

WELFARE REFORM CHANGES IN IMMIGRANT RECEPTION:
INSTITUTIONAL-CONTEXTUAL INFLUENCES ON NATURALIZATION

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Abstract

In 1996, the U.S. Congress passed the “Welfare Reform Act,” legislation that adopted political (legal) citizenship as a criterion for receipt of welfare and led to both federal and state-level changes in immigrant welfare availability, modifications that provide a unique opportunity to investigate how welfare contexts of immigrant reception affect immigrant naturalization behavior. This paper reports such a study in four parts. First, the paper summarizes instrumental-legal (IL) and institutional-contextual (IC) theoretical perspectives on the foundations of citizenship, together with the different views these theories offer about the kinds of forces motivating naturalization’s pursuit. Second, the paper draws on the theories to derive alternative hypotheses about how varying post-Welfare Reform contexts of immigrant reception (as reflected in state differences and changes in the level and degree of access to welfare benefits) might influence naturalization behavior. Third, the paper analyzes longitudinal data from the Survey of Program Dynamics (SPD) for 1988-2002 to assess the hypotheses, finding that state-level combinations of benefit levels and access symbolizing ambiguity and uncertainty about contexts of immigrant reception positively relate to the tendency to naturalize, as predicted by IC but not IL theory. Fourth, the paper argues that family/household-based risk minimization drives immigrant efforts to naturalize more than individual-based pursuit of material gain, a conclusion that carries important implications for citizenship and incorporation theories and immigration policy reform proposals.

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In 1996, the U.S. Congress passed the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), more widely known as the “Welfare Reform Act” (Blank and Haskins 2001; Espenshade, Baraka, and Huber 1997; Weil and Finegold 2002). For present purposes, the legislation’s most critical feature was its introduction of political (legal) citizenship as a criterion for receipt of welfare. By requiring legal permanent residents arriving in the country after August 22, 1996 to naturalize before they could become eligible for benefits (Bean and Van Hook 1998; Fix and Passel 2002), the new law redefined social citizenship, eliminating what had been nearly universal access in the country to federal means-tested cash and non-cash social services. The original legislation thus sent a definite message to immigrants regarding the relationship between social and political (legal) citizenship – after 1996, only native-born and naturalized citizens would have full access to social service benefits; legal permanent residents, not to mention unauthorized immigrants, would not. The legislation thus marked a significant narrowing of the country’s definition of which members of the population would have full access to certain membership rights, in this case social rights (Aleinikoff 2001).

Arguably, similarly important restrictions had not occurred since 1928 when legislation took effect that prevented legal permanent residents from voting in that year’s Presidential election (Raskin 1993). Until 1996, comparably significant efforts to restrict immigrant social, economic and political citizenship had generally not taken place, with the notable exception of administrative wartime measures directed primarily at Japanese-American residents (Jensen 1988; Reimers 1992, [1985]). Moreover, in the decades after World War II, both the geo-strategic aspects of the Cold War and the ever more-compelling appeals of the spreading civil

rights movement to end legal racial discrimination fostered a climate generally favoring expanded rather than restrictive immigrant citizenship (Bean and Bell-Rose 1999; Morris 1985) tendencies that eventually found further expression in the judicial system. In 1971, for example, the US Supreme Court ruled that 'alienage' was a "suspect classification," that is, "that statutes disadvantaging aliens as a class are held invalid unless justified by some compelling state interest" (Rosberg 1977). This led to other judicial decisions declaring that states may not deny aliens welfare benefits (403 U.S. 365), civil service employment (*Sugarman v. Dougall*, 413 U.S. 634 (1973)), access to the bar (in *re: Griffiths*, 413 U.S. 717 (1973)), financial assistance for higher education (*Nyquist v. Mauclet*, 97 S. Ct. 2120 (1977)) or licenses to practice as civil engineering (*Examining Bd. v. Flores de Otero*, 426 U.S. 572 (1976)).

Such decisions illustrate both that citizenship matters for the resources available to immigrants and that the symbolic receptions newcomers receive in destination societies may influence naturalization (Bloemraad 2002). Citizenship access and benefits thus carry important implications for immigrant incorporation (Morawska 2003). Moreover, when citizenship changes are not clear-cut, but rather convey mixed and confusing signals about contexts of immigrant reception, their effects on naturalization may be exaggerated. Because the states were allowed separately after 1996 to extend (and pay for) immigrant benefits, which in fact many did (albeit to varying degrees), and because Congress itself subsequently restored some benefits to certain legal permanent residents (Fix and Zimmermann 2001), both the implementation of Welfare Reform as well as subsequently passed federal legislation delivered contradictory signals to immigrants about the welfare context of immigrant reception in the United States. The former created major ambiguities about the degree of access to and level of benefits, whereas the latter sent a generally confusing message about the availability of welfare to immigrants. These

recent changes in and implementation of U.S. law thus provide an unusual vantage point from which to examine how institutional-contextual ambiguities, along with more conventional individual-level utilitarian factors, influence the tendency to naturalize.

This study thus seeks to assess the implications for naturalization behavior of changing U.S. social and political (legal) citizenship. By studying how varying contexts of immigrant reception affect the pursuit of citizenship in the wake of the legislative shift, the research endeavors to clarify why immigrants naturalize. To shed light on the nature of such contexts, the paper examines state differences and changes in the level of benefits and the degree of access to welfare after 1996 Welfare Reform. Theoretically, we explicate the mechanisms newly emerging and more conventional theories of citizenship suggest might drive the likelihood of seeking political citizenship (or naturalization), both before and after the introduction of more stringent criteria of social citizenship. As predicted by the newer theories, we find empirically that state-level combinations of differences in benefit levels and access symbolizing high ambiguity and uncertainty about post-reform contexts of immigrant reception are more likely to increase naturalization than the factors identified by conventional theory, suggesting that family/household-based risk minimization more than individual-based maximization of material gain drives immigrant naturalization decisions.

Theoretical Background on Citizenship and Factors Affecting Naturalization

Citizenship refers to the rights, privileges and obligations associated with nation-state membership (Aleinikoff 1990). Such rights are usually defined in legal-political terms, but often are also extended to include social and cultural dimensions (Bendix 1977; Feldblum 2000; Marshall 1950; Ueda 2001). Equivalence of at least basic rights has long been avidly sought by

disenfranchised groups, including the poor, the working class, women and ethnic-racial minorities (Bloemraad 2001). Traditional views of citizenship tend to see membership as involving distinctly political-economic rights (Ong 1999), with the major political right connected with citizenship in the United States being the right to vote and the major economic right access to America's economic opportunities (Aleinikoff 2001). Thus, the state is conceptualized as viewing socio-cultural rights as peripheral to the meaning of citizenship. Together with the fact that naturalized Americans are required to abjure past allegiances in the Oath of Allegiance, U.S. naturalization at least gives the appearance of requiring only a single citizenship (Aleinikoff 2003; Schuck 1998), these emphases depict a distinctly instrumental, legal and exclusive basis for U.S. citizenship. Citizens can expect to be able to vote and to pursue economic opportunities; in turn they are assumed to embrace largely uniform national identifications. In short, this perspective on U.S. citizenship, which we term the instrumental-legalistic (IL) view, envisions naturalization as involving immigrants individually and quite explicitly and exclusively casting their material and subjective lots with their new country.

The dynamics of contemporary international trade, modern long-distance communication and transportation systems, and international migration, however, have contributed to the emergence of new theories both about the nature and bases of citizenship and national identification (Bloemraad 2003; Feldblum 2000). Some of these perspectives, including some that focus on the operation of post-nationalist and transnationalist forces, suggest a diminishing relevance of national citizenship altogether e.g., (Bauböck 1994; Carens 1987; Jacobson 1996; Soysal 1994). Others argue it is normatively appealing, but not empirically sustained by evidence of immigrants' life conditions (Stasiulis 1997). In general, the post-nationalists contend that national citizenship is less salient in today's world than other criteria of

membership, particularly those based on human rights. Moreover, national citizenship, as something usually inherited or granted by birthright, is seen as essentially ascriptive, and thus illiberal as well. But in part because it is difficult to imagine any sort of welfare state without markers of state membership (Galloway 2000), other theorists emphasize not the irrelevance of citizenship, but rather the growing flexibility in definitions of citizenship and increasingly less restrictive criteria for membership (Levitt 2003), noting instead multiple kinds of citizenship and the rising possibilities and prevalence of transnational, including dual, citizenship (Basch, Glick Schiller, and Szanton Blanc 1994; Ong 1999; Portes, Guarnizo, and Landolt 1999).

