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Report on the Project LINK Meeting

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1. Introduction

The Spring 2005 meeting of Project LINK was held in Mexico City from 16 to 20 May 2005, hosted by the Universidad Nacional Autónoma de México (UNAM). More than 100 participants from over 40 countries and several international institutions attended the meeting. The agenda of the meeting comprised three broad sections: economic outlook, economic policy issues and modeling techniques. This report summarizes presentations and discussions during the meeting.

The LINK Global Economic Outlook prepared by the Economic Monitoring and Assessment Unit for the meeting, the LINK Country Reports prepared by country participants, and most of the other documents presented at the meeting are available on the United Nations website (http://www.un.org/esa/policy/index.html) and the Project LINK Research Centre website at the Institute for Policy Analysis at the University of Toronto (http://www.chass.utoronto.ca/link/).

On the morning of 16 May, **Luis Miguel Galindo** of UNAM welcomed the delegates, noting that the conference represented an outstanding event for UNAM and expressing his thanks to the organizers and participants. **Peter Pauly**, Director of the Project LINK Research Centre at the University of Toronto, also welcomed the conference participants and presented a brief overview of the program. **Roberto Escalante**, Dean of the Faculty of Economics at UNAM, pointed out the need for the economic sciences to find solutions to increasingly complex problems and emphasized the role of LINK as an opportunity to establish closer international cooperation in the attempt to understand and deal with global economic issues. **Rosaura Ruiz**, as the representative of the vice-chancellor of UNAM, highlighted the importance for UNAM in addressing issues pertinent both to Mexico and the world. In this context, academic research served as a tool to give decision-making power to the public in solving problems in such areas as health, education and the environment. Ms. Ruiz added that the conference would help to strengthen UNAM's links with international institutions and she expressed the hope that the discussions would contribute to fostering an optimistic atmosphere for solving the problems faced by developing countries.

2. World economic outlook

2.1 Global economic outlook

Ian Kinniburgh (United Nations) began his presentation of the *LINK Global Economic Outlook* by emphasizing that the implied assumptions and the basic scenario were intended to serve as a starting point for the discussions at the conference. Oil prices are expected to show a downward trend in the medium term, with supply and demand returning to balance, while prices of non-oil commodities are likely to grow at more moderate rates in 2005/2006. With respect to the twin deficits in the US, no hard landing is expected, but they continue to pose a significant risk to the outlook. While the fiscal balance is expected to improve, little or no change is forecast in the current account

Table 1: Gross domestic product and world trade, 2004-2006
(Annual percentage change)

	May 2005 forecasts [a]			November 2004 forecasts	
	2004[b]	2005	2006	2004	2005
Gross world product	3.9	2.9	3.0	3.8	3.2
PPP weighted	4.6	3.6	3.5	4.5	3.8
Major developed economies					
Canada	2.8	1.6	2.8	2.8	2.7
Japan	2.6	0.7	1.5	3.6	2.0
United States	4.4	3.1	3.1	4.0	3.0
European Union (EU25)	2.3	2.0	2.4	2.3	2.3
France	2.5	2.0	2.2	2.5	2.5
Germany	1.6	1.0	1.8	2.0	1.7
Italy	1.0	1.1	1.5	1.1	1.7
United Kingdom	3.1	2.7	2.5	3.3	2.9
Memo item: Euro Zone	2.0	1.6	2.1	2.0	2.1
Russia	7.1	6.0	5.2	6.5	5.3
Developing countries and regions					
Latin America and the Caribbean	6.1	4.5	4.2	5.0	3.9
Argentina	9.0	6.5	4.0	7.1	4.0
Brazil	5.2	3.8	4.1	4.4	3.7
Mexico	4.4	3.5	4..5	4.1	3.9
Africa	4.5	5.2	5.2	4.4	4.6
North Africa	4.5	5.1	5.0	4.5	5.1
Sub-Saharan Africa [c]	5.1	5.4	5.8	5.5	5.7
Nigeria	4.3	7.0	5.2	6.4	5.0
South Africa	3.8	4.0	3.8	3.0	3.1
South and East Asia	6.7	6.2	6.1	5.5	5.3
India	7.0	7.0	7.1	6.4	6.5
Indonesia	5.1	5.4	5.5	4.5	4.4
Korea, Republic of	4.6	4.0	4.3	4.9	4.5
Malaysia	7.1	6.3	6.4	7.0	5.9
Philippines	6.1	5.0	4.7	5.5	5.3
Thailand	6.1	5.5	5.7	6.0	5.5
China	9.5	8.8	8.3	9.2	8.8
Western Asia	6.5	5.3	5.0	6.2	5.0
Oil-exporting countries	6.0	5.8	5.4	5.6	5.1
Oil-importing countries	7.0	4.7	4.5	6.7	4.9
World export volume	10.8	7.2	8.1	9.3	8.0
Oil price (Brent, $/pb)	38.3	46.0	37.0	40.0	38.0

[a] Pre-Meeting forecasts.
[b] Actual or most recent estimates.
[c] Excluding Nigeria and South Africa.
Source: United Nations Secretariat / Economic Monitoring and Assessment Unit

deficit. The US dollar is likely to depreciate against both the euro and the Japanese yen, and international trade will slow from its fast pace of expansion in 2004. Overall, economic growth will slow in 2005 from relatively high growth rates last year.

Looking at the individual regions, the performance of developed economies is marked by continued weakness of the Japanese economy, which is still struggling to move out of deflationary territory, as well as a relative slowdown in the US economy. As for the latter, an important determinant of future growth will be the reaction by the Federal Reserve to any reemergence of inflation. Europe continues to see high unemployment rates, weighing on domestic demand. Growth in the economies in transition is driven especially by the performance of the Russian economy. In developing countries, growth rates are forecast to slow but to remain at solid levels. Africa has been a very positive example, seeing growth of around 5 per cent on the back of higher commodity prices and fewer military conflicts. China remains a critical factor for the future performance of developing economies as well as for the world economy as a whole.

Hans Timmer (World Bank) presented an outlook based on the World Bank's latest publication, *Global Development Finance*, stating that there had been few surprises since the last LINK meeting and that the data had been in line with forecasts. The key characteristics of the world economy are currently a slowdown in economic growth, an increase in policy interest rates and still strong albeit flattening growth in commodity prices. Global imbalances remain a serious source of risk and an increase in both the level and volatility of interest rates seems especially relevant in this context. On economic growth, Hans Timmer sees the expansion of developing economies slowing to a more sustainable pace, while, at the same time, becoming increasingly driven by such domestic, internal determinants like institutions and policies instead of external economic conditions like, for example, interest rates and commodity prices. There has been an increase in inflationary pressure, also due to higher commodity prices, but inflation still remains low for the current phase of the business cycle. Regarding the global imbalances, the US twin deficits seem particularly relevant, especially with a view to the question of how they are financed. In the past, FDI has been an important way of providing the funds required for financing deficits, but after the bursting of the technology bubble, this has been substituted by private sector debt instruments as well as government debt instruments. Foreign exchange reserves of developing countries, especially in Asia, also play an important role in this context, as a large part of these are invested in US government securities. He pointed out that many Asian countries had been accumulating foreign reserves far above the "standard" levels (equivalent to six months of imports) and warned that if those central banks stopped accumulating dollar denominated assets, interest rates in the United States would increase significantly, leading to downside risks for the economy. In this context, Hans Timmer also raised the question as to what extent the unwinding of the economic imbalances would be accompanied by a fall in the value of the US dollar. Finally, Hans Timmer observed that the current solid state of the global economy could also be seen as an indicator of the success of structural reforms and improved macroeconomic policies; that the existing imbalances were unlikely to resolve themselves, unless the United States would reduce its demand; and that the value of the

US dollar could only be one part of the solution, although it could also become a part of the problem.

Thomas Helbling of the International Monetary Fund (IMF) presented his outlook based on the latest IMF *World Economic Outlook*, expressing agreement with the key points of the previous presentations on the state of the global economy. He said he would share a similar concern as Hans Timmer about the global imbalances, but that he would present a different analysis on this issue in a separate session: in his view, the current account deficit of the United States is still mainly financed by private capital flows, although official flows did increase recently. He then identified a number of driving forces for the global economic expansion in 2005. Macroeconomic policy could still be seen as accommodative, despite some unwinding of the policy stimuli; corporate profits in many developed economies have been improving, supporting business investment; long-term interest rates are still at low levels; and the euro area should have the potential for stronger growth, given the recent progress in reforms. Mr. Helbling concluded by pointing out several short-term risks such as tighter financial market conditions, especially if long-term interest rates increased in conjunction with higher expected inflation, which could lead to an adjustment in housing prices and savings rates in many countries; uncertainty regarding oil prices; and the US current account deficit, although there seems potential for an orderly adjustment through private capital flows.

Presenting the *NIESR International Economic Outlook*, **Ray Barrell** (National Institute of Economic and Social Research, NIESR, London) discussed the prospects for growth and inflation in the world economy and highlighted four specific global issues: the impact of higher oil prices, house prices in the US, Chinese realignment, and trend output and fiscal policy in the euro area.

The world economy is expected to grow by 4 ¼ per cent in 2005 and 2006. Oil prices have risen to $48 a barrel which will slow GDP growth and raise inflation. Output growth is slowing with much of the world operating above capacity. In 2005, growth is expected to be 1.6 per cent in the euro area, 3.5 per cent in the US, and less than 1 per cent in Japan. Germany is at capacity despite weak growth. In East Asia, growth in Japan has decelerated and is expected to be less than 1 per cent in 2005 and 2006. Chinese growth accelerated in 2004, but so did inflation.

Inflation is increasing in OECD countries, from 2.0 per cent in 2004 to 2.6 per cent in 2006, but this is mostly in the US. The realignment of the US dollar spreads the pressures so that inflation should fall in the euro area and Canada. Inflation risks are high in the US, with headline inflation expected to be over 3 per cent in 2006, as unit labour costs rise due to slowing labour productivity. European growth has weakened but inflation has not fallen due to structural problems.

Real interest rates are low, with policy being lax in the US and neutral in the EU. Short term interest rates may need to rise more than markets think. There is a significant worry that real interest rates have been negative for too long. The Fed may raise interest rates more than anticipated, implying additional upward pressure on the US dollar, with both inflation and output falling.

The US current account balance has deteriorated in the last 2 years and part of this is the "J curve", so that in 2005 and 2006 some turnaround is expected.

Oil prices have risen due to the increase in world demand, resulting in a deterioration in the terms of trade of oil consuming countries. The effects of the increase in oil prices depend in part on the monetary policy response. In simulations using the NIESR's global model (NIGEM), the US is the most affected and is quickest to respond.

Looking at 30 years of house price data, there are obvious cycles but no trend, although in the last 10 years there has been a pronounced upward trend, which may be evidence of a bubble. Borrowing is in excess, but affordability is normal. However, if interest rates rise, then affordability will drop. In the long run, both house prices and equity have wealth effects, but in the short run, house prices are more important and are, thus, a risk to consumption and growth in the US. A simulation with house prices falling by a permanent 10 per cent results in a decline in consumption and GDP, an improvement in the current account balance by 0.27 per cent of GDP, and a slowdown in global economic activity.

