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China's Global Technology Competitiveness: Recent Company Experience in China

Good morning. It's a pleasure to be here. Let me begin by thanking the members of the Commission and its staff for holding these hearings and for inviting me to participate. I believe that the focus of this Commission is vitally important to the economic and strategic future of the United States. Apart from terrorism and other violent threats, there is perhaps no greater long-term geopolitical challenge to this nation at the beginning of this century than the question of how to address, and co-exist and work with, the rising power of China.

I should preface my further remarks by saying that my views today are my own, and not those of my past or present employers.

In one of my past work lives as a State Department Foreign Service officer, I often found myself an informal watcher of China. While posted in India and Japan, political and economic developments in China were of great strategic interest to both of those nations, as well as to the United States. Today, my interest is more practical, and conditions in China impact my professional life on a daily basis. As in-house counsel with primary responsibility for international legal affairs at a large semiconductor company, I spend the bulk of my time managing legal matters overseas. In China, that has meant setting up several operating units to support market expansion and off-shore research and development efforts. My recent experience may be of interest in the context of these hearings.

The Catch-22 of offshoring to China: to stay competitive we enable our competitors

One initial observation is that offshoring cutting-edge technology work to China creates a Catch-22 situation. In an effort to reduce costs, find new engineering talent, and reach new markets, Western companies are inevitably creating greater competition for themselves. By transferring technological know-how and fueling demand for new technology and products, we are not necessarily creating new market opportunities solely for ourselves. Take for instance the mobile phone industry. The introduction of cellular technology into China has been stunningly quick in fueling demand that outpaces that of the U.S. Yet that introduction of technology has also enabled a native Chinese cell phone industry that now accounts for over 40% of sales in China.

Likewise in the computer software and hardware industries, all bets are off. When major software, hardware, and PC makers first took their wares and know-how to China, it is likely that they were hoping for a billion new customers. There is no denying that there remains plenty of market upside in China, and that Western companies continue to grow their business there. But it is also true that demand for computer software and hardware, including advanced semiconductors, is increasingly filled by local Chinese producers (not to mention pirated software). And it is becoming apparent that Chinese technology manufacturers will not be satisfied with the China market -- many are already working towards plans to, somewhat ironically, expand globally beyond China, perhaps starting first with other Asian markets, but no doubt with sights set on long-term goals that likely include Western markets.

Another aspect of the enablement of Chinese competition that results from offshoring technology work and technology transfer is the problem of intellectual property risk and blatant IP theft. It is true that, at least on paper, there has been change for the better in terms of legal structures in China for intellectual property protection and enforcement of patents, copyrights, and trademarks. But we need to keep in mind that such progress is incremental, and in some instances, meant mainly to mollify the concerns of foreign investors. When it comes to keeping trade secrets secret, or enforcing non-disclosure agreements against entities or individuals, there is little hope of credible recourse. From an information security perspective, companies can take precautions, including use of cameras, firewalled computer systems, and encrypted data, but the risks remain high in an environment where encryption methods must be acceptable to the local authorities and the host government must be given the encryption keys. The bottom-line is that companies going to China must be cautious, and they must limit and compartmentalize the technology they take there if they are to retain competitive advantages.

Getting started in China: multilayered complexity and lack of transparency

Getting started in China presents practical challenges on a day-to-day basis. Setting up a new wholly-owned company is not the 7-10 day task that we take for granted in the U.S. Outside legal counsel and consultants typically recommend allowing at least 6 months to locate a site and come to terms on a lease, negotiate with government officials over scope of allowed business and incentives, prepare documentation, and obtain government approvals. Our experience is that timeframes can be shorter (though at other times they have taken as long as predicted), but the processes are always multilayered and complex, with little insight into the approval processes. Businesses entering China need to understand that approval processes are government controlled and lack transparency. Decisions can be arbitrary and unpredictable, and even private party processes such as lease negotiations may be subject to government approvals, and influenced by motivations we can only begin to guess at.

Procedures also vary considerably from region to region, and between technology parks in the same region. In Shanghai, Chinese and English versions of important documents are carefully crafted to closely match in meanings and may carry equal validity. In South

China, only Chinese versions may be valid -- English translations may be prepared by a company's own advisers, but may carry no legal weight. In some cases, the latter, more opaque situation may actually lead to quicker approvals, but with more uncertainty over exactly what the terms are and how they will be enforced. Additionally, the problem of transparency is heightened when a company considers engaging in a joint venture, licensing arrangement, or acquisition involving a Chinese entity. Performing due diligence will in almost all cases be difficult and will result in far fewer satisfactory answers and far less clarity than hoped for.

Uncertain motivations: interests apparently in synch; some interests against our national interests

I've touched on the idea of uncertain motivations on the part of the Chinese. Most Western companies today are fortunate in that interests on both sides are apparently in synch. Central and local government actors find our presence beneficial in terms of technology and capital transfers, job creation, and increased supplies of goods and resources, all contributing to generally heightened standards of living. My experience is that offshoring and market outreach efforts in various regions have been welcomed because we have offered technology, expertise, employment, and overall investment deemed to be of high value both to local and central government authorities. In most instances, government and quasi-governmental actors have been extremely helpful to us. To our advantage, entities such as the technology parks and certain quasi-governmental promotion units, and most importantly individuals within those organizations, are often stakeholders who are extremely motivated to assist and guide foreign companies through the maze of official and private requirements. Individuals themselves are often paid bonuses for successfully recruiting foreign companies. On the surface at least, interests on all sides are finding common ground.

