling and employment decisions, multinomial logistic regression is used to assess the effects of welfare legacy on the respondent's post high school activity. Given that a key concern among many is that welfare exposure might lead to an incorporation into a welfare culture, characterized by a lack of employment or engagement in education, a focus is also placed on inactivity, defined here as not being enrolled in school and minimal or no labor force engagement. Three potential outcomes are measured for the length of twelve months after either high school graduation or the last month of school attended. These mutually exclusive categories are college enrollment, labor force participation, and inactivity. The multinomial logistic regression model is appropriate for modeling categorical dependent variables with more than two possible outcomes (DeMaris 1992, 2004) with  $\theta_{\rm C}$  and  $\theta_{\rm W}$  representing the probability of being in college or working compared to the being inactive ( $\theta_{\rm I}$ );

$$\log \frac{\theta_{\rm C}}{\theta_{\rm I}} = \beta_{0}^{1} + \beta_{1}^{1} N_{1} + \beta_{2}^{1} W_{1} + \beta_{3}^{1} N W_{1} + \beta_{4}^{1} Z_{1}$$
$$\log \frac{\theta_{\rm W}}{\theta_{\rm I}} = \beta_{0}^{2} + \beta_{1}^{2} N_{1} + \beta_{2}^{2} W_{1} + \beta_{3}^{2} N W_{1} + \beta_{4}^{2} Z_{1}$$

where N represents parental nativity status, W represents welfare history, NW is the interaction of nativity status and welfare history, and Z is a vector of control variables.<sup>5</sup> Roughly, 40 percent of the sample reported being enrolled at least six months of the 12-month period; another 40 percent reported working under the current definition; the

<sup>&</sup>lt;sup>5</sup> Tests of the independence of irrelevant alternatives (IIA) performed were not significant, indicating that multinomial logit modeling is the appropriate choice (Freese and Long 2000).

remaining 20 percent reported minimal or no work activity. Appendix Table 1 shows a similar distribution of activity between the children of natives and the children of immigrants.

The multinomial logit model estimates the odds of (1) attending college versus inactivity; (2) working versus inactivity; and (3) attending college versus working. As in the previous analysis, the focus is on the association between the potential outcome and the nativity status of the parent along with the presence of a welfare legacy. Table 3 presents the regression coefficients and odds ratios for three variables: the main effects of a parental nativity, welfare history measured as either any welfare receipt or recent exposure, and the cross products of the two. The model includes the same set of control variables, a full set of individual, parental, family and neighborhood characteristics as controls.

The first panel displays the coefficients for parental welfare legacy and nativity status for the additive model predicting the youth respondent's status. Controlling for a full set of contextual characteristics, the results show that youth respondents with a welfare legacy are on average 51% less likely to attend college versus inactivity than youth respondents with no welfare legacy ( $e^{(.720)}$ =.487). Therefore, youths with no history of welfare are twice as likely to attend college during the year after high school rather than being inactive as are youth with no welfare history. The coefficient for welfare legacy predicting working versus inactivity is small and non-significant. Young adults with a welfare history do not have higher odds of inactivity than working compared to those with no welfare history. Given some kind of activity, the odds that it is college attendance versus only work is 49 percent less for those with a welfare history than for those without a welfare history ( $e^{(.687)} = .508$ ). In other words, those with no welfare history of welfare use. Focusing attention on the indicator of parental nativity status, suggests that the children of immigrants are 31 percent more likely to attend college than remain inactive than are the children of natives ( $e^{(.272)} = 1.31$ ). However, this effect is only marginally significant ( $p \le .077$ ). Again, the association between having an immigrant parent and being inactive rather than working is not significant, nor is the association between having an immigrant parent and attending college relative to working.

