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The Use of Transfers by Immigrants

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The Use of Transfers by Immigrants

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Abstract

This paper uses data from the 1976 Survey of Income and Education to examine the receipt of transfers by immigrants in comparison to the native born. The average level of transfers is found to be considerably higher among families headed by male immigrants. However, this is almost entirely due to the higher average age of family members among the immigrant group--a reflection of the large inflows of immigrants into the U.S. during the pre-World War I period. Holding other factors (including age) constant, immigrant families are found to be considerably less likely to rely on welfare than native families, while their receipts from social insurance programs are found to be only slightly higher.

I. Introduction

The recent large inflows of refugees from Southeast Asia, Cuba, and Haiti, and of illegal immigrants from Mexico, Latin America, and elsewhere have focused public attention on the consequences of these population movements for the United States economy. When considering the advisability of admitting immigrants to the U.S., their use of the transfer system is necessarily a major consideration. While this issue is one that excites much public interest, relatively little previous work has been done on the topic.[1]

Some of this concern over the economic impact of immigrants may stem from beliefs that recent arrivals differ in important respects from earlier immigrants. However, given the time dependent nature of the "Americanization" process--the process by which immigrants adapt to their surroundings--and the importance of age-related factors in determining transfer receipts, it is helpful to assess the experiences of the whole immigrant population, including earlier arrivals, in forming judgments as to the likely impact of newcomers. This is the strategy pursued in this paper. In the conclusion we specifically consider the implications of our findings for recent immigrants.

Immigrant-native differences in receipts from major transfer programs during 1975 are shown in Table 1. At a superficial level, these figures lend some support to fears that immigrants constitute a burden on the transfer payment system. On average male immigrants and their families (immigrant families) received more of both welfare (e.g., public assistance, AFDC, supplemental security income) and social insurance (e.g., social security, unemployment insurance, workman's compensation)

payments than native-born males and their families (native families).[2] This amounted to a total differential of 53 percent or $571 per family per year. This differential reflects both immigrant families' greater likelihood of participating in each type of program (i.e., welfare or social insurance) and their higher average payment levels conditional on participation.

The purpose of this paper is to develop a fuller understanding of the reasons for these immigrant-native differences in the utilization of transfers. Such an investigation may be useful in formulating immigration policy. For example, if policy makers wish to minimize the size of outlays on transfers, such information may be relevant to the selection of criteria for admitting immigrants and/or for determining the level of immigration permitted. On the other hand, a deeper investigation of the causes of these observed differentials may suggest that immigrants do not, in fact, unduly burden the transfer payment system (in comparison to the native born) and that a reduction of transfer payment outlays on their account need not be a major policy concern.

Economic theory suggests that "...migration in response to economic incentives is generally more profitable for the more able and more highly motivated" (Chiswick, 1978 p. 900).[3] If such traits are distributed similarly across countries, immigrants may be more able or highly motivated than native-born individuals with similar characteristics. This implication is weakened to the extent that migration is politically motivated or is induced by the availability of more generous welfare benefits in the place of destination (Chiswick 1978). Research on the earnings of immigrants tends to support the self-selection hypothesis.

Using 1970 Census data, Chiswick (1978) finds that while male immigrants initially earn less than natives with similar characteristics, they tend to catch up to and then surpass the native-born in earnings in a 10 to 15 year period. Similar findings are obtained by Blau (1980) for the early twentieth century, a period when welfare availability would not have been a consideration in the immigration decision.

These findings suggest interesting questions regarding the utilization of transfers by immigrants. Does the increasing economic success of immigrants over time imply a decreasing reliance on transfers? As a more highly motivated group, are immigrants more reluctant to rely on transfer payments, all else equal, particularly welfare payments which have a negative social connotation? It is hoped that this paper may shed further light on the notion of the selectivity of immigration and its implications for social policy by examining the utilization of transfers by immigrants.

To elucidate these issues, we seek to determine whether immigrant families place greater or lesser demands on the transfer system than native families with similar characteristics (i.e., whether immigrant families are more or less "transfer prone" than native families). We also investigate the role of differences in characteristics across immigrant and native families in producing a higher utilization of the transfer system on the part of the former group. The policy implications of the specific characteristics identified as of primary importance in producing the differential may then be evaluated. Of particular interest is the role played by age and age-related variables.

The age distribution of the native population is determined primarily by domestic birth and death rates.[4] However, in the case of immigrants,

the major factor is the historical pattern of in-migration. Such inflows peaked during the late nineteenth and early twentieth centuries (Blau, 1980). After World War I, restrictive legislation was adopted that sharply curtailed the entry of immigrants. As a result, the average age of immigrant male family heads, 51, is considerably higher than that of native male heads, 45; and 30 percent of male immigrant heads are 65 years of age or over, in comparison to 14 percent of the male native heads (Table 2). Viewing the matter somewhat differently, on average, there is one additional family member (excluding the male head) 65 years of age or over for every five immigrant families in comparison to one such older individual for every ten native families (Table 2).

While immigrants have other characteristics that could raise their reliance on transfers, ceteris paribus (e.g., a lower educational attainment, a higher representation of minority groups), the role of age-related factors has a particular policy relevance. To the extent that the differences in the receipt of transfer payments shown in Table 1 are due to the impact of age and age-related variables, a fairly good case may be made for the view that the higher level of transfers among immigrants does not represent a cause for concern from a policy point of view. First, as with any investment in human capital, immigration is more profitable the earlier in the life cycle it takes place (i.e., the longer the remaining work life period in which the returns may be collected). Thus, it is likely that the vast majority of older immigrants have spent most of their working lives, including their most productive years, in the United States. Second, to the extent that the collection

of transfer payments by older individuals may be conceptualized as an intergenerational transfer, older immigrants have their own working age children who make positive contributions to this system in the form of income and social security taxes, etc.[5] Third, in the decision of which and how many immigrants to admit, higher costs many years in the future in the form of transfer payments to older individuals would have relatively little weight in a present value calculation, at most discount rates (Simon, 1980). Further, the age distribution of immigrants can be manipulated by public policy in a beneficial manner, e.g., to even out population imbalances in age composition due to past fluctuations in domestic birth rates (Wachter, 1980).

II. Conceptual Framework

A. The Determinants of Transfers

Given that virtually all transfer programs have work disincentives associated with them, the labor-leisure trade-off is at the heart of the transfer decision. Individuals may be viewed as comparing the value of market work with the benefits of participation in the transfer program.[6] Thus, the demand for transfers may be viewed as being determined by the following factors. All else equal, the higher the individual's market wage, the lower his demand for transfers is likely to be. Further, difficulty obtaining employment at the market wage corresponding to one's characteristics, is expected to increase the demand for transfers, other things equal. Factors which increase the demand for leisure at a given price (e.g., higher nonlabor income or assets, certain demographic characteristics) are expected to raise the demand for transfers, ceteris paribus.

The supply of transfers is determined by the eligibility requirements of the program; the program parameters (i.e., the guarantee level--benefit level at zero work hours; the variables that determine the guarantee level; and the marginal tax rate on labor income); and the stringency with which the program is administered. Given the individual's demand for and the potential supply of transfers, individual outcomes may differ depending on the skillfulness of the individual in understanding and navigating his way through the various bureaucratic requirements (i.e., his "program skills").