Prices react rapidly in China. The nominal exchange rate may be fixed but instead prices react to bring about the adjustment to equilibrium of the real exchange rate. Following the previous exchange rate realignment, there was a period of serious deflation. Now exchange rate imbalances are leading to inflation. In a simulation with the NIGEM an appreciation of the nominal exchange rate results in a quick downward adjustment in prices, so that the real exchange rate returns to base quickly and there is little impact on the current account balance. While changing the currency peg will not have any significant effect, an increase in Chinese consumption would be more relevant.

Looking at the question of slow growth in the EU, from a Keynesian point of view it would be a lack of demand, while from the vantage point of Real Business Cycle theory, it would be real factors. The strength of the euro has had an effect, but structural factors are the key. In Germany, the labour market and productivity growth imply a rate of trend growth of 1 per cent. But productivity should increase in the future so that trend growth should rise. Trend growth has also declined in Italy and due to its specialization in middle market textiles (15 per cent of exports), Italy has been particularly exposed to increased competition from East Asia.

Ray Barrell then addressed the question as to what effects fiscal policy has had in the European situation. The Stability and Growth Pact has been reformed, stipulating a long-run bound of a 1 per cent deficit and allowing more exceptions than before. To evaluate whether fiscal policy has been contractionary, the fiscal impulse is calculated with the result that policy was expansionary in 1999, contractionary in 2001 and 2002, and slightly expansionary in 2005.

In concluding, the euro area has little scope for expansion as the current output gap is not large. A realignment in East Asia would lead to lower inflation but little change in current account balances. Finally, if the US imbalances are unsustainable, then the correction must come in the US.

2.2 Outlook regarding oil prices

Robert Kaufmann (Boston University) presented an analysis of *The Economic and Political Determinants of OPEC Oil Production*. The objective is to model OPEC's production behaviour, and answer such important issues as the nature of OPEC as an organization, the effect of oil prices on OPEC's production level, and the potential asymmetry between OPEC's production decisions and changes in oil prices.

While the modalities of supply behaviour can be described as competitive in view of a positively sloped demand curve, the cartel model implies that suppliers control output to raise prices. In addition, according to the target revenue model, suppliers have limited absorptive capacity, and the property rights model encapsulates uncertainty about the future ownership of resources.

Mr. Kaufmann starts his analysis with an equation estimated by Griffin in 1985, which estimates the relationship between production by an individual OPEC country, the real price of oil and production by the other OPEC members. The implicit assumptions are that the variables are cointegrated, price is a dependent variable and production is an independent variable. These assumptions, however, do not hold, as price and production by individual OPEC members are not cointegrated. Thus, Mr. Kaufmann proceeds in his analysis in several steps. First, the Griffin equation is expanded to include behavioral variables (quota, installed capacity, reserves). In the next step, the cointegrating relationships are estimated. Then, the author estimates the short-run dynamics, before in the last step he conducts a test for asymmetry.

The results show that after including behavioral variables, there are indications of cointegration relationships. Moreover, all countries except Indonesia obey their OPEC quotas to some extent. Third, countries with relatively lower utilization rates (Saudi Arabia, UAE), have the highest elasticity of production with respect to prices. In addition, there are some indications of asymmetry.

In his general findings, Mr. Kaufmann points out that OPEC is an effective cartel that influences production by assigning quotas; higher oil prices are an incentive to most OPEC countries to increase production; and there is some evidence that production responses to prices are asymmetric.

Topics for further analysis during future LINK meetings include the determinants of OPEC quotas as well as the determinants of installed capacity.

2.3 Regional economic outlook

United States

Lawrence Klein (University of Pennsylvania) presented the outlook for the *United States*. In his view, while the US economy is currently not in bad shape, it is underperforming, growing at a pace below its potential. He described the state of the economy using several indicators based on a high-frequency model, explaining that the strength of the economy was reflected in solid data regarding personal income, retail sales, resident structures and employment. He pointed out that while housing prices might have been leveling off consumer price inflation had been moving upward, but only to a modest extent. Inflation expectations, as measured by the yield spread between US treasuries and inflation-indexed treasuries, remains tamed. Although the value of the US dollar had been increasing recently, he doubted the weakness of the dollar was over. He noted that the current account of the United States had improved in March 2005, but he believed the "J curve" could be very significant, namely the lag between the start of the depreciation of the dollar and the narrowing of the current account deficit. Turning towards the fiscal budget, he noted that the figure for the deficit in 2004 could be revised downward, due to higher tax receipts, but that the deficit would remain at $400 billion. He concluded with a technical note on the sensitivity of the US economy to oil prices, which was an issue brought up in the previous LINK Meeting. Using calculations based on an input-output table, he found that there was no significant reduction in the sensitivity of the US economy to higher oil prices, contrary to a commonly accepted view held by many others, which he believed was not based on solid analysis. Currently, a 10 per cent increase in oil prices would lead to a 0.36 per cent rise in overall prices in the United States.

Japan

Kanemi Ban (Osaka University) presented the outlook for *Japan*. He started by referring to the latest figure on GDP growth, showing that the Japanese economy expanded at a rate of 5.3 per cent in the first quarter of 2005. However, he warned that this quarterly number could be an exception, as indicated by a similar pattern in 2004, when a strong first quarter had been followed by a sharp deceleration in economic growth for the rest of the year. In general, he was still pessimistic regarding the outlook for 2005 and 2006, with GDP growth expected to reach 0.6 per cent and 1.6 per cent, respectively. He mentioned that exports would remain weak and that the Japanese economy would remain in deflationary territory until 2006. The only promising indicator was the improvement in corporate profits. When questioned about the sources for corporate profits, he believed that reduced labour costs were the key determinant, but other participants also pointed towards the revenues of Japanese firms abroad.

Europe

Peter Pauly (University of Toronto) presented a summary of the economic outlook for *Europe*. GDP growth for 2005 was revised downward to 1.5 per cent for the EU15, well below potential growth estimated at 2.5 per cent, and there remained concerns over the strength of the expansion. In contrast, the accession countries were experiencing a solid expansion. There are structural problems in the core countries of the European Union, reform is slow, and unemployment is persistently high. The deficiency in trend growth leaves little scope for expansion. Some acceleration in growth is expected in 2006, but it will still be below potential. Headline inflation will lie below 2.0 per cent and for some countries close to 1.0 per cent, raising the question of what the appropriate monetary policy should be. In addition, the labour market remains a concern.

There is continued variance of growth performance across countries due to different fiscal positions and structural reasons. The strong euro has weakened growth, especially in export sensitive countries such as Germany and Italy. Exports are still crucial in Germany. Core inflation has fallen to below 2.0 per cent and there is continued debate on ECB policy. The variance of inflation rates across countries has declined, but there remain both cyclical and structural differences.

The Stability and Growth Pact has been reformed, reducing constraints, with the result that fiscal policy is slightly expansionary. Growth in the EU15 is held back by Germany and Italy but boosted by France and Spain. The smaller Scandinavian countries and Ireland have higher growth, in the 4-5 per cent range, but are too small to affect the aggregate. There will be more disparities in 2005 than in 2004, but growth will pick up in 2006. Peter Pauly highlighted the question as to what will happen if the US slows down and pointed out that, in his view, the EU15 has not much room for maneuver.

The inflation situation is very favourable, with inflation falling from about 2.0 per cent to 1.5 per cent next year. There is some variance across countries but much less than in 2004. Unemployment shows significant variance across countries, ranging from countries with low unemployment such as Ireland, the UK, the Netherlands, and Sweden to those faced with rates of unemployment of around 10.0 per cent, as is the case in Germany, France, Spain and Italy. Structural factors explain much of this diversity, and structural reforms are very slow.

The countries in Central and Eastern Europe and in the CIS region have posted solid growth of about 4-5 per cent in 2004. The countries in central Europe are growing slightly more slowly but GDP growth remains significantly stronger than in the EU-15. The economies of the Baltic States continue to outpace most countries in this group. GDP growth in the Russian Federation and in the other economies of the CIS region was strong in 2004 but is slowing down. However, it is expected to stay robust at about 5-6 per cent on average for the next two years. In the energy-exporting CIS countries, growth is largely driven by the oil and gas sector, which is likely to remain the case in the foreseeable future. However, some of these countries, in particular the Russian Federation, are facing the risk to become victims of the Dutch disease.

In the discussion, concerns were raised about the problems that the accession countries might have on entering the ERM, as well as issues driven by the forthcoming EU enlargement in 2007. The underlying catch-up process is slow and in many countries the current account as well as budgets are in disequilibrium. Peter Pauly pointed out that these countries are facing a new environment and that it seems still too early to evaluate the effects of the EU enlargement in May 2004. A further issue that was raised referred to the comparison between the strong growth performance of China and Russia and the possibility to sustain this in both countries. Peter Pauly noted that it is not possible for Russia to maintain economic growth of around 6-7 per cent because of the high vulnerability of the country to oil prices. In addition, another argument was pointed out by a participant in the conference, focusing on the characteristics of growth in these countries. Economic growth in China reflects a series of systemic reforms to restructure domestic markets in recent years, while reforms in Russia have been partial and often interrupted by delays, thus hampering efforts to restructure and diversify the economy.

Peter Pauly mentioned several issues that are likely to be important regarding the economic outlook for Europe, among them the progress of structural reforms in Germany, whether the ECB adopts a more expansionary policy or continues its cautious path, whether the reformed Stability and Growth Pact leads to less fiscal discipline, the strength of the euro, macro and structural progress in the accession countries, the results of the referendums on the proposed new European constitution, and any progress made in reforming the Common Agricultural Policy (CAP), especially in light of the Doha round.

During the discussion, **Sheila Page** (Overseas Development Institute, London) asked about structural change and trade issues, particularly in regard to the liberalization of services. **Peter Pauly** (University of Toronto) responded that there was a lot of dislocation, migration from or outsourcing to the accession countries, and even more was expected with the liberalization of services or from the agricultural side.

Franjo Stiblar (Universiy of Ljubljana) commented that three of the acceding countries would eventually be in the EMU and there would be three new members in 2007. Growth is increasing but progress on stability was lagging with current account balances and fiscal deficits. Baltic countries have high growth but imbalances and are externally supported so they were potentially unstable.

Carlo D'Adda (University of Bologna) mentioned that the aging of populations was important and implied another 25 years of lower growth, unless more immigration was allowed. The overvaluation of the euro was also hurting.

Adolfo Castilla (Adolfo Castilla y Asociados, S. L.) noted that the process of immigration was working in Spain. Unemployment was high but the working population had also increased a lot. The current account imbalance was very high with a deficit of 5 per cent of GDP. He pointed out that it was important to look at regions individually, as they were very different in Spain.

Stephen Hall (Imperial College, London) made some comments regarding the constitutional referendum. The UK would prefer that the French vote against the constitution. Otherwise, there would be a major problem, as the UK would almost certainly vote against the constitution. This was a significant uncertainty for the EU as a whole.

