# Has the Labor Market Quality of U.S. Immigrants Fallen? Evidence from Longitudinal Data

by

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## ABSTRACT

A decline in immigrant entry earnings, controlling for observable characteristics, has fostered concerns about the labor market "quality" of recent immigrants and prompted changes in U.S. immigration law as well as calls for further change. The importance of this concern depends upon whether the unexplained drop in entry earnings reflects a decline in immigrant ability versus a decline in skill transferability; the latter—according to basic tenets of human capital theory—should be associated with greater investment in U.S.-specific human capital and faster earnings growth. This paper uses longitudinal individual data to shed new light on the over time transition of entry earnings and earnings growth of foreign-born men and women relative to U.S.-born men and women.

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Recent U.S. immigrants are starting their economic lives in the United States at substantially lower earnings than previous immigrant cohorts. Examining the wages of immigrant men who had been in the United States 5 years or less, Borjas (1992) found that for 1955-60 entrants, there was a 13 percent differential between their wages in 1960 and those of U.S.-born men; for the 1965-69 cohort, the foreign-born/native-born wage deficit was 16%, and for the 1975-1979 cohort, it grew to 30%. Adjusting for immigrant-native age and education differences the corresponding adjusted differentials became 11%, 15%, and 22%, leaving most of the increasing differential intact. It is this decline in immigrant earnings, unaccounted for by changes in observable human capital, that has inspired discussions of a possible decline in the "quality" of U.S. immigrants while casting doubt on the optimistic conclusion of cross-sectional studies that immigrants have faster earnings growth than natives (Chiswick, 1978, 1979). Yet, the importance of the unexplained earnings drop depends upon its underlying cause.

Borjas (1987, 1990, 1992a, 1992b) has theorized that immigrants coming from countries with greater income inequality than the United States will be selected from the lower tail of the ability distribution in the sending country, whereas immigrants from countries with less income inequality than the United States will be selected from the upper tail of their countries' ability distributions. With countries that have relatively egalitarian income distributions, "...the source country in effect "taxes" able workers and "insures" the least productive against poor labor market outcomes... generating incentives for the most able to migrate to the U.S..... Conversely, if the source country offers relatively high rates of return to skills (...typically true in countries with substantial income inequality), ... economic conditions in the U.S. become a

magnet for individuals with relatively low earnings capacities, and the immigrant flow is negatively selected." (Borjas, 1992b, p. 429)

Available evidence suggests that the major source countries of recent U.S. immigration have less equal income distributions, relative to the United States, than the dominant source countries of yesteryear.[1] Thus one hypothesis for the decline in immigrant entry earnings is that it has been caused by a decline in immigrant ability, a result of the relatively unequal income distributions of the source countries currently dominating U.S. immigration (Borjas 1987, 1992a). This decline, it is proposed, was intensified by the 1965 Immigration and Naturalization Act,

[1] "The typical person who immigrated between 1935 and 1940 originated in a country where the ratio of the income accruing to the top 10 percent of the households to that accruing to the bottom 20 percent...was 4.3. This statistic increased to 5.5 for the 1955-60 flow, to 6.8 for the 1965-70 flow, and to 8.8 for the 1975-80 flow.... therefore, the...dispersion in the average immigrant's source country doubled in the postwar period, with most of that increase occurring after 1960." (Borjas 1992a, p.44) "Prior to...1965..., immigration to the United States from Eastern Hemisphere countries was regulated by numerical quotas. These quotas were based on the ethnic population of the United States in 1919 and thus encouraged immigration from (some) Western European countries and discouraged immigration from all other countries. The favored countries have one important characteristic: their income distributions are probably much less dispersed than those of countries in Latin America or Asia. The 1965 Amendments revamped the quota system, ... and led to a substantial increase in the number of immigrants from Asia and Latin America. The new flow of migrants originate in countries that are much more likely to have greater income inequality than the United States. It would not be surprising, therefore, if the quality of immigrants declined as a result of the 1965 Amendments." (Borjas, 1987, p. 537)

which emphasized family-based admissions and opened the U.S. door to those previously excluded; recent immigrants come predominantly from Asian and Hispanic countries in marked contrast to earlier, European dominated, immigration. According to this hypothesis, we would expect that as immigrant entry earnings have declined, immigrant earnings growth would have declined as well since low ability would likely dampen earnings growth.

