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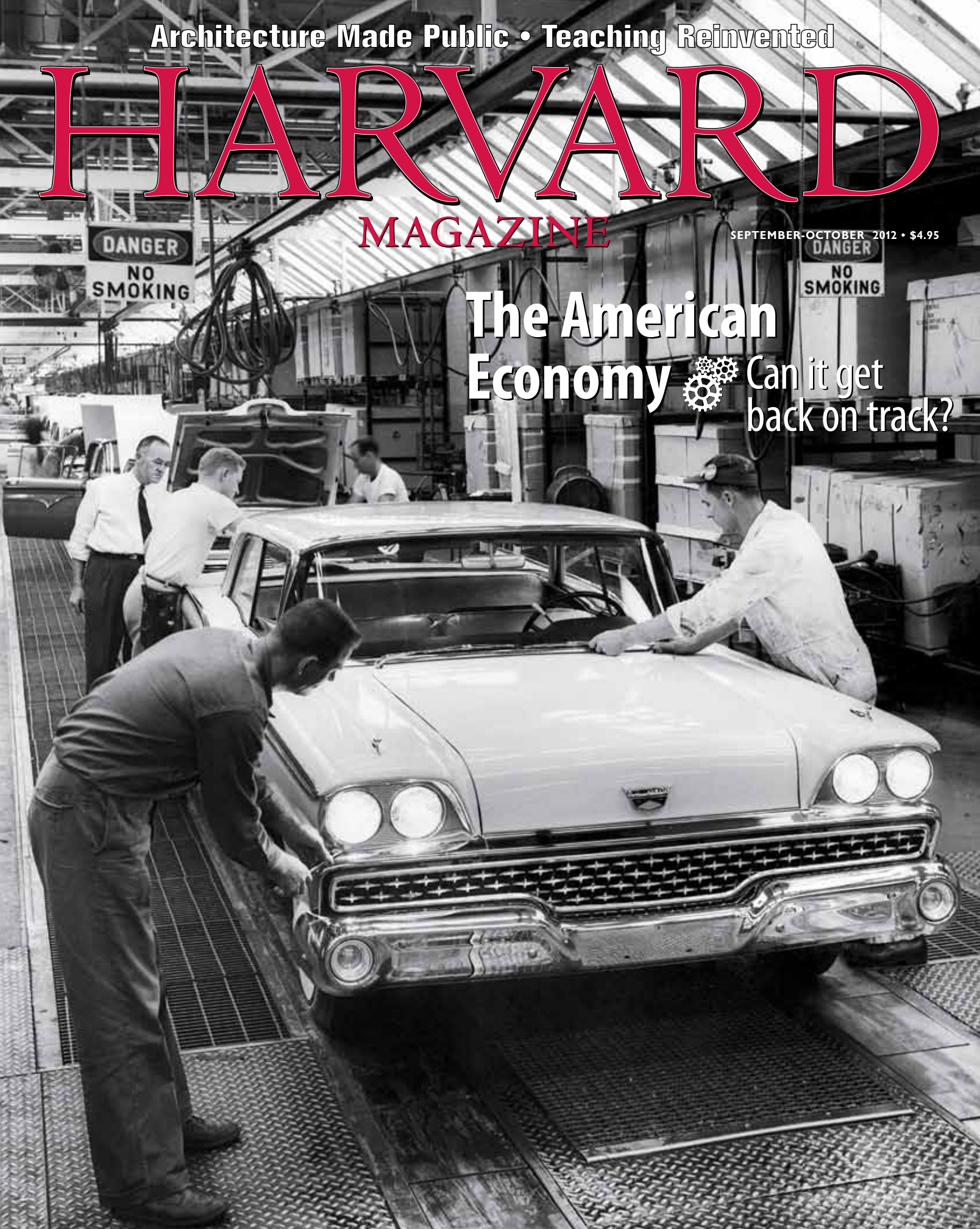
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The American
Economy



Can it get
back on track?



Can America Compete?

Strategies for economic revival

DOES THE UNITED STATES face insoluble economic challenges? In the aftermath of the 2008 financial crisis and subsequent recession, growth has been sluggish—with unemployment devastating far too many Americans. Yet the real problem, obscured by this acute, cyclical downturn, may be a long-term erosion of competitiveness in a more challenging global economic era.

For a third of a century after World War II, U.S. economic prowess was unquestioned. But as other nations prospered, America's status came to seem less certain. That changing *relative* position attracted the interest of Harvard Business School (HBS) scholars. The school's U.S. Competitiveness Project (www.hbs.edu/competitiveness), launched last spring, draws together expertise from colleagues and from other institutions, under the leadership of two members of HBS's strategy unit: Lawrence University Professor Michael E. Porter, the leading scholar of competitive strategy (identifying the elements that can make an enterprise distinctive and successful, sorting out the defining characteristics of different industries, advising nations about their economic opportunities); and Rauner professor of business administration Jan W. Rivkin. Their collective aim is devising strategies for a robust U.S. economic future.

The work proceeds from an encompassing definition of the purpose of business and economic activity: *The United States is a competitive location to the extent that companies operating in the U.S. are able to compete successfully in the global economy while supporting high and rising living standards for the average American. A competitive location produces prosperity for both companies and citizens.*

The project's research attempts to address comprehensively the country's economic strengths (innovation and entrepreneurship, for instance, and research universities) and shortcomings (deteriorating worker skills, complex tax and regulatory systems, and fractious federal policymaking). A survey of HBS alumni added weight to those concerns—particularly about political paralysis and the relative attractiveness of other countries for future investment. A special issue of *Harvard Business Review* presented a baker's dozen of in-depth analyses of major issues by project participants, from reforming finance to investing in green energy to righting the federal fisc (in part by raising revenue with carbon and value-added taxes). Among the noteworthy themes emerging from the work:

- The importance of the business “ecosystem.” Individual firms' decisions depend on the network of resources (diverse suppliers, skilled workers, efficient infrastructure) around them. Focusing on a single enterprise may be insufficient to assure success—and may even undercut it, if a firm's short-term, self-interested decisions starve the “commons,” compromising future prosperity.

- Acting locally. Those attributes for economic success, and the policy context for a firm's operation, are effective and can be affected *locally*, where the availability of workers, training, academic and educational expertise, and other factors determine what companies and industries can actually do. A region's business, labor, education, and government leaders can do much to enhance competitiveness *without* awaiting federal action (although much depends on what happens in Washington, too).

- Improve, not move. There is ample room for better practices *within* businesses' control. One is making decisions about where to locate (or to outsource) operations in a more sophisticated, nuanced way. Another is investing in apprenticeships and other skills programs for workers. A third is rethinking stock-based compensation systems, to rein in powerful incentives toward short-term thinking and excessive risk-taking by business managers and institutional investors alike.

The competitiveness agenda is daunting. Tweaking this regulation, refining that tax credit—these are not even half-measures. Yet the broad analyses and recommendations have the ring of reality, and suggest common gains for companies, citizens, and their communities. On balance, Porter, Rivkin, and their peers remain encouraged about America's prospects, based on its enduring strengths and proven economic adaptability. McLean professor of business administration David A. Moss even finds in historic ideological divisions and partisanship the seeds for future compromises and progress that might ease business leaders' greatest current fear about the country's economic future.

Harvard Magazine recently met with several of the competitiveness project's principals, from diverse business disciplines, to discuss their research at length. Edited versions of those conversations follow. ~The Editors

Through October 31, *Harvard Magazine* readers can access the *Harvard Business Review* articles detailing the research discussed here, free of charge, at <http://hbr.org/archive-toc/BR1203>.

The Strategic Context

“We should have been worried before the Great Recession.”

Michael E. Porter, Lawrence University Professor, and Jan W. Rivkin, Rauner professor of business administration and head of HBS's strategy unit

Harvard Magazine: What prompted you to begin this inquiry?

Michael Porter: There was a clear feeling at HBS that something different was happening in the U.S. economy—this was not just a deep recession caused by the housing mortgage crisis and so forth. The recession is very real, but something more was going on. This project was born from that feeling, and the belief that the school could convene and analyze and understand in ways we had not taken full advantage of.

As Jan and I started looking at the data, a whole set of indicators validated disturbing trends that began well before the Great Recession.

Most obvious and most important is the job-creation machine. For decades, America has been unique among large advanced countries in generating large numbers of jobs steadily over time: roughly 2 percent job growth per year [on a rolling 10-year basis that smooths out short-term factors]. That great American job machine started sputtering around 2000. There's something structural here, because it started before the recent downturn. Moreover, we and others discovered that virtually all the net new jobs created over the last decade were in *local* businesses—government, healthcare, retailing—not exposed to international competition. That was a sign that the U.S. was not doing well in businesses that have to compete internationally.

The data also showed what many had known—that wages started stagnating well over a decade ago. The participation of Americans in the workforce peaked in 1997, and workforce participation is critical to prosperity because the more people who work as a proportion of the total working-age population, the higher per capita income will be whatever the wage level. All of this is threatening the American dream, the idea that each generation will be better off than the previous one.

The question was, “Why did this happen?” What were the causes of the problems, and what could leaders do about them?

