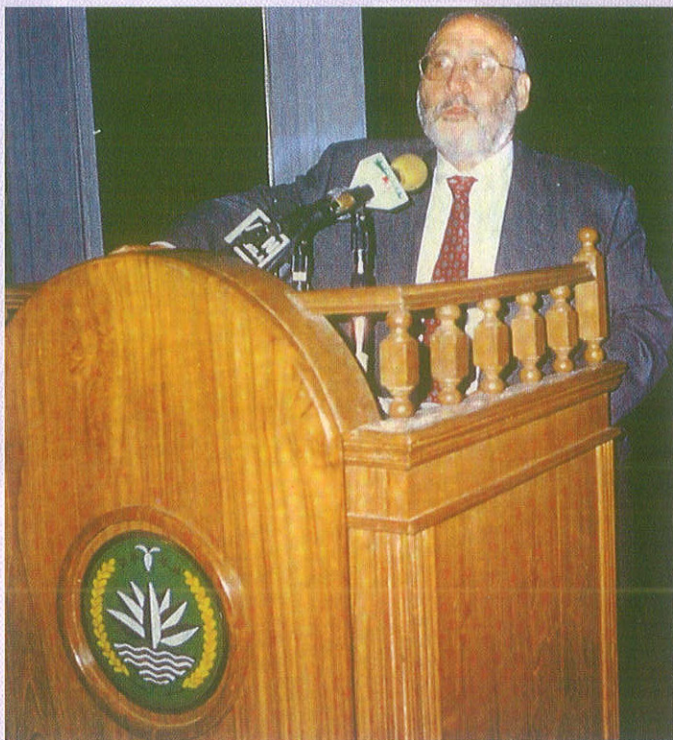


Sustainable Development and Neo-Liberalism

Joseph E. Stiglitz



Nobel Laureate Professor Joseph E. Stiglitz
delivering Public Lecture organized by BEA; 14 August 2003



Public Lecture

Bangladesh Economic Association

Dhaka: 14 August 2003

A Note from the Executive Committee of the Bangladesh Economic Association

Professor Joseph E. Stiglitz, the 2001 Nobel Laureate in Economic Sciences has delivered the Public Lecture titled "*Sustainable Development and Neo-Liberalism*" organized by the Bangladesh Economic Association. The Lecture was delivered on August 14, 2003 at Local Government Engineering Department Auditorium, Agargaon, Dhaka. The accompanying printed version of the Public Lecture is the transcribed material of his speech which was tape recorded. The transcription was done jointly by Professor Abul Barkat, General Secretary, Bangladesh Economic Association and Md. Mahfuz Ali, is a part-time teacher, Department of Marketing, University of Dhaka. This publication also includes a short Autobiography of Professor Joseph E. Stiglitz; an opening speech by Professor Abul Barkat, General Secretary, and an introductory speech by Dr. Qazi Kholiquzzaman Ahmad, President, Bangladesh Economic Association. The Executive Committee of the Bangladesh Economic Association acknowledges *Sono Diagnostic Centre Ltd., (Kushtia)*, for extending financial support for printing this book.

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Address of Welcome*

by

Abul Barkat

General Secretary, Bangladesh Economic Association

I welcome you all to this high utility event organized by us, the Bangladesh Economic Association –*Public Lecture 2003*. The Public Lecture is going to be delivered by one of the greatest minds in the contemporary world, **Professor Joseph E. Stiglitz**, the **2001 Nobel Laureate in Economic Sciences**. The 2001 Nobel Prize (officially named the Bank of Sweden Prize) in Economic Sciences was awarded to Professor Joseph E. Stiglitz (Columbia University) with George Akerlof (University of California, Berkeley) and A. Michael Spence (Stanford University) for “**their analysis of markets with asymmetric information**”. In welcoming Professor Stiglitz, let me remind you about his contribution to economic sciences, which the Swedish Academy noted as follows: “*Stiglitz clarified the opposite type of market adjustment, where poorly informed agents extracts information from the better informed, ... Stiglitz has shown that asymmetric information can provide the key to understanding market phenomena*”. To this end, Stiglitz himself said that, “*Our models took into account asymmetries of information, which is another way of saying ‘some people know more than others’.*”

On behalf of the Bangladesh Economic Association, let me express our profound indebtedness to Professor Stiglitz for his kind consent, despite his extremely busy schedule, in delivering today’s Public Lecture on a thought-provoking subject “*Sustainable Development and Neo-Liberalism*” – the subject

* An abridged version of this Welcome Address was presented in the Public Lecture-2003.

having high theoretical implications for economic sciences and practical utilities in designing policies and strategies for long-lasting development.

It is a matter of great pride and happy coincidence that Bangladesh Economic Association, in its diverse activities as a professional body of the economists, assigns high value to and upholds many of the ideas of Professor Stiglitz. Let me just mention some of your, Professor Stiglitz, philosophical insights that we follow in explaining economic reality here, in Bangladesh, and in our, in most cases, unsuccessful attempts in suggesting the Government in her managing the economy towards sustained economic and social development:

01. For example, Professor Stiglitz, you have said "*economics can make a difference*" in improving people's lives by "*focusing on the difference between the haves and have-nots*". We, in the Bangladesh Economic Association, as a civil society body, are both concerned and committed – in all our information dissemination activities – to performing the important social responsibilities of economists in Bangladesh.
02. We pursue the idea of high return of "*government investment in public accommodation*" about which you, Professor Stiglitz, has said "*ensuring public good is itself a public good*"; and we believe in the inner strength of your concept that "*public spiritedness* (and not the economist's traditional narrow view about individualistic model), *through which voluntarily individuals work collectively ... for collective interests.*"
03. We understand – in development – government matters much. We fight tooth and nail to convince the Government that ensuring people's access to complete and accurate information is important, information disclosures have distributive consequences, and problems of information are central to understanding not only **market economies**, but

also **political economy**. We always put very conscious emphasis on the fact that information imperfections affect political process, as you say, *“more transparency not only exposes mistakes - but also corruption”*, and *“secrecy is an artificially created scarcity of information.”*

04. Here, in Bangladesh, blanket privatization is a development strategy. Most governments consider privatization as panacea. But we try to argue, using your empirically substantiated research findings, in which you have argued, *“Countries that privatized rapidly but lacked “good” corporate governance did not grow more rapidly. Privatization might not lead to an increase in social welfare, rather than providing a basis for wealth creation, it led to asset stripping and wealth destruction.”*
05. What can be done with costly corruption? Your view is: *“sunshine is the strongest antiseptic”*. Although I have already mentioned about the relationships between transparency and right to information, let me, in view of the prevalence of high extent of corruption in our country, communicate your idea to sharpen our understanding. You have said, *“There are strong forces on the part of those in government to reduce transparency. More transparency reduces their scope of actions – it not only exposes mistakes but also corruption. Government officials may try to enhance their power, by trying to advance specious arguments for secrecy, and then saying, in effect, to justify their otherwise inexplicable or self-serving behavior. There is a further rationale for secrecy: secrecy is an artificially created scarcity of information, and like most artificially created scarcities, it gives rise to rents, rents which in some countries are appropriated through outright corruption (selling information), but in others are part of a “gift exchange” in which reporters not only provide puff pieces praising the government official who has given the reporter privileged access to information, particularly in*

ways which are designed to enhance the officials influence and power, but distort news coverage... . Without unbiased information, the effectiveness of the check that can be provided by the citizenry is limited; without good information, the contestability of the political process can be undermined.

One of the lessons of the economics of information is that these problems cannot be fully resolved, but there are laws and institutions which can decidedly improve matters. Right-to-know laws, demanding transparency, have been part of governance in Sweden for two hundred years; they have become an important if imperfect check on government abuses in the United States over the past quarter century. In the last five years, there has become a growing international movement, with some countries, such as Thailand, going so far as to include them in their new Constitution. **Regrettably, these principles have yet to be endorsed by the international economic institutions.**" (emphasis mine; Nobel Lecture)

06. Your elegant explanation about the reasons behind East Asia crisis (which began in Thailand on July 2, 1997) has been an eye opener for the truth-seeking economist's and the serious policy people all over the world, particularly in the emerging developing countries. You, in your Nobel Lecture, have said, "*Poorly designed policies could lead to an unnecessarily large reduction in credit availability and unnecessary large increases in bankruptcy, both leading to large adverse effects on aggregate supply, exacerbating the economic downturn. But this is precisely what the IMF did: by raising interest rates to extremely high levels in countries where firms were already highly leveraged, it forced massive bankruptcy, and the economies were thus plunged into deep recession and depression; capital was not attracted to the country, but rather fled. Thus the policies even failed in their stated purpose, which was to*

stabilize the exchange rate. There were strong hysteresis effects associated with these policies: when the interest rates were subsequently lowered, the firms that had been forced into bankruptcy did not become unbankrupt, and the firms that had seen their net worth depleted did not see an immediate restoration. There were alternative policies available, debt standstills followed by corporate financial restructuring, which, while they might not have avoided a downturn, would have resulted in the downturns being shallower and shorter. Malaysia, whose economic policies confirmed much more closely to those that our theories would have suggested, not only recovered more quickly, but was left with less of a legacy of debt to impair its future growth, than did neighboring Thailand. Which confirmed more closely to the IMF's recommendation". We value your method of analysis as social scientist, which you have termed **"I have tried to follow the analysis, wherever it might lead"** (Nobel Lecture). This method led you to unveil the impacts of poorly designed policies on instabilizing the exchange rate, bankruptcy, and debt legacy-mediated growth impairment. Based on these analysis, we, in Bangladesh, try to convey the essence of your message to our policy community. But, at times, it is difficult to convince them, more due to donor-drivenness ("donors know more and better," or "king can do no wrong" syndrome), partly due to leaders arrogance, and partly due to their lack of understanding about the fact that, (as you say) *"Market economies are characterized by a high degree of imperfections. Even small degrees of information imperfections can have large economic consequences."*

07. We are a victim of Washington consensus. And we fully agree with you when you say: *"The so-called Washington consensus policies, which have predominated in the policy advice of the international financial institutions over the*

past quarter century, have been based on **market fundamentalist policies** which **ignored the information-theoretic concerns**, and this explains at least in part their widespread failures” (emphasis mine; quoted from Nobel Lecture by Professor Joseph E. Stiglitz, December 8, 2001).

08. In welcoming you, Professor Stiglitz, I think, I will be failing in my responsibility, if I do not mention your conviction regarding the inappropriateness of the assumption of fixed preferences. Since this is absolutely critical to understand the problems of development, I want to quote you extensively to put on record: “*I have criticized the Washington consensus development strategies partly on the grounds that they perceived of development as nothing more than increasing the stock of capital and reducing economic distortions. But development represents a far more fundamental transformation of society, including a change in “preferences” and attitudes, an acceptance of change and an abandonment of many traditional ways of thinking.*

*Especially during the last few years, as I have become more deeply immersed in the problems of development, I have felt more strongly these and some of the other deficiencies of the standard paradigm, for instance, its attempt to **separate out economics from broader social concerns**. A major impediment to development in Africa has been the civil strife, which has been endemic there, itself in part a consequence of the economic circumstances.*

*These perspective have strong policy implications. For instance, some policies are more conducive to effecting a development transformation. **Many of the policies of the IMF – including the manner in which it interacted with governments, basing loans on conditionality – were counterproductive. Policies which have ignored social***

consequences have frequently been disastrous. The IMF policies in Indonesia, including the elimination of food and fuel subsidies for the very poor, just as the country was plunging into depression, with wages plummeting and unemployment soaring, predictably led to riots; the economic consequences are still being felt." (emphasis mine; quoted from Nobel Lecture). We, in the Bangladesh Economic Association, uphold this analysis of development which is critical about the inappropriateness of the assumption of fixed preferences. We constantly hammer and pursue that the whole issue of development in our context of poverty reproduction and market dogmatism shall be seen as a subject of fundamental transformation of society; we constantly pursue that development policies to be effective and sustainable shall encapsulate social consequences, and that is why, we are uncompromising about human development, and not just so called **"economic growth with increasing rich-poor divide."**

09. We, in the developing nations, are much concerned about the global inequities and north-south divide. In this connection, Professor Stiglitz, you have said *"Our global system is characterized by a lot of inequities. It seems increasingly important to try to redress these inequities"*. And, we also rightfully believe that so-called globalization can only work to the benefit of the developing countries if such **"redressing of inequities"** is appropriately addressed.
10. In order to pave space for globalization to work, the International Financial System needs to be reshaped and reformed, because as you have said *"they have failed, and failed so miserably"* (Globalization and its Discontents, page 215). And you have suggested seven key areas of reform: *"(1) Acceptance of the dangers of capital market liberalization, and that short-term capital flows ("hot money") impose huge externalities, costs borne by those not directly party to the transactions, (2) Bankruptcy*

reforms and stand stills; (3) *Less reliance on bailouts*; (4) *Improved banking regulations – both design and implementation – in the developed and the less developed countries alike*; (5) *Improved risk management*; (6) *Improved safety nets*; and (7) *Improved response to crises*“ (Globalization and its Discontents, pages 236-240). And the most serious question for IMF, and a life and death issue for us, you have raised is “... *forcing the IMF to disclose the expected “poverty” and unemployment impact of its programs ... Countries should know the likely consequences of what it recommends. If the fund systematically errs in its analysis – if, for instance, the increases in poverty are grater than it predicted – it should be held accountable. Questions can be asked: is there something systematically wrong with its models? Or is it trying to deliberately mislead policy making?* (emphasis mine; Globalization and Its Discontents, page 240).

11. As you all know, Professor Stiglitz, is the number one authority in the world in explaining people's discontents associated with globalization, and at the same time, has shown the pathway of development within globalization. In expressing his concern about what globalization does to democracy, he says “*Globalization, as it has been advocated, often seems to replace the old dictatorships of national elites with new dictatorships of international finance*” (emphasis mine, Globalization and Its Discontents, page 247). Professor Stiglitz is not anti-globalization, rather he strongly argues for “*a more humane process of globalization*”, which will ensure true development by implementing *policies for sustainable, equitable and democratic growth*. Therefore, in search of *a more humane process of globalization*, he concludes his seminal work “Globalization and its Discontent” with the following: “*The developed world needs to do its part to reform the international institutions that govern*

globalization. We set up these institutions and we need to work to fix them. If we are to address the legitimate concerns of those who have expressed a discontent with globalization, if we are to make globalization work for the billions of people for whom it has not, if we are to make globalization with a human face succeed, then our voices must be raised. We cannot, we should not, stand idly by" (page 252).

