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Benchmarking Competitiveness: Is America's Technological Hegemony Waning?

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For more than half a century, by almost every standard, the United States has been the world's leader in scientific discovery, innovation and technological competitiveness. To a large degree, that dominant position stemmed from the circumstances our nation inherited at the conclusion of the World War Two: we were, in effect, the only major nation left standing that did not have to repair serious war damage. And we found ourselves with an extraordinary science and technology base that we had developed for military purposes. We had the laboratories – industrial, academic and government – as well as the scientific and engineering personnel – many of them immigrants who had escaped from war-time Europe. What remained was to convert the wartime machinery into peacetime uses. We adopted private and public policies that accomplished the transition remarkably well, and we have prospered ever since. Our higher education system, our protection of intellectual property rights, our venture capital system, our entrepreneurial culture and our willingness to commit government funds for the support of science and engineering have been key components to our success. But recent competitiveness benchmarks suggest that our dominance is waning rapidly, in part because other nations have begun to emulate our successful model, in part because globalization has “flattened” the world and in part because we have been reluctant to pursue the public policies that are necessary to ensure our leadership. We will examine these benchmarks and explore the policy changes that are needed to keep our nation's science and technology enterprise vibrant and our economic growth on an upward trajectory.