**Jan W. Rivkin
and Michael E. Porter**

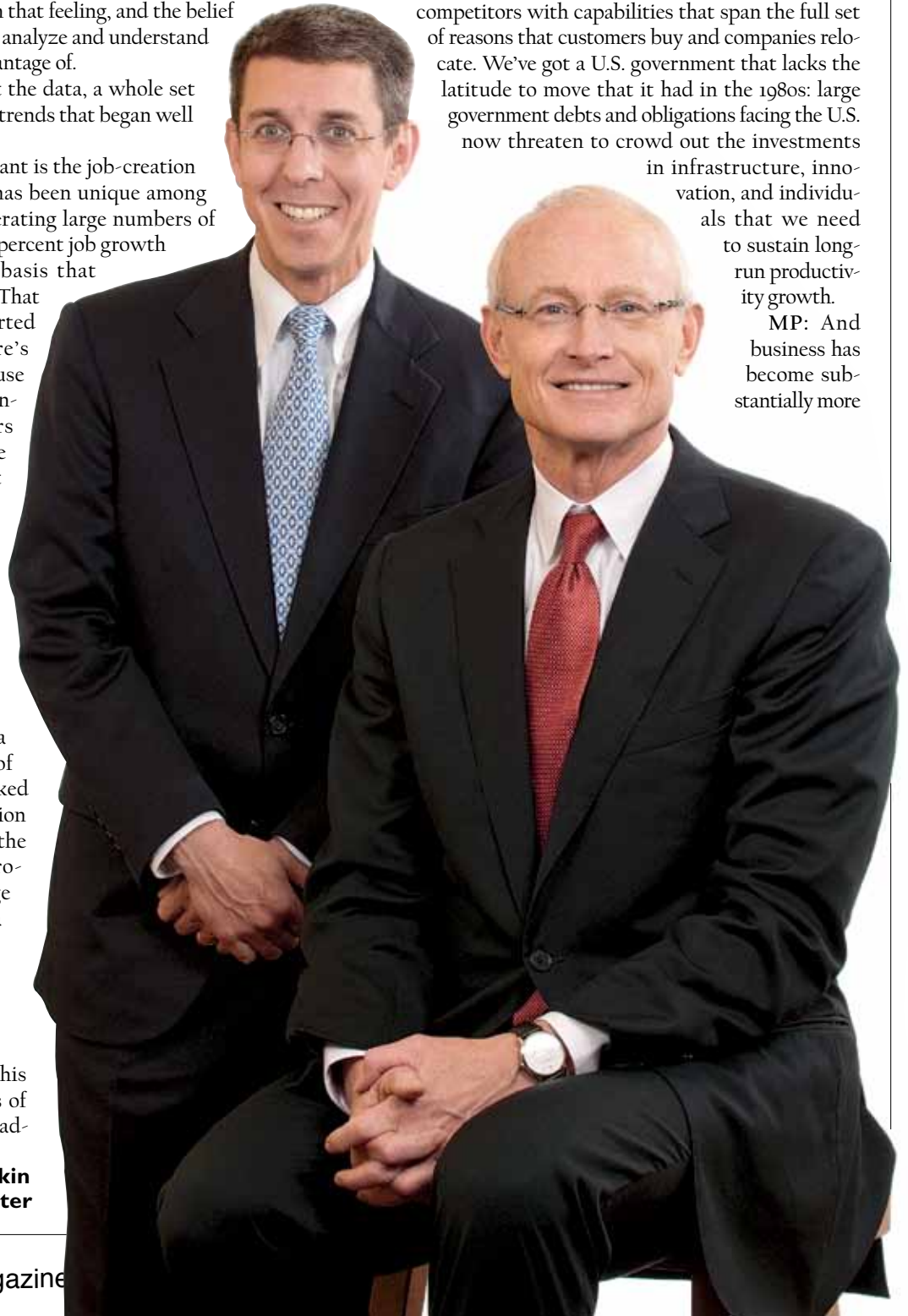
Jan Rivkin: By many current measures, America looks all right *today*: we have an enormously productive economy, high wages in absolute terms in many parts of the economy, a large share of exports and foreign direct investment [FDI]. But when you look at the trajectory over time—job growth rates, wage growth rates, changes in export or FDI share, particularly compared to emerging economies—the country looks much weaker. We should have been worried before the Great Recession.

HM: *In the 1980s, Americans were concerned about the competitive challenge from Japan. Are current challenges different?*

JR: Today, we've got a far more diverse set of global competitors with capabilities that span the full set of reasons that customers buy and companies relocate. We've got a U.S. government that lacks the latitude to move that it had in the 1980s: large government debts and obligations facing the U.S.

now threaten to crowd out the investments in infrastructure, innovation, and individuals that we need to sustain long-run productivity growth.

MP: And business has become substantially more



global. The typical U.S.-based multinational corporation has a much higher percentage of its total activity outside the U.S. today. Early in our work, we'd talk to business executives and they would say, "I can't just worry about America, I run a global company, we're not an American company anymore." The notion in business that this is *our* country and we own its challenges has diminished.

We believe that that corporate perception is ill-advised. It may be true that more of a company's activity is global, but that doesn't diminish the importance of U.S. vitality to its vitality. The first reaction to globalization was often, "It's wonderful that we can relocate anywhere. If we have a skill shortage here in America, we can just go somewhere else. If we can get a better tax deal there, we'll go there." But that thinking is changing. One of the optimistic findings of this project is the enormous readiness of many in the business community to roll up their sleeves and do things in their communities and companies to make America more competitive.

JR: An important notion is what we call the "business commons" from which companies draw: a skilled workforce, an educated populace, vibrant local suppliers, basic rule of law, and so on. Historically, American businesses invested in these resources deeply, and that helped to build many of America's strengths.

Then, in a world of increasing geographic mobility, many businesses took that commons for granted in America. Interestingly, they actually invested in building the commons elsewhere because they realized its importance—but in the process, over a number of decades, the commons got run down in America. The good news is, we see a large number of business leaders who recognize the importance of reinvesting at this point.

HM: *In this context, you advance an unusual definition of competitiveness. Is that really the fulcrum for your whole project?*

JR: We define U.S. competitiveness as the ability of firms in the U.S. to succeed in the global marketplace while raising the living standards of the average American.

The second part of that definition is immensely important. Sometimes you hear people saying the U.S. would be more competitive if only wages were lower or we had a cheaper dollar. But if we took a na-

tional pay cut in that fashion, we'd hardly applaud it as a great success of U.S. competitiveness. To the contrary, that's an indicator that we have to choose between being able to sell our products to customers and paying our citizens well.

A competitive economy does *both*. The only way you can do both is by satisfying customers, shareholders, *and* employees. You can do that only by raising productivity—being better at changing inputs into valuable outputs than the other guys. So the ultimate goal of national policy has to be long-term productivity growth.

That may sound obvious, but the rhetoric these days is all about jobs, jobs, jobs. It's easy to understand why: if you lack a job, it is all about jobs. But if you set out simply to create jobs for their own sake, you wind up investing in areas not where you're

productive, but where you can create a lot of jobs quickly. Yes, we absolutely want jobs. But we want competitive jobs that can last in a demanding global economy.

MP: The sectors where you can generate the most jobs quickly tend to be in things like healthcare and construction—inherently local activities. But any economy is an interesting combination of what we call "traded businesses"—like manufacturing, sophisticated services, and tourism that are exposed to international competition—and local ones. For any large population there are a lot of local needs—food, housing, utilities—but ultimately the vitality of an economy is heavily determined by the traded part. That's where we find the opportunities for much higher productivity that can support high wages. You want to grow those areas where you can be highly productive and serve the *world* market. Where you can't be productive, you need to import. You want local needs to be met efficiently, but the ultimate wealth that feeds the local economy derives heavily from the traded economy.

Therefore, the U.S. economy's inability to generate net new jobs in the traded sector for the last decade is deeply disturbing. Also, the ability to raise wages, particularly in the traded sector, is being capped by the enormous improvements going on in other countries. It used to be that the wages of U.S. workers rose in line with domestic productivity, but the two became decoupled. Some attribute that to declining unionization. That may be part of it, but much has to do with the fact that employers can hire an equally skilled person in another location at a lower wage. Other countries have been improving their game with good skills compared to us and have better infrastructure in some cases than we do.

We believe the U.S. retains its core strengths, but we have allowed ourselves to fail to progress rapidly enough to continue to justify our standards of living, at least during the recent decade.

JR: The things America is great at—higher education and entrepreneurial capacity and scientific and technical infrastructure—are very hard to replicate. The things that we're bad at now are largely the results of choices we made.

HM: *The U.S. today seems to have trouble focusing on major policies in pursuit of overarching goals such as enhanced productivity. What does it mean for businesses and the government—in their own spheres and together—to be strategic and comprehensive in pursuit of making the U.S. competitive again?*

MP: The challenge of the whole issue of competitiveness and productivity is that it's influenced by a vast array of factors: schools, roads, regulatory complexity, almost everything matters—not just the traditional macroeconomic policies. If you don't have a good public-education system, for example, you lack the foundation for productivity. If you don't have people who are healthy and can afford good healthcare, you lack that foundation. If you don't have a governmental system that works effectively and delivers good public services, that's a drag on productivity.

The United States used to be a uniquely productive place to do business, and not only for entrepreneurship where we still have strengths. For example, we used to have amazingly efficient logistics. Because we've been so committed to open competition, we

The notion in business that this is *our* country and we own its challenges has diminished. We believe that that corporate perception is ill-advised.

tended to have efficient producers and distributors throughout the economy. A lot of other countries were saddled with special interests and monopolies. We've been able to preserve the long-term strengths Jan just mentioned—we stay ahead in those areas.

But ironically, we've lost out on some things that seem more basic. For instance, do we have a regulatory environment that makes it easy to conduct business? The World Bank's "Doing Business" report ranks every country on the ease of doing business. Twenty years ago, the U.S. would have been by far the easiest place. Now we're well down the list—not in the top 10. In other countries, I've participated in some government-established working groups dedicated to improving their rankings. Lately, the U.S. just hasn't been improving the basics nearly as fast as some other countries.

It's a knotty problem because competitiveness is sort of *everybody's* agenda. That's one reason you have to be strategic: there are so many things to work on that if you don't have a clear sense of priorities and sequencing and a sustained effort, you don't make progress. Our single-issue focus lately works against us.

There's also a tremendous mismatch between the time horizons of politics and of competitiveness. Most things that matter for building competitiveness take a decade or *multiple* decades to improve. But we have a political system that's increasingly about today's news. This mismatch has probably gotten worse in the last 10 or 20 years. The politics of economic policy is never easy, but we used to be better at overcoming political differences.

JR: Two elements make building competitiveness vexing. The first, which Mike emphasized, is that there are so many related elements. The second is that the lag times involved are very long. Investments in improving K-12 education have an impact a decade, two decades, from now. That means you need to make sets of choices that are holistic and farsighted—and I think you can argue that in both public policy and on the business side, we have moved toward fragmentation and near-term thinking.

MP: It's particularly hard to pursue the agenda in the United States. This is a very large country, very spread out, very complex, there are 300-million-plus people—so it's just more difficult to think strategically and long term here as opposed to in South Korea or Singapore. China has had the luxury, or curse, of a high degree of centralization that makes long-term thinking much easier.

