[Does Immigration Grease the Wheels of the Labor Market?]. Comments and Discussion

Robert Shimer; Robert H. Topel

Comments and Discussion

Robert Shimer: George Borjas has written an ambitious paper, presenting some new empirical findings and developing a framework for quantifying the efficiency gains from immigration. The paper begins by documenting that immigrants tend to move to states where workers with their skills earn high wages. It then argues that the resulting increase in labor supply in high-wage states accelerates the convergence of wages across states. And finally it claims that the efficiency gain from immigration roughly equals conventional estimates of the immigration surplus. The bulk of my discussion will ask whether we should accept each of these findings. The short answer is that immigrants do move to high-wage states but, surprisingly, that native migrants do not—a piece of evidence that is inconsistent with Borjas's framework. The support for the other empirical result, that migration compresses interstate wage differentials, thereby generating an efficiency gain from immigration, is weak.

To analyze whether immigrants move to states where workers with their skills earn high wages, Borjas proceeds in two stages. First, he uses decennial census data on native-born workers to estimate the average wage that workers with a given skill level, as proxied by their educational attainment, earn in each state conditional on their age and sex. The paper implicitly maintains the hypothesis that these interstate wage differentials do not simply proxy for the unobserved characteristics of workers in different states. This implies that a worker who moves to a high-wage state can expect to earn a higher wage than he or she would have earned in a low-wage state.

In the second stage, Borjas examines whether immigrants' location decisions respond to wage differentials. If they do, we should see a large

number of immigrants in a state-education group some years after observing a high level of wages in that group. Borjas runs the appropriate regression in first differences (his tables 3 and 4), but he provided me with some additional results in terms of levels, which I find easier to interpret. Some of those results are shown in table 1 below. A state-education group with 10 percent higher wages than the average draws a 29 percent larger relative supply of immigrants than of natives. Comparing the second and third columns, we see that the effect is slightly stronger on new immigrants than on earlier ones. Since these regressions include state fixed effects, they do not just say that immigrants move to California, Florida, and New York, which happen to be high-wage states. Rather, states that pay relatively high wages to college graduates tend to draw a lot of college graduates relative to high school graduates.

The finding that both old and new immigrants tend to reside in high-wage states might appear inconsistent with the findings in Borjas's first-difference regressions, where he shows that an increase in wages attracts new immigrants but not old ones. The very slow convergence of wages across states reconciles these results. A highly educated immigrant drawn to New York in 1950 would continue to earn high wages in New York throughout the sample period. Thus these regressions support Borjas's model of immigrants' location decisions.

Borjas notes that what is true for immigrants should also be true for native migrants. Any worker who moves should move to a high-wage state, regardless of whether he or she came from another state or another country. His table 5 shows that this is not the case. The most straightforward

Table 1. Estimating the Sensitivity of Relative Labor Supply of Immigrants to Interstate Wage Differences, in Levels[a]

	Estimated coefficient on log wage index			
Sample	Immigrants relative to natives	Earlier immigrants relative to natives	New immigrants relative to natives	New immigrants relative to earlier immigrants
1960–80	2.905	2.343	3.208	0.200
	(0.083)	(0.333)	(0.437)	(0.235)

Source: Calculations by George Borjas using data for persons aged eighteen to fifty-nine from the 1950–90 Public Use Microdata Samples of the U.S. Census.

a. The dependent variable is the relative supply index over 1960–80. The independent variable is the log wage index. Standard errors are reported in parentheses. Regressions include time, education, and state fixed effects and are weighted by $(n_0^{-1} + n_t^{-1})^{-1}$, where n_t gives the number of observations for the state-education group in year t.

regression in the first column of the table finds that native movers tend to move to *low*-wage states. This effect is large in magnitude and very significant, with a *t* statistic in excess of –6. Constructing the data in other ways, Borjas cannot reject the null hypothesis that native movers, native stayers, and earlier immigrants live in the same places—that is, that native movers do not seek out high-wage states. This is a puzzle.

