

“The Rise of the New Economy and Its Implication for Fiscal Policy”

Vito Tanzi

Carnegie Endowment For International Peace

Leon Koźmiński Academy of Entrepreneurship and Management (WSPiZ)

Distinguished Lectures Series No. 2

Warsaw, March 29, 2001

This is the transcript of the Distinguished Lecture held by Professor Vito Tanzi at the Leon Koźmiński Academy of Entrepreneurship and Management (WSPiZ) on March 29, 2001 year. Transcript reflects the character of the lecture, its liveliness and colloquial character. It is intended to preserve not only the message, but also the atmosphere of this memorable event.

Andrzej K. Koźmiński: Ladies and gentlemen, dear friends, we are starting another part of our conference, which is going to be conducted in English. We are very privileged and honoured to host after Robert A. Mundell the second WSPiZ Distinguished Lecturer - Professor Vito Tanzi. Professor Vito Tanzi is certainly the worldwide authority in the field of taxation. Everybody has heard about the ‘Tanzi effect’. I give the floor to Professor Kolodko to introduce our speaker.

Grzegorz W. Kolodko: Good afternoon everybody. This is indeed my great privilege to host Professor Tanzi today here on the kind invitation of Professor Koźmiński, Rector of the Leon Koźmiński Academy of Entrepreneurship and Management, and with kind support of Telekomunikacja Polska S.A. and its chairman Paweł Rzepka. Professor Vito Tanzi is today’s WSPiZ Distinguished Lecturer. As it has been said by director Koźmiński, this is the second lecturer in the WSPiZ Distinguished Lecture Series. The series first volume has been published some time ago. I believe that in May we will have another publication with today’s contribution by Professor Vito Tanzi.

Professor Vito Tanzi is much more than the leading world expert on taxation and fiscal policy because he is the sort of economist who sees much more than just the topic of his research or his particular paper. He has immensely contributed to the theory of economics as well as public finance, yet he has specialised in financial policies, fiscal policies, tax administrations and he has been for a long time involved in policy oriented research related to these matters. Actually, for the last twenty years, since 1981 till the end of 2000, Professor Vito Tanzi had served as the Director of the Fiscal Affairs Department of the International Monetary Fund and in this capacity he worked on various issues on fiscal systems, tax administration and financial policies. At the same time, which is quite an exceptional achievement, he was also carrying on his research, which resulted in a number of publications world-wide.

For the last ten or so years, at least since we met in September 1989 in Buenos Aires, Professor Tanzi was chairing the International Institute for Public Finance. Professor Vito Tanzi has contributed also, I think in a significant way, to the transition process, doing research, giving advice, and writing publications on financial policies, and fiscal reforms in countries of post-socialist transformation. I consider myself as one of his students in a sense because I did learn a lot from Professor Tanzi's research, advice, knowledge and wisdom.

Professor Tanzi is a graduate and PhD of Harvard University. He has published an enormous amount of work in a number of languages, including a book on inflation and personal income tax; which I think has made history. Though, Professor Tanzi is much happier than all of us, because his name has been used in the economic theory to entitle the 'Tanzi effect'. All of us we are involved in the 'Tanzi effect' because if we pay taxes in an inflationary environment, in real terms we pay much less than we should pay if the taxes were withdrawn on the spot. In a sense what is good news for the taxpayer due to the 'Tanzi effect' is not really good news for the Finance Minister, because of the erosion of the tax bases due to the 'Tanzi effect'. Maybe Vito will tell us what one has to do to have his own effect or right or rule named after him or her, as we have 'Tanzi effect' or 'Phillips curve' or whatsoever.

Today's topic is very much linked to our conference, the topic that we are concerned with, that is the New Economy. Before giving the floor to Professor Tanzi, I would like to mention, in his CV, Professor Tanzi also refers to his book 'Economic Policy and Equity', which is available in the library. In this book we have a certain

collection of papers. I am very proud that my paper on equity issues and fiscal policy in transition economies is also included. But now back to the topic of the New Economy. Professor's Tanzi lecture today is on the rise of the New Economy and its fiscal implications. Please do not be confused because this is *in statu nascendi*. The lecture will be delivered today and it is not a published paper yet. So we are facing the act of creation. What Professor Tanzi is going to say will be said today and it has not yet been written or published. It will soon be written, because it is now being recorded and it will be published soon in our series. What we do have in the proceedings of this conference, and in the papers prepared for the conference, is another paper by Professor Tanzi: 'Globalization, Technological Development and the Work of Fiscal Termites', available both in hard and soft copy, in paper and on CD, in English and in Polish. Though what will be presented now is another contribution to this topic. Now, we are eager to listen to you, Vito. Welcome, thank you for accepting our invitation and the floor is yours. Thank you.

Vito Tanzi: Thank you very much Professor Koźmiński, and Professor Kolodko for the very kind invitation and for the kind remarks. I am very, very happy to be here. I remember the first time I came to Poland in 1989. Poland was a very different country at that time. Lots of changes have taken place in the world and certainly a lot of changes have taken place here. We hope that the world is a better world now than it was at that time, at least we are all optimistic. I was very happy to be asked to deliver this lecture, but in talking about it I feel a little bit like Christopher Columbus. When he arrived to America, he was interviewed by a reporter from 'La Nacion', who asked him to make some comments. He said: 'I have a great problem because I have no idea where I am, I have no idea how I got here, and I have no idea where I am going, the only thing I know for sure is that the government of Spain paid for the trip'. The topic really gives me a little bit of a problem. I had the choice of presenting an already written paper on fiscal termites, which would have been very easy. That is a nice paper, I thought a lot about it. Or I had the choice of trying to put together some thoughts. I want to emphasise that these thoughts are still developing, some of them will be more refined than others, some more firm than others, but it is really a collection of thoughts that I am going to present today.

Essentially I am going to talk about the rise of the New Economy and the implication for fiscal policy, fiscal policy intended in a broad sense, not in a purely Keynesian sense, but in a sense of the role of government and so forth. This is a big topic with many ramifications and it is really more the theme for a book than for a lecture; but I have to give a lecture so I will try to squeeze it in about 45 minutes.

