LONG-TERM PROSPECTS FOR THE WORLD ECONOMY

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LONG-TERM PROSPECTS FOR THE WORLD ECONOMY
ORGANISATION FOR ECONOMIC CO-OPERATION
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Foreword

Decision-makers in government and industry are increasingly confronted with challenges of a longer-term nature, such as environment, technology and energy, ageing populations, regional integration, and the implications of economic reform in Eastern and Central Europe. While many of these challenges take a long time to unfold, their evolution and consequences often depend on the timely implementation of appropriate strategies. Stepping back to look at the broader picture from a longer-term perspective can help decision-makers to understand better the problems to be addressed and their interactions, and to identify the principal factors affecting them. By providing a more systematic foundation for exploring possible futures, it can stimulate constructive thinking about the issues at stake and the choices to be made.

It was in this context that the OECD Forum for the Future, in conjunction with the Organisation’s ongoing informal dialogue with the Dynamic Asian Economies (DAEs), organised in June 1991 a conference on “Long-term Prospects for the World Economy”. It was attended by 35 high-level participants from government, business and academia. The presence of a strong DAE representation at the meeting reflected the extent to which the emergence of dynamic, market-oriented economies in East and South East Asia has significantly expanded the foundations for sustained global economic growth.

The purpose of the conference was to examine the main developments which are likely to affect the evolution of the world economy and its major regions over the next decade or so, to discuss their implications for international economic relations, and to reflect on the policy agenda for the 1990s.

The first session, chaired by Arne Øien, Secretary-General in Norway’s Ministry of Finance, considered future trends from a global perspective, pointing up the environmental, demographic and economic dimensions of sustainable development, the question of multilateralism versus regionalisation, and concerns about a possible world savings-investment imbalance. The second session, chaired by Vincent H. C. Cheng, Senior Manager of the Hong Kong and Shanghai Banking Corporation, concentrated on the outlook for North America, including the prospect of economic integration with Mexico. This was followed by discussions – presided over by Patrice Vial, Directeur de la prévision, Ministère de l’économie, des finances et du budget, France – on current and future developments in the Asian-Pacific region, notably the role of Japan in the 1990s and that of the more dynamic performers among the East and South East Asian economies. The final session, under the chairmanship of Teh Kok Peng, Deputy Managing Director of the Monetary Authority of Singapore, assessed European prospects, issues related to economic, social and political integration in Western Europe, and events in Eastern and Central Europe.
Developments in the region of the former Soviet Union have been particularly turbulent over the last twelve months or so. The contributions to the conference were submitted in the summer of 1991. Thus, unlike the Secretariat’s introductory chapter which was drafted in the spring of 1992, they were unable to take into account more recent events, notably the emergence of the republics of the Commonwealth of Independent States.

This publication brings together the papers presented at the meeting, as well as an introductory contribution by the Secretariat. The book is made available to the public on the responsibility of the Secretary-General.
# Table of Contents

Long-term Prospects for the World Economy:  
Overall Outlook, Main Issues and Summary of Discussions  
by *Michel Andrieu, Wolfgang Michalski and Barrie Stevens* .................................. 7

by *André de Jong and Gerrit Zalm* .............................................................. 27

Long-term Prospects for the US Economy  
by *Maurice Ernst and Jimmy W. Wheeler* ....................................................... 75

North American Economic Integration in the 1990s  
by *Wendy Dobson* .................................................................................. 101

European Economic Integration in a Long-term Perspective  
by *Emilio Fontela* .................................................................................. 119

The Evolution of Europe 1990-2010  
by *Jacques Lesourne* ............................................................................ 135

Long-term Economic Issues in Japan and the Asia-Pacific Region  
by *Masaru Yoshitomi and Naohiro Yashiro* ........................................... 149

The Asia-Pacific Region in the 1990s  
by *Steven Wong* .................................................................................. 171

*Annex:* List of Participants ................................................................. 191
Long-term Prospects for the World Economy: Overall Outlook, Main Issues and Summary of Discussions

by

Michel Andrieu, Wolfgang Michalski and Barrie Stevens
OECD Secretariat, Advisory Unit to the Secretary-General

1. Introduction

What kind of world economic environment are governments, enterprises and individuals likely to encounter at the turn of the century? What major uncertainties and issues will have to be faced at the international level? What are the prospects for the major economic regions of the world? These are some of the questions which are increasingly on the minds of decision-makers as the turn of the century approaches and they become more sharply aware of the pace of change and of the extraordinary transformations that the world economy has been undergoing in the last few years.

The need for decision-makers in the public and private sectors to develop a longer-term strategic view of events in the global economy has grown as they have increasingly been confronted with issues of a longer-term nature, such as sustainable development; environment and energy; the economic and social implications of ageing populations in OECD countries; explosive population growth and poverty in developing countries; and the changes in Central and Eastern Europe. While many of these problems have been building up for a long time, some were rather late in moving to the top of the political agenda.

The evolution and eventual outcome of many of these problems, however, often depend critically on actions taken at a relatively early stage. As time goes on, the range of feasible options frequently becomes narrower; problems tend to become more acute and solutions harder to implement. Hence, while there is a danger of making decisions that are too hasty, there are also risks in deferring policy attention too long.

The purpose of the conference was therefore to examine the principal developments which are likely to influence the evolution of the world economy and of its main economic regions over the next decade or so, to discuss the implications of those developments for international economic relations, and to reflect on the policy agenda for the 1990s. This paper provides a broad overview of the contributions presented at the meeting and of the ensuing discussion, and serves as an introduction to some of the principal issues.
Section 2 of the overview provides an assessment of longer-term prospects for the main economic regions of the world. First, the future evolution of North America is considered, with an emphasis on the outlook for the US economy and the possible implications of the North American Free Trade Agreement (NAFTA). The outlook for Europe which follows focuses primarily on issues related to the deepening and the widening of the European Community. Prospects for the Asia-Pacific region, with particular emphasis on the future evolution of Japan and of the Dynamic Asian Economies (Hong Kong, Malaysia, Singapore, South Korea, Taiwan and Thailand), are then addressed. Section 2 concludes with the outlook for other regions of the world (South Asia, Latin America, the former USSR, the Arab world and Africa south of the Sahara).

This regional assessment provides a basis for addressing in Section 3 some of the major questions that are likely to arise at the global level from the interaction between regional and national economic players. Four main issues are considered: the possible shift in the economic centre of gravity from the Atlantic to the Pacific basin; the implications of increasing regionalisation for the future of the multilateral system of trade, investment and technology; the implications of saving and investment imbalances at the global level; and the significance for future international economic relations of the growing competition among national economic systems. The challenges raised for developed and developing countries alike by environmental problems, though a further possible issue for discussion in a global context, were not addressed at the meeting.

2. Longer-term outlook for the main economic regions of the world

Projections for the global economy in the 1990s and beyond are by and large optimistic. In the industrialised countries, after more than a decade of widespread restructuring, conditions on the supply side are favourable, and provided international financial markets remain stable, the recovery in investment rates over the latter half of the 1980s should feed through into improved output performance over the longer term. Moreover, private consumption and investment could pick up in the debt-stricken developing countries, as well as in Eastern Europe. Thus, estimates for average annual growth in world output up to the year 2000 are broadly in the 3 per cent range. North America and OECD Europe are seen as likely to grow at between 2.5 and 3 per cent. Japan is set to grow at between 3 and 4 per cent, and the Asia-Pacific region as a whole at well over 5.5 per cent (slightly higher for the Asian NIEs). Latin America is expected to grow at around 3 per cent, and Africa at a somewhat lower rate. Finally, growth may resume in some Central European countries towards the end of the decade, after a prolonged period of major structural change.

This basically optimistic outlook needs to be set against a number of major uncertainties. Some, such as the future of the international trade system or the possibility of ex ante imbalances between world saving and investment, are global in nature – either because they depend on the interaction of several regions or because they call for a global response. These are addressed in Section 3 of this paper. Other uncertainties pertain essentially to the regional or the national level. They may be either common to several regions (e.g. impact of ageing populations) or even specific to a single nation (e.g. the US budget deficit). These will be dealt with in this section, which primarily focuses on the prospects for development in the main economic regions of the world.
Prospects for North America

In a longer-term perspective, the creation of a North American free trade area (NAFTA) which will foster economic integration between Canada, the United States and Mexico should be a new source of strength for the North American continent. As regards the 1990s, however, most observers seem to agree that per annum growth for the region will probably be in the 2.5 per cent range overall, an evolution primarily determined by the relatively moderate performance of the dominant US economy. The latter’s dynamism over the next decade will depend largely on its ability to improve the productivity of its labour force and correct for the low rate of capital accumulation experienced since the mid-1980s.

Reflecting the ageing of its population, the rate of growth of the US labour force will decline substantially in the 1990s and into the next century. Thus, overall economic growth will, on the whole, be determined by the quantity and quality of other factors of production, by productivity gains through structural adjustment, and by the improvement in the quality of human resources, in particular through education and training. Slower growth in the labour force is likely to cause real wages to rise as labour becomes relatively scarcer, creating stronger incentives for the substitution of capital for labour (e.g. more widespread application of robotics and automation). As a result, the rate of growth of the capital/labour ratio (2.2 per cent per annum in the 1980s) could increase in the 1990s. Moreover, with the relatively faster growth rate of labour productivity in manufacturing, resources will continue to shift to services, so that the biggest challenge for the United States over the next ten to twenty years will be to increase labour productivity in the tertiary sector.

If the United States is to achieve reasonable overall productivity growth over the next twenty years, it will also need to increase public and private investment in physical infrastructure. In this respect, the record of the last two decades has been poor and may have been an important factor in the country’s generally weak overall productivity performance. Restoring infrastructure to an adequate level, and even creating critical infrastructures in advance of demand, could be a source of large positive externalities in the 1990s and beyond. The construction of railroads in the 19th century and of the interstate highway system in the 1950s and 1960s represent interesting precedents in this regard. Modernisation of road, rail and air facilities could contribute to significant productivity gains in transport, and the development of an integrated fibre optic communication network, with government leadership, might well speed up the diffusion of new technologies.

The need to accelerate the capital/labour substitution, to improve the quality of labour and to upgrade physical infrastructure will cause an increase in the demand for productive investment. Whether or not the United States will be able to generate sufficient funds to match the related capital accumulation needs is an open question. A slightly increased rate of gross investment, however, should be sustained, both for investment-related and saving-related reasons. On the investment front, a substantial reduction in the level of housing construction, brought about by a decline in the number of young people looking for housing, could make room for more productive investments. On the saving front, an increase in total savings of 2 per cent of GNP could result from two mutually reinforcing developments. First, the private saving rate may rise because of a shift in population distribution in favour of age groups that normally have the highest saving rate. Secondly, the federal budget deficit as a share of GNP could decline, in particular as a result of a reduction in military expenditures.
The "peace dividend" resulting from reduced East-West tension would, in fact, not only alleviate the strain of military outlays on the public budget but also constitute an opportunity in a much broader sense, especially since some of the resources (including skilled labour) hitherto devoted to military objectives could be redirected towards civilian applications. In the longer run, this could significantly improve the competitiveness of the US economy. However, future military conflicts, perhaps of a different nature and perhaps requiring different forms of armament, cannot be ruled out. Hence, the reduction in military expenditures may not be as significant as expected. Moreover, the conversion of armament industries from military to civilian production could be costly and extend over several years.

Even if the overall level of funds available for public investment is adequate in the future, it will need to be channelled to the proper level of government. In this regard, some way will have to be found to increase federal support to, or raise the taxation capacity of, states; it is at the state level that the heavy burden of financing both infrastructures and the development of human capital will fall.

The creation of NAFTA should stimulate intra-industry rationalisation of production and foster economic growth for all North America. The gains, which may be greater for the smaller economies, are likely to be in the form of real income effects, reduced consumer prices, scale economies, dynamic effects (more rapid rate of introduction of new technology), and reduced uncertainty – thereby encouraging investment and risk-taking. The extent to which the potential benefits can indeed be realised nevertheless remains to be seen. While serious negotiations are under way, there is still substantial uncertainty with regard to the nature of the agreement that will eventually be reached, notably because of the tripartite character of the negotiations, the unequal degree of integration among the three economies and the differences in size and level of development. An additional element of uncertainty in the 1990s will be the nature of the relationship between Quebec and the rest of Canada.

Whatever the outcome, it is highly probable that NAFTA will accelerate the migration of US "Rust Belt" companies and blue-collar jobs towards Mexico, with the result that US labour adjustments in terms of occupational shifts and changes in relative wages could be greater than under the Canada-US FTA. In particular, if this happens in a period of slow or moderate growth, some observers fear that these adjustments could create a backlash against imports of products originating from outside the North American continent, notably from the Asia-Pacific region. However, given the limited absorptive capacity of the Mexican economy resulting from the poor quality of existing infrastructure facilities, the potential labour displacement could be very gradual indeed.

Whether or not NAFTA creates – directly or indirectly – increased discrimination against third parties as the overall structure of its economy improves over time, Mexico may become in the medium term a strong competitor for Asia-Pacific countries on the North American market. Moreover, it is likely that a change in foreign investment flows in favour of Mexico, notably from the advanced OECD Member countries, could be even more important in this context than the impact on trade flows.