As we have seen in Table 1, differences between two groups (e.g., immigrants and natives) in the average level of transfer receipts may arise from group differences in the probability of participating in a transfer program [$P(T > 0)$] or the level of payments received, given participation [$T|(T > 0)$], or a combination of both. As part of our effort to explore a variety of potential sources of the observed differences between the two groups, we examine each separately. With respect to determinants, the analysis is similar in each case, except that eligibility would not influence the level of receipts of program participants [$T|(T > 0)$]. However, since the empirical analysis is conducted on aggregates of programs, eligibility for additional programs within categories could have an impact on the level of receipts, given participation.

In analyzing the utilization of transfers, it is helpful to distinguish between welfare (W) and social insurance (S) programs since the two types of programs differ in eligibility requirements and the variables which determine guarantee levels (Lampman, 1976). While specific

welfare programs are targeted on particular groups (e.g., disabled and aged persons, broken families), the basic requirement for eligibility is economic need as determined on the basis of current sources of income and also of assets. Guarantee levels are designed to bring actual family income up to a stated level of need. Social insurance programs, on the other hand may be viewed as being targeted on individuals who have had a "firm attachment to the labor force" (Lampman, p. 165). Eligibility is determined by employment of a specified duration in a covered sector. The determination of guarantee levels is guided primarily by the replacement ratio principle where a specified portion of the income lost (through disability, unemployment, retirement, etc.) is replaced by the program. The level of the individual's nonwage income or assets is typically not taken into account in determining payments under social insurance programs, however, other indicators of need, such as number of dependents, do play a role in determining benefit levels in some social insurance programs. In light of these distinctions between the two types of programs (W and S), they will be analyzed separately in the empirical work.

B. Immigrants and Transfer Payments

The analysis of the receipt of transfer payments by immigrants raises some interesting and unique issues. First, is the complex role played by the amount of time in the U.S. All else equal, the earnings of immigrants have been found to be positively related to time spent in the U.S. (Chiswick, 1978; Blau, 1980). While newcomers may initially be at a disadvantage due to lack of knowledge of customs, job opportunities, etc., their earnings are expected to increase over time as they

accumulate country-specific experience and seek out the best opportunities to utilize their skills and abilities. To the extent that higher wages are associated with lower participation in transfer programs, the indirect effect of time in the U.S. on the receipt of transfer payments (through the wage) is likely to be negative. However, controlling for the wage, the direct effect of time spent in the U.S. on transfers is unclear, a priori. On the one hand, although we do not have evidence on this point, it seems likely that the increased labor market information accumulated over time should reduce the incidence and/or duration of unemployment, ceteris paribus. This is expected to reduce the receipt of transfer payments with time spent in the country. On the other hand, over time, individuals may accumulate more information about transfer programs; their greater program skills may work to increase their receipt of transfer payments, all else equal. Further, their eligibility for and, in some cases, benefit levels in social insurance programs are expected to increase as immigrants accumulate employment experience in covered sectors. The total effect of time spent in the U.S. on the receipt of transfer payments is thus ambiguous a priori and depends on the sign and level of the direct and indirect effects.

Second, like time in the U.S., the impact of English (speaking and understanding) ability on transfer payment use is a consideration which is primarily of relevance to the foreign born (see Table 2). As in the former case, the ability to speak and understand English well has an ambiguous total effect on transfer payment use. All else equal, poor English ability is expected to increase the utilization of transfer programs through its negative effect on wages. Controlling for wages, poor

English ability may be hypothesized to increase the incidence and/or duration of unemployment through its impact on access to labor market information, resulting in a positive effect on transfer payment utilization. However, the expected negative impact of poor English ability on program skills and possibly employment in a covered sector may be expected to lower transfer payment use, ceteris paribus.

III. The Data

The data used in this study are from the 1976 Survey of Income and Education (SIE). The SIE data were gathered nationally on 158,500 households, stratified so as to include more than proportional numbers of households with children living in poverty. The immigrant sample is comprised of all families in which the male head is a foreign-born male, 18 years of age or over, who arrived in the U.S. during or before 1974. The income data in the SIE refer to calendar year 1975. Those arriving in 1976 were excluded from the analysis, since they did not earn income or receive transfer payments in the U.S. during 1975. In addition, since individuals who arrived during 1975 came after the start of the year, their income and transfer data do not represent a full year, and such individuals have therefore been excluded from the sample. To economize on data processing costs, the native sample is comprised of a random subsample of families from the SIE in which the male head is a native-born male, 18 years of age or over (native men married to immigrant women are not included in the native sample). Individuals born in Puerto Rico and other U.S. territories were excluded from the sample.

No information is available regarding the legal-illegal status of the immigrants in the SIE sample. However, it seems likely that illegal

immigrants are underrepresented, since no special efforts were made to include them. Other evidence suggests that the utilization of government transfers by illegal immigrants is less than that of legal immigrants, since the former may be ineligible if their illegal status is discovered (U.S. House of Representatives, 1978). Thus, a focus on legal immigrants is likely to give an upper bound on our estimates of the utilization of transfers by immigrants.

IV. Empirical Procedures and Results

A. Estimation Procedures

The probability of participating in transfer programs [$P(T > 0)$] and the level of receipts, given participation [$T|(T > 0)$] were estimated separately for each type of transfer program (i.e., welfare and social insurance programs). The variables included in the estimating equations may be seen in Table 4 (see Table 3 for variable definitions). The results presented here are for pooled immigrant-native regressions. However, similar findings were obtained when separate regression equations were estimated for each group.

As noted earlier, all else equal, the wage is expected to negatively affect $P(T > 0)$ and $T|(T > 0)$. However, in the empirical work, we must qualify this prediction somewhat in the case of social insurance programs where benefits are determined on the basis of the replacement principle (i.e., are a positive function of earnings). Since we do not explicitly control for the program parameters in the estimating equations, the sign of the wage variable becomes uncertain <u>a priori</u>.

The income and asset variables (OTHERY and HOUSEQ) are proxies for the demand for leisure as well as eligibility and benefit levels under

welfare programs. In the case of welfare programs, the latter consideration is likely to outweigh the former and to result in a negative sign for these variables. While positive signs on OTHERY and HOUSEQ are expected in the social insurance equations (due to the effects of these variables on the demand for leisure), we may note that their levels are measured at the end of the year. Participants in social insurance programs may have depleted their assets over the period, resulting in spurious negative correlations between the utilization of social insurance transfers and both variables. Further, high levels of income and assets may reflect a taste for work and saving. Thus, due to greater past work experience, persons with higher other income and assets may be more likely to qualify for certain kinds of social insurance payments.

The racial and ethnic variables (BLACK, OTHER, SPAN) may reflect the impact of labor market discrimination, controlling for wages and other factors. If, for example, individuals from these groups expect slower future wage growth as a result of labor market experience or encounter more difficulty locating a job (i.e., have higher unemployment rates), they may be more likely to utilize transfers than comparable white nonhispanics.[7] There may be other racial and ethnic differences in the demand for leisure, all else equal, due to noneconomic factors, but one can only speculate on the signs of such possible effects.

The other demographic variables (MAR through HD68PLUS) are proxies for the demand for leisure, as well as eligibility and benefit levels under a variety of transfer programs. Given the various factors represented by these variables, it is not possible to predict all their signs a priori. However, a positive association between the age of the head and other family members and the collection of transfers is expected due to both an increased demand for leisure and an increased eligibility for

welfare (e.g., supplemental security) and social insurance (e.g., social security retirement and disability) programs. VET is expected to positively affect the utilization of social insurance programs through its impact on eligibility for veterans benefits. The locational variables (SMSA through CENTER) are intended to control for area differences in the eligibility requirements and benefit formulas of transfer programs, as well as the stringency with which the programs are administered at the local level. The inclusion of these variables also adjusts for locational differences in economic conditions and the cost of living.