An alternative hypothesis for the entry earnings decline is that it reflects a decline in the extent to which immigrants' source-country human capital is transferable to the United States. The Asian and Hispanic countries dominating recent U.S. immigration tend to be less economically developed than the United States. A decline in immigrant skill transferability could have occurred either because the skills taught in less economically developed countries are less applicable to the U.S. economy, than the skills taught in economically developed countries (Chiswick, 1979; Mincer and Ofek, 1982), or because limited opportunities in less-developed countries make it worthwhile for individuals to immigrate even when immigration entails substantial post-migration investment in new skills and credentials such as learning English, undertaking a U.S. degree program, or starting a business (Duleep and Regets, 1997c).

Immigrants will invest more in host-country-specific human capital than natives and low skill transferability immigrants more than high skill transferability immigrants if the return to investment is higher and the cost lower. Immigrants face a higher return to human capital investment than natives because of a complementary relationship between the skills acquired in the home and host country: learning English or acquiring U.S. training or work experience enables immigrants to bring to the U.S. labor market those skills they acquired before migrating. This complementarity boosts the return on U.S.-acquired human capital, increasing the incentive to invest in U.S.-specific human capital and hence the steepness of an immigrant's U.S. age-earning profile (Chiswick 1978, 1979). To the extent that additional transferability is harder

to achieve the higher the initial rate, the lower the initial skill transferability, the greater the return to investment in host-country human capital. By virtue of the less than perfect transferability of immigrant human capital, with the same initial level of human capital, the opportunity cost per unit of investment will be less for immigrants than for natives. Among immigrants, the lower the initial skill transferability, the lower the opportunity cost of investment (Duleep and Regets, 1992, 1994, 1997, 1999).[2] These relationships suggest that, holding constant levels of human capital, immigrant earnings growth will exceed that of natives, and among immigrants, there will be an inverse relationship between immigrant entry earnings and earnings growth. Thus, if the entry earnings decline reflects a decline in immigrant skill transferability, we would expect a concomitant increase in immigrant investment in U.S.-specific human capital and faster earnings growth.

[2]At the same time, initially untransferable source-country human capital can be used in the production of host-country human capital. Refer to Duleep and Regets (1996, 1999) for a formal exposition of an immigrant human capital investment model.

Following immigrant cohorts across decennial census data, Duleep and Regets (1992, 1994, 1996, 1997) confirmed the unexplained over time decline in immigrant entry earnings while, at the same time, finding a corresponding increase in earnings growth, both unconditionally, and conditioning on schooling and age.[3] A key characteristic of their analyses, in keeping with the above theoretical concepts, is that each immigrant cohort is separately analyzed thus permitting immigrant earnings growth to change as immigrant entry earnings change.[4] Their earnings growth estimates, however, are subject to potential biases stemming from immigrant emigration[5] and variations in how successfully the census "captures" various groups between censuses (Passel and Luther, 1990; Ahmed and Robinson, 1994).

There are other potential biases inherent to most immigrant cohort analyses that may affect earnings-growth estimates based on following cohorts. Efforts to follow samples representing the same people may inadvertently hide immigrant economic assimilation. For instance, many cohort studies precisely control for educational achievement in the earnings regressions. Yet because of the high educational investment of immigrants relative to the native born,[6] controlling for educational achievement will understate the earnings growth of all

[3]Duleep and Regets (1997) also followed the wages of individual immigrants and native-born men for a year using matched CPS data.