HM: *One issue that is in businesses' purview is the research you've done on firms' location decisions. Could businesses be doing a better job of that?*

MP: American businesses *should* be locating certain activities abroad because that makes them more competitive by enabling them to better penetrate international markets. In some cases,

producing offshore also saves unnecessary costs of shipping goods to distant markets, or allows better adaptation of products to local circumstances. So globalization at one level has *enhanced* the competitiveness of U.S.-based companies and will support their growth in the U.S.

That said, our research revealed that offshoring and constructing global supply chains is really complicated—it is challenging to accurately figure out the total costs of locating in China or another

country versus in the U.S. We found that many activities should have gone offshore, but some probably should not. In making their location decisions, some managers failed to understand hidden costs of offshoring, such as indirect costs of hiring and retention, supervision, and intellectual-property protection.

We also identified some trends that are working in favor of the U.S. for location decisions—some for reasons we should be unhappy about. For example, wages are rising much more rapidly in China and India than they are

here. We want China's wages to go up—we just would like ours to go up faster, justified by our productivity. Also, the U.S. dollar has depreciated.

Other trends favoring the U.S. are unambiguously good news. For instance, it has become significantly more expensive to move goods, so if you want to tap America's market, the largest single market in the world by a considerable margin, you're more likely to produce here.

And you can add another wild card: the whole energy situation. The U.S. suddenly has a potential surplus of energy through the production of oil and especially natural gas trapped in shale. This development is a potentially transformational asset, and major activities in chemicals and other industries can move back to the U.S. because we now have low-cost energy.

JR: Mike described some issues that make location choices a hard problem for multinational corporations—particularly, hidden costs that don't appear until years in the future. A second difficulty is that there is a tendency to take a static view of the U.S. environment. It's very easy to assume that the state of the business environment here is a given. In fact, businesses can *improve* the environments in which they operate—by investing in the local workforce, by mentoring local suppliers, and so on—but that's hard to include in your calculations correctly.

HM: *You use the vivid phrase "Improve, not move" as a way of describing businesses' options.*

MP: One of the myths about competitiveness is that it is driven mostly by government policy and that the solution to competitive



GE Healthcare employees assemble magnetic-resonance imaging machines in Beijing. In 2011, the highly global company moved its x-ray unit headquarters staff to China—a major, rapidly growing market.

problems is government action. The more we've gotten into this, the more we understand that *business* can influence many of these things that constrain U.S. competitiveness without the president signing a new law. Businesses—both individually and collectively—can make major contributions by enhancing skills, improving the supplier base, and taking other steps.

JR: Just as it's an error to think government is the only solution, it's also an error to think government is exclusively the problem. You can trace some of the weaknesses in the U.S. business environment right back to things that businesses have done in their narrow self-interest. How did we get such an incoherent, complex corporate tax code? Because the IRS wanted loopholes? No, because businesses pleaded for loopholes that benefited them.

MP: And legislators saw a great way to get campaign contributions.

HM: *What reaction have you heard from the business community?*

MP: Very little disagreement on the fundamental diagnosis. Most people feel in their gut that something is going wrong in our economy. When we're in the company of political leaders and public figures, there are often statements of optimism,

of not wanting to bet against America—and we share this perspective. We think this is a fixable problem, that the U.S. could make rapid improvements. It's going to take time, but we believe America is eminently capable of renewing its competitiveness.

We are discovering an increasing awareness in the business community: they have a role in American competitiveness. They want to do something constructive and be part of the solution. But one of the things that is different now from 30 years ago is the public perception of and attitude toward business. There's a lot of skepticism, and frankly, some of it is deserved.

JR: I've met very few business leaders who conclude, "There's no problem, and we'll just ride this one out." At the same time, I've met very few who feel the situation is so bad it can't be fixed.

Most people we've talked with feel we've got a real problem, it can be fixed, but it requires action. They're asking about the right steps to take. Even the leaders we see taking action are asking, "What more can we do?" There's a search for better answers.

MP: That said, there's an almost universal view that our federal political system is one of the greatest threats to our economic future—because of its inability to tackle some of these issues. There are some federal policies that a great majority of those in the private sector agree are necessary. They defy labels—they're not Republican or Democratic, not liberal or conservative policies.

Almost everybody agrees we've got to simplify the corporate tax code: statutory rates are too high, the code is riddled with loopholes, deductions need to be reduced. The right policy is to lower the rate substantially and end most deductions. That's a policy economic theory supports, and almost everybody in the private sector agrees with—though some will lose cherished deductions.

The U.S. also has an unusual system of taxing our companies on foreign income, which has led to dozens of companies moving their corporate headquarters offshore and American companies holding more than a trillion dollars of cash abroad rather than repatriate it. Almost all agree that a better system would harmonize U.S. practices with those of other leading countries.

On immigration reform, pretty much everybody agrees we need increased skilled immigration. And there are many other areas like these, yet the U.S. can't seem to make any progress on them.

It's not that we haven't had partisan bickering in the past, but at the end of the day we came together and compromised on key policies for education, infrastructure, and support for science [see the conversation with David Moss, page 40]. America believed in business and entrepreneurship. Today, the political support for business has become very polarized. This is a key reason we're just not making progress on some of the fundamentals.

Manufacturing

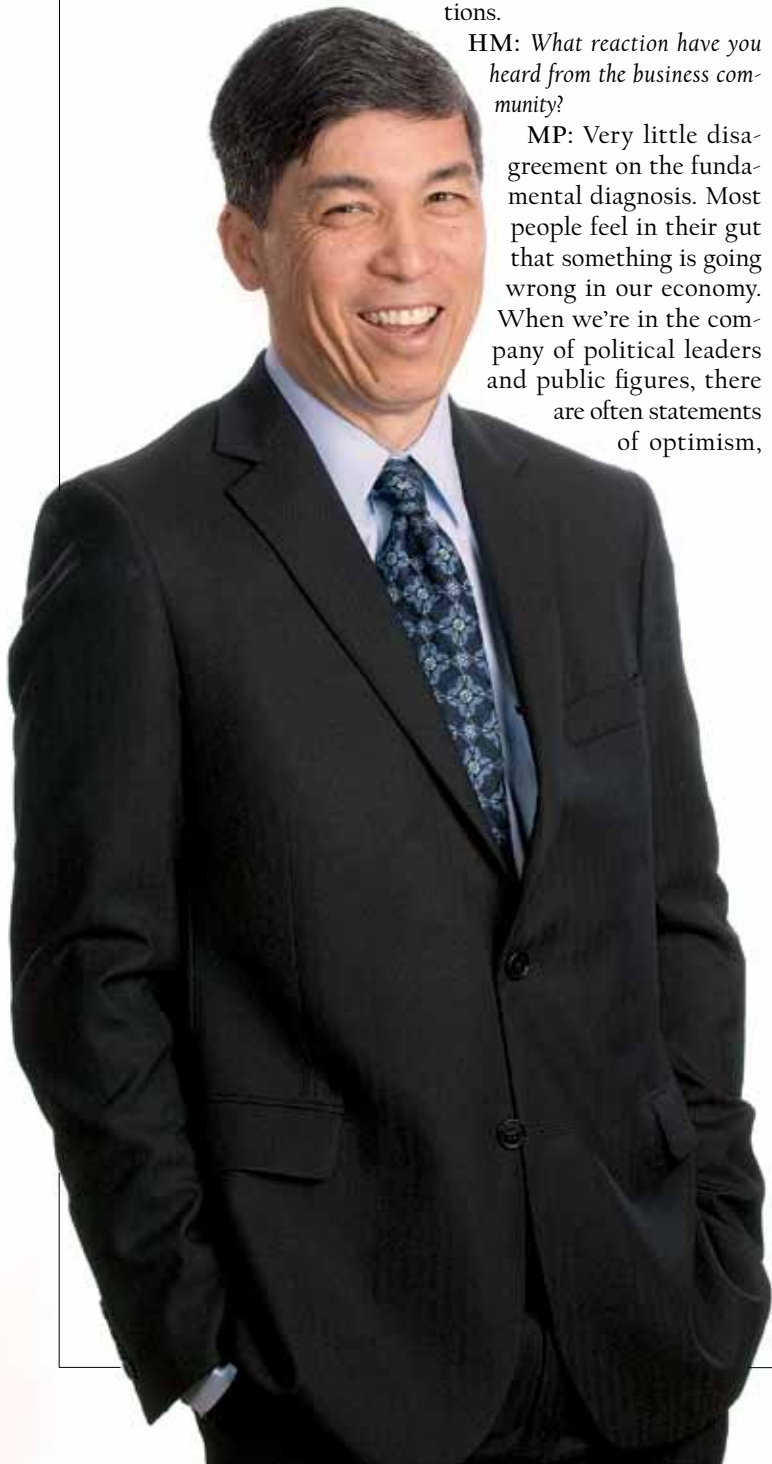
"There was no way for us to get to market in the U.S."

Willy C. Shih, professor of management practice, HBS's technology and operations management unit

Harvard Magazine: *You've had a lot of manufacturing experience.*

Willy Shih: I spent 28 years in industry. I confronted a lot of puzzles there, and I've been looking at them since coming here.

The interesting question relating to competitiveness had to do with my time at Kodak. In 1997, I took over the consumer digital business it was trying to



build. That year Kodak shipped a few tens of thousands of digital cameras. One of the factories in Rochester, New York, had this highly automated assembly line where the engineers were attempting to manufacture digital cameras locally. You needed a whole bunch of electronic and optical components: electronic sensors, the tiny displays that show you your pictures, rechargeable batteries, consumer-electronic stuff.

I found that back in the 1960s and 1970s, all the money in photography was made manufacturing film. So Kodak let go of camera manufacturing except for the low-end, single-use cameras—basically just a box for film with a lens. In the same decades, U.S. consumer-electronics makers outsourced the assembly of TV sets to Asia, and then they gradually let go of more and more of the business.

So I arrive in Rochester and find that there is no more expertise in the U.S. for all the components you need to build a digital camera—not in LCD displays, electronic sensors, zoom lenses, or the tiny electric motors you need to drive zooms. There weren't people who made shutter buttons or view finders, or *any* of those components. So even though my team had decided we were going to be highly automated, you couldn't design and make digital cameras in the U.S. That was the first object lesson.

That was repeated when I took over the organic LED (OLED) business. Kodak made the pioneering invention in organic electroluminescence. In solar photovoltaic cells, it's light in, electricity out; this is electricity in, light out. There are a lot of benefits to this technology; a Samsung Galaxy S smartphone has an OLED display. But the path to market required the ability to make extremely uniform, low-temperature polysilicon on glass. It was the same story: even though U.S. companies *invented* a lot of the technologies, they had given up on *commercializing* and manufacturing them, so there was no way for us to get to market in the U.S.