12. Professor Stiglitz, you have raised the question of persistence of the neo-classical paradigm. You have argued, very forcefully, that *"pervasive government interventions make the reigning competitive paradigm of limited relevance."* But, what is most important, which we try to convey to our undergraduate students about your critical views on forces of demand and supply: *"The underlying forces of demand and supply are still important, though in the new paradigm, they become only part of analysis; they are not the whole analysis. But one cannot ignore the possibility that the survival of the paradigm was partly because the belief in that paradigm, and the policy prescriptions, has served certain interests."* (quoted from Nobel Lecture).
13. Professor Stiglitz, to us, you are a very humane and noble person. And here, in Bangladesh, we have a great respect and high regard for you, because of your reciprocity, which is evident when you say such things as: *"Growth need not benefit all"; "We have to weigh benefits against social costs"; "Development is about transformation of society"; "Costs of instability are disproportionately borne by the poor; "WTO illustrates play of double standards and inequity"; "Privatization is briberization" "Win-win policies like land reform or better access to education for the poor hold out to promise of enhanced growth and greater equality"; "It is not that the poor are lazy; they often work harder, with longer hours, than*

those who are far better off; “Asking people in developing countries to pay for schools is another example of this narrow worldview”; “The essence of freedom is the right to make a choice – and to accept the responsibility that comes with it” (Globalization and Its Discontents, pages 58, 66, 72, 76, 82, 83, 85).

14. Finally, Professor Stiglitz, we believe in your dictum: *“With freedom comes responsibility ... the world of the future be one in which there is not only greater economic prosperity, but also more social justice”*

With these few words, I again welcome the **noble man with the Nobel Prize**, and the *rebel with a cause* (as termed by *The Daily Telegraph*, June 30, 2002), **Professor Joseph E. Stiglitz**, the founding father of a new paradigm in Economics, subsequent to the competitive equilibrium paradigm which led to misguided policy prescriptions to information paradigm; and the proponent of “Information Economics”, “Economics of Asymmetric Information,” and “Political Economy of Information”.

Now, I would like to request Dr. Qazi Kholiquzzaman Ahmad, president of Bangladesh Economic Association and Chair of today’s Public Lecture to introduce Professor Stiglitz before he delivers the Public Lecture. The Lecture will be followed by a question-answer session. Our program will continue until 5.30 pm. Because of time constraint, I would request you to be as succinct as possible in raising question(s) – this will mean maximizing benefits of learning from the wisdom of Professor Stiglitz.

Wish you a very thought provoking Public Lecture by Professor Stiglitz on “*Sustainable Development and Neo-Liberalism*”, and an interesting discussion session.

Welcome you, Professor Stiglitz, and thank you all.

Introducing Professor Joseph E. Stiglitz and the Subject of the Public Lecture

by

Qazi Kholiquzzaman Ahmad

President, Bangladesh Economic Association

I deem it a great privilege for us in Bangladesh Economic Association to be able to host Professor Joseph Stiglitz once again for a Public Lecture. The Association previously hosted Professor Stiglitz for a Public Lecture in 1999. Up to that time, he was not yet recognized by the Nobel Committee, although he was eminently qualified for the Nobel Prize in Economic Sciences. Since then, as you know, he has won that most prestigious honour. We are delighted and we congratulate him.

Professor Stiglitz – you are well known and held in great esteem in Bangladesh as a socially conscious and conscientious world renowned economist, with a strong voice against global injustices and machinations of the Bretton Woods institutions, particularly IMF, and in favour of people's perspectives.

In introducing Professor Joseph Stiglitz, let me first give a short resume of his achievements. This will give a flavour only – and will not do justice to his multifarious and high levels of achievements. I shall then make a few remarks by way of introducing the subject of his public lecture today.

I

Professor Stiglitz was awarded the Nobel Prize for Economic Sciences in 2001, with reference to Information Economics in particular. The Royal Swedish Academy of Sciences noted that Stiglitz “clarified the opposite type of market adjustment, where poorly informed agents extract information from the better

informed, such as the screening performed by insurance companies dividing customers into risk classes by offering a menu of contracts where higher deductibles can be exchanged for significantly lower premiums. In a number of contributions about different markets, Stiglitz has shown that asymmetric information can provide the key to understanding of many observed market phenomena, including unemployment and credit rationing.”

Born in 1943 in Gary, Indiana Professor Stiglitz graduated from Amherst College and received his Ph.D from MIT in 1967.

He became a full Professor at Yale in 1970 at 27, and was awarded the John Bates Clark Award in 1979 by the American Economic Association – this award is given to an economist under 40 who has made the most significant contribution to the field. He is a Member of the National Academy of Sciences and he has been a fellow of the Econometric Society since the age of 29.

He taught at Princeton, Stanford, MIT, and was Drummond Professor and a Fellow of All Souls College, Oxford.

He worked in the Council of Economic Advisors under Clinton Administration – as a member during 1993-95 and as the chairman during 1996-97. During 1997-2000, he was the Chief Economist and Senior Vice President of the World Bank.

He is now Professor of Economics and Finance at Columbia University, New York. He has recently launched the Initiative for Policy Dialogue aimed at providing an alternative to the IMF and World Bank for countries in need of sound economic policy advice.

Professor Stiglitz has made seminal and fundamental contributions to macro-economics and monetary theory, to development economics and trade theory, to public and corporate finance, to the theories of industrial organization and rural organizations, to the theories of welfare economics and of income and wealth distribution. He has helped to explain the

circumstances in which markets do not work and how selective government interventions can improve their performance.

Many books written by Professor Stiglitz have been translated into many languages. His book *Globalization and its Discontents*, published in 2001, has been translated into 20 languages and is an international best seller. He has published numerous learned papers and books. Some of his most recent books are:

The Roaring Nineties, W.W. Norton & Company, forthcoming in October 2003.

Towards a New Paradigm in Monetary Economics, with Bruce Greenwald, Cambridge University Press, forthcoming 2003.

Globalization and its Discontents, W.W. Norton & Company, June 2002.

Economics, Third Edition, with Carl E. Walsh, W.W. Norton & Company, April, 2002.

Peasants Versus City-Dwellers: Taxation and the Burden of Economic Development, with Raaj K. Sah, Oxford University Press, April, 2002.

Principles of Macroeconomics, Third Edition, with Carl E. Walsh, W. W. Norton & Company, March, 2002.

The Rebel Within: Joseph Stiglitz and the World Bank, edited by Ha-Joon Chang, Anthem Press, February 2002.

New Ideas About Old Age Security: Toward Sustainable Pension Systems in the 21st Century, edited with Robert Holzmann, World Bank, January, 2001.

Frontiers of Development Economics: The Future in Perspective edited with Gerald M. Meier and Nicholas Stern, World Bank, May 2000 et.al.

Whither Socialism? MIT Press, January, 1996.

II

The subject of today's Public Lecture is "Sustainable Development and Neo-Liberalism." Indeed, 'sustainable development' remains an amorphous concept – it is often used by people from their own perspectives. However, there is, in my understanding, broad agreement on its three fundamental constituent processes to be pursued simultaneously, viz. economic growth, social equity, and environmental protection and enhancement. Neo-liberalism, on the other hand, promotes unimpeded national and international commerce in goods, services and capital, which, it is held, would lead to most rapid economic growth. Free international movement of labour is not part of the neo-liberal scheme of things – a glaring injustice to the developing world to begin with.

The inequality that the neo-liberalist path generates and accentuates is a key element in the neo-liberalist agenda, which it is contended, works through higher savings and investments to promote rapid economic growth. Free market-based globalization is touted as creating prosperity for all – through economic integration of countries around the world. But, the process, which is inherently iniquitous and superimposed on a widely diverse world, has been accentuating disparity – globally and within nations.

Today, when there have been a tremendous rise in production and unprecedented technological advancements, over a billion people around the world, mostly in the developing countries, are absolutely poor; and relative poverty is of gigantic proportion. I may highlight a few other global dimensions of stark, staring deprivation: Some 4.2 billion people cannot read, 1.2 billion are homeless, 1.7 billion live in darkness, 1.2 billion do not have access to safe drinking water, and 2.4 billion do not have access to even rudimentary sanitation facilities. What an insult and body blow to humanity and human dignity?

The neo-liberalist path is unsustainable. It spawns not only inequality but also instability, discontents and terrorism, as is seen around the world today. No weapons – of whatever variety these may be – can resolve them. Arrogant application of weapons-based international campaigns even by the super-power won't be able to root out these problems. The answer must be sought through the promotion of equity and social justice – among nations and within nations.

Professor Stiglitz—you have written and spoken millions of words before you were awarded the Nobel Prize and since. Let me pick two of your comments made after the award, which are apparently simple but are profound in their import. One: “Economics can make a difference” in improving people's lives by “focusing on the differences between the haves and the have-nots”, and the second: “Our global system is characterized by a lot of inequalities. It seems increasingly important to try to address these inequalities.”

It seems to me that these comments of yours are at the heart the theme of today's Public Lecture “Sustainable Development and Neo-Liberalism.” The first of these two frameworks is for environmentally harmonious growth and social equity across the globe and within nations, while the latter, the currently ruling paradigm, has been accentuating disparity and discontents, creating muscle power syndrome (globally and within nations), and degrading the environment. Where is global society heading to? Where should it - and how?

May I invite you, Professor Stiglitz, to deliver your lecture.

Sustainable Development and Neo-Liberalism

Joseph E. Stiglitz

It's a matter of pleasure to be here again. Thank you for inviting me to join the ranks of my good friends Kenneth Arrow and Amartya Sen as Honorary Life Members of the Bangladesh Economic Association. There is probably no topic more important than the question of how to achieve sustainable development. The recognition that we are concerned not just with the increase in income with social equity, environment or growth continues not just for one or two years but for the long run. It is of vital importance to the billions of people who have been in poverty. It is clear that there is no easy answer to this question of how to achieve sustainable development.

If the world we would have more success..... But the fact is that there have been some important successes but there also have been some failures. I want to begin my talk by focusing on some of the worsening situations we have, looking at the

Note for the readers: The extempore Public Lecture by Professor Joseph E. Stiglitz was tape-recorded. This tape-recorded speech was transcribed into a written form by Professor Abul Barkat, General Secretary, Bangladesh Economic Association and Md. Mahfuz Ali, part-time teacher, Department of Marketing, University of Dhaka. The transcribers have made use of dots (....) especially when the sentence is grammatically incomplete or when the verb is absent in a sentence to make fragmentary parts of the speech comprehensible to the readers. Editing of spoken English for grammatical corrections etc. was not done. Since the written form of the speech was not checked by Professor Stiglitz, the persons concerned with the process of transcription are ready to make an apology in the event of any omission or addition or mistake.

examples of success and contrasting them with the failures. And then I want to turn to a set of doctrines that we call neo-liberalism and market phenomenalism. And I want to spend a few minutes, talking both about the underlying economic theory and about the particular policy prescriptions. I want to conclude some broad remarks about the relationship between sustainable development and globalization. The most successful reasonable word in terms of development and in many ways called sustainable development is East Asia. Over the last 35 years they have seen their per capita income increase more than eightfold.

At the time 40 years ago, 50 years ago, no one thought that that kind of sustained growth was feasible. What has happened is the transformation of their society has really come in a way very unexpected. The question is: What did these countries do to achieve their success? To put their success in perspective, one needs to contrast one of the East-Asian countries, Korea, with India. It recognized its per capita income 35 years ago was a little bit lower than that of India. Today, per capita income in Korea is eight times higher than that of India.

Six years ago, in the midst of the East-Asia crisis, a number of people said, look at the East-Asian model – it doesn't work. It was not sustainable. It was just a flash in the pan. They had a few years of success but now their whole system is collapsed.

Two things went wrong with them. Firstly, it was just a few years of success; it was 30 years of success. Secondly, the reason for their failure..... I would argue the reason for their failure is that they forgot "Let them do their success." In a sense the argument for their failure was that for the short-while they paid more attention to the neo-liberal doctrines. That is what led to their failures.

I explained the above... that. I sometimes jokingly put it. There was a study. I participated in a study in the World Bank in the late eighties and early nineties called the East-Asian Miracle. I sometimes said your problem in East Asia that they had forgot

to read their book. If they had read their book and studied exact doing with the head done in the late seventies and eighties and not deviated in the nineties, they wouldn't have had their crisis. But the fact of the matter is that Korea, Malaysia and even Taiwan now recovered from their crisis. The growth in Korea has been at the rate of 5%, 6% and 7% per year. China not only avoided economic crisis but also managed to grow at the rate of 7%, 8% and in the last year 9% all throughout the period when there was global economic slowdown. So, what is quiet clear is that they were doing something right, and they were doing in a sustainable way persistently for more than three decades.

The fact to mention one more aspect is this....that let me hit a great deal upon the income theory in the East-Asian crisis. People said, these countries were very vulnerable just waiting for crisis to happen. If you look at the record of volatility, crisis have marked ups and downs, booms and recessions have marked capitalism from the beginning for the last two hundreds years. What is remarkable about East Asia, not that there had no downturn—said every economist at every session. What is remarkable about East Asia that the fact that they had a few downturns. Two of the countries of East Asia had not had a single year of recession in 30 years. Two of the countries had one year of recession in a few years,..... 30 years—a better record than any of the advanced industrial countries. So the natural question to ask is: To what do they owe all their success of East Asia? What are the policies they pursued? The answer to bring out; the quick answer is: They didn't follow the policies of Washington Consensus. A more accurate answer is that they pursued some of the policies but they did it very selectively. They did it to adapt it to their own conditions.

Let me give you a couple of examples. One of the thing that they did was that they did it in the global economy. They did it in promoting exports, not immediately taking down import barriers. They did it by focusing unemployment creation and making sure that jobs which were destroyed – new jobs were created. They

did it in creating new jobs by recognizing the importance of finance and recognizing that sometime private markets do not make good decisions. They channeled the direction of finance. In Thailand, for instance, there was an explicit provision, restricting the amount of finance that could go for real state. They intervened the market in a number of other ways. They did not allow speculative capital flows to come into their countries.

They emphasized the role of technology. They recognized that what separated the advanced industrial countries from the rest of the other countries was not in the differences of resources but also a gap of knowledge. There is another important role for the government for including the gap in education and in the promotion of technology. They emphasized quite exclusively the importance of equality. They had the egalitarian education policy and the egalitarian social policy. They eliminated the extent of inequality that emerges in the society. So they recognized that a successful economy has to be a successful society. They recognized it to seek balanced role between the government and market. They recognized the importance of central role of market in the development strategy. But they also recognized the role of government. That is the thing that I am going to return in a few minutes.