In a longer-term perspective, an important question is whether NAFTA, as currently envisaged, is a stopping point or whether it is the first step towards the creation of a North American common market. Once under way, the process of deeper integration may indeed prove inevitable, as closer economic relations call for new mechanisms to deal with new sources of conflict, and perhaps even greater harmonization of policies. However, concerns in Mexico and Canada about a potential loss of sovereignty in the foreign
policy area and US reluctance regarding a free flow of labour appear, at least for the moment, to make a real common market unlikely.

US dominance could prove to be an obstacle to the harmonization of commercial policies, because in the past the United States has more than once used trade and investment restrictions as instruments of foreign policy. From a US perspective, the liberalisation of labour flows raises a serious problem because of the income differential between Mexico and its two northern partners. Nevertheless, in the longer run, the growing scarcity of labour in the US as a result of the ageing of its population could lead to a more liberal US attitude towards labour migration within the region, and – depending on the evolution of the new world order in general and on the political future of Canada in particular – the issue of sovereignty in foreign policy might also become less relevant.

The outlook for Europe

With regard to Europe, most analysts expect a healthy growth performance (in the 3 to 4 per cent range) over the next decade and into the next century, although persistently high unemployment rates and related social problems are a source of concern. This generally positive outlook is largely predicated on the expected static and dynamic gains to be derived from the creation of the Single European Market. Further liberalisation of goods markets will promote rationalisation and restructuring, and offer new opportunities for gains in scale economies. Sharper competition in the provision of services, especially in banking, insurance, information and transport, will raise efficiency and reduce transaction costs. More liberal public sector practices will stimulate public administrations and public monopolies to improve their overall performance. The liberalisation of financial markets will foster competitiveness through better resource allocation. The freer movement of workers, notably in the case of the professions and crafts, should improve the functioning of related labour markets.

In addition to the Single European Market initiative, further measures for deepening the integration process have been envisaged with the aim of establishing an economic and monetary union. The creation of "Social Europe" (i.e. the establishment of "best practice" binding norms for working conditions and labour market policies) has been advocated to provide for more equal living and working conditions. Finally, alongside such deepening of the economic dimensions of the Community, including the creation of an independent European Monetary Institute and later on a common currency, serious rethinking of the other institutional dimensions appears unavoidable. The options under consideration in this regard range from intensified co-operation between nation states to the creation of a confederation or even a federal state.

The recent Maastricht agreement has carefully avoided incorporating any final decisions regarding these options, but it was agreed to strengthen the power of the European Parliament to amend and veto European legislation, and to widen the domain in which the Commission can make proposals to the Council. The co-ordination of foreign policy and internal security questions, however, is still to be dealt with at the intergovernmental level and remains outside the Community. Whether this somewhat artificial division of responsibilities can effectively be maintained in the years to come is, however, another open question. The answer depends in part on the extent to which it is possible to reconcile the different requirements for the deepening and widening of the integration process.
While greater integration would contribute to a more stable macroeconomic environment and make Europe more competitive, it could also exacerbate regional inequalities. For instance, the convergence of macroeconomic policies and the introduction of ceilings for budget deficits will reduce the scope for national policies to promote underdeveloped regions. Fixed exchange rates and (ultimately) the creation of a common currency could introduce, at least in the medium term, an additional element of rigidity to the detriment of the less advanced member countries. Social Europe would force an artificial reduction of labour cost differentials which could undermine the cost advantage of the poorer regions in labour-intensive activities. Thus the increased dualism which may result from the deepening of integration could erode the cohesion of Europe, unless more active support policies in favour of the less advanced regions are implemented.

The deepening of the European Community could, to a certain extent, raise barriers to the second dimension of European integration, namely the widening of membership. Potential new members will have to be prepared to adhere to more stringent rules, to make more extensive adaptations, and to give up more of their sovereignty than in the past. However, this should not be a major problem for most of the European Free Trade Association (EFTA) countries, which have already established close economic links with the Community, have a comparable level of development and have similar institutional and social frameworks.

Some of these countries – such as Austria, Finland and Sweden – have even already pegged their currency to the deutsche mark or the ECU. Moreover, most if not all should be in a position to contribute actively to the internal cohesion programmes of the Community. So, with the exception perhaps of Switzerland (where major constitutional problems need to be resolved), EFTA countries should be able to achieve full membership before the turn of the century. The implementation of the recently concluded European Economic Area (EEA) agreement represents for most EFTA countries nothing more than a further intermediate step towards definite integration.

The widening of the EC to Central and Eastern Europe raises issues of a different nature. While the economies of Central Europe are relatively small at present (15 per cent of EC GDP); the economic gains to be achieved from their successful integration with Western Europe could be substantial in the longer term. Moreover, the EC has an important stake in the political stability of its neighbours and in ensuring that they have the ability to address the serious environmental problems inherited from the previous regimes. Finally, the successful transition of Central European countries to a market economy could have a strong demonstration effect on other countries, not only in the East but also in the developing world.

With active Community support, rapid progress may be achieved in Hungary, Czechoslovakia and Poland. However, the special association status granted to these countries needs to be complemented by other measures. Particularly important in this context are specific development programmes designed to facilitate transition to a market economy, but also a rapid removal by the Community of trade restrictions in those sectors where East European countries could have a comparative advantage in the shorter term (e.g. agriculture, steel and textile products). This would encourage them to pursue the painful structural reforms currently under way. Other Eastern European countries which are less advanced on the path of political and economic reform (such as Romania) will in all likelihood need a longer adjustment period.

The confused and uncertain situation in the former USSR constitutes one of the most serious challenges for Europe. Most experts expect a further deterioration of the eco-
nomic situation over, perhaps, the next five years – followed, in the best of circumstances, by only very moderate and very uneven growth. However, given the size and the wide range of the problems involved (ethnic, political, social, economic, environmental), the scope for influencing the course of events in the former Soviet Union is very limited. Even massive aid from the West could, at best, play a subsidiary role and would only serve to provide some leeway in the process. Substantial flows of foreign direct investment are, however, also unlikely as long as the present state of confusion prevails and the legal and economic infrastructure of the newly independent republics remains incomplete.

Several factors which discourage private Western companies from investing in the former USSR need to be addressed. First, the demarcation of power between what remains of the central authorities and the republics should be clearly defined, and adequate mechanisms which guarantee political stability put in place. Second, efficient regulatory frameworks and administrative structures which support the functioning of a market economy need to be established. Third, prices should truly reflect supply and demand relations and the ruble (or the currencies which may replace it in some of the new republics) should be made convertible to hard currency. Finally, bottlenecks in the physical infrastructure, particularly in transport and communications, need to be overcome effectively. There is no doubt that considerable time will be required before these conditions are met.

Asia-Pacific perspectives

The Asia-Pacific region should continue to experience rapid growth in the future; the region’s average overall growth rate is expected to be in the 5 to 6 per cent a year range in the 1990s and beyond. These rates are significantly higher than for the rest of the world economy; the region’s share of world income could therefore rise from 24 per cent in 1989 to 35 per cent in 2010 and to over 50 per cent by 2040. Japan will continue to be the dominant economy in the foreseeable future and a major contributor to economic development, while Australia and New Zealand will strengthen their links to other economies within the region. The Dynamic Asian Economies (DAEs) will play an increasingly important role, and other countries at an earlier stage of development could be a source of renewed dynamism in the future. However, despite this optimistic vision, Asian countries will be confronted with serious challenges, notably of an environmental and social nature.

For Japan, most observers anticipate an average growth rate in the 3 to 4 per cent range in the 1990s and into the next century. However, the country is expected to face some new constraints which will have a major bearing not only on internal patterns of growth but also on its relations with the rest of the world. The rapid ageing of the population will result in a decline in the working age population after 1995 and a decline in the labour force after 2000, despite increased participation of women in the labour market. As labour shortages could be compounded by reductions in working hours, Japan may also be confronted with the need to reconsider its immigration policies.

Demographic trends could have serious implications too for consumption, investment and national saving. In this regard, the share of total investment in Japanese GNP is projected to fall from 32 per cent in 1990 to 29 per cent in 2000, but due to the rise in labour-saving investment it could increase again to about 30 per cent thereafter. At the same time, aggregate saving is expected to decline gradually from 34 per cent in 1989 to around 29 per cent in 2010. Hence, on balance, while Japan should continue to be a net
saver in the 1990s – the decline in saving being matched by a corresponding decline in investment – after the turn of the century it may not be able to maintain the position of a major capital exporter. This development might be further accentuated if Japan embarks on new programmes for a major upgrading of its infrastructure. Consequently, the current external surplus may remain in the range of 1 to 1.5 per cent of GNP up to 2000 and fall to close to zero over the 2000-2010 period.

Another major development in the 1990s and beyond will be the relocation of industrial production outside Japan. The ratio of international production of Japanese companies may increase from the present level of 6 per cent or so, which is low by international standards, to 20 per cent by 2010 (approximately the current level for Germany). Part of the outward investment will be ‘‘market oriented’’, i.e. flowing to other advanced countries in North America and Europe; part of it will be ‘‘cost oriented’’, i.e. flowing to less developed countries, notably in the Asia-Pacific region. This will contribute to increased intra-industry trade between Japan and the rest of the region, but sustained investment outflows are very unlikely to result in a hollowing-out of Japanese domestic manufacturing.

Australia’s and New Zealand’s economic relations with other countries in the region are set to grow substantially. Both economies are likely to meet their import requirements increasingly within the region and to continue at the same time to be major suppliers of food, minerals, fuel and services to other Asian countries. Trade liberalisation and other market-oriented reforms (e.g. deregulation of banking) under way or planned in the region could further improve the two countries’ economic prospects. However, in order to take full advantage of the prosperity of the region in the future, both will need to make a major effort to boost their industrial base, upgrade the skills of their labour force and improve their R&D capability. Nevertheless, with regard to the ultimate impact of the policy initiatives taken to date, there still remain major uncertainties. The stakes appear to be particularly high for New Zealand, where far-reaching market-oriented reforms have been launched with rather mixed results. While success would enable New Zealand to take full advantage of the dynamism of the region, failure could open the door to a period of prolonged stagnation and social unrest.

For the rest of the Asia-Pacific region, most projections are highly optimistic. Advanced DAEs (South Korea, Taiwan, Hong Kong, Singapore), which will still be experiencing rapid but diminishing growth rates towards the end of the century, should progressively catch up with the developed countries. For the region as a whole, however, this gradual slow-down may possibly be offset by the take-off of ASEAN countries, fuelled by substantial investments from Japan and advanced DAEs. China may also resume rapid growth in the 1990s if the fundamental issues of how to proceed with economic reforms are effectively addressed. However, considerable risks remain on the political front. In particular, it is uncertain whether the passing of China’s ageing leaders would not lead to turbulent power struggles and the breakdown of central authority, which in turn could result in ethnic conflicts and the kind of warlordism China suffered in the 1920s and 1930s. In other socialist countries in the region (Vietnam, Laos, Mongolia, North Korea), reforms under way or contemplated could start to pay off in terms of improved economic performance in the years to come as economic relations with other countries in the region expand.

Over the 1980s, DAEs experienced a growing gap between their investment and saving ratios, resulting in an excess saving of more than 10 per cent of their GNP in
1990. However, in light of the considerable resources that will be needed to upgrade physical and social infrastructures in many of these countries, it appears unlikely that this gap will be sustained in the future. In Taiwan, for instance, inadequate infrastructure has resulted in congestion, power shortages and industrial pollution. This has led the authorities to earmark more than $300 billion for public infrastructure upgrading over the next six years. In Korea, major efforts will be needed to alleviate the acute housing shortage and improve transportation infrastructure, notably between Seoul and Pusan. More mature DAEs, such as Singapore, may also be faced with significant increases in social and health expenditure due to ageing of the population.

Continued urbanisation and industrialisation will exacerbate environmental problems facing large Asian metropolises in the future (urban population in the whole Asian continent is expected to rise to 2.3 billion in 2000, compared with 750 million in 1990). According to a recent UN study, sulphur dioxide, dust and soot levels in many Asian cities are already well above safety limits. Efforts will also need to be intensified to protect tropical forests which have been destroyed at an alarmingly high rate, notably in Malaysia, Thailand, Indonesia and the Philippines. There is concern, however, that efficient control of the forest economy in the ASEAN countries may accelerate the destruction of forests in other countries such as Laos or Cambodia.

Asian countries may have to modify their export strategy in the 1990s. In particular, the US markets may be neither as accessible nor as attractive as in the past, since protectionist pressures are mounting and the US economy is unlikely to grow as fast as it did in the 1980s. Moreover, trade liberalisation within the North American economy and its possible extension to other countries in Latin America could result in the emergence of new competitors for Asian producers on North American markets. Hence Asian countries need to diversify their export markets. In this regard, Europe is a possible but uncertain option: the expected new economic dynamism due to the European integration process should provide an expanding market with growing import capacity. However, European suppliers themselves may gain in competitiveness; certain protectionist barriers – in particular, quantitative restrictions – might exclude outsiders from the gains of the internal dynamism; and new competitors for the Asian producers, such as those from Central Europe, may even benefit from preferential market access.