Whatever their various emphases, the new views give greater acknowledgement to the social and cultural aspects of citizenship. In addition to the kinds of factors emphasized in the conventional view, the meaning and pursuit of citizenship (in the form of naturalization) has come to be seen as depending on socio-culturally-based institutional and contextual factors that influence the real and perceived material and symbolic benefits of naturalization (Bloemraad 2002; Morawska 2001; Morawska 2003). Unlike the conventional perspective, the focus in these frameworks on socio-cultural as well as the instrumental dimensions of citizenship derives from the insight that the multiple and fluid identifications rooted in increasingly complex and dynamic social networks and family relationships provide both flexibilities more consonant with transnational experiences (Bloemraad 2004) and adaptabilities more conducive to innovative family and ethnic strategies associated with immigrant incorporation (Bean, Stevens, and Wierzbicki 2003). We term this view of citizenship the institutional-contextual (IC) since it envisions citizenship behaviors often involving immigrants hedging their bets in order to minimize real and perceived risks to the social units within which they live and work, especially the family/household. In this perspective, immigrants are seen as selectively maintaining

involvements and identifications with countries of both origin and destination, frequently for the purpose of reducing uncertainty and minimizing family/household risks while at the same time seeking to take maximum advantage of institutional resources that facilitate incorporation, including naturalization.

Bloemraad (2004; 2002) has developed particularly insightful theories about how institutional supports for immigrant settlement might influence the likelihood of naturalization. The main idea in her framework is that the tangible and intangible support provided to newcomers from institutional and state sources plays a large role in shaping immigrant contexts of reception (Portes and Rumbaut 2001; Reitz 2003). The availability of such institutional and state programs influence how welcome immigrants feel at arrival, how much settlement help they receive, and how much assistance they can draw upon when learning the skills required for naturalization (e.g., knowledge of civics and English) (Bloemraad 2003). All of these factors encourage naturalization. Active and supportive settlement policies in the form of institutional arrangements and organizations that provide aid, assistance and language training for immigrants, by providing help with the means to become citizens, also foster the motivation to apply for citizenship.

Bloemraad's (2002) research finds that a much greater prevalence of such institutions and policies in Canada compared to the United States largely explains the relatively higher rates of naturalization among immigrants to Canada in the late twentieth century. She argues that symbols of favorable immigrant reception encourage naturalization by communicating to immigrants that their presence in and contributions to their new society are valued and welcomed. Such communications, by denoting positive contexts of reception, support identification with the new society and the formal application for civic membership (e.g.,

naturalization). Thus, in addition to IC theory viewing naturalization as part of family/household-based strategies to minimize risk, and as such, more likely to occur in contexts of higher risk, IC theory sees naturalization also as requiring resources and support, and therefore more likely to occur in welcoming, supportive contexts.

Empirically-based analyses relevant to assessing the degree to which such theories explain naturalization behavior and its changes have been rare. The reason, as Bloemraad (2003) notes, is that analyses of citizenship dynamics have been mostly cast exclusively at either the individual or the national (or country) levels, and almost invariably have emphasized economic and legalistic influences on the tendency to naturalize. As has often been noted (DeSipio 2001), individual-level studies often focus on the characteristics and attributes of the individuals seeking citizenship, usually within some sort of rational decision-making theoretical framework that ignores variation in institutional possibilities for citizenship. Country-level studies, in turn, have often emphasized such possibilities, albeit at a legal-politico level, focusing on how state legal rights and practices, together with citizenship policies, account for differences across countries or within countries over time in the definition and practice of citizenship (Brubaker 1992; Joppke 1998).

As useful as these approaches have been in shedding light on citizenship dynamics, they provide little basis for assessing how individuals are influenced in seeking citizenship by contextual factors involving socio-cultural and institutional structures and mechanisms as emphasized in the IC perspective. In the absence of data on individuals from different countries at different points in time, one useful way to address this question would be to examine the influence of institutional and contextual variables in research conducted at the individual level. This is the approach taken in the present study. Beyond this, we also suggest that insights into

the kinds of forces driving citizenship behavior are revealed by examining the effects on naturalization behavior of changing immigrant contexts of reception as a result of major societal policy changes involving shifts in citizenship criteria for welfare eligibility.

Hypotheses about Instrumental-Legal and Institutional-Contextual Effects on Naturalization

What would IL and IC theories predict about immigrant naturalization behavior as a result of the changes in welfare availability after welfare reform? We focus first on possible impacts of welfare benefit levels. Based on IL theory, the level of welfare benefits *per se* should have no effect on naturalization tendencies in the pre-reform period because prior to welfare reform citizenship was not a criterion for welfare eligibility, thus eliminating any possibility of differential payoffs for naturalization deriving from differential benefits. Hence, we would not expect variation across states in welfare benefits to influence the likelihood of naturalization before welfare reform. However, because such differences could come into play after welfare reform, we would expect a positive effect after 1996. Based on IC theory, we would expect higher levels of welfare benefits to relate positively to naturalization because higher welfare payments send stronger positive signals about states' valuations of immigrants than do lower payments. Even though IC theory would accordingly predict a positive effect of level of benefits across states, because welfare reform did not result in state-level changes in the magnitude of welfare payments, we would not expect an increase in period-based measures of naturalization. Again, however, IC theory would predict an even more positive effect of benefit levels across states in the post-reform period because of greater post-reform salience of immigrant contexts of reception.

Second, we focus on possible impacts of differential access to welfare. Unlike the case of benefit levels, which did not change over time as a result of welfare reform legislation, access to welfare did change. The Federal legislation in 1996 removed access altogether for all non-citizens in all states. Subsequently, some states restored access, some legislating full restoration (what we call high access states) and some partial restoration (what we call low access states). Interestingly, the high access states ended up with little or no change in program availability in contrast to the pre-reform period, thus effectively nullifying in these states the Federal legislation's invocation of citizenship as a contingent criterion for welfare eligibility. Low access states, on the other hand, changed considerably. They restored some programs but not others, thus dramatizing the citizenship contingency for welfare receipt and sharply raising the salience of naturalization.

Based on IL theory, we would again not expect variation in levels of access *per se* to affect naturalization in the pre-reform period for the same reasons we would not expect such a relationship in the case of benefit levels. However, IL theory would predict a negative effect after welfare reform (i.e., higher naturalization in low access states) because of the greater salience of citizenship for benefit eligibility in low access states. Based on IC theory, we would not expect a positive relationship in the pre-reform period because the nearly universal pre-reform availability of welfare meant there was negligible variation in access up to 1996. After 1996, however, we would expect a positive relationship between access and naturalization *per se* because the provision of greater access indicates more positive contexts of immigrant reception, thus fostering increased motivation for citizenship. One possibility, however, is that states that granted the most welfare access to non-citizens in the post-reform period may have had the same positive social and political climate vis-à-vis immigrants before welfare reform. These states'

responses to welfare reform may have merely underscored the already-positive climate that had been present in the state before. If this were the case, we would expect to see a positive relationship between naturalization and access prior to welfare reform, and an even stronger positive relationship after welfare reform. In either of these instances, however, IL and IC theory imply different main effects of welfare benefit levels and access to social service programs, and different interactions with time period. The directions of these different predictions are summarized in Table 1.

The two theories also imply different kinds of interaction effects on naturalization involving benefit levels, access, and time period. The IL perspective would predict greater post-reform naturalization with rising benefits in low access states because of the greater salience of citizenship contingency in those states. However, IL theory does not provide a basis for predicting higher post-reform naturalization with rising benefit levels in high access states. By contrast, the IC perspective implies either no interaction effect or a different pattern of interaction depending on whether the minimization of risk or the level of support to immigrants, both of which are important in IC theory, is most salient. In the latter case, if both welfare benefit levels and access were operating the way IC theory suggests they would as outlined above in the hypotheses about their main effects (i.e., if the level of state and social support is most important), then no interaction effect would emerge. The greatest degree of naturalization should occur in high benefit-high access states and the lowest in low benefit-low access states, with the other states falling in between.

However, these variables may operate in a different way than hypothesized to this point in our discussion. Consider the case where minimization of risk overrides support as a consideration affecting naturalization. The legislation arguably sent an equivocal message to

immigrants. On the one hand, it restricted social citizenship (i.e., it limited the class of members eligible for social benefits); on the other hand, it merely stipulated that certain conditions were being introduced for eligibility (i.e., all could receive benefits if they naturalized). In short, the policy change symbolically delivered a distinctly unfriendly message to immigrants, even though materially the shift may have mattered little because the criteria for obtaining political citizenship remained the same (Aleinikoff 2000). But the differential restoration of benefits to immigrants after the legislation confronted immigrants with contradictory signals. Because IC theory implies that naturalization is pursued as a family/household form of social insurance, it suggests that attempts to minimize risk exposure should be strongest in places where the symbolic and material messages sent to immigrants about their contexts of reception are most ambiguous and uncertain. Just such messages would have occurred in those states where welfare benefits were high but access to benefits was low, or in those states where full and complete access was granted but benefits were low.