A contrast is Latin America, when Latin America was the region of the world that was the best student of the neo-liberal ideology. The country in Latin America that is post-child of neo-liberal practices.....that was given the A+ was Argentina. The IMF brought the president of Argentina Madame to the Annual Meetings of the IMF to Washington in 1998 and 1999 to show Madame the showcase of what is meant by good government and good economics. Well me all know what has happened about a year and half later Argentina has had one of the worst crises and a major of recession. At that point the IMF president said, look at the corruption. Suddenly when economy was in marking, they said all these men we showed up to the world as the puritan were actually corrupt.

That was the first thing.... I pursued. A few years earlier they had talked about the Salienas, the Mexican President, as how to run a government, and how to run an economy. The American Enterprise Institute in Washington, in early 12th December of 1994 just after the president of (Mexico Salienas) left the government, the leader of the world of the year. We know what happened just a couple of weeks later. Mexico had its crisis and it took about four years to return to normal order. It recognized the extent of the corruption in the country. If we look across the region of the whole of Latin America, and the region as a whole pursued the Washington Consensus Policies. We now have some of more than a decades of Data that they describes the record. As I said before the best student, Argentina, is now recognized to have had some serious problems. And elsewhere in Latin America much of the rest of the world, people said, that would happen to A+ student in the school we don't want to enroll in it. For the nineties show that the growth in Latin America is just over half of what was in the fifties, sixties and seventies before reform. It was better than the eighties which was the last decade that was caused by the debt crisis and the slow process with which the debts were addressed in the restructuring of debt. But for Latin America as a whole.....There is no way, which we can say it is a decade of reform or success. Now of course what the IMF, World Bank and the other liberals said, the growth in the fifties, sixties and seventies was not sustainable. And it was clear that it was not sustained. We have to ask: Why wasn't it sustained? What happened? It is also clear that the growth in the nineties which is not impressive as in the fifties and sixties that too evidently showed it was not sustainable, and in any case, it was not sustained. Per capita income in the last five years has actually been going down in much of Latin America. So they are talking about the last half-decade, referring to the decade of eighties. Well..... in my interpretation and the interpretation of many other scholars they brought on end to fifties, sixties, and seventies.....It was primarily the fact.... they hadn't brought end to high growth period in fifties, sixties and seventies.

During the seventies the countries of the region were encouraged which call the "recycling petrodollars". And by borrowing they avoided the recession that plagued most of the rest of the world. They were able to manage their debt reasonably well until in 1980 and 1981. When the interest rate in the United States reached an unprecedented level. When they did that, the debt became unsustainable. So, it was not the development strategy that failed; as a whole there was a fault. It was primarily the fact that they had borrowed to avoid they avoided downturn that came from oil price shock.

And the fact that when they borrowed, the risk of interest rate fluctuation was left with the poor countries, the developing countries. And when the interest rate soared, they had to bear the consequences. So it was not really a failure in the development strategy as a whole, it was really a problem with international debt markets. On the other hand, if we look at what happened in the beginning of the nineties in Latin America: Again they had a growth spark, much milder than in the earlier three decades, nothing really to boost up. And particularly when ever you have a period of almost zero growth, negative growth, there is always – there is often a period of catch-up. So much of the period in the nineties was doing nothing more than catching up from the fact that nothing has happened for the previous decades. Much of the growth was largely based on the inflows of short-term capital which was not sustainable. The nature of these inflows of the short-term capital is that when sentiment changes, and as the Chairman of the Federal Reserve of USA, as I put it, the markets are subject to irrational exuberance and are also subject to irrational pessimism. And when the irrational exuberance of the early nineties was followed by the irrational pessimism, the capital debt was pulled out. When it pulled out, it caused enormous devastation. So the growth was not based on fundamentalism. It was based on the unsustainable short-term flows. It causes the reverse in growth in America. Recession starts in many of the countries. Per capita income was stagnated in many of the countries.

There was another important difference between the experiences in East-Asia and what happened in Latin America. I mentioned before that the East-Asia growth, and the benefits of that growth was widely shared. Poverty fell enormously during the three decades. The number of individuals, percentages of the population in poverty plummeted. The contrast with Latin America during the unsustainable growth of the nineties could be more marked.

The benefits of this growth went mostly to the up to 30% and even more up to 10%. The fraction of the population on 2\$ a day or less actually increased, and the percentage, let alone the absolute number. The fraction of the population that was unemployed increased. The fraction of the population that worked in informal jobs—without the job protection come with the formal sector employment and are associated with the advanced industrial economy—the percentage of those in the informal or un-protected sectors also increased. So the bottom line in that, if we contrast the two situations, we see in one case a region which do not follow the neo-liberal doctrines and had successful 35 years of growth. Another region which, during the fifties, sixties and seventies, has had a reasonably high growth when switched to the neo-liberal doctrines. Its growth was more modest and poverty increased.

We have reason to question: How do we think about the economic theory? How do we think about these experiences? How do we think about the underlying theory of the neo-liberal doctrines? What was wrong? Was the experience just an accident? There are some reasons why we should find it not that surprising.....One could argue that the fact is an outcome, perfectly to be expected; it shouldn't come as a surprise. Underlying the neo-liberal doctrine is the belief.....I mentioned before..... market fundamentalism. I believe that markets by themselves work well and are efficient. The second set of doctrines which said: Don't worry about inequality. It called the trickle-down theory.

The growth benefits all: has a number metaphors people use... a rising tide that solves both. What do we say about these two theories. The first one, market fundamentalism has a long tradition. Adam Smith talked about the invisible hand as if the invisible hand is an efficient outcome. Now the interesting thing is that Adam Smith was actually very aware of the limitations of this argument. He was not a market fundamentalist. But his disciples never bothered to read everything he wrote. And picked out the parts they liked, and they argued that, markets by themselves have an efficient outcome. Over the last 30-40 years the question about whether competitive markets lead to an efficient outcome,..... the sense of which is true,..... the condition under which is true, has been subjected to an enormous analysis. My own work is one of the central concerns. The issue was: What are the conditions under which markets lead to which called trade efficiency. And one of the most fundamental results was that underlying the theories that have been developed by Adam Smith and his followers that with a very strong assumption – the assumption of perfect information. We all know that the information is not perfect. The hope was; and there was really nothing more than a hope, the religious belief so long as the market imperfections, the information imperfections, are not too large, a model which assume that perfect information would provide a good description of an actual economy. So this was the hope. There was no theorem. There was no proof. There was no evidence. there was simply a hope. And when I set out to do 35 years ago was to ask: Is that true? The challenge or difficulty was: How do you construct models of imperfect information. It is easy to construct the models of imperfect information. All you do is assume that, everybody knows everything. What do you mean? How do you model imperfection of information? How do you model asymmetries of information different people know different things? And then the sense on the thrust of the work which I did in the economics of information, and tried to understand that.

The result of that work, in some ways, was quite dramatic. Most of the central results of standard economic theories had to be revisited. The principle like one of the standard of most important laws in economics, the law of supply and demand, says that all market is clear. Demand equals supply. That we mean by equilibrium. We know it natural. In many countries of the world unemployment is 5%, 10%, 20%, 30% in South Africa. That is not demand man equals supply. It is equilibrium in the sense that it is persistent for years. So it is not a temporary thing that lasts for a few months. Standard economic theory says – yes demand might not equal supply. But then the market forces are so strong that demand is brought back into the supply and the market is clear. In the labor markets, there can be persistent discrepancies between demand and supply. There can be unemployment. And that of course was one of the concerns of Keynes, 70 years ago. He tried to explain, “Why that was the case?” He didn’t provide adequate micro-foundations for that, and that led to the large criticisms in the 1970’s. One of the objectives of the research program and economics of information was to use these theories of imperfect information and the results of imperfect information to explain “Why Keynes is right? Why was the unemployment actually did exist? The neo-liberals argue, “Unemployment doesn’t exist.” You have to be blind to believe that.

So an another example of demand not equaling supply is credit rationing. In many markets in many situations, individual would like to borrow and can get access to market at any interest rate. I sometimes overstressed that point with my students who are skeptical, they are already been indoctrinated by demand. Okay, so they say, demand equals supply. Therefore if you want credit, you can get it. I told them to go down to a local bank and say them, you want to borrow. I told them if you get a PhD and have a high income, therefore the bank should give them enough money so they should live in the way they wanted to live in 20 years; smooth their income over the life time. All the way they come back and said, the bank was not very interested in lending to them. And I

said did not you offer them a high interest rate. And I said wasn't the bank interested. The bank would offer you high interest. The bank would be interested in negotiation. At no interest rate the bank would be lending me money. That's one example of the way the markets often don't work in the way the standard competitive equilibrium says it should. That is market imperfection. That is particularly important in the developing countries.

Another one of the most important results.....I would say..... that emerged from analysis of imperfect information and the resulting imperfect markets was that I would be able to show....perhaps the reason was.....the invisible hand was invisible was that wasn't there. In another words, that we proved a very strong theorem with my colleagues at Colombia that the market is, in general, never proven-efficient. There was always constrain within the efficient market; there was always intervention in the market which in principle can be improved in economic efficiency. These are the arguments that the fact that the markets failed in certain areas that has been mechanized – public goods, aerial environment, regulate pollution.

So the underlying economic theory that the neo-liberalism relied on simply was not valid. The neo-liberalism was based on an economic theory that was discredited. And to me it was remarkable that the neo-liberalism gained.

Just economic science, lack of understanding of economic science, ideology and interest.... that is ideology and interest more than anything else, that motivated the set of policies generated in Washington Consensus. I want to turn to look at three of the specific policies that have formed the core of Washington Consensus. What I said in the beginning of discussion, what I emphasized is that I believe looking at the historical records, looking at the economic theories -markets are absolutely fundamental to successful economy. There's no economy which has been successful that has ignored markets. Neither has there been any successful economy in which

government has not played an important role. The quest is to find the right balance between the government and markets. That particular balance between the government and market will differ from country to country time to time.

It depends on the competency of the political process which differs across time and among the countries as well as stages of the development of market. So that is one of the reasons. So there is no easy prescription, and no easy solution to how to create sustainable development. So the general principle which one always has to be engaged in quest for that balance. My criticism of Washington Consensus is that they didn't understand the nature of that balance and that they repeatedly got it wrong. And they got it wrong because they have this market fundamentalist ideology that put too much trust on the strengths of market. They didn't appreciate the weaknesses.

It is not only in the developing countries they faced the problem of getting their balance right. The developed countries faced exactly the same problem. That is the lesson United States in great difficulties is just finding out once again. We found-out about it in the early eighties when market fundamentalism took over United States in the same way that it took over international financial institutions.

We had excessive deregulations of financial institutions. What happened? We had savings of long debacle, savings of financial institutions which is a very important part of the banking system when many of the bankrupt financial institutions became very weak. It cost American taxpayers over hundred billion dollars to bail out the savings bank. It cost American economy a recession. Again I sometimes joke that United States one or two... all the world shared in this kind of experience. One of the reasons why I pushed the IMF to advocate the financial market liberalization around the world. This is the cause of our financial breakdown. We took the experience. If we had been selfish, we wouldn't have been the only one that wouldn't have been in the financial crisis.

And that policies worked. Each of the countries follows the policies of their financial liberalization and each had their own crisis. Most of them were, however, far worse in terms of cost relative to GDP than Latin America. Even though in the Clinton Administration that I served in, we had a number of battles over the right balance between the role of the government and the role of the private sector. We recognized, when we came in, that the government..... the Republicans, Regan and Bush have pursued excessively market fundamentalism. They pushed deregulations too far, in many areas. But we also have one or two proofs that we are committed to market. So we took up the challenge of deregulation. Inside the White House and inside the administration, we had a number of balances about what the right balance is. I want to mention in this respect that we made a number of mistakes. We got the balance wrong. We pursued the banking deregulation too far. We didn't push the accounting regulation far enough. The result of these failures, I have a new book coming out, is that the boom of the nineties came to an end and we are into a recession, a slowdown in the economy. Two and a half million jobs were destroyed in the American economy, over the last two and half years.

We need to create 2 or 3 million jobs to provide the new entrances. But instead, jobs have actually been reduced. So, every country faces the challenge of getting the balance between the government and market. Washington Consensus Policy-the neo-liberal doctrine-has not achieved that balance. There are three aspects of this policy: privatization, liberalization, and macro-economic stability.

Everybody recognizes the importance of macroeconomic stability. It is virtually impossible for successful growth if you have excessively high inflation. The question is: the inflation is not an end in itself when you are not really concerned with-go back to the theme-sustainable development, equitable development. The excessive focus on inflation has repeatedly resulted in undermining the development process around the

world. So I see over and over again. What happened is that.... They pushed interest rates so high that you can't do any investment.

I talked before about the success of East Asia. It was based on the notion of creating jobs. To create jobs, you have to have finance, that is a political term... When I was the adviser of President Clinton, he used to get very upset when he heard that this....he was thinking about increasing interest rate from 20 basis point to 50 basis point, increasing interest rate from 4% to 5%. When the IMF came into Korea, it increased interest rate roughly from 9% to 25%. And then I said, you are not serious really, you have to let them go up to 40%. Then the surprise, there is no investment, economy goes into depression. Things have been worse in Indonesia and even if we look at Russia, the interest rate is also higher. They pursued the objective of inflation has been done at the expense of other more fundamental objectives, namely growth and equity. It is true that during the fifties, sixties and seventies Latin America had more inflation than today, and one of the achievements of Latin America is that it has eliminated inflation, but it has also eliminated growth. Growth in the fifties, sixties and seventies, as I said before, was averaged over 5% for three decades. Growth under the new policies is being hampered there.

The issue of macro stability. Yes, macro stability is important. One has put macro stability in terms of what are the right policies of that promotes development, that promotes self-employment.

Another issue is liberalization – trade liberalization, financial market liberalization, capital market liberalization. Each of these has been widely debated. I already mentioned financial market liberalization. Today nobody talks about unfair financial market liberalization, free banking. The last experiment was done under Pinochet in Chile, and it was another disaster. Every banking system needs some regulation. The issue shouldn't be deregulation but finding the right regulatory system.

Capital market liberalization is a subject of enormous amount of debate. The IMF in 1997 went to its Annual Meetings was trying to change its charter to allow it to force countries to liberalize their capital markets. The timing could have been worse. Because the East-Asia was just about to go into a crisis; a crisis caused by the capital market liberalization, caused by the capital market liberalization in the sense that it resumed capital market liberalization resulting in the capital flowing in and certain changes took place in the sentiment and capital flew out, that is source of instability and that was the source of crisis. I mentioned before that Latin America today is in a recession, depression – depending on which country. Its exactly the same phenomena capital came more in under capital market liberalization in 1990 to 1997, and then it moved out. And the loss is when it moves out greater when it comes in.