[4]The pooled cohort approach, introduced by Borjas and widely adopted in cohort analyses of immigrant earnings growth, allows the entry earnings of immigrant cohorts to change, but assumes stationarity in immigrant earnings growth. Given an inverse relationship between immigrant entry earnings and earnings growth, the stationarity assumption of the pooled cohort analyses will overstate the earnings growth of immigrant cohorts with relatively high entry earnings and underestimate the earnings growth of cohorts with relatively low entry earnings (Duleep and Regets, 1992, 1994, 1999).

[5]A method for testing the sensitivity of cohort results to emigration is presented in Duleep and Regets (1994b). For a review of emigration studies and other theoretical and empirical results, refer to Duleep(1994), and Ahmed and Robinson (1994).

[6]Duleep, Regets, and Sanders (2000) and Duleep and Regets (1999) document this for

immigrants, relative to the native born, but particularly those immigrants initially lacking U.S.-specific human capital. Immigrant regression models that pool entry cohorts from two or more censuses also generally limit the sample to employed individuals. Yet, individuals who are unemployed or out of the labor force during the first census (perhaps because of low employability or time spent in school), might be fully employed during the second.[7]

These problems clearly point to the importance of following the same individuals over time.

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ages 25 and above.

[7]This issue applies to any cohort followed between censuses, but it is particularly important for a study of immigrants since immigrants have high occupational mobility and high in-school rates (Duleep, Regets, and Sanders, 1999; Duleep and Regets, 1999).

## II. Using Social Security Longitudinal Earnings to Measure Changes in Immigrant Earnings Growth Over Time

This paper uses Social Security Administration earnings data matched to the 1994 March Current Population Survey (CPS) to describe changes over time in immigrant entry earnings and earnings growth.[8] The longitudinal individual earnings data circumvent potential cohort biases that afflict cross-sectional analyses, and biases due to immigrant emigration that afflict cohort as well as cross-sectional analyses of immigrant earnings growth.[9] A particular advantage of the Social Security administrative data is their historical nature: numerous cohorts of immigrants and natives can be followed over time. The current paper's focus is the annual earnings of working-age foreign- and native-born men and women.

Social Security maintains a longitudinal record of each person's earnings in order to determine the eligibility and amount of benefits an individual worker or dependent is entitled to. An advantage of using administrative record information over survey information for earnings data is that the force of law accompanying the collection of the administrative information is likely to encourage more accurate responses. The Social Security earnings data

[8]Refer to Duleep and Dowhan (1999a, 1999b) for earlier analyses using the Social Security matched longitudinal data focussed on the trend in foreign-born and native-born earnings growth, as well as the diversity of ways the Social Security data can be used in studying immigrant economic assimilation.

[9]A fuller discussion of how the matched Social Security earnings data resolves these issues may be found in Duleep and Dowhan (1999a, 1999b). Users of the 1994 CPS should also be aware of a weighting problem. Due to a mistake resulting from a change in the number of racial/ethnic groups used by the Census Bureau in the computation of weights, the individual weights estimated by the Census Bureau for the 1994 Current Population Survey undercount individuals in certain groups (Schmidley and Robinson (1998). Of particular concern for immigration researchers, the 1994 March CPS weights undercount Asians. To address this issue, we used new weights developed for the 1994 CPS by Jeff Passel.

used in this analysis are of high quality, but present two challenges for the researcher: they are limited to the Social Security covered employment and they do not record earnings beyond the Social Security taxable maximum.[10]

[10]Another concern is that the population of foreign born and native born in the Social Security defined labor force is not representative of these populations in general. This concern, however, turns out to be unfounded: the educational distributions of our foreign-born and native-born populations represented in the Social Security data are remarkably similar to the educational distribution of the CPS labor force populations defined as those with some positive (CPS-recorded) earnings (Duleep and Dowhan, 1999a).