That led to my thinking about the similarity to the tragedy of the commons—the loss of the shared pastures in a town that nurtured all the farmers' animals. All these predecessor organizations had let these capabilities go because they didn't matter to them individually at the time—but they turned out to be critical if you wanted to go into some important *new* technologies. It raised the question: if you don't have capabilities in some of these areas, does that mean it no longer makes sense to invest in research and development and innovation in other new areas? Gary Pisano [Figgie professor of business administration] and I pointed out in a 2009 *Harvard Business Review* article that you couldn't make an Amazon Kindle in the U.S. because many key capabilities no longer existed. The key technology in that device came out of MIT: the electrophoretic beads for its e-paper display. It was commercialized by E Ink here in Cambridge. But they had to go to Asia to make the complete screen.*

*See Pisano and Shih's new book, *Producing Prosperity: Why America Needs a Manufacturing Renaissance* (Harvard Business Press), for a fuller discussion of these issues.

HM: *What caused this dispersal of manufacturing?*

WS: When I grew up in industry in the 1980s, the thing they always pounded into an engineer's head was the importance of product development and commercialization being close to production. When I was at IBM in Austin, our factory was across the road; when your processes are not particularly mature, it really makes sense to be close to production.

So why did everyone start outsourcing? When the Asian economy—specifically China—opened up, the labor-cost differential was so great and there was such a limitless supply, seemingly everybody focused on labor arbitrage. My fully loaded labor cost in Rochester in the late 1990s was more than 100 times higher than China's. Everybody just moved their manufacturing over there.

Now what happens if your engineers and designers have to be close to manufacturing? Well, we just fill the sky with planes. If you're on the product side of Apple, you spend a lot of time in China—near the factories, working out problems.

The core question is whether this affects your ability to innovate. Gary and I think there is an impact, especially in leading-edge technologies where manufacturing processes are not yet mature. So we've just called that out.

Part of the problem is that people don't think of manufacturing as *knowledge work*. They think of it as someone putting in four screws 2,400 times a day—and there is a lot of that in the more mature assembly areas. But in a lot of manufacturing,

a lot of value is created in commercialization and advanced manufacturing; a lot of *that* is sophisticated knowledge work. If you wander around in factories around the world (since the beginning of 2011 I've been in more than a hundred factories), you see some very sophisticated knowledge work. In some of the advanced semiconductor fabrication lines in Asia, you have masters in engineering running production tools that cost as much as an airplane—\$65 million, \$70 million. They're extremely sophisticated and complex, and a lot of engineering goes on *on* the factory floor.

So one of the things we call out is that conception that manufacturing is not knowledge work. For some types of manufacturing, it is very important to maintain production capability because it's tied to your ability to innovate.

HM: *Do you see a similar fate for some of the new industries American businesses have been counting on?*

WS: Photovoltaic panels are a problem because America has let go of a lot of the electronic supply chain and silicon-processing skills from semiconductors. The companies that manufactured semiconductors—that commons fed the flat-panel-display industry, the solar-panel industry, the energy-efficient lighting industry with LEDs, because a lot of the same capabilities flowed into those.

Part of the problem is that people don't think of manufacturing as *knowledge work*. But a lot of value in commercialization and advanced manufacturing is sophisticated knowledge work.

HM: What about areas of U.S. strength like aerospace assembly, biotech, and medical devices—what are the risks there?

WS: The same kinds of things. A couple of factors led to unquestioned U.S. manufacturing leadership at the end of the 1960s and early 1970s. We had institutional foundations and broad education in the practical arts, going back to the Morrill Land Grant Act. We controlled mass manufacturing going back to the nineteenth-century “American system of manufactures,” with interchangeable parts and gages, specialized tools, sequential production—all leading to Henry Ford and mass assembly of automobiles. And at the end of World War II, all our competitors were in ruins. At the end of that war, we had this public perception that science had won the war—not just the atomic bomb, but

things like radar, antibiotics, the proximity fuse, and countless other innovations. So as a country we had a lot of faith in science, and we invested heavily in our basic science and education.

But other countries did, too—Germany and Europe, but also Japan, the Asian tigers, and China. Now other countries compete very aggressively for those manufacturing facilities. Singapore would love to be the biotech hub of the world: they are competing very aggressively for R&D and manufacturing facilities. Every other Asian country is asking those questions as well: how do I capture more of these export-earning industries?

We haven’t thought about preserving those types of capabilities. There are some industries where we’re still pretty strong, like aerospace, especially jet engines—the engine manufacturers are pretty thoughtful about what is important to hold on to. But lots of other countries have decided what’s important. In the capital-equipment businesses these days, if you’re going to sell in a lot of countries, you need to provide production offsets for local manufacturers—so they begin picking up the skills and learn how to move to higher value-added.

I worry about composite materials, where the U.S. has really had a lead. We’re shipping a lot of that overseas. I worry about biotech manufacturing and medical devices, where we have a lot of regulatory issues—Europe is a lot easier for medical devices, so we’re chasing a lot of the companies that make them offshore.

It’s a complex mix of factors, but again the key in my mind is preserving innovative capability. We talk about innovation a lot, but we don’t recognize how important *making things* is to preserving some of that innovative capability over time.

HM: What are the relative responsibilities of businesses and of policymakers in preserving those innovative capabilities?

WS: Managers need to think longer term about those capabili-

ties and about the context in which they’re embedded. It’s not only the people and knowledge within their walls—it’s their supplier network and competitors in adjacent industries. Thinking about capabilities is key.

The government has to correct some of the policy deficits that caused the U.S. to be less favored as a location. Mike and Jan’s survey

of HBS alumni showed how few companies would actually choose to locate in the U.S. In some industries, location decisions are heavily influenced by tax incentives. But I can absolutely say that our complex tax law and relatively high rates of taxation motivate people to move operations offshore. So the government needs to think about how we at least get to a level playing field *and* it has the responsibility to invest in public goods: basic scientific research, education, and infrastructure—key parts of the “commons” that private companies are incapable of investing in.

HM: What skills would the U.S. need to promote to tilt decisions about where to locate operations away from a strictly financial calculation about the cost of hiring suitable employees?

WS: Once you allow those skills to dissipate, throw away those capabilities, a

lot of those decisions are very expensive or impossible to reverse. My counsel is to be more thoughtful about that.

I just wrote a case on a large multinational that has its engineering center in India, with thousands of engineers and an average age of 27, and its home engineering operation in the U.S., where the average age is 47. The guys in India said the U.S. operations hadn’t hired anybody in the past half-dozen years, so they don’t have fresh skills. Do you retrain, or start with the younger generation and try to keep their skills fresh? That’s a huge problem. I saw people at Kodak in film manufacturing who had amazing skills, but as technological substitution happens, those people can’t take their skills anywhere.

The global market for tradable goods decimated the lower-skilled jobs. I think it’s starting to attack highly skilled jobs, too. I don’t have good answers, but I think that’s the next huge issue.

Compensation Practices and Incentives

“The first step is popping the myth that we can use financial markets naively to measure performance over short horizons...”

Mihir A. Desai, Mizuho Financial Group professor of finance and professor of law, and HBS’s senior associate dean for planning and university affairs

Harvard Magazine: The crux of your argument is that governance has broken down on both sides of American capitalism: the managers who run companies, and the institutional investors who in effect own them. Monitoring performance, evaluating it, and holding performance to a standard has fallen short. In what ways, and with what consequences for Americans?

Mihir Desai: The competitiveness of the U.S. economy is connected fundamentally to the productivity of American workers.

The twin crises of modern American capitalism—rising income inequality and repeated governance crises (including the financial crisis)—can be traced in part to the proliferation of these high-powered incentive contracts.

That productivity hinges on the allocation of all kinds of capital: financial capital, real capital, and human capital, because workers are most productive with the appropriate allocation of capital. That led me to question how those allocation processes are working and the incentives facing managers and investors.

I was struck by how the evaluation and compensation of managers and investors have been transformed over the last several decades: in short, we have decided to outsource that evaluation and compensation to financial markets. If financial markets indicate that these actors have created value, these contracts suggest that they should take a piece of that incremental value. This seems fair and has become a dominant belief on both sides of the capital market. These beliefs are manifest in the rise of equity-based compensation for managers but also in the rise of the alternative-asset industry that relies on a similar logic. Indeed, the rise of the alternative-asset industry—both hedge funds and private-equity firms—has been transformational for global capital markets, and they are predicated in part on this intuition.

I label the evolution of these practices a “financial incentive bubble” because I think they are unsustainable as implemented. As I lay out in my *Harvard Business Review* article, I think the twin crises of modern American capitalism—rising income inequality and repeated governance crises (including the financial crisis)—can be traced in part to the proliferation of these very high-powered incentive contracts for managers and institutional investors.

HM: *Years ago, there was concern that corporate managers did not have the same interests as shareholders, so there was a reformist impulse: give managers stock as an incentive and everyone's interests would be aligned. You're saying that reform was too simplistic?*

MD: The impulse for such reforms was correct: well-designed instruments can provide for an alignment of interest between shareholders and managers. But *implementation* of those ideas has become far divorced from that abstraction. In particular, these contracts for managers and investors have made little effort to control for *relative* performance or for the risks undertaken—and have been implemented over time horizons that are simply too short.

For example, *un-indexed* performance contracts—that award corporate managers stock compensation but don't try to control for some general level of stock-market or industry performance—

are dominant in the U.S. and difficult to reconcile with common sense. Similarly, contracts for investment-management services that don't measure appropriate benchmarks thoughtfully, or the underlying risks managers are taking, also just don't make sense.

The related problem is the horizons across which these contracts get implemented. We are trying to measure performance and value creation over very short horizons, even when we know that it's almost impossible to disentangle skill from luck at such high frequencies. I like to use the analogy of sports because managers and investors like to think of themselves as athletes. There is no great difficulty in disentangling luck from skill in Roger Federer's game or LeBron James's game—their performance reflects their effort and skill. That clarity in separating luck from skill is lacking when assessing managers and investors. Only *very long* horizons can help solve that problem.