This interpretation of the combined effects of benefits and access implies a different prediction. In this instance, IC theory implies the strongest tendencies to seek naturalization after welfare reform in those states where the messages sent about contexts of reception were most ambiguous. Since the theory emphasizes that naturalization is often sought as a family/household survival strategy designed to minimize risk, the operation of such a strategy would be most evident under conditions of greatest uncertainty and most manifest in states sending the most confusing messages about immigrant contexts of reception. In short, IC theory implies higher levels of post-reform naturalization both in states with high benefits and low levels of access and in states with low benefits and high access. IL theory, however, by focusing

on utility gain at the individual level instead of risk minimization, implies the greatest naturalization tendencies only in high benefit and low access states.

Further Theoretical Contingencies

Instrumental-legalistic and institutional-contextual theories also differ in other ways in what they imply. One of the most important is in the degree of their acknowledgement that naturalization decisions may be contingent on other factors, with IC theory explicitly specifying contingent relations and IL theory largely overlooking such possibilities. This follows from IL theory focusing mainly on the individual incentives that affect naturalization and IC theory emphasizing the social contextual nature of risk minimization, the urgency of which is shaped by contexts of immigrant reception. Thus, IC (but not IL) theory would predict that the effects of benefits and access will vary by kind of immigrant. The United States has recently received basically three kinds of immigrants (Bean, Stevens, and Van Hook 2003; Bean, Van Hook, and Glick 1997; Fix and Passel 1994). Some of these are more likely to be affected (or at least differently affected) by contexts of reception than others. One group of immigrants consists mostly of labor migrants from Mexico and Central America, including mainly low education persons who come to the country primarily to work, usually intending to return home after a short period of time. Many of these originally come as unauthorized migrants and then later find ways to convert to legal permanent resident status as their life situations change. A second group is Refugees who have come fleeing political persecution in their countries of origin and whose entry and settlement in the United States are accordingly given extra priority and support by the U.S. government. The third group is all remaining Other Immigrants who come from numerous countries and for a variety of reasons.

Persons who come in the last of these three categories are likely to be more sensitive to ambiguities in contexts of reception than those coming in the first, with those in the second falling somewhere in between. Poor labor migrants may be less sensitive to their contexts of reception, not only because of their frequently presumed temporary status, but also because they do not expect their contexts to be very good in the first place given their widespread unauthorized status (Portes and Rumbaut 2001). But most particularly, this group consists of labor migrants. Thus, they come to the United States overwhelmingly for the express purpose of working, with the result that a considerable body of research shows that they are thus less likely to rely on welfare, all else equal (Bean and Stevens 2003). It would stand to reason, then, that they are less attuned to vagaries in welfare contexts of reception. Refugees are also less likely to be affected by vagaries in contexts of reception because they receive extra governmental settlement assistance at the onset of their time in the country (Bloemraad 2003), rendering them less sensitive to risk and uncertainty. As a result, IC theory suggests that the main effects of benefit levels and access would be most likely to emerge among Other Immigrants and least likely among Mexicans/Central Americans, with Refugees falling in between. Also, the three-way interaction effect of time period, benefit level and access would be most likely to emerge among Other Immigrants, next most likely among Refugees, and least likely among Mexican/Central Americans.

DATA AND MEASURES

Data and Samples

To assess the relationship between changing contexts of immigrant reception and naturalization, we rely on data from the Survey of Program Dynamics (SPD). The SPD is a new

data source that was designed and implemented by the U.S. Census Bureau to study the short- and medium-term effects of welfare reform. The SPD offers unique advantages over other data sets in that it includes information on migration, welfare, and naturalization histories. Perhaps most significant is that SPD includes data on the year naturalization occurred for naturalized citizens, and thus permits the examination of naturalization both before and after Welfare Reform. The study follows a sub-sample of the original respondents of the 1992 and 1993 panels of the Survey of Income and Program Participation (SIPP) (with over-samples of poor and minority families), first in 1997 with the SPD Bridge Survey (a modified version of the March 1997 CPS), and then annually from 1998 through 2002 with the SPD survey. The available data permit the tracking of individuals in the sub-sample for 9 to 10 years from 1992/93 to 2002. In addition, because retrospective information was collected, individuals may be tracked starting at least as early as 1987. Thus, the data enable the examination of naturalization patterns before welfare reform (1987-1996) and after (1997-2002). Even though the SPD offers unique advantages, it suffers the disadvantage of relatively high attrition rates. Of those who were present in the 1993 data and who were eligible to be followed, roughly 30 percent were not interviewed in 1998. An additional 15 percent dropped out by 2001. However, in preliminary work in which we estimate multivariate models of sample attrition, we find that attrition in the SPD is not significantly related to nativity, citizenship status, or welfare reciprocity, and thus is unlikely to be a significant source of bias in the findings presented below.

The major aim of this research is to investigate the determinants of naturalization. To do so, we follow a sample of non-citizens from as early as 1988 up to and including the year in which they naturalize or until they are censored from the sample. We exclude children from the analysis since they are not eligible for naturalization on their own accord apart from their

parents. Non-citizens who entered the country or reached age 18 later than 1988 are not excluded from the sample altogether; instead, they enter the sample in the year they arrived in the country or reached age 18. As described further below, we estimate non-parametric discrete-time event history models of naturalization. As such, the data are organized into person-year observations with each individual contributing a person-year for each year they remain at risk of naturalizing, including the year they naturalized. The analytic sample includes 1,413 non-citizen adults age 18+ as of 1988. These individuals contributed 15,770 person-years, 9,727 during the pre-reform period (1988-1995), 2,833 during the transitional period (1996-1997), and 3,210 during the post-reform period (1998-2002).

As an important coda to the naturalization analysis, we examine the relationship between nativity and welfare dynamics by naturalization status both before and after welfare reform. In particular, we focus on changes in rates of going on welfare among non-recipients and changes in rates of leaving welfare among recipients for natives, naturalized citizens, and non-citizens. In these analyses, we follow non-welfare recipients from 1992¹ up until the time they either go on welfare or are censored from the sample (i.e., the “non-recipient sample”), and we follow welfare recipients from 1992 until they either leave welfare or are censored (i.e., the “recipient sample”). The non-recipient sample includes 17,453 natives and 1,571 immigrants, (232,628 and 22,113 person-years, respectively), and the recipient sample includes 4,396 natives and 772 immigrants, (44,071 and 6,577 person-years, respectively).

Statistical Models

¹ In analyses of welfare receipt, we follow individuals starting in 1992 rather than 1988 because the retrospective data on welfare reciprocity (prior to 1992) is not nearly as precise with respect to the timing of welfare spells as is the prospective data.

We estimate discrete-time hazard models (Allison 1995) to model the probability of (1) naturalization among non-citizens, (2) welfare entry among non-recipients, and (3) staying on welfare among welfare recipients. We use discrete-rather than continuous-time models (such as Cox proportional hazards) because our data lack precise information about the timing of moves in and out of citizenship and welfare statuses; we only know whether a change occurred between interviews (usually conducted at one-year intervals). Also, discrete-time hazard models can easily handle time-varying covariates, right-censorship, and left-truncated cases (if start-times are known) (Allison 1995; Guo 1993).

One potential problem associated with event history methods is left-truncation bias. Our sample is left-truncated because it includes non-citizens who had been living in the U.S. for many years and thus had been exposed to the “risk” of naturalization prior to their inclusion in the sample. This introduces sample selection bias because ongoing “non-citizen” spells are likely to be of longer duration (shorter non-citizen spells had already ended before the beginning of the observation period because these people had naturalized earlier). To handle this problem, we control for approximate duration of ongoing “non-citizen” spells (i.e., based on the first time the respondent came to the United States to stay), thereby estimating conditional likelihood discrete-time hazard models that condition the likelihood function on the length of the spell. We use the same technique with the welfare models by controlling for duration of on-going welfare spells. Conditional likelihood models are identical to the standard discrete-time hazard models except that spell duration is measured starting from the beginning of the spell and not from the time the case first enters the sample (Guo 1993).

Below we describe in detail the estimation of the naturalization model although the welfare models follow the same basic logic. The naturalization model is specified as:

$$N_{ijt} = \alpha_1 T_{ijt} + \alpha_2 R_{ijt} + \alpha_3 A_j + \alpha_4 B_j + \alpha_5 X_{ij} + \alpha_6 Z_{ij(t-1)} + \varepsilon_{ijt} \quad (1)$$

where N indicates naturalization status (1=naturalized, 0=non-citizen) for respondent i in state j at year t . T is the number of years the respondents has lived in the U.S. and has thus been exposed to the “risk” of naturalization, R indicates the time period for year t (1 = post-reform, 0=pre-reform), A is a non-time varying measure of welfare access provided after welfare reform to non-citizens living in state j , B is the 1997 value of welfare benefits provided to natives living in state j , X is a vector of non-time-varying control variables (e.g., race, ethnicity, gender, and country-of-origin grouping), and Z is a vector of time-varying control variables taken from the prior year $t-1$ (e.g., marital status, educational attainment, home ownership, and income-to-poverty ratio). To test whether naturalization probabilities changed differentially by state benefit level or state’s welfare access to non-citizens, or whether the effects of state welfare benefit level vary by state welfare access, we add and test the significance of two-way interaction terms:

$$N_{ijt} = \alpha_1 T_{ijt} + \alpha_2 R_{it} + \alpha_3 A_j + \alpha_4 B_j + \alpha_5 X_{ij} + \alpha_6 Z_{ij(t-1)} + \beta_1 (R_{it} \times A_{ij}) + \beta_2 (R_{it} \times B_j) + \beta_3 (A_j \times B_j) + \varepsilon_{ijt} \quad (2)$$

Thus, α_2 is the effect of living in a high-access state prior to welfare reform, $\alpha_2 + \beta_1$ is the effect after welfare reform, and β_1 is the change for those living in high access states. Similarly, α_3 is the effect of state welfare benefit level prior to welfare reform, $\alpha_3 + \beta_2$ is the effect after welfare reform, β_2 is the change. Finally β_3 is the additional effect of living in a high-benefit, high-access state independent of time period. We also tested whether the effects of various combinations of benefit and access changed over time by adding to model 2 the three way interaction: $\gamma(R_{it} \times A_j \times B_j)$.

