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# Introduction

*America was indebted to immigration for her settlement and prosperity.  
That part of America which had encouraged them most  
had advanced most rapidly in population, agriculture and the arts.*

—James Madison (1751–1836)<sup>1</sup>

The high-skilled immigration system in the United States is in desperate need of reform.<sup>2</sup> While comprehensive immigration policy made it back onto the US political agenda in the summer of 2007, regrettably little attention is being paid to visa policies and procedures for high-skilled foreign workers, some of which are increasingly becoming arbitrary, time consuming, and costly.

The entire annual H-1B temporary work visa quota available to US businesses was snapped up in less than one day in early April 2007 and, due to oversubscription, had to be allocated based on a random lottery (see chapter 3). And as recently as July 2007, rapidly changing and conflicting US governmental policy decisions on who can file for legal permanent resident (“green card”) status and when confounded sponsoring US employers and high-skilled foreigners working here on temporary visas while waiting for years to adjust their status to permanent residents. The

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1. The Debates in the Federal Convention of 1787, August 13.
2. “High-skilled” in this policy analysis, unless otherwise indicated, refers to persons with at least tertiary education—i.e., the equivalent of a four-year college degree or higher.

far-reaching policy decisions were subsequently clarified and partly reversed, but the debacle has undoubtedly lowered foreign workers' confidence in the system and their hope for a permanent future in the United States by significantly adding to the delay in processing of pending applications (see chapter 2).

It must be acknowledged at the outset, however, that historically the US high-skilled immigration system has in many ways been the world's leading such system and retains several well-functioning programs, but its present shortcomings have become increasingly pronounced in the main temporary work visa, the H-1B, and the legal permanent resident programs (see chapter 2). The two programs play a substantial role in bringing in foreign high-skilled workers and permanently keeping them here and could play an even bigger role as demand for high-skilled workers in the US economy increases.

The lack of a serious push to reform these programs is unfortunate because America is in the midst of a transition from its historical position at the pinnacle of the global skills hierarchy to a position where it is struggling to remain even in the world's top 10. This policy analysis presents evidence that in the coming decade, America will face substantial and broad skill shortages and will therefore have to remain attractive to "the best and the brightest."

The long-term economic growth of an advanced country like the United States in the age of rapid globalization is with certainty highly correlated with the skill level of its residents. This is the fundamental insight of growth theory provided by Robert Solow in the 1950s. The skill level in turn depends heavily on both the education and immigration policies of the country.

The combined outcome of these policies is a ready supply of high-skilled workers, which is critical for globally competing businesses. Domestic education policies—for the purposes of this policy analysis, policies that enable a country's young people to get a university degree—are clearly more important because they affect far more people than do immigration policies. The main reason for focusing on tertiary education in this policy analysis is the assertion that this skill level is most required to "learn how to learn." Tertiary skills are the crucial stepping stones to a flexible, fluctuating, and increasingly services-oriented global economy.

The principal objective of any government must be the welfare of its own population, so when considering the overall public response to an increased demand for high-skilled workers, domestic education policies will always retain primacy over immigration policies (which invariably benefit the populations of other countries, as they would otherwise not choose to emigrate).<sup>3</sup> Immigration should not become a substitute for edu-

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3. It will be a laudable goal for a destination country's immigration policies to seek to pro-

cation of the domestic population—the latter, however, is a topic well outside the scope of this policy analysis.

That said, any reform of a country's education system inevitably takes considerable time—likely decades—to have a discernible effect on the skill level of the workforce. It is, for instance, well established that many of the positive economic effects on the US economy of the 1944 GI Bill emerged only many years later.<sup>4</sup> As such, from the perspective of finding a problem-solving policy tool for the short and medium terms, high-skilled immigration policies in a high-wage country like the United States, which (in theory at least) can be altered relatively quickly and have a more immediate impact on a country's supply of high-skilled workers, should be at least partly responsive to the long-term outcome of that same country's domestic education policies. In other words, education policy is a *fait accompli*, whose long-term economic impact policymakers designing high-skilled immigration policies must never ignore.