The second panel shows the same model, but with the addition of the cross product of any welfare exposure and parental nativity status. Key here is that having an immigrant parent lessens the negative impact of a parental welfare legacy. More specifically, having a welfare history decreases the odds of college attendance (versus inactivity) by 55 percent for those youth respondents from native families compared to 26 percent for those from

immigrant families. The same pattern holds for the odds of working versus remaining inactive. The effect of welfare exposure among the children of immigrants on the log odds of working is (-.041+.057) = .016, but the coefficient fails to reach significance. Given some activity, having a welfare history decreases the odds of attending college relative to working by 53 percent for those young adults from native families, but decreases the odds of college attendance by only a factor of 27 percent for young adults from immigrant families.

The third and fourth panels of Table 3 focus on the impact of more recent welfare exposure. Overall, the coefficients follow the same direction. Youth respondents with a welfare legacy have lower odds of college enrollment (versus inactivity) than youth respondents with no welfare legacy by a factor of 48 percent [1-  $e^{(-.655)}$ ]. That is, young adults with no welfare exposure have odds of college attendance relative to inactivity that is almost twice that of young adults with a welfare legacy. However, youth respondents with a welfare legacy do not have significantly different odds of only working versus inactivity. Given some kind of activity, the odds that it is college versus work is  $e^{(-.580)} = .560$ , or roughly 1.8 times higher for those without a welfare history than for those with a welfare history.

The coefficients for the interaction model (panel 4) follow the same pattern across contrast groups. The main effect of a recent welfare legacy confirms the negative association between welfare exposure, particularly exposure during late childhood and early adolescence on the educational attainment of young adults from native families. Again, the addition of the interaction term increases the likelihood Chi square significantly ( $LR\chi^{2}$  <sup>[2]</sup> = 10.54, p $\leq$  .005). Youth respondents from native families with a recent welfare legacy have lower odds of college attendance relative to both inactivity ( $e^{(.754)} = .471$ ) and working ( $e^{(.643)} = .526$ ) than youth from native families with no recent welfare exposure. Among young adults from immigrant families, the effect of recent welfare exposure on the odds of college attendance relative to inactivity ( $e^{(.754+.735)} = .981$ ) or working ( $e^{(.643 + .453)} = .827$ ) indicates that parental nativity status has a protective effect against the potentially negative impacts of welfare use.

#### Discussion

The immediate costs of immigrants and the future costs of their children is a topic that has taken center stage in a debate between policy makers and the American public. Indeed, many public forums are currently focusing on the impact that immigrants have on the economy and culture of the United States. A key feature of the debate is the role that public assistance might play among immigrant families. There is a long history of public policy and sociological scholarship linking welfare use to immigration policy. On the one hand, the availability of public benefits to immigrants can be seen as a magnet, drawing 'lower quality' immigrants to the United States (Borjas 1995; Borjas and Hilton 1996; Brimelow 1995). Those who would normally not come to the U.S. are negatively selected and migrate to the U.S. due to the availability of a public benefits safety net, and those who would be likely to return home (i.e. the 'failed' migrants) are more likely to remain in the U.S. if they can rely on welfare. On the other hand, the availability of public benefits for immigrants could be seen as settlement assistance to relieve poverty and ease the transition and adaptation into U.S. society.

With respect to immigration policy, the question really becomes, is welfare receipt negative or is a positive? Does welfare serve as a roadblock to the successful incorporation of immigrants and their children or does it serve as a means of easing the way toward a successful transition into American society? This interaction between welfare and immigration has served as an impetus to modify both existing U.S. immigration policies and domestic welfare policies. Indeed, with the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PWRORA or Welfare Reform), U.S. welfare policy underwent significant revision, particularly with regard to recent arrivals. For instance, immigrants entering the country legally after the date of enactment are barred from receiving benefits for five years, and immigrants entering the country illegally are barred from all services. The driving motivation for this legislation was the fearful prospect of welfare receipt continuing across immigrant generations.

In this paper, I found a persistent negative association between parental welfare legacy and high school graduation among the children of immigrants and the children of natives with the effect most pronounced among the latter. The welfare culture hypothesis predicts that young adults with a welfare history will display less attachment to the labor force and have lower educational attainments than young adults with no family history of welfare. This was only partially supported here, evidenced by a persistent negative association between a parental welfare legacy and educational attainment even after household income is controlled. However, youth with a welfare legacy are no more likely to be inactive during the year after high school than they are to work. Moreover, there is no evidence to suggest that the children of immigrants, those either with a welfare history or without, are more likely to choose inactivity over work. Thus, this finding is inconsistent with the expectations of the theories of a welfare culture, as well as the outcomes suggested by the immigrant restrictions of U.S. immigrant-welfare policy.