We cannot, however, lose track of the reality that China is a centrally-controlled playing field, where much of what goes on is allowed simply because it is deemed to be of benefit to China's long-term goals, whatever those may be. From our position as a democracy with a multitude of conflicting motivations within and outside of government, and in a post-Soviet era when the idea of central control is becoming a dim memory in many parts of the world, it is sometimes difficult to keep in mind that central government control continues to exist, particularly in a country like China where every day brings greater and seemingly freer engagement at the business level. But at times, reasons for greater concern become clear. For example, in an effort to assure Western companies that power sources and road access to a given site will be plentiful and well-maintained, Chinese promoters sometimes let slip that infrastructure in the area will receive consistent support and priority because the government wants to attract certain technologies that can be used in the Chinese defense and military industries. So when the Commission's report to Congress of last year asks "whether [China] converts [growing technology capabilities] to military uses and/or to control the free flow of information to its population," it seems to me that the question should be considered rhetorical and the answer more than clear. That we have at times seen the overt and covert transfer of dual use items, including turbine designs, precision machine tools, and other technology useful for the development of WMD and related delivery systems, makes it even clearer that some interests at play are not in our national interest.

Masters of the game: creating a comfort zone for foreign investment; temporal market opportunities

It seems that China is becoming master of the game of attracting foreign investment and technology, creating jobs, and rapidly raising standards of living for its people. One visit to Shanghai is enough to convince most people that China lives in the modern age and is a force to be reckoned with. The very modernity one is greeted with adds to a sense of comfort for foreign investors. At the same time, China appears to have given up very little in terms of its own resources and markets. It continues to export finished goods at rates that far exceed imports. It welcomes foreign investment and marketeers, but it does not really give up its domestic markets, and it retains complete control over regulations, market access, labor supply, and infrastructure. Foreign companies create new markets within China -- but, once demand is established, in almost every instance, native Chinese producers take back a large chunk of the demand. In some cases, the nature of demand may also be manipulated through the adoption of state-dictated standards in areas such as wireless technology and software. So rather than a billion new customers for foreign companies, China presents only the market that China wants it to be. Even for cutting-edge technology, open markets in China may be illusory and temporal. Some might argue that, rather than new goods, what China really wants is technology and know-how to take advantage of its own market potential, and in preparation for competition in and perhaps dominance of foreign markets. In parallel, China seems to be getting its ducks in a row for the future, engaging internationally and creating channels of influence and resources in far-flung parts of the globe. One has to give China credit -- it has created a winning strategy of attracting our investment, technology, and jobs, while for the most part placating fears, and simultaneously developing its own capabilities and resources.

The possibility of illusory benefits: the rising total cost of doing business

U.S. technology companies need to also keep in mind that the cost benefits of offshoring and investing in China may at least in part be illusory. It is one thing to find cheap manufacturing labor and materials, it is a different challenge to find skilled and experienced hardware engineers in China, and then have to compete for them against other U.S. companies and multinationals. Though on a yearly basis China continues to produce many times the number of engineers as the U.S., demand, competition, and salaries for those individuals are rising at tremendous rates. By some accounts, salaries for skilled employees are rising as much as 20% per year, making retention all the more difficult, and steadily eroding cost advantages with respect to technology labor. For the most experienced personnel, salaries and incentives such as stock options are already on a par with the U.S. Real estate costs are also rising, with rental rates per square foot in cities such as Shanghai already exceeding current rates here in the Bay Area. All of which is to say that the total cost of doing business in China is now much higher than anticipated.

Weighing the upside: focusing on the short-term rather than the end game

For better or worse, however, there does not seem to be a noticeable decrease in corporate plans to move more operations offshore. Despite election year battles over offshoring and outsourcing of U.S. jobs, it seems that boards, management, and institutional and individual investors continue to see offshore strategies in a positive, rose-colored light. Companies will continue to weigh the perceived upside against the risks of shifting economic and political policies in China, uncertain financial and legal structures, controlled markets, and rising costs. In my view, companies seem overly focused on short-term strategies and market potential, without imagining the end game and the possibility that they will lose their competitive advantage and/or be taken advantage of. How this will play out I leave to others more skilled at gaming the variables.

Moving Silicon Valley beyond engagement: alignment of business interests with national interests

The one recommendation that I would like to leave you with is this: that the federal government must do a better job of engaging with Silicon Valley, and that the two should work together to move beyond unbridled engagement with China towards an alignment of private sector business interests with national interests. To start to do that, we need to educate each other on an ongoing basis. Apart from hearings such as today's, the federal government's visibility in this region is surprisingly limited, particularly given that much of the technology subject to export controls and giving rise to concerns about long-term competitiveness and proliferation originates within a 50 mile radius of this meeting. And except for the few individuals responsible for export control compliance within each company, there is in my experience very little appreciation in the private sector for the competitive, strategic, and national security threats inherent in technology transfer and offshoring activity, particularly with respect to China. For the U.S. to maintain scientific and technological leadership, strategists and policy makers in Washington must win the cooperation of Silicon Valley. Developing and publishing a national policy and strategy towards China, by itself, will not likely change or affect the views and behaviors of the private sector, particularly here in Silicon Valley. But moving beyond a DC-centric federal government and establishing a visible, ongoing, sophisticated, cooperative, and non-threatening presence here could help. If the Commission agrees with some of these observations, and if it wants to have effect beyond Washington, the dialogue must go beyond this forum -- through the media, among corporate management, and at the level of technology workers. The Commission will need to demonstrate that it understands what is driving companies overseas to places like China, and that it has insights to offer that can help companies make better decisions -- insights not only with respect to risks, threats, and national security, but also at the practical level, by discussing overall return on investment, competition risk, long-term scenarios, and by counteracting hype and naiveté. By working more in concert, the federal government and the private sector can together encourage more deep thinking and discussion on the issue of China -- leading, hopefully, to a more sophisticated normative understanding of what China means to the U.S. and to each business's competitive position. Thank you.