Now there has been econometric studies that shows that capital market liberalization is not related to economic growth, not related to increased investment but is related to increased instability. The interesting thing... this is important from a general policy perspective.... when the issues of capital market liberalization was put forward in 1997 saying that countries first liberalized their capital market, I was a little bit puzzled. I spent.....My life is in academia ... and I thought before you make a change of this magnitude, the rules of international game, surely there must be evidence that is good for the country. Surely there must be evidence that is good for the developing countries if they utilize their capital market. That much evidence.....You don't have to twist the arm. They wouldn't wanna do it. Why force them to do it? First is the evidence, then the record. I kept asking for the evidence. We need evidence. We know what is true. The first reason why we don't need evidence is that the evidence is on the other side. Finally, this March The Chief Economist of IMF and three of his colleagues put forward a paper in which they took the time finally to review the evidence. They guessed for the evidence and said, it didn't promote economic

growth; and it does promote economic instability. They showed that everybody else knew for a very long time. It is beginning to affect some of the policies. So that is the second dimension of liberalization. Even those who are, general, in favor of liberalization, like Jagadish Bhagabati, this is not something like reasonable people should be peppered up.

Two large countries, two emerging markets that didn't experience a crisis in the period of global financial crisis in 1997 and 1998, are India and China. Both of those hadn't liberalized their capital market. I don't think it was an accident. They had spirit.....ravages in the financial crisis. The most typical question I hesitate to talk about is just because I wouldn't want people to draw any wrong lesson. It has to do with trade liberalization. I think the trade liberalization is a good thing. I think trade liberalization, particularly done in the right way is a positive thing. As an academic I think it is important to understand the nature of the argument. There have been a large number of studies that have tried to argue that trade liberalization is associated with faster economic growth.

The econometrics of doing the statistics are extremely difficult. Because in general countries that have grown faster have traded more. But, it is often difficult to tell whether they have grown faster because they trade more or they have grown more because they have traded more. The people who put forward these statistics want you to draw the lesson that you get rid of trade barriers and you will grow, and you get rid of trade barriers and you will trade more and that will lead to more growth. That's the policy implication of these studies. But if you look more carefully these studies; that's not typically that they show. They looked at trade by including in trade – the export and the import. China in those terms grown a lot and traded a lot. But it had an export-oriented trade policy and didn't take down trade barriers. So these studies don't say anything about the strategy of East Asia. East Asia did trade but it didn't liberalize. It had an export-oriented industrial policy, exactly the opposite what the neo-

liberalism, would likely to claim. So you see a correlation between trade and growth. You should not conclude that that means take down trade barriers. There has been a study. The interesting UNDP report shows no relationship between trade liberalization and growth. The reason for is that it(how you understand) depends on the circumstances how it is done. The basic theory behind trade liberalization.... The notion of free trade is a good thing. It is one of the oldest notions of economics. It is almost a heresy to say anything on the other side The fact of the matter is that if you look at the arguments it is based on the principles of competitive advantage – you are to produce where you have competitive advantage, and if you do that, you can move out.

So, the underlying the argument of liberalization is that if you liberalize, you take away resources from the protected efficient sector and you re-deploy them to the more efficient, export sectors. The argument is right, sometimes. When is the argument is not right? When the economy has 20% unemployment, you don't need to move resources from the protected sector into the export sector. You don't need to take the resources from the unemployed and move the area. But there are some reasons that are not happening. For instance, lack of access to capital because the interest rates are too high, because you have bad macro-economic policies.

Over valued exchange rates, because you can say you can't sell your goods. So there is whole variety of macro policies, exchange rate policies that help to explain why there may be unemployment. If you look at them closely in those economies which are close to full-employment, you find that trade liberalization does promote economic growth. When there is high level of unemployment, trade liberalization leads to more unemployment. Moving people from unproductive sector to zero productivity doesn't make you better off. So that's the other example where the ideology has actually distorted economic analysis and led to policies that has not been promoting development.

The third power of Washington Consensus Policy is privatization. Again I need to make a beginning. I think, in general, the governments shouldn't be in the business of producing things like steel or whole varieties of kinds of goods that should be produced by private sectors. In general, the incentives in the private sectors are better. In privatization of those kinds of things make sense. There are other things of which, I think, privatization doesn't make sense. Again when I was in the White House, we had a lot of debates about the issue..... that doing the Bush and Regan administration You know actually they were privatizing.....everybody is privatizing.....It was very embarrassing for the United States, the people like Regan that they had nothing to privatize.

If you in that kind of circles, you go to G-7 meetings – you boast. I privatized 2 billion dollars last year. I privatized 6 billion dollars. I privatized 2 million dollars Helium plants with taxes. You lose your race. You lose your standing with your colleagues. Finally they came on with an idea.....a brilliant idea that no one else has got out in privatizing and only a few other countries could even think about it. They decided what about privatizing atomic bombs. But it is a sad story – we did. Again one of the things about the Clinton Administration, I am not proud of it: We didn't actually privatize the atomic bombs. If you remember.....things going on in North Korea and Iraq, the thing people get most excited about is the enriched uranium. If you have enriched uranium, evidently you can go to Web-site and you can find out how to make an atomic bomb. It is not...that ..difficult. Engineers are here who can probably do it. The real thing is making sure is that they don't have enriched uranium. So, we decided to privatize the making of enriched uranium. So that they can sell it to the private market to make money. You shouldn't allow yourselves to do that. But privating centers tell you to do it. This is one of those cases, where you saw...the privating centers do not necessarily relying on public incentives.

I mentioned before the Enron Scandals, the Andersons – those are the examples of privating centers gone alright. I can use other examples of privating centers. The United States made an agreement with Russia after the end of cold war to take the nuclear war has needs the rich uranium..... the nuclear war has. You can call it highly enriched uranium. You can bring it down. You can use it in an atomic power plant. It's no longer usable for bombs. We can take the highly enriched uranium. We know Russia is going into a period of turmoil. Russia is worried over.....Russia will bring it over the United States. We wouldn't be in danger. The group of scientists that was assigned with the responsibility for the USA government was the US enriched corporation. The same people that were involved in the enrichment business. They make sense what really happened. Of course once they were privatized, what they started to think? This Russian uranium is competing with our uranium. They are pressing the price. Let us keep it cheaper and enriched over in Russia when loom our market in America.

I was in a meeting where an official said, don't worry.....trust us. The next day I found at my desk.....Still exactly I don't know how I got it. One of the ministers of the government.....I found a copy of secret document in which Russia offered to triple the sale — to stock into the United States. The USA enrichment corporation paid them fifteen million dollars to go away; keep the stuff in Russia to sell to any other country, but keep it secret. It was only because somebody in the USA government would know about it.....I would talk about it.....somebody would get something happening..... The copy of the document was at my desk. Incentive matters..... If you don't have right incentives, you don't have the right outcome. That's what it shows.....Private incentives are not necessarily in line with the social incentives. It shows dramatically how social and private incentives may be misaligned.

There have been many fields of privatization. Many of the privatizations have not worked. The lesson from that is not to

have privatization. But you think carefully about how to do privatization.....The privatization is not a panacea. Privatization when done badly make things worse. In Russia there have been enormous numbers of bad privatizations. Privatization actually made increased corruption. Because... in my books I talked about how privatization in many parts of the world has been changed into briberization. The idea is a very simply one. It illustrates the role of the ideology in this whole process. The model in many people's mind was that if you go to a developing country on a mission and you tell the country – privatize. And you give the sermon : you say to government officials that do you know that you are corrupt; and you know that as long as the enterprise of the state is going to be taking away the money; you should not be doing that – that is naughty. And, the government official listens and scratches in head and says, you are right how we are a single eyed – I am going to privatize.

Now, anybody who understands the consistency in human behavior scrapes his head and asks: Why is he saying that? The reason is that he has scraped his head and understood something that he has not understood before. A basic economic principle the we all probably understand – which is the concept of present discounted value. That when you do privatize, you get the present discounted value of the rents of the future profits. That's the value – the assets. Well, the basic thing is when the government officials says how we are, he says: Why should I share those corruption, rents with my successors. If I privatize, I can get them all for myself. Not only the rents today, but rents ten years from now. So it is a great idea; thank you for this suggestion. And the result is this corruption is actually amplified. You sold the asset at below market value. You have a private guy who is happy; who continue to support your party; and give you a media gift. This is what happened in Russia. And it undermines the society more broadly, and you don't get economic efficiency. I just mention that is one example there are whole set of other examples. Where

privatization with off-regulation of monopoly results in higher prices. Because with the monopoly, the private monopoly is more efficient at exploiting the consumers than the government. The government is checked by the voting process. The private monopoly is not. So it is important to have a monopoly with regulatory and anti-trust bodies. To go back to what I said before: I don't want to be misunderstood. In many cases, privatization is a right thing to do but it has to be done in the right way. If it is done in the wrong way, things can be actually worse off. These are, as I say, some of the examples in the field of privatization.

I want to conclude by discussing the relationship between globalization, development and poverty reduction. As I have already indicated, I think globalization, in some parts of the world, has strong positive force in promoting economic development. The success in East Asia was based on globalization and its access to export market, in closing knowledge gap, and access to new technology.

In many parts of the world, globalization has led to improve the living standards of people and their access to global knowledge. When globalization is done in the right way it does promote growth, and it promotes growth when it is done in the right way. That can be used to reduce poverty. Again you can see that in East Asia. But globalization—when it is done in an unthinking way and particularly under the doctrines of ideology that is neo-liberal doctrines, often, doesn't promote economic development. When it does development, that development may not be pro-poor. Trickle-down economics doesn't work. We know that in the United States from 1973 until 1993/1994 for a period of twenty years when our GDP went up, but the people at the bottom of the income distribution, saw their incomes go down. They were actually worse off year after year. There was no trickle down economics. It was all trickle-up. Similarly the policies that were pursued in Latin America didn't led to trickle-down benefits to the poor. The poor were worse off. You need to have a pro-poor growth policy. Some of the policies like capital market

liberalization are associated with the greater instability. And in general, it is the poor that bear the brunt of that instability. It is the unskilled labor that are laid-off first; it is the poor who suffer most when you have an economic crisis. The conclusion of this is that the countries need to shape globalization in ways that promote economic development and reduce poverty. It is possible to do that.

But to do that one has to be selective economic policies. That means accepting some of the tenets of Washington Consensus in ways it is appropriate and at a time when it is appropriate: phasing sequencing, going through change, transforming society but recognizing that in the transformation of society that is associated with economic development more than economy that is at stake. It is a transformation of society. And if one is going to have sustainable development, long-term development that is associated with social equity, sustainable environment, one has to shape one's economic policies, policies driven by ideology; simplistic economy will not work. That's the solution. That is why the problems of sustainable development had only have been with us for so long and they will remain with us for the coming decades. I do believe, as I said in my introductory remarks, that economics does make a difference. We think about the questions hard in a pragmatic way, using economic theory, using economic evidence of learning from the experience of others. I think, we have a greater hope of achieving our sustainable development within the near future.

Thank you.

ANSWERS TO THE QUESTIONS RAISED FROM THE FLOOR

Questions raised from the floor (*the questions presented here are in line with the order those were posed*): Is there any way out from dictations of IMF and World Bank – for Bangladesh? Whether colonial factor inhibited development in South Asia? Why South Asia is lagging behind East Asia? How much policy flexibility an aid dependent country like Bangladesh can have? Do you feel that the Fund (IMF) is moving in right direction or there is no direction at all? Do you believe that there should be free movement of labor in the globalization process? How can you pressurize your government to reduce corruption in Bangladesh?

Answers by JOSEPH STIGLITZ

Let me begin by answering the quiet interesting questions posed.....I'm not going to say anything interesting. So posed by the country representatives, the representative of IMF.

I begin with the last question which is how do you think about moving things, in particular, things in the direction that I have been arguing and advocating. I emphasize it is not just me but the awful people. It is just one of the advantages of global democracy. There is widespread discussion. Globalization has become one of the big issues of the day. What are the issues? There has been pressure. The result of the pressure has been a significant movement.

For example, capital market liberalization is ruling back of conditionality. The IMF report recognizes excessive conditionality. There is the other example. It recognizes greater role, and the need of the poor for participation, which is reflected in the PRSP process. One of the examples, I picked up from one of other questions. I think initiative for having some mechanism for sovereign debt restructuring, sovereign bankruptcy was welcomed. It's welcome. During the East-Asia crisis I argued that

there should be more emphasis on in bankruptcy, That was more in the private sector.

In the eighties a number of people said there should be some sovereign debt restructuring mechanism, there should be some sovereign debts bankruptcy. After the failures in Argentina Bail Out – the six major failures in six years - it became clear that some alternatives was necessary. It made lot of sense to look for something along those lines. When one criticizes the IMF, one has to recognize that it is an international institution, many of its policies are derived from positions –most of its positions– of the of governments.

There is one government that has a....power in IMF that is United States. The policies that it pursues are not really reflective of the US government or the American people. They are the positions of the US Treasury. Often the US Treasury doesn't consult with the USA president, cabinet or the rest of the people. They reflect the position of the Treasury. Once the USA president said, he saw article in the newspaper, and he said, something is terrible – what the IMF is doing? I tried to explain him that they are his guys who are doing it.

So, the point is that these are political institutions. The structure of these political institutions reflects some of the power politics – the reality that we have they are not democratic institutions; they are not transparent institutions. The outcomes, therefore, are the kind that we see. So, the United States effectively vetoed, which I thought is a good initiative on the part of IMF to open up discussions on sovereign bankruptcy.

I think their particular proposals had a lot of problems with it. One of the examples the IMF..... the people have role in the bankruptcy process. No one would allow the City Bank to be the bankruptcy judge and the bankruptcy proceeding in the United States. They can have a role of the creditor in the bankruptcy judges. They can have climax. Only one of the climaxes in a sovereign debt restructuring mechanism is sovereign stake of all

the stakeholders including social security claimants, education, school students —they all are climax when all go into bankruptcy. Had there been a more open moral discussion, that discussion could have gone longer as the United States should have been more receptive to a broader discussion, I think eventually there would have been a movement towards an acceptable bankruptcy procedure. Let me say that I can hope that we do handling this sovereign debts much better than we did in the nineteenth century, when we put in armies to settle these problems, and those who know that Britain and France effectively attacked Mexico in the middle of the century, the European powers bombarded Venezuela in 1902, ... had to surrender its basically democratic government – when it went to bankruptcy. So, there is going to be the whole history of ways, which we today would not find acceptable, and I think we are moving in the right direction.