My prior belief was that natives would be drawn toward high-wage states at least as much as immigrants. Native migrants have better information about wages in different states. They are less tied by linguistic barriers to a small subset of locations. Moreover, we know from work by Olivier Blanchard and Lawrence Katz that regions in the United States respond to adverse shocks through emigration.[1] Perhaps most relevant, under the maintained hypothesis that interstate wage differentials do not reflect unobserved heterogeneity, native migrants are throwing away a lot of income. According to Borjas, the mean college graduate living in Wyoming in 1980, the state at the 20th percentile of the wage distribution, earned 17 percent less than the mean college graduate living in Nevada, the state at the 80th percentile of the distribution. Even if this wage differential decays at 2 percent a year, a migrant with a forty-year time horizon and a 4 percent discount rate would earn 2.6 years extra income in present value terms by moving to Nevada rather than staying in Wyoming.

One possible explanation for this finding is that the maintained hypothesis is incorrect. An alternative hypothesis is that state-level wage differentials entirely reflect the unobserved characteristics of workers in different states. In that case a migrant with a given set of characteristics would not enjoy any wage increase upon moving to a high-wage state, and so would not be attracted to such a state. The problem is that although this can explain why native migrants do not move to high-wage states, it is inconsistent with the evidence that immigrants do in fact move to such states, and it cannot explain why native migrants move to low-wage states. The simplest reconciliation of these findings is that natives are moving away from states that attract immigrants with similar skills. If in fact the role of unobserved heterogeneity lies somewhere in between that assumed in the maintained and alternative hypotheses, natives need not be giving up that much income through this behavior.

1. Blanchard and Katz (1992).

Correctly assessing the importance of unobserved heterogeneity is crucial for quantifying the efficiency gains from immigration. Most obviously, the more that unmeasured heterogeneity accounts for interstate wage differentials, the less will be the efficiency gain from equalizing productivity across regions. Additionally, if we know what fraction of measured wage differentials can be recovered by moving to a high-wage state, we can estimate the mobility cost of the marginal native worker who chooses to move to such a state. As Borjas shows, high mobility costs raise the efficiency gains from immigration, since immigrants rather than native migrants incur the cost of equalizing wages across regions.

In any case, the failure of native migration to eliminate wage differentials leaves a qualitative role for immigrants to grease the wheels of the labor market by moving to high-wage states and erasing interstate wage differentials. To see whether this occurs, Borjas estimates β-convergence coefficients for native wages over four different decades and for five education groups. He then regresses these twenty data points on a measure of immigrant penetration in each labor market, weighting the regression by the inverse of the standard error of the estimate of the β-convergence coefficients.

His table 7 presents some evidence that higher immigrant penetration raises the speed of convergence, but the finding is weak in several respects. First, the β-convergence coefficients are almost certainly measured with error. If the wage level in a state is overestimated in year t, for example, the state will appear to be growing at a slower rate between t and $t + 1$, misleading the econometrician into finding evidence of convergence. The regression of convergence coefficients on immigrant penetration will then yield biased estimates if measurement error is worse for education-year groups with more immigrant penetration. The second problem is that there are only twenty data points, and a few of them, in particular the least educated workers in 1980, seem to be driving the results. The finding goes away in an unweighted ordinary least-squares regression. It also goes away when a time trend or year fixed effects are added to the weighted least-squares regression (with or without the education fixed effects). For these reasons, the correlation between convergence and immigrant penetration is weak at best.

Even with more and better-quality data, I would be surprised if one found that higher immigrant penetration significantly raises the speed of convergence. Immigrants have been moving to high-wage states for years

without appreciably mitigating wage dispersion. For example, Borjas, George Freeman, and Katz find a positive correlation between the change in wages for native-born workers and measures of immigrant penetration across states or regions in the United States.[2] The effect is reversed when regional fixed effects are included (see their table 2), which, they argue, soak up immigrants' tendency to move to permanent high-wage areas. (As an aside, the existence of permanent high-wage areas is obviously inconsistent with the convergence hypothesis that Borjas investigates.)