Large increases in a country's domestic output of university graduates will, *ceteris paribus*, reduce the demand from businesses and other employers for high-skilled foreign workers. On the other hand, stagnating output of domestic university graduates will, *ceteris paribus*, increase the demand for foreign university graduates and put pressure on high-skilled immigration regulation to facilitate this demand. The latter case is of particular relevance, because—as many economists have established—the US economy has during the last decades been experiencing skill-biased technological change, which has raised the relative demand for high-skilled workers in the US economy.<sup>5</sup>

Before proceeding with the analysis, it is useful to consider why high-skilled immigration is different from immigration in general. A country's overall immigration system serves multiple purposes: upholding sovereignty and border control, national security (including aiding local employees working for military forces deployed overseas<sup>6</sup>), and long-held

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mote the welfare of origin countries too. Whether this is on balance the case is a complicated matter beyond the scope of this policy analysis. However, it is most useful to conceptualize high-skilled immigration as exchange-oriented “brain flows” between different countries, rather than zero-sum “brain drains.”

4. Officially titled the Servicemen's Readjustment Act of 1944, the 1944 GI Bill provided returning World War II veterans (commonly referred to as GIs) with college or vocational education as well as one year of unemployment compensation. For its positive impact on the US economy, see, for instance, Bound and Turner (2002) and Eggertsson (1972).

5. There is a vast literature on this subject. For a recent exhaustive overview, see Feenstra (2000); Levy and Temin (2007); Levy and Murnane (1992); Autor, Levy, and Murnane (2001); and Mann (2003, 2006).

6. The current debate on making US visas available to local employees of coalition forces in Iraq—interpreter/translator applicants until recently faced a nine-year waiting period—is another example of the many unintended but potentially highly damaging spillover effects into other policy areas of the current broad-based deadlock on US immigration policy reform. See “Envoy Urges Visas for Iraqis Aiding U.S.,” *Washington Post*, July 22, 2007, A1.

legal and humanitarian traditions, while reflecting national identity politics, for instance. This exhaustive set of priorities, however, is not relevant for the part of the immigration system that concerns high-skilled foreign workers. A sensible high-skilled immigration system involves itself first and foremost with a country's economic growth prospects and should generally aim to appropriately align two traditional "welfare economics" issues, namely enabling a country's employers and businesses to recruit needed high-skilled workers if necessary also from abroad (efficiency) while preserving the interests of the resident workforce (equity).

It would be fortuitous if high-skilled immigration policies in America were reformed as part of a "grand compromise" on immigration encompassing all the different purposes listed above. But it should be clear to all stakeholders that in the event such a "grand compromise" is not politically possible, then holding much-needed high-skilled immigration reforms hostage as a political negotiating strategy puts continuing US economic growth at risk. If US-located businesses cannot get the high-skilled employees they need to get their work done inside the United States, then they will as a matter of simple competitive logic in a global economy be increasingly likely to shift jobs and workplaces to locations outside US borders, where they will have progressively better access to the workers they require. A recent survey by the National Venture Capital Association (2007, 24) of privately held venture capital-backed US companies shows that restrictive US high-skilled immigration laws had influenced the decisions of one-third of such companies to place more personnel at facilities abroad.<sup>7</sup> To reestablish its leadership in global talent, in the short run America will have to revamp its high-skilled immigration policies and processes to not only welcome more highly skilled foreign workers but also make it easier for them to stay.

This policy analysis first shows how America will increasingly require high-skilled foreign workers to buttress its aging skilled workforce and will do so precisely at a time when many other Organization for Economic Cooperation and Development (OECD) countries are reforming their high-skilled immigration regulation to attract highly sought global talent. Second, it focuses on the H-1B and L-1 visa and green card programs to illustrate how the current high-skilled immigration system is characterized by a dual trend: volatile expansion in numbers concerning Indian nationals but relative stability concerning other foreigners. Third, it addresses the welfare trade-off between economic efficiency and worker interests, looks more closely at the labor-market conditions faced by those Americans most affected by high-skilled immigration—software workers—and addresses ways in which immigration policy can best match foreign workers to US employers. Finally, it presents a package of coherent and parsimonious reforms of present US high-skilled immigration laws.

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7. The study singles out the lack of H-1B visas as the major human resources bottleneck.