Latin America

Francisco Villareal (ECLAC, Santiago) started his presentation on the economic outlook for *Latin America* by pointing out that ECLAC has been developing a methodology for estimation based on the conceptual framework provided by the System of National Accounts 1993 using quarterly data from the expenditure side and production. From the global perspective, commodity prices are expected to decrease gradually, especially those for oil and metals. GDP growth for the region is expected to decrease from 5.8 per cent in 2004 to 4.4 per cent in 2005 and foreign trade will decelerate, especially with the EU and China. On the other hand, internal demand is expected to strengthen. Brazil, the Andean Community and the Southern Cone will grow above the regional average. Mexico is expected to grow by 3.8 per cent in 2005, while the Caribbean countries will benefit from re-directed tourism. Inflation for the region will decrease to 6.6 per cent and the current account will be practically balanced. The main challenges for 2005 are the possible effects of the twin deficits and oil prices, the strength of domestic demand that is heavily financed by remittances, low levels of investment and the procyclicality of fiscal policy.

In his presentation on *Recent Developments and Prospects of the Mexican Economy*, **Jorge Mattar** (ECLAC, Mexico) stated that Mexico's growth from 1970-2004 had been low and volatile, especially after 1980. Gross fixed capital formation has been closely linked to growth. At the end of the '70s, growth came from the oil boom, while after the '80s, the Mexican economy was more closely linked to the US economy and external sector crises became recurrent. Real exchange rate appreciation expanded current account deficits, creating balance of payment crises. However, conditions have changed and risks have decreased as exchange rate regimes have become more flexible and international reserves as well as FDI have increased. International trade has increased during the reform period of the '90s, including an export boom after '94 due to a real devaluation and the establishment of NAFTA; however, although non-maquila exports increased, imports also did, leading to even larger deficits in the non-maquila trade. Growth during the post-crisis period from 1996-2000 was led by the US and exports became the engine of growth as the real exchange rate depreciated. Economic policy focused on macroeconomic stability. As the end of the expansion cycle in the US provoked a slowdown in Mexico from 2000-2003, economic policy reacted procyclically, but GDP per capita shrank during three consecutive years, competitiveness levels fell and China emerged as a competitor. The economy recuperated in 2004 with an increase in internal demand and a surge in credit to the private sector, while remittances began to have a positive effect at the macroeconomic level. Further support for the economic recovery came from the upswing in manufacturing in the US. In 2005, inflation targeting remains the main objective; fiscal and monetary policies are austere against the background of a floating exchange rate, while reforms are at a standoff. GDP growth is expected to be 3.8 per cent, accompanied by reasonable levels regarding inflation, the current account deficit and unemployment.

The country needs to grow at a rate of at least 6 per cent in order to generate sufficient employment. However, in the short run, expectations are moderate in the presence of both external and internal limiting factors such as slow growth of the US, competition from China, higher oil prices and their effect on the world economy, the lack of structural changes, political uncertainty and a weak domestic market. In the longer run, these factors of concern will linger in addition to the role of the banking system. Investment levels must be increased, which requires fiscal (especially on the revenue side), labor, pension system and energy sector reforms. However, reforms are not progressing and policies have been passive. Access to foreign capital is weak and limited to some sectors, while trade deficits may slow growth in the long run. Consequently, diversification and linkages to the domestic market must be strengthened.

Africa

Mr. Oumar Diallo (United Nations) reported on economic developments in Africa and forecasts for 2005 and 2006. Economic growth in Africa is forecast to accelerate to more than 5 per cent in 2005, continuing the trend of the previous two years. The main factors expected to contribute to growth are higher oil prices and increased volumes of oil exports; strong demand and favourable prices for non-oil commodities; buoyant domestic demand in most countries; a reduction in the number of serious conflicts on the continent to the lowest level for several years; and increased tourism revenues in some countries, reflecting the growth in global incomes and a spill-over from Asian countries that were affected by the tsunami in December 2004. The termination of the GATT/WTO Agreement on Textiles and Clothing on 1 January 2005 represents a less favourable development that is expected to reduce exports, income and employment in several countries.

Growth performance was fairly evenly distributed throughout Africa. In North African countries, growth is expected to accelerate in Algeria and the Libyan Arab Jamahiriya as a result of continued strong hydrocarbon revenues as well as increased public consumption and investment. Growth in Egypt and Tunisia is expected to accelerate moderately, but in Morocco, weak textile output and exports are expected to dampen export revenues and GDP growth.

GDP growth for Sub-Saharan Africa, excluding Nigeria and South Africa, is projected to rise from 5½ per cent in 2005 to 6 per cent in 2006, reflecting the recovery of most economies on the continent. South Africa's GDP growth is expected to increase to 4 per cent in 2005 from 3.8 per cent in 2004 mainly as a result of low inflation and interest rates, high levels of public and private consumption, increased domestic investment and other favourable domestic factors. In Nigeria, GDP growth is forecast to jump to 7 per cent in 2005 on the basis of stronger oil and gas output. In contrast, continued political tensions in Cote-d'Ivoire and Zimbabwe and a decline of oil production in Gabon are forecast to make these the worst-performing economies in Africa in 2005.

Monetary and fiscal policies are expected to be relatively prudent in most countries. Inflation accelerated in 2004 as oil price increases were passed on to consumers in many countries. Higher food prices were, however, the main source of inflationary pressures in several countries. Many African oil-producing countries are expected to continue to register substantial current account surpluses in 2005, aided by better terms of trade, higher oil and non-oil commodity prices and increased export volumes, although the majority of African countries are expected to face additional oil import costs.

In the discussion that followed the presentation, Mr. Diallo clarified the use of the term hydrocarbons to mean crude oil and natural gas and confirmed that increased earnings from tourism resulted from a diversion of tourist traffic from destinations in Asian countries that were affected by the December 2004 tsunami. **Ms. Faiza Awad Mohammed Osman** presented additional information on economic reforms in Sudan pertaining to increased fiscal expenditures in the social sector.

Asia

John Malcolm Dowling (Singapore Management University) presented the regional outlook for *Asia*. In East Asia, he expects economic growth to slow in China due to monetary policy tightening. Korea will see a continuation of its modest recovery, which will remain constrained by weak consumer demand, while Taiwan Province of China's performance will continue to depend on exports. Indonesia's outlook is marked by the need to attract foreign direct investment, reduce fuel subsidies and reform the tax regime, and the extent of policy reforms will also be an important determinant of the performance of the Philippine economy. Economic growth in South Asia has been led by India, whose outlook hinges especially on the extent of fiscal consolidation. Mr. Dowling pointed out that inflation had been increasing throughout the region and that more intense competition had put pressure on firms' profit margins, implying the need for increased efficiency. Turning towards short-term risks, he stated that developments in the oil markets, movements in the currency markets, overheating of the Chinese economy, a more severe outbreak of avain flu, and the lingering impacts of last year's tsunami could have a major unexpected effect on the region's economic performance.

In the open-floor discussion, the question was raised as to what might be the impact of the end of the Agreement on Textiles and Clothing on Bangladesh, and how this would fit in with the relatively high growth rates that are predicted for this country.
In his reply, John Malcolm Dowling pointed out that Bangladesh's solid growth was driven mainly by strong reforms.

3. Economic policy issues

3.1 Global economic imbalances

In the session on *The US Current Account Deficit and its Exchange Rate Consequences*, **Ray Barrel** (NIESR, London) presented a summary of various studies that have been done in the area of global economic imbalances at NIESR. He first pointed toward the increase in the US current account deficit and the fall in the value of the US dollar over the past years, adding that the relationship between a weaker US dollar and a reduction in the current account deficit may not be as close as expected. He then focused first on the causes of the current account deficit of the US and tried to answer the question as to what will happen if it corrects. Deficits driven by exchange rate fluctuations are of a more temporary nature than those caused by structural factors and he pointed toward the US current account that had been progressively deteriorating over more than a decade.

Although the US current account has deteriorated in the last years, following a “J-curve”, there are no clear signs as to which extent this trend is due to structural reasons, or how much of it is driven by structural demand for US assets by foreigners.

Looking at the funding of the US current account deficit and the impact of this since the late 1990’s, he pointed out that the nature of the current account deficit had changed and was now dominated by US government securities. Due to the shift in the driving factors, the entire picture had changed – from growing consumption and investment in the second half of the 90’s, based on capital flows with favourable future returns, to reduced national savings and investment coupled with growing consumption since 2001. The main reason for the decline in national savings appears to have been government borrowing – the federal deficit now absorbs ¾ of the private savings generated by the US economy.

Furthermore, he focused on several economic adjustments that might help to correct these imbalances, considering in particular the potential effects of increased savings, a reduction in the US government deficit and a decline in the value of the US dollar. Before going into the details he emphasized that these adjustments will not likely to be policy driven but market driven. The alternative adjustment scenarios and their implications on global imbalances were analyzed using the Global Econometric Model of the National Institute of Economic and Social Research (NiGEM). The savings simulation allows evaluating the effects of saving changes on GDP of the US and the euro area, with a slowdown in growth predicted for four years and for one year, respectively, as a response to an increase in US savings. The effect of reducing the US fiscal deficit was traced out through increased taxes, which in the long run improves the current account balance by 1 per cent of GDP. Ray Barrel presented also the results of a simulation of the impact of a higher risk premium on the US economy, which could lead to a sustained improvement in the balance of payment position as well as valuation effects on long-term assets. However, the impact on the euro area is likely to be limited.

Finally, he summarized the structural argument regarding the global imbalances by pointing out that changes in savings redistribute demand around the world. Increased (decreased) savings lead to less (more) demand, which is in part offset by lower (higher) long-term interest rates. All these effects would depend on the monetary policy response.

In his presentation on *Globalization and External Imbalances*, **Thomas Helbling** (International Monetary Fund, IMF) pointed out that chapter III of the IMF’s World Economic Outlook scrutinizes recent claims that the increased international economic and financial integration allows to sustain larger imbalances for a longer period of time, and that an adjustment requires smaller real exchange rate changes than in the past.

In a first step, the extent of financial globalization and its implications for adjustment costs is analyzed. The IMF finds that - due to reduced obstacles in the form of cross-border transaction costs and regulatory barriers - home bias in asset holdings has been reduced at a global level since the 1970s and 80s, albeit more so in the USA than in the rest of the world. A decline in home biases allows for increased accommodation of current account imbalances, since demand for foreign assets will be higher and more price-elastic, and larger net external liabilities will be less costly. This, in turn, allows for a more gradual unwinding of the current imbalances, stretching the necessary structural adjustments over a longer period of time and, thereby, reducing the size of the overall exchange rate adjustment.

In a second step, the extent and implications of real globalization is analyzed. The reduction in costs of global trading has led to an increase in the share of trade in worldwide GDP from 16% in 1960 to 40% in 2001. Also, trade patterns have changed dramatically, in terms of geographic origins as well as in their composition. As a side effect of greater trade integration, market structures worldwide have changed due to increased international competition; and the preferences of economic actors have shifted given the wider variety of goods and services available. As a result, real globalization has caused home biases in tradable shares as well as mark ups and real rigidities to decrease; and cross border vertical and horizontal integration to increase.

In a third step, the implications of real sector globalization for the adjustment of external imbalances are analyzed by simulating the IMF's Global Economic Model (GEM) based on two different calibrations (GEM 1980 vs. GEM 2000). The calibration for GEM 2000 differs from GEM 1980 with respect to country sizes (the two blocs of Emerging Asia and the combination of Japan and the euro area gained relative weight while the USA and the rest of the world lost weight), share of traded vs. non-traded goods (share of traded goods decreased while the share of non-traded goods increased), home biases (decreased), mark-ups (decreased), nominal rigidities (decreased), and monetary policy (more aggressive).