In a forthcoming paper, I provide a different interpretation of Borjas, Freeman, and Katz's finding.[3] In the presence of some form of increasing returns to scale, as in models with trading externalities or agglomeration effects,[4] steady or anticipated increases in labor supply may induce an offsetting increase in labor demand, leaving wages unchanged. For example, the decision of migrating software engineers to settle in Silicon Valley does not put downward pressure on wages in that region. Rather, it further cements the region's dominance in this industry, ensuring that, in the future, firms will continue to locate most job openings in the area. Although this phenomenon is most obviously relevant to more skilled workers, it may also help explain the geographic concentration of the American textile industry, for example. As evidence of this effect, I show in my forthcoming paper that a state that experiences an unusually high birth rate has a large entering cohort in the labor market twenty years later—an anticipated labor supply shock. When the shock hits, the unemployment rate falls, and wages and labor market participation increase, evidence that labor demand has increased more than proportionately. If this is correct, persistent immigration of workers with particular skills will not reduce wage dispersion. This may explain why wage dispersion can survive in the presence of large-scale domestic and international migration of both labor and capital.

What does all this mean for the efficiency gains from immigration? On the one hand, it means that immigration is unlikely to contribute much to regional wage convergence in the United States, and so the efficiency gains discussed in this paper are probably not empirically relevant. On the other hand, with increasing returns to scale, immigration may help supply

2. Borjas, Freeman, and Katz (1996).
3. Shimer (2001).
4. Diamond (1982) investigates models with trading externalities, and Ciccone and Hall (1996) consider models with agglomeration effects.

regions that require particular types of labor, facilitating the growth of Silicon Valleys beyond a critical threshold. This is a different form of efficiency gain from immigration, and unfortunately one that cannot easily be quantified in Borjas's framework. It suggests, for example, that the U.S. economy is so strong and dynamic because its labor market is constantly reinforced by immigration, rather than the commonly assumed converse, that the U.S. labor market can easily incorporate immigrants because its economy is so strong and dynamic.

Robert H. Topel: The central idea of George Borjas's paper is that immigrant labor, as a highly mobile factor, enhances market efficiency by arbitraging productivity differences across locations. Further, he argues, some of the returns to this activity accrue to natives, over and above the traditional measure of the immigration surplus that is due to increased labor supply and changing factor proportions, so that traditional measures may understate the benefits of immigration. The paper certainly affected my thinking on this topic, although I read the evidence rather differently than does the author. In the end I came away with the view that the forces studied here are, empirically, fairly small. But the theory and evidence presented are nevertheless important.

The paper proceeds along three fronts. First, Borjas makes a theoretical case for an additional, "efficiency" gain from immigration. Second, he provides evidence that immigrants make location decisions in a manner consistent with arbitrage of geographic wage differences. Last, he provides a back-of-the-envelope calculation of the size of these additional efficiency gains.

What exactly is the efficiency gain *to natives*? On this the paper is less than clear. Borjas's definition includes two apparent components. The first is a gain from immigrant clustering: when wages differ across geographic areas, immigrants have greater incentive to cluster in particular areas (those that offer them high wages). Clustering maximizes the surplus that accrues to natives because it has the largest impact on factor proportions. The second component is a reduction in mobility costs incurred by natives. If immigrants arbitrage geographic wage differences, then natives do not have to.