I think, Bangladesh, from what I have understood has actually got unfortunately not having a fairly good macro-economic policies, and so it has no reason to have a conflict with international institutions, as in many other countries. I have been to many other countries where the nature of conflict is much more intense..... In the East-Asian countries there is the East-Asian crisis. In Colombia where a excessively high interest rate forced the country into one of its worse recessions in fifty years. So each country ... blessings. The typical question I don't want to underestimate the difficulty of many of the policy choices. When it comes to the concrete issues, the issues are often complicated which widely requires a lot of detailed knowledge of the particular country.

Let me look into the particular question I was posed into when you have a crisis, you have a dollar-denominated debt, when your exchange rate falls, your debtors may face bankruptcy; your country may face a difficulty. And so, you face a very difficult decision: Do you let the exchange rate fall (?), or do you try to stop exchange rate fall to bail out or privatizing interest rates, and

interest rate is too may cause bankruptcies. Let me just illustrate the difficulties in that issue and how you can address it by looking at the microeconomics of the situations. We did that in the World Bank, we looked at to two countries.

I can refer to two countries in particular. We got an answer very different from that of the standard prescription. The first one was Thailand. In the case of Thailand if you looked at who held the dollar-denominated debt the largest debtors in dollars with the real state firms and the banks that had lend to them. Why is it relevant? All these firms were already bankrupt after the real estate property crash. Letting exchange rate fall will make them any debtor – they were already dead. The real estate market was dead.

Nothing you could do to revive the real estate market for several years. Because there was excess capacity over 20% bankruptcy rates. So we ask: What would have been the adverse effect of exchange rate fall? The answer for discouraging – nothing. What about the second largest group. That was exporters. The exporters gained where exchange rate fall because they got more money from selling their goods. Because they were effectively insured. Which is why a company in private sector, an efficient private sector, should have insurance. They should be recovered. They should be effective exporters. So again there was no adverse effect. So when we balance it out in the case of Taiwan, the answer is very clear. The high interest rates much of the countries in the bankruptcy, allowing exchange rate would promote export..... the choice..... would have been quite different if they looked at the macro economies.

The second country, Malaysia. The corporations have very little foreign debt. Because the Malaysian Central Bank say it's dangerous for corporation debts. They used their banking controls to basically circumscribe private corporations having large amount of dollar-denominated debt. But the policy prescription for Malaysia is very similar to that of the other

countries. They don't allow their exchange rate to devalue. The valuation would not affect the adverse balance sheet effect in other countries like Indonesia. So it is important in each of the cases to look at the Micro-economics. One of my criticisms is it was not done enough, and to some extent, it was not done at all I didn't see much of that.

Now another question is about the international dimension of globalization. I could talk the topic for whole two hours on that. They told me only I had a-hour and half to talk. So I had to leave outThe government in a country has its own development process. The international dimensions of globalization are critical.

I think that countries ought to bear the responsibility to the international rules have been awfully large effect on the prospects of the ability of the countries to develop. I have been very critical of many of the international rules. I have argued that WTO is basically unbalanced and basically been pursuing the interest of the advanced industrialized countries at the expense of others.

I think the international financial arrangements are defective, deficient in many important ways, in particular, we take great pride in how WallStreet is able to slice in dice race from those less able to bear and those more able to bear. But in fact the developing countries are left to bear the interest rates in exchange rate volatility. Some of the biggest risk. I talked about Latin American crisis. It was caused because they had to bear the risk of that interest rate change. I would like to say the international economic institutions work to try to create a mechanism for better absorption of risks so that the rest of the risk is borne by the developing countries

Another example of what I view is the symmetry in international arrangements has to do with the asymmetric treatment of capital and labor. One of the other questions were actually specifically addressed to that. A lot of discussions which is very important for global efficiency in the free mobility of capital. But it didn't

analyze from where will come the largest improvements in global output. It will come from the free mobility of labor.

We have the disparity between productivity measured by income larger and larger capital in one country, United States and capital in another country and large labor in one country and labor in another..... the disparity in terms of productivity far... far larger,. Therefore allowing free mobility of labor, in principle, not in their social consequences, which we can't would lead to much better increases in global income. But it is clear that they there is not much interest on the part of the people who are deriving the international agenda. The advance industrial countries are not in favor of free movement of labor. The consequences of lack of free labor mobility and free capital mobility—that is symmetry—has enormous distribution consequences. Because it means, for example,... it is very difficult to impose taxes on capital. If you impose taxes on capital, those will move. So you have to raise to.....capital is being taxed less and less more the burdened taxation on poor and labor with greater inequality.

It is important to recognize in getting the flavor of the degree of inequity in the system. It is not just a direct mobility of labor that people are concerned about. There are indirect ways of moving labor. I am giving you an example. Trade in services is one of the so-called great achievement of the WTO in Uruguay Round. What kind of services were talked about? Financial market services which are the comparative advantage of United States. What were the services that were not on the agenda? The maritime services, construction services, services utilizing a large amount of unskilled labor.

Korea is an exporter of construction services. Poor developing countries like The Philippine are the exporters of maritime services. But the United States is not interested in the movement of these unskilled labor services. And so these were not on the agenda; and they are still not in the agenda of WTO. So it seems to me that it is important that there should be improvement in

both the equity and the efficiency of global economic arrangements. And there is much more to be done, as I said before, the IMF, I think there should be movement towards better bankruptcy, one of the areas which I emphasized in the beginning of my discussion and the general view is put into deep freeze and out of that deep freeze and back on the table.

The interesting question about the colonial role in determining the pattern of development in South-Asia and Africa. Undoubtedly it had a very major effect. But I want to call by that in a couple of ways. First I think.....I do think that societal factors are very important in understanding development. But I also think that sometimes people put too much emphasize.....too much blame is put on them. Let me just tell you one story that I experienced when I was doing my studies in the East-Asian Miracle. When I go to the Confucian countries – countries with Confucian tradition, I would ask them to what do they at tribute their success? They would all emphasize it was because of their Confucian tradition – they would emphasis on education. When I go to the Non-Confucian countries, I would ask them to what do they at tribute to their success. They would emphasize that they have not done by the Confucian tradition, the respect for authority....they have the negatives.....they emphasize we don't have the Confucian tradition. I think there is element of truth in both of them. But neither of them provides complete explanation of their success and the colonial role is not the explanation of the lack of success.

One of the things I think it is important to distinguish is between the institutional structures and in individuals. By that I mean the following: I have been struck how quickly society is changed in the course of less than a generation. The context, which I see that most dramatically, is that of the economics in transition. You go to some countries and you talk to the young people. The fact that there was 70-year-old-communism, for them, somebody twenty years old you ask, "Can't you remember communism?" They were 10 years old at the end of communism. Now at the age of

thirty they are already became very entrepreneurial. So there are societies in that sense at the individual level who change very dramatically.

As I have gone to many developing countries where I see at the grass roots..... is enormous entrepreneurship.... You go into the villages in Bangladesh and you will see micro credit schemes; you will see people are doing with a micro-credit. There is little bit of entrepreneurship, but they are doing little things, little projects – it's a level of innovativeness at a particular level in that pervasive society. There is an enormous innate potential. One has to find out how do you facilitate that: It needs education, it needs finance, and it needs access to technology. It has to be empowered. History plays a more important role is on the institutional structures. Those change more slowly. Those collective decisions are often very hard. So the colonial history, I think, does weigh down very heavily in many of the colonial countries. It is only the gradual time those..... changes.

The government plays a catalytic role in many of the cases of East Asia. The sources of catalysts can be different in different societies. NGOs are playing a very the catalytic role here, in Bangladesh. That is of a kind the government is play and played in East Asia.

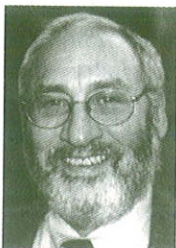
Two of the questions dealt with what are the scopes for discretion or what is the degree of political flexibility in countries with..... economic power. I think one has to recognize that there is at our limitations – one can ignore those limitations. And particularly that is true in the poorest countries. The countries which are a little bit better off, have more discretion. For instance, Argentina, over the last year they have liberally made their decisions. Basically has said, we will only borrow from IMF if we get a program we think will help us to review our economy. They have taken the responsibility to try to make a judgment. They say if you put the wrong conditions, the money is not worthy; rather not have the money than have the wrong conditions; we want to have

the money and the right conditions. But they have been very strong, and economy has turned around and they began to grow. And when the economy will grow, people are more interested in lending it to them. That is actually an example of a country that has played strong. Yesterday in my lecture I emphasized that it is important for countries to try to manage their macroeconomic policies in ways that make them less likely to need to turn to others ... that and turn to the policy's will demand. Because whether you turn to the international financial institutions or the private lenders – demands will be made –the nature of lender. They will put some conditions. And, that, in turn, means that government, I think, has to live us with there means. It means that while you may have a deficit in times of economic recession to stimulate your economy, over the long run, it is important to limit the degree of indebtedness because it is that debtness which exposes you to risk of the international volatility and exposes you to make you dependent on outsiders for the dictation of policy.

One final question two questionsone has to do with FA.... clearly.....I think that normally clearly they will keep with the agreement. They would take safe-guard measures, and other measures that will effectively vitiate. What is suppose to happen if you remember the agreement was that the MFA was to end in ten years ago to give them ten years to gradually adjust to the change. Well we have gone through more than eight years, and nothing have been done to adjust to the change. So, we are exactly in the situation we were back in 1993 when they reach the agreement which was negotiated. That's why it makes me nervous particularly when United States is in a recession or in a slow-down when there is high levels of unemployment. Whether in some ways the safe-guard measures will be employed, like was used in street that would effectively maintain some forms of trade restrictions. But what that from of trade restriction is not clear.

Let me just stop at that.

Joseph E. Stiglitz— Autobiography



I was born in Gary, Indiana, at the time, a major steel town on the southern shores of Lake Michigan, on February 9, 1943. Both of my parents were born within six miles of Gary, early in the century, and continued to live in the area until 1997. I sometimes thought that my perignations made up for their stability.

There must have been something in the air of Gary that led one into economics: the first Nobel Prize winner, , was also from Gary, as were several other distinguished economists. (Paul allegedly once wrote a letter of recommendation for me which summarized my accomplishments by saying that I was the best economist from Gary, Indiana.) Certainly, the poverty, the discrimination, the episodic unemployment could not but strike an inquiring youngster: why did these exist, and what could we do about them.

I grew up in a family in which political issues were often discussed, and debated intensely. My mother's family were New Deal Democrats - they worshipped FDR; and though my uncle was a highly successful lawyer and real estate entrepreneur, he was staunchly pro-labor. My father, on the other hand, was probably more aptly described as a Jeffersonian democrat; a small businessman (an independent insurance agent) himself, he repeatedly spoke of the virtues of self-employment, of being one's own boss, of self-reliance. He worried about big business,

and valued our competition laws. I saw him, conservative by nature, buffeted by the marked changes in American society during the near-century of his life, and adapt to these changes. By the midseventies, he had become a strong advocate of civil rights. He had a deep sense of civic and moral responsibility. He was one of the few people I knew who insisted on paying social security contributions for household help - regardless of whether they wanted it or not; he knew they would need it when they were old. (This attitude served me well; in 1993, while many Clinton appointees faced problems in being vetted because of their failure to pay these taxes, I was spared these problems because I had followed his example.)

I went to public schools, and while Gary was, like most American cities, racially segregated, it was at least socially integrated - a cross section of children from families of all walks of life. The Gary public school system was designed to integrate the immigrants who constituted such a large fraction of its inhabitant; here, the melting pot rhetoric that is so important part of America's, self-image was taken seriously. All of us had to learn, for instance, two trades (mine were printing and being an electrician). I had the good fortune of having dedicated teachers, who in spite of relatively large classes, provided a high level of individual attention. My teachers helped guide and motivate me; but the responsibility of learning was left with me, an approach to learning which was later reinforced by my experiences at .

The extra curricular activity in which I was most engaged - debating - helped shape my interests in public policy. Every year, a national debating topic is chosen. (One year, it was the reform of the agricultural support programs, an issue which I had to grapple with almost forty years later; some of my colleagues in the Clinton Administration too had been debaters, but they got taken up by the sport. I was attracted more by the ideas.) In debate, one randomly was assigned to one side or the other. This had at least one virtue - it made one see that there was more than one side to these complex issues.

The intellectually most formative experiences occurred during the three years 1960-1963 I spent at Amherst college, a small, New England college (at the time, a men's college with around 1000 students). I went to Amherst because my brother had gone there before me, and he went there because his guidance counselor thought that we would do better there than at a large university like . Amherst is a liberal arts college, committed to providing students with a broad education. (Today, I serve on its board of trustees.) The notion that every well educated person would have a mastery of at least the basic elements of the humanities, sciences, and social sciences is a far cry from the specialized education that most students today receive, particularly in the research universities. But what distinguished Amherst was not only what was taught, but how it was taught, and the close relationships we had with our teachers. The best teachers still taught in a Socratic style, asking questions, responding to the answers with still another question. And in all of our courses, we were taught that what mattered most was asking the right question - having posed the question well, answering the question was often a relatively easy matter.

I thrived on the atmosphere; while until late in my third year, I majored in physics, and enjoyed immensely the camaraderie of the physics students as we strove to solve the hard problems that were assigned to us. I took a smattering of courses in mathematics, history, English, philosophy, and the standard fare of introductory biology and chemistry. I still remember well the courses, and have frequently drawn upon this learning. For instance, the discussions of the encounters between different civilizations that was a major theme in our Freshman history class helped shape my thinking about globalization more than three decades later; I felt I was in a better position to think about the current episode from an historical perspective, and see it more through the eyes of the *other* side.