It is important to note that a true test of the welfare culture hypothesis requires information on welfare use as adults. In the current analytic sample, which is still too young to fully assess the transmission of welfare dependency, levels of welfare use were too low for analysis. In addition, a key component of the welfare culture argument is that there is a shift in values and attitudes associated with welfare receipt (Bane and Elwood 1994), an aspect that has not been tested here due to limitations in the data.

There is some evidence that among the children of immigrants the effect of welfare on subsequent outcomes varies by immigrant ethnic group. This was supported by results showing the largest effect of welfare receipt among the most disadvantaged group, the young adult children of immigrants from Mexican and Central American countries. Nevertheless, why would welfare be more salient among this group than others? The answer may lie within the segmented assimilation paradigm.

A key tenet of segmented assimilation theory is that the context of reception matters. That is, immigrants and their children may be confronted by barriers, such as racial discrimination or segregation, which might limit their successful socio-economic incorporation. Segmented assimilation also theorizes that the concentration of poverty amid immigrant inner city neighborhoods combined with a lack of labor market opportunities due to economic restructuring might be particularly severe among the most disadvantaged groups, such as Mexicans and Central Americans (Portes and Zhou 1993; Rumbaut 1996; Portes and Rumbaut 2001; Portes, Fernandez-Kelly and Haller 2005). In other words, children who come from immigrant families with fewer resources measured by parental income and education might follow a path of declining attainments, whereas other children who come from immigrant families with more resources might follow a path of upward achievement.

While previous research has positioned welfare receipt as a potential barrier to the children of immigrants (i.e. a 'welfare trap' limiting the prospects for their children), under segmented assimilation theory, welfare can be thought of as a tool to counteract the some of the risks associated with settlement, and possibly as a way for immigrant families to continue to invest in their children's future. Taken from this perspective, the finding that the largest benefits are felt among the most impoverished immigrant groups are particularly compelling.

In sum, the results presented here support the idea that the negative impacts of welfare receipt might be lessened and in some cases reversed among the young adults from immigrant families. A possible explanation for this difference concerns the positive self-selection of migrants. That is, it could be that the immigrants who choose to come to the U.S. are positively self-selected on characteristics such as ambition, self-motivation and a heightened willingness to invest in their children (Fuligni and Yoshikawa 2003; Gibson and Bhachu 1991; Suarez-Orozco and Suarez-Orozco 1995; Zhou and Bankston 1998). Given that it is more difficult for immigrants to qualify for welfare than natives (even in the pre-reform era), those immigrants who do manage to get welfare may be especially persistent and thus even more positively selected. These parents could possess a level of skill and confidence to move through the welfare system in order to maximize their outcomes in ways not predicted by the traditional welfare and structural models. More detailed data, which examines not only behaviors and outcomes but also motivations and knowledge of governmental assistance programs is needed to fully explore this possibility.

It is important to note some of the key limitations to this study. First, the analyses are moderate tests of the intergenerational effects of welfare exposure. Given the nature of the data, this work cannot establish a true causal relationship between a welfare legacy and subsequent attainments among youth from immigrant families, only an empirical relationship. Future research might be able to address the precise mechanisms, (i.e. whether it involves a family 'welfare strategy'), through which immigrant parents invest in the human capital development of their children.

Second, these data do not capture whole-childhood information. While the current research does utilize a general measure of welfare receipt along with a more recent measure, which roughly covers the youth respondents late childhood and adolescence, a more complete measure of welfare might help to establish causal links. While earlier data sets such as the NLSY79 do have a more complete picture of welfare use and outcomes, these data do not capture immigrant families from more recent waves of immigration to the U.S. However, as the NLSY97 youth sample ages, future research will be able to focus on the role that welfare might play in life transitions.

