

Throughout the day we have all been singing from the same hymnal, albeit with occasionally different volume and pitch.

Hence let me begin my remarks by singing only the first chorus from the Michigan Roadmap, our own report on the crisis faced by our state:

“Michigan’s old manufacturing economy is dying, slowly but surely, putting at risk the welfare of millions of citizens in our state in the face of withering competition from an emerging global knowledge economy. For many years now we have seen our low-skill, high-pay factor jobs increasingly downsized, outsourced, and off-shored.

“Preoccupied with obsolete political battles, addicted to entitlements, and assuming what worked before will work again, Michigan today is sailing blindly into a profoundly different future. Thus far our state has been in denial, assuming our low-skill workforce would remain competitive and our factor-based manufacturing economy would be prosperous indefinitely. Yet that 20th century economy will not return.”

“Michigan is certainly not lone in facing this new economic reality. Yet as we look about, we see other states, not to mention other nations, investing heavily and restructuring their economies to create high-skill, high-pay jobs in knowledge-intensive areas such as financial services, trade, and professional and technical services. From California to North Carolina, Dublin to Bangalore, there is a growing recognition that economic prosperity and social well-being in a global knowledge economy require public investment in knowledge resources. That is, regions must create and sustain a highly educated and innovative workforce, supported through policies and investments in cutting-edge

technology, a knowledge infrastructure, and human capital development.”

Enough of the chorus...

Let me add a few additional ideas into our discussion drawn from various activities I've recently been involved in at the national level:

1. The importance of innovation

First, last month the president announced in his State of the Union address an important new initiative, the American Competitive Initiative, designed to gear up this nation's capacity to compete in the global knowledge economy.

This was stimulated by a number of important efforts over the past several years (two of which I chaired) that stressed the importance of innovation to the nation's prosperity, social well being, and security. As the source of new products and services, new industry, and new jobs, innovation is directly responsible for the most dynamic sectors of the U.S. economy. Of course America has a great competitive advance, since our society is based on a highly diverse population, democratic values, and free-market practices.

But history has also show that significant public investment is necessary to produce the essential ingredients for innovation to flourish:

- new knowledge (research, development, innovation)
- human capital (education)
- infrastructure (organizations, facilities, networks)
- policies (tax, intellectual property)

Other nations are beginning to reap the benefits of such investments aimed at stimulating and exploiting innovation, creating serious competitive challenges to American industry both in conventional markets (e.g., Toyota) and through new paradigms such as the global sourcing of knowledge-intensive services (e.g., Bangalore).

Here Michigan is missing in action, significantly under-investing its economic and political resources in planting and nurturing the seeds of innovation.

2. Schumpeter was right

For the past several years I have co-chaired a conference held in Switzerland that brings together higher education and business leaders from the U.S. and Europe to compare notes. This past summer the subject was the role of research universities in economic development, and from the U.S. we had university presidents from economic hot-spots such as San Diego, Austin, Boston, and North Carolina in addition to their counterparts from Europe.

The contrast could not have been more different.

- The Europeans tended to embrace the conventional linear models of tech transfer and working closely with established industry.
- In contrast, the Americans have embraced far more sophisticated, nonlinear models of knowledge transfer to create new industries rather support old companies. They saw their greatest value to society and their greatest institutional payoff in Schumpeter's process of creative destruction, building the new industries that would eventually devour the old.

It may well be time for Michigan to move on, to cease mortgaging our future by continuing to invest limited public funds in a futile effort to bailing out a failing factory-based manufacturing industry—particularly in automobile production—and focus instead our public investments and public policy on stimulating the new industries that will be key to our future.

After all,

- North Carolina was able to move beyond the textile and tobacco industry.
- California survived the end of the Cold War and the decline of the defense industry.
- Texas has survived the depletion of its oil reserves.
- These and many other states are now thriving by focusing their attention and investments in the knowledge economy.

We need to do the same.

3. A possible path to Michigan's knowledge economy

Last fall I was appointed to serve on a new National Commission on the Future of Higher Education in America. Although the commission has triggered considerable speculation and paranoia over possibilities such as extending the standardized testing philosophy of "No Child Left Behind" to higher education, let me suggest what may turn out to be our most important recommendation.