The two calibrated models are subjected to an identical cocktail shock, reproducing roughly today's imbalances (a drop in US public saving, a drop in US private saving, and an increase in the demand for US assets). For GEM 2000 (which accounts for real sector globalization), external adjustment coincides with a smaller real depreciation of the US dollar and more contained real appreciation in the other blocs. Real globalization also allows for smaller increases in real interest rates in all economic blocs during the adjustment. As a result, globalization allows for smaller short-run declines in output growth in all blocs, apart from emerging Asia.

In addition to this baseline scenario, two other scenarios are analyzed, in which investors outside the US gradually reduce their holdings of US assets (back to 2001 levels by 2010).[1] Both scenarios lead to relatively higher interest rate rises in the United States, a faster and more drastic decline of the US dollar, and a more marked decline in US output growth. The depreciation of the US dollar is matched by an appreciation of exchange rates – and lower trade and current account balances – in blocs with flexible exchange rates. In emerging Asia, however, developments vary substantially across the two scenarios. In both scenarios, real interest rates outside the US fall, and – despite slower US growth – GDP growth in the other blocs rises moderately. However, this relatively

[1] The first of these scenarios assumes a reduction in US asset holdings only in Japan, the euro area and in the rest of the world, holding investment behaviour in emerging Asia constant, while the second scenario assumes a reduction in US asset holdings in all three blocs outside of the United States.

benign outcome hinges on the specification of the shift in investor preferences, as the decline in desired asset holdings outside the US is accompanied by a reduction in desired savings, boosting consumption.

Summing up, although globalization has created the scope for less costly global rebalancing if financial market conditions remain favorable, a change in investor preferences could trigger a more abrupt and costly adjustment. Global current account balances therefore still remain a concern.

While the discussion of the global imbalances generally focuses on questions of sustainability and stability, **Pingfan Hong** (United Nations) used his presentation on *Global Imbalances and the International Reserve System* to pose the additional questions of efficiency and equity. He started with a question: "Even if the imbalances were sustainable, or even if the imbalances could be adjusted in a smooth manner so that there would be limited shocks to the world economy, would such a large magnitude and a skewed distribution of the imbalances really imply an efficient and equitable allocation of global resources across countries?" He claimed that mainstream explanations of substantial and prolonged current account deficits in the US since the 1990s were somewhat tautological in arguing that high US growth rates caused and allowed to sustain larger external deficits. He pointed out the key role of the international financial system, in which the US dollar served as international reserve currency, as the cause for the global imbalances.

Pingfan Hong reviewed the Triffin's dilemma in the 1960s, which defined a systemic inconsistency in the Bretton Woods system, and in his view, Triffin's dilemma remained valid today despite some changes in the reserve system. Since the US dollar is no longer pegged to gold, the US has a tendency to run a larger deficit for a longer period of time than before. He argued that as the issuer of the international reserve currency, the United States enjoyed the privilege of being able to pay for international transactions in its own currency, to realize seigniorage gains, and to face less external constraints and more policy flexibility.

He also reviewed the latest debate on this issue, particularly the work of Dooley and others, who see today's international monetary arrangement as a revived Bretton Woods. Comparing with the last major adjustment of global imbalances between 1985 and 1991, Mr. Hong argued that the current imbalances were similar to those in the 1980s in that they were driven by a large twin deficit in the US. Commenting on some optimistic views that today's situation is different because of deepening global economic integration so that the large global imbalances could be sustained, Mr. Hong suggested that the differences could only be of a quantitative nature and that, ultimately, imbalances had to unwind.

According to Mr. Hong, the present reserve system is indeed more flexible than Bretton Woods, and it is more expedient for global trade and capital flows; however, such a system can hardly be considered as efficient if it fails recurrently to correct large balance-of-payment disequilibria across countries, if it makes many countries, particularly developing countries, accumulate substantial amounts of resources as foreign-exchange reserves, and if it constantly involves massive short-term capital flows for speculation and hedging in the foreign exchange market. Nor can the arrangement be deemed as equitable either, when the most affluent nation in the world, the United States, absorbs a large proportion of global savings from many developing countries, leaving at the same time a group of the poorest countries in a desperate need for funding of their economic development, and when often an adjustment of the global imbalances places heavy burdens asymmetrically on many developing countries.

Mr. Hong concluded with a discussion on how to reform the reserve system so as to prevent large unstable global imbalances in the long-run.

In the subsequent debate, Pingfan Hong clarified several points, including the deeper and wider “J-curve” than before; the “valuation effect” of a US dollar depreciation on rebalancing; the possible decomposition of the imbalance into a cyclical, structural and institutional component; and steps to create a true form of world currency.

Hans Timmer (World Bank) used the opportunity to specify that estimations according to which an unwinding of the imbalances would be accompanied by a depreciation of the US dollar by about 30 or 40 per cent refer to real exchange rates. The nominal depreciation by around 30 per cent over the last three years has so far not significantly contributed to this. No nominal exchange rate change alone will change the current account. Instead, structural changes must lead to a change in demand, which will cause a change in relative prices, thereby causing real exchange rate changes. However, simulation results must also be viewed with caution, since the need of high exchange rate realignments usually results from models with small price elasticities.

3.2 Economic liberalization in Latin America

José Antonio Ocampo (United Nations) started his presentation on *Economic Liberalization in Latin America in Retrospect* with the question as to why the economic results of Latin America during the last 25 years have been unsatisfactory. Latin America’s economic policy has been based on the assumption that state-led industrialization was inefficient and that, therefore, liberalization of market forces was necessary to start up competitive and dynamic economies. However, the last 25 years have seen the worst performance in history and growth was much higher in the previous model, with an average GDP growth rate of 5.5 per cent for the period 1950-80 and only 3 per cent for 1980-2004.

Mr. Ocampo stated that there are four questions that must be answered to understand this situation:

1. Why did the state-led industrialization model collapse?

Import substitution had long been exhausted and a “mixed model” emerged combining export promotion, regional integration, gradual rationalization of protection and gradual devaluation schemes in inflationary countries. Contrary to traditional myths, exports accelerated since the mid-fifties but lost market share in food and energy markets, while the trade of manufactured goods gradually increased. Thus, a better explanation for the crisis than the region’s export history are its macroeconomic conditions like, for example, external and fiscal deficits, the lack of investment, and, in the case of more liberalized economies, abundant external financing, increasing their macroeconomic vulnerability.

2. Why was the debt crisis so severe?

There were two external shocks: a reversal of the capital account equivalent to -7 per cent of GDP and a collapse of non-oil commodity prices. High interest rates increased external debt, while the international response was late and insufficient, unlike in the 1930s.

3. Why was the following economic recovery so frustrating?

The three most common but inaccurate answers refer to an overemphasis of the positive effects of reforms, a lack of conditions for the market to operate, and slow productivity growth. These answers do not explain nor consider that Latin America grew satisfactorily before the ‘80s, that the present model may increase static efficiency at the micro level but not dynamic efficiency in productive sectors necessary to generate growth as the previous model did, or that increased informality provokes sub-utilization of resources. Despite greater international insertion, growth was sluggish due to limited productive linkages; the creation of new enclaves in the manufacturing sector giving rise to dualism; and the deterioration of macro balances, which led to greater dependency on external financing, volatility and low levels of investment aggravated by real currency appreciation.

4. Is the economic performance associated with the poor social performance?

Although the improvement of human development indicators has slowed during the last decades, most of the social indicators have continued to improve while many of them did not suffer during the lost decade. Social expenditures have increased along the advancement of democracy. The problems lie in the connections from the economic to the social realm, i.e. income distribution has deteriorated and social segmentation is already high.

Turning towards the policy agenda, Mr. Ocampo concluded that policy should emphasize the economy’s real stability; open economies should strengthen ties to the rest of the world through productive development strategies; and linkages from the economic to the social realm must be strengthened.

3.3 Globalization, development and democracy in Latin America

In a further presentation, **José Antonio Ocampo** (United Nations) presented his book *Reconstructing the future. Globalization, development and democracy in Latin America*. He quoted a local author who once said, “The future is no longer what it used to be”, thereby echoing the region’s disappointment with its economic performance after several years of reform efforts. Mr. Ocampo explained that his book consisted of three essays. The first one presented an analysis of a period of reforms in the region and an assessment of their positive and negative outcomes. The return to low inflation, dynamic export growth and increased social spending are the major positive results, while low and unstable economic growth and increased dualism within national economies are among the adverse consequences of the reforms. The second essay put forward an agenda of national policies for development focusing on the contribution of regionalism and taking into account local conditions to forge the region’s insertion into the global economy with a view to reducing existing inequalities. Lastly, the third essay addressed the issue of democracy, which in Mr. Ocampo’s view encompasses civil, economic and cultural rights as well as respect for diversity, and its relationship with economic development in the region.

Rolando Cordera, **Rebecca Gryspan** (ECLAC) and **Luis Miguel Galindo** (UNAM) added their perspectives on the issues addressed by Mr. Ocampo’s book. They shared his views and diagnosis, but expanded the discussion and enriched the presentation further.

3.4 Financial intermediation in Mexico

Fanny Warman (Banco de Mexico) made a presentation on *Financial Intermediation in Mexico*. She emphasized the structural and regulatory aspects of Mexico’s financial system and provided a deeper analysis on the banking system, looking at its assets and liabilities as well as profitability after the 1995 crisis. According to Ms. Warman, financial intermediation, as measured by the share of M4 to GDP, is lower in Mexico than in countries with a comparable level of development. The same observation applies to the supply of credit to the private sector by the banking system. Taking the financial system as a whole, about 60 per cent of credit is geared towards the public sector, thus indicating the occurrence of some crowding out of the private sector. Ms. Warman also indicated that the financial health of the banking system has improved lately. Non-performing assets have declined and profitability increased within a context of low interest rates. Improved profitability was due to a change in the composition of both assets and liabilities: banks are increasingly extending credit to consumers through credit cards (the most profitable segment of their operations) and capturing resources through lower cost instruments such as cash deposits.

3.5 Mexico's federal fiscal system

Jaime René Jimenez (Secretaría de Hacienda y Crédito Público, Mexico) presented an overview of *Mexico's Federal Fiscal System*, analyzed the conditions of the country's fiscal finances focusing on the transfer system of revenues and responsibilities to municipalities and offered a diagnosis to serve as the basis for future reforms. According to Mr. Jimenez, Mexico has a very low tax burden largely due to administrative inefficiencies brought about by a complex and imbalanced tax structure. Moreover, the health of the Mexican public finances has been deteriorating over the recent years both due to its limited tax base (reflecting the increasing informality of the economy) and its volatility, as a considerable share of fiscal revenues is still petroleum-related. Due to the existing mechanism of transfer and other recurrent expenditures, there is little left for social expenditures and investment at the federal level, with negative consequences for economic growth. This, in Mr Jimenez's opinion, gives a renewed urgency to the introduction of additional reforms aiming at improved administrative efficiency.

