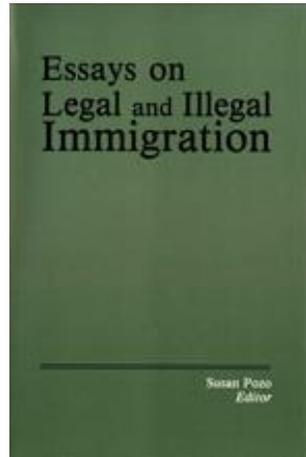

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There has been a very rapid increase in the number of immigrants admitted to the United States in the postwar period. During the 1950-1960 decade, for example, an average of 251,500 immigrants per year were admitted into this country. This number had increased to over 390,000 per year during the 1970-1980 decade. The rapid increase in the number of immigrants has raised (again) the very old question of whether or not the U.S. benefits from immigration. Surprisingly, even though immigration has been an important part of demographic change and of population growth in the United States practically throughout its entire history, very little is known as to how immigration affects different sectors of the economy. Are workers, firms, and consumers helped or hurt by immigration?

In this lecture I would like to try to provide an understanding of what facts we need to know before we can provide a valid assessment of this important question. Despite what self-appointed immigration experts claim, existing research is so preliminary (and often so contradictory) in its conclusions that it is entirely inappropriate to make sweeping generalizations based on that literature. Nevertheless, existing research does provide valid hints and clues as to what kinds of questions policymakers should be asking in trying to assess the impact of immigration on the United States. My

objective in this survey is to provide an outline of what current research has to say about this important issue: What kinds of questions are relevant and what do we know about the answers to these questions?

I should stress at the beginning of the survey that my focus is exclusively on the *economic* costs and benefits associated with immigration. This is not to say that there are not other important issues—e.g., the impact of immigrants on the political structure of governmental units of the U.S. However, most research has concentrated on the economic aspects of immigration, and this, too, will be the focus of my analysis.

There are two questions which I believe are most relevant in any assessment of the economic impact of immigration. First, how well do immigrants do in the U.S. labor market? In a competitive labor market, workers are paid the value of their marginal productivity. In other words, workers are paid the value of the contribution that they make to the firm's output. By analyzing how immigrants do in the labor market, by studying the level of immigrants' earnings and comparing them to the level of native-born earnings, we are, in effect, calculating the value of the contribution that immigrants make to national output. This research question is the one that has received the most effort from social scientists interested in immigration phenomena. A common finding in this literature is that immigrants have lower earnings than the native-born when they first arrive in this country, but that over time the earnings of immigrants grow very fast and eventually immigrant earnings actually overtake and surpass the earnings of the native-born. It is not uncommon in these studies to find that after 10 to 15 years in the U.S. the typical immigrant is earning more than the typical native-born person. These kinds of findings not only help perpetuate the Horatio Alger myth, but also have the impor-

tant policy implication that immigrants, through their higher productivity, actually make a significant contribution to U.S. national product.

The second question that is relevant for an assessment of the economic impact of immigrants “twists” the first question around: from how immigrants do in the labor market, to what immigrants do to the labor market? This is probably the question that receives the most media concern. There are endless anecdotes of immigrants arriving in the U.S. and “taking jobs away” from specific groups of native-born workers. Despite the appeal of such anecdotal evidence, the fact remains that not a single shred of evidence acceptable to a social scientist even with the most liberal standards of scientific analysis has been produced substantiating these anecdotal claims. Certainly, as immigrants enter the U.S. labor market in large numbers it seems reasonable to expect that these shifts in supply would have an impact on the earnings and employment of native-born groups. As will be seen below, however, regardless of the magnitude of the shift in immigrant supply, economic theory cannot predict unambiguously the direction of the change in immigrant earnings and employment. In particular, immigrants may “substitute” for native-born workers (as the anecdotal evidence implicitly assumes) or they may “complement” native-born workers in the production process. All scientific studies of this important question suggest that immigrants have had a minor impact on the U.S. labor market, and not a single study in this literature has provided evidence of the large negative impacts assumed in media discussions of this issue.

It is my contention that no valid assessment of the economic impact of immigration in this country can be made unless we can provide measures of the dollar costs (or benefits) associated with each of these two issues. In the re-

remainder of this lecture I will summarize the current state of knowledge in each of these questions, and, with some luck, raise some doubts as to how much we really do know about any of these important policy issues.