Because of the clustered, highly stratified sampling design of the SIPP/SPD (Chakrabarty 1989), we adjust all standard errors and other test statistics to take into account design effects.

Measures

Appendix Table 1 displays means for all the dependent and independent variables used in the analysis. We describe each measure in turn below.

Nativity/Citizenship. The SIPP collects information on naturalization status and migration history at the second SIPP interview (four months after the first SIPP interview), and the SPD again collects these data in the Bridge and annual surveys. In addition, the 2001 and 2002 SPD include year of naturalization for those who naturalized. We classify immigrants as those who were born outside the United States and U.S. outlying areas (such as Puerto Rico), and were not born abroad of American parents. Some respondents reported citizenship status in one interview but not in others. For these cases, we make the assumption that citizenship status did not change over time. Other foreign-born respondents reported as naturalized citizens even though they had not been living in the United States long enough to qualify for naturalization (5 years in most cases, 3 years for those with U.S. born spouses). Following Passel and Clark (1998, 1997), we recode these individuals as non-citizens. We use reported year of naturalization to estimate the timing of changes in citizenship status. For the large proportion of naturalized citizens who did not report year of naturalization (57 percent of those who ever naturalized), we infer the year based on the year their citizenship status was observed in the data to have changed from non-citizen to citizen. This is not possible for those who were naturalized citizens at the time of the first SIPP interview in 1992 (30 percent of all naturalized citizens or roughly half of the missing cases). For this group, year of naturalization was approximated as the mid-point between 1992 and the year the respondent had been in the U.S. for at least five years. Because the year of naturalization was imputed to be earlier than 1988 for most members

of this latter group (81 percent), the vast majority of those with imputed year of naturalization were eventually dropped from the analytical sample for the naturalization models, which was restricted to non-citizens who naturalized in 1988 or later and those who never naturalized.

In the welfare analyses, we use two different nativity/citizenship classification schemes, one in which a person's status is treated as varying over time, and another that treats individuals as belonging to fixed cohorts over time. The time-varying classification contrasts the welfare reciprocity of U.S. natives with immigrants who had naturalized within the last two years ("recently naturalized"), immigrants who naturalized more than two years ago, and non-citizens. These categories allow the examination of the relationship between naturalization and subsequent welfare reciprocity, in particular whether welfare receipt increased among the recently naturalized following welfare reform. One potential problem with this approach, however, is that unobserved heterogeneity may account for citizenship differences in welfare reciprocity as people shift from non-citizen to citizen categories over time. Thus, we supplement the analysis using a second classification scheme that treats citizenship groups as fixed over time. These groups include natives, those who naturalized prior to welfare reform, those who naturalized after welfare reform, and those who had not naturalized as of 2002.

Welfare Receipt. The SIPP collects monthly information about welfare receipt and the SPD collects information about welfare receipt in the previous calendar year. We examine welfare reciprocity for three federally-funded programs: Food Stamps (FS), AFDC/TANF, and SSI. TANF (formerly AFDC) provides income support to families with children, SSI provides income to the blind, disabled and elderly, and Food Stamps provides non-cash food vouchers to a wider range of demographic groups. In the naturalization models, we are interested in whether involvement in the welfare system prior to welfare reform is related to naturalization after

welfare reform. We measure pre-reform welfare reciprocity as a simple dichotomous variable indicating whether the person had ever received assistance from any of the three programs (AFDC, SSI, or FS) at any time prior to 1996. In the welfare models, we are interested in whether naturalization (particularly naturalization in the post-reform period) is associated with subsequent welfare receipt. In these models, welfare reciprocity is measured as a dummy variable indicating receipt of assistance from any of the three programs in the current year.

State Welfare Policy. To measure the extent to which states make their safety nets available to immigrants during the post-reform period, we use the “Safety Net” scale created by Zimmerman and Tumlin (1998), which we refer to here as “access.” The scale takes into account twelve separate categories of immigrant eligibility decisions such as whether the state provides Medicaid or TANF to immigrants entering the United States after August 1996, or whether the state created a food program for immigrants no longer covered by Food Stamps. Points are awarded to states for having programs in each category and deducted for the introduction of certain restrictions to immigrants. The scale ranges from one to four, with states that made their safety nets the most available to immigrants in category 1 and those that placed the most restrictions on immigrants in category 4. A full description of the scale is included in Zimmerman and Tumlin (1999, Appendix B) (Zimmerman and Tumlin 1999). To aid interpretation of coefficients in the multivariate models, we recoded the variable so that it varies from 0 to 1 (with categories 1, 2, 3, and 4 recoded respectively to 0.00, 0.33, 0.66, and 1.00), and then reverse coded the scale with higher values indicating greater access to welfare programs for non-citizens following welfare reform. We treat this measure as fixed in time, in that states retain the same “access” score in both the pre- and post-reform periods. Therefore, the effects of

post-reform welfare access become apparent by examining interaction effects between access and time period.

We also examine the influence of welfare benefit level on naturalization. State-level information on welfare benefits was obtained from the New Federalism state database available from the Urban Institute. We developed a standardized measure of state benefit level based on both the 1997 SSI state supplement available to couples living independently with no other income other than federal SSI, and the 1997 AFDC/TANF benefit paid to a single, non-working parent with two children. Since the SSI and TANF benefits run on different scales, we first created standardized scores for state SSI and TANF benefit levels. We then averaged the two z-scores, yielding a score ranging approximately from -1.7 to 1.7 with average states falling close to zero. We treat state benefit level as non-time varying because the amounts states paid to welfare recipients rarely changed during the 1990s.

Other State Characteristics. We control for state-level factors that could influence the likelihood of naturalization among non-citizens. Some states, as a part of their welfare reform policy, encouraged non-citizen welfare recipients to apply for naturalization so that they then would become eligible for federal public assistance programs. We construct a variable that indicates whether the respondent was living in a state that has a naturalization program linked to welfare receipt. State-level information about post-reform naturalization programs was obtained from a state-level database compiled by researchers at the Urban Institute (Zimmerman and Tumlin 1999). Because this variable was highly correlated with the welfare access measure ($r = 0.80$), we estimated models with the naturalization program variable both included and excluded. The results were essentially similar in both cases (available from the authors by request), and we include only the latter here.

The time between filing out an application and taking the oath of citizenship varies across INS district offices (U.S. General Accounting Office 1997). To control for this variation, we included measure of the probability that an application for naturalization would be completed in one year. To calculate the probability that the application was completed in one year, for each INS district office we divided the number of applications completed in a given year by the sum of the number completed in that year plus the number of applications that were pending or held over from the previous year. We then averaged the 1996, 1997 and 1998 estimates. Respondents were assigned to the appropriate INS district office based on their state of residence.

Other Factors. We include in our multivariate models controls for socioeconomic status, family composition, and other demographic characteristics, most of which are allowed to vary from year to year. Indicators of socioeconomic status and human capital (income-to-poverty ratio, educational attainment, English proficiency, and homeownership) are likely to have direct effects on naturalization and welfare eligibility and indirect effects on welfare participation via their influence on employment status, potential earnings, and wealth. We include a person's income-to-poverty ratio as a time-varying variable. Income has been shown in prior research to be positively associated with naturalization, and is a strong determinant of welfare eligibility because relatively low income thresholds must not be exceeded to qualify for most public assistance (Choi 1992; Coe 1985a; Coe 1985b; McGarry 1996; Menefee, Edwards, and Schieber 1981; Moffitt 1992; Warlick 1980).

Educational attainment and English language proficiency have also been linked to naturalization and welfare reciprocity. Educational attainment is treated as time-varying and thus may change from year to year. We classify respondents as attaining 0-8 years of education, 9-11

years, a high school diploma, and attending college or more. The SPD 1997 Bridge Survey collected data on English language proficiency. Respondents are asked how well they speak English: Not very well/not at all, Not well, Well, and Very Well. Finally, homeownership is important because others have found it to be a significant predictor of naturalization (Yang), and is an indicator of wealth that may be tapped as a substitute for governmental support in times of economic need (Choi 1992; McGarry 1996; Soldo and Agee 1988; Tienda and Jensen 1986). Like educational attainment, home ownership is a time-varying measure that may change from year to year.