A more promising alternative for Asian countries might therefore well be to intensify exchanges within the Asia-Pacific area. Such an increase in intra-regional trade would strengthen the economic integration of the region already in progress, contribute to continued dynamism in the area and even provide a mechanism through which the less advanced countries in the region could gradually be integrated into the development process. In parallel, Asian firms, notably in the DAEs, could also respond to increased integration in North America and Europe by seeking to take advantage of the gains to be achieved in the two regions through a strategy of combined trade- and investment-led consolidation of their positions on Western markets. However, the DAEs would need to complement that strategy by pursuing liberalisation of their own economies. In this way, they would contribute to making the Asia-Pacific region a more attractive market for North American and European firms. Trade tensions could then subside as the traditional unilateral dependence of Asian countries on Western markets, notably on the United States, gave way to a more balanced interdependence.
Prospects for the rest of the world

Outside North America, Europe and the Asia-Pacific region, prospects for growth appear to be rather uneven. Real progress could be achieved in major parts of South Asia provided that certain tensions building up in the region can be effectively defused. Improvements appear to be on the way also in Latin America. Developments in the Arab world are unpredictable, while the future of most of Africa south of the Sahara appears rather bleak overall.

The political prospects for South Asia are uncertain. While the end of the cold war is creating a new geopolitical environment for the two main actors – India and Pakistan – scope for serious confrontation still looms large. As both countries have now acquired a nuclear capability, a certain “balance of terror” has been achieved; once started, however, any conflict could have devastating consequences. The potential for violent confrontation is further increased by the growing internal dissent which is spreading in both countries. Moreover, Pakistan might enter into a pan-Islamic alliance with Iran, the newly independent Central Asian republics of the former Soviet Union and Afghanistan as a bulwark against India. While co-ordinated efforts by Western powers, Russia and China could contribute to reducing the risks of confrontation, South Asia is likely to remain volatile as long as differences between the two main countries – including, in particular, issues concerning the future of Kashmir – are not resolved.

Provided political tensions can be kept under control, the outlook on the economic front is one of cautious optimism. India is well placed to follow Indonesia and other developing countries into a period of high growth and rapid industrialisation financed by a strong inflow of foreign capital. Success will depend critically on the ability of the government to open up the economy to the outside world, to eliminate the Soviet-inspired system of regulations and licensing which has been a major obstacle to development in the past, and to reform the highly inefficient public sector. Another priority is the alleviation of poverty in rural areas, where further degradation of the environment could seriously impair Indian agriculture in the years ahead. In Pakistan, growth in the 6 to 7 per cent range could be achieved and would allow for a gradual increase in standards of living as population growth is expected to decline from 3.1 per cent in 1988 to 2.6 per cent in 2003. However, employment creation is likely to remain a major challenge, especially in view of projected return migration from the Middle East. Moreover, in order to deal with its impending financial crisis, Pakistan will need to improve substantially its export performance in the 1990s, to take appropriate steps to attract foreign investments and foreign technology, and to encourage national savings.

After two decades of sustained economic growth, during which per capita income increased by 3 per cent a year on average, Latin American countries experienced serious difficulties in the 1980s. Looking ahead, most observers expect growth to resume in Latin America in the 1990s. These hopes are based on the far-reaching reforms recently implemented by a growing number of countries to liberalise their economies and create a more favourable business environment. Mexico and Chile were among the first to adopt such measures. Argentina, Brazil and Uruguay have more recently followed suit. While serious problems remain, these efforts are starting to pay off – as indicated by the renewed interest in the region recently expressed by private investors. As a result of this positive change, the Latin American economy may grow by about 3 per cent a year on average in the 1990s.
In the longer run, President Bush’s “Enterprise for the Americas” initiative could potentially lead to the creation of a free trade area which will foster growth and economic integration throughout the continent. However, the United States may not be as enthusiastic about negotiating further free trade agreements in the hemisphere as it has been with regard to NAFTA. First of all, such negotiations require a great deal of political capital for the US President to obtain the necessary authority from Congress to launch and to conclude. Secondly, US strategic interest in a wider agreement is not as great as its interest in agreements with its closest neighbours. The 1990s are more likely to see arrangements between Mexico and its neighbours, as Mexico becomes a magnet for migrants from its poorer southern neighbours.

Prospects for most of Africa south of the Sahara are rather pessimistic. The continent has a vulnerable natural environment (deserts, drought, tropical rain forest) and faces extensive political instability, partially linked to tribalism. With a 3 per cent per annum growth rate projected for the 1990s, Africans’ standard of living will not rise significantly because of the rapidly increasing population. The vicious circle of rapid population growth and economic stagnation could lead to a dramatic increase in poverty. Indeed, it is estimated that 265 million Africans could be living below the poverty line by the year 2000, accounting for one-third of the world’s poor.

However, this pessimistic outlook needs to be qualified. First of all, official statistics may be misleading, especially in not capturing the activities taking place in the informal sector, a sector which plays a major role in many African countries. Moreover, the situation is not gloomy everywhere. Some countries, such as Ghana, Madagascar, Tanzania and Togo, have recently been able to increase their growth performance (from 1 per cent on average in the early 1980s to 4 per cent in the 1988-90 period), leading to a modest increase in the standard of living. Also, there may be positive overspill effects to South Africa’s northern neighbours if this country finds its way to political stability and new economic dynamism.

Future developments in the Arab world represent a particular source of concern and uncertainty. The main problems facing that region include political and economic instability, a demographic explosion and the severe environmental problems likely to result from the expected growth of large Arab cities. The unequal distribution of oil resources will also be a source of continued tensions and often bitter confrontations between various political and religious groups. Arab countries could involve countries in other regions in some of their wars and terrorist actions, notably in light of the world’s growing dependence on Gulf oil as other resources (e.g. North Sea oil) are gradually depleted and as Soviet oil or gas may not always be readily available. The Arab world may also be a source of strong outward migration pressures, notably towards Europe. Overall, it is estimated that immigration from the developing world towards Europe in the 1990-2025 period could be of the order of 30 million (including migrants from Black Africa).

3. Global issues

The future evolution of the world economy and of its various economic regions raises a number of major issues which policy-makers will need to be aware of in the coming years. Among these – with the notable exception of environment-related questions, which were not addressed at the meeting – four appear to be particularly important at the global level. The first relates directly to the cautiously optimistic overall picture
that has emerged. In light of the major risks and uncertainties which have been identified at the regional level, what other possible futures might be considered? In particular, what might be the implications of a shift in the centre of economic gravity from the Atlantic to the Pacific basin? A second issue pertains to the implications of what appears to be a strong trend towards regionalisation of the world economy for the effective operation of the multilateral system of trade and investment. To what extent and under what conditions are regionalisation and multilateralism incompatible? The third question focuses on the potential risk of future \textit{ex ante} imbalances between saving and investment at the world level. What are the possible implications for economic growth, notably in developing countries? The fourth issue relates to increased interdependence between nations and its consequences for the pursuit of national economic policies and for rivalry between different socio-economic systems. Will system competition or even system friction increase, and what could be the effects on the multilateral system of trade, investment and technology?

\textit{The shift of economic gravity}

Barring any major unforeseen event at the global level, the world economy in the 1990s and beyond will depend largely on the performance of its three main economic regions (North America, Europe and Asia-Pacific) and on the interaction that is likely to take place between them. While growth prospects and major uncertainties have been assessed for each region in isolation, it is also instructive to consider the overall global picture that may emerge from a combination of these outlooks, in particular the changes in the economic centre of gravity which could result from differences in the relative economic performance of each of the main regions. A central question in this regard is whether relatively poor economic performance in North America and Europe combined with high growth in the Asia-Pacific region could lead to a shift in economic gravity from the Atlantic to the Pacific basin. Economic gravity in this context needs to be measured not only in terms of economic weight (i.e. share of world GNP), but also in terms of the ability to use this weight effectively in international negotiations.

In the "Business as Usual" scenario which underlies the outlook presented in Section 2, the Asia-Pacific region is expected to grow relatively fast (5 to 6 per cent per annum) compared to North America and Europe (2.5 to 3 per cent per annum). If this growth rate differential persists through the next two decades, the share of the Asia-Pacific region in world GNP will increase from roughly one-quarter in 1990 to about one-third in 2010. This implies that the region would be at least on a par with North America and Europe in terms of overall size, but not in a position to exercise a dominant influence on the world economy on the basis of its economic weight alone. For a much more significant shift in relative economic weight to occur, the Asia-Pacific area would need to outperform the other two regions by a very considerable margin in the decades to come.

Several factors could conceivably contribute to such a scenario. First, the Japanese model of development – characterised by hard work, an emphasis on education, high savings, application-oriented research and development, and a long-term perspective in decision-making (in the business sector among others) – could prove highly resilient in the face of major changes in the Japanese economy and its international environment. Secondly, the more advanced of the DAES could continue with a robust rate of growth performance for some years. Moreover, variants of these highly successful models, which appear to be more easily adoptable in countries with similar values (e.g. Confucian
tradition), could rapidly spread to other Asian nations. Indeed, despite the heterogeneity of the region and political misgivings about excessive Japanese influence, the process of integration under way among Asian nations is largely driven by the relocation of Japanese industry and the introduction of Japanese industrial culture.

The gradual emergence of China as a major economic player could strengthen the economic weight of Asia. In contrast to the former USSR, China has been able to implement rather successful economic reforms and expects to be able to double its GNP before the year 2000, despite its lack of progress so far on the political front. In particular, the “spheres of influence” established by Hong Kong and Taiwan in South China are expected to continue to prosper in the future, fuelled by cheap labour from China’s inland zone. Moreover, the strong relations which tie mainland China to the large Chinese community outside the country will contribute further to China’s influence in the region and the economic position of Asia in the world.

One could envisage a scenario with respect to Asia’s competitors that is very different: North American countries are unable to reach an agreement on NAFTA and the United States is unsuccessful in its attempt to reduce its budget deficit, to improve its education system and to upgrade its infrastructure; Europe proves unable to generate and harness the expected dynamics which could result from its integration or to catch up technologically with the other two regions. However, these factors will need to translate into very considerable growth rate differentials for Asia to account for 50 per cent of world GNP by 2010. The region’s average annual rate of growth over the next two decades would need to be about 5 to 6 percentage points higher than the North American and European growth rate. This is highly improbable, given in particular the limits to growth expected not only in Japan – partly as a result of the rapid ageing of its population – but also in the DAEs because of the increasing infrastructure and environmental constraints they will have to face.

Theoretically, the Asia-Pacific region would not need 50 per cent or more of world GNP to exercise a dominant role, if it were able effectively to bring its greatly increased economic weight to bear in international economic relations, notably vis-à-vis North America and Europe. However, to do this would require a considerable degree of regional cohesion of economic and political action, and such an eventuality is unlikely. The extraordinary diversity across the region of political, economic, social and cultural systems would seem to constitute too great an obstacle. It is not surprising, therefore, that closer integration in the Asia-Pacific region has been essentially led by the private sector, with intergovernmental action only of marginal importance so far. Nonetheless, it cannot be excluded that looser economic co-operative arrangements on such matters as foreign investment and technology transfer, perhaps involving some form of dispute resolution mechanism for intra-Asian trade conflicts, might be established between a core group of countries before the turn of the century.

One possible avenue to such arrangements is the further evolution of the Asia-Pacific Economic Cooperation Initiative (APEC), a politically more balanced and therefore – for some countries – more easily acceptable version of the “Asian Brain” concept as contained in a 1988 consultant’s report for Japan’s MITI; there are also more restricted approaches, such as further intensified co-operation in the ASEAN framework. However, it seems that none of the foreseeable solutions could be expected to match the European or North American set-up in terms of effective political weight or international bargaining power. In particular, any attempt by Japan to become an hegemonic power may be strongly resisted by other Asian countries which will try to balance the Japanese influ-
ence by seeking stronger ties with the United States or Europe. Finally, even if China is successful in overcoming its political difficulties and expanding its economy, its rivalry with Japan could very well intensify. Hence Asian countries as a whole are unlikely to present a common front to the rest of the world.

**Regionalisation and multilateralism**

While the pace of multilateral trade liberalisation slowed down in the 1970s and 1980s, the process of integration of the world’s major economic regions gathered momentum. This process appears set to continue if not accelerate in the future, notably in North America and Europe. It may also become more important in the Asia-Pacific region. Questions arise with regard to the future evolution of these arrangements and their likely impact on trade and investment patterns, as well as on the operation of the multilateral system in coming decades.

Some observers have expressed deep concern about the increased regionalisation of the world economy. They point out that the preferential trade liberalisation features of such agreements could be a major source of trade diversion which may well offset their trade-creating effects. Moreover, regionalisation could have adverse overspill effects since it may induce outsiders who bear the brunt of trade diversion to retaliate by seeking preferential trade agreements among themselves so as to offset their loss of markets and strengthen their bargaining power. This process of competitive regionalisation may undermine the multilateral system and, far from contributing to global liberalisation, could turn the world into one of hostile economic blocs and discriminatory trade regimes similar to those that prevailed in the 1930s.

Others disagree. They welcome regional and plurilateral strategies as perhaps the best way to foster global liberalisation, given the growing obstacles which have brought multilateral negotiations to a virtual halt at present and which are not likely to disappear in the future. They point out that in contrast to multilateral negotiations, regional agreements are attractive because they make negotiations more manageable: a relatively small number of like-minded countries are involved, which reduces the likelihood that liberalisation will be held hostage by a recalcitrant player. Moreover, the free-ride problem implicit in the MFN GATT principle is eliminated. Through gradual enlargement and mergers (e.g. between the EC and EFTA), regional approaches could contribute in a significant way to global liberalisation. Indeed, given continued protectionist tendencies and the very slow pace of multilateral negotiations, regional liberalisation could prove essential for further trade liberalisation in the future.