To evaluate these points, consider figure 1 below. The curves V_1 and V_2 represent identical marginal productivity schedules for two geographic markets. If, initially, the labor supplies in the two regions are L_1 and L_2,

Figure 1. Gains from Immigration in a Two-Region Economy with Homogeneous Labor and Fixed Capital
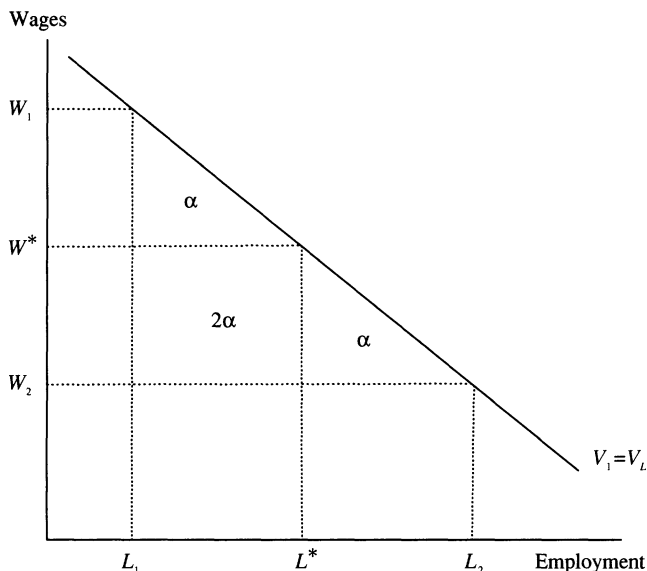
then marginal products (and therefore wages) will be W_1 and W_2. Because $W_1 > W_2$, there is something to be gained from arbitrage that increases labor supply in market 1. The questions raised by Borjas's definition are, Who does the arbitraging, natives or immigrants? And who gets the gain in output?

If we follow Borjas's assumption that exactly enough immigrants enter market 1 to equalize wages, then the welfare gain to natives is equal to 4α. This would be the immigration surplus as traditionally understood, if that surplus is measured correctly, accounting for its concentration in one market. To arrive at his notion of the gain from optimal immigrant behavior, Borjas needs to define an alternative world, and he chooses one where immigrants allocate themselves randomly across the two markets. This complicates matters slightly, because when immigrants do the "wrong" thing, other agents (that is, natives) compensate by changing their migration behavior, and this must be taken into account.

If immigrants move equally to markets 1 and 2, they generate a surplus of α in each market, or 2α in total. This is not the end of the story, however, because wages are still unequal, and this will cause natives to

move. Let native migration from market 2 to market 1 equalize wages, and let the total cost of this migration be C. The net gain from this activity is $2\alpha - C$. So the net gain from immigrants behaving optimally rather than in a *particular* nonoptimal way is $4\alpha - (2\alpha + 2\alpha - C) = C$. Optimal immigration saves natives the mobility costs of arbitraging wage differences themselves; there is no other component of gain.

As Borjas notes, the alternative world he assumes is essentially arbitrary, and I have to confess that its attraction escapes me, especially given the propensity of immigrants to concentrate in a small number of immigrant enclaves. Yet there is something attractive in the idea that a calculation of the "gains" from immigration should account for what would have happened otherwise. For example, let the alternative world used in calculating the gains from income-maximizing immigration be *no* immigration. In this case migration by natives from market 2 to market 1 would raise national output by $2\alpha - C$, so the net gain from allowing immigration is $4\alpha - (2\alpha - C) = 2\alpha + C$. Component 2α is the traditional surplus that would accrue to natives if markets were initially efficient ($W_1 = W_2$), so the difference is once again C, the mobility cost of native arbitrage.

It appears to me that this is the main sense in which immigrants can be said to "grease the wheels": because natives do not have to provide their own grease, they save C. It is true that traditional measures of the surplus from immigration do not account for this effect. Yet this does not mean that the usual measure understates the gains from immigration. In the previous example, a traditional measure of surplus would ignore the costs *and* the benefits of native migration in the absence of immigration. That is, the traditional measure would calculate the gains as 4α, the gain in output in the market that absorbs the immigrants, ignoring the fact that natives would have produced $2\alpha - C$ anyway. The net gain from immigration is $2\alpha + C < 4\alpha$. In other words, there is no assurance that a traditional measure of the immigration surplus, small as it might be, is too small.