In addition to socioeconomic status, we include in our models controls for certain socio-demographic factors that are likely to be associated with naturalization and welfare receipt. These include years in the United States (plus a squared term), current spouse's citizenship status, age (18-29, 30-49, 50-64, 65+), gender, disability status, number of children under age 15, and country-of-origin grouping (Mexican or other Central American, refugee², Asian, other). All except gender and country of origin are treated as time varying. The welfare models further include the duration of the current welfare spell (measured in years), the number of prior welfare spells, a combined indicator of marital and parental status (single parent, married parent, married non-parent, not married and not a parent), and race/ethnicity.

FINDINGS ON NATURALIZATION AND WELFARE PATTERNS

Naturalization Patterns

After the passage of Welfare Reform in 1996, the average annual probability of naturalization for the cohort of immigrants included in the SPD went up by a factor of about six

²i.e., coming from a country that typically sends many refugees (Cuba, Vietnam, Laos, Cambodia, El Salvador, the former Soviet Union, Ethiopia, Somalia, Iran, Poland, Afghanistan, and the former Yugoslavia).

(see Table 2). In interpreting this increase, it must be remembered that the SPD focuses on a particular cohort. Since naturalization occurs only once (citizens do not “de-naturalize”), and since naturalization depends in part on the accumulation of U.S. experience, some increase in the probability of naturalization over time would be expected on account of these dynamics alone. Welfare reform nonetheless appears to have coincided with an increase in the likelihood of naturalization. It is also interesting that the increase occurred among immigrants from various countries of origin, all of whom experienced upswings in the probability of naturalizing of about 0.10. But as we noted in the theoretical discussions above, this does not mean that changing welfare contexts of immigrant reception contributed to the increase in naturalization tendency in the same way or to the same degree among different kinds of immigrants.

To what extent does the rise appear to derive from legal permanent residents becoming citizens in order to be able to receive welfare, as IL theory predicts? A first clue that something more than instrumental-legal reasons might be involved is evident in the fact that the probability of naturalization increased more among non-welfare recipients than it did among recipients (0.111 in the case of non-recipients and 0.089 in the case of recipients). If much of the naturalization were occurring in order to obtain welfare, we would expect to see higher increases among welfare recipients, but we do not. So on the basis of examination of the pattern of absolute change alone, the ideas of IL theory do not receive support in the data. But evidence for IL theory might emerge if we examine naturalization probabilities by state welfare policy factors. However, when we do so, the prediction of IL theory that high benefit states would show higher rates of naturalization after welfare reform is not borne out by the results in Table 2, although evidence does emerge for the IL theory notion that naturalization should be higher and go up more in low- than high-access states, because such states raise the salience of the new citizenship

criterion for welfare receipt. The prediction of IC theory that this relationship should be positive thus does not receive support in this simple unadjusted case either. But the numbers in Table 2 do suggest that the idea from IC theory that states sending the most ambiguous messages about the favorability of immigrant contexts of reception – low access-high benefit and high access-low benefit states – should show higher levels of naturalization and change than high access-high benefit states. However, the theoretical import of this is clouded somewhat by the high levels of naturalization that also occur in low access-low benefit states.

Such unadjusted figures do not control for the influence of other factors that also affect naturalization, so it is pre-mature at this point to embrace the conclusion that IC theory provides the superior explanation of post-reform naturalization tendencies. More definitive evidence requires multivariate models that control for differences in other factors affecting naturalization. To obtain such results, we estimate event history models as described above, and then we evaluate their outcomes by calculating predicted probabilities of naturalization for combinations of values on key independent variables. Odds ratios showing the effects of the control and key independent variables are shown in Table 3 for each of the three kinds of immigrant groups separately, as well as for all immigrants. It is clear in the case of the control variables, that the direction and magnitude of their influence on naturalization is largely consistent with expectations. Having a naturalized spouse, for example, increases the likelihood of naturalization substantially, as does having more than a high school education. In the cases of welfare benefits and access, we see that benefit level per se is negatively related to the odds of naturalization in three of the four groups examined, but the odds ratios are not statistically significant. Neither is access per se related to naturalization, although the effect for Mexicans/Central Americans is more positive than it is for the other groups.

The key hypotheses derived from IL and IC theory, however, pertain to how benefit levels and access interact to influence naturalization after Welfare Reform. We estimate these effects and evaluate them by again calculating predicted probabilities from models including interaction terms involving these variables. We also examine the effects for the three kinds of immigrant groups separately because IC theory (but not IL theory) predicts different patterns in the various groups. Tests of statistical significance for the various interaction effects are shown in Table 4, with the patterns involved in two-way results shown in Table 5, and the patterns in three-way results in Table 6. Both IL and IC theory provide a basis for expecting the effect of welfare benefit levels to be more positive in the post-reform period, and this is what the data show, except in the Mexican/Central American group. As for the effects of access, IL theory implies a more negative effect in the post-reform period and IC theory a more positive effect in the post-reform period. Again except for Mexican/Central Americans, the negative effect is what emerges in the data, although less strongly for Refugees than for Other Immigrants. As expected by IC theory, the Mexican/Central American group shows little in the way of the patterns implied by IL theory, suggesting that the migration status and situations of Mexican/Central Americans, namely being disadvantaged labor migrants who often are unauthorized and in the country only temporarily, may override the forces IL theory would suggest operate to affect naturalization behavior.

Turning to the three-way interaction of welfare benefit and access by time period, we find that such an effect emerges as hypothesized among Other Immigrants, and, to a lesser extent, among Refugees, but not among Mexican/Central Americans. Thus, the predictions of IC theory that the highest naturalization probabilities will occur in the "mixed-message" states (those with either low access-high benefits or high access-low benefits) and among certain groups are borne

out, whereas the predictions of IL theory that this will occur only in low access-high benefit states and among all groups are not. That more naturalizations occur in both high access-low benefit states and low access-high benefit states, places whose configurations of welfare reform messages to immigrants are contradictory, not just in low access-high benefit states as predicted by IL theory, lends confidence to the idea that it is ambiguities in contexts of immigrant reception in these states that are driving post-reform naturalization patterns, not just the pursuit of higher benefits in states that have most raised the salience of citizenship contingency. But the fact that the probability of naturalization is higher in low access-high benefit states than it is in high access-low benefit states suggests that the mechanisms and dynamics implied by IL theory may be at work to some extent in the former states, thus serving to raise naturalizations in low access-high benefit states for some immigrants even as ambiguities in contexts of reception are also boosting naturalizations for other immigrants in both kinds of states (see Figure 1).

Welfare Patterns

Based on the results presented thus far, more support emerges for IC than IL theory, but it is nonetheless useful to examine additional evidence relevant to the assessment of the two theories. Looking at the relationship between naturalization and welfare receipt both before and after welfare reform is especially germane. In particular, we are interested in ascertaining if more substantial evidentiary indications consistent with IL theory emerge here since only limited support for IL theory has emerged up to this point. We first examine the three-way interactions among access, benefit, and time period among pre-reform welfare recipients and non-recipients while controlling for the same factors as before. The three-way interaction terms are strongly statistically significant for both groups. The patterns predicted by IC theory most clearly emerge

among recipients, while the one pattern thus far supported in the data and predicted by IL theory (that of high naturalization in high benefit-low access states) appears among non-recipients (Figure 2). Among welfare recipients, the annual probabilities of naturalization are highest in the post-reform period in mixed message states (high access-low benefit, and low access-high benefit states), just as predicted by IC theory. Moreover, the positive relationship between benefit levels and naturalization in low access states preceded welfare reform, a pattern also predicted by IC theory. Thus, welfare recipients appear more sensitive to socio-cultural contexts of reception while non-welfare-recipients appear, on the face of things, more responsive to the kinds of incentives specified by IL theory.

To gain further insight into this matter, we also examine whether those who naturalized following welfare reform were more likely to go on or stay on welfare both before and after welfare reform. We estimate event history models of going on welfare and staying on welfare as a function of a set of socio-demographic and economic controls, citizenship status, time period, and the interaction between citizenship and time period. We use both a time-varying and a non-time-varying measure. The time-varying measure, distinguishing among the U.S. born, citizens who naturalized earlier (more than two years ago), citizens who recently naturalized (within the past two years), and non-citizens, permits the examination of whether recently naturalized citizens were more likely to receive welfare in the post-reform than the pre-reform period. The non-time-varying measure distinguishes among the U.S. born, those who naturalized before 1997 (pre-reform), those who naturalized after 1997 (post-reform), and those who never naturalized, and thus treats immigrants as belonging to stable groups over time, not as shifting from one group to another when they naturalize. In this instance, we thus eliminate the possibility that (i.e., citizenship heterogeneity over time movement from non-citizen to citizen categories) can

account for the results. Because both sets of results were similar, we display only one set of predicted values in Table 7, those based on the time-non-varying measure of citizenship status.