One key question is the effect, if any, which the creation of large groupings of countries may have on the balance between liberal and protectionist forces. Country groupings may result in a more liberal attitude to the extent that protectionist arguments originating in one country are likely to have less weight at the regional level than in the purely national context. However, powerful cross-national coalitions can still materialise (e.g. with regard to agricultural policy in the EC), and a weak decision-making process at the regional level (e.g. unanimous voting rule) may provide opportunities for one of the countries to block liberalisation. In the final analysis, however, the net outcome in the longer run will be determined by two effects: the trade creation and economic dynamics due to intra-regional liberalisation, and the average level of effective protection *vis-à-vis* the outside world.

20
Over the longer term, much may also depend on the way the business community responds. While further regional integration could affect the decisions of firms related to the localisation of their activities, business may nevertheless increasingly adopt a global approach to its operations. Global supply and demand considerations, new patterns of cooperation and competition and, in particular, the concern of business about access to technology wherever it may be obtained are likely to contribute significantly to the further liberalisation process. As the distinction between "domestic" and "foreign" products and companies becomes blurred, discriminatory protectionist measures based on the geographical origin of products will become more and more difficult to apply in practice. The issue of how to deal with Japanese cars produced in North America and Europe in the framework of import restrictions vis-à-vis Japan is a good illustration of this.

The formation of trading blocs may nevertheless force business to adopt strategies which may not be optimal from a global welfare perspective. In particular, private foreign direct investment may be determined (at least in part) by market access rather than efficiency considerations. Moreover, the trading blocs may be tempted to use their bargaining power to gain concessions from others. This power play could significantly undermine the operation of the rule-based multilateral system of trade, investment and technology. As was the case in the 1930s, it would most likely lead to the establishment of a series of discriminatory bilateral agreements between blocs which would not only hamper and distort trade flows, with detrimental effects on all parties involved, but also serve to heighten confrontations between players as blocs excluded from particular bilateral agreements try to muscle in so as to obtain the same market access concessions as their rivals.

An illustration of the way this vicious circle could start is provided by the recent reaction of the European Commission to attempts by the United States to apply direct political pressure for bilateral trade concessions by Japan. Particularly vulnerable in this power play would be those countries or groupings of countries which have relatively weak bargaining power. The increased use of managed trade would exacerbate international tensions, and to the detriment of smaller countries as well as developing countries, thus contributing to widening the gap between the rich and the poor.

**Saving and investment imbalances**

The ability to generate adequate saving and to ensure that such saving is properly channelled to productive investment is a key ingredient in economic progress. However, it appears that on the basis of present and expected saving rates and in the light of massive investment and capital needs in several regions of the world, the 1990s may not only be characterised by persistent regional savings investment imbalances, but also be faced with a dramatically increased ex ante excess demand for financial resources at the global level. As a consequence, international interest rates may continue to remain high or even rise further.

There are several reasons for such an evolution. On the supply side, Japan and Germany – which until recently have been the major net savers in the world – are likely to reduce their capital exports in the future. Apart from the need for an ambitious upgrading of its infrastructure, Japan will have to devote considerable resources to the needs of a rapidly ageing population. Germany has already ceased to be a net saver and will have to continue to allocate most of its saving in the coming years to the heavy
investment requirement of the reconstruction of eastern Germany. Considering the order of magnitude of this undertaking, it is unlikely that Germany will resume its role of net world saver before the turn of the century. Other countries whose capital export capacity may be reduced over the next decade (if they export capital at all) include Kuwait and Saudi Arabia. Finally, it seems somewhat improbable that the newly industrialising economies with major export surpluses, such as Taiwan and (in the medium term) Korea, could fully make up for these shortfalls.

On the other side of the equation, claims on world saving are increasing. While the US external deficit, at least in absolute terms, shows no signs of substantial improvement, some analysts find it unlikely that the United States will be able to sustain respectable economic growth rates over the next decade or so without considerably larger public and private investments in transport and communication infrastructures as well as in education. There is also strong demand for funds from Eastern and Central Europe and the former USSR to finance economic reforms, to invest in industry and infrastructure and to clean up the environment. Huge amounts of resources will be needed for the reconstruction of Kuwait and Iraq. Many of the previously fast-growing newly industrialising economies such as the DAEs and Mexico will be channelling more funds into upgrading physical infrastructures and social welfare. Finally, large capital flows will still be required by numerous countries in the Third World – be it for development and investment, the coverage of basic needs like food and health, or the reorganisation of debt.

The only silver lining on the horizon is the prospect of major reductions in military expenditure. Any gap which may arise between saving and investment could, in principle, be reduced by a cut in military spending, which is estimated at about 5-6 per cent of world GNP. While the end of the cold war may provide such an opportunity, at least for the ex-Warsaw Pact powers and NATO members, the overall impact is unlikely to be very large in practice: arms-producing and -exporting countries particularly in the West may be adversely affected and restructuring of armament industries will require substantial resources. Moreover, new sources of conflict are likely to arise, and there may be a need for the industrial countries to adjust their weapon systems to the new circumstances. For the Third World, it has been estimated that a reduction of their armament expenditures to about 4 to 5 per cent of GNP could free some $150 billion. However, even if international financial institutions and individual donor countries made their development aid increasingly conditional on a reduction of armament expenditures, major effects cannot be expected if it is against the perceived interest of the political leadership in the recipient countries.

With very little chance of a substantial increase in private and public saving in the short run, the ex post balance between demand and supply of capital may therefore be achieved primarily through a rise in real long-term interest rates. Some observers argue that this could have, in the final analysis, a beneficial effect by acting as a screening device to separate efficient from inefficient investment projects. Moreover, the reduced availability of outside funding will create incentives for governments to undertake (e.g. tax) reforms designed to boost domestic saving and ensure that it is effectively used.

The risk, however, is that the industrialised countries and the newly industrialising economies, with their relatively satisfactory record of rates of return on investment in recent years, will prove a more attractive target for capital flows than many less advanced countries. In particular, foreign direct investment may shun the highly indebted countries in the south and the east, and failure to attract foreign investment will also mean lags in economic growth, in employment creation and in technology transfer. To the extent that
investment is based on private risk capital, this could result in a further widening of the welfare gap between the advanced countries and the rest of the world.

Another issue is that some of the new demand for investment could distort the operation of capital markets. Indeed, a significant part of the new investment which will need to be carried out over the coming years will involve some form of government intervention, either because the related risks are too high and largely political in nature (e.g. investment in Eastern Europe) or because such investment falls in the public domain or is subject to substantial externalities (e.g. upgrading of public infrastructures, environmental clean-up). As appropriate pay-off criteria for such investment are difficult to establish, the related capital demand is likely to be largely determined by factors other than market considerations. As a result, any such additional claim on the limited pool of world saving, including public aid programmes – particularly to the former USSR – may drive up the rate of interest further and could thus contribute to the crowding out of market-oriented investment.

**System competition and system friction**

The growing internationalisation of economic activities is creating an increasingly competitive environment for firms, both on their domestic and export markets. Their ability to compete effectively in this environment in the future will depend not only on the competitiveness of their own internal resources and management, but also on the particular strengths of the national socio-economic system in which they will have to operate. Such systems are largely shaped by social values and behaviour patterns, by cultural inheritance and social institutions, and by policies at all levels of government. Hence the competition between firms on international markets could increasingly translate into a competition between rival national socio-economic systems, resulting in major tensions among trading partners.

Over longer periods, such tensions could to some extent diminish of their own accord as the underlying divergences between national systems are gradually reduced through market competition, expanded international linkages (e.g. foreign investment) and progress in transportation and communications. Moreover, governments are likely to adopt increasingly similar policies if such policies are generally perceived as effective in strengthening national competitiveness. However, while this market-driven convergence process could indeed contribute to a more healthy world economy, its pace may be too slow to prevent persistent system frictions during the adjustment period. Moreover, convergence is likely to remain at best incomplete, since many differences in national systems are beyond the realm of government policy, being inherently rooted in the culture and historical experience of societies. The net outcome in the future could be continuing instabilities in international economic relations and growing pressures for new forms of managed trade.

In order to mitigate system frictions in the future, an international policy process designed to promote the convergence of government policies in specific areas could be envisaged. This is not a straightforward task, however. First of all, it is not clear to what system the convergence process should lead and whether this system is indeed necessarily socially desirable and politically acceptable for all countries involved. Secondly, competition between different policy concepts could be seen as an important ingredient of an innovation process towards best practice.
One option adopted by the European Community features the mutual recognition of national regulations which, combined with the free flow of mobile factors (in particular, capital and entrepreneurship), should induce a gradual convergence to a regulatory system which reflects the preferences of the mobile factors *ex post*. However, such a process cannot be envisaged without first implementing *ex ante* reductions of divergences in key regulatory instruments (e.g. competition policy, capital market regulations, technical and environmental standards) between EC members under the auspices of the Commission. Hence, while this approach may work in a grouping of like-minded countries willing to accept some loss of sovereignty in the process, it is less likely to be feasible at the global level, where divergences are bound to be greater and losses of sovereignty more difficult to accept.

In the future, particularly contentious issues are likely to arise at the international level in areas related to access to markets, to capital and to technology. Asymmetries with regard to access to markets have already caused considerable political frictions in the past and have contributed to eroding the commitment to a rule-based multilateral system. Such frictions are likely to continue to the extent that they reflect differences in deep-rooted tastes and behaviour patterns which may reach beyond the realm of policy-making. Frictions related to access to capital might also be difficult to deal with since they may reflect substantial differences in customs and institutional arrangements (e.g. relations between industry and banks) which cannot be easily changed. For technology, differences may arise between nations with regard to the role of governments in the support of technological development – notably that of generic research, a relatively ill-defined intermediate stage between basic and applied research. Conditions of access to the results of such research may also become a bone of contention.

As international competition intensifies and as interdependence among nations increases in the coming years, system friction is likely to become more frequent. While increased economic integration could contribute to alleviating tensions and hasten policy convergence at the regional level, at least in North America and Europe, conflicts between regions are likely to intensify. There is a danger that such frictions could induce strong political pressures for the adoption of short-sighted bilateral measures (e.g. VER agreements or market share guarantees) which will not only be ineffective in achieving the political objectives sought, but also undermine the multilateral system. Moreover, the unfulfilled expectations resulting from the very ineffectiveness of such agreements can only exacerbate frustrations, leading to a further escalation of conflicts.

4. **Conclusion**

To cope with the challenges and to seize the opportunities of the 1990s, developed and developing countries alike will need a stable and open international environment in the years ahead. A successful completion of the Uruguay Round and a strengthening of international co-operation across a broad range of economic and other policies could contribute to such an environment. As key players in international discussions, the United States, the European Community and Japan can and should significantly contribute to shaping the environment they need. The creation of NAFTA could contribute to trade liberalisation and economic stability, not only in North America but also in Latin America. The extension of the Community could contribute to trade liberalisation in Europe and to the stabilization of still shaky Central and Eastern European economies.
Closer links between Japan and other Asia-Pacific countries could liberalise economic relations and foster growth in the region.

This more stable and open international environment could in turn initiate a virtuous circle of growth characterised by reduced system frictions and uncertainties, and thus create a more favourable overall climate for investment as well as for the development and diffusion of new technology, particularly foreign direct investment and technology transfers to developing countries. In this more favourable context, equity and environmental issues, notably the problems faced by the most underdeveloped regions of the world, could be tackled in a more co-operative and more effective manner. Ultimately it is the responsibility of the advanced countries to make regional integration a springboard for extended multilateralism, and to avoid the vicious circle of bloc-building and fragmentation of the world economy.

by

André de Jong and Gerrit Zalm
Central Planning Bureau
The Netherlands

1. Introduction

Implicitly or explicitly, generally or specifically, policy-makers in business and government all hold certain views of the future and allow themselves to be swayed by them when making decisions. When these views are made explicit and elaborated, they are often referred to as strategic visions. The main objective of the long-term (LT) study of the Dutch Central Planning Bureau (CPB) is to make a contribution to the strategic debates addressing the development of the Dutch economy up to the year 2015. Given the very open nature of the Dutch economy, it is self-evident that attention should initially be focused on the development of the world economy. The visions which the CPB has developed in this field are the subject of this paper.

In these visions of the future, perspectives on economic development are selected as the central theme. Developments in the environmental field and provision of raw materials will also be taken into consideration, because they determine to a large extent whether growth processes can be characterised as sustainable.

The logical first step is the organisation of information. When focusing on the main theme of the LT study, perspectives on economic development, the following questions arise:

- What are the driving forces behind the process of economic development?
- How is the current position of the various regions assessed in the light of these driving forces? In other words, what are the strong and weak points of each region?
- Which long-term trends stand out as the ones that can strongly influence the development of the world economy during the next twenty-five years?

Clearly, it is not possible to provide conclusive answers to these questions. Fundamental uncertainties remain which make the LT future largely unpredictable. To emphasize this, a number of alternative visions of the future, or scenarios, will be presented based on the information gathered during the first step. The uncertainty also implies that in principle, a great many scenarios are imaginable. For this reason, no matter how logically, consistently or plausibly each scenario has been formulated, it is still just a
relatively arbitrary story. This leads to the more fundamental question of what significance, if any, can be attached to LT scenario studies.