It is tempting to view my argument as some kind of an “Occupancy” document: these people are getting paid too much. Just to be perfectly clear, I think managerial talent and investment talent are two of the most precious things in a market economy, and I love market economies. High-quality managers and investors should be richly rewarded. My problem is not with the *level* of compensation, it's with the *form*. Contracts that don't measure performance relative to appropriate benchmarks or that claim to disentangle luck from skill over short horizons can do more harm than good.

HM: *What problems do typical, ostensibly market-based, management and asset-manager compensation agreements cause?*

MD: If the only adverse result of these contracts was a bunch of windfalls for being lucky, it's not a problem *per se*. The real problem is the risk-taking these contracts induce. We know such contracts give rise to risk-taking incentives for people to increase stock prices at shorter horizons by doing things that may not lead to the long-run success of those organizations. That kind of asymmetric contract has been shown to be at the heart of a number of governance problems on the managerial side. The remarkable wealth obtainable simply by influencing short-run outcomes distorts people into decisions that are not in the interest of the long-run shareholder.



Mihir A. Desai

In investment management, the similar notion in the alternative-asset industry is predicated on the so-called “two and twenty contract”: alternative-asset managers get a management fee of 2 percent of the asset value annually and 20 percent of investment gains—the “carried interest.” The logic is simple: I give you \$100, you make it into \$120—therefore, you must have created value and deserve 20 percent of that \$20. You get skin in the game as a consequence, and our interests are aligned because you succeed only when I do. That sounds fair and right.

The first problem with that logic is that we need to know how the rest of the market and comparable investments did. Otherwise, that compensation is a windfall. More important, we need to be able to observe the risk and the leverage the invest-

ment manager undertook in order to make that \$100 into \$120. If you don't observe that perfectly (and you never can), then you are partly giving an incentive for the manager to take on risk—risk that you don't quantify or penalize for. Making matters worse, we measure their returns and compensate them over a short horizon, further inducing them to take on risks over the short run. Finally, we're not typically charging for the illiquidity the manager imposes on the ultimate investor when I have to lock up my money inside a fund for many years. We all found out during the financial crisis that illiquidity is very costly. In short, we induce risk-taking on both sides of the capital market by naively structuring these contracts over short horizons and without sufficient attention to the risks being undertaken or illiquidity being imposed.

A guiding principle of the rise of alternative assets is the proliferation of the idea that they can provide “alpha,” or excess returns, to their clients. Indeed, the *raison d'être* for much of the industry is the belief that alpha is readily quantified and obtained. Many of these claims are difficult to substantiate when one uses an appropriate benchmark for their investments, properly accounts for leverage, and properly penalizes them for the illiquidity they impose on investors. So the final problem is that, to justify these contracts, many of the ultimate investors—pension funds and foundations—are promised alpha that never materializes. Of course, they're equally culpable because part of the attraction of this promised alpha is the ability to mask their underfunded pensions.

Just to be clear, a considerably smaller alternative-asset industry is likely well justified for investors with true talent. But the claim here is that this industry mushroomed well past what can be justified by their returns, in part because of the naiveté of these contracts and the search for the “free lunch” of excess returns.

HM: So these incentives lead to behaviors that may not be productive in the long term and can also lead to crises?

MD: Yes. One of the things I wanted to do is provide an alter-

native history of the financial crisis. In my article, I discuss the rapid growth of the alternative-asset industry in the late 1990s and early 2000s in response to very low interest rates after the Internet bubble. I use contemporaneous accounts to show that the rise of the alternative-asset industry triggers risk-taking inside traditional Wall Street establishments as they compete to hold on to their people and retain customers. Wall Street saw the rapid

growth of an operating model with even more operating leverage and profitability than their own—and came to mimic it by providing more risk capital to their own traders and employees.

It's tempting to say there's some big ethical problem here—this generation just doesn't have the morals of the last one. I think this is naive. These *contracts* are giving rise to the risk-taking and short-term thinking. Young investment managers could access completely mind-blowing wealth based on six or 12 months of performance, because as soon as they produce those results, more funds start to flow in and before you know it, they are running another large fund and after another 12

months of reasonable returns they are going to be in a world of compensation they could never have imagined. That's going to give rise to problematic risk-taking.

To return to capital allocation for a moment: *financial* capital is being allocated by these investors, *real* capital is being allocated by corporate managers with similarly distorted incentives, and then *human* capital is being allocated when we see our young graduates choose their fields in response to these skewed rewards. When the structure of relative rewards gets so out of whack, in part because of these naive contracts, then people start making human-capital decisions that are likely not socially optimal. And, of course, the allocation of talent, particularly way out in the tail of the distribution of talent, matters enormously for all of us.

HM: Are these problems susceptible to regulatory reform, changes in taxation, or better ethical education for managers?

MD: I am somewhat pessimistic about the usual recommendations. Handwringing about ethics is not my preferred solution because it obscures the critical role of incentives as you see them playing out in society at large. Indeed, these are often very good people responding to crazy incentives.

Using regulatory or tax instruments is likely problematic. As a public-finance scholar, I'm keenly aware of our fiscal problems, and reforms should be geared toward those problems rather than fine-tuning governance. Indeed, fine-tuning our tax system to target compensation practices can lead to unforeseen consequences. The one exception that I think is advisable is correcting the characterization of carried interest employed in the alternative-asset industry as *capital* income rather than *labor* income. This preferential treatment of earned income effectively increases the subsidy toward these high-powered incentive contracts.

I think the first step in improving things is popping the underlying myths—that we can use financial markets naively to measure performance over short horizons and that excess returns are easily measured and obtained if we just put the right incentive

Being a shareholder has been mediocre at best, being a manager has been wonderful, and being an investment manager has been absolutely exceptional. That strikes me as unsustainable.

contract in front of a smart person. In fact, markets are roughly efficient and alpha is hard to measure and fairly scarce. And discerning who is a good manager or good investor can take many, many years—contracts need to be restructured to reflect that.

Second, we have to awaken institutional investors, particularly large pension funds, foundations, and endowments, to their responsibilities. In effect, by outsourcing performance evaluation and compensation to financial markets, these institutions have abdicated their fundamental responsibility and achieved a sort of plausible deniability. Board members can say: “I don’t have to evaluate my manager because I have a neutral, objective measure of performance—the stock price. I didn’t pay the manager a lot of money—I just made sure our interests were aligned.” Similarly, managers of large pension funds can say, “I didn’t lose any money. I just gave your assets to the best outside investment managers, or the best funds of funds, so you can’t fault me for any losses.” That is why this problem is so difficult—we can’t expect markets alone to solve this because the underlying problem is that there are monopolistic providers of pension services. The ultimate governance providers in our economy are the large institutional investors—state and corporate pension funds, endowments—and you can’t unseat them.

Awakening institutional investors is the best chance we have to fix this. That is starting to happen. It could happen much more—for example, institutions should be playing much more active roles in compensation practices by reinserting judgment into executive compensation, challenging existing compensation arrangements, and significantly lengthening the horizons over which managers and investors are evaluated.

On the alternative-asset side, there is much to be said for creating a uniform system for reporting results so asset managers can no longer live in Lake Wobegon where every manager is in the top quartile of performance. Recent developments in Canada are also instructive: their pension funds have figured out that they can disintermediate alternative-asset investors and do transactions themselves. Somehow, in the U.S., we’ve come to a place where it’s easier to pay outside alternative-asset managers more money than an internal pension-fund manager will ever see. The Canadians have shown us the opportunity to reclaim a chunk of that investment function. Finally, requiring a fuller funding of pensions would help enormously—so the temptation to swing for the fences by investing in asset classes that promise alpha will become restricted. The easiest way to avoid the reckoning of an underfunded pension is to assume you can make higher returns by allocating more and more assets to individuals who promise alpha. So

the problem gets worse as those returns turn out to be illusory.

For people who care about shareholder capitalism, the past 15 years have to be deeply worrying. Being a shareholder has been mediocre at best, being a manager has been wonderful, and being an investment manager has been absolutely exceptional. That strikes me as unsustainable. I think the proliferation of these naive contracts via the financial-incentive bubble helps explain these patterns.

The Workforce

“All the other things we used to think about as a social contract...”

Thomas A. Kochan, Bunker professor of management, MIT’s Sloan School of Management, and co-director of the MIT Institute for Work and Employment Research

Harvard Magazine: You speak of a fundamental human-capital paradox in the way American employers and workers interact with each other.

Thomas Kochan: American corporations often say human resources are their most important asset. In our national discourse, everyone talks about jobs. Yet as a society we somehow tolerate persistent high unemployment, 30 years of stagnating wages and growing

wage inequality, two decades of declining job satisfaction and loss of pension and retirement benefits, and continuous challenges from the consequences of unemployment on family life. If we really valued work and human resources, we would address these problems with the vigor required to solve them.

HM: *What causes this disconnection?*

TK: The root cause is that we have become a financially driven economy. The view of shareholder value as corporations’ primary objective

has dominated since the 1980s. That motivation—to get short-term shareholder returns—then pushes to lower priority all the other things we used to think about as a social contract: that wages and productivity should go together, that there should be an alignment between the interest of American business and the overall American economy and society. That creates a *market* failure: it’s not in the interest of an *individual* firm to address all of the consequences of unemployment and loss of high-quality jobs, but the business community overall depends on high-quality jobs to produce the purchasing power needed to sell their goods and services to the American market. Sixty percent of U.S.-based multinational corporations’ revenue still comes from the U.S. market. We’ve got to solve this market failure.



Metalwork training at a vocational school in Germany, a high-wage, manufacturing powerhouse—and a model of skills- and job-focused training that U.S. employers and educators might want to emulate

But I think there is also a deep *institutional* failure in the United States. We have allowed the labor movement and the government and our educational institutions—the coordinating glue that brought these different interests together and provided some assistance in coordinating economic activity—all to decline in effectiveness. Government is completely polarized and almost impotent at the moment. Unions have declined to the point where they are no longer able to discipline management or serve as a powerful and valued partner with business to solve problems. And I'm concerned that our business schools particularly have receded into the same myopic view of the economic system where finance rules everything, so we aren't training the next generation of leaders to manage businesses in ways that work for both investors and shareholders *and* for employees in the community.