A final limitation involves the composition of the children of immigrant's sample. As described earlier, the NLSY97 consists of a Black and Hispanic oversample. However, results here indicate that the children of Asians are underrepresented in these data. This is unfortunate given that other research has shown that there are clear differences in outcomes between Asian and Hispanic groups (Fuligni 1997; Kao 2004; Kao and Thompson 2003; Kao and Tienda 1995). This does not mean that the NLSY97 is not suitable for research on the children of immigrants, but rather the focus might be better placed on just children from Hispanic immigrant families. In particular, it would be of interest to examine not only the patterns of educational progress among Hispanic generations, but also how family and labor commitments interact with educational progress. Future research should examine the relationship between educational aspirations and eventual attainment using these longitudinal data. Educational attainment is critically important to the social mobility of the children of immigrants (Rumbaut 2005).

As the NLSY97 sample population ages, completes their education, and becomes fully engaged in the labor force, further analyses might be able to determine whether and how the children of immigrants confront the barriers posed

by a restructured labor market. While this paper focuses on welfare exposure prior to the implementation of severe immigrant welfare restrictions, the results provide important evidence on the role that welfare may play in the settlement of immigrant families. Such findings challenge the common notion that immigrant families use welfare as a crutch across generations and raise serious concern about U.S. immigration and welfare policies.

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|                                     | Children of Immigrants |        |        | Children of Natives<br>Welfare History |        |        | Difference in Means<br>Children of Immigrants- Children of<br>Natives |        |     |        |    |
|-------------------------------------|------------------------|--------|--------|--|--------|--------|---|--------|-----|--------|----|
|                                     | Welfare History        |        | f      |  |        |        |   |        |     |        |    |
|                                     | None                   | Ever   | Recent | None                                   | Ever   | Recent | None  | Ever   |     | Recent |    |
| Educational Outcomes                |                        |        |        |  |        |        |   |        |     |        |    |
| High School Graduation <sup>1</sup> | 0.912                  | 0.759  | 0.726  | 0.925                                  | 0.738  | 0.662  | -0.014  | 0.021  |     | 0.064  | #  |
|                                     | (.013)                 | (.023) | (.031) | (.005)                                 | (.009) | (.013) | (.014)  | (.025) |     | (.036) |    |
| College Enrollment <sup>2</sup>     | 0.664                  | 0.434  | 0.373  | 0.663                                  | 0.330  | 0.252  | 0.001   | 0.105  | *** | 0.122  | ** |
|                                     | (.022)                 | (.027) | (.034) | (.010)                                 | (.009) | (.012) | (.027)  | (.027) |     | (.034) |    |
| Combined Education and Labor        | · Force <sup>3</sup>   |        |        |  |        |        |   |        |     |        |    |
| Enrolled in College                 | 0.547                  | 0.292  | 0.244  | 0.573                                  | 0.249  | 0.195  | -0.026  | 0.042  | #   | 0.049  |    |
| -                                   | (.024)                 | (.025) | (.030) | (.010)                                 | (.009) | (.011) | (.025)  | (.025) |     | (.030) |    |
| Working                             | 0.233                  | 0.321  | 0.342  | 0.236                                  | 0.346  | 0.315  | -0.003  | -0.025 |     | 0.027  |    |
|                                     | (.020)                 | (.026) | (.034) | (.009)                                 | (.009) | (.022) | (.028)  | (.028) |     | (.035) |    |
| Inactive                            | 0.221                  | 0.388  | 0.415  | 0.192                                  | 0.405  | 0.491  | 0.029   | -0.017 |     | -0.076 | *  |
|                                     | (.020)                 | (.027) | (.035) | (.008)                                 | (.010) | (.013) | (.020)  | (.028) |     | (.038) |    |

Table 1: Education and labor force participation by parental welfare legacy, native-born children of immigrants and the children of natives. Weighted Means (standard error).

Source: National Longitudinal Survey of Youth 1997.