The main purpose of creating scenarios is to stimulate and organise ongoing public debates about LT prospects for the future. Specifically, the goal here is to induce people to re-evaluate their established ideas about future developments, as well as reconsider the thought patterns and norms on which these are founded, the so-called "mental maps". In more concrete terms, scenarios should help people imagine the various futures which may unfold and enable them better to prepare themselves for bottlenecks and opportunities that may emerge.

Organising the LT discussion can only take place by making choices. That is why each LT study only presents a limited number of scenarios. A discussion about ingrained attitudes also requires a selection of scenarios that are outspoken and widely divergent in nature. The history of scenario-building provides supporting evidence for this view: too many scenarios underestimated the forces of change and later turned out to be nothing but trend extrapolations. Scenarios should help to "expect the unexpected". By creatively and speculatively playing with LT trends, driving forces and comparative strength analyses, the authors try to generate various prospects for the future which meet these criteria.

The organisation of this paper is a logical extension of the above. Section 2 describes the vision propounded by the CPB in this study concerning the process of economic development. With this established, Section 3 analyses the strengths and weaknesses of various regions in the world economy. In Section 4, a summary is presented of the most important LT trends. Section 5, the core of this paper, presents four scenarios for the world economy. Section 6 contains some conclusions and final comments.

It should be noted that the OECD Interfutures project was an important source of inspiration for the authors.

2. Perspectives on economic development

The need for a theoretical framework

A long-term study where the main theme is economic development should primarily have a vision of the driving forces behind that process. Since, however, there is as yet no integrated theory of economic development, such a view is inevitably eclectic. This section presents the organising principles on which the LT study is based: three perspectives which concur, in principle, with three schools of economic theory. These perspectives are both competitive and complementary. Together, they provide a more or less complete picture of the process of economic development.

The equilibrium perspective

The first, designated as the equilibrium perspective, is based on the neoclassical theory. The essence of this theory is best expressed in the famous adage by Adam Smith: "The pursuit of private interests produces harmony, not chaos". The basis for this line of
thought is a well-functioning price mechanism which co-ordinates the decisions of various economic subjects. Prices are the information carriers which steer economic agents toward optimal decisions. They lead to a balance between supply and demand in the various markets. The economic subjects are rational and possess "perfect foresight" – or, in a somewhat weaker description, they have rational expectations. Whenever preferences or circumstances change, adjustments in relative prices will result in the establishment of a new equilibrium in the various markets. From this perspective, the resulting level of prosperity hinges on the production factors available: natural resources, availability and quality of labour supply, and size of capital stock.

Growth of prosperity is caused by changes in these variables. In addition to the increase in quantity and quality of the labour force, the level of savings is also crucial. By means of the price mechanism, savings result in an expansion of capital stock, subsequently creating a greater supply of goods and services. Although technology is also important, within this tranquil perspective it is a continuous source of new findings, "given by God and the engineers" and further affected by relative prices.

In this perspective, the government plays a modest role. This is not because of any negative attitude toward the government, but because here a rational government confines itself to matters which cannot develop by means of the price mechanism: the production of so-called purely public goods, such as infrastructure. In addition, the government should adjust prices via levies and subsidies should there be any question of negative or positive external effects.

**The co-ordination perspective**

The second perspective, that of co-ordination, is based primarily on the views of Keynes. The main idea here is contradictory to that of Smith: rational behaviour on a micro level can lead to significant imbalances on the macro level. These imbalances do not necessarily result from rigidities in wage- and price-setting, but are linked to fundamental uncertainties under the influence of which economic actors must take decisions. When the future is fundamentally uncertain, rational decision-making, collectively as well as on an individual basis, will also be susceptible to changes in "moods and spirits". As a result, expectations of the future, crucial to investment decisions and, to a somewhat lesser degree, to savings decisions, can at times be very unstable, which in turn leads to cumulative disturbances, especially in a monetary economy. The economic process then no longer slides smoothly from one equilibrium to the next, but can remain in disequilibrium for quite some time, resulting (for example) in high unemployment. Of course, the textbook example is the Depression during the 1930s.

Keynes' significant contribution is the idea that balanced economic development can be promoted by stabilizing exceptionally volatile expectations. A somewhat broader interpretation of this perspective is that the pursuit of private interests alone may fail to bring about stable economic development and that in order to achieve it, some degree of co-operation and co-ordination is required. In this perspective government can play an important positive role. It concerns not only anti-cyclical budgetary policy, but also other types of stabilization policy in the broadest sense of the term, varying from exchange rate agreements and commodity market interventions to discussions with employers' organisations and labour unions.
The free-market perspective

Finally, there is the free-market perspective, which goes back to the neo-Austrian school of economic theory, of which Schumpeter and Hayek are two important representatives. This perspective states that growth is never painless. Companies and sectors and even countries and regions rise and fall. In this perspective there will always be winners and losers, and both the will to win and the fear of losing drive to a significant degree the dynamics of a market economy. Entrepreneurs – as inspirers and organisers of technological innovation, the perennial gale of creative destruction – play an important role in this perspective. In a world where uncertainty looms large, entrepreneurs will have different views about which course should be followed; different companies will thus follow different innovation strategies. Fierce market competition will then determine which innovations will survive. In this way, the market also determines in what direction and at what rate the economy will develop.

Within this perspective, entrepreneurs cannot be considered as so-called "representative agents", all showing similar behaviour and hardly recognisable as individuals. Instead, the entrepreneur (and man in general) is seen as a vital, intuitive and creative personality with individual talents, one who defies damage and disgrace, growing wiser in the process. In order to achieve this, he does, however, require assurance that he will be the one to pick the fruits of his labour. By the same token, he must accept that he will also be the one to suffer the consequences of his failures.

An adequate incentive structure is essential to this perspective. As far as the entrepreneurs are concerned, it involves a well-developed system of property rights and the absence of political intervention. It is equally essential that employees are rewarded for their achievements and penalised for poor performance. This would necessitate low taxes and a frugal system of social security.

The driving forces behind the three perspectives are summarised in the prosperity circle (Figure 1).

In both the free-market and equilibrium perspectives, a very important role is played by a well-functioning price mechanism. The free-market perspective does not, however, adhere to the metaphor by Walras, that the price mechanism is like an auctioneer who balances market supply and demand; the market is no quiet auction, but a permanent battlefield full of uncertainty and risk. Good and bad decisions are taken, and today's winners may be tomorrow's losers.

What the co-ordination and free-market perspectives have in common is the notion that the future is fundamentally uncertain and that expectations are very volatile. This does not, however, mean that in the free-market perspective an important role is given to the government. On the contrary, with a fundamentally uncertain future there is no reason whatsoever to assume that the government has a better expectation of the future than individuals. Furthermore, the government is not homogeneous. Actual policy is the result of a power struggle between all sorts of groups pursing their own interests: civil servants, lobby groups, advisory bodies, politicians of different political persuasions, etc. Finally, the sceptical attitude toward the government is prompted by the idea that various types of support, protection, collective insurance and regulations have a crippling effect, which weakens the dynamics of the economic process.
Some illustrations from economic history

Is it possible to derive the formula for success from the circle? The authors do not really consider that to be the correct approach. The formula for success strongly depends on time and place. Success stories from economic history coincide with different emphases on the three perspectives. The rise of England during the second half of the 18th century and the success of the United States in the first half of the 20th century figure particularly prominently in the free-market perspective. Entrepreneurship and innovation were stimulated, business encountered little government interference, individual responsibility was held in high esteem, property rights were guaranteed and there were sufficient financial incentives. The successful postwar reconstruction of the Netherlands in the
1950s, sometimes referred to as "the Dutch miracle", was greatly influenced by the co-
ordination perspective, although the other perspectives were not neglected. The govern-
ment played a major role, spending a great deal on infrastructure and education and
adhering to a wage-control policy. That period is also characterised as one of co-
operation and stability, rather than cutthroat competition. The successful postwar devel-
opment of Japan can also be explained to a large extent through the co-ordination
perspective: there was for example close co-operation between government and business
in mapping out new business strategies; industrial relations within large companies were,
and in many cases still are, harmonious. Elements of the equilibrium perspective, how-
ever, also contributed heavily to Japan's rapid catching-up, i.e. the high saving rate and
the high level of education among the labour force.

All in all, the conclusion seems to be that while countries – depending to a certain
degree on the national culture – are able to stress in their own ways different perspectives
in order to be successful, neglecting one of the three perspectives is very dangerous.

Finally, history also teaches that time and again, firms, sectors and whole economies
often push their success formulas too far, and for too long. Even when strong incentive
structures exist and clear signals are sent that limits are being reached, the inability to
adjust to new circumstances is often striking. This study defines social innovation as the
capacity and willingness of a firm or society as a whole to challenge continuously the
ruling paradigms and to strike a new balance between the driving forces of economic
development – which explains why social innovation has been placed at the heart of the
prosperity circle. Especially for the developed countries striving for continued economic
growth and development, social innovation is extremely important and, as history so
often shows, very difficult. Failure to achieve it leads to institutional sclerosis and,
ultimately, relative economic decline.

3. A comparative strength analysis of the current state of the world economy

The United States

A comparative strength analysis of the United States is essentially an analysis of the
productivity slow-down that has persisted for some twenty years now. In recent years this
slow-down has increasingly raised the question of whether the United States can continue
to maintain its position as the most prosperous nation in the world. In terms of growth, it
appears that factors from the free-market perspective are still the great strength of the
country. Autonomy in the economic sphere is guaranteed, a well-functioning price mech-
anism is present, and there is a strong incentive structure (with low tax rates and a frugal
welfare system), all of which lead to a competitive climate, a flexible labour market and
an individualistic culture promoting entrepreneurship and inventiveness.

The strong emphasis on the free-market perspective, however, tends to undermine
the driving forces of the other two perspectives. The sceptical view of the role of
government and the dislike of taxes, both of which are typical of the free-market
perspective, have led to underspending in the fields of education and infrastructure and an
inability to solve the budget deficit problem. The shadow side of the keywords competi-
tion, flexibility and individualism also seems to include a lack of both co-operation and
loyalty between management and labour, between separate organisational units of a firm,
between producers and suppliers, etc. Exaggerating the free-market perspective may also
cause a certain short-sightedness, manifested in a high discount rate, a very low savings rate and inordinate attention to short-term profits.

The result is a relatively sluggish increase in labour productivity. Because of this, American industry has lost ground in many sectors during the last years. A notorious example of this is consumer electronics.

Remarkably, in many cases American industry still insists on retaining its own production methods and market strategy. Sometimes this is even true when American employees in Japanese factories in the United States (e.g. some car factories) attain almost exactly the same high levels of productivity as Japanese employees in Japanese factories. This maladjustment — which can occur despite strong incentive structures and a well-functioning price mechanism — has been designated within the prosperity circle as a lack of social innovation. What matters now is whether in the next decades the United States can manage to renew its own “System of Manufacturing”, by which it became a “world-class economy” in this century. The history of business and the rise and fall of nations makes clear, however, just how difficult it is to shake off the success formulas of the past.

Japan

Nowhere in the world has prosperity increased as dramatically as in Japan since World War II. Per capita income has increased tenfold since 1950. Considered from the standpoint of the prosperity circle, growth-determining factors such as the high savings ratio, effort expended by and quality of the labour force, innovative potential and the ability to adapt and co-operate all score exceptionally high. Japanese incentive structures are also adequate, although they tend to be much less financial in nature than those of the West. The only low-scoring factor is physical infrastructure. Other factors reveal a more mixed picture, the sectors’ international orientation being the discriminating factor.

In the exposed sectors, the quality of the government (MITI) and the operation of the price mechanism are strong points. During the last decade, Japan has also gathered a great deal of momentum in the high-tech sectors. No longer just a “copycat”, the country is now actively trying to develop its own inventing potential.

As far as the domestic sectors are concerned, however, these factors score low. In a few sectors, such as agriculture and the building industry, this is the result of screening out foreign competition almost completely. Powerful pressure groups perpetuate the archaic distribution system. Moreover, a series of scandals is unfolding on the domestic political stage.

In summary, judging from the perspective of the prosperity circle, the Japanese economy may be considered the strongest economy in the world today. Furthermore, because the productivity level for the economy as a whole still lies far below the American level, the potential for comparatively high rates of economic growth and continuation of the catching-up process — particularly in the service sectors — is very promising.

The industrial strength of Japan has, unlike that of the United States and Western Europe, created a considerable surplus on the country’s current account, a source of much tension in trade relations. This has sparked off a discussion as to what extent (indirect) protectionist practices have contributed to Japanese performance. Recently the discussion has expanded to cover the nature of the Japanese economic and political systems.
There are two views on the subject. The first states that although the Japanese economy has all sorts of idiosyncrasies, including protectionist tendencies, it is still basically a market economy like any other (Emmott, 1991). Japanese economic successes are ultimately due to a superior combination of growth-determining factors. Surpluses on the current account reflect this competitiveness, and at the same time reveal the weak points of other economies.