Let me read from a "proto" draft of a possible Commission report:

- Today the United States faces a crossroads, as a global knowledge economy demands a new level of knowledge, skills, and abilities on the part of our citizens.
- Just as in earlier critical moments in our nation's history when federal initiatives expanded the role of education, e.g. the Land Grant Acts in the 19th century to provide higher education to the working class, universal access to secondary education in the early 20th century, and the G. I. Bill enabling the college education of the returning veterans of World War II, today a major expansion of educational opportunity could have extraordinary impact on the future of the nation.
- The Commission believes it is time for the United States to take bold action, completing in a sense the series of these earlier federal education initiatives, by providing all American citizens with *universal access to lifelong learning opportunities*, thereby enabling participation in the world's most advanced knowledge and learning society.
- The needs for lifelong learning opportunities in a knowledge society are manifold.
 - The shelf life of education early in one's life, whether K-12 or higher education, is shrinking rapidly in face of the explosion of knowledge in many fields.
 - Today's students and tomorrow's graduates are likely to value access to lifelong learning opportunities more highly than job security, which will be elusive in any event. They understand that in the turbulent world of a knowledge economy, characterized by outsourcing and off-shoring to a global workforce, employees are only one paycheck away from the unemployment line unless they

commit to continuous learning and re-skilling to adapt to every changing work requirements.

- Furthermore, longer life expectancies and lengthening working careers create additional needs to refresh one's knowledge and skills through. Even today's college graduates expect to change not simply jobs but entire careers many times throughout their lives, and at each transition point, further education will be required—additional training, short courses, degree programs, or even new professions.
- And, just as students increasingly understand that in a knowledge economy there is no wiser personal investment than education, many nations now accept that the development of their human capital through education must become a higher priority than other social priorities, since this is the only sure path toward prosperity, security, and social well-being in a global knowledge economy.
- Of course, establishing as a national goal the universal access to lifelong learning would require not only a very considerable transformation and expansion of the existing postsecondary education enterprise, but it would also require entirely new paradigms for the conduct, organization, financing, leadership, and governance of higher education in America.
 - For example, most of today's colleges and universities are primarily designed to serve the young—either as recent high school graduates or young adults early in their careers. Yet achieving the objective of universal access to lifelong learning

would expand enormously the population of adult learners of all ages.

- Traditional university characteristics such as residential campuses designed primarily to socialize the young with resources such as residence halls, student unions, recreational facilities, and varsity athletics would have marginal value to adult learners with career and family priorities.
- Such universal lifelong learning could change dramatically the higher education marketplace, providing for-profit institutions already experienced in adult education with significant advantages.
- Furthermore it seems likely that the only way that such ubiquitous access can be provided to lifelong learning to adults with career and family responsibilities will be through technology-mediated distance learning.

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And then there is the matter of how to finance such a bold effort.

- One approach would be to utilize a combination of transportable education savings accounts and loans, perhaps indexed to future earnings much like Social Security by mandatory earmarking of a portion of an individual's earnings over their careers as a source of funds for their education.
- A second approach would be an analog to the Land Grant Acts of the 19th Century that assisted the nation in evolving from an agrarian frontier society into an industrial nation. One might imagine a Learn Grant Act for the 21st Century to assist the United States in evolving still further to respond to the challenges of a global

knowledge economy. It would focus on developing our most important asset, our human resources, as its top priority, along with the infrastructure necessary to sustain a knowledge-driven economy.

- The Commission recommends that the nation accept a responsibility as a democratic society to enable all of its citizens to take advantage of the educational, learning, and training opportunities they need and deserve, throughout their lives, thereby enabling both individuals and the nation itself to prosper in an ever more competitive global economy.

Yet the principle is clear:

- While the ability to take advantage of educational opportunity always depends on the need, aptitude, aspirations, and motivation of the student, it should not depend on one's socioeconomic status.
- *Access to lifelong learning opportunities should be a right for all* rather than a privilege for the few if the nation is to achieve prosperity, security, and social well-being in the global, knowledge- and value-based economy of the 21st century.

Wouldn't it be interesting if Michigan were to embrace a similar commitment?

After all, we've provided leadership for the nation before...

Perhaps it is time to do it again!

One final comment, again drawn from our Roadmap:

“Michigan is at far more risk than other states because our manufacturing-dominated culture is addicted to an entitlement mentality that has long since disappeared in other regions and industrial sectors.

Moreover we are cursed with leadership—in Lansing, in business, in the media—that is both irresponsible and myopic in continuing to fan the flames of voter hostility to an adequate tax base capable of meeting today’s urgent social needs and longer term investment imperatives such as education and investment.

Michigan must stop backing into the future and instead turn its attention to making the commitments and investments today necessary to allow it to compete for prosperity and social well-being tomorrow in a global, knowledge-driven economy.”

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