But while I loved all of these courses, there was an irresistible attraction of economics. My three teachers at Amherst showed

me the range of the subject: Arnold Collery, later to be Dean of Columbia College, was a thoughtful and erudite scholar, from whom I studied both micro-economics and macro-economics. The style of teaching was exemplified by his choice of texts for the micro course. Rather than a standard textbook, he used Abba Lerner's *Economics of Control*, a book written as a theoretical contribution to our understanding of how markets work, an inquiry into whether planning provided an alternative. James Nelson, who taught me introductory economics, was a vivacious policy economist, who conveyed the sense of excitement that came from trying to shape economic policies. Finally, Ralph Beals was a young graduate of , trained in mathematical techniques that were just then coming into vogue. It was not until late in the spring of my junior (third) year that I decided to major in economics; I thought it provided an opportunity for me to apply my interests and abilities in mathematics to important social problems, and somehow, I thought it would also enable me to combine my interest in history and in writing. I wanted it all, and economics seemed to have it all. When I advised my teachers of my decision, they advised me that I should go on to graduate school. What I would study during my senior year would be largely repeated in my first year of graduate school. They then arranged for me to go to MIT, and to receive the finance I required (I had been on full scholarship at Amherst; the modest last minute fellowship from MIT entailed my living on a dollar a day beyond my rent - the number that today is taken as the threshold for absolute poverty.) The flexibility of MIT, and Amherst, - the deadlines for application were well past, the money for fellowships had largely already been dispensed - is a tribute to America's higher educational system, and one of the reasons that it continues to excel. I left Amherst for MIT without a degree, or without any promise of one. It was before I had done my work on the economics of information, and I think I didn't grasp the information that might be conveyed by having a degree from Amherst. I simply wanted to learn as much as I could as quickly as I could - not from any sense of "getting ahead" but

simply from an overwhelming sense that there was so much to learn, and one needed to get on with it. (Later, Amherst did give me a degree, and still later, in 1974, they gave me an honorary doctorate.) One of my teachers, and one of the world's greatest economists, Hirofumi Uzawa, when asked where he got his advanced degree, would say they he had no degree to speak of; in academic circles, there is a certain pride in simply having pursued one's studies on one's own, outside the confines of a regular program. If Amherst hadn't given me a degree, I could have given a similar response.

My love of politics first manifested itself in my days at Amherst. I served on the Student Council both in my freshman and sophomore years (there were three representatives from each class), and in junior year, got elected president of the student council. My conviction that if one attains positions of "power" one should view them as opportunities for social change also manifested itself. I began a campaign to abolish fraternities (to which 90% of the students belonged), because they were socially divisive, and contrary to the spirit of a liberal arts school and community. It was a campaign that was not welcomed by many of my classmates, and it took years to come to fruition, but it did, and I believe that Amherst is the better for it. This was only one of the many issues that I raised in my "activist" presidency. I, like many members of my generation, was concerned with segregation and the repeated violation of civil rights. We were impatient with those (like President Kennedy) who took a cautious approach. How could we continue to countenance these injustices that had gone on so long. (The fact that so many people in the establishment seemed to do so - as they had accepted colonialism, slavery, and other forms of oppression - left a life-long mark. It reinforced a distrust of authority which I had had from childhood.) I marched on Washington - the march where gave his "I have a dream" speech remains an indelible memory. I organized an exchange program with a small, African-American, southern school; I believed it was important for us to understand, as much as we could, what they

were confronting. These were the years where many civil rights activists from the North were killed; but in our enthusiasm for doing what was right, these risks never crossed our minds.

Not surprisingly, there was considerable opposition to some of my initiatives, so much so that a recall referendum was initiated. It was also my first encounter with the power of the press and personal rivalries; the editor of the student paper took on the cause of removing me. But my friends and allies beat back the initiative, and I continued to use the platform of the presidency of the student council to promote social change.

Amherst was pivotal in my broad intellectual development; MIT in my development as a professional economist. I spent but two years at MIT as a student (I did my generals in a year and a half, and then began writing my thesis.) It was the hey-day of MIT with first-rate professors (I had at least four Nobel Prize winners as professor: (Nobel Laureate in 1970), (Nobel Laureate in 1987), (Nobel Laureate in 1985), and (Nobel Laureate in 1972)) teaching first-rate students. My first paper presented at an academic meeting, to the econometric society, was jointly co-authored with George Akerlof, with whom I shared this year's prize. I had many other first rate classmates that were to make truly important contributions to economics.

The particular style of MIT economics suited me well - simple and concrete models, directed at answering important and relevant questions. I sometimes wonder what would have happened had I gone to one of the universities in which other styles of economics were taught, either the abstract general equilibrium models, for which was then noted, or the simpler partial equilibrium models for which was famous. The politics of MIT also suited me well. My teachers were mostly establishment liberals, but there were a few that were more questioning. I wonder too how I would have fared had I gone to one of the schools, like Chicago, where there is a more conservative bent. Would I have changed? Or would I have just been unhappy?

But, as I comment in my Prize lecture, there was an incongruity between many of the models that we were taught and the policy positions that our teachers (and we) believed in. The models seemed more consonant with free market prescriptions, though they were presented more as benchmarks rather than full characterizations.

The students and faculty at MIT were highly interactive. There was a group of friends (mostly from the year ahead of me, including George), which included a few young economists from Harvard, with whom I spent much of my time. We lived economics and politics. We debated about what was wrong with the models that we were being taught. We thought about how we could or would go about changing the models, and occasionally about how we could or would go about changing the world. One of our group was from India (Mrinal Datta-Chaudhuri) and we learned from him a host of stories concerning the colonial experience.

After my first year as a graduate student, I was offered a wonderful opportunity, editing Paul Samuelson's collected papers. I often took Paul as a role model, the expansiveness of his learning, the breadth of his work, its originality and penetration. He wrote forcefully and beautifully. For many years after leaving MIT, I was best known as Samuelson's editor, which I did not always appreciate, since I wanted to be known for my own work.

The summer after my second year as a graduate student was one of the most exciting. Hirofumi Uzawa had moved from Stanford to Chicago, and had received an NSF grant to bring around a dozen graduate students from around the country to work together on theory. Eytan Sheshinski and his wife Ruthie, George Akerlof, Mrinal Datta-Chaudhuri, Georgio LaMalfa (later to be head of the Republican party of Italy and a minister in several of that country's governments) and his wife, Eva drove off to Chicago. We stopped on the way at my home in Gary for a night, where my parents were delighted to have a chance to meet my

friends. At Chicago, we were joined by some of Hiro's Chicago students and by Frank Levy from (who now teaches at MIT), among others. Growth theory was then all the rage, and we did growth theory, day in and day out. Many of us worked on technical change, on work which would be rediscovered, two decades later and popularized under the name of endogenous growth theory. (The fact that the work that was done in this period received so little attention in the subsequent revival of interest in growth theory two decades later has been a subject of some interest to me, as part of what may be thought of as the sociology of knowledge. Economists tend to move in particular circles, defined by their "school" and "subject." Endogenous growth theory in the 80s grew out of the Chicago school, while the earlier work on growth theory was part of the MIT school - treating Uzawa, though a professor at Chicago, as an honorary member of the MIT fraternity. I moved both across schools and subjects. This allowed me to learn from each, and the cross fertilization was highly productive. But it did pose problems. Not being a dues paying member of any particular school/subdiscipline sometimes meant it was more difficult to get one's ideas accepted, or even widely discussed. This was particularly the case in macro-economics, where in the 70s and 80s, the reigning paradigms were either rational expectations/representative agent models or fixed price new Keynesian models. The models that Greenwald and I formulated, focusing on imperfect capital markets, risk averse, credit constrained firms, in which concerns about bankruptcy often play an important role, only became widely accepted after similar ideas were picked up by the card carrying members of the macro-fraternity.)

While the group of us who went to Chicago to study under Uzawa was supposedly chosen for our prowess as students, we shared a broad weltanschauung. As the month of intensive work ended, leaving a lifelong impression on all of us, most of us went up to George's family place on Lake Squam. I was working as

Bob Solow's research assistant, and so had to commute from Cambridge.

After two years at MIT (supported in the second year by the National Science Foundation), I received a Fulbright fellowship to for 1965-1966. At the time, there were three High Churches in the economics profession: Chicago on the right and Cambridge, U.K. on the left, with MIT being in the center. Cambridge was still basking in the reflected glory of Keynes, who had revolutionized economics some thirty years earlier. Lord Kahn, of the Kahn multiplier (which explained how a dollar of government expenditure had a multiple effect in increasing GDP), Joan Robinson, Nicky Kaldor, James Meade, David Champernowne, Piero Sraffa, these were among the gods that populated the colleges of Cambridge. I wanted to see as many views as I could, and I worried about coming too much under the influence of Samuelson and Solow. Joan Robinson was assigned as my tutor. She had originally wanted me to redo my undergraduate degree - she thought it would take some time to undo the damage of my MIT education, but eventually she was prevailed upon instead to take on the responsibility of my re-education. We had a tumultuous relationship. Evidently, she wasn't used to the kind of questioning stance of a brash American student, even a soft-spoken one from the mid-west, and after one term, I switched to Frank Hahn. He was flamboyant, and always intellectually provocative. Cambridge was in ferment. The quality of the students and the young lecturers matched that of the gray eminences: (later to get the Nobel prize), Partha Dasgupta, Tony Atkinson; Geoff Heal, David Newbery and a host of others. There was a sense of excitement that was associated not just with the generation of new ideas, but with the belief that those ideas were important, and not just for economics, but for society more broadly. As Frank Hahn demonstrated the dynamic instability of the economy (a problem posed by the absence of futures markets going out infinitely far into the future; in technical terms, the

absence of a transversality condition), he would excitedly exclaim that he had put another nail in the coffin of capitalism.

One evening I gave a seminar on a paper I was then completing, on the distribution of income among individuals (using the kinds of tools that had been used to describe the dynamics of growth to describe the dynamics of inequality). The discussion had been followed by a lively debate. The next morning, I received a twenty-page comment from (who received the Nobel Prize in 1977), suggesting elaborations and alternative interpretations. There was a sense of a community of scholars trying to understand some very important and complex problems.

My research in this period centered around growth, technical change, and income distribution, both how growth affected the distribution of income and how the distribution of income affected growth. The most important paper to emerge from my thesis, "The Distribution of Income and Wealth Among Individuals," received considerable attention at the time, but unfortunately, the topic has not been one which has received much attention from the economic profession, so that it has not generated as much follow-on research as I had hoped.

But the subject of the causes and consequences of inequality has remained one of my abiding concerns, one which I pursued as I began to delve into the economics of information.

My early research project in this area illustrated one feature of my research style which, while it may have contributed to the overall success of some of my research program, was a source of unending frustration. Once I undertook the analysis of a problem, I often looked at it from a variety of perspectives. I approached the problem as a series of thought experiments - unlike many other sciences, we typically cannot do actual experiments. I would construct models changing one assumption or the other. Each would provide some insight into what drove the results. The whole was more than the sum of the parts; while each of the models was, by itself, of some interest, it was the collection of

models, and how the results depended on the particular assumptions employed, which provided the greatest insight. My original work thus grew into a monograph of some hundred pages. Unfortunately, the preferred form of expression in the profession was narrowly defined articles, making a single point. I thus had to extract from the longer monograph a series of papers, a process which not only took a long time, but diminished (in my judgment) the insights provided. (This problem was even greater in the next two research projects, one exploring the behavior of the firm under uncertainty, and in particular, the consequences of risk with an incomplete set of risk markets; most (but not all) of that "paper" - an eight hour lecture I delivered in 1970 at Hakone, Japan, in another one of Hirofumi Uzawa's workshops - was published as a series of articles over the next decade. The exploration of "Alternative theories of wage determination and unemployment in less developing countries," completed while I was at the Institute of Development Studies at the in the summer of 1969, was similarly published in a series of articles - the most recent of which was not published until 1992).

Another project that I began in Cambridge concerned the interaction between the distribution of income and short run macro economic behavior. At the time, most macro economic models simply assumed that wages and prices were fixed. But, of course, during the great depression wages and prices had fallen considerably. The problem was not that they were absolutely fixed, but with the dynamics of adjustment. With Robert Solow (Solow and Stiglitz, 1968), I explored these dynamics, to explain the persistence of unemployment. With George Akerlof (see Akerlof and Stiglitz, 1969), I showed how such dynamics can give rise to cyclical behavior. Later work would attempt to provide stronger micro foundations for these adjustment dynamics.

I returned from Cambridge to take up a one-year appointment as an assistant professor at MIT, from which I went to Yale. My teaching at Yale seemingly warranted an indefinite deferment

from the Vietnam War draft. During this period, I continued my work on economic dynamics, and began my research on the economics of uncertainty, which in turn, quickly led to the work on the economics of information.

The major concern in my research on dynamics was the stability of the market economy. The standard models assumed that there were future markets extending infinitely far into the future. Following work of Frank Hahn (1966), Karl Shell and I showed that a competitive economy with futures markets extending an arbitrarily large finite number of periods into the future would, in general, exhibit dynamic instabilities; that is, it would take off onto a path that *appeared* to be efficient and stable, with the inefficiency and instability only manifesting itself some distance into the future (Shell and Stiglitz, 1967). This theme was explored in a variety of different contexts. The subject was central to the on-going debate concerning the efficiency of the capitalist economy. If stability and efficiency required that there existed markets that extended infinitely far into the future - and these markets clearly did not exist - what assurance do we have of the stability and efficiency of the capitalist system? In one important variant on this theme, I assumed that there were rational expectations. Simplistic representative agent models living infinitely long had been constructed, and, not surprisingly, in these models, the problems of instability and inefficiency did not arise. I assumed, on the contrary, that individuals were finitely lived; there were overlapping generations. In that case, there were an infinite number of paths consistent with rational expectations extending infinitely far into the future. (Stiglitz, 1973b.)

This concern with *multiplicity* of equilibrium (both in the short run and the long) was to appear over and over again in my subsequent work, where under a wide variety of circumstances, the economy could be trapped in a "bad" equilibrium. In some cases, some individuals are better off in one equilibrium, some worse off, but in other cases, one equilibrium could Pareto dominate others.

Much of my work in this period was concerned with exploring the *logic* of economic models, but also with attempting to reconcile the models with every day observation. Thus, in much of my earlier work I began by asking what would happen to the standard results if there were not the complete set of risk markets which Arrow and (Nobel Laureate in 1983) had postulated in their analysis of competitive equilibrium. This was a question which one could approach largely (though not entirely) deductively. (Stiglitz, 1972a, 1982b.) But my research in this area quickly posed problems for which there was no obvious answer: what should (or do) firms maximize? This early work exposed how sensitive not only were the *results* of the standard model to the (clearly unrealistic) assumptions posited, but even the reasonableness of the *assumed* behavior. As my work progressed, the discrepancies between the kind of behavior *implied* by the standard model and actual behavior also became increasingly clear. In the standard model, the only risk that firms should worry about was the correlation of the outcomes (profits) with the “market”; in practice, businesses seem to pay less attention to that than they do to “own” risk, the chance the project will succeed or fail. In the standard model, everyone agrees about what the firm should do; in practice, there are often heated disagreements. It seemed to me that any persuasive theory of the firm had to be consistent with these, and other, aspects of widely observed firm behavior. (Stiglitz, 1982c, 1989b.)