Finally, the variables ENGPOOR through (FOR)(BEFR20) are included to capture the impact of foreign birth on the receipt of transfers. The dummy variable specification of the impact of time spent in the U.S. was dictated by the availability of this information only in categorical form on the SIE tape. As noted earlier, the direct effects of these variables on transfers, controlling for wages and other factors, are unclear, a priori. However, a positive association between the utilization of social insurance transfers and time spent in the U.S. is likely due to the accumulation of experience in covered sectors.

One problem in estimating these equations is that hourly wages cannot be computed for those who were not employed at the time of the survey. It would be possible to use the estimated coefficients from an OLS wage regression based on labor force participants to predict wages for non-participants. However, a possible censoring bias arises from such a procedure, if the probability of being employed is correlated with the wage, given employment. This bias is potentially important in our sample since wages were not observed for 30 percent of the male heads. The possible censoring bias in estimating wages can be eliminated using a

technique developed by Heckman (1980). For each individual i, one includes as an additional explanatory variable in a wage regression:

$$\lambda_i = - \frac{f(B'X_i)}{F(B'X_i)}, \text{ where}$$

f(-) and F(-) are, respectively, the standard normal density and cumulative distribution functions, B is a vector of probit coefficients from an equation estimating the probability of being employed at the time of the survey and X includes all the exogenous explanatory variables present in the wage and/or transfer equations.

The other explanatory variables in the wage equation include the traditional human capital variables, marital status, race and ethnic group, veteran status and the locational variables, as well as dummy variables for English ability, foreign birth and time spent in the U.S. (see Table A-1 for the exact specification of the wage equation).

It should also be noted that a possible censoring bias may exist in the case of the transfer receipt regression, as well, since it is estimated on a censored sample of transfer program participants. However, we have not attempted to correct for the problem in this case, since the explanatory variables included in the transfer probability and receipt equations are identical. Although technically it would be possible to include an estimate of λ based on that transfer probability equation in the transfer receipt equation (due to the nonlinear estimation technique), the collinearity between λ and the other explanatory variables would be too severe to allow any meaningful conclusions. Censoring bias is essentially an omitted variable problem. To the extent that we have included proxies for the major determinants of the level of transfer payments, it may not be important in this case. Further, even

if censoring bias exists, some evidence suggest that its impact is considerably larger when values of the dependent variable are inputed for nonparticipants (Smith, 1980). Our use of the transfer receipt equation is primarily limited to the participant group. Finally, there is no reason to suppose that, to the extent censoring bias is present, immigrants and natives are differentially affected by it in such a way as to bias our findings regarding group differences in transfer receipts in one direction or another.

B. Empirical Results

Our findings for the estimation of the probability of participating in welfare and social insurance programs [$P(T > 0)$] and the level of receipts from each type of program, given participation [$T|(T > 0)$] are given in Table 4. We first briefly consider our findings for the control variables and then proceed to a detailed examination of the impact of foreign-birth on the receipt of transfers.

Wages are found to have a significantly negative effect on the probability of participating in both welfare and social insurance programs (despite the ambiguity of their expected effect in the latter case). Specifically, computations based on the estimated coefficients in Table 4 indicate that a 10 percent increase in wages is associated with a 5.5 percent reduction in the probability of participating in welfare programs and a 6 percent reduction in the probability of participating in social insurance programs.[8] Among participants in social insurance programs, the estimated wage coefficient is significantly positively related to the level of receipts, possibly due to the impact of the replacement ratio principle. Among participants in welfare programs, the coefficient on LNWAGE is positive but not significant. This

may indicate little labor supply response to wage changes among welfare recipients or in part reflect the truncated nature of the sample.

The level of nonlabor income and assets is found to negatively influence the probability of participating in both types of transfer programs. It may be recalled that the negative effect of OTHERY and HOUSEQ in the social insurance probit analyses may reflect asset depletion. In this regard, it is interesting to note that, among participants, OTHERY is significantly positively related to the level of social insurance payments. (HOUSEQ is negative, but insignificant).

Other things equal, members of minority groups are more likely to participate in welfare programs and less likely to participate in social insurance programs, although these effects are not always statistically significant. Among participants in transfer programs, there is some tendency for members of minority groups to receive higher welfare payments, ceteris paribus. The coefficients on the racial and ethnic variables in the social insurance payment regression are not significant and are generally small relative to their standard errors. As noted earlier, the greater reliance of minority individuals on welfare may reflect the impact of labor market discrimination with respect to wage growth and/or the probability of obtaining employment (as well as group differences in the demand for leisure due to noneconomic factors). The findings in Table 4 suggest that, all else equal, minority males (and/or their spouses) have greater difficulty in qualifying for social insurance programs, perhaps due in part to discrimination in gaining access to covered employment. This would also work to increase their utilization of welfare programs, ceteris paribus.

With respect to the impact of the demographic variables, it is particularly interesting, in light of the age composition differences between

immigrant and native households, to note the sizable effect of the age-related variables on the probability of participating in both types of transfer programs. Considering first the impact of the age of the male head, we see, for example, that having a male head aged 65 to 67 or 68 and over substantially raises the probability of the family receiving welfare payments (by 2.3 and 1.3 percentage points, respectively) relative to a family headed by a male aged 18 to 44, all else equal.[9] Similarly, in comparison to a family headed by a male aged 18 to 44, the family's probability of participating in social insurance programs is 49.3 percentage points higher when the male head is aged 65 to 67 and 67.3 percentage points higher when the head is 68 or over, ceteris paribus. Among social insurance recipients, families headed by a male between the ages of 65 and 67 receive $1706 more, and those headed by a male aged 68 or over receive $1978 more than families headed by an 18 to 44 year old male, other things equal. All these effects are large relative to the means of the dependent variables given in Table 1. (The effects of the age of head variables on welfare receipts, given participation, are positive, but considerably smaller and are not statistically significant).

The presence of additional family members over 65 (excluding the male head) also has a strong positive effect on the collection of transfers. An additional older person in the family raises the probability of participation by 3.8 percentage points, in the case of welfare programs, and by 41.9 percentage points, in the case of social insurance programs, ceteris paribus. All else equal, among participants in social insurance programs, an additional older person raises payments received by about $1092. (Again, the effect of an additional older person on welfare payments received by participants is positive, but much smaller and not statistically significant.)

As expected, veterans are significantly more likely to participate in social insurance programs which include veterans programs for which only they are eligible. They also receive higher social insurance payments, all else equal, suggesting that veteran's progams are either more generous than other social insurance programs or have a larger work disincentive effect or both.

We now turn to a consideration of the impact of English (speaking and understanding) ability and the dummy variables for time spent in the U.S. on the utilization of transfers by immigrants. It may be recalled that, all else equal, these variables influence the receipt of transfers both indirectly, through their impact on wages, and directly, holding wages constant. As expected, poor English ability was found to be significantly negatively related to wages, while length of time in the U.S. had a significant positive effect on wages, all else equal (see Table A-1).[10] This implies that the indirect effect of poor English ability on the probability of participating in both types of transfer programs is positive, while the indirect effect of time in the U.S. on transfer program participation is negative. It may be recalled that the coefficient on wages in the receipt of transfer payments, given participation regression was positive, although small and insignificant in the case of welfare programs.