HM: *Is there a jobs crisis?*

TK: There's a crisis with two dimensions. First, we still have not recovered from the last recession: we're still about five million jobs short of getting back to where we were. The best estimate is that it's going to take us the rest of this decade and we're going to have to create about 20 million jobs to make up for those lost *and* for the growth in the



labor force. That computes to about 200,000 jobs a month, and we're not even coming close.

The second element of the crisis has been going on since 1980. Wages for average workers have been stagnant, so we have seen both the growth in inequality (as a high proportion of the income gets distributed to the top 5 percent or 1 percent of the population) and we have seen a gap develop between wage growth and productivity growth. From the 1940s through the 1970s, we had an implicit social contract where they moved in tandem. That broke down: since 1980 we've had about 84 percent growth in productivity but only 10 percent growth in median family income and 5 percent growth in wages. We've got to address both dimensions of this crisis to get the economy back on track.

HM: *What has happened to the quality of jobs and the match with workers' skills?*

TK: An average employee who gets laid off from a good manufacturing or service job at age 45 is likely not only to experience extended unemployment but to take a loss in wages when he or she finally gets reemployed. The average employee loses between 15 and 20 percent. Those who don't find another job and have to retire early, or drop out of the labor force, or go back to school, obviously have deeper losses. They are likely to be unemployed longer today than they were in the past; over 40 percent of those who are unemployed are unemployed for more than six months—a long time to be without a living wage. They also bear the social costs of unemployment in terms of impacts on families, health, divorce rates, suicide, even mortality. There's evidence that those unemployed for a long time have a lower life expectancy. Children of unemployed parents don't learn as well in school.

As for employers, we have this paradoxical situation where some say they can't find the skilled workers they need. That in part reflects changes in technologies and in industry and product mix in the U.S. as employers try to transform to a higher value-added economy—to a more high-technology-, social-media-oriented economy. The technical and behavioral skills, problem-solving skills, analytical skills are all in very high demand—and those are not necessarily the skills of the prior generation. So while we are producing young people with many of these skills, many of the unemployed don't have what is needed. This problem is entirely solvable for those already in the workplace *and* young students alike. We just have to rebuild and expand apprenticeships, get more community colleges working closely with industry, and adapt our education system (K-12 and our four-year universities) to make sure that we get more of our young people into the STEM fields—science, technology, engineering, and math disciplines that are in high demand.

HM: *Where does the responsibility for that training lie?*

TK: The good news is, people are beginning to recognize that we have a crisis. The bad news is, we don't have leadership yet that has stepped forward to say we're going to bring these groups together to solve the market failure and rebuild our institutions to get the job done.

Business schools have not only a special opportunity but a *responsibility* to do so. We know how to bring groups together, we teach multiparty negotiations and collaborative problem-solving, we teach leadership. It's

time for us to say to American in-

Thomas A. Kochan

time for us to say to American in-

dustry leaders, labor leaders, and our community colleges: Let's get together and identify, within our respective regions, what skills you need. How can we contribute to making sure that the four-year universities are providing the right mix of skills? How can we build more internships and co-op programs with you and use our online-learning technologies to retrain or give second-chance education to people who have the intellectual capabilities needed to learn these skills? How can we learn from the best examples? There are many: from North Carolina's community colleges to Wisconsin, where there are very good technical schools linked to local industry—whether manufacturing or advanced information technology or healthcare. We need to make sure we're working with state-of-the-art technologies and job specifications and that employers are engaged collectively so they share the cost but can also share the benefits by hiring the graduates.

That's not rocket science, that's leadership and institution-building. We could do that—we don't have to wait for a big government program (although I do think the federal government has an opportunity and responsibility as well).

HM: *In the finance-driven model of business, it is perhaps easiest to treat everything as a cost. What about the alternative that invests in human capital and considers workers a source of innovation and service enhancement—competing on the basis of product development, innovation, and quality?*

TK: There's good news on this front as well. In every major industry you can find leading employers who have decided they are going to invest and compete on the basis of having the best, most fully engaged, and most productive workforce—characteristics that support the higher-wage profile.

The favorite example is Southwest Airlines. Their business model is not to compete on the basis of lowest labor cost but keeping their unit cost low and their productivity high by turning their planes around more rapidly than any competitors: they make money by flying planes rather than having them sit on the tarmac. To do that, they have to select people who are capable of working in teams and motivated to work together. They have to train people. They have to have union contracts that don't have a lot of cumbersome work rules, so they get the flexibility to work together to solve problems. They have produced high levels of profits and good wages, and for the last two decades have always been on the *Fortune* list of the 100 best places to work.

We need to learn from those examples: Southwest or Continental airlines; Kaiser Permanente in healthcare—they have an advanced partnership with their employees and unions and are way ahead on automated medical records and teamwork among doctors, nurses, and technicians. In manufacturing, there are examples in the steel and automobile industries of how to do this.

But we aren't making those the norm. We should make sure no one comes out of our universities to be a future business leader, an entrepreneur, or even a middle manager, who doesn't have the skills and knowledge to build these "high-performance" work systems, as they're called, and who sees that as a way to compete that works for both shareholders and the workforce.

HM: *What does that model imply for workers and unions?*

TK: If unions want to have a future in the United States, they need to be the champions of giving workers the training, skills, and opportunities to add value to their enterprise—and then be able to negotiate a fair sharing of the returns that they help to generate. That's how labor unions could add considerable value and discipline management—in a way that works for the benefit of the firm as well as for the workforce. Workers should be demanding that of their employer, their union, their professional association. They should be demanding that in their university education—skills that prepare them to add value in these ways and to lead others so everyone is adding value. That way, we can compete effectively, with a high-quality American workforce.

HM: *Are there implications for other levels of education?*

TK: The best elementary and secondary schools now educate young people to be more skilled in working together (with team assignments), in communications and problem-solving, even in

In every major industry you can find leading employers who have decided they are going to invest and compete on the basis of having the best, most fully engaged, and most productive workforce.

negotiations and conflict-resolution. We need to get that curriculum embedded all over the country: strengthening math and science and these behavioral skills. Universities are doing a lot more of this. At MIT, we're exposing our fantastic engineering and science undergraduates to leadership,

problem-solving, negotiations, how real organizations work—how to sell their creative, technical ideas to people in authority. But we have a long way to go. We're farther along with undergraduates than with graduate students—particularly in the business and professional schools.

HM: *In human development, are companies disproportionately spending on upper management, as opposed to "middle skills"—the operating skills that used to be taught in apprenticeships?*

TK: It's a gross misallocation of resources to spend millions on executive education for middle managers or senior executives while systematically underinvesting in people who develop the products, manufacture them, and service them. These middle skills are eroding because firms have given up on training. They expect to be able to buy all these skills on the market, and don't want to invest in training because they're afraid if they do their competitors will hire these newly minted high-skills employees away. Employers need to reinvest by engaging each other in their industry, in their location, sharing the cost and the benefits. The internship model, the co-op model, the local-industry collaborative that works closely with universities to make sure they're training and educating people in up-to-date skills and technologies is a model that has proven its effectiveness. We need to multiply those models many times over.

HM: *Are other countries doing things better?*

TK: The problems are more severe in the U.S. because we have such a tradition of individualism. We don't have a history of collaborating between labor and management or with other businesses.

Germany has a well-established vocational-education program funded at the regional level; industry is very much involved in shaping the standards and curriculum and hiring the graduates of those programs. We're not going to have a single system like Germany's. But the best examples around the country are where local industry works with local education institutions to tailor programs to suit the regional industry mix. That's why the buzzword is that you have to have an "ecosystem" in the region: Rosabeth Moss Kanter emphasizes this—and she is right to do so (see below). We need to bring education, training, human-resource systems, finance, the supplier community, and the infrastructure together—that's what we mean by an ecosystem. We've got to make sure the workforce is addressed as part of a modern ecosystem for a competitive industry cluster.

The federal government should be a catalyst for this kind of innovation and institution-building.

The best analogy I can think of is the model being used in education, with "Race

to the Top" funds. Create the same incentives for community colleges, universities, and industry collaborative institutions.

We know there are a couple of key ingredients to successful training and education: the close links between industry and education that we've been talking about, and using adult-based learning models with a mix of classroom and on-the-job application through internships, co-ops, or apprenticeships. Third is a career pathway, so there's a continuous opportunity to progress and to learn. It's got to be collaborative—engaging the business community, not just an individual firm.

If we say any program that meets those basic principles will get matching funds from the federal government and if you don't, you won't, you would see changed behavior at the community level where we need it. Race to the Top has produced enormous national change. The job of the federal government here is to get that same innovation at a scale sufficient to have effects on our overall jobs and economic competitiveness. The federal government doesn't have to tell you what to train people in or force you to do this. It has to say, "Meet these basic principles in ways that fit your particular circumstances and we will share in the investments—and if you don't, you're on your own."

The Business Ecosystem

"A country can become complacent about its assets."

Rosabeth Moss Kanter, Arbuckle professor of business administration, in HBS's general management unit, and chair and director of the Harvard University Advanced Leadership Initiative

Harvard Magazine: *What do you mean by "enriching the business ecosystem"?*

Rosabeth Moss Kanter: "Ecosystem" conveys the idea that all the pieces of an economy come together in particular places, and that their strength and interactions determine prosperity and economic growth. In Silicon Valley there is a sense that you prosper only because you're surrounded by lots of resources that make it possible to succeed, beyond what your own entity controls. Think of it as your garden, where you need fertile soil, seeds, and other ingredients to make things grow.

I chose "enriching" carefully because it not only means richer nutrients in your garden, but also the sense that we want continued prosperity. We want more people to feel they have rich lives and opportunity ahead. That is important.

In the mid 1990s, I worked on helping communities around the country adapt to disruptions from the Internet and globalization—trends that were very good for the prosperity of the country overall, but had communities worried about being left behind. I developed the idea associated with this transition from the industrial to the digital in *World Class*: competitive communities had to reach the highest standards in the world because your customers and employers now knew what the highest standards were, and didn't necessarily need you to access them—they could go even outside their country. Those developments pointed to networks and larger systems—what cities and regions and small businesses needed to do to remain prosperous.

