

I want to thank the all the participants, business leaders, representatives from the Japan and U.S. governments, my distinguished colleagues from Stanford, and the invited audience, for a most interesting and informative conference. The issues faced here, around the theme of innovation and entrepreneurship are vital to the continued economic well-being and cooperation between our two countries.

Innovation and entrepreneurship are concepts about the future. They are interdependent; they are connected. Entrepreneurship provides the impetus for innovation, and innovation provides the productive re-combinations that allow economic growth.

Can anyone doubt the urgency of these issues? In both the US and Japan, there is an unease among all economic strata and interest groups - but particularly the middle class - about our relevance in the economic future. We worry about the opportunities that we will have to have to secure jobs that will allow a good life, a good retirement, and sufficient prosperity to grant to our children.

Unease also stalks our nations. In both the US and Japan, we wonder if we can maintain our lifestyles if wages around the world are so much lower than ours. Panelists noted that Japan has a birth rate worry that it shares with other advanced economies in Europe. The US would have a declining population, too, were it not for immigration, but that causes domestic unease here as well.

Comments today generally agree - it is the formation of successful new innovative companies that can create and condition the future, provide employment, and increase productivity.

If we want that future, governments must also play a role.

Much of the conversation today crystalized around three policy directions that governments can take to catalyze the entrepreneurial results we want. There were few simple answers, and perhaps this is good. Simple answers are sometimes the best - but not when they are given *before* a problem is identified. We cannot devise solutions until we have a clear view of the cause of the problem and a way to measure our success.

One simple solution is to encourage companies to start. But it is easy to start a company. In Japan it takes about \$1000 and two weeks or so. In California it's about \$800 and ten days. But starting a company is the easy part. How does it grow? Simply starting companies is not the answer.

How about venture capital? Venture capital - as we heard from several panelists today - plays a key role in creating the economy of the future. Risk capital is appropriate, necessary and doubtless supremely suited to creating technical companies. For it is in the interest of the venture capitalist that they make money - that is, that they ensure commercialization of the innovations they fund. Thus, by doing their job, the policy goal is accomplished. But around the world, attempts to encourage entrepreneurship by establishing venture capital firms, in the first instance, have met with uneven results. Venture capital - injected into an environment

without entrepreneurs already pursuing economic opportunity risks being a sterile injection. *Venture capital follows entrepreneurship - it does not lead.*

Government venture investing certainly runs the risk of injecting cash into an economic void. If government related investment firms invest before a market exists to be met, we run the grave risk of creating *zombie ventures* with quasi-public funding that keeps them alive and free from the discipline of the market.

Education? Should we encourage entrepreneurs, or train entrepreneurs? If so, what do we teach them? Perhaps not unexpectedly, it is not the typical case that successful entrepreneurs are a graduates of a training program. What should we teach to improve that? Accounting? How to be bold? How to be creative? Leadership? Law? Entrepreneurship is the province of *unusual* people - how do we train for that? I suggest that we can be successful using the Stanford method that Dr. Byers told us about, and that is training a willing cadre of entrepreneurs who are aching to get out there and do something. They need no encouragement. Education is not a predecessor, but comes *after* opportunity flowers, *after* the entrepreneurial ranks form up.

Transferring technologies is perhaps a key. Of course this is useful, but into what economic environment is the technology released? If it is to be a commercial venture, will the technology find a ready market? Will the entrepreneurs be attracted to that market? Once again, we are faced with the same antecedent: economic opportunity.

Instead, let's capture some ideas that we heard today. The key idea I heard, perhaps most directly in Mr. Sonsini's keynote speech, is that government and industry can create economic opportunity. Let me summarize this concept into three broad areas:

First, government can enact effective policy to allow talent to enter the entrepreneurial realm. The government can create rules that ensure fair dealing and access to the market, of course. In the U.S. and Japan, this means effective commercial law, courts, and regulations. But even more broadly, the government can enact policies that allow an energetic workforce to simply participate the new economy. This means policies such as encouraging talented immigration, providing effective child care to bring talented women into the innovative economic realm, and retirement and health care systems so that entrepreneurs won't need to seek the safety of big companies to ensure a reasonable retirement and reasonable health risk.

