

Skills, Jobs, Competitiveness and Innovation

Will the nations and businesses that are leaders today continue to be leaders tomorrow?

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I was recently in Washington, D.C., where I participated in a Symposium on the "Globalization of Innovation: Industry Trends and Professional Workforce Implications" sponsored by the [Board on Science, Technology and Economy Policy](#) of the [National Academies](#). I gave a talk on "Skill Requirements for Innovation in the 21st Century", a subject that I have been thinking a lot about in recent years, but especially in the last few months.

The key question on everyone's mind is whether the nations and businesses that are leaders today will continue to be leaders tomorrow, given all the changes taking place around the world. In particular, there are [serious concerns](#) as to whether the US will continue to be an innovation leader in the 21st century.

[David Morgenthaler](#), founding partner of [Morgenthaler Ventures](#) and a co-chair of the Symposium, reminded us to take nothing for granted. He said that he remembered that in the 1950s Americans felt that innovation and leadership were essentially their birthright. But then, from his home base in Cleveland, he watched the decline of the industrial Midwest over the next several decades. While the country in general has done quite well during these times, Morgenthaler cautioned us all to be very watchful, so the painful economic shifts that he observed around him over the last forty years do not get duplicated in the country as a whole over the next forty.

There is no doubt that the US has been a leader in innovation over the last century, reinventing itself and its economy from time to time, most recently with the rise of the Internet in the mid-1990s. Clearly, one of the qualities that have made us innovation leaders is our talent. Talent, especially [technical talent](#), is more important than ever, given the fast-changing, complex and unpredictable world in which we live. At the recent IBM [Business Leadership Forum](#) in Rome, [Tom Friedman](#) observed, "We've really gone from the Industrial Age to the Information Age; what we're now in is what I would call the Talent Age. You see, when the world is flat, all the tools of collaboration and innovation are increasingly becoming

commodities, distributed to more people than ever before. The only sustainable edge you have, therefore, as a country, company or an individual, is actually your human talent."

For a long time, the US has been a leader in research and higher education, but questions are being raised as to whether that leadership position will continue into the future as other countries increase their investments in R&D and graduate larger numbers of engineers and scientists. For example, a recent report from the [National Academies](#) entitled "[Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future](#)" warns that "in a world where advanced knowledge is widespread and low-cost labor is readily available, U.S. advantages in the marketplace and in science and technology have begun to erode."

Talent is absolutely necessary for leadership, but not sufficient. In addition to talent, you need to have a highly flexible society that can absorb and adapt to rapidly changing and unpredictable economic, social and political environments. Such times truly test a country's capacity to evolve those institutions and practices that no longer work, so it can move into the future. This is very difficult, often painful. We all crave stability -- individuals, businesses and the institutions of society.

For individuals, for example, the same skills that served us well in the past may no longer be adequate to get good jobs in the marketplace. We have no choice but to learn [new skills](#) if we want to compete for those good jobs, and our educational system needs to change so that it trains students with the required new skills. [Many businesses](#) must similarly undergo [fundamental transformation](#) as they face significant forces beyond their control, like globalization, commoditization and deregulation. The whole society must step up to address important national problems, like health care, security, energy and the environment, problems that will make it harder to compete on a global scale if they are not properly resolved.

Flexibility and adaptability are underlying strengths of America that will serve it well in this kind of world. The fact that our society is deeply grounded in democratic institutions and free-market principles is key. Our [culture of diversity](#) -- not just of people from different nationalities, religions, and cultures, but also of different experiences and points of view -- bodes well for America's future as a center of innovation.

Tom Friedman touched on this point from a somewhat different angle in his talk at the Rome Business Leadership Forum. He said that one of the key things countries, companies and individuals need to get right to succeed in our increasingly "flat world" is governance. He

added, "By governance, I really mean everything from your intellectual property laws to your fiscal policy, rule of law . . ." essentially all the things you need to be properly accepted into the world's increasingly integrated economy, the place where innovation, collaboration, and entrepreneurship take place and "where the action is going to be."

As with most complex issues, we have a somewhat mixed picture when looking at America's prospects for continuing into the 21st century as a top innovation leader. A number of recent [innovation studies](#) have correctly pointed out that we have to significantly improve our investments in research and education, because other countries are aggressively competing in these areas and catching up. But we continue to enjoy governance, structural and cultural strengths that are very difficult to replicate, and which other countries aspiring to innovation leadership will have to emulate in their own way.

There are no easy answers. But I believe that if nations compete to develop top talent through investment in research and education, as well as to attract and retain top talent through good governance, democratic institutions, free markets, the rule of law and respect for diversity, all of us around the world will ultimately have a better future.