About 96 percent of all U.S. jobs (including the self-employed) are covered by Social Security, with coverage applying regardless of an individual's citizenship or legal status.[11] In the earnings series of Social Security covered employment, zero earnings are recorded for persons employed in uncovered employment. This makes it difficult to distinguish the unemployed, or labor force dropouts, from persons fully employed in uncovered employment, or to distinguish the partially employed from persons working in both the covered and uncovered sectors. In examining the same individuals over time, it is important to identify those whose principle source of earnings is in Social Security covered employment. The "solution" pursued in this paper is to limit the study sample to individuals who had positive reported earnings in the first

[11]Classes of workers lacking complete coverage in the period of this paper's study include (1) federal civilian employees hired before 1984, (2) railroad workers (who are covered under the railroad retirement system), (3) certain state and local government employees (who are covered under a retirement system), (4) household workers and farm workers whose earnings do not meet certain minimum requirements (workers in industry and commerce are covered regardless of the amount of earnings) and (5) persons with very low net earnings from self-employment (generally less than $400 per year). (Social Security Administration, 1998, p. 32)

and last year of each analysis.[12]

[12] The approach reported here is the least restrictive of several other options, such as requiring positive earnings for each year in the period of analysis. The general approach of limiting the sample to those with positive Social Security earnings was used in previous studies of immigrant and native-born men (e.g. Duleep and Dowhan 1999a, b) and in a longitudinal analysis of the earnings of Blacks and Hispanics before and after the Civil Rights Act using the 1973 CPS-IRS-SSA Exact Match File, Duleep and Regets (1990). An alternative general approach (see Duleep 1986) is to exclude from the sample persons who report in the survey working in employment that is not covered by Social Security. Employment changes make this approach problematic. If the covered work-uncovered work changes differ for immigrants and natives then the results will be biased in an unknown direction.

To sidestep the top-coding handicap, while avoiding making any assumptions about the unknown distribution of earnings above the Social Security's taxable maximum, we analyzed earnings at the median. For most cohorts, the median earnings of natives and immigrants falls below the Social Security taxable maximum in each year of our analyses.[13] In addition to circumventing the top-coding handicap, an advantage of using the median, as opposed to the average, is that the median is a much less volatile measure of central tendency in small samples and is thus ideally suited for a study limited by small sample sizes for the foreign born. This is particularly important for our study since we wanted to follow each foreign-born cohort separately instead of pooling cohorts and imposing assumptions about how the earnings growth of one cohort relates to the earnings growth of another cohort.

[13] For the early cohorts where this was not always the case, we used the quarter the person reached the Social Security taxable maximum to estimate their total earnings. This information, available until 1978 (when the Social Security system started to use annual tax return data), provides actual data on the earnings of the early cohorts above the taxable maximum.

To examine the earnings growth of immigrants in the 1960's through 1980's, we tracked the earnings of foreign- and native-born men and women for 10-year periods where the first year of earnings measurement follows the last year of each CPS year-of-immigration category.[14] Immigrants were identified through the 1994 CPS information as persons born abroad of non-U.S. parents. Sample selection for each of the cohort-specific 10-year periods requires that men and women, regardless of nativity, be at least 25 years old in the initial year of earnings analysis and no more than 60 years old in the tenth year of analysis and that they have positive Social Security earnings in the first and last year of each ten-year earnings-measurement period. Each cohort of foreign-born men and women is further defined by the year-of-U.S. immigration information on the 1994 CPS.[15] These sample selection rules result in 6 cohorts in which the same individual immigrants and natives are examined at the year following the last year in each CPS year of immigration category, and ten years later. Starting with the 1984-85 cohort, we follow the earnings through 1993, the last year of earnings on the CPS-Social Security data set. The age and covered employment restrictions for each of these cohorts requires that individuals be at least 25 years old in the initial year of earnings analysis and no more than 60 years old in 1993 and must have positive Social Security earnings in the first year of the earnings analysis and in 1993.[16] Since the starting year of earnings measurement follows the last year of each CPS-

[14]The following CPS year-of-immigration categories are relevant: 1960-1964, 1965-1969, 1970-1974, 1975-1979, 1980-1981, 1982-1983, 1984-85, 1986-87, 1988-89, and 1990-91.