There are at least three angles to this topic, or three aspects of it, which I want to deal with in order. First is the impact of the New Economy on productivity and growth and on macro-economic balances, including fiscal outcomes. In this afternoon section there was a lot of discussion about the impact on productivity, on efficiency and so forth. I want to come back a little bit to some of these points.

Second, I want to discuss something that has received almost no attention in spite of the tremendous importance of the topic. I would urge some of the students here to write a thesis on it. This is the impact of the New Economy on public sector productivity and behaviour and how the New Economy can affect the behaviour of the government. When I tried to learn a little bit about this I realised that there is very, very little written. I could not find any organised material. But I will report some of my own thoughts and some of the little that I learned about this.

Third, I want to discuss the impact of the New Economy and of the technological change combined with globalisation, on long term fiscal development. This third part comes more from the paper that was distributed and I will try to be brief. The other two parts are somewhat more speculative.

Let me start with the first topic, the impact of the New Economy on productivity in the economy. What is the meaning of the New Economy? It is very difficult really to get a precise definition. When I was preparing for this conference I read some of the speeches by Greenspan, who has been one of the most thoughtful persons concerning the meaning of the New Economy. Greenspan, as you know, first was somewhat sceptical about the impact of the New Economy. When the stock market started going up, and reached 6000 or 7000, he was talking about irrational exuberance. Then he became convinced that the New Economy was having a substantial impact on productivity; he began to change his view on the topic. Anyway, at one point he said 'It is information technology that defines this special period – he is talking about the period in the late 90s – Information technology lies at the root of productivity and economic growth'. In the United States, at least, something happened

around 1995. What happened is essentially that productivity growth - production per worker per hour, almost tripled from about 1% growth per year to about 3% growth. It was a dramatic change that brought about a tremendous expansion of the economy and this expansion came without inflation. The inflation rate has been remarkably low in the US and a lot of workers have been brought into the labour market. The unemployment rate has come down and the economy had been growing, at least up to this year, at about 5% per year.

The New Economy is essentially an information-based economy, an economy in which information and knowledge become very important. Those who are economists here, realise that there is a similarity, a relationship between the New Economy and the new growth theory that was advanced by people like Romer in the United States and a few others. Anyway, these theories are not terribly different from what Schumpeter was really saying at the beginning of the last century, about hundred years ago. The idea is that ideas and knowledge are more important than resources and tangible capital. Growth depends more on ideas and on knowledge than it depends on saving rates or investment rates; or, finally, than it depends on the ownership of natural resources and so forth. In fact it is very interesting that most of the countries that have grown a lot are relatively poor in terms of natural resources. If you consider Singapore, for example, a country I will discuss later on, except for a harbour, it has nothing else. If you consider Finland, a country mentioned earlier, it is relatively poor in natural resources. These countries that have been able to use knowledge and to mobilise this knowledge have been very successful.

The New Economy gives you access to much knowledge. All at once it opens frontiers. All at once the library of Congress, the biggest library in the world, becomes accessible to you. The Medical Library of Washington, which is one of the largest in the world, becomes accessible to doctors. Many of the obstacles that existed before disappear.

The capacity to use ideas and knowledge becomes obviously much more important than the savings rate and the investment rate. Economists are still driven by the idea that if you want a country to grow, you must increase the rate of investment to GDP or you must increase the rate of savings. The New Economy is saying that, perhaps as important as that, is the ability to develop skills and technology that allow people to use the computer, to get access to the Internet and so forth. The New

Economy has to do with the introduction and mainly with the spreading of this new technology. New technology, that is developed and is not monopolised by just one group, then begins to spread. It is a process - as Greenspan says - of creative destruction. In the process of creating new jobs and new activity, you destroy activities that existed before.

Some people have made the point that the introduction of the Internet and this new computer technology was very similar to the introduction of electricity, and some other inventions. What happened at that time, if you go back, you see that when these new inventions were introduced, at the beginning people did not quite know what to do with them. Electricity was perhaps a curiosity for a while and nobody could fully anticipate the full impact that this new technology would have on society. As time passed people could see more and more applications; and with more applications come the productivity changes.

As I said, Schumpeter was already saying some of these things around 1910 in his book on the theory of economic development. He was saying that growth really has little to do with the saving rate and with the investment rate, and much with how the resources a country has are combined and used.

What are some of the obvious uses of the new technology? One obvious use is instant communication with a growing number of individuals. The limit that you could only communicate with one person at one time began to disappear. Now, you can communicate with many persons and this is practically costless communication. This is the reduction in transaction costs that was emphasised by several speakers in some of the lectures this afternoon. It is now possible to get an immediate feedback from sales to production. This is a very, very important element, which has a lot of economic implications. Benneton, I think, exploited very early this possibility. They would get immediate information about sales - what colour shirts are people buying, yellow or red? If yellow shirts were being sold more quickly than red, this information was fed back to the production side. This reduces mistakes and introduces things like just-in-time techniques, which have an impact on inventory accumulation. Firms do not need to accumulate as much inventory as before, because they can communicate much more quickly.

All this clearly has tremendous impact on the economy. It has also an impact on price competition. There was an article, not too long ago, in the *Financial Times* saying that

some enterprises were complaining that in the past, in their relationships with customers, they did not have to worry too much about price competition. Now the customers can go over the Internet and find out how cheaply they can get the same product from somebody else. This is bringing a similarity of prices. Professor Blinder from Princeton has been talking about reality imitating theory. The theory of pure competition told you that in some way prices tend to be the same and this is happening more and more. Also there is an impact on procurement costs. Once you discover that there are suppliers out there that can provide what you want more cheaply, you go to them.

We have recently witnessed the growth of virtual products. This has been a tremendous development. A few minutes ago the idea was mentioned about the possibility of customising newspapers. I would not be surprised that in a few years we will have that. You will no longer buy a newspaper from the stand, you will make an arrangement with a newspaper company, and they will feed all the information you are mostly interested in and this information will come to you through your computer. You can do this now in so many areas, in the medical field for example.

What role can government play in this? Or better: what influence does the New Economy have on the way the government behaves? The government can help this process in various ways. It can help to create technical skills in the population. If the population has to access the computers and the knowledge available in the world, it would be good if the population has the skills to do so. The government can facilitate the introduction of these new skills in the economy.