The estimated direct effects of English ability and time spent in the U.S. on the probability of receiving transfers and on the level of transfers, given participation, are given by the coefficients on these variables in Table 4. Poor English ability of the head significantly raises the probability of the family being on welfare by 1.2 percentage

points, all else equal, possibly through its hypothesized positive impact on unemployment of the head. On the other hand, families headed by a male who does not speak and understand English well have a significantly lower probability (9.4 percentage points less) of collecting social insurance transfers, ceteris paribus, possibly due to the head's difficulty in obtaining employment in the covered sector. Further, among both types of transfer recipients, poor English ability of the head is negatively associated with the level of receipts, although the coefficients on ENGPOOR are not significant. This is consistent with the notion that those with poor English ability have weaker program skills which results in a lower level of receipts. In the case of social insurance programs this finding may also reflect a shorter duration of covered employment among this group.

We now consider the direct impact of length of time in the U.S. of the male head on the family's receipt of transfers (Table 4). With respect to welfare programs, there is some tendency, albeit not a completely consistent or significant one, for earlier cohorts to be more likely to participate than more recent arrivals, all else equal (including wages). This may be due to the greater accumulation over time of information about transfer programs discussed earlier. Among welfare recipients, those who have been in the U.S. a longer period of time appear to have lower receipts, all else equal, although the effects are not significant.

Length of time in the U.S. appears to have a stronger direct effect on the collection of social insurance transfers. Controlling for the wage and other factors, the length of time in the U.S. dummy variables

are significantly positively related to the probability of participating in social insurance programs. The magnitude of the coefficients tends to rise monotonically from the more recent entrants to the earlier arrivals (until the group that arrived before 1920). Other things equal, families headed by a male who arrived in the U.S. before 1960 are estimated to have a 15.4 to 20.5 percentage point higher incidence of participation in social insurance programs than those headed by more recent (1970-74) arrivals. The coefficients on the year dummies in the social insurance payment regression are also positive, significantly so among those arriving between 1920 and 1949. Taken as a whole, these findings suggest increased utilization of social insurance transfers by immigrants over time, ceteris paribus, as they gain access to and accumulate experience in covered sectors (with a corresponding increase in eligibility and, in some cases, benefit levels).

The total effects of these explanatory variables on the utilization of transfers have been estimated on the basis of reduced form equations (Table 5).[11] Taking into account both direct and indirect effects, those who do not speak and understand English well are more likely (than those who do) to receive welfare payments, but less likely to participate in social insurance programs. Those with poor English ability receive a lower level of each type of payment, given that they participate in a transfer program. On net, those who do not speak and understand English well have higher expected payments from welfare programs but lower expected payments from social insurance programs. Their total expected payments are $202 lower than those whose command of Engish is superior. This somewhat surprising result is dictated by their lower utilization of social insurance programs.

The cohort effects in Table 5 have been expressed relative to the native-born to give an indication of the relative utilization of transfers of immigrants in comparison to this group, ceteris paribus. Other things equal, immigrant families are estimated to have a lower incidence of welfare dependency and lower welfare receipts, given participation, than native families, regardless of length of time in the U.S. of the male head. As a result, the expected welfare receipts of immigrant families range from $17 to $34 less, ceteris paribus, depending on length of residence. On the other hand, while participation in social insurance is initially less for immigrant than native families, after about 15 years of residence of the male head, immigrant families begin to have a higher incidence of participation, all else equal. The social insurance receipts of immigrant families given participation, are about the same or less than native families, all else equal, when the male head has arrived after 1949. However, among the families of longer-term residents, receipts are higher than for native families, ceteris paribus.

To obtain an estimate of the relative importance of differences in the response to given characteristics and differences in characteristics in generating a higher utilization of transfers by immigrant families, we turn to the decomposition in Table 6. We first consider immigrant-native differences in the response to a given set of characteristics--or the overall effect of foreign-birth, all else equal, when the length of time in the U.S. variables are evaluated at their mean levels for immigrants (row 7). Again, reduced form transfer equations (omitting wages as an explanatory variable) are employed to obtain total effects. But it is interesting to note that the wages of immigrant male heads are

found to be about 14 percent higher than those of comparable native's (column 1, row 7). This finding is supportive of the notion of the selectivity of immigration in terms of ability and/or motivation of which Chiswick (1978) and Blau (1980) have found evidence. Higher immigrant wages, all else equal, work to lower the probability of participating in welfare and social insurance programs of immigrants in comparison to natives, while raising the level of receipts in these programs, given participation.

Turning to transfers, we see that in fact immigrant families have a lower utilization of welfare than natives with similar characteristics. Their probability of participating in welfare programs is 1.2 percentage points lower than similar native families (column 2, row 7). This is 52 percent less than the predicted welfare probability for a native family with native mean characteristics (2.3 percent). Similarly, their level of welfare payments, given participation, is estimated to be 12 percent ($174) lower than the predicted level for a native family with mean native characteristics ($1472). This results in an expected welfare payment among immigrant families that is estimated to be 57 percent ($19) lower than the predicted level for a native family with mean native characteristics ($34). On the other hand, immigrant families are as likely to participate in social insurance programs as comparable native families (column 3, row 7). But their receipt of social insurance payments, given participation, is 4 percent ($98) higher than a native family with native mean characteristics ($2611). Thus, the expected social insurance payment of an immigrant family is estimated to be 4 percent ($37) higher than the predicted value for a typical native family ($998).

On net, all else equal, the total expected transfer payment of an immigrant family is only 2 percent ($18) higher than the predicted level for a native family with mean native characteristics. This reflects a considerably lower (in relative terms) utilization of welfare and a slightly higher (in relative terms) utilization of social insurance by immigrant families than by native families, ceteris paribus. The higher utilization of social insurance programs by immigrant families, ceteris paribus, was solely due to their higher level of receipts, given participation. This, in turn, is partly a reflection of their greater labor market success (higher wages), all else equal, since wages are positively related to the level of social insurance receipts, given participation, due to the replacement ratio principle. These findings are consistent with the notion that immigrants are a more highly motivated or able group than the native born. But it is interesting to see that the impact of economic success is not unambiguously to lower transfers.

Overall, differences in immigrant-native responses to the same set of variables do not account for a substantial portion of the observed differences in transfer receipts between the two groups. Thus, virtually the entire difference must be due to differences in characteristics. As noted earlier, a variety of characteristics may contribute to the observed differences. Table 6 suggests that, as expected, age and age-related variables play a major role. Age-related factors account for 44 percent of the predicted immigrant-native differential in expected welfare receipts ($7.42/$16.84); 96 percent of the predicted differential in expected social insurance receipts ($750.43/$778.72); and 95 percent of the predicted differential in total expected transfer receipts ($757.85/$795.56). As noted earlier, to the extent that the higher utilization

of transfers by immigrants is due to age-related factors, it may not constitute a cause for concern from a policy point of view.

Immigrants' lower levels of education and greater concentration in SMSA's and in the Northeast tend to raise their expected receipts from both welfare and social insurance programs. The higher representation of minority groups among immigrants increases their expected welfare payments but lowers their expected social insurance payments, resulting in lower total transfer receipts. On net, the other personal characteristics of immigrants work to lower their total transfer receipts, with a major factor being the lower proportion of veterans among immigrant male heads (which lowers their utilization of social insurance transfers). The higher representation of individuals who have poor English ability reduces their total transfer receipts on balance. This reflects their lower probability of participating in social insurance programs, as well as their lower receipts, given participation, in both types of programs.