[15]Following recently arrived immigrants avoids the confounding effects of age and assimilation highlighted in Kossoudji (1989) and Friedberg (1993).

[16]Giving the number for men first, with the native-born numbers in parentheses, the foreign- and native-born samples sizes for each of the cohorts are: 1960-1964: 82, 50 (7,938, 3,948) ; 1965-1969: 97, 72 (9,245, 5,156); 1970-1974: 134, 97 (10,380, 6,461); 1975-1979: 156, 90 (12,319, 8,946); 1980-1981: 79, 46 (12,813, 9,458); 1982-1983: 35, 39 (13,456, 10,362); 1984-85: 64, 45 (17,516, 13,878); 1986-87: 52, 46 (19,150, 15,708); 1988-89: 104, 87 (20,704, 17,539) and 1990-91: 103, 62 (22,165, 19,410).

defined year-of-immigration category, our immigrant earnings growth estimates are not biased upward by the immigrant earnings in the first year reflecting less than a full year due to immigration.[17]

[17]In other work, we use as the year of immigration the earliest evidence of Social Security earnings (Duleep and Dowhan, 1999a, 1999b).

We defined the relative earnings profile of each foreign-born cohort as the median earnings of the foreign born divided by the median earnings of the corresponding native-born cohort in the initial year of earnings analysis, and ten years later (or in 1993, for cohorts that could not be followed ten years). To control for age and education differences between immigrants and natives, we imposed the age-education distribution of immigrants on natives. This was done by first describing the age-education distribution of each immigrant and native sample, labeling the percent in each age-education cell f(i,j) for the foreign born and n(i,j) for the native born. Each native-born observation in cell i,j is then weighted by f(i,j)/n(i,j). The advantage of this approach is that it utilizes all immigrant observations in each cohort to estimate the median earnings of immigrants, while taking advantage of the plenitude of native-born observations to reliably estimate the median earnings of natives at an alternative detailed age-education distribution. Of greater general import, this procedure controls for foreign-born/native-born differences in age and education without imposing any assumptions about the relationship of age and education to earnings.[18]

## What the Data Show

The left-hand side of Table 1 shows the foreign-born/native-born earnings ratios at the first year, labeled "start," following the CPS defined year of immigration, and the last year, labeled "end," defined as either ten years later or as 1993.[19] The results adjusting for

[18]For another application of this methodology see Duleep and Regets (1997a).

[19]Note that it is only for these years that the earnings data are meaningful since it is only for these years that we have imposed the Social Security covered employment restriction.

foreign-born/native-born differences in age and education are always shown to the right of the unadjusted results.

Perusing the results for men we see that, in general, immigrant entry earnings have fallen over time and, echoing Borjas' result, this decline persists when we evaluate natives' earnings at each foreign-born cohort's age and education distribution. Foreign-born men who immigrated in 1960-64 earned on a par with U.S. natives and entering immigrants in 1965-69 earned only 17% less than their U.S.-born statistical twins. Though the entry earnings of the mid-1980's foreign-born cohorts show improvement vis-à-vis the native born, the unadjusted foreign-born entry earnings of all other post-1969 cohorts is 38 to 51 percent below natives' earnings, while the adjusted foreign-born deficit ranges from 28% to 46%. For women, the entry earnings of the pre-1980 foreign-born cohorts equal or exceed the earnings of their U.S.-born counterparts while for the post-1979 cohorts there is a 21% to 38% unadjusted, and a 19% to 32% adjusted, earnings deficit.

Comparing the cohort-specific results at the ten-year mark with the initial year reveals substantial earnings convergence. The earnings of immigrant men across all the cohorts we can follow for ten years extend from 49 to 100 percent of natives' earnings (a range of 51 percentage points), in the initial year, to 69 to 101 percent of natives' earnings (a range of 32 points) ten years later. Adjusting for immigrant/native age and education differences, the range in the relative earnings of foreign-born men goes from 46 points, in the measurements for the initial year, to 29 points, ten years later. For women, the initial unadjusted range is 33 points, compared with 20 points at the ten-year mark, while the range for the adjusted results goes from 42 to 13 percentage points.