1. Attained by the last month of the 19th year.

2. Measured among those who graduated from high school.

3. Measured as three mutually exclusive categories. See text for details.

Difference in means assessed by t-tests  $p \le .10, p \le .05, p \le .01$ ,  $p \le .01$ ,  $p \le .01$ 

Table 2. Regression coefficients and odds ratios for the logistic regression of high school graduation and college enrollment on parental welfare legacy and nativity status.

|     |                                  |         | High School    | Graduation |                |        |                |        |                |
|-----|----------------------------------|---------|----------------|------------|----------------|--------|----------------|--------|----------------|
|     |                                  | Me      | odel 1         | Mo         | del 2          | М      | odel 3         | Mo     | odel 4         |
|     | Key independent variables        | В       | e <sup>β</sup> | В          | e <sup>β</sup> | В      | e <sup>β</sup> | В      | e <sup>β</sup> |
| (A) | Any Welfare History              | - 0.541 | 0.582 ***      | -0.627     | 0.534 ***      | -0.567 | 0.567 ***      | -0.625 | 0.536 ***      |
|     | Child of Immigrant               | 0.470   | 1.600 **       | 0.178      | 1.195          | 0.278  | 1.320 *        | 0.109  | 1.115          |
|     | Interaction (Welfare x Nativity) |         |                | 0.604      | 1.830 **       |        |                | 0.454  | 1.574 *        |
|     | LR Chisq                         |         | 859.4          |            | 866.7          |        | 894.9          |        | 899.7          |
|     | DF                               |         | 25             |            | 26             |        | 25             |        | 26             |
| (B) | Recent Welfare History           | - 0.483 | 0.617 ***      | - 0.593    | 0.553 ***      | -0.513 | 0.599 ***      | -0.589 | 0.555 ***      |
| . , | Child of Immigrant               | 0.501   | 1.650 **       | 0.210      | 1.234          | 0.326  | 1.386 *        | 0.204  | 1.226          |
|     | Interaction (Welfare x Nativity) |         |                | 0.813      | 2.255 ***      |        |                | 0.528  | 1.695 *        |
|     | LR Chisq                         |         | 845.3          |            | 857.7          |        | 865.7          |        | 870.9          |
|     | DF                               |         | 25             |            | 26             |        | 25             |        | 26             |
| (C) | Any Welfare History              | -0.540  | 0.583 ***      | -0.635     | 0.530 ***      | -0.566 | 0.568 ***      | -0.622 | 0.537 ***      |
| (-) | Central American                 | 0.360   | 1.433 *        | -0.064     | 0.938          | 0.397  | 1.487 *        | 0.125  | 1.133          |
|     | Non-Central American             | 0.667   | 1.948 **       | 0.596      | 1.814 *        | 0.185  | 1.203          | 0.135  | 1.145          |
|     | Interactions                     |         |                |            |                |        |                |        |                |
|     | Central American x welfare       |         |                | 0.792      | 2.209 **       |        |                | 0.591  | 1.806 *        |
|     | Non-central American x welfare   |         |                | 0.126      | 1.134          |        |                | 0.144  | 1.155          |
|     | LR Chisq                         |         | 858.79         |            | 865.64         |        | 895.8          |        | 901.3          |
|     | DF                               |         | 26             |            | 28             |        | 26             |        | 28             |
| (D) | Recent Welfare History           | -0.485  | 0.616 ***      | -0.606     | 0 546 ***      | -0.514 | 0 598 ***      | -0.585 | 0 557 ***      |
| (D) | Central American                 | 0.267   | 1.306          | -0.047     | 0.954          | 0.465  | 1.592 *        | 0.310  | 1.364          |
|     | Non-Central American             | 0.686   | 1.987 **       | 0.602      | 1.826 *        | 0.218  | 1.243          | 0.132  | 1.141          |
|     | Interactions                     |         |                |            |                |        |                |        |                |
|     | Central American x welfare       |         |                | 0.998      | 2.714 **       |        |                | 0.461  | 1.586 #        |
|     | Non-central American x welfare   |         |                | 0.334      | 1.396          |        |                | 0.597  | 1.816          |
|     | LR Chisq                         |         | 844.08         |            | 856.16         |        | 866.9          |        | 871.4          |
|     | DF                               |         | 26             |            | 28             |        | 26             |        | 28             |

Source: National Longitudinal Survey of Youth 1997.