The government can also remove regulatory obstacles to these developments. It is no accident that the New Economy revolution started in the United States and not in Japan. Japan was very advanced in terms of technology, but the revolution started in the United States. The reason is that the United States had far less regulations, far less obstacles to the introduction of these new ideas. The fact that the United States was better placed in terms of regulations, in terms of organisation for this, meant that the United States was much quicker, much more ready to take advantage of this new trend. If I wanted to make quick and, perhaps, dangerous reference to Poland, a country about which I know very little, I would assume that the technical skills in Poland are probably very good. You have a very educated society, but probably the

regulatory framework still needs a lot of attention.

The introduction of the New Economy brings many, many changes. It transforms the economy from a smokestack economy to one which enterprises produce lots of virtual products. It is very interesting that Microsoft, an enterprise which did not exist only 20 years ago, has now a value that is more than all of the steel industry in the United States. I remember, my first job, in the US Senate, and the preoccupation at that time that Russia, in a few years, would be producing more steel than the United States. This was considered a very dangerous development. Now nobody talks about the steel industry anymore. I was reading recently that three of the largest New Economy enterprises in the US have a combined value that exceeds that of the agriculture and the steel industry combined. These have been tremendous changes in the economy!

Is this something permanent or something that will change? What is going on in the stock market in the US today brings some pauses. Greenspan made an interesting speech about a year ago at the Economic Club in New York. He said that ‘...once in a century acceleration of innovation which has propelled forward productivity, output, corporate profit and stock prices at a pace not seen in a generation’ – this was the way he described the economy. At the same time he raised the question whether this was ‘...one of the many euphoric, speculative bubbles that have dotted human history’. He seems to have some doubts. My view is that we should not be misled by what is happening in the stock market. The impact of the New Economy on the real economy is real and this is not going to be changed, regardless of what happens to the stock market. But a lot of mistakes were made in the process. As was pointed out by one of the speakers this afternoon, many of the people who created these new companies, knew a lot about the technical side of the Internet, but very little about the economy, about business. So many of these enterprises inevitably have gone broke. But the impact of the New Economy on the real economy will continue. The Federal Reserve estimates that the growth in productivity in the United States will continue to be about three times what it was about ten years ago for the next several years.

The New Economy is also having an impact on the economic developments of various countries. The fact that the United States could grow very fast in recent years

means that the country is now producing a budget surplus. The Congressional Budget Office has predicted that over the next ten years the US economy will generate a surplus of about six trillion dollars! To give you a sense of the size of this surplus, it is about 60% of the present GDP of the United States. The assumptions on which these projections are based are questionable but they are made by very competent people who spend their professional life doing this. One would have to assume that this scenario of a big budget surplus would probably happen. This will create a new situation. When you compare the United States with Japan, where there has been much less of an impact from the New Economy, you find that Japan has now a public debt of about 130% of GDP, and is running a very large fiscal deficit. The United States has a surplus of a 3% of GDP at the moment and that surplus is supposed to grow to 5% in the next few years. Its public debt is decreasing at a very fast pace. Within 6-7 years the public debt of the United States might vanish. The New Economy has probably had a lot of impact in bringing about these changes in these two major countries.

This was a kind of introduction about the New Economy, on the impact of the New Economy, let me now turn more directly to the public sector and on the productivity and behaviour of the public sector. This is much more relevant to the question of fiscal policy. The potential benefit that may come from the New Economy to the work of governments can be enormous. Unfortunately, there has been very little in-depth study of this issue.

The hardware and the software for an electronically based government, for what I will call an e-government, have become much, much cheaper than before. Most governments can now buy the computer technology and the software for this. Some governments are becoming leaders in the use of these technologies by the government. By no coincidence, Singapore has been at the top in this as in other areas. It is a geographically small country but, I am sure, it has a GDP larger than that of Poland. It is ranked at the top by various surveys in terms of friendliness for business, in terms of having very few regulations, of having no corruption and so forth. This is an interesting country to which I will come back in a minute.

How can the new technology be used in the government? First of all it is possible to have electronic generation of all documents. Governments to a large extent are paper factories. Governments generate a tremendous amount of papers: certificates, diplomas, laws, regulations and so forth. The governments could provide much of these documents electronically through the Internet. There is the potential for a totally electronic and paperless environment, [in the public sector. We are a long way from there, but in theory it is possible. It is possible to have on-line government services. Now if you want to deal with the government you have to go specifically to an office, you have to go specifically during particular hours, you have to stand in line, sometimes you have to go back because the employee is not there or is not available. It has become possible to eliminate time and space as obstacles to the dealings that individuals have with the government. It is possible to introduce e-mails as a standard tool of communication between the citizens and the bureaucrats and among the civil servants themselves.

There is no reason why this could not happen. You could have, you begin to have this already, on-line filing of income taxes or other taxes. In the United States, in the last budget that President Clinton sent to Congress, they recommended that there would be a 10-dollar credit to anyone that filed their income tax electronically. Again, this filing of taxes electronically is happening in several of countries. In Denmark this process has gone so far as having the people not filing at all because now the government receives enough information electronically on people that many do not need to file. The government gets the information, determines the tax bill, and sends the request for payment to the taxpayer.

The possibilities are enormous. There is no need to have public employees in every corner of a country. Employees need to be stationed in particular places because the people in the area need access to certain public services, when that access is possible electronically there is no longer such need.

There are other possibilities. For example, there has been a movement in some countries for the government to go from having many offices dealing with many forms, regulations, authorisations and so forth, to having a single window. The use of a single window is an idea that has been pushed by an office of the UN. They say: 'why should you go to many offices if you want to open a new business. Why do you need to go to the Health Ministry, to the Zoning Ministry and so on...Why don't you

create a single window?’ This single window idea has begun to be implemented in various parts of the world. The citizen goes to one place where somebody receives him. The latter states what kind of service he needs and in one place gets all done. With the New Economy the single window could be accessed electronically. There is no longer a reason to have a physical place for the “window”. It is now possible to send the request to the government for a driving licence, a birth certificate, a marriage certificate, permission to build a house, to build an extension to my house, or to become an importer. These requests could go to this single portal and could be answered electronically.

