

**FORTY-SIXTH
CONVOCAATION ADDRESS**

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It is a pleasure to be with you today to help celebrate your graduation from one of the world's finest schools in one of the most vibrant countries at one of the most exciting times in the world economy.

What has happened here, and in other developing countries during the past fifty years—during the period in which I have been a regular visit to the country—was almost inconceivable. Growth rates that were simply not imaginable. And it has come about without any planner to guide it. Markets have worked. Or so it would seem.

But they haven't worked alone, and they haven't worked exactly as we would have liked. We would have liked the fruits of that growth to be more equally shared, and we would have liked there to have been fewer of the adverse effects—pollution, congestion—that seem to accompany rapid growth.

These successes are often attributed to the market, and sometimes to the businessmen who take advantage of the opportunities that the market offers. But this is an overly simplistic interpretation. Why do certain societies seem to grow, while others do not? In most, the human potential and deep underlying forces, including those associated with globalization, are apparent. The difference in part between the countries where there is success and those where there is not is the government—how societies organize themselves for collective action. Do they educate their children? Do they provide adequate infrastructure? Have they created a legal and institutional infrastructure in which individuals can thrive? The kind of social capital where others can be trusted?

No individual accomplishes what he does based on his own work; he builds on knowledge of others and a social and economic framework which is largely taken for granted. We should thus look askance at the claim of those who make large incomes, that they deserve it, and that therefore they shouldn't be taxed. A closer look at the sources of wealth in societies with high inequality suggests that much of that wealth arises from rents, including those derived from the exercise of monopoly power; and much of it arises as a result of being able to extract, shall I say, favorable terms from government, either in the acquisition of state assets or in procurement, often through corruption. But even those that have come by their fortunes more honestly, through wealth creation, could not have done what they did without the help of others, without making use of knowledge produced by others, and without the

advantages of the social, political, and economic context in which they function.

The experiences of growth and development have shown not only the importance of what the government does, but of ideas and knowledge—in several different senses. The roles assigned to government and the policies it takes reflect interests and beliefs and perceptions of interests. At the time of the founding of the Republic of India, the failures of the market seemed apparent, and there was an attempt at government led growth. But that only led us to learn, with some costs, of the limitations of collective action.

Now, with the Great Recession, the failures of the market—both in efficiency and equity—once again cannot be ignored. No democratic government, outside of war, has wasted resources on the scale of the devastation brought about by America's financial sector. The cumulative loss in output, the gap between what has actually been produced and what could have been produced, amounts to trillions of dollars, and the toll is still mounting. We should be clear: this is a failure of unfettered markets. The main failure of government was not doing what it should have done—to restrain markets from what they have done, and done repeatedly: excessive risk taking and exploitive and anti-competitive practices.

For those who have seen the consequences of excessive government intervention, there is a tendency to let the pendulum swing too much to the other side. Let America's experience be a warning. America is a rich country that can, perhaps, afford such waste. India is not.

The Occupy Wall Street movement (and protestors in Spain and elsewhere around the world) have brought forward a ringing set of complaints about our economies and our democracies. Markets aren't working the way they're supposed to. Demand is supposed to equal supply, including in the labor market, but we have millions without jobs, and a vast underutilization of resources—in a world with vast unmet needs, to fight poverty, to promote development, to retrofit the global economy for global warming. In the US, millions have been thrown out of their homes in a foreclosure process that has undermined America's claim to be a country of the "rule of law." We have empty homes and homeless people.

Everyone was supposed to benefit from the prosperity that markets and globalization brought. Even if a few got a lot, everyone would benefit. But, unfortunately, that's not been the case. Rather than trickledown economics, we have trickle-up economics. Those at the bottom—and increasingly in the middle—are worse and worse off. Median household income (that is, the income of the typical American family) is the same as it was fifteen years ago; and that has only been achieved at the expense of longer hours of work. Wages adjusted for inflation are falling. The median income of a full-time male worker in the US is the same as it was more than three decades ago.

The top 1% receives today between a fifth and a quarter of all income in the United States, with some 40% of all the wealth. But while inequality has been growing, government has been taking a less active role, either in restraining the sources of inequality or in offsetting its consequences. While one out of seven Americans today are on food stamps, almost an equal number still face food insecurity. And while India debates about whether there should be basic economic rights, like the right to food, such debates are still not part of the discourse in America.

Standard economic theory explained that under certain idealized conditions, competitive markets would be efficient. Economic research over the past fifty years has explained the many conditions under which markets fail to produce efficient outcomes—why it is that Adam Smith's invisible hand, which was supposed to lead the pursuit of private interest to the general well-being of society, often seems invisible: it's not there, whenever, for instance, risk markets are incomplete and information is imperfect or asymmetric (that is some people know something that others don't). We know too what the government can do to help "correct" these market failures. In some areas, like the environment, there has been great progress, at least in the acceptance of the principles. In practice, though, we are failing: globally, the world has failed to come to terms with the most important environmental disaster facing it, global warming; and here in India, there is also a failure to come to terms with the lowering of the levels of groundwater, which threatens agricultural sustainability.