The underlying reason for the convergence is that as the relative entry earnings of immigrants have fallen, there has been a tendency for their relative earnings growth to

increase.[20]

The right-hand side of Table 1 shows the ratios of foreign-born to native-born earnings growth rates defined as $[(Y_{10} - Y_1)/Y_1]_F / [(Y_{10} - Y_1)/Y_1]_N$ where $Y_1$ and $Y_{10}$ refer to the beginning- and end-year earnings, and F and N refer to foreign and native born. The earnings growth rates of the early cohorts of immigrant men equal or closely approximate those of U.S.-born men. But, starting with the 1970-74 cohort, immigrant men show higher earnings growth rates than their U.S.-born counterparts. For women, the transformation from equal or lower immigrant earnings growth rates, relative to U.S. natives, to higher earnings growth takes place later—starting with the 1980-81 cohorts.

[20]The exception to this pattern are the 1984-85 and 1986-87 cohorts of immigrant men perhaps reflecting the newly legalized IRCA immigrants, as well as relatively high unemployment rates for these years.

The higher relative earnings growth rates of the recent immigrant cohorts could simply reflect a shared attribute of all of the foreign-born cohorts—their somewhat younger ages vis-à-vis the native born.[21] When we impose each foreign-born cohort's age and education distribution on the corresponding native-born cohort, the relative earnings of the foreign born, whether measured at the beginning or end of the earnings profile, generally increase (as shown in the left-hand side of Table 1). Yet, the higher relative earnings growth for the post-1969 cohorts of immigrant men, and for the post-1979 cohorts of immigrant women, persists. Figure 1 shows the over time transformation for the cohorts we can follow ten years.[22]

[21]As summarized in Ehrenberg and Smith (1994, pp. 296-98), the real earnings of men typically increase with age, at a decreasing rate, until the mid-forties when, for several education groups, they begin to decline.

[22]Whether the ratio of earnings growth will be less or more at 10 years for the post-1984 cohorts depends upon the decline in foreign born growth relative to the decline in native born growth as well as the differential effects of employment conditions on the native born and foreign born.

## Conclusion

Much attention has been paid in the policy and academic arenas to the entry earnings of recent immigrant men and whether there is a cross-over point at which their earnings equal those of natives. Of potentially greater societal import is whether America's newest entrants invest in human capital and how their earnings change as they live and work in the United States. Expectations of upward mobility can affect social behavior and the prevalence of pathologies otherwise associated with low-income individuals.[23] Lower opportunity costs of human capital investment and higher returns, for immigrants than natives, with the attendant higher rates of human capital investment may give immigrants greater ability to adapt to changing skills needs in the economy, adding significant flexibility to the economy (Green, 1995). Immigrant earnings growth is also relevant to other topics such as the labor market impact of immigrants on natives (i.e. Gang and Rivera-Batiz, 1994). Even if we believe that immigrants and natives are perfect substitutes within broad skill levels, a finding of high earnings growth would suggest that many immigrants will go from being substitutes for low skill labor to complements over their life cycle (Lalonde and Topel, 1992).