This sounds like a dream. Actually, and this is important, some countries are already trying to do something along these lines. In the future those countries that move faster than others will have a tremendous advantage because the government will become a partner in economic activities rather than a limit to them. Obviously, this new approach will increase the transparency of government operations. When you send an e-mail and you get a reply, it is a much more transparent process in many ways than when you see someone privately. In this way, transparency will definitely increase. Elimination of physical contact can help avoid abuses. The work on corruption, for example, has emphasised the fact that the more physical contacts there are between citizens and government employees the more likely it is that, at some point, corruption occurs; familiarity creates the possibility for corruption. In the area of taxation, for example, in countries where in order to pay taxes, taxpayers have to visit frequently tax inspectors, after a while they begin to offer a coffee to the tax inspector or a dinner or a gift. Pretty soon strange things happen. When dealings are by e-mail, personal contacts are eliminated, and these problems tend to disappear.

Clearly with this new technology there can be greater access for citizens to government services. Regardless where they are in the country, they would be able to get what they need. If they need a passport they will not have to come to Warsaw to apply for it, they will be able to do that from wherever they are.

Once this new approach is introduced, the government will begin to adjust to the people rather than the other way around. Think of it! We are so used to the idea that we adjust to the government, we adjust to its working hours, to its holidays, to the places from which it operates, to the occasional unpleasantness of the bureaucrat, who may be upset because they have too much to do today. We have been adjusting for a

long time to the government. But the opposite can happen. It should be possible to create a technical bureaucratic or a service-oriented government that is there to help the citizens and not the other way around. I hope that Professor Kolodko will forgive me if I pass along an idea that I got from him. It would be possible to establish, at some point, the condition for direct democracy. If everybody had a computer, and everybody had access to the Internet the government could survey almost everybody and get immediate reaction to its proposed policies. This would be a form of direct democracy.

I have given you this rosy picture but, as somebody put earlier, the devil is always in the detail. There is often another side. First of all, the benefits of the New Economy will not happen automatically. There is a need for some specific action on the part of the government. Some transitional obstacles may slow down the process or prevent its full implementation. Let me mention some of these obstacles without going into much detail.

First of all, many civil servants are technologically illiterate, are e-illiterate. They need to be retrained. What do you do if you need to introduce the use of the Internet or new technology and you have a lot of employees who do not want to learn or are unable to learn and you are prevented from moving or firing them? Immediately you see that laws and regulations can interfere with the process of bringing the benefits of the New Economy to the government. Low wages can be an obstacle to attract needed people; or, alternatively, the best-trained people may leave. This problem had existed in Russian tax administration: as employees have acquired good training, they have left the government to move to jobs where they received ten times the government salary. This problem is not typical of Russia; it is a problem in many countries. So, if wages are low and they prevent the government from hiring people with the right skills, this clearly can be a problem.

The full implementation of e-government may come only when all civil servants become e-literate. There is a problem that is common when two different systems coexist. In China twenty years ago everybody had a bicycle, and the bicycle traffic flow was smooth, although slow; there were no major traffic problems. In many places where everybody drives a car, the movement of cars is normally good, except at some times of the day. However, when bicycles and cars are mixed, as happened in China in more recent years, then you have major problems. When the two systems are

used within the government, there will be some problems unless it is possible to isolate the parts of the government where you can introduce fully the new technology.

We know from economic theory that alternative *B* may be better than *A* but sometimes the cost of getting from *A* to *B* may be very high. This is something to worry about. A digital divide may exist between a part of the government, which becomes e-literate and a part of the government that is not e-literate; or it may exist between the government and the public. These two types of digital divide are something to worry about.

The introduction of the new technology will give full benefits when everybody in the government is skilled to some extent, at least at a minimum level to cope with it. For a while there will be a discrepancy between the availability of hardware and software and the people's ability to use them efficiently. What is most easily accessible is the hardware and the software. Now you can buy it cheaply. But there is this classic problem that to some extent, the new hardware and the new software are bought but they are not used efficiently. So garbage in, garbage out. This problem has often been encountered by the IMF in its work with tax administration. Fund missions would go to a country and find that the tax administration had been talking to the French, the Germans or the Americans and had been convinced to buy computers and spend a lot of money without a clear idea about what to do with them.

The point is that there is a need for a new strategy, for new thinking about how to organise things before the hardware is bought. As importantly, it is not possible to have a computer revolution without a revolution in government management and major changes in regulations. Many regulations would need to be changed. Let me give an extreme example: until recently in Italy any time a citizen needed to deal with the government had to present a request, the request had to be made on a special paper called *carta bollata* which incorporated a stamp tax. Imagine the problems that this would create when requests are made by computer! Clearly major changes are needed. In many countries relations with the government require personal appearance and signatures. So new ways of dealing with the government need to be invented. Some legal rearrangements need to be made. To give you an example, in many countries the payment of taxes still has to be done in person. You have to go to an office, stand in line, sometimes wait for hours and make the payment of taxes. Clearly all these ways have to be changed.

Let me also mention some broader problems, in some ways more serious. All the problems that I have mentioned up to now could be in theory solved. The one I am going to mention is more complicated. Governments have different nature. Around the world there are at least two different types of governments: governments that are democratic and service-oriented and whose function is to help the citizens; and governments that are of a surveillance or dictatorial type. These are governments that exploit the people. Which one of these two governments would use the new technology for the benefit of the citizens? Obviously the first kind of government, that is the service-oriented and democratic one. If there is a danger that the government will exploit the new technology to get for itself additional power, then there is a problem. This is something to think about.

Let me mention briefly a case study of a potential good use of the new technology. Singapore is always a country worth studying. As with many other things, it has jumped immediately in front of everybody else in the use of the new technology. Recently it has created a three-year programme with a budget of one billion dollars to introduce the new technology in the government. The government of Singapore plans to create a knowledge-based government where all public servants will be e-literate. Within three years a civil servant that can not make use of a computer will be asked to leave the government. This sounds very harsh. It is the kind of problem which will prevent the introduction of this new technology in many countries, but that is what the Singaporeans are planning to do. They will reengineer all feasible public services for electronic delivery. They say: 'Regardless of what kind of laws we have, what kind of regulations, let's identify everything we do within the government and see what can be delivered electronically'. The objective will be to achieve operational efficiency and to abolish paper in public sector dealings. Within three years public employees will communicate only by e-mail. Whether they will succeed in doing this remains to be seen, but they have been very focused and effective in other areas. Other countries are also trying to go this way but not as fast or as far. Singapore is clearly the leader in this and its experiment merits to be studied in detail. The UK has established a senior government position to oversee the introduction of the new technology within the British government.