But even if markets were efficient (which they are not) the distribution of income that emerges from the market is typically not socially acceptable—and those that are emerging in countries around the world are increasingly perceived as unjust. The level of inequality is not inevitable. It can be changed. And I've argued in my forthcoming book

that it can even be improved upon with reforms that would increase the efficiency of the economy.

Extracting the lessons of the failures and successes of development, of the failures and successes of markets and of governments, is one of the main tasks for the social sciences. Your school is part of the global community of scholars—in my mind, the most important part of globalization—working together, linked together, trying to figure out these puzzles, the answers to which may bring enormous benefits to hundreds of millions around the world. Hopefully, out of this will emerge a more balanced and nuanced view of the role of government in the economy.

The work that you have studied here, the research that is going on in other universities around the world, attempts to clarify what works and what doesn't, what is important and what is not. The basic lesson of economics is that resources are scarce, and that they have to be used carefully, to where the returns are highest. Understanding what kinds of expenditures and policies are most likely to produce sustained growth is thus essential.

The importance of knowledge for development though goes further. One of the important insights into development of the last fifteen years is that what separates developed and developing countries is not just a gap in resources, but a gap in knowledge, and reducing that gap can do more to improve growth and reduce poverty than almost anything else. Today, we look with amazement at some of the rates of growth in the emerging markets—numbers that would have seemed inconceivable a half century ago. That growth is in no small measure, because the emerging markets have learned how to learn, and have learned how to close the knowledge gap. They know that there is no reason that researchers in Brazil, India, or China shouldn't be every bit as much at the frontiers of knowledge as those in the more developed countries, and they have shown they are every bit as good at pushing those frontiers back.

But it is not just the frontiers of knowledge that are moving out. Slight changes in practice—better cooking stoves, for instance—can lead to both higher standards of living, better health, and a better environment. There may not be many examples of this low lying fruit, but even exploiting a few of them can make a very big difference.

The importance of knowledge for and in development brings me back to my previous theme—the need for a balance between the market, the state, and civil society. Basic knowledge itself is something economists call a public good, that is, a good that the private sector on its own will not produce in adequate supply, and when it does produce it, will attempt to restrict its use inefficiently, to extract monopoly returns. That's why the most successful countries have had a vibrant state and not-for-profit research and education system. Not a single one of America's leading universities is a for-profit institution. Indeed, the for-profit universities have excelled in only one thing—exploiting the poor and the less educated.

The basic research that provided the foundations of the Internet, which has done so much to transform economies around the world, was done by the government; but the private sector played a vital role in bringing the Internet to market.

So too the knowledge that brought about the green revolution was the result of efforts by governments, including that of India, and private foundations. It succeeded in increasing agricultural productivity in India and other countries enormously. This is an example of how knowledge—the production of a new variety of grain—was transformative. But it has been more than forty years since the Green Revolution, and today, India faces challenges.

First, as has long been the case, hunger is caused not by an absolute shortage of grain, but by the lack of income of those in poverty to get access to it, as Amartya Sen has emphasized in his analysis of the Bengal Famine. India has recognized the right to food as a basic human right, leading the way for the rest of the world, and is on the verge of an historic implementation of the world's largest social protection program against hunger, just as the rural employment scheme was the largest social protection program against unemployment. Technology alone does not provide answers to our society's problems. Technology has to be wedded with social programs, and it is the social sciences that provide insights into how these can best be designed.

Secondly, the rising population necessitates continuing research. One can never rest on one's laurels. There is a need for another green revolution, this one more sensitive to the environment, and especially to the scarcity of water, a problem will be worsening with global warming. There is great scope for further increases in productivity even with

existing technology—China's productivity per hectare, for instance, is 2.5 times that of India.

One has to run to stay still: unless there are further efforts, especially in research, the challenges posed especially in certain regions of the country, by falling groundwater levels, increasing salinity, and climate change may put the country's food security at risk.

Thomas Jefferson, America's third president and an advocate of education, explained the nature of knowledge as a public good long before economists developed the technology jargon: knowledge is like a candle. When one candle lights another, it does not diminish the light of the first candle. We have lit here several hundred candles, as each of these lights hundreds more, the light can help lead the way to a more enlightened development of the country.