Among non-welfare recipients, the likelihood of going on welfare declined in most cases from the pre-reform to the post-reform period. More importantly, the decline was not significantly different for those who naturalized following welfare reform compared to those who naturalized within the past two years. Thus, immigrants who naturalized following welfare reform did not become more likely to go on welfare than other groups. The story is somewhat different in regard to staying on welfare among welfare recipients. Pre-reform welfare recipients were generally less likely to stay on welfare following welfare reform, thus not supporting IL theory. However, among non-citizens who naturalized following welfare reform (especially those who naturalized within the past two years), the likelihood of staying on welfare declined less than among natives and non-citizens. It appears that by naturalizing, some pre-reform welfare recipients were able to hold onto their benefits.

In interpreting these results, characterizations of immigrant welfare recipients as primarily rational actors seeking to maximize welfare benefits seem problematic. Recalling that pre-reform welfare recipients are in all likelihood the more politically and economically vulnerable population, we would think such recipients would have been less able to marshal the means and resources to naturalize in the absence of supportive environments. Those who did manage to naturalize would have hung on to their welfare benefits as a consequence of rather than as a motivation for naturalization. In contrast to immigrants with a history of welfare reciprocity, non-recipients, as a more advantaged group, would be better able to bring personal and social resources to bear on naturalization even in less supportive contexts. Nevertheless, their relatively low welfare reciprocity levels following post-reform naturalization suggests that

the citizenship dynamics for this group involved broader risk management strategies rather than simply strategies to gain welfare benefits. Thus, on balance, the findings on post-reform welfare receipt provide no more extensive support for IL theory than our earlier results. Factors that IC theory suggest should come into play, then, are actually more likely to emerge in the data, which reinforces our previous conclusion that socially-based institutional-contextual influences more than individually-based instrumental ones, affect immigrant naturalization behavior.

SUMMARY AND DISCUSSION

This research includes several distinctive features. First, the present research is the only large-scale study of naturalization based on longitudinal data to involve a representative national sample of immigrants selected at a given point in time. One previous very valuable study was longitudinal but based only on a cohort of immigrants entering the country in a single year (Jasso and Rosenzweig 1990). Second, the present research also is the first to seek to take advantage of the changes in citizenship criteria and welfare availability resulting from 1996 Welfare Reform in order to shed light on the relative influence of institutional-contextual and instrumental-legal factors affecting immigrant naturalization behavior. Third, the present findings support the idea that institutional-contextual factors matter for naturalization, in that there appears to be more support in the data for IC theory than IL theory (e.g., the evidence that emerges that ambiguous welfare contexts of reception most increase naturalization and that naturalization patterns of response to welfare reform vary among different kinds of immigrants, results that would not be predicted by IL theory). The results of the research thus fall into substantial agreement with contentions that the social and policy contexts of immigrant reception are likely to influence their naturalization behavior (Bloemraad 2003). By extension, such contexts are also likely to

increase successful immigrant incorporation, because citizenship makes a considerable difference for full social and economic participation in the society.

The results also hold implications for theories about the incorporation of immigrants and for immigration policy reform proposals. Citizenship clearly facilitates incorporation, and the processes of pursuing and acquiring citizenship involve social, especially family/household-related, as well as individual considerations. Like the migration decision itself, seeking citizenship takes place within a family/household nexus that appears to place greater value on risk minimization for the social unit than on utility maximization for the individual (Massey 1999; Stark 1991). Incorporation theories have tended to emphasize processes occurring at either the individual or the group level, often envisioning family/household phenomena as factors affected by the processes. In short, family/household phenomena are usually treated as dependent variables in studies of immigrant or immigrant group incorporation (Boyd 1989; Foner 1999). But the family/household as a social unit is also an independent variable in the incorporation process. Much more theory and research on the functioning of family/household as an independent, contingent, and mediating variable in incorporation processes is needed.

In considering implications for immigration policy, it is important to recognize that decisions such as migration, seeking naturalization, and even participating in welfare, can be, and often are, largely motivated by socially-based risk minimization. This involves a different image of immigrants than the picture that depicts them primarily as motivated by the desire for individual utilitarian gain. The latter tends to see both migration and naturalization as resulting from the possibility of obtaining of welfare in the United States. Thus, some social scientists have argued: "Immigrants become citizens because they are attracted by government social welfare and affirmative action programs" (Huntington 2004). Similarly, Borjas (2002: Executive

Summary) contends: "Many immigrants will become citizens because naturalization is a hurdle on the road to receiving welfare benefits." The recommended policy solution following from such perspectives typically suggests the curtailment of immigration. But the results of the present research suggest naturalization decisions are more motivated by desires to protect family security than to maximize monetary gain.

The difference between these is subtle but crucial. Considerable recent research indicates that optimizing social (family/household) security is more important to most people than maximizing individual gain (Hacker 2004). In considerable measure, of course, this is because family-household-based risk minimization strategies are the only ones available to working class and poor people. Attributing naturalization decisions made primarily for reasons of family protection to the pursuit of monetary gain, as in seeing migration as being driven by "welfare magnets" (a hypothesis not supported by research [(Bean, Stevens, and Van Hook 2003)], invites the attribution of cynical motives to immigrants (i.e., to see immigrants as naturalizing just to obtain welfare). In such attributions, seeking protection for one's family or household members is equated with seeking a hand-out (Gilens 1999). However, the results of the present research suggest this logic does not apply in the case of immigrant naturalization decisions, whose pattern of variation with welfare contexts of immigrant reception indicates such decisions involve risk minimization more than utility maximization. At a policy level, then, strengthening support for immigrant naturalization, rather than cutting off immigration, seems a preferable policy option. It offers the prospect of enhancing the successful incorporation of immigrants already here, which can only help both immigrants and the larger receiving society that allows, indeed even invites, immigrants to come to the country in the first place.

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Table 1. Predictions of Instrumental-Legal (IL) and Institutional-Contextual (IC) Theories about the Main and Interaction Effects of Welfare Benefits (WB) and Welfare Access (WA) on Naturalization by Time Period

	Theoretical Perspectives			
	<u>Institutional-Legal (IL)</u>		<u>Institutional-Contextual (IC)</u>	
	<u>Pre-reform</u>	<u>Post-reform</u>	<u>Pre-reform</u>	<u>Post-reform</u>
Welfare Benefits (WB)	0	+	+	++
Welfare Access (WA)	0	-	+	++
WB x WA	0	- ^a	0	-- ^b

^a High benefit and low access states only

^b Both high benefit/low access and low benefit/high access states

Table 2

Average Annual Probability of Naturalizing By Time Period and Country Grouping, Welfare Reciprocity, and State Welfare Policy

	Pre-reform	Post-reform	Change
All Immigrants	.021	.121	.100 *
<u>Country Grouping</u>			
Non-Refugee, Non-Mexican	.039	.153	.114 *
Refugees	.008	.088	.080 *
Mexicans & Cent. Am's	.021	.144	.123 *
<u>Welfare Receipt</u>			
Welfare Recipients	.017	.107	.089 *
Non-Recipients	.024	.135	.111 *
Difference	-.007 *	-.028 *	-.021 *
<u>State Welfare Policy</u>			
Low Access	.027	.149	.122 *
High Access	.015	.097	.082 *
Difference	.012 *	.052 *	.040 *
High Benefit	.017	.117	.100 *
Low Benefit	.028	.127	.099 *
Difference	-.011 *	-.010	.001
Low Access-High Benefit	.027	.124	.097 *
High Access-High Benefit	.014	.094	.079 *
Difference	.013 *	.030 *	.017
Low Access-Low Benefit	.026	.229	.203 *
High Access-Low Benefit	.033	.186	.153 *
Difference	-.007	.043	.050

Source: 1992-2002 SPD Longitudinal File.

Sample: Person-years from 1988 to 2002 contributed by immigrants who were non-citizens in the prior year.