There is a gradual approach and a shock therapy here. The shock therapy requires the removal of many existing obstacles to moving personnel, replacing civil

servants and so forth. Not all countries can do that. In some countries it would be impossible. In Italy for example it would be impossible to do something like this. But just imagine the competitive advantage of countries that can do this quickly

Introducing the new technology into the government would require looking at all the existing regulations, labour laws, tenure in jobs, and so forth. With the new technology the role of the government will become more important in determining economic performance. The challenge of competing with the Singaporeans of tomorrow must be recognised. As was said several times in previous panels, globalisation is here to stay: it can not be stopped. Those who will first take advantage of this fully will acquire competitive advantage over others.

By the way, there are other changes that can come with this. For example, in the UK they have introduced what they call 'Citizen Charters', which have established the times within which the government must react to a citizen's request. When public employees need to be visited for a request, they may react very slowly if not at all to it. But once the requests can be mailed through the Internet, it becomes feasible to impose time limits. As long as you go and you visit a bureaucrat somewhere and you have a discussion, he promises you a near answer and sometimes months or years can pass and nothing happens. How long should it take for somebody to get a new passport? It is something that we rarely think about. In some countries where they are introducing the new technology within the government, they are also trying to introduce these time limits. In the UK they have specified that citizens should not wait more than so many days to get a driving licence and other particular documents.

Let me deal a bit with the third part of my talk, the impact of the new technology on longer-term fiscal developments. I have talked up to now about how the role of the government can change in the economy. But, of course, the role of the government consists not only of providing services but also of spending money.

The government has many programs – pensions, health, education, and it needs to raise taxes. There is some literature that deals with this aspect. It raises the possibility that the new technology could create problems for the government in raising tax revenue in the future. In some of my work I have used the term 'fiscal termites'. If you know, termites are little creatures that get into wood and bit by bit eat the wood. When they are discovered, it is sometimes too late. These fiscal termites may be particularly important for governments that raise and spend a lot of money. At

the Singapore or Hong-Kong low level of spending, the termites may not do much damage. At the spending level of Sweden, Denmark, the Netherlands and some other countries, the termites may create major problems.

The reason is that the combination of globalisation and the new technology will bring about many problems for tax administrators. I will mention a few without going into details.

One is electronic commerce. Electronic commerce is creating lots of headaches for tax administrators. Until recently people would go to a shop and buy goods. The shop would collect the tax. When things can be bought electronically, it becomes much more complicated. It becomes more complicated when the goods come from outside the country and when customs officials are less and less able to control the importation of these goods. The United States Customs now control only 3% of the items that come into the United States and within three to four years it plans to reduce this three per cent to one per cent. So 99% of what comes into the US will not be controlled by anybody. You will be able to send an e-mail to somebody in the Bahamas or elsewhere and your purchase will be delivered directly to your house and you will completely escape taxes.

There is the problem of virtual products. A lot of tax items are becoming virtual. They will not be bought from shops any more. Before one would go and buy a CD, in the future most people will go directly to the Internet to buy movies, medical advice, CDs and so on. Now you can get a degree through the Internet in the United States. The University of Phoenix is totally run on the Internet. You never need to visit it to get a degree. You can do everything totally by Internet. There are so many things that you can get through the Internet and the number will increase with time. Suppose that a satellite in space sends these virtual products to you. Even imagine the possibility of taxing the source, if you could. In legal terms, it is really difficult to do that but even if you wanted to do that, it would be very, very difficult to do it. Sometimes the identification of the residence of the seller and the buyer becomes very complicated. You can trade Russian art for American buyers through an Internet site that can be in the Bahamas, in Antigua or in Paris. The world is becoming very complicated.

The advent of electronic money is still at the very beginning of its usage. I came here from Munich where I was at the university. The first day I was given an

electronic card for lunch. When you went to buy food you would just insert this card and the lunch money would be subtracted from it. It is a very primitive application of electronic money. But this idea is going to spread. It is just a question of time before this electronic money begins to replace a larger and larger share of regular money. Electronic money can be used on-line, where somebody keeps track of its use. Somebody could sell you a card and keep track of how you were using it. Or it can be used off-line, and nobody would keep track of its use. It can be accounted for or not accounted for. You could buy some electronic money from somebody who uses an account in a country where banking secrecy prevails. There are, therefore, a lot of problems, which are just beginning. This is a termite, which has not caused any damage yet. But it is there; it is just a question of time before it begins to have an impact.

You also have intra-company trade and e-commerce. A lot of the trade between companies now takes place electronically and there are problems with that.

There are offshore financial centres and tax heavens. To a large extent they have been stimulated by the fact that large amounts of money can now be moved electronically around the world. This, again, will create more and more problems for tax authorities.

There are financial instruments that have become more and more complex. There is a new, fascinating book, which I highly recommend. It is called 'When Genius Failed'. This book was just published a few months ago. It is an account of the rise and fall of Long-Term Capital Management, the hedge fund that went broke in 1998. This book gives you a sense of how complex these financial instruments have become. It is becoming very difficult now to identify income and where its originates and distinguish it from capital gains. This is important for taxation and is the result of the new technology.

I do not want to spend more time on this. The point is that we are entering an era where we need to rethink many of the taxes that we used to impose. The world was very simple one time when most people earned income from wages and from large establishments. People worked for the government or for General Motors or Bell Telephone and they received their income from them. Most incomes were earned domestically in the country where people lived and most of the money was also spent domestically. But the world is changing. Now more and more incomes are no longer

wage incomes; now more and more incomes are of other types. More and more incomes are earned abroad. People are now more and more linked with foreign activities.

These developments will inevitably bring a change in the way the governments finance themselves. Nobody knows exactly what will happen over the long term. But this is an aspect of the new technology that will not necessarily be for the best. Some people who do not like governments argue that this would be very good because it will bring about competition in public sector and will reduce revenue for the government. Thus, the governments will be forced to become more efficient and spend less. Obviously, a government that wants to play a role not only in terms of allocation, but also a social role such as supporting people who are ill, old, poor and so forth will have financial problems.