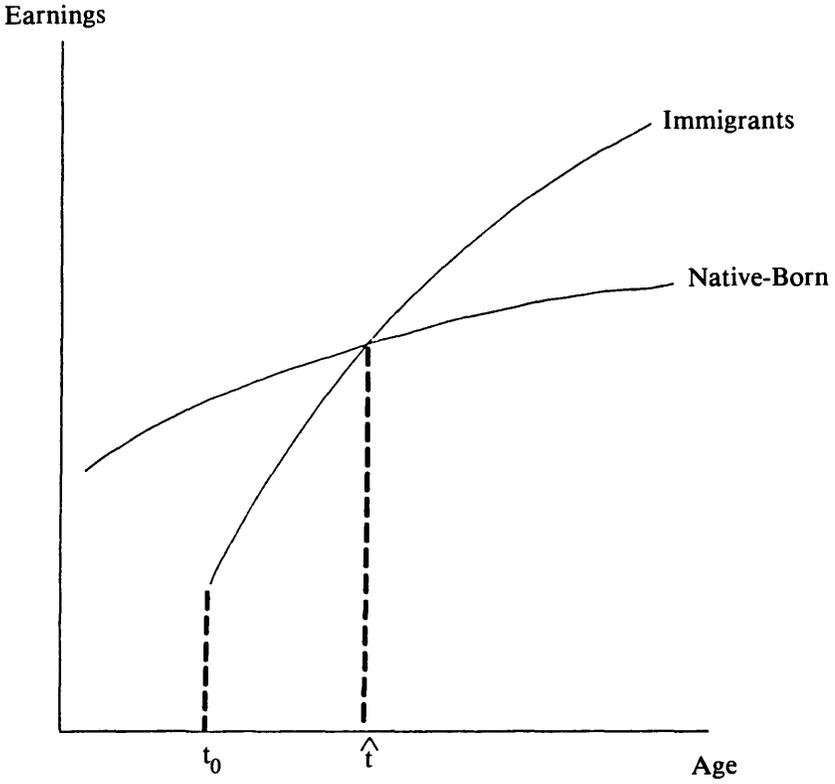
The Earnings of Immigrants

How do immigrants do in the labor market? This question, by far, has dominated most of the empirical research in the immigration literature. To address this problem the researcher must simply compare the earnings of the native-born with the earnings of the foreign-born. In principle, therefore, it is a trivial exercise. Despite the simplicity of this task, however, the first such study in the modern literature did not appear until 1978 when Barry Chiswick published an influential paper on the “Americanization” of immigrant earnings. Using the 1970 Census cross-section, Chiswick’s analysis revealed two major findings:

1. The earnings of recently arrived immigrants are significantly lower than the earnings of immigrants who have been in this country for longer periods; and
2. After 10-15 years, the earnings of immigrants overtake the earnings of the native-born, so that earlier waves of immigrants are valued more by the U.S. labor market than the native-born population.

The thrust of these findings is illustrated in Figure 1. The typical native-born age-earnings profile is upward sloping throughout much of the working life cycle. The typical immigrant migrates at age t_0 , and at that time his earnings are significantly lower than those of the native-born population. Over time, however, the earnings of immigrants rise at a significantly higher rate than those of the native-born (as indicated by the steeper slope of the age-earnings profile of immigrants in Figure 1). The difference in these slopes leads to

Figure 1
Immigrant and Native-Born
Earnings Profiles



an overtaking age of \hat{t} , which Chiswick found was 10-15 years after age t_0 . Thus for a large portion of the life cycle Chiswick found that immigrants had higher productivity—and hence were valued more by the U.S. labor market—than the native-born population. This remarkable finding gave birth to the current conventional wisdom that immigrants assimilate quite well in the United States.

These results have a great deal of appeal to labor economists trained in the human capital tradition since human capital theory can be easily invoked to explain (part of) these empirical regularities. In particular, persons immigrating to the United States for “economic” reasons have strong incentives to devote a large fraction of their effort and time to the process of accumulating human capital or skills valued by U.S. employers. These incentives are, of course, created by the fact that the typical immigrant incurred substantial costs in immigrating, and the returns to these investment costs can only be obtained through high earnings in the U.S. labor market. These high human capital investment volumes explain why immigrants’ earnings rise at a faster rate than native-born earnings. They do *not*, however, explain the existence of an overtaking age since there is no obvious reason why the *total* stock of human capital should be greater for immigrants than for the native-born. To explain the overtaking point Chiswick introduces the *deus ex machina* of “selection biases.” That is, for reasons that are not well understood, the immigration policies of the United States (as well as the emigration policies of sending countries) combined with the economic incentives motivating individuals to migrate lead to an immigrant population that is, on average, “better” than the native-born population. This greater quality (in terms of earnings potential) of immigrants is, therefore, responsible for the fact that over a large portion of the working life, immigrants apparently have higher earnings than the native-born.