The second potential axis of policy intervention is the government can re-write the rules of a market and thus change the way the market is approached by firms. Research makes it clear that a flowering of new firms follows in the wake of regulatory change. In Japan, for example, the liberalization of the wholesale and retail market laws created a vast number of new firms. Research is clear on this subject, changing regulatory structures, eliminating regulations OR creating new regulations, is a proven way to create economic opportunity that attracts entrepreneurs. This whole area is fruitful and careful policy-making can create beneficial regulations and liberalizations that have both positive policy outcomes and positive economic opportunity outcomes.

The third and perhaps most intriguing concept that I heard today, is the idea *that governments can intervene to create economic opportunity* by taking technological risks, *demand*, and *purchase* advanced technology to create entrepreneurial opportunity.

Government can do this in two ways. First, it can fund basic research. Commercial firms cannot afford to conduct research far from the commercialization point. Yet the innovations, the *technical* advances that we seek, are products of basic research. It is the realm of risky research. Companies will, on their own, conduct a practicable research. But only governments can, for political reasons, engage in fundamental research – out of which come not only the ideas *but the technologists*, the human capital that form a crucial part of the entrepreneurial cohort.

Even more fundamentally, governments can create technology markets by pursuing their own political interests. As Dr. Winarsky noted, technology in search of a market is a rough road. But a market in search of technology is an opportunity.

This, to me, is a powerful idea and the not too distant history will help illustrate. Take, for example, the Saturn V. No commercial enterprise would ever build it. While it generated enough energy to exceed the entire electrical output of the country of India, it mostly fell into the ocean in pieces when used. It took two men to the surface of the moon and brought back about 70 lbs of rocks. It has no commercial value aside from scrap. It cost about 6 billion to build each one in today's dollars.

It was built for political reasons. The governments had its own interest in mind when it ordered a dozen of these.

The key is that the government, by pursuing its own interest, created a market for advanced technology that reverberates down to today. The computers to guide this machine were the most advanced of its time, and, when ordered in 1962, did not yet exist. Companies on both coasts are still here today because of the need to miniaturize and lighten computing power to get us to the moon. The technology led directly to the micro-computer and the microchip after which Silicon Valley was named. The pump technology created a sub-industry that still powers semi-conductor manufacturing equipment. Young people were inspired, technical suppliers were enriched, and the technical products diversified into new markets as we left space and focused on more earthly matters.

By building this, *for purely political reasons*, technical industries were founded and jobs created by *government demand for advanced technology*. Government took the technological risks.

Government can be bold in a way that private interests cannot. Governments can imagine advanced technologies, demand those technologies, and pay for those technologies. This takes imagination. And as President Obama alluded to in his state-of-the-union speech, if we could imagine it in 1957 with Sputnik, we can imagine it now when confronted with our crisis of confidence. It is a role the government can and ought to fulfill. If we are to call thoughtful people into symposia, committees, and

consortiums, perhaps this will be a bolder and better task than to simply exhort our youth to be more creative.

Lastly, let's have confidence. We are in a new economic order, and we are challenged to find the path ahead. But the challenges of today are not more arduous than in 1957, or 1932, or 1868 for Japan, or in 1787 for us. It is no miracle that countries with large populations will have large GDP's. The miracle is that a nation of 120 million became the second largest economy, and stayed that way for 40 years. Japan could not have done that unless it is an entrepreneurial and innovative place.

I hope you will join us at Stanford as we explore these issues, I hope you will continue to give your thoughts, ideas, and inspirations to those we select to create policy, and I sincerely hope that the bond between the United States and Japan grows stronger with every passing year.

Thank you.