Economists spend enormous energy providing refined testing to their models. Economists often seem to forget that some of the most important theories in physics are either verified or refuted by a single observation, or a limited number of observations (e.g. Einstein’s theory of relativity, or the theory of black holes). Thus, models which suggested that there was no such thing as unemployment, or that it was at most short lived, to my mind were suspect. Economists often like startling theorems, results which seem to run counter to conventional wisdom. Perhaps the most important result in the economics of uncertainty in the

1950s was that of Modigliani and (Nobel Laureate in 1990), who argued that corporate financial structure - whether firms finance themselves with debt or equity - made no difference (other than as a result of taxes). What was interesting about the theory was that it was based on assumptions of rational behavior, and yet if it were true, there was ample evidence of market irrationality - the thousands of people on Wall Street and other financial centers who seemed to be worrying about corporate finance - and for reasons that had nothing to do with taxation. I began my analysis of corporate finance by demonstrating that the result was far more general than they had shown. (Stiglitz, 1969b.) But there were two assumptions that they had ignored, and these turned out to be crucial: they had assumed no bankruptcy and perfect (or at least symmetric) information. Over the succeeding years, I was to explore the consequences of these (related) assumptions, not only for the theories of corporate finance, but also for corporate governance (including takeovers) and macro-economics. As I note in my Prize lecture, the failure of the to take on board fully the consequences of these assumptions played an important role in their policy failures almost three decades later.

My work on the economics of uncertainty led naturally to the work on information asymmetries, and more generally, imperfect information. In the work on the economics of uncertainty, I explored the consequences, *given beliefs about probability distributions, say, of prices and outputs*, of economic behavior. The standard theory not only had assumed that there was a complete set of markets for these risks, but that beliefs about these probability distributions were exogenous, unaffected by any actions. But individuals and firms spend an enormous amount of resources acquiring information, which affects their beliefs; and actions of others too affect their beliefs.

As I approached the problems that are today referred to as the economics of information, I was greatly helped by the breadth of my education at Amherst and MIT. The problem of how people form their *beliefs* is, of course, the central question of statistics:

making inferences on the basis of limited data. The first course for which I served as a teaching assistant was statistics (with Harold Freeman), and it was concerned with using probability theory to make statistical inferences (rather than “classical” statistics). I am sure that I was, at least subconsciously, affected too by the work going on in Cambridge in statistical decision theory, by people like Raiffa, and while I never took a course from him, he was active in the Harvard-MIT theory seminar, and was a presence at the dinners we often had afterwards.

Another set of central insights came from the work that I had been doing in public finance (as it was called at that time; with my 1984 textbook, I helped shift the sub discipline to focus more broadly on the *economics of the public sector*.) As I noted in my Nobel lecture, an early insight in my work on the economics of information concerned the problem of appropriability - the difficulty that those who pay for information have in getting returns. This is, of course, the central concern of *public goods*, one of the main subjects within the economics of the public sector. I recognized that information was, in many respects, like a public good, and it was this insight that made it clear to me that it was unlikely that the private market would provide efficient resource allocations whenever information was endogenous. (See, e.g. Stiglitz, 1987a.) Much of the subsequent work was trying to define more precisely the nature of the market failures.

As I explain in my Nobel lecture, the time I spent in Kenya was pivotal in the development of my ideas on the economics of information. I have often wondered why. I think in part the reason is that seeing an economy that is, in many ways, quite different from the one grows up in, helps crystallize issues: in one’s own environment, one takes too much for granted, without asking why things are the way they are. As I studied development, I was forced to think everything through from first principles. Had I grown up in a world in which everyone was a sharecropper, I probably would have accepted this as the way things are. As it was, sharecropping seemed like a peculiar institution, for it

seemed to attenuate greatly the incentives workers had to work (since they typically had to give one out of two dollars that they earned to the landlord). Similarly, growing up in Gary Indiana gave me, I think, a distinct advantage over many of my classmates who had grown up in affluent suburbs. They could read articles that argued that in competitive equilibrium, there could not be discrimination, so long as there are some non-discriminatory individuals or firms, since it would pay any such firm to hire the lower wage discriminated - against individuals, and take them seriously. I *knew* that discrimination existed, even though there were many individuals who were not prejudiced. To me, the *theorem* simply proved that one or more of the assumptions that went into the theory was wrong; my task, as a theorist, was to figure out which assumptions were the critical ones.

A topic of abiding concern since I was in high school was *economic organization*. I grew up in the midst of the cold war. At the time, Communism *seemed* to be delivering faster economic growth, but at the expense of liberty. Much of the world seemed to be suffering under the yoke of colonialism, which neither delivered economic growth or democracy, and one which seemed to inconsistent with the principles in which I had been taught, and come to believe. The market economy seemed to be plagued by repeated periods of unemployment, and to leave large fractions of the population in poverty. Yugoslavia's system of self-managed firms intrigued me. Economics seemed to provide the tools with which one could analyze these alternative economic systems. A central question was how, and how well, alternative systems addressed the problems of gathering, analyzing, and disseminating information, and making decisions based on imperfect information. Understanding the limitations of the market - the so-called market failures - became one of the central foci of my research.

I recognized that the standard model was deficient not only in its assumptions about information, but also in ignoring technical

change. The latter I thought particularly curious, given the importance that technical change clearly played in our economy. I joined the growing band of those who paid homage to Joseph Schumpeter because of his emphasis on technical change, a subject which was not even broached in the standard first year graduate economics course, let alone in undergraduate principles courses. (I tried to remedy the latter deficiency by introducing a chapter on the subject in my Principles book.) But while I thought that Schumpeter had asked the right question, I was not convinced he gave the right answer. The close links between the work that I had been doing on information and technical change allowed me to begin to formalize models of Schumpeterian competition, and I quickly realized that several of the "accepted" results of Schumpeterian competition were not valid, e.g. that there would necessarily be a succession of short lived monopolies. (See, e.g. Dasgupta and Stiglitz, 1980a, 1980b, 1981, 1988.) I showed that a monopoly, once established, could be persistent, that Schumpeterian competition was not, in general, "efficient," and that in particular the incumbent could/would take actions which deterred entry, that potential competition would not in general suffice to ensure a rapid (efficient) pace of innovation. These ideas are, of course, of particular relevance in the "new economy," which centers around innovation.

There was a rather different strand of literature (often associated with Hayek) which praised the virtues of the market economy, not the basis of the standard competitive (Arrow Debreu) mode, or on the basis of Schumpeterian competition, but rather on "evolutionary" grounds. In the early 70s, I had become fascinated with this alternative approach, and begun to subject it to scrutiny. At the time, there was little formal work on evolutionary modeling, and even later, most of the modeling focused around *describing* (often in simulation exercises) evolutionary processes. I was interested in *evaluating* evolutionary processes. What could one say about whether free markets, by themselves,

led to “efficient” or “desirable” evolution? Were there interventions in the market which might “shape” evolution in ways which would lead to better outcomes? Hayek and his disciples had argued for free markets, but never really even addressed these questions. This remains a question that has still not been well investigated, but preliminary results (cited in my Prize lecture) suggest strongly the limitations of unfettered free market evolution. (Part, but only part, of the problem lies with imperfections of capital markets.)

Later, with the collapse of the Soviet system, and the recognition of the problems of socialism more broadly, I rethought the lessons that might be gleaned from the failed experiment. In *Whither Socialism?* (See Stiglitz, 1994) I came to the conclusion that the failure of the socialist economies reinforced my belief in the inadequacy of the competitive equilibrium model. If that model had been correct, market socialism probably could have succeeded. The standard competitive market equilibrium model had failed to recognize the complexity of the information problem facing the economy - just as the socialists had. Their view of decentralization was similarly oversimplified - a point which I had earlier emphasized in my work with Raj Sah, where we had compared hierarchical and polyarchival decision making structures. Here, our concern was not with asymmetries of information or incentives, but with how different economic organizational structures in effect *aggregated* the disparate and limited information of different individuals.

As the former socialist economies decided to make the transition to a market economy, a host of fascinating problems was posed on how best to make that transition. China provided the first venue for looking at these questions, in a series of meetings in 1980 and 1981, and Russia and the other countries of the former Soviet Union and Eastern Europe provide a second. The debates were heated. Much was at stake. And underlying the debate were very different understandings of the fundamentals of a market economy - what was necessary to make it function. My views on

the inadequacy of the standard model played a central role in my thinking. I emphasized the importance of competition, corporate governance, finance, and more broadly the institutional (including legal) infrastructure. I did not place much stress on privatization. I was part of a wider school, sometimes referred to as “gradualists,” as opposed to the shock therapists that focused on rapid transitions, with quick privatization. The strategy for transition that I advocated was markedly different from that pushed by the IMF and the shock therapists. The failures of so many countries to make a successful transition back to a market economy has provided new insights into what makes market economies function, one which I had occasion to explore during my years as the Chief Economist of the World Bank. There is now a wide consensus on the importance of the institutional infrastructure, and on the dangers of rapid privatization. (See the references cited in my Prize lecture.)

I referred earlier to my work in the economics of the public sector. I was convinced that there was an important role for government to play. Given that, it was natural for me to turn to the question of how it could play that role most effectively. (See, e.g. Stiglitz, 1991, 1997a.) One of the main questions with which I was concerned was how to redistribute income in a way as to minimize the loss in efficiency that is inevitably associated with tax distortions. Economics of information had provided a framework within which this question could, for the first time, be addressed in a meaningful way, as I explain in my Prize lecture.

Still another important strand of my research, only tangentially related to my work on the economics of information, concerned industrial organization. In one of my most cited papers, that with Avinash Dixit, we constructed a model in which there are so many firms that each can ignore its impact on others’ economic actions, but still, firms face downward sloping demand curves - there is monopolistic competition. This seemed to describe many of the markets in the economy far better than either the models of pure competition, pure monopoly, or oligopoly. (Markets in

which information is imperfect are also likely to be characterized by monopolist competition). Little progress on the theory of monopolistic competition had been made in the more than forty years since Edwin Chamberlain first broached the idea. In particular, he had only formulated a partial equilibrium model. We were interested in constructing a general equilibrium model, within which one could assess how well the market functioned, in particular in making the tradeoffs between economies of scale and product diversity. We showed that there was a single borderline case - of immense simplicity - in which the market made that trade-off perfectly; but more generally, it did not.

While my work on industrial organization and imperfect information undermined the confidence in the ability of unfettered markets to allocate resources efficiently, there was another strand of research in the economics profession which was trying to argue the contrary. In particular, there were those who argued that even with natural monopoly markets could be efficient; competition for the market could replace competition in the market; all that one required was potential competition. On the face of it, this idea seemed suspect. If it were true, there would be no monopoly rents. And indeed, my suspicions turned out to be true: I showed that even if there were arbitrarily small sunk costs (which there always are) then potential competition would not suffice to limit the abuses of monopoly.

The most important *systemic* failure associated with the market economy is the periodic episodes of underutilization of resources. Trying to understand why the labor market does not clear - why there is persistent unemployment - has been another abiding concern, one which I have tried to approach from a variety of angles. The work with Solow and with Akerlof cited above focused on the consequences of finite speeds of adjustment. Even if wages fall, if prices fall too, real wages may not adjust very quickly. Subsequent work with Greenwald tried to explain in a more coherent way these speeds of adjustment. The efficiency wage theories (described in greater detail in my Prize lecture)

explain why it may pay firms to pay a wage higher than the market clearing wage: the increase in productivity more than offsets the increase in wages. The theory of equity rationing helped explain why more “flexible” contractual arrangements were not adopted; such arrangements (such as those where wages depend on firm profitability) in effect make the worker have an implied equity stake in the firm, and, given asymmetries of information, the value which workers are willing to assign to such contractual provisions is less than that which is acceptable to the firm.

The 1970s and 1980s represented decades during which the rational expectations/representative agent model was in ascendancy. This model suggested not only that, with rational expectations, government policy was ineffective, but that unemployment was not a serious problem. Neither of these conclusions made much sense to me; and with my former student, Peter Neary, we sought to show that the results depended not on the rational expectations assumption, but on the assumptions concerning wage and price flexibility. We constructed a fixed wage/price model with rational expectations, and showed contrary to the suggestion of the rational expectations school, not only could unemployment be persistent, but that government policy was even more effective with rational expectations that without it (i.e. multipliers associated with government expenditures were larger). The reason was simple: an increase in government expenditures today had some spill overs to future periods. Today's increased savings translated into tomorrow's increased income, and, with rational expectations, that increased income translated into higher consumption today. We also showed that there were *multiple rational expectations equilibria*: if everyone was pessimistic, then income would indeed be low today *and* tomorrow; but if everyone was optimistic, then both could be high.

Our work also emphasized that it was not just wage and price rigidities which could give rise to macro-economic problems.

(This work could be thought of as a revival and formalization of Fisher's earlier work on debt deflation.) Incomplete contracts meant that unanticipated changes in wages and prices had large distributional effects, with correspondingly large consequences. While when we first put forward these ideas almost twenty years ago, they met with considerable resistance, they are now coming to be more widely accepted.

While I spent most of my time teaching and doing research, I learned a great deal from the limited amount of consulting I did, and I thought it important to engage in issues of public policy. My first major consulting project was a direct outgrowth of work on imperfect information; it was concerned with the information externalities that arose in the process of oil exploration, externalities which played an important role in a heated dispute between the federal government and the states (which was eventually settled out of court for \$12 billion). A variety of other consultations, typically associated either with antitrust violations or issues of corporate governance, gave me insights both into how real markets work as well as the behavior of firms.

In the 1980s, I was involved in two major public interest litigations, one concerning the treatment of Native Americans, the other with the exploitation of our natural resources. The first, involving the Seneca Indians in upstate New York, gave me further insights into the nature of America's past - and ongoing - exploitation of Native Americans. An unfair lease that had been imposed on the tribe was about to expire, and it insisted that it would renew only on more equitable terms. I helped calculate the magnitude of the amount by which the previous lease had "cheated" them - magnitudes in excess of a billion dollars in present terms - and though the tribe was never compensated for these past injuries, the information I provided did, I think, contribute to a settlement which was far fairer than would otherwise have been the case.

The second suit was one against the federal government. In the 1980s, President Reagan tried to turn over as much of the offshore oil tracts to private companies as fast as he could - the fire sale was a give-away to the oil companies, depriving the American taxpayers of billions of dollars. Working with Jeffrey Leitzinger and a conservation minded NGO, -NRDC, we tried to estimate this cost, and, unsuccessfully, to bloc the fire sales.