* $p < .05$

Table 3

Percentages of Persons Naturalizing By Time Period and Country Grouping
and State Welfare Policy

	All Immigrants	Non-Refugee, Non-Mexican	Refugees	Mexicans & Central Americans
Years in U.S.	1.017	1.006	1.031 +	1.064 +
Years Squared	1.000	1.000	1.000	0.999
(Pre-reform)	---	---	---	---
Transition Period: 1996-1997	11.459 ***	9.436 ***	13.857 ***	18.234 ***
Post-Reform: 1998-2001	5.034 ***	4.590 ***	3.914 ***	8.641 ***
Age 18-29	0.944	0.806	0.731	1.071
Age 30-44	0.965	0.804	0.943	1.098
Age 45-64	1.098	0.911	1.433	1.239
(Age 65+)	---	---	---	---
Mexican/Central Am.	0.690 **			
Refugee	1.561 **			
(Other Immigrant)	---			
U.S.Born Spouse	1.117	0.985	1.474	1.142
Naturalized Spouse	2.125 ***	1.786 *	4.626 **	1.684
Non-citizen spouse (Not Married)	0.755 +	0.492 **	0.979	1.326
	---	---	---	---
N Children Age 0-14	0.976	1.014	1.041	0.912
Disabled	1.185	1.140	1.233	1.182
Homeowner	1.006	1.271	0.821	0.677 +
Poor English	0.725 *	0.883	0.505 **	0.698
Income to Poverty Ratio	1.022	0.947	0.959	1.035
Income to Poverty Squared	0.998	1.003	1.019	0.996
0-8 years	0.582 **	0.407 ***	0.518 *	0.764
9-11 years	0.735	0.839	0.620	0.753
HS graduate	0.774 +	0.690 *	0.974	0.819
(More than HS)	---	---	---	---
Welfare Recipient (pre-reform)	1.046	1.136	1.127	0.858
Naturalization Processing Time	0.530	0.972	0.036 +	1.079
Non-citizen Welfare Access	1.265	1.631	0.806	0.687
State Welfare Benefit Level	0.947	1.027	0.830	0.735
Intercept	0.023 ***	0.029 ***	0.101 *	0.005 ***
Person-years	14,027	5,890	2,508	5,629
Pseudo R-squared	0.161	0.146	0.227	0.164

*** p<.001 ** p<.01 *p<.05 +p<.10

Source and Sample: See Table 2.

Table 4

Results of Interaction Tests of Time Period, State Welfare Access, and State Welfare Benefit Level,
by Country Grouping and Pre-reform Welfare Reciprocity (p-values)

	All Immigrants	Non-refugee, Non-Mexican	Refugees	Mexicans & Cent. Am's	Welfare Recipients Before 1996	Non- recipients Before 1996
<u>Two-way interactions (tested separately)</u>						
Access x Benefit Level	0.004	0.004	0.325	0.463	0.055	0.021
Time Period x Access	0.106	0.106	0.767	0.348	0.173	0.278
Time Period x Benefit Level	0.048	0.014	0.927	0.570	0.247	0.074
<u>Three-way interaction</u>						
Time Period x Access x Benefit Level	0.534	0.009	0.185	0.581	0.907	0.528

Source and Sample: See Table 1.

Table 5

Predicted Annual Probability of Naturalization for Two-Way Interactions
Involving Access and Time Period, and Benefit Level and Time Period

	Pre-reform	Post-reform	Difference: Post-Pre
Non-Refugee, Non-Mexican Immigrants			
Low Benefit State	0.033	0.161	0.128
High Benefit State	0.027	0.193	0.166
Low Access State	0.038	0.208	0.169
High Access State	0.021	0.145	0.124
Refugees			
Low Benefit State	0.044	0.147	0.102
High Benefit State	0.026	0.136	0.109
Low Access State	0.030	0.129	0.098
High Access State	0.038	0.154	0.116
Mexicans/Central Americans			
Low Benefit State	0.010	0.118	0.108
High Benefit State	0.010	0.053	0.043
Low Access State	0.014	0.052	0.037
High Access State	0.006	0.108	0.102
Welfare Recipients Before 1996			
Low Benefit State	0.026	0.151	0.125
High Benefit State	0.037	0.103	0.066
Low Access State	0.054	0.140	0.086
High Access State	0.009	0.111	0.102
Non-Welfare Recipients Before 1996			
Low Benefit State	0.030	0.128	0.098
High Benefit State	0.015	0.164	0.148
Low Access State	0.018	0.153	0.135
High Access State	0.025	0.137	0.112

*based on model with two-way interactions among benefit, access, and time period.

Table 6

Predicted Annual Probability of Naturalization for Three-Way Interactions
Involving Access, Benefit Level, and Time Period

	Pre-reform	Post-reform	Difference: Post-Pre
Non-Refugee, Non-Mexican Immigrants			
Unambiguous States	0.031	0.119	0.088
Low Benefit, Low Access	0.043	0.138	0.095
High Benefit, High Access	0.020	0.100	0.081
Mixed Message States	0.026	0.488	0.462
Low Benefit, High Access	0.024	0.209	0.185
High Benefit, Low Access	0.028	0.766	0.739
Refugees			
Unambiguous States	0.034	0.133	0.099
Low Benefit, Low Access	0.041	0.137	0.096
High Benefit, High Access	0.027	0.128	0.101
Mixed Message States	0.044	0.273	0.230
Low Benefit, High Access	0.049	0.179	0.130
High Benefit, Low Access	0.038	0.367	0.329
Mexicans/Central Americans			
Unambiguous States	0.013	0.074	0.061
Low Benefit, Low Access	0.021	0.077	0.056
High Benefit, High Access	0.005	0.072	0.067
Mixed Message States	0.076	0.093	0.016
Low Benefit, High Access	0.007	0.158	0.150
High Benefit, Low Access	0.145	0.028	-0.117
Welfare Recipients Before 1996			
Unambiguous States	0.029	0.133	0.104
Low Benefit, Low Access	0.049	0.188	0.138
High Benefit, High Access	0.009	0.078	0.069
Mixed Message States	0.085	0.264	0.179
Low Benefit, High Access	0.009	0.155	0.146
High Benefit, Low Access	0.160	0.373	0.213
Non-Welfare Recipients Before 1996			
Unambiguous States	0.021	0.124	0.103
Low Benefit, Low Access	0.026	0.126	0.100
High Benefit, High Access	0.017	0.123	0.105
Mixed Message States	0.028	0.358	0.330
Low Benefit, High Access	0.037	0.163	0.125
High Benefit, Low Access	0.018	0.552	0.535

*based on model with all two-way and three-way interactions among benefit, access, and time period

Table 7

Predicted Percentage Going on Welfare (Among Non-recipients), and Staying on Welfare (Among Recipients)

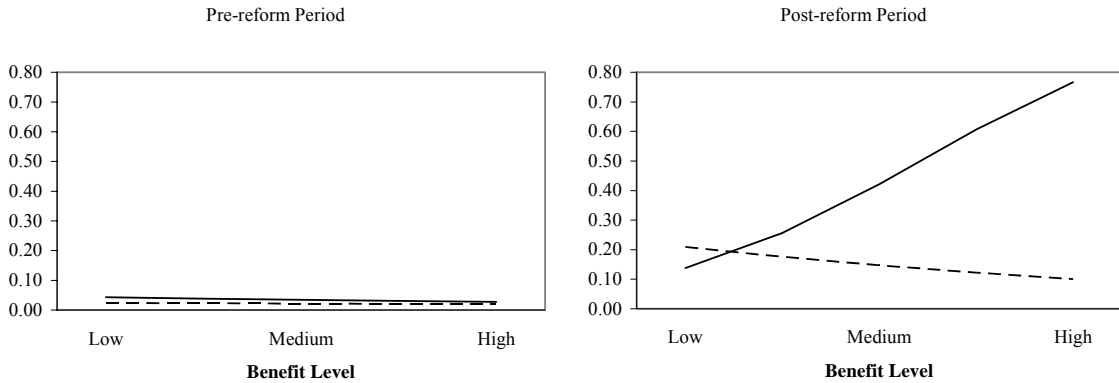
	All Immigrants			Mexicans/Central Am's			Other Immigrants		
	Pre-reform	Post-reform	Change	Pre-reform	Post-reform	Change	Pre-reform	Post-reform	Change
Going on Public Assistance									
U.S. Born	5.2	4.3	-0.9	5.1	4.1	-1.0	5.1	4.1	-1.0
Naturalized Pre-reform	5.0	4.0	-1.0	11.4	5.1	-6.3	4.1	3.9	-0.3
Naturalized Post-reform	5.4	4.0	-1.4	6.8	4.2	-2.6	5.3	4.3	-1.0
Never Naturalized	7.5	3.9	-3.6	12.0	3.5	-8.5	5.2	5.3	0.1
Staying on Public Assistance									
U.S. Born	81.8	70.8	-11.0	81.8	70.5	-11.3	81.8	70.7	-11.1
Naturalized Pre-reform	82.6	65.0	-17.6	87.0	58.8	-28.3	80.1	66.3	-13.8
Naturalized Post-reform	82.3	68.8	-13.5	77.7	64.9	-12.8	84.2	69.4	-14.8
Never Naturalized	83.3	69.5	-13.8	80.8	67.0	-13.8	84.2	68.8	-15.4

Note: Predicted values are based on event history models of going on welfare and staying on welfare that include interactions between time period and citizenship/nativity and control for country of origin, race/ethnicity, education, income to poverty ratio, pre-reform earnings, home ownership, age, sex, marital status, number of children, disability, and state unemployment rate, welfare access and benefit level.