 ${}^{\#}p \leq .10, *p \leq .05, **p \leq .01$  , \*\*\*p  $\leq .001$ 

Omitted category are children of native born. Models include a full set of individual, family, parent, state and neighborhood characteristics (see text).

|     |                                    | College Attendance<br>versus<br>Inactivity |                | In   | Work<br>versus<br>Inactivity |                | ollege<br>versus<br>Work |                |
|-----|------------------------------------|--|----------------|------|------------------------------|----------------|--------------------------|----------------|
|     |                                    | β  | e <sup>β</sup> |      | β                            | e <sup>β</sup> | β                        | e <sup>β</sup> |
| (1) | Any Welfare History                | -0.720                                     | 0.487          | ***  | -0.033                       | 0.967          | -0.687                   | 0.503 ***      |
|     | Child of an Immigrant <sup>a</sup> | 0.272                                      | 1.313          | #    | 0.140                        | 1.150          | 0.133                    | 1.142          |
| (2) | Any Welfare History                | -0.782                                     | 0.457          | ***  | -0.041                       | 0.960          | -0.741                   | 0.477 ***      |
|     | Child of an Immigrant              | 0.111                                      | 1.117          |      | 0.111                        | 1.117          | 0.000                    | 1.000          |
|     | Interaction (Welfare x Nativity)   | 0.485                                      | 1.625          | *    | 0.057                        | 1.059          | 0.428                    | 1.535 *        |
| (3) | Recent Welfare History             | -0.655                                     | 0.520          | ***  | -0.075                       | 0.928          | -0.580                   | 0.560 ***      |
|     | Child of Immigrant                 | 0.311                                      | 1.365          | *    | 0.136                        | 1.146          | 0.175                    | 1.191          |
| (4) | Recent Welfare History             | -0.754                                     | 0.471          | * ** | -0.111                       | 0.895          | -0.643                   | 0.526 ***      |
|     | Child of Immigrant <sup>a</sup>    | 0.141                                      | 1.151          |      | 0.037                        | 1.037          | 0.104                    | 1.110          |
|     | Interaction (Welfare x Nativity)   | 0.735                                      | 2.085          | **   | 0.282                        | 1.326          | 0.453                    | 1.573 #        |

Table 3: Coefficients and odds ratios from multinomial logit models for patterns of college enrollment and labor force participation on parental welfare legacy and parental nativity status

Source: National Longitudinal Survey of Youth 1997.

 $p^{\#} p \le .10, p \le .05, p \le .01, p \le .01$ 

a. Omitted category are children of native born. Models include a full set of individual, family, parent, state and neighborhood characteristics (see text).

Note: Likelihood Ratio (LR) Chi-Square for the model of any welfare legacy is 1482.32 (df. 50) with Akaike (AIC)=10635.19; Model including more recent welfare exposure the (LR) Chi-Square= 1487.66 (df. 52) with AIC=10633.85

Appendix Table 1: Sample characteristics, weighted means and standard deviations.