V. Conclusion

Considerable social concern has been expressed over the possibility that immigrants may constitute a burden on the U.S. transfer payment system. The total expected transfer payment to an immigrant family is indeed found to be $571 higher on average than for a native family. However, when these differences are considered more closely, considerable doubt is cast on the validity of the above concern.

We have found that immigrant families are, in fact, considerably less likely to rely on welfare than native families with similar characteristics. As a result, their expected receipts from such programs are 57 percent lower than those of comparable native families. Immigrant

families are about as likely to participate in social insurance programs as native families with the same characteristics, but their receipt of payments from such programs, given participation, is somewhat higher. As a result, the expected social insurance payment of an immigrant family is found to be slightly (4 percent) higher than a comparable native family. Overall, we estimate that, on average, the total expected transfer payment to immigrant families is only 2 percent higher than their native counterparts. Thus, behavioral differences in the response of immigrant and native families to the same characteristics account for a negligible portion of the observed higher receipts of transfer payments by immigrant families. This implies that the observed difference between the two groups is almost entirely due to group differences in characteristics.

With respect to specific characteristics, we have found that immigrant-native differences in age-related variables are the primary cause of the higher utilization of transfers by immigrant families, accounting for 95 percent of the total immigrant-native difference. Since the age distribution of immigrants is determined by historical trends in immigration (particularly the adoption of a more restrictive immigration law after World War I) rather than by domestic birth and death rates, immigrants tend to be older, on average, than native-born individuals. This factor tends to increase their utilization of transfers, all else equal. However, since it is likely that the vast majority of older immigrants have spent most of their working lives in the U.S. and have working age children who contribute to tax revenues, a higher utilization of transfers of immigrants due to age-related factors does not appear to unduly burden the transfer payment system.

In considering the policy implications of these findings, it is important to point out that they are in part dependent on the past composition of the immigrant group. If, in the future, we were to see, for example, a widening of the immigrant-native disparity in educational attainment or an increase in the proportion of refugees among immigrants, the relative utilization of transfers by immigrants might begin to pose a social problem. However, for the most part, these findings suggest grounds for cautious optimism. For example, one issue regarding recent immigrants is the high representation of minority group individuals among them. But, as we have seen, the higher representation of minority groups among immigrants in the past has actually worked to lower their total transfer receipts, on net: increasing their expected welfare payments but lowering their expected social insurance payments. Similarly, the higher representation among immigrants of individuals who have poor English ability has also reduced their total transfer receipts, on balance due to their lower probability of participating in social insurance programs, as well as their lower receipts, given participation, in both types of programs. Finally, it is possible that the immigration decisions of the post-1949 cohorts of immigrants were influenced to a greater extent than earlier cohorts by the availability of more generous transfers in the U.S. than in other countries. However, when the analysis was replicated including only immigrants who had arrived after 1949, essentially the same results were obtained.

Footnotes

[1]For an attempt to balance out the costs and benefits of immigration at an aggregate level, see Simon (1980). For a study dealing with illegal immigrants, see North and Houston (1976). The U.S. House of Representatives, Report of the Special Committee on Population (1978) states:

> "Immigrants undoubtedly have an effect on the cost of providing a whole range of public services including welfare, medical care, education, public housing, fire and police protection, sanitation, transportation, and recreation. Few of these effects, however, have received more than cursory attention by immigration researchers or by the administrators of these public services."

[2]The nature and significance of the distinction between welfare and social insurance type programs is explained in detail below.

[3]Greater ability or motivation raises both the opportunity cost of migrating (foregone earnings in the place of origin) and the return to migration (expected earnings in the place of destination). However, the direct costs of migrating would be the same for all individuals regardless of ability or motivation. Thus greater ability or motivation is expected to raise the returns to migration more than the costs.

[4]Outmigration is a relatively minor factor in the case of the United States.

[5]Using 1970 census data, Chiswick (1977) has found that, other things equal, the native-born sons of immigrants have higher earnings than the native-born sons of native-born parents. For a similar finding using data from the early 1900's, see Blau (1980).

[6]See, for example, Lyon (1977), Abrahamse, et al. (1976), Hamermesh (1979), Parsons (1980).

[7]In 1975, the unemployment rate of males 20 years of age and over was 11.7 percent among Blacks and other nonwhites, 9.7 among those of Spanish origin, but only 6.2 percent among whites (Employment and Training Report of the President, 1976, p. 223).

[8]The computation of these wage effects is illustrated in the case of social insurance programs (S) where the percentage change in the participation probability for a 10 percent increase in wages is given by:

$$\ln 1.1 \cdot B_{WS}\, f(B_S'\bar{X}) / \overline{SOC} \text{ , where}$$

B_{WS} is the estimated probit wage coefficient for participating in social insurance programs; B_S is the estimated vector of probit coefficients for participating in social insurance programs; $f(-)$ is the density

function for a standard normal random variable; SOC is a dummy variable equaling 1 if the individual particpates in social insurance programs, and 0 otherwise (i.e., the dependent variable in the social insurance probit analysis); and a line over the expression indicates that the weighted sample mean value is employed.

[9]These partial derivatives are computed analogously to the wage effects explained above (footnote 8), i.e., in the case of social insurance programs, for an exogenous variable (X_k): $B_{kS}f(B_S'\bar{X})$.

[10]As may be seen in Table A-1, the coefficient on λ is significantly negative. The use of coefficients from wage regressions including λ to estimate predicted wages for the full sample (including nonlabor force participants) resulted in lower mean estimates than the use of coefficients from wage regressions that did not include an adjustment for selectivity bias. This suggests that employed individuals have unobservables that are positively related to wages.

[11]See Table A-2.

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TABLE 1

RECEIPT OF TRANSFER PAYMENTS BY IMMIGRANT AND NATIVE FAMILIES, 1975[a,b]

	Natives	Immigrants
Welfare [W]	$ 71.59	$ 98.09
Social Insurance [S]	$ 997.35	$1541.64
Total [W + S]	$1068.94	$1639.73
Participation in Welfare [P(W > 0)]	.045	.057
Participation in Social Insurance [P(S > 0)]	.369	.464
Welfare, Given Participation [W|(W > 0)]	$1584.53	$1708.39
Social Insurance, Given Participation [S|(S > 0)]	$2700.70	$3324.40
Number of observations	7205	5730

[a]Welfare payments include income received by the family from public assistance, welfare (including Aid to Families with Dependent Children) or supplemental security income. Social insurance payments include income received by the family from social security, railroad retirement, veterans payments, unemployment compensation or workman's compensation.

[b]Observations are weighted by sampling weights reported in the SIE.

Source: Survey of Income and Education, 1976.

TABLE 2

MEANS AND STANDARD DEVIATIONS[a,b]

Variable	Natives		Immigrants	
	Mean	S.D.	Mean	S.D.
EDUC	12.045	3.324	10.783	4.695
EXP	27.799	17.717	35.676	20.474
EXP^2	1086.674	1161.369	1691.963	1604.384
BLACK	.087	.282	.035	.185
OTHER	.006	.076	.095	.293
SPAN	.019	.136	.231	.421
MAR	.851	.356	.825	.380
VET	.480	.500	.184	.387
OTHERY	863.433	3204.229	1162.990	3903.915
HOUSEQ	15646.647	18720.127	15359.953	19561.713
SPEDUC	10.265	4.893	8.843	5.442
PER18T64	1.021	.748	.923	.823
PERGE65	.096	.304	.209	.419
KIDSLT18	.945	1.326	.825	1.281
HD45T59	.274	.446	.221	.415
HD60T64	.071	.258	.067	.250
HD65T67	.040	.196	.048	.213
HD68PLUS	.097	.296	.256	.436
ENGPOOR	.001	.032	.114	.317
ENTRY COHORT				
1965-69	*	*	.132	.339
1960-65	*	*	.105	.306
1950-59	*	*	.195	.396
1920-49	*	*	.358	.480
BEFR20	*	*	.070	.256
SMSA	.908	.289	.967	.180
SOUTH	.331	.470	.178	.382
WEST	.180	.384	.272	.445
CENTER	.281	.450	.168	.373
PREDICTED LNWAGE[c]	1.474	.349	1.379	.458

[a]See Table 3 for variable definitions.

