

Statement of
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A.T. Kearney has recently conducted two studies on competitiveness that have intriguing policy implications when it comes to maintaining U.S. leadership in high technology. In this testimony I will review each study and its results, and then examine their policy implications.

Tech industry competitiveness

A.T. Kearney's "Crunch Time: The Competitiveness Audit" finds an industry of rebounding opportunity but also increasing competitive intensity. The study was conducted in late 2004 and early 2005 in cooperation with the CMO Council and the BPM Forum, and it is based on a survey of 300 U.S. technology and telecommunications executives.

The study finds three major trends impacting technology markets:

- **New Mega Markets – China and India.** In coming years, information technology spend growth from the Asia-Pacific region, for example, will be double that of the United States and Europe. Consumer spending growth for China, India, and Russia will also be double the domestic rates. These represent new mega-markets in which high-tech firms can sell their products.
- **Shift from defense and enterprise to consumer.** The consumer has become the main driver of the tech market, as illustrated by the eclipse of semiconductors going into consumer applications over those going into business or defense purposes.
- **New technologies.** Emerging technologies such as wireless and VoIP (voice over internet protocol) are fast becoming mainstream. The most significant five-year growth forecasts are for digital TVs, MP3 players, digital hotspots, and RFID.

Meanwhile, competition is increasing as companies become larger, more global, and more efficient than ever before. Whether it's new players from China, Korea or India, or larger players resulting from domestic consolidation, the result is companies with a combination of greater size and increased agility.

Where is this competition coming from? Respondents vote the United States as the number one geographic source, with China and India trailing close behind. When asked about factors influencing competitiveness, the top three responses are emerging technologies, industry consolidation, and new entrants into the market.

So how prepared are U.S. high-tech companies? While 90 percent of our survey respondents expect competitive intensity to increase, just 15 percent rate their own company's preparedness as "very good." (Most gave themselves a "good" or "fair"

grade.) Less than 40 percent have a formal function or process to assess competitiveness. Most drive their competitive planning and action within product and market groups—not at the company level.

Why is this a problem? The mega-shifts discussed above are challenging traditional market and product boundaries. Leaders use innovative business models to exploit the intersection of new markets and new technologies; for example, Apple with music, eBay with auctions and Yahoo and Google with advertising. Among established players, EMC is moving from storage to “content management,” while IBM continues to migrate from hardware to software to outsourced services. In short, companies that want to position themselves to play globally and change markets with new technology must break out of their product business silos.

In summary, the study shows that the U.S. technology industry is not standing still; it is taking key actions. However, given the significant market changes underway, companies may need to do more. The study identifies six dimensions to improving competitive positioning. The three most important, according to technology executives, are:

- Strengthening their companies’ strategic position in the marketing place, e.g., developing company-level strategies for emerging markets such as China
- Enhancing product and service innovation, e.g., innovating not just through incremental improvements around core products, but in a few big bets on potential new technologies
- Improving customer intimacy and experience, e.g., engaging customers and channels to improve customer processes and systems, strengthen account management, and shift sales focus from products to solutions.

Other key dimensions are managing operational complexity; managing organization, culture, and leadership; and optimizing governance and capital deployment.

Competitiveness of a strategic U.S. business region

“The Future of Bay Area Jobs: The Impact of Offshoring and Other Key Trends,” undertaken in 2004 in partnership with three area nonprofits (Joint Venture: Silicon Valley Network, the Bay Area Economic Forum, and the Stanford Project on Regions of Innovation and Entrepreneurship), began as a rigorous examination of the much-discussed effects of global offshoring on the domestic jobs base. It soon found, however, that while the offshoring trend has actually been around for decades, other factors also drive changes in the job market.

Based on 120 interviews, analysis of 9,000 online jobs listings, extensive review of secondary source materials, and in-depth examination of the semiconductor and software industries, the study’s analytical framework focused on four key components: trends, regional capabilities, the regional business environment, and the regional job market.

Our study found that the Bay Area is overall well-positioned in three critical technologies: information technology, biotechnology, and nanotechnology.