In conclusion, the New Economy brings good and bad things. We are still at the very beginning; it is very difficult to understand exactly how these things will work out. I tried to list some of the advantages, in relation to the role of government as to how the New Economy can make governments more efficient. At the same time I have mentioned that there are some developments that could create future difficulties. Maybe when we meet next time, a few years from now, Professor Kolodko will tell us which of these two aspects has become more important. Thank you very much.

Grzegorz W. Kolodko: Thank you very much Vito. That was really enjoyable. I still hope that this New Economy is going to bring us more good than bad news. Definitely I am not one of these fiscal termites, since once upon a time I even used to be finance minister and I did take care of the revenues and the state budget. If you do not mind I will tell a little bit of our private story.

Two years ago, or so, we were dining somewhere with our wives in Georgetown, in Washington. I asked Maria, your beautiful wife: ‘Did you ever buy anything on the Internet’ and she said: ‘Yes. I bought a refrigerator yesterday’. I said: ‘Did you buy the refrigerator through the Internet?!’ She said: ‘Yes, I did.’ I asked: ‘How much did you pay?’ She said that she had paid \$699. ‘What is the retail price?’ – I asked. She answered that it was \$999. I said: ‘So you made 300 bucks? That’s 30 per cent!’

The next day I went to Tower Records and was going to buy ‘Great Pianists of the 20th Century’. It was \$25.99. So, I decided to think it over a little bit longer. Then my daughter asked: ‘Why not buy it over the Internet?’ So I bought it through the Internet. And I paid \$19.55. So, I saved more than 20 per cent.

But the question is who has lost these dollars. Maybe, as always, somebody’s good news is somebody else’s bad news. That is what we have to discuss when we are talking about fiscal termites, the good and bad sides of the development of the New Economy and its fiscal consequences. So you have the refrigerator, I have ‘Great Pianists of 20th Century’; we enjoy this New Economy from these perspectives. However, somebody has lost the tax revenue.

Now we are going to continue our discussion and I would like our Rector, Professor Koźmiński to chair the debate, please.

Andrzej K. Koźmiński: I think we have at least half an hour for a discussion. The floor is open for questions and remarks and whatever. Please introduce yourself when taking the floor. Who will be first?

Andrzej Wojtyna: If I may have three questions, it is not too many, I hope. The first two will be related to the first part of your lecture and to the policy mix in the United States and the role of Mr Greenspan. Now there is a controversy regarding tax reform or reduction in taxation and there is a strong pressure because of this slowdown in the American economy. The monetary policy measures will be in force only after the time lag which may take several months and therefore there is a strong pressure on using tax reductions, again, more for cyclical reasons rather than for long-run tax reforms. I would be happy if you could comment briefly on it. This is my first question.

The second one is also regarding the controversy that has been a part of the New Economy debate. If at all, and if so to what extent, should monetary policy interfere with the stock market in your opinion, that is whether Mr Greenspan should have acted a bit earlier and not let the stock bubble grow that much. This is also quite a controversial issue in monetary and not only monetary policy but in economics in general.

The last question pertains to the last part of your lecture, which tackled the issue of those fiscal termites. May I ask you directly to what extent new technology or the New Economy has affected the 'Tanzi effect', so far? Are there any practical examples regarding tax collection, because I think that there can also be positive and negative effects.

Vito Tanzi: These are three very interesting questions. One advantage of being a little bit older is that you are not very much impressed by the latest trends, you have seen them. I was a graduate student at the time when almost nobody believed that monetary policy could do very much about a recession. You remember the famous expression by Keynes that you can pull a string but you can not push it. It was the thinking prevalent in the 60s and 70s. Then we got to the 80s and people somehow became enamoured with monetary policy. In my view people have come to believe that there is much, much more power in monetary policy than I think there is. I just do not believe that the change in the interest rate and the discount rate or the rate that the Federal Reserve controls, by 50 points can make all that much difference. If you look at what is happening to some stocks, some stocks change by 20 per cent in one day. There is then no comparison between those numbers. The cut in interest rates will help somewhat, but I do not think that this is what will determine whether we will continue with a recession or not.

The other part you mentioned regarding the tax cut, I would not do it simply because of the recession because taxes too have lags; you mentioned the lags in monetary policy action but also in fiscal action there are long lags. I have studied that tax proposal recently, and have become much interested in it. I started with the idea that there should not be a tax cut; that it would be a mistake. But by the time I spent some time really thinking about it, I became convinced that a tax cut was almost inevitable. The size of the cut is a different story. The US is running a surplus of about 2.7% of GDP this year. Under the most likely assumptions this surplus will keep growing and might reach 5% of GDP by the year 2010. It is good to have a surplus. You can buy back the public debt. But by 2006 the United States' projected surplus will allow the government to buy all the debt that it can buy back. It cannot buy the debt that has 30 years maturity. But all the debts that can be bought back because of their maturity will already have been bought by 2006. What should the government do after that with

budget surpluses of 3-4 percent of GDP? Three-four per cent of GDP in the United States means 300 or 400 billion dollars a year. You select a small group of individuals and say: 'Go there, buy houses'? It is very difficult. This would imply a tremendous nationalisation of the economy, or the opposite of privatisation, if this were allowed to happen. That is the part that really concerns me. Of course, there is always another possibility, that the politicians will see all this money and say, 'let's spend it'.

On the second question in regards to the monetary policy and the stock market; when the stock market went to 6000 I said that it was much too much. By the way, Greenspan was in agreement with that view; he was making statements about 'irrational exuberance' and so forth. Then time passed and the fall in the market did not happen. After a while one gets used to the new levels and forgets that they are very high levels. I would not see the recent fall in the stock market as a tremendous danger and I believe that monetary policy should not begin to play a game, to try to influence the stock market. You just do not want to do that. This happened in Hong-Kong three years ago during the financial crises. The stock market came down so dramatically that the central bank decided to buy stock and made a lot of money. But as a principle, I would not support this kind of intervention.

The third question – the Tanzi effect and the fiscal termites. There is only one connection that I see between the New Economy and that effect. I was in Brazil some years ago when the Brazilian inflation rate was about 30 per cent per month. I was at a conference with James Buchanan, the Nobel Prize laureate, and Prof. Buchanan was totally amazed that this country with 30 per cent inflation was able to collect taxes. There was not much evidence of the Tanzi effect under these special circumstances. What happened? Because of the widespread use of computers they were able to adjust the tax liabilities by the day. In other words, they would compute an interest payment from the taxpayer to the government, which was in line with the inflation rate plus something. They could do it only because of the fact that in Brazil there was a large use of computers. That is where I see the link.