| Characteristics   | Child<br>Immi | Children of<br>Immigrants |       | ren of<br>ives |
|---|---------------|---------------------------|-------|----------------|
| Dependent variables <sup>a</sup>                          |               |                           |       |                |
| Educational Attainment                                    |               |                           |       |                |
| High School Graduation                                    | 0.85          | (0.36)                    | 0.83  | (0.38)         |
| Ever enrolled in College <sup>b</sup>                     | 0.57          | (0.50)                    | 0.49  | (0.50)         |
| Combined Education/Labor Force Participation <sup>c</sup> |               |                           |       |                |
| Enrolled in college at least 6 months                     | 0.44          | (0.50)                    | 0.41  | (0.49)         |
| No college, working over 441 hours                        | 0.27          | (0.44)                    | 0.29  | (0.45)         |
| No college, working 0 to 440 hours                        | 0.29          | (0.45)                    | 0.30  | (0.46)         |
| Parental characteristics                                  |               |                           |       |                |
| Parental Welfare Legacy                                   |               |                           |       |                |
| Any   | 0.43          | (0.50)                    | 0.52  | (0.50)         |
| Recent  | 0.22          | (0.42)                    | 0.25  | (0.43)         |
| Years of education  | 13.16         | (6.98)                    | 13.73 | (2.56)         |
| From Mexico or Central America                            | 0.42          | (0.49)                    |       | ( )            |
| Household Characteristics                                 |               |                           |       |                |
| Household structure at age 12                             |               |                           |       |                |
| Two biological parents                                    | 0.66          | (0.48)                    | 0.47  | (0.5)          |
| Two parent/step   | 0.04          | (0.18)                    | 0.07  | (0.25)         |
| Single mother   | 0.26          | (0.44)                    | 0.38  | (0.48)         |
| Singe father  | 0.03          | (0.16)                    | 0.04  | (0.20)         |
| Other family type   | 0.03          | (0.17)                    | 0.05  | (0.21)         |
| Non-English is spoken in home                             | 0.70          | (0.46)                    | 0.07  | (0.25)         |
| Average number of residential moves from age 12 °         | 1.61          | (1.61)                    | 1.63  | (1.21)         |
| Household Income (log) <sup>c</sup>                       | 10.29         | (1.77)                    | 10.29 | (1.80)         |
| Below poverty level                                       | 0.22          | (0.42)                    | 0.18  | (0.38)         |
| Youth Respondent Characteristics                          |               |                           |       |                |
| Male <sup>c</sup>   | 0.50          | (0.50)                    | 0.51  | (0.50)         |
| Hispanic  | 0.48          | (0.50)                    | 0.07  | 0.26           |
| Non-Hispanic  |               |                           |       |                |
| White   | 0.28          | (0.45)                    | 0.73  | (0.44)         |
| Black   | 0.08          | (0.28)                    | 0.17  | (0.38)         |
| Asian   | 0.10          | (0.29)                    | 0.01  | (0.11)         |
| Other   | 0.06          | (0.23)                    | 0.01  | (0.11)         |
| Had a birth prior to outcome measure <sup>c</sup>         | 0.06          | (0.24)                    | 0.06  | (0.23)         |
| Neighborhood & State Characteristics                      |               |                           |       |                |
| City  | 0.36          | (0.48)                    | 0.27  | (0.44)         |
| Rural   | 0.04          | (0.20)                    | 0.23  | (0.42)         |
| Suburb  | 0.60          | (0.49)                    | 0.50  | (0.50)         |
| Region  |               |                           |       |                |
| North Central   | 0.16          | (0.36)                    | 0.29  | (0.45)         |
| South   | 0.23          | (0.42)                    | 0.35  | (0.48)         |
| West  | 0.43          | (0.50)                    | 0.17  | (0.38)         |
| County Unemployment rate                                  | 6.22          | (3.62)                    | 4.94  | (2.28)         |
| Pct Living Below Poverty in County of Residence 1997      | 12.43         | (5.77)                    | 13.36 | (6.57)         |
| Average Household Cash Welfare Receipt in County1999      | 3.99          | (2.34)                    | 3.36  | (1.72)         |
| Average AFDC benefit by state (1990-1996)                 | \$416         | (\$159)                   | \$343 | (\$134)        |
| Unweighted N  | 790           |                           | 4 946 |                |