[b]Observations are weighted by sampling weights reported in the SIE.

[c]Predicted on the basis of the wage regression with selectivity bias correction presented in Table A-1.

*Not applicable.

TABLE 3

VARIABLE DEFINITIONS

EDUC	Highest grade completed.
EXP	Potential experience = age - education - 5 (constrained to be greater than or equal to 0).
EXP2	Potential experience squared.
BLACK	Equals 1 if the male head is black, and 0 otherwise.
OTHER	Equals 1 if the male head is other nonwhite, and 0 otherwise.
SPAN	Equals 1 if the male head is of Spanish origin, and 0 otherwise.
MAR	Equals 1 if the male head is married, spouse present, and 0 otherwise.
VET	Equals 1 if the male head is a veteran, and 0 otherwise.
OTHERY	Amount of the family's nonlabor, nontransfer income.
HOUSEQ	Market value of the house minus value of the mortgage outstanding.
SPEDUC	Equals highest grade completed of spouse, if married, and 0 otherwise.
PER18T64	Number of family members, excluding male head, aged 18-64.
PERGE65	Number of family members, excluding male head, aged 65 and over.
KIDSLT18	Number of children less than 18 years of age.
HD45T59	Equals 1 if the male head is aged 45-59, and 0 otherwise.
HD60T64	Equals 1 if the male head is aged 60-64, and 0 otherwise.
HD65T67	Equals 1 if the male head is aged 65-67, and 0 otherwise.
HD68PLUS	Equals 1 if the male head is aged 68 or more, and 0 otherwise.
ENGPOOR	Equals 1 if the male head does not speak or understand English well, and 0 otherwise.
FOR	Equals 1 if the male head is foreign born, and 0 otherwise.
(FOR)(EDUC)	Equals highest grade completed by the male head if foreign-born, and 0 otherwise.

TABLE 3 (cont.)

VARIABLE DEFINITIONS

(FOR)(1970-74)	Equals 1 if the male head is foreign born and entered the U.S. between 1970 and 1974, and 0 otherwise (reference category in the regressions).
(FOR)(1965-69)	Equals 1 if the male head is foreign born and entered the U.S. between 1965 and 1969, and 0 otherwise.
(FOR)(1960-64)	Equals 1 if the male head is foreign born and entered the U.S. between 1960 and 1964, and 0 otherwise.
(FOR)(1950-59)	Equals 1 if the male head is foreign born and entered the U.S. between 1950 and 1959, and 0 otherwise.
(FOR)(1920-49)	Equals 1 if the male head is foreign born and entered the U.S. between 1920 and 1949, and 0 otherwise.
(FOR)(BEFR20)	Equals 1 if the male head is foreign born and entered the U.S. before 1920, and 0 otherwise.
LNWAGE	Natural log of the hourly wage.
WELFARE (W)	Amount of income received by the family from public assistance, welfare (including Aid to Families with Dependent Children) or supplemental security income.
SOCIAL INSURANCE (S)	Amount of income received by the family from social security, railroad retirement, veterans payments, unemployment compensation or workman's compensation.
SMSA	Equals 1 if the family resides in an SMSA, and 0 otherwise.
SOUTH	Equals 1 if the family resides in the South, and 0 otherwise.
WEST	Equals 1 if the family resides in the West, and 0 otherwise.
CENTER	Equals 1 if the family resides in the North Central U.S., and 0 otherwise.

TABLE 4

REGRESSION RESULTS

Variables	Participation Probability (Probit)[a]		Level of Receipts Among Participants (OLS)[b]	
	Welfare	Social Insurance	Welfare	Social Insurance
OTHERY	$-.412\times10^{-4}$**	$-.104\times10^{-4}$**	-.008	.022***
	($.163\times10^{-4}$)	($.435\times10^{-5}$)	(.043)	(.007)
HOUSEQ	$-.186\times10^{-4}$***	$-.437\times10^{-5}$***	-.008	-.001
	($.185\times10^{-5}$)	($.812\times10^{-6}$)	(.005)	(.001)
BLACK	.494***	-.036	338.23**	77.39
	(.078)	(.062)	(168.26)	(126.48)
OTHER	.268***	-.165***	254.63	-142.66
	(.089)	(.063)	(205.57)	(124.61)
SPAN	.286***	-.109**	437.19**	121.18
	(.077)	(.055)	(182.44)	(108.75)
MAR	-.106	.432***	145.38	393.40***
	(.104)	(.079)	(237.91)	(121.14)
SPEDUC	-.032***	-.035***	-16.86	-7.14
	(.008)	(.006)	(20.61)	(9.32)
PER18T64	.293***	.187***	148.38**	124.34***
	(.030)	(.021)	(69.35)	(37.36)
PERGE65	.637***	1.054***	118.22	1092.40***
	(.065)	(.060)	(136.84)	(67.89)
KIDSLT18	.136***	-.036***	97.97**	67.49**
	(.017)	(.011)	(37.97)	(26.63)
HD45T59	.168***	-.034	274.73*	325.28***
	(.062)	(.036)	(151.54)	(81.86)
HD60T64	.079	.327***	254.91	791.76***
	(.103)	(.053)	(261.65)	(107.14)
HD65T67	.392***	1.240***	79.15	1705.50***
	(.111)	(.075)	(266.60)	(109.21)
HD68PLUS	.223**	1.691***	200.39	1978.10***
	(.100)	(.076)	(234.06)	(102.02)
VET	-.021	.417***	-68.71	140.24**
	(.053)	(.031)	(136.14)	(56.78)
ENGPOOR	.195**	-.237***	-115.46	-124.45
	(.094)	(.078)	(201.95)	(135.35)
FOR	-.425***	-.289***	-109.16	-157.59
	(.108)	(.070)	(253.48)	(174.18)
(FOR)(1965-69)	.083	.283***	80.63	129.64
	(.126)	(.081)	(302.19)	(203.89)
(FOR)(1960-64)	.250*	.334***	105.74	138.84
	(.136)	(.088)	(323.62)	(215.94)
(FOR)(1950-59)	.191	.403***	-60.41	118.65
	(.125)	(.077)	(304.10)	(187.92)

TABLE 4 (cont.)