Analyzing the region's capabilities—perhaps the most important component in companies' choices to locate and invest in a region—the study found that the Bay Area is highly competitive in five key areas:

- Entrepreneurship/new business creation
- Research in advanced technologies
- Cross-disciplinary research
- Concept and market development
- Global integrated management

The Bay Area is less competitive in three areas: mass production, back-office operations, and product and process enhancement. Remember, however, that this study focused only on the Bay Area (where the cost of living is quite high), and other domestic regions may be competitive in these capabilities. It's not that such operations are necessarily headed for China, or anywhere offshore—a call center in Nevada or a distribution center in Dallas, for example, will still have advantages over offshore locations. Further study of various pockets or regions within the country would help identify their competitive capabilities.

But to return to the Bay Area, we found that its unique strengths should produce net job *creation* for the foreseeable future. The region should continue to incubate and grow new businesses; small and new businesses will keep most of their jobs local until their business processes and products mature.

In addition to job creation, there will be job destruction. With the regional economy's focus on innovation and strong link to economic cycles, an individual may find that after the creation and scale-up of a business, her job might move to another region of the country or world—and she'll probably want to stay in the Bay Area and start with a new business centered around a new technology. But again, despite (and in part because of) the stress on any one individual, the macro jobs picture will be strong.

Policy implications

From our competitiveness study, the primary policy implication of interest to this commission concerns balancing the playing field for trade between the United States and China. China is a potentially huge market for U.S. products—but who will have access to it? Currently, Chinese firms have far greater access to U.S. markets than vice-versa. Part of the problem is maturity of infrastructure (retail, logistics, etc.). But part of it is market entry issues, including intellectual property protections. U.S. firms need government help to assure that they can grow globally just as Chinese firms do.

Again, I'm speaking of markets to sell products. As the offshoring phenomenon shows, we do already have access to low-cost labor in China. But that labor is unregulated—which brings up another issue of balancing the playing field. We must ensure that Chinese firms are held to the same standard of compliance as American firms when it comes to the environment, labor, and accounting. U.S. policies on these issues reflect our

society's concern for the long-term sustainability of financial markets and the health and welfare of both workers and the world we all live in. We must call on the Chinese government to match our support for these ideals.

We have also hampered our own competitiveness by limiting H-1B visas, the tool through which high-potential, highly talented foreign individuals can come to this country for work or school. The program suffered from some abuse in the late 1990s, and was justifiably examined in the aftermath of 9/11, but we should now reinvigorate the inflow of skilled immigrants who can power our economy. Many of these talented people end up staying permanently in the country where they study or work—and if we don't bring them in, then Canada, the United Kingdom, and other countries will.

The Bay Area jobs study generated recommendations for individuals, businesses, and all levels of government, but let me focus now on the government end. Primarily, the lesson is that we should invest in promoting the region's competitive capabilities, including mechanisms such as:

- R&D tax credits
- Funding for science in next-generation technologies, including bio, nano, and energy
- Increased grants for higher education that supports our competitive capabilities.

Note that it is far more effective to use taxes and policies to *maintain* our leadership position in areas where we are already strong than to try to shore up areas where we are less competitive.

The volatile nature of the Bay Area economy, our study found, has many benefits to business, although it frequently takes a toll on individual workers. As companies mature and move certain functions offshore, they can do so without calculating the total burden on their transitioning employees. That burden has traditionally fallen on the government (in addition to the employee himself). We should thus encourage businesses to “share the load” of job transitions.

But since that volatile job market is nevertheless a robust one—good for national competitiveness—we as a society can also pursue innovative approaches for transitioning employees. A big concern for individuals considering leaving their jobs is maintaining their health insurance, so better portability of health accounts might allow them to take more chances in business creation. Likewise, leaving an established company for a startup generally requires new skills to apply to the new technologies that the emerging company is centered on. The 401(k) is a wonderful innovation that basically creates a portable retirement account; workers are calling for a similar approach to their continuing reeducation and retraining needs.

Finally, policy should address the needs of the supporting business environment, such as housing and transportation. Current policies are in place to do so; however, has government demanded the same type of productivity and efficiencies from its suppliers and departments that businesses have gained from their suppliers and internal departments?

Conclusion

China's high-tech development contributes to the intense competitive environment for U.S. high tech firms—but at the same time it promises huge markets for those who succeed. With a level playing field in trade, and policies that invest in our competitive capabilities, the federal government can permit well-prepared U.S. companies to thrive in the challenging but promising years to come.

I thank you for the opportunity to share our perspectives on these important issues.