An extensive literature developed following the appearance of Chiswick's paper. This literature borrowed both the conceptual framework and empirical methodology of Chiswick's analysis, and, by and large, concluded that Chiswick's results were quite robust. Cross-section studies of immigrants by sex, by national origin, by race, etc., all led to the same essential finding: after a period of adaptation (or assimilation) immigrants do quite well in the U.S. labor market.

A recent paper of mine (Borjas 1985a), however, questions the validity of this finding. The fallacy in the Chiswick-type literature is its use of cross-section data sets (a "snapshot" like the U.S. Census) to explain the dynamic series of events which we call "assimilation." In other words, it is incorrect to study how different immigrants do (in terms of earnings) at a given point in time, and to infer from that how the earnings of a given immigrant grow over time. There are two serious biases which destroy the validity of this inference. The first of these biases arises from the fact that many immigrants eventually return to their country of origin. Estimates of the emigration rates of the foreign-born population in the United States range from 20-30 percent. It is unlikely that the incidence of emigration is distributed randomly in the immigrant population. Instead, immigrants who emigrate are likely to leave the U.S. for specific reasons. One such possibility is that things simply did not work out for them in the U.S. labor market. In a sense, then, the "failures" leave the United States. If so, the earlier waves of immigrants will be composed only of "successes," while the more recent waves contain both "successes" and the "failures" who will eventually leave. This kind of sample composition will clearly lead to the result that earlier waves of immigrants earn more, on average, than the more recent waves *even if no assimilation truly exists.*

The second problem with the cross-section results is the implicit assumption that different waves of immigrants are identical in average quality (even if there were no emigration). This hidden (and heroic) assumption forces the reader to believe that the quality of immigrants who arrived in the U.S. in the 1940s is the same as that of immigrants who arrived in the U.S. in the 1960s and in the 1980s. The fact that U.S. immigration policy went through a major revision in 1964 is enough to make an analyst aware of the implausibility of this kind of analysis. In addition, however, political and economic upheavals in sending countries have clearly had an impact on the size, on the racial, and on the national origin composition of the immigrant flow to the United States. If these events have led to a decline in the quality of immigrants admitted to the U.S. in the postwar period, the Chiswick-type cross-section result of Figure 1 would again be generated since earlier waves would be expected to have higher earnings than the more recent arrivals.

In my 1985a paper, I address this problem by conducting a joint analysis of the 1970 and 1980 U.S. Censuses. If the cross-section studies are right, specific cohorts of immigrants (e.g., Cubans who arrived in 1965-1969) should do substantially better in the 1980 Census than in the 1970 Census. In fact, they do not. The tracking of a large number of immigrant cohorts over the 1970-1980 period reveals that, in most cases, the cross-section studies greatly overstate the actual improvement that took place in immigrant earnings during that time period. Hence the reason that earlier waves of immigrants earn more than the recent waves has little to do with the assimilation stories that dominate the literature. Rather it has to do with the fact that there has been a precipitous decline in the quality of the immigrant pool admitted to the U.S. in the postwar period.

There still remains the question, however, of what policy implications, if any, are suggested by this revisionist view of

Figure 1. Clearly, my results imply that the productivity of immigrants has fallen over time. Yet, one can still ask: So what? Is this secular decline in quality a good or a bad thing? I do not know the answer to this question. Since the industrial structure of the U.S. economy has changed rapidly since 1940 (and will likely continue to change) it is unclear that we need 500,000 professionals immigrating to the U.S. every year. My results must, therefore, be interpreted in the context of the kinds of jobs that are being generated by the U.S. economy and not simply on the qualifications of the new entrants.