3.6 Labour market integration

Clemente Ruiz (UNAM) introduced the topic *Labor Market Integration as a Response to Goods Market Failure to Adjust* by observing that, traditionally, adjustment in the labor market has meant an increase in unemployment. More recently, the concept that laborers voluntarily wait to work has been introduced, while developing countries are seen to have segmented labor markets, with the informal sector playing a particularly relevant role in this context. However, all of these models assume a closed labor market without considering the effect of migration on home and host countries' economies.

The IMF calculated in a recent *World Economic Outlook* the effect of demographics on growth. The North American Free Trade Agreement was expected to increase employment in the region. However, it created a surplus of labor in Mexico and small shortages in Canada and the US. Employment levels were higher than migration in the beginning, but the trend reverted in the latter years. Also, it has been calculated that migration has reduced Mexico's GDP by 27 per cent while Mexican migrants' work accounts for 8 per cent of the GDP of the US.

At a second stage, the region is expected to have more labor intensive activities: while some of the manufacturing may be relocated outside the region, designing activities will remain in the country. In addition, as longevity increases, health services should become increasingly more important, as will continuous education of the labour force.

Labor market integration has not promoted convergence in productivity in the region during the period 1994-2000. By 2012, the labor force is expected to increase by 18 million. Maintaining open migration policies and new migration agreements will be necessary for the US and Canada to grow at their potential level. Benefits of migration should be further studied by academia. Mexico should become aware of the effects of migration on growth and should place efforts on investment in order to keep its labor force occupied.

3.7 Remittances in Colombia

Ximena Cadena (Fedesarrollo) presented a paper, written with Mauricio Cerdenas, on *Remittances in Colombia: Transaction Costs and Exchange Rates.* She stated that while the possibility that the usual channels for migrant remittances could be used for money laundering was an issue specific to Colombia, other countries were concerned as well. In the case of Colombia, this issue presents a public policy dilemma.

While growth of remittances was particularly high in 1999, a development related to the economic crisis that Colombia went through in that year as well as the migration sparked by internal conflict, remittances have been very stable since 2002 in terms of number of payments. It is estimated that 10 per cent of Colombian households receive remittances from abroad and the percentage of households receiving remittances is highest among those classified as high-class households (20 per cent), compared to just 5 per cent of low-class households.

Looking at the origin of remittances, she explained that the United States is the main country of origin with 67 per cent of the total value, followed by Spain with 10 per cent and the UK with 6.5 per cent. The highest average value remittances were those from Spain, followed by those received from the United States.

On money laundering, she emphasized that consistency of the available data at the micro level with those at the macro level indicates that the use of remittance channels for money laundering is not as extended as suggested by social beliefs. There is a trade-off between the regulation needed to prevent this illicit use, and the economic efficiency of the remittances transfer system in performing its social function.

Starting with the new requirements set by the US Patriot Act, a stream of new regulations of the sector has been enacted in Colombia. These impose on money transfer institutions the obligation to report multiple transfers by a single person, as well as operations for amounts higher than a preset level.

With respect to transaction costs, she mentioned that although transfer costs in Colombia are still low (around 7 per cent of the amounts transferred) if compared with the rest of Latin America, they have increased in 2004, possibly as a result of the new regulations. However, overall business margins in the industry have tended to decrease as competition has become stronger among agents and market shares more uniform.

She concluded her presentation with several observations. First, migrants' remittances received by households constitute a key source of stabilization of private consumption in Colombia. Second, Colombia has an efficient remittance transfer system and is the regional leader in anti-money laundering regulation. In addition, the money transfer industry should not be put under an excessive regulatory burden that reduces its efficiency and regulations should be geared to the relevant institutions and agents. Fourth, remittances constitute private resources and their owners make rational decisions on their allocation.

3.8 Remittances and development

Hans Timmer (World Bank) started his presentation on *Remittances and Development* by pointing out several reasons for the increased interest in remittances. First, they represent a large, growing and stable source of foreign exchange, which has kept growing steadily through the last decade, notably through the financial crises of the period 1997-2001. Second, remittances go more than proportionally to the poor, as they represented 3.3 per cent of low-income countries' GDP in 2003, the highest percentage of all country groupings. Although in absolute terms the main recipients are large developing countries, remittances are larger for small countries in relative terms. Third, remittances, as a source of financing, do not create debt problems. Finally, sharing of a border with a richer country appears to be a significant factor regarding the volume of remittance inflows as a share of GDP.

Hans Timmer then suggested three ways of improving the development effectiveness of remittances. First, transaction costs need to be reduced, as they are high and regressive in terms of the amount transferred. Second, the transfer of remittances through formal channels needs to be encouraged through recipient-country government incentives such as tax breaks and facilities for land purchases. Third, the investment climate in recipient countries needs to be improved as higher remittances as percentage of GDP appear to be associated with such factors like lower corruption and inequality as well as higher monetization and a higher trade-to-GDP ratio.

In concluding, Hans Timmer emphasized that there are large gains for migrants and the receivers of their remittances, but that the latter also have mixed impacts on both the countries of origin and the host countries of migrants.

3.9 Asian regional trade groupings and the Doha round negotiations

Oh-Seok Hyun of the Trade Research Institute of Korea presented a paper on *The Effect of New Asian Regional Trade Groupings on the Doha Round Negotiations*. He started by observing that Asia currently is the most dynamic trade area in the world and linked this to the question of the potential effects of numerous bilateral Free Trade Agreements (FTAs) that are in the process of being negotiated in the region. He then identified the major issues in the current round of multilateral trade negotiations, the Doha Development Agenda (DDA): market opening for agriculture, services and commodities; regulations regarding anti-dumping measures; government subsidies; and other issues such as environment and intellectual property rights. Comparing FTAs with the DDA negotiations, he emphasized that FTAs were voluntary, selective and much wider and comprehensive. However, Asia has so far been lagging in terms of concluding regional trade agreements due to its dependence on trade with the US as well as a lack of leadership, although the financial crisis of 1997/98 provided additional impetus to the emergence of regional trade groupings. He then provided an overview of developments in regional trade negotiations and presented some quantitative results on the potential welfare effects of new Asian trade regionalism. Analyzing the potential impact of FTAs on multilateral trade negotiations, he first pointed towards the possible negative effects in the form of discrimination against non-FTA member countries, additional administrative costs, difficulties regarding the harmonization of rules and the potential use of FTAs as a tool for securing regional hegemony. He concluded by stating that despite these drawbacks, regionalism could still be seen as having a positive, complementary effect on multilateral systems as it helped countries to achieve training effects in international negotiations, created additional competition and played the role of a catalyst for market opening.

3.10 The accession of China to WTO

Jean-Louis Brillet (INSEE, Paris) presented a paper on *The Accession of China to WTO: Consequences for the Regional Gap*. While China's accession to WTO brings important changes, exposing the local market to foreign competition, Chinese growth experiences a disparity between the coastal regions and the interior, a problem that is expected to be further compounded by China's WTO entry. The paper addresses this issue using a two-region, three-sector model, based on statistical data and the most reasonable assumptions, as well as a single region, single product model. The behavioral equations have been calibrated based on this model. The regional dimension separates the 11 coastal regions from the 12 others. The product dimension separates the primary, secondary and tertiary sectors.

The model computes the trade flows between the two regions and the rest of the world. Preset shares are modified by availability of productive capacities, relative prices and the availability of transport. After a detailed description of the framework, separate changes in the assumptions are introduced, allowing an analysis of the results by region. The conclusion is that WTO does increase the gap, but government policy should be able to mitigate this effect.

3.11 The role of special trade measures for developing countries

Sheila Page (Overseas Development Institute, London) presented an analysis of the likely effectiveness of special and differential treatment (SDT) for developing countries in current multilateral trade negotiations. The general theme of the presentation, which is outlined in great detail in an accompanying paper, is that there is no clear link between trade and development and, therefore, no compelling reason for such provisions to be included in current trade negotiations. That assessment leads to the further conclusion that developing countries that are most in need of SDT would be better off if they received other forms of development assistance, including direct cash grants equal to the value of economic rent they were allowed to reap from the international trading system through trade preferences. Qualifying countries that benefit from quota trade preferences for sugar exports to the EU, for example, would receive cash grants calculated on the basis of the difference between the price guaranteed by the SDT preference arrangement and the prevailing global market price (which is usually lower than the guaranteed price). Such grants would then be used to finance economic development activities directly.

The conclusions were based on a detailed historical analysis of the development process in different types of developing countries and trade negotiations in the Tokyo and Uruguay Rounds as well as the current impasse in the Doha Round negotiations. The analysis looked at SDT granted to developing countries under pre-GATT arrangements and GATT/WTO rules to determine if trade preferences contributed to the success of advanced developing countries (essentially defined as countries where manufactured goods comprise a large share of total exports) and whether such preferences would help to accelerate development of countries left behind. Although successful developing countries benefited from trade and trade preferences, other factors such as domestic industrialization policies, import-competing strategies to build local capacity in the production of manufactured goods and other types of planned government interventions might have contributed more significantly to growth and development than external trade.

This was evident in the 1970s and 1980s in many countries grappling with the effects of two oil crises, terms-of-trade losses in view of an erosion of export incomes because of declining commodity prices, and mounting external debt. The presentation argued that South-East Asian countries adopted strategies of structural change, industrialization and export-led growth without, necessarily, the pull of SDT and trade preferences. Commodity-dependent countries in Africa and Latin America, on the other hand, became less focused on development - in the sense of industrialization and economic diversification - and more preoccupied with adjustment to declining incomes through austere fiscal and monetary policies and import compression. Those countries turned more to international commodity agreements, including the OPEC cartel, in order to boost export incomes. This provided only a weak link between trade and development.

The link between trade and development is even weaker in current trade negotiations in an environment where development is increasingly linked to poverty reduction. SDT provisions are important features of the current Doha Round trade negotiations, but developing countries are split between two main groups with different and sometimes competing objectives. Trade liberalization policies (rather than SDT provisions) were more important to a group of advanced developing countries that can compete effectively with developed industrialized countries in export markets for manufactured goods. On the other hand, SDT still remain important for poorer commodity-dependent countries. The presentation argued, however, that historically, many of those countries have derived little benefit from trade preferences because of supply-side constraints and other limitations. Development assistance should therefore directly address problems of structural reforms, institution building and good governance that were more important to promoting economic development and poverty reduction.

4. Modeling techniques

4.1 Lawrence R. Klein lecture on forecasting: Stock returns and expected business conditions - A half-century of direct evidence

In his *Lawrence R. Klein Lecture on Forecasting,* **Francis X. Diebold** (University of Pennsylvania) presented a paper entitled *Stock Returns and Expected Business Conditions - A Half-Century of Direct Evidence*, in which he attempted to add a macroeconomic dimension to the usual explanation of excess stock returns based solely on financial variables. In his lecture, he addressed the question whether financial variables proxy for expected business conditions; whether financial variables have predictive content for excess stock returns after controlling directly for expected business conditions; and whether non-financial predictors have any explanatory power.

The empirical analysis was conducted on a sample of United States data from 1952 to 2003. Excess stock returns were measured as the excess returns on the value-weighted CRSP index relative to 90-day U.S. Treasuries. The dividend yield, the default premium and the term premium were used as financial predictors. Expected business conditions were proxied by the median two-step-ahead bi-annual GDP growth rate forecasts from the Livingston Survey of professional forecasters. Finally, the Lettau-Ludvigson's generalized consumption/wealth ratio was subsequently included in an attempt to capture the impact of non-financial predictors on excess returns.