The second view emphasizes that Japan is different (see for example Fallows, 1989; van Wolferen, 1990; Buruma, 1989). The political and economic systems can be described as a sort of oligopoly consisting of a network of ministries, industries and politicians who manage Japan in a continuous state of mutual rivalry. There is, however, no difference of opinion on the ultimate objective: striving toward further expansion of the Japanese economy. As long as protectionism is a useful means to that end, it is certainly allowed. In this game the average Japanese are just pawns with little say in the system, who only modestly profit from the enormous increase in production.

According to the first view, Japan will gradually evolve by means of continuing economic, social and demographic developments into a political and economic system resembling the Western model. In the second view, however, the existing system is unable to change for want of incentive to do so: there is a power vacuum within the political and economic system itself and the extent of influence from the Japanese people is negligible. According to the second view, Japan will consequently be a continuing source of tension within the system of world trade in the future as well.

The importance of this to the comparative strength analysis is that a strong protectionist perception of Japanese economic success can provoke protectionist counter-reactions. At the moment, this external problem probably poses a more serious potential threat to the further economic development of Japan than domestic bottlenecks. The continuation or deepening of protectionist tendencies would also have a serious negative impact on a global level – it would greatly endanger the relatively liberal system of trade the world has enjoyed since World War II.

**Western Europe**

Until a few years ago, the prospects for West European economies looked bleak. This gloom was prompted by Western Europe’s inability to react flexibly to the oil shocks of the 1970s. In the mid-1980s it looked as though high unemployment and low productivity growth were set to become permanent features. At the same time, the region was steadily falling behind in its technology race against the United States and Japan. According to some observers, Western Europe was even in danger of dropping out of the core of the world economy.

The contrast with the period between 1950 and 1972, when the West European economies enjoyed a period of unprecedented growth in prosperity, was striking. Factors such as education, infrastructure, government quality and savings – prominent in the coordination and equilibrium perspectives – played an especially important role in this. The setback between 1973 and 1985 can generally be explained by the fact that growth-determining factors from the free-market perspective were neglected. There was a relatively strong tendency in Western Europe to protect citizens and companies from the harsh effects of adjustment processes in a market economy. Because of this, structural adjustment in the labour market and technological renewal progressed at a very slow rate.
This continued until the second oil shock precipitated a hard landing and there was no longer any escape.

Since then, many believe the prospects for Western Europe have drastically changed: from "Eurosclerosis" to "Europhoria". The sudden reversal in opinion can actually be traced back to:

- the unmistakable economic recovery during the second half of the 1980s;
- the new enthusiasm for European integration (Europe '92, the EMU, EPU);
- the anticipated opening up of Central Europe, and German unification in particular.

There is no denying, however, that even after years of economic recovery, unemployment still remains very high (at about the same level as that of 1982). Moreover, it appears that the 1985 assessment that the position of West European high-tech industries was threatened, is still applicable. A recent report by the US Department of Commerce (1990) provides fresh evidence supporting this view.

In summary, although the importance of positive developments should not be underestimated, especially their favourable effect on business confidence and animal spirits, there is still doubt as to whether Europe has actually overcome Eurosclerosis.

**Dynamic Asian Economies (DAEs)**

The dynamic Asian economies can be broken down into the so-called first-tier, newly industrialising economies (NIEs, especially Taiwan, South Korea, Singapore and Hong Kong) and the second-tier NIEs, also known as the ASEAN Four (Thailand, Malaysia, Indonesia and the Philippines). The first-tier NIEs have enjoyed phenomenal economic development during the past two decades. They now face the challenge of continuing the process of catching-up with developed countries by further upgrading and modernising their economies. Judging by factors within the prosperity circle, their initial position can be described as favourable.

The economic success of the first-tier NIEs has prompted the second-tier NIEs to replicate a number of elements from the former's "outward-oriented" development strategy. Here, the keywords are liberalisation of trade and capital transactions, deregulation and privatisation. In short, this is an economic policy aimed at strengthening growth-determining factors from the free-market perspective. The result has been very turbulent growth, with rates of 6-10 per cent annually. Foreign investment, particularly from Japan and the first-tier NIEs, helped pave the way, demonstrating the great degree of confidence in the growth potential of the region.

An important difference in the industrialisation process between the traditional and the new NIEs appears to be that the latter's is much more market-driven. The traditional NIEs, especially South Korea and Taiwan, tried in a number of cases to create comparative advantages themselves by means of industrial policy (see for example Westphal, 1990).

Other growth-determining factors in the new NIEs concern political stability, the high savings ratio and education. The turbulent growth of recent years has, however, shed light on all sorts of bottlenecks within the physical infrastructure. In addition, a strong emphasis on the free-market perspective may lead to more emancipation, one result of which would be that existing political systems would no longer be sustainable.
It seems reasonable to conclude that nowhere in the Third World are conditions for continued economic growth as favourable as in the DAEs.

Other less-developed countries

The other less-developed countries (LDCs) include the rest of Asia (especially China and India), Latin America, Africa and the Middle East. About 75 per cent of the world population live in these regions, although their share of world income amounts to no more than 15 per cent. The development of these regions during the 1980s varied widely. The last decade was absolutely disastrous for Latin America and Africa. Per capita income in these regions fell on average about 10-25 per cent. China, on the other hand, was able to more than double its per capita income by means of a successful reform policy. After the events of Tiananmen Square in 1989, however, there was a serious setback during which the rate of growth was cut by half.

In summary, it can be said that during the 1980-90 period, sub-Saharan Africa, Latin America and some Asian countries, especially Bangladesh, did not experience any significant breakthrough into a self-sustained process of growth. For the other regions, especially China, the picture is less dark, but doubts remain as to whether favourable developments will last.

Despite the enormous differences between these regions, there seems to be a common denominator which impedes or entirely precludes the creation of such a self-sustained process of growth.

In simplified form, the problem is that the government is too large and, at the same time, too weak": "too large" in the sense of being a large item in the national income than of interfering through the issue of regulations on all sorts of matters, thereby frustrating the operation of market forces. For example, agriculture is discriminated against in favour of industry. In many countries, industry is also heavily protected against foreign competition (see for example The Economist, 1991).

At the same time, the government is "too weak" because it seems unable to cope adequately with many of its self-set tasks. The result is bureaucracy, mismanagement and corruption. Moreover, this situation contributed toward the neglect of classic government tasks such as education, physical infrastructure and general administration

In terms of the prosperity circle, this implies that growth-determining factors from all three perspectives do not score well. It also implies that factors which do score highly at least in some regions, such as India’s and China’s high savings ratio and entrepreneurship, are not used to their full potential.

Finally, there are various region-related factors which hinder the development process. In India for example, there are serious religious differences threatening to slash the country to pieces, while China still is a communist dictatorship.

Latin America is tormented by political instability linked to huge social differences, which in turn are a result of the extremely uneven distribution of wealth and resources. This has led to the establishment of so-called populist policy cycles, during which periods of growth alternate with stagnation and hyper-inflation (Sachs, 1989a). These cycles have contributed to Latin America’s sizeable foreign debt (Sachs, 1989b, pp. 11-13) and have led to extreme "short-termism" which hinders the development of genuine entrepreneurship.
However, though there are problems, there are also signs of hope and change in all these regions. Some examples include successful reforms in Mexico, policies announced to reform the Indian economy, and signs of the continued silent transition of the Chinese economy into a market economy.

Sub-Saharan Africa, however, is the main exception; its population currently suffers the worst fate of all mankind. There is extensive political instability, partially linked to tribalism. In the past decade this has turned Africa into a war-torn continent, and armed conflicts have heavily intensified its economic distress. The Sudan, Ethiopia, Uganda, Somalia, Liberia, Angola and Mozambique are but a few examples. Then there is AIDS, threatening to kill millions of people in the prime of their lives. In addition, sub-Saharan Africa has a very vulnerable natural environment. There are vast desert areas; extensive though rapidly decreasing areas of tropical rain forest; and a climate that is characterised by periods of extreme drought. Lastly, this war- and poverty-ridden continent has an exceptionally massive foreign debt.

The Soviet Union\textsuperscript{10}

During the past few years the Soviet system has degenerated into a non-system. Although the centrally planned economy no longer functions, nothing has taken its place. Chaos and total stagnation are the results. Last year the national income dropped by 5-10 per cent, investment by about 20 per cent and exports by about 30 per cent. The government's budget deficit is said to have risen to about 10 per cent of the national income and inflation has allegedly climbed to three-digit figures.

It is therefore not surprising that a comparative strength analysis of the Soviet Union reveals a very depressing picture. From the point of view of the prosperity circle, there are problems with every one of the perspectives. Neither incentive structures (including property rights) nor price mechanisms are functioning. Furthermore, the quality of the physical infrastructure, as well as that of government administration, leaves much to be desired. Lastly, the political struggle between reformers and "vested interests" of the nomenklatura, together with nationalistic disputes, ensures an uncertain and unstable political situation.

These weak points completely overshadow such strong points as a high level of education, availability of natural resources and high-tech experience in the military industrial complex.

In summary, there is no positive economic development possible under the current circumstances. How much longer can the Soviet Union muddle on? A radical breakthrough is becoming more and more likely – either in the shape of a conservative backlash, or as a leap into a market economy.

Central Europe

Unlike the Soviet Union, the countries of Central Europe are already setting in motion a political and economic transition. The economic development in this region does demonstrate, however, that such transition is not necessarily followed by a period of rapid catch-up with the West. This is largely due to the legacy from the past: the large state-owned factories which usually make products of inferior quality, using high-pollut-
ing, energy-intensive production processes. The market forces now unleashed will eliminate a good portion of that sort of economic activity. The result will be a decrease in production and rising unemployment for which hardly any kind of social safety net exists. At the same time, market forces are initiating entrepreneurship, causing new economic activities, new employment opportunities and new wealth to surface. The industrial tradition and the high degree of education among the labour force are important assets in this respect.

The question is whether the positive developments will offset the negative: in other words, whether this transformation process will be fast enough for society to continue bearing the "pain" of market forces, in the belief that economic conditions will greatly improve in the long run. Up to now the social adaptability required to endure the hardships of the market has proved extensive. Should this fade because of disappointment over the lack of economic progress, however, then any sustainable economic development would be seriously endangered (Ash, 1990).

In summary, the conditions for economic development have been structurally improved by the transition to a market economy. The legacy from the past significantly hinders growth in the short term. In order to overcome this, the high degree of social innovation demonstrated so far must be maintained in the years to come.

4. Trends in the world economy

Demographic developments

According to projections by the United Nations (1990), between 1990 and 2015 the world population will increase by about 2.4 billion, totalling about 7.7 billion people. This means that until 2015, the world population will grow daily by an average of about 260 000 people, with about 95 per cent of the growth taking place in LDCs. These projections are based on a steady drop in fertility rates, combined with a further increase in life expectancy. The projections also assume continuation of existing population policies aimed at slowing down population growth. By 2015 the developed countries’ share of the world population will then only amount to 13 per cent (compared with 17 per cent in 1990). Compared with the 1950-90 period, the world population’s rate of increase is actually decreasing slightly: from 1.85 per cent to 1.5 per cent annually. Nonetheless, in sub-Saharan Africa for example, the population is still growing by about 3 per cent annually, which means the size of the population in this region will double, reaching about 1 billion people in 2015.

The demographic development of the LDCs, excluding China, presents an enormous challenge to the economies of those countries. In order simply to maintain the existing, very low standard of living, economic growth of about 70 per cent is required between now and 2015. Tremendous efforts will be needed in areas such as education, housing, food and water supply and employment, so as to accommodate all these people. The magnitude of the challenge is further emphasized by the fact that the weakest regions economically (Africa, parts of Asia, Latin America) are the ones exhibiting the largest growth in population. In fact, the population explosion in these regions creates a formidable complication for the development process of the LDCs.

Should that process fail — a possibility which cannot be excluded for some regions — Malthusian repercussions could follow. This would, of course, primarily mean enormous
human misery within the regions themselves. However, it seems likely that this failure would also be felt along various channels within the developed countries, contributing toward political unrest, environmental problems and especially the strain caused by migration.

In contrast to the demographic challenge of the LDCs, ageing – the demographic challenge of the developed countries – seems like child’s play. In addition, the ageing process will only really get under way near the end of the scenario period. Although Japan, the main exception to this, still has the youngest population of all the developed countries today, in 2015 that population will be the most aged. The old-age dependency ratio12 in Japan will increase from 17 per cent in 1990 to 36 per cent in 2015 (compared with an increase from 19 to 23 per cent in the United States and from 20 to 27 per cent in the European Community).

Lastly, apart from failing processes of development, the phase difference in demographic evolution between developed countries and the LDCs, in combination with the significant differences in prosperity, will sustain migratory movements to the former. It seems an inevitable conclusion for the developed countries that the trend toward a multicultural society will only continue to intensify.

Provision of raw materials

Twelve years ago Interfutures concluded that, in terms of physical scarcity, the supply of raw materials need not be a hindrance to growth for the world economy until 2000. That time frame can be extended to the year 2015, judging from a comprehensive analysis (Mannaerts, 1990) of the depletion of existing reserves, as well as the consumption of the most important non-renewable resources, including energy. The CPB analysis operates from an optimistic assumption concerning growth of the world economy (4 per cent per annum) and from a conservative one concerning the inflow to reserves. The most important mechanisms supporting this optimistic conclusion are continual dematerialisation and a switch to mineral raw materials, which are in relatively abundant supply. The driving forces behind these mechanisms are technological developments and increases in the real prices of raw materials, which in an historical perspective are modest.