REGRESSION RESULTS

Variables	Participation Probability (Probit)[a]		Level of Receipts Among Participants (OLS)[b]	
	Welfare	Social Insurance	Welfare	Social Insurance
(FOR)(1920-49)	.218*	.515***	-295.75	294.61*
	(.117)	(.077)	(274.83)	(177.46)
(FOR)(BEFR20)	.074	.388**	-98.17	152.82
	(.149)	(.162)	(341.43)	(196.34)
PREDICTED LNWAGE	-.491***	-.660***	21.77	249.93***
	(.082)	(.069)	(180.90)	(83.55)
SMSA	.152	.020	202.40	34.36
	(.104)	(.061)	(255.77)	(107.29)
SOUTH	-.068	-.279***	-550.41***	-132.45*
	(.067)	(.041)	(163.40)	(77.23)
WEST	.019	-.177***	-297.58**	-137.71**
	(.060)	(.036)	(151.56)	(65.28)
CENTER	-.148**	-.176***	-374.48**	-44.31
	(.066)	(.038)	(169.98)	(66.61)
CONSTANT	-1.167***	.226**	1135.00***	773.78***
	(.157)	(.112)	(374.93)	(167.08)
-2xLOG LIKELIHOOD RATIO	837.260	5517.138		
ADJUSTED R^2			.051	.293
N OF OBSERVATIONS	12935	12935	595	5460

(a) Asymptotic standard errors in parenthesis
(b) Standard errors in parenthesis

*Significant at the 10% level on a two-tailed test
**Significant at the 5% level on a two-tailed test
***Significant at the 1% level on a two-tailed test

TABLE 5

TOTAL EFFECTS OF FOREIGN BIRTH, LENGTH OF TIME IN THE U.S. AND ENGLISH ABILITY ON THE RECEIPT OF TRANSFER PAYMENTS[a]

Variable	Participation Probability[b]		Receipts, Given Participation[c]		Expected Transfer Receipt[d]		
	Welfare	Social Insurance	Welfare	Social Insurance	Welfare	Social Insurance	Total
Foreign[e] and Arrived:							
1970-74	-.024	-.120	-163.07	-162.68	-33.53	-353.48	-387.01
1965-69	-.022	-.039	-95.49	-1.27	-28.96	-90.19	-119.15
1960-64	-.012	-.022	-66.49	14.86	-16.84	-44.74	-61.58
1950-59	-.015	.016	-230.89	-12.24	-23.49	31.14	7.65
1920-49	-.010	.056	-553.10	177.38	-25.45	211.01	185.56
Before 1920	-.011	.051	-415.65	109.70	-23.32	168.66	145.34
ENGPOOR	.019	-.066	-227.22	-143.28	17.55	-219.90	-202.36

[a]Computed on the basis of reduced form equations, see Table A-2.

[b]The partial derivative of the probability of participating in a transfer program (PT) with respect to an exogenous variable (X_k) is computed as:

$$\frac{\partial PT}{\partial X_k} = \beta_k f(\beta'\bar{X})$$

where β_k is the estimated probit coefficient on X_k and $f(\beta'\bar{X})$ is the value of the normal density function evaluated at the weighted sample means of the exogenous variables.

[c]The partial derivative of the level of receipts, given participation (T) with respect to an exogenous variable (X_k) is the estimated OLS regression coefficient.

[d]The expected transfer receipt (ET) is defined as:

$$ET = PT \times T$$

where PT and T have been defined above. The partial derivative of the expected transfer receipt with respect to an exogenous variable (X_k) is computed as:

$$\frac{\partial ET}{\partial X_k} = T_{\bar{X}} \frac{\partial PT}{\partial X_k} + PT_{\bar{X}} \frac{\partial T}{\partial X_k}$$

where $T_{\bar{X}}$ and $PT_{\bar{X}}$ are evaluted at the weighted sample means of the exogenous variables.

[e]Note that all length of time in the U.S. effects are expressed relative to native-born individuals. The (FOR)(EDUC) interaction term is evaluated at the weighted sample mean level of EDUC.

TABLE 3

DECOMPOSITION OF THE IMMIGRANT-NATIVE WAGE AND TRANSFER DIFFERENTIALS[a]

Characteristic	Wage[b]	Participation Probability[c]		Receipts, Given Participation[b]		Expected Transfer Receipts[d]		
		Welfare	Social Insurance	Welfare	Social Insurance	Welfare	Social Insurance	Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Race or Ethnic Group[e]	-.0281	.0034	-.0076	133.53	1.78	8.51	-19.16	-10.65
Age-related Factors[f]	-.0960	.0040	.1657	57.06	580.02	7.42	750.43	757.85
Education[g]	-.0732	.0066	.0308	-21.93	-10.70	9.07	76.03	85.10
Other Personal Characteristics[h]	-.0254	.0028	-.0301	0.71	-35.40	4.14	-91.06	-86.92
Location[i]	.0105	.0022	.0153	85.20	25.60	5.37	50.14	55.51
Poor English Ability	-.0127	.0022	-.0076	-65.32	-13.74	1.61	-24.97	-23.36
Foreign-birth[j]	.1306	-.0118	.0	-173.98	97.59	-19.28	37.31	18.03
Total Predicted Differential[k]	-.0943	.0094	.1665	15.27	645.15	16.84	778.72	795.56

nsfer decompositions based on reduced form equations, see Table A-2.

the case of the OLS regressions, e.g. for the level of receipts, given participation (T), the ferential associated with the 1...m variables included in characteristic C (DC_T) is computed

$$DC_T = \sum_{i=1}^{m} B_i(\bar{X}_{iI} - \bar{X}_{iN}) = \sum_{i=1}^{m} B_i\bar{X}_{iI} + \sum_{i=m+1}^{n} B_i\bar{X}_{iN} - \sum_{i=1}^{n} B_i\bar{X}_{iN}$$

$$= \sum_{i=1}^{n} B_i\bar{X}_{iI} - \left(\sum_{i=1}^{m} B_i\bar{X}_{iN} + \sum_{i=m+1}^{n} B_i\bar{X}_{iI}\right)$$

re B_i is the estimated regression coefficient on X_i; $\bar{X}_{iI}$ and $\bar{X}_{iN}$ are the weighted means of X_i immigrants and natives respectively; and there are n variables. Note that the weighted means computed for the relevant subgroup, i.e., welfare or social insurance program participants.

the case of the probit analyses of transfer participation probabilities (PT), the differential ciated with the 1...m variables included in characteristic C (DC_{PT}) is computed as:

$$DC_{PT} = F\left(\sum_{i=1}^{m} B_i^P\bar{X}_{iI} + \sum_{i=m+1}^{n} B_i^P\bar{X}_{iN}\right) - F\left(\sum_{i=1}^{n} B_i^P\bar{X}_{iN}\right)$$

e B_i^P is the estimated probit coefficient on X_i; F(-) is the cumulative distribution function a standard normal variable; and the other symbols have been defined above. Note that in the rical work DC_{PT} as computed above was found to be approximately equal to

$$[F(\sum_{i=1}^{n} B_i\bar{X}_{iI}) - F(\sum_{i=1}^{m} B_i\bar{X}_{iN} + \sum_{i=m+1}^{n} B_i\bar{X}_{iI})].$$

[i] In the case of the expected transfer payment (ET) the differential associated with the 1...m variables included in characteristic C (DC_{ET}) is computed as:

$$DC_{ET} = (\sum_{i=1}^{m} B_i\bar{X}_{iI} + \sum_{i=m+1}^{n} B_i\bar{X}_{iN}) \times F(\sum_{i=1}^{m} B_i\bar{P}\bar{X}_{iI} + \sum_{i=m+1}^{n} B_i\bar{P}\bar{X}_{iN}) - [(\sum_{i=1}^{n} B_i\bar{X}_{iN}) \times F(\sum_{i=1}^{n} B_i\bar{X}_{iN})]$$

where the symbols have been defined above.

[2] Includes BLACK, OTHER, SPAN.

[3] Includes EXP, EXP2, PER18T64, PERGE65, KIDSLT18, HD45T59, HD60T64, HD65T67, HD68PLUS.

[4] Includes EDUC.

[5] Includes OTHERY, HOUSEQ, MAR, SPEDUC, VET.