Using longitudinal earnings data we compare the entry earnings and earnings growth of foreign-born and native-born men and women. The comparison yields a more nuanced picture of immigrant economic assimilation than has characterized the recent debate concerning America's newest entrants. In particular, we find that for almost all post-1970 cohorts, the earnings growth of foreign-born men exceeds that of native-born men, both unconditionally, and

[23]This may account for the lower crime rates of immigrants, than natives, ceteris paribus (Butcher and Piehl, 1998).

adjusting for immigrant/native differences in age and education. Furthermore, we find that as the entry earnings of immigrant men have fallen, their earnings growth has tended to increase relative to that of natives. This increase in earnings growth suggests that the decline in immigrant entry earnings, adjusting for changes in education, has been due to a change in the degree of skills transferability, as opposed to a decline in immigrant innate ability: the latter seems incompatible with an increase in earnings growth. Even ignoring social and economic externalities resulting from high earnings growth, the over time increase in earnings growth substantially ameliorates the entry earnings deficit of recent immigrants relative to the native born; the picture of how recent immigrants fare in the U.S. is remarkably different from one where immigrant entry earnings are allowed to vary across cohorts but stationarity in immigrant earnings growth across cohorts is assumed (e.g. Borjas, 1994). The increasing earnings growth with lower entry earnings also suggests that in models that pool multiple immigrant cohorts we cannot control for cohort effects simply with the inclusion of cohort-specific dummy variables.

The results for women are intriguing and likely reflect complex interactions.[24] As with men, recent immigrant women have higher rates of earnings growth than their native-born counterparts, likely representing higher rates of human capital investment. Indeed, the relative earnings growth rates of recent immigrant women exceeds that of men.

[24]On this point, refer to Long (1980), Beach and Worswick (1993), Duleep and Sanders (1993), Baker and Benjamin (1997), Worswick (1999), and Duleep, Regets, and Sanders (2000).

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**Table 1: Earnings of foreign born relative to native born in first year (start) and in last year (end), measured at the median.**
Each cohort is followed for ten years, or to 1993. The foreign and native born are 25-60 years old in each year of analysis. Adjusted results refer to estimates in which the native born are weighted to have the foreign-born's age and education distribution

| | Men | | | | Women | | | | Ratios of foreign-born to native-born growth rates | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unadjusted | | Adjusted | | Unadjusted | | Adjusted | | *Earnings growth measured over...* | Men | | Women | |
| *Followed 10 years* | start | end | start | end | start | end | start | end | | Unadj. | Adj. | Unadj. | Adj. |
| 1960-64 | 1.00 | 1.01 | 1.00 | 1.04 | 1.04 | 1.05 | 1.08 | 1.06 | *10 years* | 1.00 | 1.08 | 1.03 | .96 |
| 1965-69 | .71 | .71 | .83 | .80 | 1.05 | .95 | 1.18 | 1.07 | | 1.00 | .94 | .83 | .83 |
| 1970-74 | .62 | .71 | .72 | .86 | .98 | 1.07 | 1.03 | 1.05 | | 1.31 | 1.42 | 1.15 | 1.04 |
| 1975-79 | .61 | .73 | .68 | .79 | 1.02 | .90 | 1.08 | .96 | | 1.49 | 1.40 | .74 | .77 |
| 1980-81 | .49 | .69 | .54 | .75 | .77 | 87 | .81 | .94 | | 2.11 | 2.09 | 1.32 | 1.34 |
| 1982-83 | .54 | .85 | .60 | .92 | .71 | .93 | .76 | .97 | | 2.84 | 2.56 | 1.73 | 1.66 |
| *Followed to 1993* | | | | | | | | | | | | | |
| 1984-85 | .60 | .64 | .71 | .73 | .68 | 1.01 | .76 | 1.05 | *8 years* | 1.30 | 1.07 | 2.58 | 2.07 |
| 1986-87 | .78 | .84 | .82 | .80 | .62 | .79 | .69 | .82 | *6 years* | 1.54 | .89 | 2.31 | 1.64 |
| 1988-89 | .51 | .62 | .58 | .66 | .68 | 1.02 | .68 | .98 | *4 years* | 3.93 | 2.11 | 5.26 | 3.78 |
| 1990-91 | .60 | .69 | .63 | .71 | .79 | .82 | .80 | .84 | *2 years* | 7.49 | 4.68 | 2.11 | 2.35 |

**Figure 1: Cohort-specific ratios of foreign-born to native-born ten year growth rates**