I've spoken of the importance of knowledge in development, but I should say a word about an important consideration: development for what end? Too much of the world has been in pursuit of what I have called GDP fetishism—the belief that development is simply the increase in GDP. GDP statistics provide a simple metric of performance, and in today's world, there is a quest for simple and easily understood metrics. In that metric, India's 8 percent growth rate has been truly impressive.

But I explained earlier that GDP could be going up, even though most individuals in society could be getting worse off—as has been happening in the US. GDP in the US before the crisis looked respectable, but it was not sustainable. It was built on a mountain of debt, on the basis of a housing bubble. The quality of life of many Americans was deteriorating in many other ways—they faced greater insecurities (because of inadequacies in our health and unemployment insurance schemes) and spent more money protecting themselves against crime. They worked longer hours, and felt more isolated. Economic change is often associated with societal changes, and some of these changes were not enhancing most Americans' sense of well-being, and understandably so.

The International Commission on the Measurement of Economic Performance and Social Progress, which I chaired, highlighted the deficiencies in GDP, proposed a set of reforms and a research program to further improve our metrics, and encouraged national dialogues about the objectives of growth and extent to which measures and policies are working to achieve them.

These issues are highly relevant for many of the policy debates going on in India. These issues are not a matter of a rich country's luxury. Rather, they are at the heart of shaping development strategies, so much so that Bhutan has renamed its planning and development commission its Gross National Happiness (GNH) commission. For instance, there are those in India who have been arguing for fuller capital market liberalization. The evidence is that such liberalization does not lead to faster growth, but does lead to more instability, and that the poor and small businesses bear the brunt of the cost of that instability. But financial liberalization has also been associated not only with instability, but the creation of large inequalities in our society.

We are sometimes not fully aware of the societal changes brought about as a by-product of other actions. America's superhighway system in the 1950s created large suburbs and exurbs, with their soulless shopping malls, contributing to the destruction of inner cities, and enhancing residential segregation. In the U.K. today, there is a discussion of the consequences of shutting down village post offices for village life and social interactions.

For those of you engaged in research, these issues too are of considerable relevance. In assessing the success or failure of programs and policies, you need to look not just at the impact on GDP or income, but on broader measures of well-being.

I want to end my talk with a few reflections on what my parents told me as a young teenager as we discussed what career I might embark upon. They had but three words of advice. (First) money will never buy you happiness. Strange advice perhaps to give a future economist, but the wisdom of which I have seen in subsequent years. (Secondly) use your mind. You here today have been blessed with the gift of great intellectual talent, and you should use it to the fullest. This is what will give you pleasure in the years ahead. And (finally) be of service to others. That service can take on many different forms—one-to-one interactions, as in medicine or teaching, or changing societies and economies—the ambition of every economist and social scientist.

You are lucky. You have been born with enormous intellectual capabilities, in a lively and thriving democracy, that has helped provide you with an education to enable you to use your mind. You have been born in an exciting time, where India and other emerging markets are

coming into their own, and where the possibility that poverty will be history seems real. There is a new global balance of power, and some of you may play an important role in shaping this New World.

What this New World will look like is not yet clear. It could be just a new version of the old world: new forms of inequities, new castes and classes, a world divided between the haves and have-nots, where opportunities of those born to the poor and less educated are limited.

Many of you will be asked to use your intellectual prowess in a variety of ways: To help make banks more profitable or to help design better weapons of war. You will be enticed by money, and there are those who will attempt to seduce you through illusions of grandeur of power and influence. Intellectual challenges abound everywhere. Private rewards make some of these opportunities alluring and hard to resist. I wish it were the case that private rewards and social returns were well aligned, for then these agonizing conflicts between private and social purpose would not arise. But private rewards are often not commensurate with social returns, and that means many of you will face very difficult decisions.

There is no clear roadmap for where India is going today. Fifty years from now, does it see itself much as it is today—a divided country, only with the rich much richer, the poor perhaps a little better than they are today? Does it see itself evolving like the U.S., where even the middle has not been sharing in the gains of the growth? Where the rich live in gated communities, waited upon by the vast majority of the poor, who earn in a lifetime but a fraction of what they receive in an hour? Or, will India go down the path of those countries that have managed to have rapid, sustainable, growth, with the benefits of that growth widely shared within the population?

India prides itself on its democracy. But can there be real or meaningful democracy with the large economic divides that are emerging today in the U.S. and elsewhere, where the wealthy use their money to have an undue influence in shaping perceptions and beliefs, and thus the outcome of electoral processes? The problems are even worse where large portions of the population receive limited and inadequate education.

So I ask of each of you to think about what kind of society, what kind of India, what kind of world, you would like to live in twenty-five, fifty,

seventy-five years from now, and whether what you will be doing will be contribute to creating that world, if only through a small step. For this world won't come about on its own. It will only be through the hard work of talented people like you.

I wish you—and India—the best of luck on this journey.