[6] Includes SMSA, SOUTH, WEST, CENTER.

[7] Includes FOR, (FOR)(EDUC), (FOR) (1965-69), (FOR)(1960-64), (FOR)(1950-59), (FOR)(1920-49), (FOR)(BEFR20).

[8] Sum of rows (1) through (7).

TABLE A-1

WAGE REGRESESSIONS
(STANDARD ERRORS)

Variables	Without Selectivity Bias Correction	With Selectivity Bias Correction
EDUC	.058***	.058***
	(.003)	(.003)
EXP	.035***	.038***
	(.002)	(.002)
EXP^2	$-.552 \times 10^{-3}$***	$-.658 \times 10^{-3}$***
	$(.293 \times 10^{-4})$	$(.479 \times 10^{-4})$
BLACK	-.101***	-.104***
	(.032)	(.032)
OTHER	-.007	-.013
	(.031)	(.031)
SPAN	-.159***	-.153***
	(.027)	(.027)
MAR	.126***	.130***
	(.019)	(.020)
VET	.059***	.074***
	(.016)	(.016)
ENGPOOR	-.124***	-.113***
	(.041)	(.042)
FOR	.175***	.196***
	(.061)	(.061)
(FOR)(EDUC)	-.016***	-.018***
	(.004)	(.004)
(FOR)(1965-69)	.109***	.117***
	(.038)	(.038)
(FOR)(1960-64)	.151***	.143***
	(.042)	(.042)
(FOR)(1950-59)	.105***	.108***
	(.036)	(.036)
(FOR)(1920-49)	.144***	.136***
	(.038)	(.038)
(FOR)(BEFR20)	.398***	.334***
	(.117)	(.120)
SMSA	.085***	.091***
	(.031)	(.031)
SOUTH	-.040*	-.046**
	(.021)	(.021)
WEST	-.041**	-.049***
	(.018)	(.019)
CENTER	-.021	-.023
	(.019)	(.019)

TABLE A-1 (cont.)

Variables	Without Selectivity Bias Correction	With Selectivity Bias Correction
λ	---	-.191***
		(.068)
CONSTANT	.317***	.237***
	(.060)	(.066)
ADJUSTED R^2	.139	.139
Number of Observations	9116	9116

*Significant at the 10% level on a two-tailed test
**Significant at the 5% level on a two-tailed test
***Significant at the 1% level on a two-tailed test

TABLE A-2

REDUCED FORM REGRESSIONS

Variables	Participation Probability (Probit)[a]		Level of Receipts Among Participants (OLS)[b]	
	Welfare	Social Insurance	Welfare	Social Insurance
EDUC	-.087***	-.062***	27.89	6.44
	(.012)	(.007)	(26.81)	(13.48)
EXP	-.009	-.013***	32.93**	10.83
	(.006)	(.004)	(15.73)	(8.40)
EXP^2	$.101 \times 10^{-3}$	$.137 \times 10^{-3}$*	-.209	-.192**
	$.804 \times 10^{-4}$	$(.747 \times 10^{-4})$	(.185)	(.092)
BLACK	.494***	.015	329.67**	43.29
	(.079)	(.062)	(167.57)	(126.44)
OTHER	.240***	-.149**	308.48	-148.66
	(.089)	(.063)	(206.21)	(124.71)
SPAN	.310***	-.030	453.22**	80.60
	(.076)	(.054)	(180.09)	(108.35)
MAR	-.262**	.238***	96.39	414.01***
	(.112)	(.085)	(248.52)	(129.29)
VET	-.045	.361***	-78.86	160.81***
	(.052)	(.030)	(136.06)	(56.24)
OTHERY	$-.372 \times 10^{-4}$**	$-.100 \times 10^{-4}$**	-.011	-.022***
	$(.160 \times 10^{-4})$	$(.436 \times 10^{-5})$	(.043)	(.007)
HOUSEQ	$-.183 \times 10^{-4}$***	$-.445 \times 10^{-5}$***	-.008*	-.001
	$(.186 \times 10^{-5})$	$(.822 \times 10^{-6})$	(.005)	(.001)
SPEDUC	-.025***	-.027***	-7.88	-6.18
	(.009)	(.006)	(21.39)	(9.83)
PER18T64	.291***	.185***	136.15**	123.94***
	(.030)	(.021)	(69.42)	(37.40)
PERGE65	.636***	1.062***	119.71	1093.30***
	(.066)	(.060)	(137.59)	(68.30)
KIDSLT18	.125***	-.047***	78.27**	65.40**
	(.018)	(.012)	(38.78)	(27.52)

TABLE A-2 (cont'd).

REDUCED FORM REGRESSIONS

Variables	Participation Probability (Probit)[a]		Level of Receipts Among Participants (OLS)[b]	
	Welfare	Social Insurance	Welfare	Social Insurance
HD45T59	.108	-.014	-144.56	316.31**
	(.102)	(.061)	(247.24)	(140.80)
HD60T64	.084	.448***	-359.92	716.90***
	(.161)	(.097)	(391.97)	(194.22)
HD65T67	.426**	1.423***	-563.66	1707.2***
	(.179)	(.122)	(421.64)	(208.22)
HD68PLUS	.379*	2.014***	-503.54	1993.80***
	(.199)	(.150)	(463.96)	(230.03)
ENGPOOR	.327***	-.167**	-227.22	-143.28
	(.097)	(.080)	(211.32)	(136.99)
FOR	-1.128***	-.503***	251.47	-192.55
	(.175)	(.119)	(388.02)	(237.84)
(FOR)(EDUC)	.063***	.018**	-36.35	2.62
	(.012)	(.008)	(29.53)	(13.91)
(FOR)(1965-69)	.041	.205**	67.58	161.41
	(.125)	(.081)	(301.13)	(203.91)
(FOR)(1960-64)	.201	.246***	96.58	177.54
	(.135)	(.088)	(322.74)	(215.82)
(FOR)(1950-59)	.165	.343***	-67.82	150.44
	(.125)	(.077)	(304.02)	(188.06)
(FOR)(1920-49)	.251**	.443***	-390.03	340.06*
	(.119)	(.078)	(283.51)	(179.02)
(FOR)(BEFRZO)	.233	.431**	-252.58	272.38
	(.166)	(.178)	(378.47)	(209.75)
SMSA	.109	-.036	205.61	59.65
	(.104)	(.060)	(254.24)	(106.86)
SOUTH	-.059	-.241***	-546.05***	-145.51*
	(.067)	(.041)	(163.16)	(77.46)

TABLE A-2 (cont'd.)

REDUCED FORM REGRESSIONS

Variables	Participation Probability (Probit)[a]		Level of Receipts Among Participants (OLS)[b]	
	Welfare	Social Insurance	Welfare	Social Insurance
WEST	.063	-.135***	-325.23**	-147.98**
	(.060)	(.036)	(151.38)	(65.34)
CENTER	-.135**	-.158***	-404.70**	-50.32
	(.066)	(.038)	(170.00)	(66.71)
CONSTANT	-.657***	.299**	436.66	921.50***
	(.212)	(.128)	(502.52)	(248.95)
-2XLOGLIKE-LIHOOD RATIO	874.790	5541.827		
ADJUSTED R^2			.056	.293
N OF OB-SERVATIONS	12935	12935	595	5460

(a) Asymptotic standard errors in parenthesis
(b) Standard errors in parenthesis

*Significant at the 10% level on a two-tailed test
**Significant at the 5% level on a two-tailed test
***Significant at the 1% level on a two-tailed test