Marcin Piątkowski: My first question will be a quantitative one. I was wondering if you are familiar with numbers, most likely in percentages, of the benefits that we could reap if we transformed the paper-based government into an e-government? In other words, in terms of the percentage of the costs of the administration or in

percentage of the GDP of a country, what would the numbers be? My question is also based on the research done by GoldmanSachs, the investment bank, which looked at the business side of the e-economy. They found that through implementation of e-business solutions, various industries are able to cut costs from 2 per cent up to extraordinary 30 percent. What would then the numbers be for the e-government? What would be the factors that would decide the range of values for different governments?

The second question concerns behavioural economic aspects of the government. If you were to become a responsible person in the Italian government for its transformation into e-government, what steps would you be taking? The example of Singapore is so much different from Poland and Italy. Italy is much closer to Poland in mentality terms than it is to Singapore. Would then your actions be different than in the Singapore case study that you presented? Which steps in e-transformation would be, in your mind, acceptable for local people?

Vito Tanzi: These are both questions without answers. As regards the first one, we know that there are possibilities of very large savings. Professor Kolodko was mentioning the savings in refrigerators and in CDs. We know that there must be savings if the productivity gain per year tripled as it did in the U.S. If you look at the data, up to 1995 the US productivity gains per year were about one per cent, and then they went to almost three per cent. This is a tremendous increase in productivity. Clearly, at least in the private sector, there are important gains. Whether these are once for all gains, (once you exhausted them, then it is the end), it remains to be seen. Probably, there is a lot of this kind of thing. Once you take advantage of all the inefficiencies that existed before, you move from a level of income to a higher level of income, after that the growth rate goes back to the traditional one.

In the government it is much more difficult to predict. It will depend of course on what the government does. If you could have changes in the government that eliminated the government as an obstacle then you could get large gains. Let me give you an anecdote. Economists do not like anecdotes, they say. But as a famous economist once remarked: 'One story is an anecdote; two is data'. One time I was in a mission in Morocco. I had been invited by the government to recommend a tax reform. When we got there we were told that they wanted us to meet with a group of

entrepreneurs. We met with this very articulate group of about 15 people, and we spent about 3-4 hours with them. Do you think we talked about taxes? They knew that we were there for the tax reform. But they were not much interested in talking about taxes. They wanted to talk about authorisations and regulations. They were complaining that in Morocco for almost anything that you want to do, you need some authorisation from the government. You want to borrow money from the bank, you must have an authorisation. You want to build a new enterprise? You want to open a new shop? You need an authorisation. But what happens? When an entrepreneur contacts the government, he is told that they will get back to him. He waits and waits and, although the group we met was not very explicit, the bottom line was that unless they bribed somebody, the authorisation would never come. If there are these obstacles to economic activity and they can be eliminated this must be a tremendous advantage. In terms of quantification I have no idea how much. But the more the government interferes in the actions of the individuals, the more gain there would be from the changes.

The third part of the question is more complicated. On the one hand, on purely efficiency ground, Singapore is ideal. On the other hand, if you have a strong social consciousness but you say: 'well, how can I fire somebody? This person had a government job for 20 years. But he cannot do the new job and he will not learn it because he is too old. But should I fire him? These are very sharp dilemmas. What I know is that if we are going towards a world that is highly globalized, in which Poland or Italy will be competing with Singapore, then these countries could have problems. If a country wants to hold to the traditional way while the world continues towards globalisation and openness, this country will face a hard time. It is no accident that if you go to the ranking of the world competitiveness report, you will find Italy at the 32nd position and Singapore at number 1 or 2. Over time countries will be forced to change unless the process towards globalisation stops. After all globalisation is the result of two factors: one is technology, the other one is policies. In theory, at least, there could be a change in policies so that restrictions could be put on trade and on movements of capital. There are many things that can be done. Technology may not prevent a country from doing some of those things.

Wojciech Wińkowski: I enjoyed your lecture very much and the answers to some of the questions. The first answer to the question of Professor Wojtyna is the one that I cannot be satisfied with. You have downplayed the role of this coming tax reform in the US. You have just counterbalanced all this good that can come with it with the fact that right now the US government has this surplus and that in years to come the surplus will grow to 600 billion dollars. Therefore there is not a need to lower taxes. I think that lower taxes play a very positive role and there are various aspects related to that. This is the efficiency of allocation of various resources. I think it is good for the individual and for the enterprise to have a lower tax burden. I just wonder why you have downplayed this tax reform which is to come? Why are you just using this one argument related to the budget surplus and the growth of it?

I can agree with you that, for example right now, the US government has problems with this slowdown of the economy. Maybe these tools which Mr Greenspan has in his possession are not so powerful and important as they used to be and as powerful as people used to think, as if monetary policy could solve all problems if properly played out. Maybe we came to the point to believe that simply monetary policy is the best tool to fight inflation and probably no more than that.

Still I think that if we think about reversing the trends in the US economy, this tax reform can be an important item which government has in its possession. If you could dwell a little bit on it... Because I would like to see what are the causes and what the government can do to speed up the restoration of equilibrium. Is it that the bubble related to the overshooting of the shares on the NASDAQ stock exchange has to go down and only after that we can think about the re-balancing of the economy and then the multiplier effect will take place? Since this is a demand-driven economy it may take quite a long time. If we have this accumulated wealth of the US consumers and this is a demand-driven economy and when we have shares going down to the extent that the demand can be a barrier, then maybe lowering taxes and therefore leaving more money in the possession of the enterprises and the people can be a factor or a kind of tool, (maybe impotent at the moment), to have this economic growth speed up again. If you could be more elaborate on the question of this tax reform and the US economic situation and the role of the government under these circumstances. I would appreciate it very much.

Vito Tanzi: Let me elaborate a little bit more. First of all I should say that I believe in historical regularities. When people tell you that the future will be very different from the past, always accept it with some scepticism. The past in the US has been one where every eight, nine years there has been a recession. This slowing down now has come one year after the record for the length of the cycle was broken. In other words, historically you should have been expecting this slowdown of the economy. In fact, I would have been surprised if the economy had continued to grow without any evidence of a slowdown.