Source: National Longitudinal Survey of Youth 1997. a. Measured by the last month of the 19th year

b. Among those who graduated from High School

c. Measured as three mutually exclusive categories. See text for details

Appendix Table 2: Logistic regression coefficients and (standard errors) for the regression of high school graduation on parental nativity status, welfare legacy, individual, family, and neighborhood characteristics

|   | Any Welfare       | Recent Welfare<br>History |                   |     |
|---|-------------------|---------------------------|-------------------|-----|
| Parental Welfare<br>(No welfare history)    | -0.541<br>(0.084) | ***                       | -0.483<br>(0.091) | *** |
| Child of Immigrant<br>(Children of natives) | 0.470<br>(0.150)  | **                        | 0.501<br>(0.150)  | **  |
| Individual Characteristics                  |                   |                           |                   |     |
| Male  | -0.557            | ***                       | -0.566            | *** |
| (Female)                                    | (0.077)           |                           | (0.077)           |     |
| Asian                                       | (0.433)           |                           | (0.440            |     |
| Black                                       | -0.005            |                           | 0.001             |     |
|   | (0.100)           |                           | (0.100)           |     |
| Hispanic                                    | 0.069             |                           | 0.059             |     |
|   | (0.160)           |                           | (0.160)           |     |
| Other                                       | -0.242            |                           | -0.247            |     |
| (Non-Hispanic white)                        | (0.334)           | ***                       | (0.336)           | *** |
| Had a birth prior to graduation             | -0.943            |                           | -0.940            | *** |
| Birth Cohort                                | (0.121)           |                           | (0.121)           |     |
| 1980  | 0.152             |                           | 0.137             |     |
|   | (0.109)           |                           | (0.109)           |     |
| 1981  | 0.048             |                           | 0.026             |     |
|   | (0.105)           |                           | (0.105)           |     |
| 1982  | 0.064             |                           | 0.049             |     |
| (1983 or higher)                            | (0.106)           |                           | (0.106)           |     |
| Family Structure at age 12                  |                   |                           |                   |     |
| Two-Parent Step Family                      | -0.407            | *                         | -0.428            | **  |
|   | (0.165)           |                           | (0.164)           |     |
| Single Mathem                               | 0.620             | ***                       | 0.657             | *** |
| Single Mother                               | -0.039            |                           | -0.657            | *** |
|   | (0.055)           |                           | (0.090)           |     |
| Single Father                               | -0.938            | ***                       | -0.902            | *** |
|   | (0.180)           |                           | (0.179)           |     |
| Other Type                                  | -0.858            | ***                       | -0.811            | *** |
| (Two-parent biological)                     | (0.161)           |                           | (0.162)           |     |
| Speaks Language other than English          | -0.479            | **                        | -0.476            | **  |
| (Speaks only English)                       | (0,160)           |                           | (0,159)           |     |
|   | ()                |                           | (0.007)           |     |
| Number of Residential Moves since age 12    | -0.212            | ***                       | -0.212            | *** |
| Parent Characteristics                      | (0.029)           |                           | (0.029)           |     |
| Parent Education                            | 0.137             | ***                       | 0.137             | *** |
|   | (0.016)           |                           | (0.016)           |     |
|   | (                 |                           |                   |     |
| Household Income (logged)                   | 0.076             | ***                       | 0.077             | *** |
|   | (0.019)           |                           | (0.019)           |     |
| Below Poverty                               | -0.435            | ***                       | -0.344            | *** |
| (Above poverty)                             | (0.098)           |                           | (0.103)           |     |
|   |                   |                           |                   |     |
| State and County Level Variables            | 0.169             |                           | 0.1/0             |     |
| Norm Central                                | -0.108            |                           | -0.169            |     |
|   | (0.120)           |                           | (0.120)           |     |
| South .                                     | -0.280            | *                         | -0.273            | *   |
|   | (0.119)           |                           | (0.119)           |     |
| West  | -0.052            |                           | -0.038            |     |
| (Northeast)                                 | (0.132)           |                           | (0.132)           |     |
| County Deverty Pate                         | 0.002             |                           | 0.002             |     |
| County Foverty Rate                         | (0.002            |                           | (0.002            |     |
|   | (0.005)           |                           | (0.005)           |     |
| PMSA  | -0.137            |                           | -0.088            |     |
| (Outside PMSA)                              | (0.090)           |                           | (0.090)           |     |
| Constant                                    | 0.729             | *                         | 0.578             | #   |
|   | (0.349)           |                           | (0.347)           |     |
| -2 log likelihood                           | -2288.7           |                           | -2295.8           |     |