I moved to Washington in March 1992 to join the Clinton Administration, first as a member, and then as Chairman of the , in which capacity I also served as a member of the cabinet. The Council helps formulate economic policies for the Administration, and serves as a consultant for all the agencies in the government. Our span of responsibilities included not only macro-economics, but policies in almost every sphere, from trade to anti-trust, from environment to agriculture, from energy to transportation, from welfare to health, from social security to taxation, from affirmative action, to tort reform. It was a wonderful experience - I had to draw upon all of my previous research, all my connections, and go beyond. I became deeply involved in environmental issues, which included serving on the International Panel for Climate Control, and helping draft a new law (including a new legal framework) for toxic wastes (which unfortunately never got passed). I was pleased to see how ideas that I had helped formulate only a few years earlier, like adverse selection and moral hazard, were now part of the every day language of the policy debate in health care.

Perhaps our most important contribution in this period was helping define a new economic philosophy, a "third way," which recognized the important, but limited, role of government, that unfettered markets often did not work well, but that government was not always able to correct the limitations of markets. The research that I had been conducting over the preceding twenty five years provided the intellectual foundations for this "third way."

Being on the Council was particularly exciting for me as a student of the economics of the public sector. I was a fly on the wall - but at the same time - I could work to put into place some of the ideas that I had been developing.

I believe that institutions like the Council play an important role in our democracies. Work on information asymmetries emphasized the importance of incentives and the discrepancy between the incentives of government officials, and in particular professional politicians, and those who they are supposed to serve. As a citizen-bureaucrat, the members of the council, who are typically drawn from academia and return to academia, have markedly different incentives than those of a professional politician. Typically, though not always, the fact that our professional reputations as economists were at stake circumscribed what was said - we could not just be political hacks - and encouraged us to work for the adoption of economic policies that were consistent with economic principles.

When the President was re-elected, he asked me to continue to serve as Chairman of the Council of Economic Advisers for another term. But I had already been approached by the World Bank, to be its senior vice president for development policy and its chief economist. America's economic policy had been successfully redefined, and the economy was performing well. There were many problems yet to be addressed, such as putting social security on a sound financial footing, but I was not optimistic about making progress on most of them in the coming years, given the Republican control of Congress. The challenges and the opportunities in the developing world seemed far greater. I had always wanted to return to the problems of development, and though I had had many visits to developing countries in the twenty five years since leaving Kenya, I had not really been immersed in their problems.

I had no strong agenda, other than doing what I could to promote the development of these countries, in ways which did as much

as possible to eliminate poverty. But as I quickly became engrossed in the problems of development, a variety of issues surfaced, the most important of which was the intellectual framework with which development was to be pursued. In a recent article in *Atlantic Monthly* I described a trip to Ethiopia, where I saw the IMF advocate policies of financial market liberalization which made no sense, in which it argued that the country's budget was out of balance - when in my estimate that was clearly not the case - and in which it had suspended its program, in spite of that country's first rate macro-economic performance. More broadly, the IMF was advocating a set of policies which is generally referred to alternatively as the Washington consensus, the neo-liberal doctrines, or market fundamentalism, based on an incorrect understanding of economic theory and (what I viewed) as an inadequate interpretation of the historical data. The IMF was using models that failed to incorporate the advances in economic theory of the past twenty five years, including the work on imperfect information and incomplete markets to which I had contributed. Most importantly, they had departed from the mission for which they had been founded, under the intellectual guidance of Keynes - they actually promoted contractionary fiscal policies for countries facing an economic downturn - and they advocated policies like capital market liberalization, for which there was little evidence that growth was promoted, while there was ample evidence that such policies generated instability.

As an academic I was scandalized; as a former adviser to the President who had helped design a "third way" for the United States - a view of the role of government that was markedly different from that envisioned by the Washington consensus - I was particularly disturbed by the role of the US government (or more accurately, the) in pushing these views.

If the IMF had only *pushed* its views - misrepresenting them as the lessons of economic orthodoxy, describing them as if they were Pareto dominant (that is, they were policies which would

make everyone better off, so that there were no trade-offs), rather than the policies which reflected the perspectives and interests of particular groups within society - that would have been bad enough. But all too often they used their economic power effectively to *force* countries to adopt these policies, undermining democratic processes. As someone who had grown up in mid-America, strongly inculcated with democratic values, I found this hard to accept; and even more so because the IMF's own governance was so dissonant with democratic principles (a single country has an effective veto; countries like China were long underrepresented, the "governors" of the IMF, those responsible for its decisions, finance ministers and the heads of the central banks, are hardly representative, and the heads of the central banks themselves are typically not directly democratically accountable).

With the East Asia crisis, my disagreements with the Fund came to a head. The Fund's policies seemed neither to accord with an understanding of the crisis countries (several of which I had studied closely during my East Asia Miracle project) and what I viewed as basic economics, especially as it had come to incorporate concerns about asymmetries of information and bankruptcy, corporate governance and finance, with which I had long been concerned. I argued against their prescriptions, and those within the Fund broadly agreed. But I made little headway with the Fund. There seemed to be no way out other than to bring the issues out into the public - and since as a democrat, I believed that there should be public discussion of such issues, I had few misgivings. I believe the public pressure that was generated did work; the counterproductive policies of excessive monetary and fiscal stringency were eased.

A third set of controversies was opened up as the World Bank began its ten year review of the transition of the former Communist countries to the market. The failures of the countries that had followed the IMF shock therapy policies - both in terms of the declines in GDP and increases in poverty - were even

worse than the worst that most of its critics had envisioned at the onset of the transition. There were clear links between the dismal performances and the particular policies that the IMF had advocated, such as the voucher privatization schemes and excessive monetary stringency. Other failures were related to the inadequate attention given to issues of corporate governance (the importance of which had, for instance, been stressed in my earlier theoretical work (see Stiglitz, 1985a). Meanwhile, the success of a few countries that had followed quite different strategies suggested that there were alternatives that could have been followed. Again, while the IMF defended its previous policies, I believe that the clear lessons that were drawn from these experiences did have some impact on policy prescriptions going forward.

I left the World Bank in January 2000. The US Treasury had put enormous pressure on the World Bank to silence my criticisms of the policies which they and the IMF had pushed, and though the President of the World Bank agreed with the stances I took on most of the issues, he was, I think, less comfortable about open discourse of these issues. I had come to the World Bank under an agreement that I would be more than a corporate spokesperson, that I could speak out on the relevant issues, in a responsible way. I believed, in part, that the credence that would be given to what I said - and my ability to advance the development agenda - depended in part on the perception that I was expressing my views, not just repeating the institution's official views. Under Treasury pressure, it was impossible to maintain this kind of independence, which had been a hallmark of the World Bank's research division, at least from the time that it achieved international prominence under the leadership of Hollis Chenery. I was, in any case, ready to return to academia - when President Clinton had asked me to be his adviser, it had been my intention to come to Washington for only two years; I had stayed seven, and although I had managed in that period to carry out a moderate research program, I had had my fill of bureaucracy. Still, it was a

great disappointment to me that my own government should have gone so much against the principles for which I believed it stood, including transparency and the importance of the role of government. (My conversations with the President convinced me that he himself supported both my stances and the values that underlay them, but that the US Treasury often did not adequately inform him about the policies they were advocating, let alone ask for his approval.)

The experiences during the seven years in Washington have helped shape my activities since then. I helped found the Initiative for Policy Dialogue, with support of the Ford, Rockefeller, McArthur, and Mott Foundations and the Canadian and Swedish government, to enhance democratic processes for decision making in developing countries, to ensure that a broader range of alternative are on the table and more stakeholders are at the table. This effort has enlisted the support of dozens of economics and other social scientists throughout the world, in a set of task forces that are intended to lay out alternative policy alternatives in a wide range of areas, and has conducted policy dialogues bringing together academics, government officials, NGO's, labor leaders, and the press in a number of countries, including Serbia, Nigeria, Viet Nam, and the Philippines. Both through the Initiative for Policy Dialogue and independently, I have continued to take an active role advising governments on a broad range of issues, from the role of monetary policy under dollarization (Ecuador) to the reform of social security systems and second and third generation reforms in China, to the lessons that can be drawn from the past failures and successes for privatization, to the design of macro-economic responses to an economic slowdown.

I have also continued to work actively to change the international economic arrangements, including the international institutions, to make them more transparent, to ensure that the policies that they have been pushing reflect the interests and concerns of the developing countries, and especially the poor within those

countries, as well as the advances in economic science of the past quarter century. I have been pleased with the progress that has occurred: perspectives, such as greater reliance on bankruptcy and standstills, that I had long advocated have now either been adopted or are at the center of the policy debate. But much remains to be done, and I anticipate that pushing this agenda will occupy much of my time in the years ahead.

My research agenda too has been greatly affected by these experiences. While I have continued the research program on the economics of information - I have recently completed a book with my long time collaborator Bruce Greenwald which explores more fully the implications of information economics for macroeconomics, and monetary theory in particular - I have turned more of my attention to an analysis of the role of information and incentives in political processes, as well as continuing my work on development more generally. (Stiglitz, 2001c.) Another major area of research involves the continuing analysis of the appropriate role of the state in the economy; in particular, how to design policies which combine concerns for economic efficiency, social justice, individual responsibility, and liberal values.

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1. Stiglitz (1969a)
2. See e.g. Stiglitz (1973a, 1975, 1976), Rothschild and Stiglitz (1973, 1982) and Braverman and Stiglitz (1989).
3. Including Stiglitz (1972a, 1972b, 1974a, 1989a)
4. See Stiglitz (1974b, 1982a). See also Stiglitz (1974c, 1992).
5. For a more complete analysis of these multiple equilibria models, see Hoff and Stiglitz (2001). The first example of such multiplicity out of the growth context was my model of equilibrium in stock markets (Stiglitz, 1972a), where the riskiness of the projects chosen by one firm depends on those chosen by other firms. Other examples of multiple equilibria can be found in Stiglitz (1972b, 1974c, 1977, 1995).
6. Sanford Grossman and I pursued these ideas further in Grossman and Stiglitz (1977, 1980).
7. See e.g. Sah and Stiglitz (1985a, 1986).
8. My work in the economics of the public sector has gone through four stages. It began with extensive collaborations with Tony Atkinson and Partha Dasgupta. Diamond and Mirrlees had helped revive interest in Ramsey's work in optimal taxation. They had extended Ramsey's analysis to a general equilibrium context, and *seemed* to incorporate distributional concerns. This work also seemed one of the few positive results in the theory of the second best: even though government could not impose lump sum taxes, one could say something meaningful about what the government

should do. But the conclusions were unpersuasive. They suggested, for instance, that the government should not impose taxes on corporations and should not impose tariffs, and Ramsey's earlier analysis suggested that high tax rates ought to be imposed on commodities, like food, with low demand elasticities. Such taxes were regressive, and I could not believe that they were truly "optimal." Atkinson and I (1972) formally incorporated distributional concerns in the design of tax policy, with results that were more in accord with our intuition. Similarly, Dasgupta and I took into account limitations on the ability of the government to impose taxes, and within this broader, and we would argue more realistic framework, tariffs and corporate income taxes did make sense. (Dasgupta and Stiglitz, 1971, 1972, 1974). Later, I began to think of the problem of taxation as an information problem - limited information imposed restrictions on the set of taxes that could be imposed; and asked what were the set of *pareto efficient* tax structures, that is, given the limitations on information, what were the set of tax structures such that no one could be made better off without making anyone worse off. (Stiglitz, 1998b). Within this framework, it became clear that Ramsey's analysis of optimal commodity taxes made little sense; only if the government could not impose income taxes as well as commodity taxes (as was the case in some developing countries) was it of much relevance. (Atkinson and Stiglitz, 1976).

A second set of issues to which I turned was project evaluation, and in particular the determination of shadow wages and discount rates. I argued that one could not calculate shadow wages without a model of the labor market, one which including a theory of wage determination and migration. Once that was done, one obtained results that were markedly different from the "standard" wisdom; for instance, the shadow wage on labor in some central cases

was the market wage, *even though there was a high level of unemployment*. (Stiglitz, 1982d and Sah and Stiglitz, 1985b). On the other hand, I argued against the use of market interest rates for project evaluation. (Stiglitz 1982e, Arrow et al., 1996). When I went to the Council of Economic Advisers, many of these views on cost benefit analysis became incorporated in the guidelines issues by the Office of Management- and -Budget for project and regulatory evaluations.

A third quite distinct research project developed the theory of local public goods. Tiebout (1956) had put forward the conjecture that competition among local communities was like competition in markets, and would yield efficient outcomes. My doubts about market competition naturally led me to have doubts about competition in this arena, perspectives that were confirmed as I formalized the theory of local public goods. (Stiglitz, 1977). This project, in turn, led to a joint research project with Richard Arnott on the relationship between expenditures on public goods and land rents: was it possible to finance the optimal supply of public goods by a tax on land only (what I referred to as the Henry George theorem).

There was a quite different strand of work motivated in part by a request from the U.S. Treasury concerning capital gains taxation. I had done earlier work on the impact of capital gains taxation in the presence of uncertainty, which changed many of the long standing presumptions. (Stiglitz, 1969c). But more complicated issues were raised by the dynamics, and by the obvious use of capital gains as part of tax avoidance strategies. I showed that, were markets perfect, one could take advantage of the special treatment of capital gains taxes to avoid all taxation. (See Stiglitz, 1983a.) Though a variety of provisions of the tax code have been introduced to try to circumscribe such tax avoidance behavior, they are imperfect. At a theoretical level, this led

me to consider the general principles of tax avoidance (Stiglitz, 1985b), and had a great deal of influence on my thinking about the problems of tax reform, reflected both in my writing and the advice I gave both while at the Council of Economic Advisers and the World Bank. (See Stiglitz, 1997b, 1998a).

9. See Dixit and Stiglitz (1977).
10. Subsequent work explored alternative versions of monopolistic competition. See Hoff and Stiglitz (1997), Salop and Stiglitz (1977) and Stiglitz (1979a,b, 1986, 1989a).
11. Stiglitz, (1987b).
12. Greenwald and Stiglitz (1989, 1995).
13. Greenwald, Stiglitz, and Weiss (1984)
14. See Fisher (1933).
15. See Stiglitz (1997b, 1998a) for brief descriptions of some of my views concerning these experiences.
16. See Stiglitz (2001a).
17. See Greenwald and Stiglitz (1999).

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