In responding to the first question, Mr. Diebold found that in simple and multiple regressions of expected business conditions on the financial predictors, all of the coefficients had the theoretically expected signs, but that not all of them were statistically significant. On the second question, he investigated the significance of financial variables in explaining expected excess returns, after accounting for the impact of expected business conditions. Using the conventional Fama-French framework, he found that the financial predictors had some predictive content for excess returns but that, when extended to include expected business conditions, the financial predictors' coefficients became small and sometimes insignificant, while the coefficient associated with expected business conditions was large and strongly significant. For the third question, he added the consumption/wealth ratio to the expected excess return regressions and found this variable to be statistically significant in all the model specifications.

Based on these results, he concluded that the two explanatory variables of key relevance for excess stock returns were the expected business conditions and the consumption/wealth ratio. The first was mentioned as a proxy for the riskness of the economic environment and, given that the two variables were not correlated, he argued that the second must capture the other theoretical determinant of excess return, risk-aversion.

The presentation was followed by discussions. **Lawrence Klein** (University of Pennsylvania) recommended the use of other, perhaps more reliable survey databases to deepen the empirical investigation, while **Stephen Hall** (Imperial College, London) questioned some of the concluding remarks, especially those suggesting that the generalised consumption/wealth ratio could be equated with risk-aversion.

4.2 Inflation in the euro area

Eilev Jansen (Bank of Norway) presented a paper entitled *Modeling Inflation in the Euro Area,* in which he discussed a dynamic version of the Incomplete Competition Model where inflation is determined jointly with unit labour cost growth. The model was estimated on data for the euro area. He then presented an evaluation of the reduced form inflation equation derived from this model in comparison with a number of competing models: the implicit price equation from the wage-price block of the Area Wide Model, a macroeconometric model of the euro area maintained by the ECB, two versions of the P* model of inflation which conceives of inflation primarily as a monetary phenomenon, one on a limited information set and one on a wider information set, and finally the New Keynesian Phillips curve, an inflation model with forward-looking behaviour, based on dynamically optimizing agents.

The evidence from these comparisons was not decisive, but there was some support in favour of the Area Wide Model inflation equation. It was the only model that encompassed a general unrestricted model and forecast encompassed the competitors when tested on 20 quarters of one-step-ahead forecasts. In addition, models that were derived from the wider information set, the Area Wide Model and the second P* model, did better in forecasting than those based on a narrower information set, mainly prescribed by theory, the first P* model and the New Keynesian model.

Marita Paloviita (Bank of Finland) presented a paper entitled *Inflation Dynamics in the Euro Area and the Role of Expectations: Further Results*. The New Keynesian Phillips Curve (NKPC) relates current inflation to future expected inflation and real marginal cost. There are two versions, a purely forward looking NKPC and a hybrid specification of the NKPC that adds lagged inflation and so contains both forward and backward looking expectations. A typical finding is that under rational expectations the fit is bad and/or signs are wrong for the purely forward looking version, but the fit improves significantly with the addition of lagged inflation.

The paper examined the effects of dropping the rational expectations assumption and instead measuring inflation expectations directly. It asked the question as to whether the inflation process was purely forward looking; whether inflation dynamics had changed over time; and how different measures of real marginal costs would affect the outcome.

Estimation was based on aggregated and pooled data for the euro area from 1977-2003. OECD inflation forecasts were used as a proxy for inflation expectations. Three measures of real marginal cost were investigated: the HP filtered output gap, the OECD's estimate of the output gap, and the labour income share.

The result was that the OECD forecasts performed relatively well as a proxy for inflation expectations, in particular obtaining the correct sign for the real marginal cost variable. However, the model with lagged inflation performed significantly better. The output gap turned out to be at least as good a proxy for real marginal costs as the labor income share. Finally, the inflation process seems to have become more forward-looking in the recent years of low and stable inflation.

4.3 Econometric country models

Mexico

In his presentation on *Mexico's Potential GDP*, **Ernesto Acevedo** (UNAM) first defined several variables. Potential GDP (GDP*) is a non-observable variable defined as the level of production if the economy has full employment. Output gap is the difference between the observed GDP and potential GDP in terms of the latter, i.e. (GDP-GDP*)/GDP*. Some factors that affect GDP* are, internally, the capacity and quality of the productive factors, economic policy, the macro and micro environment, and, externally, the US economy, oil prices and conditions of the international financial markets. These concepts can be used to identify in what part of the cycle the economy finds itself, define what types of macro policies to undertake, perform medium-term simulations, calculate supply and demand side disequilibria, and identify underlying inflationary pressures.

The methodology used was a modified Hodrick-Prescott Filter, a structural vector autoregressive model with long-term restrictions and a Cobb-Douglas production function, complemented by a Kalman filter to determine the natural rate of unemployment (NAIRU).

The logs of GDP* and GDP followed each other closely, but the annual variations were high. The output gap and volatility during the debt crisis of 1982 were the highest, while GDP* dropped sharply. GDP* increased after 1996 due to the close link of the economy to the US manufacturing sector. However, the cycles have been very short and volatile, impeding the implementation of anti-cyclical policies. Investment has been very volatile during the period after 1980, giving rise to the need of a macroeconomic environment that would stabilize and promote investment.

He concluded by recommending that coherent macro policies should be implemented to preserve financial stability. The macro environment must promote investment in both physical and human capital. Reforms that favor productivity in the medium-term, such as the educational system, should also be promoted.

Eduardo Loria (UNAM) examined in his presentation *A Quarterly Macroeconometric Model for Mexico.* The objective of this model is to correct a broader annual model, make short-term forecasting, find the main structural determinants and ask whether Mexican GDP depends entirely on US GDP by testing the null hypothesis that domestic economic policy is efficient. The model is described as $y = f(q, y^{US}, y^d, m2,)$, where all explanatory variables have a positive sign. The result was that economic policy is efficient, therefore the dependence on the US economy was rejected. It was found that the real exchange rate (q) was a more relevant factor. The estimation was done through co-integration and error-correction models.

The causality test showed that all variables are strongly exogenous so that they are good predictors of GDP. In conclusion, the variance decomposition analysis showed that the real exchange rate, M2, and domestic growth were more important factors than US growth. This result implies that monetary policy does have a role in influencing the domestic market.

Austria

Mrs. Thomas Url (Institute of Advanced Studies, Vienna) and **Ulrich Schuh** (Austrian Institute of Economic Research, Vienna) presented a paper entitled *A Long-Run Macroeconomic Model of the Austrian Economy (A-LMM),* in which they developed a long-term macroeconomic model for Austria that was used to analyze the impact of ageing on the labour market, GDP growth, and the solvency of the social security system.

The model is a neoclassical growth model with the standard stylised facts. It has three economic agents: firms, households and government. Both firms and households are forward-looking and their behavioural equations are obtained from a dynamic optimisation exercise. A further feature of the model is the degree of desegregation of labour and the social security system. Labor supply is broken down by sex and groups. The same applies to the social security system, which is disaggregated so as to model the expenditure and revenue side for health, pension, accident and unemployment insurance. The closure of the model is ensured by current account dynamics. The rationale for this is that current account imbalances lead to changes in net foreign assets, which in turn modify current and permanent income. Changes in wealth affect consumption of private households and contribute to restoring current account equilibrium.

Simulation exercises started with setting a baseline scenario, which was based on assumptions used by Hanika and al. (2004) in their population forecast for Austria. The authors then performed six alternative simulations, which were compared to the baseline scenario. Firstly, they simulated higher life expectancy and found the working age population, GDP growth rate and social security contributions to be roughly identical to those in the baseline scenario. In contrast, government transfers to the pension insurance system were found to be higher than those in the baseline scenario because of higher life expectancy. Secondly, the authors assumed a lower fertility rate and came up with lower working age population, weaker growth, larger social expenditures and government transfers to the pension insurance system. Next, a scenario with higher activity rates in some of the age cohorts was simulated. The results were a slightly lower level of employment and GDP growth, but higher social expenditures and government transfers. Fourthly, the authors assumed stable fiscal and social security balances and found that contribution rates had to be significantly raised. Another finding was that higher contribution rates gave rise to higher wage claims and to a substantial increase in unemployment. Fifthly, a scenario with alternative pension indexation was run. Employment, wages and GDP growth turned out to be quite similar to those in the baseline scenario, while government transfers to the pension system appeared more modest. Finally, a scenario with higher productivity growth resulted in higher GDP growth, stronger real wages and lower public transfers to the pension system.

Montenegro

Franjo Stiblar (Universiy of Ljubljana) presented the first results of a project, carried out together with Zan Oplotnik, on modeling the economy of Montenegro, which aimed at both educating econometricians as well as creating relevant datasets at the Central Bank of Montenegro. After a short introduction about the economy and the state of Montenegro, which is one of the largest euroized economies with a status between currency board and membership in the EMU, he presented the model specification.

The macroeconomic model of Montenegro is of Keynesian type, consisting of 18 behavioral equations and 5 identities. It includes the real sector through a production function, the household sector by modeling wages, real income and consumption, price and stock exchange equations, the government sector by receipts and expenditures, the external sector, and the banking as well as monetary sectors. In response to Central Bank requirements, the modeling strategy was to incorporate a measure of cash in the country as well as to introduce explicitly policy instruments, such as the rate of required reserves, the effective tax rate and the structure of government expenditures.

Quarterly datasets for the period from 2000 to 2004 were compiled as a first step. The model is estimated using OLS on variables in growth rates. The time-series were tested for stationarity using DF tests, while the relationships were subjected to Granger causality tests.

One of the main implications of the results is estimating the amount of available cash in the country, not through a definition, but using the model for this purpose, which has been of crucial importance for the monetary authorities.

4.4 Biases in OECD and IMF forecasts

Heinz Glueck (Oesterreichische Nationalbank) and **Stefan Schleicher** (University of Graz) presented a paper entitled *Common Biases in OECD and IMF Forecasts: Who Dares to be Different?* They compared forecasts and ex-post data revisions for G-7 countries, using real-time estimates. They looked at GDP forecasts made by the OECD and IMF and investigated the hypothesis of common biases, either through common exogenous assumptions, interactions of forecasters or a reduction in uncertainty over time as the forecasts evolve.

In step 1, they investigated common biases among OECD/IMF forecasts for each G7 country using sequentially estimated correlations and biases with fading memory.

They found very strong common biases between OECD and IMF estimates. The OECD estimate was a good predictor for the IMF estimate and vice versa. The accuracy of estimates varied over time with estimates improving since 1990 (except for the United States). The biases were always positive but became lower over time.

In step 2, they investigated common biases among G7 countries within the set of IMF estimates, using sequentially estimated covariances with fading memory. They found common biases among only a very few country groups: United States–Canada, Germany–France–Italy, United Kingdom–Canada. Japan was isolated, decoupled from the United States after 1990.