Secondly, there were clearly major mistakes made in the kind of investments as we were discussing earlier this afternoon. These young people, 23-24 years old, have many bright ideas. They could convince somebody to advance them millions of dollars to open a new Internet enterprise and sell it for phenomenal amount. A Korean guy in Washington, 27 years old, created a new Internet group and sold it for 700 million dollars. If you look at the ranking of millionaires, many are young and new. Clearly, there have been great mistakes made on these types of investments. This economic slowdown is in a way like the summer following spring; it is almost a natural development. The government is running, now not in the future, very large budget surpluses. Furthermore, if one assumes that the economy over 10 years will grow at a rate of 3 per cent, which is close to the historical figure for the past 20 years or so, it is reasonable to expect that taxes revenue will increase dramatically, then a reduction in taxes seems necessary. Also a detail that I did not mention before, is that the level of taxation in the US went up sharply around 1991-1993 by about 3 percentage points of GDP while defence spending came down dramatically. These factors improved the budgetary situation. If the world remains peaceful, defence spending will probably not increase much. The level of taxation, as long as the economy over the 10-year period grows at 3 per cent, will keep growing at a large pace. Under these circumstances, for long-term reasons, I would want to have a tax cut. A Keynesian that believed in aggregate demand should worry about these budgetary surpluses without a tax cut.

The question that I think you were driving at is: ‘What about doing the tax cut immediately?’ It is fine. If you could do it immediately, it is fine. If you need a few months, it does not really make all that much difference. If you can do it immediately,

when you have a slowdown of the economy, obviously it cannot be bad; it can only be good.

What kind of tax cut it is, is a different story. You have a tax cut that benefits mostly the top one per cent or you have a tax cut that benefits those further down the social scale. The size of the tax cut can be a matter for an argument. Whether 1.6 trillion dollars is the right amount or it should be one trillion or two trillion, these are all details that one would have to deal much more seriously with.

Generally speaking, I do not disagree with you. I think that a tax cut would be a good thing. Income taxes in the US, unlike what people say, are quite high today as illustrated by marginal tax rates. The marginal tax rate at the federal level is 39.6, almost 40 per cent. But people always forget taxes at the local level. The taxes that I pay are close to 50 percent. Fifty percent is quite high.

Danuta Gotz-Koziarkiewicz: I would be happy to learn what is your opinion about the prospects of fiscal policy for just the average economy in transition. Don't you think that there should be some asymmetric trends on the side of revenues and expenditures? Expenditures would be more or less, an obligation covered by the government and revenues would be, more or less, dissipating or very difficult to be reached with the given state of the world economy. When you are talking about corporate income tax, it would be lost because of international enterprises, because of fiscal termities. If we are talking about indirect taxes, turnover tax and excise, it would be avoided to a large extent because of this e-trade. What would be lost would be some portion probably of individual income tax, which should be more attainable, more feasible in terms of these new possibilities. This fiscal policy has been thought to be still very important for economic processes, for macro-policy in transition economies.

Vito Tanzi: I am not sure that I fully understood the question. Let me try to deal with it. The last part regarding whether you should use counter-cyclical fiscal policy, one should never rule it out but one should always recognise the danger of going that way because many things are easier in one direction than in other direction. It is always easier to cut taxes than to increase them. Government spending is the other way around. If the government has total control over the fiscal accounts, if it can change

taxes and change government spending, then counter-cyclical policy is something that you might want to pursue under certain circumstances, provided that you do not already have a high debt-to-GDP ratio.

The other point is (this part of the question was a little bit less clear), that in the case of transition economies, there was a process that should have taken place, though has not been completed yet, and is really the rethinking of the proper role of the government in the economy. In many cases there has been a progressive adjustment from a role of the government that was clearly very large 15 years ago. It was very large because the government was doing essentially everything in these economies, even in the economy of Poland, the private sector did not account for more than 20 per cent. Then the situation changed. It was really never very formalised; I do not know how to put it but a very rigorous discussion about what the government should do never took place. In many cases what happened is that the budget was cut for various activities while the role of the government did not change. In many transition countries there was public health care, but little money for the health sector. Hence the quality deteriorated. There is still totally public education. Maybe I misunderstood your question. You want to specify it a little bit more?

Danuta Gotz-Koziarkiewicz: Sorry for not being clear in asking my question. I am interested simply in good or bad prospects for fiscal policy for a government, for example the Polish one, in the not very distant future. Because of new trends of income, of tax revenue being dissipated or lost because of some new trends in international economy. This corporate income tax is being lost to a large extent because of very real possibilities to avoid this tax, not to pay it or so. Also indirect taxes like turnover tax or VAT or excise tax can be avoided because of this specific form of trade in the Internet. I am considering a question: 'What form of taxation would be left for the government to be really feasible, to be available, to get the revenue to cover public expenditure'. For the government still must pay these expenditures though not having enough financial means. I am just considering these asymmetric trends on the side of tax revenue and of public expenditure in this new world.

Vito Tanzi: It is a very complex question and it is very difficult for me to answer it, specifically in relation to Poland. I did not work with Poland for quite some time, so I do not know what the situation is, what is the level of spending and taxes. But I will give an answer in a more general form.

First of all, I would get rid of most tax incentives. In many countries there has been a temptation to use the tax system for influencing the economy but either one buys a market economy or one does not. If you buy a market economy, the government should not stay out in terms of certain programmes or spending but should stay out in terms of influencing the market through incentives. I would limit this to the maximum possible.

I would simplify the tax system. Tax systems are always more complicated than they need to be.

I would try to find sources that are immune to these foreign pressures. There are always taxes, taxes on land for example, properties, taxes on cars, these kind of taxes which are feasible even if you have this pressure coming from outside.

I would certainly look at the spending programs and see whether everything that the government is doing should be continued. It is really complicated to give a satisfactory answer.

Andrzej K. Koźmiński: Thank you very much Professor Tanzi. We all thank you for this extremely interesting lecture and your very extensive answers to sometime extensive questions. We hope to host you again at Leon Koźmiński Academy and now we would like to thank you very much Professor for your contribution. Thank you.