Borjas's empirical work provides evidence that the location decisions of immigrants are affected by financial rewards: there is a slight tendency for immigrants to settle in markets that offer them high wages for their skills. I found the empirical setup attractive and the evidence quite useful, yet I came away convinced that the estimated effects are not large enough to make the theoretical story a compelling one. For example, the estimated supply elasticity for new immigrants (Borjas's table 3) is about 1.4. Given usual estimates of the elasticity of wages with respect to new supply,

which are small, I read this as saying that immigrants' location decisions will not have much impact on wages. This is not surprising in light of the fact that immigrants remain highly clustered.

The evidence on wage convergence is also interesting, although here I think the issues in this paper are quite different from those taken up in the usual convergence literature. The wage differences that Borjas studies are (as I read them) generated by temporary demand or supply shocks, and they apply to identical workers. The working hypothesis is that mobile immigrants arbitrage these differences. In contrast, much of the convergence literature focuses on wage differences that are generated by human capital differences across countries or markets, and it is plausible that their elimination takes a long time.

General discussion: An important part of the discussion focused on the distributional impact of immigration and, as a consequence, on its political economy. Benjamin Friedman stressed that in Borjas's framework all of the gains to natives from immigration accrue to the owners of capital, whereas workers' wages are strictly reduced. Moreover, some of the gains to capital go to foreign owners. Although in principle one could imagine a transfer mechanism by which the winners compensate the losers, in practice such mechanisms do not exist. Immigration is not Pareto improving and is therefore likely to have significant consequences for the political economy. Shang-Jin Wei suggested that the conflict between owners and the workers is itself costly, and that the lobbying costs of attempts by both groups to influence immigration policy should also be taken into account in a broader welfare analysis.

Several participants discussed costs and benefits of immigration not accounted for in Borjas's model. Robert Topel noted that the model has only one final good, so that distribution is only affected by what happens to factor payments. In a world with many goods, the distributional consequences are not so straightforward. For example, if a lot of doctors were let into the country, driving doctors' wages down, the gains would accrue not to capital but to native consumers—workers as well as capitalists—as the costs of health care are reduced. Robert Gordon reminded the panel that immigrants tend to be younger than the native population. As a consequence, increased immigration can help address the problem of Social Security solvency, by raising the ratio of workers to retired people. Edward

Glaeser suggested that the fact that houses and other structures are fixed in place and have very long lives is an important reason, missing from the model, for the slow decline in the population of regions suffering negative shocks. A decline in housing prices in these regions partly compensates for lower wages, slowing outward migration. Inexpensive housing also attracts immigrants to these areas. Gordon commented that immigrants are undoubtedly a major factor in the revival of central cities in many parts of the country. Michael Kremer noted that other forms of capital are more mobile than buildings and argued that introducing mobility of such capital into the model could qualitatively change the results. For example, immigration may economize on the costs of moving capital rather than of moving domestic labor. William Nordhaus urged against taking too narrow a view of the benefits of immigration. Immigrants increase the variety of commodities that are available (an obvious example being ethnic foods) and enrich the culture in a host of other ways, such as through music and literature, not captured in economic models.

Robert Hall argued that the welfare analysis of immigration requires a more global perspective in which immigration costs and the opportunity costs of emigration—the economic value of the immigrants' services in their home country—are taken into account. He also observed that confronting traditional human capital–based growth theory with the gap between immigrants' wages in their home and host countries highlights the importance of other kinds of capital, including institutional and infrastructure capital.

Several panelists discussed ways in which the imperfect measurement of wages could distort the results. Nordhaus noted that, in principle, location decisions should depend on real wages, and he deplored the poor quality of the available data. Both he and Gordon suggested that if part of observed wage differences reflects unmeasured differences in the cost of living or compensates for differences in amenities and disamenities, the speed of convergence may be underestimated and the gains from immigration overstated.