4.5 Alternative Measures of Potential GDP and Economic Growth

Hubert Scaith (ECLAC) presented *Alternative Measures of Potential GDP and Economic Growth in Less Developed Countries*. While growth in Latin America and the Caribbean has been characterized by high volatility, complicating the identification of any trend, three country groups can be considered in a more detailed analysis of economic growth: South American countries that experienced an open crisis after 1998; other South American countries; and Mesoamerican countries (Mexico, Central America, Caribbean). The analysis itself used first the estimation of potential growth through a supply side approach. However, the latter exhibits several shortcomings such as the role of capital as a restricting factor and the absence of structural and institutional factors. As an alternative approach, the analysis relied on an export-led model, allowing to take into account the issue of external sustainability. The results of the simulations led to the conclusion that productive capacity has been negatively affected by a continued lack of investment; total factor productivity has not responded positively to the structural reforms; and that the potential for growth is significantly determined by the international environment.

4.6 Debt and economic growth in catching-up economies

Andras Simon (Bank of Hungary) presented his analysis, together with Peter Benczur and Victor Varpalotai, of the topic *Does High Debt Cause a Loss in Growth Performance in Catching-Up Economies?* After a long period of transformational recession, Central and Eastern European countries (CEE) seem to have entered a new phase of fast growth, which - along the lines of “consumption smoothing” - seems to allow for increased debt, both private and public. In the presented paper, the authors explore the question whether strong consumption increases such as those witnessed in Hungary represent a justifiable reallocation of consumption over time.

In a simple analysis, the catching-up process is characterized by a phase of faster growth due to physical and human capital accumulation, starting from an undercapitalized economy, until the steady state is reached. In such a simple open economy framework, the process is independent of saving behavior, and the speed of convergence is solely determined by the adjustment costs of investment. Empirical observations however suggest that highly indebted countries seem to run into growth problems sooner or later, unless they grow extremely fast with a high rate of investment. Both cannot be said of the CEE countries.

The authors therefore construct an extended model, which accounts for partial endogeneity of total factor productivity (TFP) growth (through spillovers from foreign investment), as well as for an increase in country risk caused by an increase in the foreign debt ratio. In this context, individual indebtedness has an external effect by contributing to an increase in country risk, which justifies government intervention through an active savings policy. The calibrated model is then used to simulate the effects of a transitory and a permanent increase in consumption (public or private) of 1 per cent. The effects of these shocks are analyzed against the backdrop of four different sets of assumptions: with and without the presence of foreign capital externalities, and with and without a risk premium.

The results of the simulations indicate that investment and growth is not independent from saving; that saving has externalities which calls for government intervention; that the effects of externalities are probably high and that their neglect by current policies probably amounts to foregoing double digit investment returns for the sake of higher present consumption (result for the scenarios with foreign capital externalities and risk premium); and that policies that result in high interest rates (and strong real effective exchange rates) have not only transitory output gap effects, but cause permanent losses in output.

In the subsequent discussion, he clarified that the authors were aware that the risk premium was most likely not linear. However, to keep the model simple, and in view of the focus on a local range around the steady state, it had been modeled in a linear fashion.

4.7 The international transmission of business cycles

Pami Dua (Delhi School of Economics) presented her work, in cooperation with Vineta Sharma, on the *International Transmission of Business Cycles: an Application of Spectral Analysis*, in which she examined the potential co-movements of international business cycles. She does so by comparing the leads based on the reference chronology from Economic Indicator Analysis with those based on Spectral Analysis. The presented study analyses cycles in three country groups (North America, Europe and the Asia Pacific region), as well as in individual countries (US, UK, Germany, India, Japan).

In Economic Indicator Analysis (EIA), economic activity is measured by the coincident index, which is a composite of output, income, employment and sales, which collectively help to date peaks and troughs of business cycles. Three types of cycles are commonly used in EIA: classical business cycles, using absolute values of the variable entering the coincident index; growth cycles, using deviations of the actual growth rate of the economy from its long-run trend growth; and growth rate cycles, using cyclical upswings and downswings in the growth rate to characterize pickups and slowdowns. In this study, growth rate cycles are used.

Spectral Analysis, in turn, tries to explore the cyclical patterns of complex time series by decomposing them into the underlying sinusoidal functions of particular wavelengths. In doing so, a process is translated from the time domain to the frequency domain, which facilitates the inference of the total variance of the process at each defined frequency. Thus, it is possible to detect the frequencies that contain most information about the variance of a series and, as a result, it is possible to check whether a sizable portion of the variance of the series is explained by variation of the business cycle frequencies.

To analyze the co-movements of cycles in different countries and country groups, EIA compares peak and trough dates for a pair of countries or zones to infer leads/lags between the two series. Using this method, the authors show that there are significant co-movements between all country groups, with North America leading Europe by 2.41 months, North America leading Asia Pacific by 1.90 months, and Asia Pacific leading Europe by 1.54 months. Results for individual country pairs are only partially in line with these results, which may be due to heterogeneity within the country groups.

Spectral Analysis analyzes the co-movements by providing a phase shift parameter which defines a lead or lag of one cycle over another at a given frequency. In addition, it provides a coherence measure to determine the degree of relatedness of two series. The results are in line with those of EIA, indicating that North America leads Europe by 2.00 months, North America leads Asia Pacific by 1.61 months, and Asia Pacific leads Europe by 0.60 months. Results for country pairs are also similar to EIA findings.

In an additional exercise, the authors analyze Granger causality for the country groups, based on a vector autoregression model. They find that North America Granger causes Europe, and that North America Granger causes Asia Pacific, but they do not find any clear-cut result for Granger causality between Europe and Asia Pacific. This, combined with the somewhat inconsistent previous results for individual country pairings, suggests that it may be instructive to look into the relationship between all individual countries within each group, in order to gauge heterogeneity within groups.

During the discussion, Ms. Dua pointed out that the countries for each group had been selected on the basis of data availability (to construct the coincident index). In addition, she agreed that time variability of the parameters is a problem, especially for India. An analysis which was not reported here shows that for the period from the 1990s onward, the observed co-movements were even stronger. In a further comment, she explained that for the Granger causality analysis, between 3 and 5 lags had been used, depending on the country group. The number of lags was determined on the basis of Akaike and Schwarz information criteria.

4.8 Density forecasts

Stephen Hall (Imperial College, London) presented three papers, which focus on creating and evaluating combinations of density forecasts. The choice of the topic was motivated by the fact that a number of institutions, such as the Bank of England and the NIESR, have started to publish density forecasts and, therefore, a combination of these forecasts could provide a better forecast of any economic indicator than the individual ones. A combination of point forecasts normally outperforms any single forecast, which might be because either all forecasts are wrong but in different ways, or simple averaging may help.

The advantage of a density forecast of a variable, such as inflation, as an estimate of the probability distribution of the possible future values of this variable over the point forecast is to provide the probability of hitting the inflation target, which is especially important when the distribution is not normal. Therefore, the signals, which the Bank of England gives to the market by making and announcing regularly density forecasts of inflation, are “better” indicators.

He then tried to answer the question as to whether a combined density forecast would work better than the combination of point forecasts. The answer to this question, which is central for the first paper, *Density Forecast Combinations*, raises a number of issues, such as how densities should be combined, how the combined densities should be evaluated and finally how individual densities should be tested against each other. He argued that going into these issues requires combining two largely unrelated areas in the literature of economic forecasting, namely density forecasting and forecast combinations.

On the first issue, combining densities, Stephen Hall discussed various approaches, such as the early operation research (OR) approach, the logarithmic opinion pool and the Bayesian approach (combining the means). After extending the Bayesian approach to higher moments, he turned to a combination of the complete density, i.e. not only the mean and the variance but the complete set of density forecast. Within this area, two approaches were presented: indirect, i.e combining moments, and direct, i.e. the complete combination of densities.

On the second issue, the evaluation of density forecasts, the density forecasts of inflation of the Bank of England and of NIESR were compared with a combination forecast. One of the results is that the direct combination of inflation forecasts by the Bank of England and NIESR is a better forecast than the single ones. After this conclusion, Stephen Hall presented a new suggestion as to how to calculate the weights in the combination of densities. The application of the traditional point forecast combinations, which is based on the regression method, is not possible for the complete density as the true density is never observed. Instead, what is suggested in the second paper, *Optimal Combinations of Density Forecasts*, is to extend the point forecast approach and, by analogy, to choose the combination that gives the most accurate combined density.

Combining density forecasts using Kullback-Leibler information criteria (KLIC) was the final part of the presentation, where Stephen Hall provided a formal framework for testing between density functions. Two Monte Carlo experiments were described to test the accuracy of the KLIC weights and to consider the size and power of the test of equal accuracy. One of the main findings is that combined forecasts generally perform better. In conclusion, Stephen Hall noted that KLIC is a useful unifying framework to combine and test density forecasts and it works better if the forecasts are completely different. However, the Bayesian modeling average, which is a moments combination, can lead to highly non-normal distributions which may perform badly.

Some questions for clarifications were raised as to the constraints for the optimal combination and the assumption for some form of distribution. Stephen Hall responded that there is no constraint in the optimal form and the method for combining density forecasts does not produce density functions; it just combines them in a forecast, which may have a normal or non-normal distribution.

4.9 Econometric modeling at mixed frequencies

Lawrence Klein (University of Pennsylvania) presented his research, together with Fyodor Kushnirsky, on *Econometric Modeling at Mixed Frequencies*. He emphasised the main aspect of choosing the approach to model an economy at mixed frequencies - the short time series available in the transition economies. Most of these economies, including China, do not have usable statistical data until the 90's, providing the rationale for building high-frequency models that do not depend on history. In addition, there is a need to build up models that are solved frequently to account for the ongoing changes in these economies as well as to combine monthly models with medium-term models.

Fyodor Kushnirsky (Temple University, Philadelphia) continued the presentation by describing the concept of such an approach, whose first step was to combine a high-frequency model with a low-frequency econometric model based on annual observations for horizons up to 5 – 10 years, first for Russia and China and next for Ukraine. When combining the models constructed at different frequencies, the results of the short-term model are used as initial conditions for the long-term model. The combination first is done in general terms and then in terms of adjustment of their structures and properties to achieve a mutually consistent joint solution. The structures of the low-frequency and high-frequency models are similar with differences in the dimensions, time horizon and lags. The solution of the low-frequency model could be of four types: an independent solution for the model; a combined solution that uses the high-frequency assumptions and a loss function; a combined solution that uses GDP inserted from the high-frequency model; and a combined solution, which uses a targeted growth scenario.

The combination of these models has been applied to construct a model of Ukraine. It is a simplified version of an annual econometric model, which uses the dataset of macroeconomic indicators for the period 1993-2003, compiled by the Institute of Economic Forecasting of the Ukrainian National Academy of Sciences. The variables in the model include GDP, capital stock, commissioned capital stock, investment, the average number of workers, and the average loan interest rate.

Four forecasts from the low-frequency model were presented according to the solution: an independent solution; a solution with 2004 GDP from the loss function, relating GDP from the two models; a solution with 2004 GDP from the high-frequency model; and a solution with targeted growth rates (2004 GDP from the high-frequency model). Comparing the results of these models, he indicated that the solution with targeted growth rates is closer to the economy of Ukraine for the last five years and therefore could be used to forecast this economy.