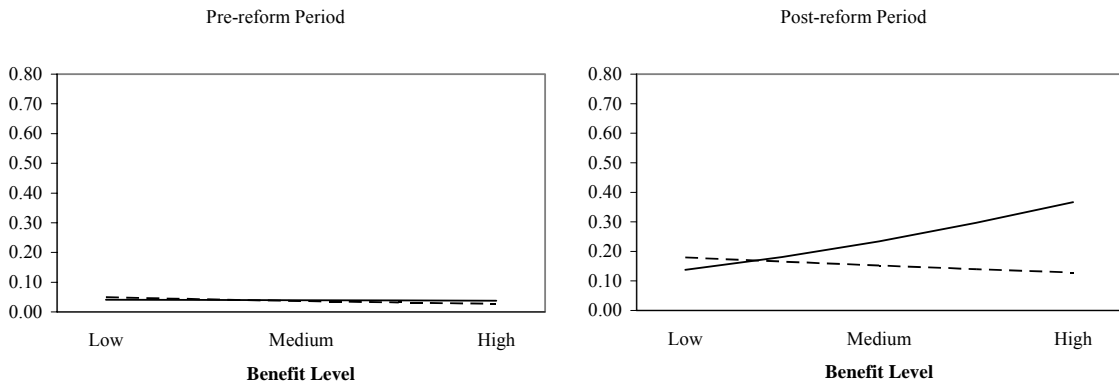
Figure 1

Predicted Annual Probability of Naturalizing By Access, Benefit Level, and Time Period Among Mexicans and Central Americans, Refugees, and Other Immigrants

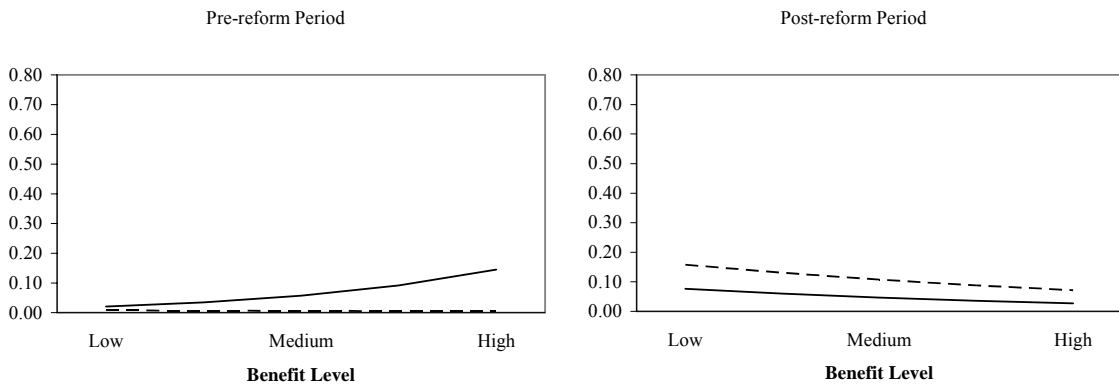
Non-Refugee, Non-Mexican Immigrants



Refugees



Mexicans/Central Americans

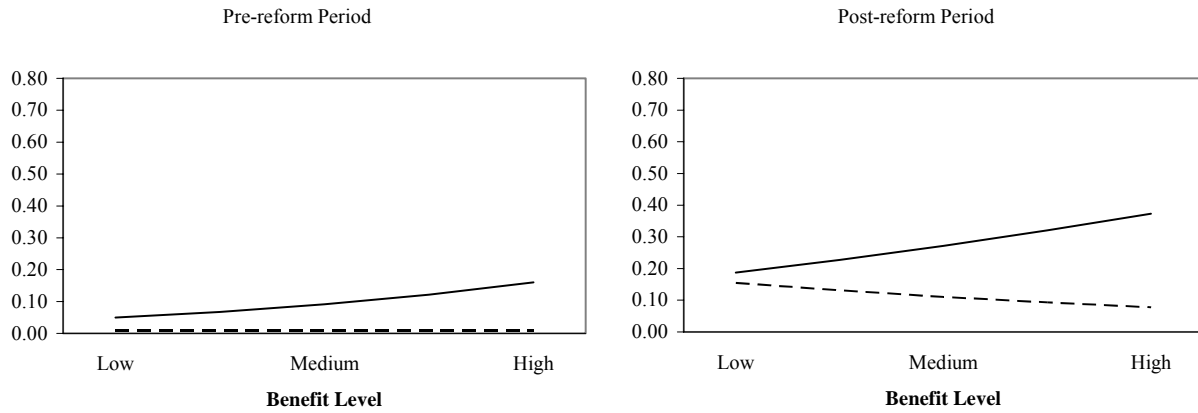


———— High Access - - - - - Low Access

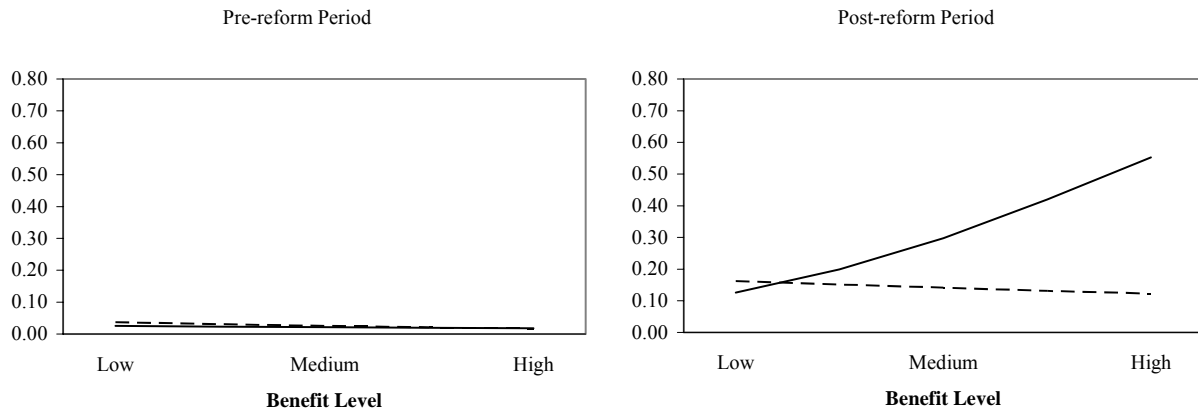
Figure 2

Predicted Annual Probability of Naturalizing
By Access, Benefit Level, and Time Period Among Welfare Recipients and Non-recipients

Received Welfare Before 1996



Non-Recipient Before 1996



———— High Access - - - - - Low Access

Appendix Table 1
Sample Descriptives

	All Immigrants	Non-refugee, Non-Mexican	Refugees	Mexicans & Central Americans
Naturalized in year t (%)	5.0	5.8	6.8	3.5
Years in U.S.	14.5	14.4	10.9	15.9
Pre-Reform: 1987-1995 (%)	61.5	64.1	65.3	57.4
Transition Period: 1996-1997 (%)	18.0	18.1	18.3	17.9
Post-Reform: 1998-2001 (%)	20.5	17.8	16.4	24.8
Age 18-29 (%)	23.7	18.2	20.8	30.5
Age 30-44 (%)	43.8	44.3	39.6	45.0
Age 45-64 (%)	25.7	29.7	29.9	20.1
Age 65+ (%)	6.7	7.8	9.8	4.5
Mexican/Central Am. (%)	41.7	0.0	0.0	100.0
Refugee (%)	15.9	0.0	100.0	0.0
Asian (%)	13.3	31.2	0.0	0.0
Other Immigrant (%)	29.2	68.8	0.0	0.0
U.S.Born Spouse (%)	23.2	25.2	16.4	23.7
Naturalized Spouse (%)	9.9	12.2	7.7	8.3
Non-citizen spouse (%)	36.5	31.7	46.1	37.7
Not Married (%)	30.5	30.9	29.8	30.2
N Children Age 0-14	1.3	1.0	1.1	1.6
Disabled (%)	4.2	4.7	4.2	3.7
Homeowner (%)	51.6	51.0	47.2	54.0
Poor English (%)	34.6	19.4	44.8	46.3
Income to Poverty Ratio	2.5	3.2	2.1	1.9
0-8 years (%)	30.3	17.2	24.4	46.0
9-11 years (%)	13.0	9.2	9.2	18.3
HS graduate (%)	30.5	30.7	40.8	26.4
More than HS (%)	26.1	42.8	25.6	9.3
Welfare Recipient any time before 1997 (%)	52.4	36.8	61.5	64.9
Welfare Recipient in 1997 (%)	24.1	17.1	31.2	31.9
Cash (%)	8.1	6.0	15.3	7.6
Non-cash only (%)	16.0	11.1	15.9	24.3
Naturalization Program in State (%)	74.7	77.8	76.9	70.8
Naturalization Processing Time	0.494	0.516	0.493	0.471
Non-citizen Welfare Access	0.724	0.726	0.705	0.730
State Welfare Benefit Level	0.074	0.073	-0.065	0.128
Person-years	5,837	6,019	2,555	5,837

Source: 1992-2002 SPD Longitudinal File.

Sample: Person-years from 1988 to 2002 contributed by immigrants who were non-citizens in the prior year.