Hall pointed to the potential for identification problems to bias the results: unmeasured features of states like California and New York may be the cause of both high wages and high immigrant penetration. Kremer suggested, on the other hand, that the coarse division of types of labor may result in underestimates: if there are many small labor submarkets, the

differences in marginal productivities among them, and thus the benefits of immigration, could be greater than those calculated from the more aggregated data.

William Branson found it informative to relate the paper to the debate about the euro area. Europessimistic economists in the United States have argued that Europe's lower labor mobility made eliminating exchange rates a bad idea, because it left the European countries with no way to deal with relative real disturbances. The counterargument was that labor mobility in Europe comes not from Europeans moving from country to country within Europe, but by marginal adjustments to labor supply by immigrants from outside the region. The Borjas paper, Branson noted, illustrates that immigration serves the same important function in the United States.

References

Åslund, Olof, Per-Andes Edin, and Peter Frederiksson. 2000. "Ethnic Enclaves and the Economic Success of Immigrants: Evidence from a Natural Experiment." Unpublished paper. Uppsala University (December).

Barro, Robert J., and Xavier Sala-i-Martin. 1991. "Convergence across States and Regions." *BPEA, 1:1991*, 107–58.

———. 1992. "Convergence." *Journal of Political Economy* 100(2): 223–51.

Bartel, Ann P. 1989. "Where Do the New U.S. Immigrants Live?" *Journal of Labor Economics* 7(4): 371–91.

Blanchard, Olivier Jean, and Lawrence F. Katz. 1992. "Regional Evolutions." *BPEA, 1:1992*, 1–61.

Borjas, George J. 1995. "The Economic Benefits from Immigration." *Journal of Economic Perspectives* 9(2): 3–22.

———. 1999a. "Immigration and Welfare Magnets." *Journal of Labor Economics* 17(4, part 1): 607–37.

———. 1999b. "The Economic Analysis of Immigration." In *Handbook of Labor Economics*, volume 3A, edited by Orley Ashenfelter and David Card. Amsterdam: North-Holland.

Borjas, George J., Richard B. Freeman, and Lawrence F. Katz. 1996. "Searching for the Effect of Immigration on the Labor Market." *American Economic Review Papers and Proceedings* 86(2): 246–51.

———. 1997. "How Much Do Immigration and Trade Affect Labor Market Outcomes?" *BPEA, 1:1997*, 1–67.

Borjas, George J., and Lynette Hilton. 1996. "Immigration and the Welfare State: Immigrant Participation in Means-Tested Entitlement Programs." *Quarterly Journal of Economics* 111(2): 575–604.

Card, David. 2001. "Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration." *Journal of Labor Economics* 19(1): 22–64.

Card, David, and Dean Hyslop. 1997. "Does Inflation 'Grease the Wheels of the Labor Market'?" In *Reducing Inflation: Motivation and Strategy*, edited by Christina D. Romer and David H. Romer. University of Chicago Press.

Ciccone, Antonio, and Robert E. Hall. 1996. "Productivity and the Density of Economic Activity." *American Economic Review* 86(1): 54–70.

Diamond, Peter A. 1982. "Aggregate Demand Management in Search Equilibrium." *Journal of Political Economy* 90(5): 881–94.

Fitzpatrick, Joseph P. 1971. *Puerto Rican Americans: The Meaning of Migration to the Mainland*. Prentice-Hall.

Friedberg, Rachel M., and Jennifer Hunt. 1995. "The Impact of Immigrants on Host Country Wages, Employment and Growth." *Journal of Economic Perspectives* 9(2): 23–44.

Fröhlich, Barbara. 1997. "SOPEMI Report for Germany." In *Trends in International Migration, Annual Report 1997*. Paris: Organization for Economic Cooperation and Development.

Gould, John P. 1968. "Adjustment Costs and the Theory of Investment of the Firm." *Review of Economic Studies* 35(1): 47–55.