This conclusion also holds true for energy. Although oil is indeed one of the scarcest non-renewable resources, as long as there is no stringent policy to curb CO₂ emissions, it could be replaced by coal and gas, both of which are in relatively abundant supply. Should there actually be a policy proposed for curbing CO₂ emissions, total energy consumption – and consequently, the consumption of oil – would increase at a much slower rate (even though the share of oil measured in total energy consumption would increase). As a result, the problem of depletion would be deferred until later in the future. In that case, however, consumer prices of carbon-intensive fuels would increase much faster than they have in the past.

Environmental problems13

The most important challenges in the environmental domain are:

a) On a global level:
   – Global warming due to the greenhouse effect. This is perhaps the most daunting of all environmental challenges, but also the one for which a great
deal of uncertainty still exists about the extent, regional distribution and
timing of the effects.

- The depletion of the ozone layer due to CFCs.

\[ b) \] In the LDCs:

- Erosion and desertification of agricultural areas; 25-30 per cent of the world’s
  agricultural areas are threatened in this way.
- The supply of safe water; because of this shortage, one-third of the world
  population risks illness every day.
- Deforestation, particularly of tropical rain forests. This seriously damages the
  bio-diversity of the earth, aggravates global warming and creates vast
  stretches of desert.

\[ c) \] In the developed countries:

- Acid rain killing off forests.
- Soil pollution.

In the LDCs, pervasive poverty together with the strain of a constantly increasing
population contributes further toward the exhaustion of natural resources through phe-
nomena such as erosion, water pollution and deforestation. Unfortunately, efforts to break
out of poverty by means of industrialisation – such as those of the DAEs, which were
successful – also cause environmental problems. Some problems are the same (such as
water pollution); others are new, such as air pollution (acid rain, greenhouse gases). Only
by introducing Western technology is it possible to alleviate these problems. The experi-
ence of both the DAEs and the developed countries indicates, however, that during
periods of rapid industrialisation, the desire for fast material progress seems to be so
strong that environmental concerns are relegated to a low priority (The Economist, 1988).

As far as the developed countries are concerned, environmental problems – provided
they are tackled in time – are not that technically or economically challenging. That
would be the case even if there were no technologies available to tackle the problems or
if total costs, in terms of consumption, were very high. Changes in the methods used to
produce goods and services are the principal mechanism for reconciling economics and
ecology. Model studies which simulate the abatement of the greenhouse effect provide
some support for the view that a similar conclusion even applies to this most challenging
of all environmental problems\(^ {14} \).

The conclusion seems therefore justified, at any rate for the next 25-40 years or so,
that the world economic system could in principle absorb the projected vast increase in
world population, as well as substantially increase the standard of living, without destroy-
ing the ecological base of the system. Although this conclusion is basically optimistic, it
cannot be inferred that the world community will cope easily with environmental
problems. It is only meant to indicate their true nature. They pose primarily political and
institutional challenges in which issues of income distribution play an important role.

Especially for global environmental problems, the diversity of interests in the world
community plus the high degree of uncertainty about the exact consequences imply that
“prisoners’ dilemmas” lie in wait around every corner. This is why any solution will
confront the world community with co-ordination problems of unprecedented complex-
ity. In view of the sizeable contribution made by the developed countries toward the
greenhouse effect and the income gap between those countries and the LDCs, any global
bargain for these problems will undoubtedly require substantial offers of aid from the
developed countries\(^ {15} \).
World food situation

During the past decades, per capita production of food has grown continuously. Compared with an average annual increase in population of 1.8 per cent during the 1970-90 period, the average annual growth of global food production was 2.3 per cent. Despite this increase, about 500 million citizens of the world are still undernourished.

The rapid rise in world food production, unprecedented in the history of mankind, is partially the result of an increase in arable farmland. For the greater part, however, it is the result of applying more modern high-yielding techniques. The so-called "green-revolution hybrids" have played a dominant role. Using them required a significant extension of irrigated acreage and increased use of fertilizer and pesticide.

Because there will be no end to the explosive increase in world population between now and 2015, the potential demand for food will also continue to grow. On pain of further poverty for increasing numbers of people, the acceleration of world food production should not slow.

The system of agricultural production is not necessarily able to comply. The capacity of natural resources is limited. Especially in LDCs, there are many areas where this limit has almost been reached. With respect to large tracts of farmland, it is even possible to speak of "exhaustion". The pipeline nature of the processes of degradation implies that the adverse consequences of this will be felt in the decades to come. In addition, expansion of agricultural acreage will further diminish because areas qualifying for development are becoming scarce, while water shortages will slow the expansion of irrigated acreage to its lowest rate for twenty-five years. Lastly, unlike the 1960s, there are currently no (really new) techniques lying somewhere "on a shelf". The developments within the field of biotechnology will only marginally affect world food production for the time being.

The situation in the rich countries presents a sharp contrast to this. The demand for agricultural products in these countries structurally lags behind the increase in income. Technical progress will subsequently lead to an increase in the present already sizeable overcapacity. In view of the heavy budgetary burden that accompanies the agricultural policy of many developed countries and the environmental problems caused by severe intensification, it seems that slowing down production growth will play an increasingly prominent role in agricultural policy in many of those countries.

The picture that emerges is one of abundance in the wealthy countries and (increasing) food shortages in the LDCs. Addressing this paradox of hunger in the midst of plenty can be considered one of the most important challenges facing humanity. From an agronomic point of view, this does not in fact appear to be an impossible task. Almost all relevant studies point out that, in view of the large possibilities for catching-up, it is still possible to double food production in most LDCs without further degrading farmland. A necessary condition is that developing countries assign a higher priority to the policy of promoting an optimal physical and economic framework for agricultural production. In fact, due to the large share of agriculture in total production and especially in total employment in the LDCs, this challenge coincides to a considerable extent with the challenge of setting up a sustainable process of economic development.

In addition, liberalisation of global food markets, dominated for the most part by developed countries, can make a modest contribution toward solving food shortages and undernourishment. A number of regions will probably not be able to carry out these
processes on their own and will remain dependent on international aid. In any case, a structural solution to the food problem will require a very long period.

Technology, internationalisation and market structures

Technological and economic progress are heavily interdependent. The most striking illustration of this is the unprecedented growth in prosperity enjoyed by the Western world since the Industrial Revolution. The significance of technological developments has much wider ramifications, however, than just an increase in consumption opportunities. It is possible to speak of a continual transformation process, with respect to the quality and diversity of consumption opportunities as well as production techniques and organisation.

There is no reason to assume that this process will decelerate during the next twenty-five years. Attention is particularly focused on the potential of four groups of key technologies developed during the 1970s and 1980s, namely information technology (IT), computer-aided manufacturing (CAM) technologies, advanced materials and biotechnology. It can be assumed that these technologies will be either entirely or partially diffused sometime during the next twenty-five years. Some believe that because of them, a period of accelerated technological dynamics is about to begin. In this context, a new techno-economic paradigm based on IT in particular is under discussion. This would be comparable to the paradigms based on steam and electricity technologies (Freeman and Perez, 1988).

In order to realise the potential of new technologies, it is necessary to maintain momentum in the transformation processes. This can be considered the developed countries' most important challenge. Transformation processes also cause important changes in the organisation of production. Some key phrases are flexibility in the enterprise, continuous learning, better intra- and interfirm relations, flattening hierarchies and broadening responsibilities. These changes have been described extensively elsewhere (OECD, 1988; Cyert and Mowery, 1987; National Research Council, 1986).

Two other important processes in the world economy which are strongly related to technological development are internationalisation and changes in market structures.

Internationalisation is the process by which economies become increasingly interdependent. This process began in the 19th century, came to a standstill during the interbellum period of depression and regained momentum after World War II. The driving force behind internationalisation was primarily technological development. Transport and communication costs fell sharply as a result, and the various parts of the world grew closer together (the global village idea). Technological development brought the world economy within reach, as it were, of the workhorses of internationalisation: comparative advantages and economies of scale. Finally, co-operation between national states is necessary to specify the rules of the game and create a stable environment in which the basic forces are able to function. After World War II, this was institutionalised in the General Agreement of Tariffs and Trade (GATT).

In the postwar period, internationalisation initially took place through trade, intra-industry trade in particular, and to a lesser degree by means of direct foreign investment. The process of internationalisation has expanded even further during the last decade: into
service industries, technological knowledge and data. Lastly, a new phenomenon, at least for industry, has been created: global competition. This process is steered by multinational companies. Their "working space" – with respect to production as well as sales – is the entire world, which is why they have expanded into transnational companies (TNCs). Their share in world production of goods currently amounts to about 20 per cent.

This process was initiated by the rise of Japan, and somewhat later by the rise of the DAEs. In a number of industrial sectors, the large Western companies came under acute pressure. The adjustment process which followed resulted in radical changes in the organisation of production. Production is now set up on a modular basis, the modules often being spread out across the globe in accordance with the comparative advantages of the regions. This means that many corporations now function within a global network.

Again, the basis for these radical changes is formed by technological change, which has made production processes increasingly footloose through dematerialisation, miniaturisation and flexible manufacturing (a combination of just-in-time production and information technology). As a result, it is possible to assemble product parts produced in various locations flawlessly, without sacrificing quality.

The various production units and suppliers around the world are interlinked in a variety of ways; global competition thus stimulates rapid internationalisation. As far as trade is concerned, this especially involves the so-called intra-firm trade, which already constitutes 30 per cent of the flow of imports and exports in Japan and the United States. Global competition has also led to a strong increase in direct foreign investment. Finally, global competition has stimulated the internationalisation of technological knowledge and data. Due to the sizeable extent of internationalisation caused by global competition, there is now also talk of globalisation, the forces behind which look as though they will take quite some time to work themselves out. For this reason, the "best guess" is that the trend will continue, even in the face of increasing protectionism.

The main consequence of internationalisation (or globalisation) for national states concerns a reduction in the effectiveness of national monetary and budgetary policy, as a result of leakage effects. A second consequence seems to be that to "get out of step" internationally will be "punished" sooner by slowing economic development. This could be due, for example, to high wage costs in relation to labour productivity, or poor quality of physical or human infrastructure. For this reason, the economic policy of national states will be aimed more than ever at location factors. A result of this could be policy competition between countries. Inversely, the national states can also stress co-operation in order to avoid being bounced back and forth between the TNCs.

Another result of global competition is that during the 1980s, market structures became much more competitive in a number of industrial sectors. The question is how this will develop. On the one hand, it is conceivable that a more concentrated market structure is evolving due to the process of competition, but now on a global instead of a national level. All sorts of recent co-operative relationships between big corporations could also develop in that direction. On the other hand, it is conceivable that the keener competitive attitudes will survive or even intensify, due to reinforced technological dynamics which fit the new techno-economic paradigm. Young, technically enthusiastic, bold companies with occasional high-risk opportunities could play an important catalytic role in this. Finally, institutional factors will also determine the outcome of this process, especially the future development of the world trade system. In the world scenarios to be discussed in the next section, both possibilities will be taken into account.
Social and political trends

There is a general social trend of growing independence and emancipation of individuals, resulting from higher educational standards. In developed regions, this has led to a desegregation of societies, while in other regions it has stimulated nationalistic tendencies.

The most important trend in the political arena is the relaxation and untangling of ideologies in East-West relations as a result of glasnost and perestroika. As a result, the political and military power struggle between East and West has decreased drastically, as has the threat of a nuclear conflict. As an extension of this, however, all sorts of nationalistic feelings are surfacing. A third trend seems to be that democracy is gaining ground – in Central Europe, Latin America and various countries in Asia and Africa.

The most important trend in the political-economic arena is the worldwide reassessment of market forces and a much more critical attitude toward government actions than was the case about 15-20 years ago. Is it possible to extend these trends to 2015?

As far as political trends are concerned, even in the event of a military backlash in the Soviet Union, a return to the days of the cold war seems highly improbable. However, even if communism is dead, “the end of history” has not been reached. History knows more themes. For example, from the economic point of view, discussions about equity versus efficiency and government intervention versus market forces seem to go on ad infinitum. Economic history teaches that opinions on these subjects vary according to the course of economic and political developments (Schlesinger, 1986, pp. 23-48; Stein, 1990).

This means political-economic trends are not of a linear nature and therefore cannot easily be extrapolated into the future. Identifying “detonating issues” for changes in these trends is, however, very difficult and tends to be guesswork. Some examples which come to mind are an eco-shock or massive migration out of the LDCs or Eastern Europe, or a wave of protectionism.

International co-operation

While ten years ago international co-operation was grinding to a halt, during the last five years it has been extensively revived in a number of fields. Perhaps the most important cause of this was the end of the cold war, resulting in arms control, the unification of Germany and intensive co-operation between Western and Central Europe. In addition, Europe '92 and the Free Trade Agreement between the United States, Canada and Mexico can be considered further indications of this. There are other examples outside these regions. One is the fact that ASEAN and Latin American countries are discussing opportunities for further co-operation. Finally, intensive international talks are also being held to consider environmental issues such as global warming and the depletion of the ozone layer.