I identified three archetypes then, suggestive of different kinds of ecosystems. Greater Boston, like Silicon Valley and Austin,

Rosabeth Moss Kanter



Texas, prospers because of *thinkers*—if you innovated and had new ideas, you attracted resources. Companies gravitate to new ideas because innovations sell at a premium in world markets. Spartanburg-Greenville, South Carolina, exemplified *makers*. It became a global manufacturing hub and attracted foreign companies by investing in American workers, especially in the skills needed for advanced manufacturing of, first, textile equipment and eventually automobiles. Today, that area has become the new Akron (while Akron has moved on to new technologies): it leads in making tires, having broadened its manufacturing skills. My third model was Greater Miami, a region of *traders* that went from being a sleepy southern city to operative capital of Latin America, attracting finance and logistics and many companies' Latin American regional headquarters.

In each of those places, leaders created a regional theme and invested in aligning many organizations to support it.

HM: What factors make that ecosystem function better?

RMK: Four issues strike me as key: turning ideas into enterprises; linking small and large businesses; better connecting education to jobs; and encouraging cross-sector collaboration. Each focuses on actions on the ground, in different regions, within our national and business contexts—whatever those may be. Let me give an example. Civic leaders in Milwaukee are creating a global hub for water-related businesses by linking manufacturers of pipes and controls with entrepreneurs who are creating urban fish farms, and both with new research centers—including the nation's first graduate school of freshwater sciences.

The first is how *ideas* become *enterprises*. This has been such a great U.S. strength that we haven't nurtured it. A country can become complacent about its assets. There is an assumption that small start-ups create the lion's share of jobs, but since the financial crisis they have lost their leading position in terms of the number of jobs created. And the start-up survival rate slipped a little—slightly less than half survive at the five-year mark.

For all the money poured into scientific research, very little was finding its way into the marketplace. Basically MIT and Stanford were taking the lead in finding ways to license ideas that have commercial potential. Elsewhere, there was a tendency to emphasize the revenue from selling a license, rather than whether an enterprise created jobs. Knowledge is the best resource we have. It wasn't any particular industry that made the difference in the transformation and prosperity of Boston and eastern Massachusetts—it's our fundamental ability to keep creating new knowledge. So, how do you make sure that knowledge creates jobs, and those jobs reach all parts of the community and that knowledge will be translated into a global competency?

There is evidence that if you make the connections between knowledge creators and businesses tighter, you can increase success. Compared to stand-alone business incubators, university-based incubators tend to keep more people *in* the community to start their enterprises and tend to have higher success rates,

because they are able to connect small enterprises with mentors. Small business needs capital but it also really needs expertise—so Harvard's new Innovation Lab is a fantastic thing.

Another aspect of moving from knowledge to enterprise to jobs is *collaborative* knowledge creation. It's very difficult to manage, but if you get a number of companies collaborating with a number of universities, you have a better exchange of ideas, and you're also more likely to have competition among them to apply the

knowledge. The semiconductor consortium in Albany is an example. A university had already invested in a technology of the future and that attracted investment from lots of companies, no one of which would want to make that investment alone. In time they will want to have their own proprietary piece, but then you can get the business-school students excited about the opportunities in

these fields and you begin to thrive locally in the global economy. That's *thinkers plus makers* in Albany.

We have long relied on federal funds from the National Science Foundation and the National Institutes of Health for the basic research that supports innovation—private companies cannot support enough basic research on their own. We have seen how in biomedical science, subject to suitable controls, networks productively connect publicly funded research and privately funded companies, hospitals, and other local institutions. We need to continue those investments, but those and other federal expenditures have to be better targeted because not every city needs a semiconductor consortium or a biomedical focus. You want to invest in places that can take the best advantage of certain strengths, and then have other places find *their* key assets, so they can compete for some of that funding, too.

HM: How do new ventures operate more successfully in a stronger business ecosystem?

RMK: That's the second idea: small businesses—particularly new enterprises—often need larger-company customers. When they're in the purchasing stream, they do better. In fact, tech companies funded by *corporate* venture capital often also got a customer who helped improve the product. I've done a very informal study that shows that dominant companies in seven different technology sectors might have had better partners earlier. Every small firm benefits if it can get more business from large ones. It's not just revenues; they also get competence and opportunity.

So, how do you connect small to large? We should have a national call to action with commitments from big companies to mentor and connect with smaller enterprises. Procurement became global because it was more efficient to consolidate global purchasing. But global supply chains are cumbersome. Many would rather buy here if they could find more sophisticated suppliers more easily in the U.S.

In Silicon Valley there is a sense that you prosper only because you're surrounded by lots of resources that make it possible to succeed, beyond what your own entity controls.

I was a consultant to IBM and mentioned this idea; they ran with it and created Supplier Connection—a universal vendor application, kind of like the common college application. They announce opportunities through Supplier Connection to thousands of small businesses. Initially, about 16 big companies started with a few purchasing areas—and expansion plans are in the works. Everywhere I've spoken about these ideas, civic leaders get very excited about linking small to large in their own region.

HM: *What about the linkage between education and job skills?*

RMK: We have been talking about school reform since I was a child in school. Preparing people for the workforce is getting more critical today: up to three million jobs are unfilled because of an absence of vocational skills—"middle skills." Germany is an economic success because of a manufacturing system in which people apprentice to learn skills. Sometimes they then go on to four-year colleges and get advanced degrees, but skills apprenticeship is a much more prominent part of the workforce.

Where do those skills come from? Community colleges are suddenly the darlings of the U.S. policy world because they're the only entities we have that are supposed to prepare people for occupations. Every tech area of the country has a shortage of software engineers—who need some programming, but *not* a four-year degree. You can send data anywhere. Are we going to outsource those jobs?

In fact, community colleges *haven't* been well connected to employers—and their graduation rates have been incredibly poor. In Chicago, fewer than 9 percent of those who start have graduated within six years. It's the problem of disconnection. But when connections between employers and community colleges or training centers are strong—for curriculum development, customized job training, post-graduation interviews—outcomes improve dramatically. There are growing consortiums where leaders of organized labor, community colleges, high schools, businesses, and representatives of the elected officials sit down together to talk about skills needs and who's going to help deal with them. The two-year colleges in Spartanburg and Greenville were the secret to that manufacturing center. South Carolina is still not the most prosperous state, but it would have been Appalachian poor if not for Governor Dick Riley (later U.S. secretary of education) focusing on the community colleges in collaboration with the industrialists.

It strikes me as such a no-brainer, but there's no real national policy here. What an opportunity: the evidence is that you get better outcomes in terms of people finishing their two-year programs and getting jobs when there's a closer tie to employers. This is a way for people to learn useful skills, ways of thinking, science and technology. Rethinking education and work is ripe for innovation. New York City opened its first six-year high school in 2011: a part-

nership of the schools, the community-college system, and IBM. Urban students, selected randomly, start college courses as early as tenth grade; when they finish grade 14, they will earn a high-school diploma, an associate's degree, and a job interview with the company. New York is already expanding this model, and Chicago has adopted it with other technology companies.

HM: *Does that amplify your concept of place-based business ecosystems and connections among actors "on the ground?"*

RMK: Yes, as I was looking for ideas to solve a lot of problems at once, the final one is community leadership and collaboration across sectors. Even if we suddenly had a national program throwing money at community colleges, you still need community leaders talking to each other—where people agree on certain priorities, align their interests, align what they do behind those priorities. Those with management competence can help those without—whether public helping private or vice versa. Those collaborations are fruitful and a source of exciting institutional innovations—from universities incubating ventures to six-year high schools to regions becoming world-class by focusing on areas of knowledge that also stimulate local businesses.

In general, every social and economic institution comes together *on the ground* in business ecosystems like Boston or Albany. You can have national policies for X, Y, or Z, but they intersect in particular places. I return to that because everything wrong with America is more easily fixed, can become right with America, *on the ground*. That's where you have less partisanship. People are fighting in Washington about the size of government, but local civic leaders, private businesses, and ordinary citizens see connections in their own particular place. That's always been an American strength. We can't compete with China's national government, tearing down an area and having an entire new city in a year or two. That's not how we operate. Our strength has been from the ground up. National policy can certainly facilitate things—or not—but you don't have to wait for a government law or allocation.

If I were handing out federal funds, I would give more money to those who prove they've got such a partnership, who have a commitment to collaboration across sectors and who create institutional innovations. There's a role for businesses large and small, government, and civic leaders dedicated to their regions. Local is beautiful, even if national can sometimes get ugly.

The Other Commons

"Political dysfunction may well be an important part of the problem."

David A. Moss, McLean professor of business administration and founder of the Tobin Project

Harvard Magazine: The competitiveness project's survey research shows that managers and business leaders are concerned about the political system—it looks messy and dysfunctional.

Our strength has been from the ground up. National policy can certainly facilitate things—or not—but you don't have to wait for a government law or allocation.

David Moss: Yes, this seems like a new twist on the competitiveness debate. Of course, worries about the *economic* health of the country are nothing new. In the 1950s, there was great fear that the Soviet Union would eventually outproduce the U.S. Then there was a good deal of worry about Japan in the 1980s—that Japan was an economic juggernaut, and the U.S. couldn't possibly keep up. Both fears turned out to be overblown.

Perhaps my favorite example relates to late eighteenth-century Britain, when skeptics were saying the country was in decline—that its public debt was too big and its products were no longer of high quality. But Adam Smith said the pessimists were wrong, and we now know he was absolutely correct—Britain was on the verge of an economic takeoff. The rationale Smith offered in 1776 is especially interesting. He suggested that in a dynamic economy, the biggest (and thus most visible) industries are frequently in decline, and the newest, most vibrant ones aren't yet visible. This is why a country could have a very promising economic future yet still appear to be in decline.

The lesson here is that we need to be cautious about our economic pessimism. It's easy to get carried away. So as we think about some of the political challenges America faces today, we need to be equally cautious.

That said, in past discussions of America's economic health, the focus was predominantly on economic and business factors: interest rates, tax rates, labor costs, supply chains. Now it seems we also need to pay close attention to the political system. One has a sense that it's increasingly dysfunctional. In fact, when our HBS alumni were surveyed about strengths and weaknesses in the American economy, they identified the political system as the biggest weakness going forward. It appears Standard & Poor's came to a similar conclusion during the debate over the debt ceiling last year. When S&P downgraded the nation's credit rating, there wasn't any serious question about the country's *capacity* to repay its federal debt. The U.S. had (and has) plenty of GDP. The real question the rating agency raised—the basis for its downgrade—was whether the nation's political system is reliable enough to ensure continued repayment. The extreme political brinkmanship that characterized the debt-ceiling fight was profoundly unsettling for S&P's analysts—and perhaps rightly so.