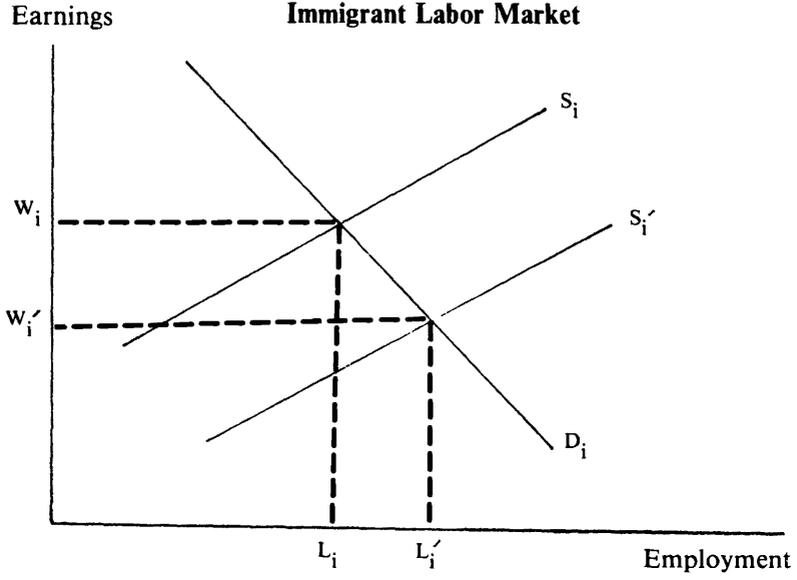
The Impact of Immigrants

A complete assessment of the relationship between immigrants and the U.S. labor market requires knowledge not only of how they do in the labor market, but also of what they do *to* the market. In other words, what is the impact of immigrants on the earnings and employment of the native-born population?

It is easy to show that, despite the deeply held (and almost religious) beliefs of many analysts who have studied this question, theoretically it is impossible to predict whether immigrants diminish or expand native-born employment opportunities. Consider Figure 2. The first graph describes the labor market facing immigrants: S_i is the supply curve of immigrants and D_i is the demand curve for immigrant labor. In a competitive labor market, the L_i immigrants employed would earn W_i dollars. Suppose now that a political crisis abroad leads to a sizable increase in the number of foreign-born persons in the U.S. This crisis shifts the supply curve for immigrant labor from S_i to S'_i , and, as expected, even though more immigrants are employed in the new labor market equilibrium (employment is now given by L'_i), the wage each immigrant gets is reduced to W'_i . In a sense, immigrants compete for jobs with themselves, and hence an in-

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Figure 2
Immigrant Labor Market



Native Labor Market

(Assuming immigrants and native-born are substitutes)

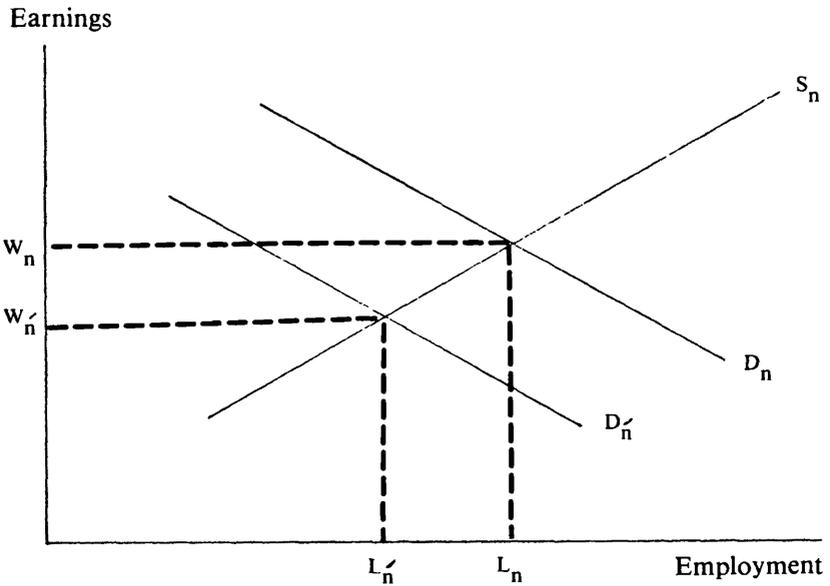
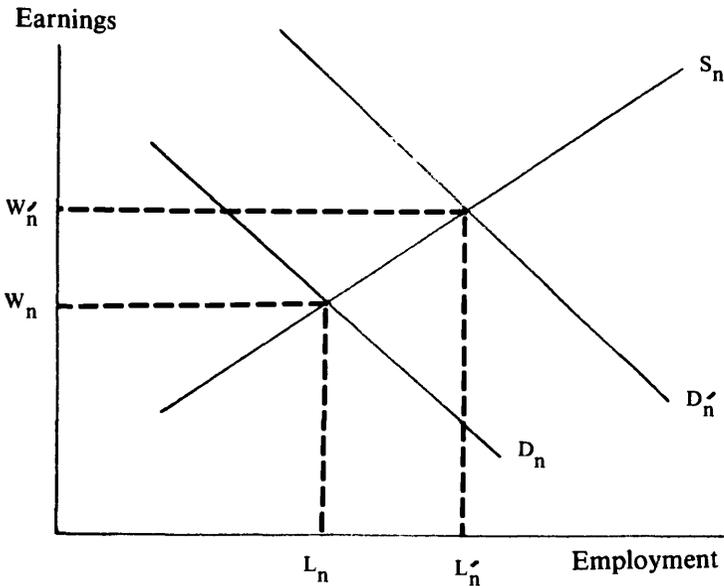