Greenwood, Michael J. 1997. "Internal Migration in Developed Countries." In *Handbook of Population and Family Economics*, volume 1B, edited by Mark R. Rosenzweig and Oded Stark. Amsterdam: North-Holland.

Hagen, Everett E. 1958. "An Economic Justification of Protectionism." *Quarterly Journal of Economics* 72(4): 496–514.

Hamermesh, Daniel S. 1993. *Labor Demand*. Princeton University Press.

Jaeger, David A. 1996. "Skill Differences and the Effect of Immigrants on the Wages of Natives." Working Paper 273. U.S. Bureau of Labor Statistics (March).

Johnson, George. 1998. "The Impact of Immigration on Income Distribution among Minorities." In *Help or Hindrance? The Economic Implications of Immigration for African Americans*, edited by Daniel S. Hamermesh and Frank D. Bean. New York: Russell Sage Foundation.

Karoly, Lynn A., and Jacob Alex Klerman. 1994. "Using Regional Data to Re-examine the Contribution of Demographic and Sectoral Changes to Increasing U.S. Wage Inequality." In *The Changing Distribution of Income in an Open U.S. Economy*, edited by Jeffrey H. Bergstrand and others. Amsterdam: Elsevier Science, North-Holland.

LaLonde, Robert J., and Robert H. Topel. 1997. "Economic Impact of International Migration and the Economic Performance of Migrants." In *Handbook of Population and Family Economics*, volume 1B, edited by Mark R. Rosenzweig and Oded Stark. Amsterdam: North-Holland.

Lapan, Harvey E. 1976. "International Trade, Factor Market Distortions, and the Optimal Dynamic Subsidy." *American Economic Review* 66(3): 335–46.

Magee, Stephen P. 1972. "The Welfare Effects of Restrictions on U.S. Trade." *BPEA, 3:1972*, 645–701.

———. 1973. "Factor Market Distortions, Production, and Trade: A Survey." *Oxford Economic Papers* 25(1): 1–43.

Mincer, Jacob. 1978. "Family Migration Decisions." *Journal of Political Economy* 86(5): 749–73.

Mussa, Michael. 1986. "The Adjustment Process and the Timing of Trade Liberalization." In *Economic Liberalization in Developing Countries*, edited by Armeane M. Choksi and Demetris Papageorgiou. Basil Blackwell.

Ramos, Fernando A. 1992. "Out-Migration and Return Migration of Puerto Ricans." In *Immigration and the Work Force: Economic Consequences for the United States and Source Areas*, edited by George J. Borjas and Richard B. Freeman. University of Chicago Press.

Roback, Jennifer. 1982. "Wages, Rents, and the Quality of Life." *Journal of Political Economy* 90(6): 1257–78.

Schoeni, Robert F. 1997. "The Effect of Immigrants on the Employment and Wages of Native Workers: Evidence from the 1970s and 1980s." Unpublished paper. Santa Monica, Calif.: RAND Corporation.

Shimer, Robert. 2001. "The Impact of Young Workers on the Aggregate Labor Market." *Quarterly Journal of Economics* (forthcoming).

Smith, James P., and Barry Edmonston, editors. 1997. *The New Americans: Economic, Demographic, and Fiscal Effects of Immigration.* Washington: National Academy Press.

Storesletten, Kjetil. 2000. "Sustaining Fiscal Policy through Immigration." *Journal of Political Economy* 108(2): 300–23.

Suro, Roberto. 1998. *Strangers among Us: How Latino Immigration Is Transforming America.* Alfred A. Knopf.

Tobin, James. 1972. "Inflation and Unemployment." *American Economic Review* 62(1): 1–18.

Topel, Robert H. 1986. "Local Labor Markets." *Journal of Political Economy* 94(3, part 2): S111–43.

U.S. Department of State. 2000. "U.S. Refugee Admissions and Resettlement Program." Washington: Bureau of Population, Refugees and Migration, U.S. Department of State.