4.10 High-frequency macroeconomic modeling

Suleyman Ozmucur (University of Pennsylvania) presented a paper, jointly with Lawrence Klein, on *The University of Pennsylvania Models for High-Frequency Macroeconomic Modeling*. The paper is available on the website. Since economic data come in different frequencies - GDP, for example, quarterly, and industrial production monthly -, it is necessary to build models which could utilize data at different frequencies. Although detailed structural model-building is the best kind of system for understanding the macroeconomy through its causal dynamic relationships, some approaches based on indicator analysis are complementary. It would be impossible to construct a structural model from monthly data, but the authors have been trying to use an indicator method to construct models at this high frequency. The paper covers the methodology of current quarter model (CQM) and the performance of alternative models, the methodology used in “survey corner”, and a comparison of the results based on various model selection criteria.

In the subsequent discussion, the first question concerned the updates of the high-frequency models, raising concerns over the noise that the random fluctuations might have. **Lawrence Klein** (University of Pennsylvania) responded that China was an interesting case in that respect. In the model, seasonal adjustments, however, were not added, but dummy variables were introduced to account for some restrictions related to the WTO membership. The main point in constructing such kinds of models is to make the most of the information from the high-frequency data, which could be from different sources, and then keep the models updated. As a response to a question on the nature of the predicting estimates and, in particular, whether they are final or just first-round data, it was clarified that the models predict the final estimates on a monthly basis first, before they are entered into the quarterly models. In addition, annual estimates could be estimated as well. Lawrence Klein pointed out that, by using the models, they are trying to predict the values on which decisions are being based and that, therefore, all advance information is incorporated into these models. He underscored that their aim is to forecast a number that would be accepted as efficient and that, therefore, they do not make any comparisons with other forecasts but regularly revise the previous estimations.

Annex -1

Project LINK International Meeting

[Conference Web Site : http://buho.unam.mx/link2005/english/welcome.htm]

May 16-20, 2005
Mexico City, DF, Mexico

hosted by

Universidad Nacional Autónoma de México (UNAM)
Mexico City, Mexico

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Roberto I. Escalante Semerena, UNAM

Meeting Preparation

Erin Bell
University of Toronto

Armando Sanchez
UNAM

Agenda Outline

Sunday, May 15, 2005

Evening: Welcome Reception

Monday, May 16, 2005

Session I: World Economic Outlook
Session II: World Economic Outlook (cont.)
Session III: Invited Lecture
Session IV: Global Economic Imbalances

Tuesday, May 17, 2005

Session V: Regional Outlook: Europe
Session VI: Mexico and Latin America
Session VII: Regional Outlook: North America and Developed East
Session VIII: Regional Outlook: Asia and Africa

Evening: Conference Dinner

Wednesday, May 18, 2005

Excursion to Archeological Site: Xochicalco, Morelos

Evening: Dinner

Thursday, May 19, 2005

Session IX: Developing Countries in the Global Trade System: Economic Growth, Trade, Financial System, and Macroeconomic Balances
Session X: International Economic Issues
Session XI: Lawrence R. Klein Lecture
Session XII: Applied Economics: Mexico

Friday, May 20, 2005

Session XIII: Remittances, Trade and Economic Development
Session XIV: Modeling Techniques
Session XV: Invited Lecture
Session XVI: Applied Macroeconomic Issues

Final Agenda

Monday, May 16

9:30-10:00 **Welcome**

Opening Remarks

Peter Pauly
Luis Miguel Galindo
Roberto Escalante
Rosaura Ruiz (Vice-Chancellor representative)

10:00-11:30 **World Economic Outlook**
Chair: Bert Hickman

"Project LINK World Outlook"
Ian Kinniburgh, United Nations, New York

"The World Bank Global Economic Prospects"
Hans Timmer, The World Bank, Washington

"The IMF International Economic Outlook"
Thomas Helbling, International Monetary Fund, Washington

11:30-12:00 **Break**

12:00-1:30 **World Economic Outlook (cont.)**
Chair: Luis Miguel Galindo

"The NIESR International Economic Outlook"
Ray Barrell, NIESR, London

"The Economic and Political Determinants of OPEC Oil Production"
Robert Kaufmann, Boston University, Boston

"Common Biases in IMF and OECD Forecasts: Who Dares To Be Different?"
Heinz Glueck and Stefan Schleicher, Austrian National bank and University of Graz

1:30-3:30 **Lunch**

3:30-4:30 **Invited Lecture**
Chair: Roberto Escalante

"Latin American Economic Liberalization in Retrospect"
José Antonio Ocampo, Under-Secretary General, United Nations, New York

4:30-5:00 **Break**

5:00-7:00 **Global Economic Imbalances**
Chair: Julio Andujar

"Dollars and Deficits – the US Current Account Deficit and its Exchange Rate Consequences"
Ali Al-Eyd, Ray Barrell and Olga Pomerantz, NIESR, London

"Global Imbalances"
Thomas Helbling, IMF, Washington

"Global Macroeconomic Imbalance and the International Reserve System"
Pingfan Hong, United Nations, New York

General Discussion
LINK National Participants

<u>Tuesday, May 17</u>

10:00-11:30 **Regional Outlook: Europe**
Chair: Julio López

"Europe: Summary"
Peter Pauly, University of Toronto, Toronto

"Modelling Inflation in the Euro Area"
Eilev Jansen, Bank of Norway, Oslo

"Inflation Dynamics In the Euro Area and the Role of Expectations: Further Results"
Maritta Paloviita, Bank of Finland, Helsinki

11:30-12:00 **Break**

12:00-1:30 **Regional Outlook: Mexico and Latin America**
Chair: Juan Carlos Moreno

"Reconstruir el futuro. Globalización, desarrollo y democracia en América Latina" (book presentation)
José Antonio Ocampo, Under-Secretary General, United Nations, New York

Panel Discussion
Rolando Cordera, Rebeca Grynspan and Luis Miguel Galindo

"Latin America: Summary"
Francisco Villareal, CEPAL, Santiago

1:30-3:30 **Lunch**

3:30-4:30 **Regional Outlook: North America and Developed East**
Chair: Carlos Tello

"United States: Summary"
Lawrence R. Klein, University of Pennsylvania, Philadelphia

"Japan: Summary"
Kanemi Ban, Osaka University, Osaka

General Discussion
LINK National Representatives

4:30-5:00 **Break**

5:00-7:00 **Regional Outlook: Asia and Africa**
Chair: Jorge Basabe

"Asia: Summary"
J. Malcolm Dowling, Singapore Management University, Singapore

"Alternative Measures of Potential GDP and Economic Growth in Less Developed Countries"
Hubert Scaith, CEPAL

"Africa: Summary"
Oumar Diallo, DESA, United Nations, New York

"Trade Policy Development and Negotiations in the Doha Round: Documentation of Major Issues and Proposals on Africa's Position"
Sam Olofin, University of Ibadan, Ibadan ***(cancelled – unable to get visa)***

<u>Wednesday, May 18</u> Full – Day Excursion to Xochicalco, Morelos

<u>Thursday, May 19</u>

10:00-11:30 **Developing Countries in the Global Trade System : Economic Growth, Trade, Financial System and Macroeconomic Balances**
Chair: Luis Aquino

"Monetary Policy in Mexico"
Federico Rublo, Banco de México

"Inflation Targeting"
Alejandro Werner, Secretaria de Hacienda, Mexico

"Economic Relationships Among the NAFTA Region: What Is Next"
Hugo Contreras, UNAM – CEMPE

11:30-12:00 **Break**

12:00-1:30 **International Economic Issues**
Chair: Martin Puchet

"Does High Debt Cause a Loss in Growth Performance in Catching-Up Economies"
Peter Benczur, Andras Simon and Victor Varpalotai, Bank of Hungary, Budapest

"Spectral Analysis of International Transmission of Business Cycles"
Pami Dua and Vineet Sharma, Delhi School of Economics, New Delhi

"The Effect of New Asian Regional Trade Groupings on the Doha Round Negotiations"
Oh-Seok Hyun, Trade Research Institute of Korea, Seoul

1:30-3:30 **Lunch**

3:30-4:30 **Lawrence R. Klein Lecture**
Chair: Hugo Contreras

"Stock Returns and Expected Business Conditions: A Half-Century of Direct Evidence"
Francis X. Diebold, University of Pennsylvania

4:30-5:00 **Break**

5:00-7:00 **Applied Economics : Mexico**
Chair: Lilia Dominguez

"Mexico´s Potential GNP"
Ernesto Acevedo, UNAM

"Labor Market Integration in North America"
Clemente Ruiz, Facultad de Economía, UNAM

"The Impact on the Mexican Economy of the Rebuild of Minatitlan´s Refinery"
Juan Bueno, PEMEX

"A Quarterly Macroeconometric Model of Mexico"
Eduardo Loria, UNAM

Friday, May 20

10:00-11:30 **Remittances, Trade and Economic Development**
Chair: Leonardo Lomeli

"Remittances and Development"
Hans Timmer, World Bank, Washington

"Remittances in Colombia: Transaction Costs and Exchange Rates"
Ximena Cadena O. and Mauricio Cardenas S., Fedesarrollo, Bogota

"Can Special Trade Measures Help Development When Trade Tools Are Weak and the Conditions for Development Are Uncertain"
Sheila Page, Overseas Development Institute, London

11:30-12:00 **Break**

12:00-1:30 **Modeling Techniques**
Chair: Thomas Wilson

"A Long-Run Macroeconomic Model of the Austrian Economy"
Josef Baumgartner, Helmut Hofer, Serguei Kaniovski, Ulrich Schuh and Thomas Url, Institute for Advanced Studies and WIFO, Vienna

"Comparison of Forecasting Methods With Many Predictors"
Jin-Lung Lin and Ruey S. Tsay, Academia Sinica, Taipei and University of Chicago, Chicago ***(cancelled – unable to get visa)***

"Econometric Modeling at Mixed Frequencies"
Lawrence R. Klein and Fyodor Kushnirsky, University of Pennsylvania and Temple
University, Philadelphia

1:30-3:30 **Lunch**

3:30-4:30 **Invited Lecture**
Chair: Duncan Ironmonger

"Density Forecasts"
Stephen Hall, Imperial College, London

4:30-5:00 **Break**

5:00-7:00 **Applied Macroeconomic Issues**
Chair: Jan van Heerden

"The University of Pennsylvania Models for High-Frequency Macroeconomic Modeling"
Lawrence R. Klein and Suleyman Ozmucur, University of Pennsylvania

"Simulating the Impact of Income Distribution on Poverty Reduction"
Qazi Massood Ahmed, Haroon Jamal and Kalim Hyder, Social Policy and Development Centre, Karachi ***(cancelled – unable to get visa)***

"Montenegro Quarterly Macroeconomic Econometric Model"
Franjo Stiblar and Zan Oplotnik, University of Ljubljana, Ljubljana

"The Accession of China to WTO: Consequences for the Regional Gap"
Jean-Louis Brillet, Muriel Jacubowicz, Chloe Mayer, Julia Schultz, and Liu Xiaoyue, INSEE, Paris, ENSAE, Paris, and CASS, Beijing

Annex - 2

LINK Spring Meeting
16-20 May 2005
MEXICO

LIST OF COUNTRY REPORTS

NO.	NAME OF THE COUNTRY	AUTHOR
1	Austria	Ulrich Schuh
2	Croatia	Andrea Mervar
3	Slovenia	F. Stiblar & Joe Mencinger
4	Bulgaria	Garabed Minassian
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Annex - 3

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