Putting these pieces together, I think there's reason to worry

David A. Moss

about the long-term economic health of the country. I remain optimistic—but nervously optimistic. Although we've seen GDP growth over the past few decades, it's been highly concentrated among top earners—most Americans haven't seen nearly as much income growth as past generations have. Will broad-based growth return in the future? I sure hope so. But we need to think hard about what's causing the problem.

I'm not sure the traditional explanations work so well. For example, I don't think the fundamental problem relates to the way our firms are managed or the nature of our trade infrastructure (though we still have to work on both). In my view, *political* dysfunction is likely a more serious impediment to a healthy economy. Are we doing what we need to do in terms of developing

our human capital? Clearly not. Whether from the right or the left, do we have an energy policy that makes sense?

Not really. People can debate the individual healthcare mandate, but the ultimate question is, can we continue to afford spending over 17 percent of GDP on a healthcare system that appears less productive—less effective, in many cases—than those of other rich, industrial countries? In terms of our fiscal position, the federal government is spending about 24 percent of GDP while taking in about 16 percent of GDP in revenues. It's obvious that we need to cut spending and

raise taxes over the long term—yet the political system can't deliver that. In fact, it's hav-

ing trouble addressing any of these major challenges in a coherent way. So political dysfunction may well be an important part of the problem.

HM: *You have found periods when Americans, though skeptical about government, have agreed on steps to reduce debt and pay for public services. Does that context inform the present?*

DM: Yes, absolutely. But first we have to ask: is there something different about the problems facing the political system today? After all, in nearly every generation, Americans have complained about how their political system “doesn't work as well as it used to.” Although the same may be true today, I think we *do* face some distinctive political challenges. Consider the research that Nolan McCarty, Keith T. Poole, and Howard Rosenthal—three superb scholars—have put together on political polarization in Congress. Their data show it is at or

near an all-time high. We're seeing more distance between the parties and less ability to compromise than we have in a long, long time.

In fact, the issue of compromise is itself interesting, and starts to get us back to your question. Many people think of compromise as meeting in the middle: I give a little, you give a little, and in this way we reach a solution. But there's another form of compromise that we sometimes forget about: instead of meeting in the middle, each party gets what it most wants. If one person wants to visit Miami and the other New York, they could settle for Washington, D.C.—or they could agree to go to Miami this year and New York the next. Some of the most important political accommodations in American history have involved the latter sort of compromise—choosing the best from column A and the best from column B.

Since the days of Jefferson and Hamilton, Americans have harbored profound disagreements about the proper role of government. One side sees government as the problem and seeks to limit it and get it out of our lives; the other believes government can be harnessed to solve important problems, particularly those that individuals have trouble solving on their own. Both views have been enormously productive over the course of the nation's history: in fact, one key to American economic success is that the nation's governance has long been rooted in two great philosophies of government, not just one. And reconciling the two has not always involved meeting in the middle.

Consider the extraordinary thing that happened in the mid nineteenth century, when many states introduced strong budget rules that sharply limited public borrowing—something the Europeans should look at very closely today. Back then, the push for fiscal responsibility, often rooted in state constitutional provisions, came mainly from small-government conservatives. In New York, for example, the group that secured a constitutional amendment to limit borrowing, the Barnburners, in some ways was very similar to the Tea Party today. One important difference is that the Barnburners were more allergic to debt than to taxes—and even willing to raise taxes to bring down debt, where necessary. But they were deeply upset about fiscal excess, and went to great lengths to bring the state budget under control.

Now, at virtually the same moment, there was another strong push—from the other end of the political spectrum—for free public education at the state level (financed by taxes, rather than private tuition charges). This represented a radical development at the time, the virtual socialization of an industry. It was enormously controversial. Ultimately, though, the rise of public education constituted a powerful competitive advantage because it moved the United States far ahead of most other countries in terms of education and human capital development.

What's especially remarkable is that many states put *both* in place nearly simultaneously: strong legal provisions for limiting deficit spending *and* public education financed by new taxes. Two powerful ideas from two very different parts of the political spectrum. In this case, as in so many others, progress was achieved not by meeting in the middle, but rather by adopting the best of *both* sides.

I think this is an important example for us in 2012. We need to think about how to get our federal budget into long-term balance—perhaps through some sort of balanced-budget provisions with appropriate escape hatches—and, simultaneously, how to invest more effectively in human-capital development. That is the type of compromise we should be aiming for: the best of both.

Which brings us back to the question of ideology. Some observers look at the paralysis in our political system and assume that ideological divisions are the cause. I don't see it that way. As I've said, these sorts of divisions have been around for a very long time in America. Instead, I believe that the central source of weakness in our political system today is an absolutist view of politics (and political tactics)—where *any* success for the other side is seen as a devastating loss for your side. A good friend at MIT, Stephen Van Evera, refers to this as a Leninist orientation—thinking of politics as war, where winning is everything and compromise is a dirty word. I would say this Leninist approach is profoundly inconsistent with sustaining a healthy democracy. *This* is the piece of American politics that's dysfunctional. We can have different views of government—that's as American as apple pie—but we need to get back to a place where it's possible to govern on the basis of *both* perspectives—and get the *best* of both, rather than fall into a cycle of unending political warfare and paralysis. The

problem isn't ideology. It's *politics as war*, and that's what Americans need to reject when they go to the voting booth.

HM: *Do politicians who approach governing as a fight to the finish fundamentally differ from business leaders, who make pragmatic decisions as they adjust and adapt operations?*

DM: That's a great question. The business sensibility tends to be highly pragmatic: problems come at you, and you need to try to solve them. That said, if you develop a better product, it might put your competitors out of business. It's hard to be too upset about this, because we all benefit as consumers from the introduction of better products. That's business.

I'm not sure the same logic entirely applies in politics. If one political party could destroy the other, the country would be poorer, not richer, as result. That's because there's an important shared element to our political system. Whatever side you're on, you need the other side to be healthy or the democracy will break down. In politics, in other words, we have to be especially careful in thinking about the integrity of the *system as a whole*. Individual politicians often have a greater responsibility in this regard than they realize.

HM: *Do today's CEOs differ from their predecessors? They're measured and compensated in a shorter-term way. If they run global enterprises, they are less locally rooted. They have strong incentives to lobby for short-term benefits, like tax loopholes. Have their ties to a functioning democracy weakened?*

The integrity and health of the nation's democracy are of incalculable benefit to everyone who lives and does business in the United States. This is true even strictly in economic terms.

DM: One theme my colleagues on the competitiveness project have emphasized relates to the broader business environment—the “commons”—and whether business support for the commons at local and national levels has diminished as the economy has globalized. If we are underinvesting in human capital, physical infrastructure, and other elements of the business environment as a result of such neglect, this certainly requires attention.

I wonder if much the same thing may be going on with respect to the political system—that is, whether the *political* “commons” has been increasingly neglected. The integrity and health of the nation’s democracy are of incalculable benefit to everyone who lives and does business in the United States. This is true even strictly in economic terms. Think about all the elements of the business environment that are products of *political* decisionmaking—from rule of law and property rights to a stable monetary system and even protection from foreign foes. Just as good governance is essential for high-performing firms, good governance is essential for high-performing countries. So I think this idea about the commons is certainly applicable in the political sphere. If we allow our political institutions to atrophy, the economic health of the country *will* falter in time. So we need to be vigilant about this.

Now, returning to CEOs, if it’s true that they are less focused on the business commons than they used to be (given the forces of globalization, for example), then perhaps they are also somewhat less attentive to the state of the *political* commons than they used to be. Is this the case? I don’t know. But it’s an intriguing question.

Certainly, we all need to think about our own responsibilities as members of a democracy. We all need to vote, to think carefully about the issues, to formulate our own opinions and be respectful of others’. In the same way, CEOs have a responsibility to think about *their* role in sustaining and strengthening the democracy, and sometimes this could involve forgoing opportunities for short-term political victories. It may seem idealistic—even naive—to speak in these terms, but I believe this sense of responsibility is absolutely essential if we want to ensure the long-term health of our political system.

HM: *What can business leaders do?*

DM: Let me talk about what *all* of us can do. We need to work as hard as we can to preserve and strengthen our *culture of democracy*. That means, in part, rejecting “politics as war,” which is so inconsistent with healthy democratic governance. But it also means mak-

ing certain investments—in education, for example. There has been discussion recently about civics in the classroom. To a large extent, it has disappeared; and even in states that still have civics programs, the curricula are often out of date and not especially exciting. If we could revive civics—or, more broadly, the study of democracy—in high school and college in a truly effective and engaging way, that by itself could have a very positive effect over time. In fact, we should be thinking about how best to do this here at Harvard and at other

colleges and universities. (Full disclosure: I’m currently developing a case-based course on the history of American democracy, which I hope will help serve this role.)

Business leaders could certainly help push this agenda along as well. A number are already speaking out about the critical importance of improving reading, writing, math, and science skills in primary and secondary education. The fact that we’re at or below the median on international tests is almost unforgivable in a country that helped invent public education. But I want to emphasize that while skill-building is enormously important, it shouldn’t be the only objective as we think about educational reform. One principal reason for creating public schools in America in the nineteenth century was to help ensure and develop a capable electorate. So as we imagine new ways to strengthen our educational system, we shouldn’t lose sight of how important it is to foster good citizenship and to deepen understanding of the democracy and its history. Thoughtful business leaders could certainly

play a valuable role in reminding us of this.

Too often, I’m afraid, the health of the political system is seen as someone else’s problem—not appropriate for the CEO to be worrying about. But when Harvard Business School alumni tell us that the biggest problem with the American business environment is the political system, that should make things abundantly clear. It is absolutely in the interest of American business to help ensure a strong and healthy culture of democracy in the United States. CEOs and other business leaders could make a difference—they could help strengthen the political commons—by making clear to their stakeholders and to the broader public that a healthy political environment is vital to a healthy business environment and a healthy economy, and that treating politics as war (however attractive in the short run) is a sure-fire way to weaken the political system (and the economy) in the long run. If we are going to strengthen and revitalize our democracy, all of us—including the nation’s business leaders—have an important role to play in making this happen. ♡



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Adam Smith, author of *The Wealth of Nations*, was prescient about dynamic economies in preindustrial Britain. Might he caution against excessive economic and political pessimism in the United States today?