Figure 2 (continued)
Native Labor Market

(Assuming immigrants and native-born are complements)



crease in the supply of immigrants must (in this simple model) lead to reduced earnings opportunities for the entire immigrant population.

The second graph of Figure 2 illustrates the impact of the increased supply of immigrants on native-born earnings and employment if it is *assumed* that immigrants and native-born workers are substitutes in production. The curves S_n and D_n are the initial supply and demand curves of native-born workers. The shift in the supply of immigrants will likely have an impact on the demand for native-born workers. It is often claimed—usually without any evidence—that immigrants and native-born workers compete for the same kinds of jobs. Economists define this situation as one in

which immigrants and native-born workers are substitutes in production. That is, both foreign- and native-born workers do the same kinds of jobs and hence the demand for native-born workers will fall to D'_n when the supply of immigrants increases. This shift in demand will lead to less native-born employment and to lower native-born wages. In a sense, the fact that immigrants and native-born workers are alike—i.e., are substitutes in production—implies that the entry of new immigrants reduces the productivity of the native-born population and hence reduces W_n . This is, of course, the typical assumption in discussions of this issue both in the media and in many academic articles.

There is, however, an alternative assumption that on *a priori* grounds is equally valid: immigrants and native-born workers are *complements* in production. This kind of technological relationship arises, for example, when an illegal alien mows the lawn at my house. We both gain: he gets a job and a salary, and I get to devote my time to research. In this scenario, the productivity of the native-born population increases when new immigrants come in. As illustrated in the third graph of Figure 2, this leads to an upward shift in the demand curve for native-born labor *increasing* both native-born employment and earnings.

To repeat, it is theoretically impossible to predict whether immigrants diminish or expand the employment opportunities of the native-born. The direction of the impact of immigrants on the earnings and employment of the native-born is *entirely* an empirical question and can be settled only by reference to available data.

A few papers have attempted to conduct empirical studies of this issue. (See Borjas 1983, 1985b, 1986; Grossman 1982.) The methodology in these studies is based on the insight that a few labor markets (or SMSAs) traditionally receive most of the immigrant labor. Hence the comparison

of earnings levels in these labor markets with the earnings levels in labor markets with relatively few immigrants should reveal the direction of the shift in the demand curve for native-born labor. The results from the studies are summarized in Table 1. This table presents the estimated percentage impact of native-born earnings (by type of native-born worker) if the (white) immigrant population were to increase by 10 percent. Table 1 reveals numerically trivial impacts. The earnings of white native-born workers are reduced by only 0.2 percent, while the earnings of black native-born workers increase by 0.2 percent. These numerically trivial effects suggest two important findings: First, the issue of whether the demand curve shifts up or down is somewhat irrelevant. Immigrants have practically *no* impact on the demand curve for native-born workers. Second, the many discussions that implicitly assume a high degree of substitutability between immigrant and native-born labor are far off the mark. These discussions are not only misleading and dogmatic, but are also erroneous.

Table 1
Estimates of Impact of Immigrants on Earnings of Native-Born

Type of native-born worker	A 10 percent increase in the number of white immigrants reduces or increases the earnings of native-born workers by:
White	-.2%
Black	.2%
Hispanic	-.1%
Asian	.1%

SOURCE: Borjas, 1985b.

It should be stressed, however, that this type of study is still in its infancy. Many more empirical studies of this type are required before these results can form the basis for informed policymaking. Nevertheless, the few studies that do exist, using different data and methodologies, cannot find *any* evidence of sizable negative impacts. And this finding, in light of the discussions that dominate the literature, is quite a surprise.

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