The only dissonant chord is increasing protectionism, particularly between the major trade blocs. It is feared that tendencies towards regional integration, rather than being (intermediate) steps toward a further opening-up of the world trade system, are actually paving the way toward the rise of tightly closed and antagonistic blocs. A complicating factor in this respect is that the United States, as described in Section 3, has lost its position of economic pre-eminence in the world economy. As suggested by, for example, Keohane (1984, p. 224), forging international co-operation in a non-hegemonic world is
much more difficult, "since it must take place among independent states that are motivated more by their own conceptions of self-interest than by a devotion to the common good".

If, as has been noted, a return to the days of the cold war seems difficult to imagine, a clear extrapolation of the two other trends – protectionism and regional integration – is not really possible. The two trends are therefore worked out differently in different scenarios.

The economic performance of the major regions is a crucial factor in the evolution of the international trade system. Strong performance would reduce protectionist tendencies and probably reinforce the GATT system. In concrete terms, this means that the United States and Western Europe should restore their competition with respect to Japan (and the DAEs), while the Japanese economy should become more open. As will be argued in the scenarios, there are a number of forces operating in Japan, including demographic trends, which can give the Japanese economy a much more open nature in the long run. Should these adjustment processes fail, however – or even worse, should one of the major regions experience a period of decline – then the reinforcement of protectionism and all the corresponding phenomena such as managed trade, bilateralism, strategic trade policies and the like appears unavoidable. It seems plausible that cooperation will also be negatively affected in all sorts of other fields, such as the environment.

With regard to the integration trend, the lesson from history about the West European process of integration seems to be that idealism and increasing interdependence among national economies are not sufficient in themselves to set up or maintain regional integration. Other urgent considerations, such as a security crisis (Western Europe 1947-51 – see Milward, 1984) or a deep economic crisis (Western Europe 1980-85) are often necessary in order to shake national states into relinquishing a portion of their sovereignty.

Furthermore, the emerging picture for a number of LDC regions, based on comparative strength analyses and trends in fields such as demography, the environment and food provision, calls into question their ability to achieve a path of sustainable economic growth. This refers especially to sub-Saharan Africa and some Asian and Latin American countries. That is why development aid should once again have high priority on the international agenda – not just out of moral obligation, but also in order to combat backlashes which also affect developed countries, such as major migratory movements, environmental issues (deforestation), and political unrest. This aid should especially focus on increasing the likelihood of sustainable development (which includes food provision, education and population policy).

Finally, international assistance can also be an important psychological factor; for example, it can provide Central European countries with just enough support to help them through occasional difficult periods.

5. Four scenarios for the world economy until 2015

a) Global Shift

The scenario from a bird's-eye view

The dynamics of technological change are the pre-eminent driving force behind this scenario. Vigorous entrepreneurship, incentives and market competition are essential
preconditions benefiting from the dynamics as well as sustaining and reinforcing them. Economies which succeed in unleashing these forces will experience rapid transformation, profoundly influencing many industries. Entire new industries will spring up and, in some cases, old ones will be revived. The most significant characteristic of this gale of creative destruction is that vested interests and market positions are continuously threatened. In a number of cases they will in fact quickly be eroded. The result in many industries (within successful economies) will be very competitive market structures. This process is further enhanced in regions where trade liberalisation occurs. These developments explain to a large extent the predominance of the free-market perspective in the Global Shift scenario.

America’s business sector, under pressure from Japan and the DAEs, will again demonstrate during the 1990s that its greatest strength lies precisely in the free-market perspective. Its capacity for renewal initiates recovery of productivity growth and competitiveness and, in so doing, reconfirms America’s position as a “world-class” economy. Even before 2000 there will be a substantial surplus on the current account and real capital costs will have fallen. The recovery in productivity also generates the financial means with which to reduce the government deficit and to tackle infrastructural bottle-necks such as education.

A free-market-dominated recovery, however, is no tranquil, harmonious process of economic development. On the contrary, as explained before, it inevitably entails some people, firms and regions badly losing, while others thrive. This is the “boom town-ghost town” phenomenon. In Global Shift this may manifest itself regionally in the further rise of the Pacific side of the United States, while the decline of the East coast continues.

In Global Shift, Japan once again tackles various internal and external challenges with great enthusiasm and flexibility. For that purpose, radical changes are being made to the Japanese system which imply a strong shift toward the free-market perspective. Perhaps the most important change is that the Japanese economy is forced to become gradually more open due to a labour shortage. The openness forces rapid “catching-up” in sectors strongly protected until now. In this way, near-total convergence with American living standards will be achieved by 2015.

The rise of the DAEs also continues. They profit from the more open nature of the Japanese economy and the transfer of economic activities. These favourable developments at the regional level also generate the open atmosphere needed to reach a sweeping liberalisation of trade and capital transactions in the Asia-Pacific region. ASEAN is expanding into an Asian Economic Community, while the “Initiative for the Americas” evolves into a Free Trade Agreement comprising both American continents. This liberalisation in turn provides fresh impetus to sustain the process of rapid economic growth. Regions such as China, India and Latin America are gradually drawn into this growth process as well.

As a result, market forces move rapidly toward a high degree of internationalisation and globalisation within the entire Asia-Pacific region. Highly competitive market structures also stimulate new research and accelerated diffusion of new technologies, including all types of “cross-fertilization” between current key technologies.

This also creates, for example, new opportunities for nuclear energy, especially through the rapid development and installation of so-called inherently safe nuclear reactors. After 2000 this will lead to a rapid increase in the use of nuclear energy in this region, helping to keep real oil prices at bay despite strong economic growth.
To summarise, in Global Shift the old vision of a renewed blossoming and rise of the Asia-Pacific region – an Asian Era – comes true, defying the horrors of the Asian Drama that was until recently thought by many to be the region’s inevitable destiny.

Despite steps taken in the direction of an internal market, Europe generally appears ill-prepared in light of the innovative and competitive capabilities emanating from the Asia-Pacific region. Eurosclerosis does not seem to have been conquered. Economic reforms intended to promote or restore market competition in, for example, the labour market are not realised or are implemented half-heartedly, due to effective resistance by pressure groups. The European bias towards security, stability, and risk-averse behaviour prevails once again. As a result, economic growth recedes, unemployment rises, and important industrial sectors such as cars, computers and chips quickly lose ground. A number of countries – France, for example – will not, however, allow their main industrial sectors to be wiped out just like that. They will make the shift toward protectionism, e.g. by giving subsidies to vital industries and introducing non-tariff barriers. Other countries oppose this. The conflict fans the flames of the crucial ongoing dispute over the kind of political-economic model that the European Community should pursue: the free-market-oriented model or the co-ordination-oriented model. The Community is once again split, causing the process of integration to become bogged down while protectionism forges on. Fortress Europe is in the making. Europhoria degenerates into Europhobia.

The relative decline in Western Europe also has significant negative repercussions for economic development in Africa and Central Europe. Africa suffers the most in what may amount to a delinking from the rest of the world economy. Delinking also applies, in a certain sense, to the Soviet Union. There, the chaos of a non-system, together with the social unrest it evokes as a result of declining standards of living, ends in a military backlash, followed by a “harsh”, authoritarian period.

The hopelessness of the situation in Africa and Eastern Europe is causing large migratory movements. Because of geographical proximity and old (colonial) bonds, Western Europe is an obvious first choice of destination. As a result, the social tensions which have already risen sharply in economic stagnation are further exacerbated. The establishment of a pauperised “under”-class – which is socially completely disintegrated, causing widespread (racial) unrest – is a threatening prospect, in particular for large urban centres. In Western Europe, the bottom of the vicious spiral is reached around 2005. The spiral is broken by means of unavoidably harsh measures, sweeping away rigidities of all kinds. Subsequently, the West European economies gradually recover.

As far as the environment is concerned, Global Shift paints a less than rosy picture. Delinking Africa and the Soviet Union implies a continuation of the current negative trends. In Western Europe and the Pacific region, local problems are the primary focus of attention. In the former case this stems from impotence, through stagnation of the process of integration. In the Pacific region, it is because the free-market nature of economic development does not expect any good to come from complex international talks on global environmental problems. Instead, the Pacific region relies on the efficiency of market forces and the stimulating effects they may have on the development of energy-saving technology and low-carbon energy sources.

Substantial increases in energy efficiency are achieved in this way, as well as an increase in the use of zero-carbon nuclear energy. In Global Shift, however, market forces by themselves appear absolutely incapable of severely limiting the increase in emissions of greenhouse gases. Thus, total CO₂ emissions by 2015 increase, for example,
by about 60 per cent, and energy-related emissions by as much as approximately 70 per cent, whereas the agreements reached in Toronto in 1988 are aimed at a decrease of 20 per cent by 2005.

Furthermore, especially in Asia, the desire for fast economic growth is so strong that environmental concerns are pushed aside for some time to come. In the environmental domain this implies that local problems are only tackled whenever critical limits are hit. In a number of fields, especially local problems such as air, water and soil pollution, this attitude leads to large lapses. Technological fixes provide short-term, temporary solutions. Only near the end of the scenario period is any noticeable change in thinking expected, due to the enormous increase in prosperity and the pollution that comes with it. This new attitude will increasingly focus attention on "quality of life" issues.

In summary, this scenario leads to a real shift in economic activities from, roughly speaking, the Atlantic to the Pacific basin, which is why it is called Global Shift. The shift is illustrated in Table 1, which summarises some main indicators of the scenario.

Table 1.  Key results of the Global Shift scenario 1990-2015

<table>
<thead>
<tr>
<th></th>
<th>NAM</th>
<th>WEU</th>
<th>JAP</th>
<th>CE/SU</th>
<th>DAEs rASIA</th>
<th>ME</th>
<th>AFR</th>
<th>LAT</th>
<th>WLD</th>
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<tbody>
<tr>
<td><strong>Average annual growth rates in %</strong></td>
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<tr>
<td>Population*b</td>
<td>0.8</td>
<td>0.4</td>
<td>0.2</td>
<td>0.5</td>
<td>1.2</td>
<td>1.5</td>
<td>2.4</td>
<td>3.1</td>
<td>1.7</td>
</tr>
<tr>
<td>GDP</td>
<td>3.4</td>
<td>1.9</td>
<td>4.3</td>
<td>0.4</td>
<td>7.3</td>
<td>6.5</td>
<td>3.6</td>
<td>2.9</td>
<td>4.3</td>
</tr>
<tr>
<td>Labour supply*b</td>
<td>1.0</td>
<td>0.6</td>
<td>0.3</td>
<td>0.4</td>
<td>1.9</td>
<td>1.6</td>
<td>3.2</td>
<td>3.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Primary energy demand*c</td>
<td>1.8</td>
<td>0.5</td>
<td>2.3</td>
<td>0.6</td>
<td>4.4</td>
<td>←</td>
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<tr>
<td>Exports*d</td>
<td>6.5</td>
<td>3.4</td>
<td>7.5</td>
<td>2.4</td>
<td>9.7</td>
<td>8.7</td>
<td>4.8</td>
<td>3.0</td>
<td>6.4</td>
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<tr>
<td><strong>Levels 2015</strong></td>
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<tr>
<td>Share of world production (%)</td>
<td>29</td>
<td>20</td>
<td>16</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>4</td>
<td>1</td>
<td>6</td>
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<tr>
<td>Share of world trade*d (%)</td>
<td>21</td>
<td>24</td>
<td>13</td>
<td>3</td>
<td>24</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Labour productivity (index US in 1990 = 100)</td>
<td>183</td>
<td>118</td>
<td>148</td>
<td>35</td>
<td>47</td>
<td>26</td>
<td>19</td>
<td>4</td>
<td>42</td>
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<tr>
<td>Emissions of CO2*</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(index 1990 = 100)</td>
<td>135</td>
<td>107</td>
<td>150</td>
<td>116</td>
<td>←</td>
<td>210</td>
<td>←</td>
<td>←</td>
<td>162</td>
</tr>
</tbody>
</table>

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*a)* The regions are defined in Table 7.  
*b)* See den Ouden, forthcoming.  
*c)* See van Hamel, Stoffers and Wong, forthcoming.  
*d)* Including intra-regional trade.  
*e)* Including de/re-forestation; disregarding de/re-forestation would change the LDCs and global CO2 emission index to 289 and 172, respectively.

A few regions further considered

- Japan

In this scenario the bottlenecks emerging in Japan form an important mutual "trigger" mechanism whereby they solve each other. For instance, demographic bottlenecks help expose well-protected and/or archaic (domestic) sectors to foreign competition. This forces them to catch up or, in industrial sectors, either to import or to transfer labour-intensive parts of production to DAEs. Both help ease the pressure on the labour market.
Another factor which contributes to this scenario is a better application of the potential of Japanese women, most of whom are well educated.

Finally, Japan will further improve its inventive potential for the technology race in the technologically advanced sectors. Through reforms in the educational system, individual initiative and creativity are stimulated. With this development, the significance of MITI's steering role gradually diminishes.

Despite these radical changes, traditional value patterns will persist to a large extent. Convergence with Western notions of lifestyle will only develop slowly and will not really impinge upon the economic development of Japan.

- Developments in China, India and Latin America

It is assumed in Global Shift that, due to catalytic internal and external circumstances, sufficient momentum is created to bring about a policy reversal which can eliminate the most important factors blocking sustained economic growth in these areas. The three regions, where approximately 50 per cent of the world population will be living around 2015, will thus increasingly participate in the highly dynamic economic development enjoyed by the entire Asia-Pacific region.

The withdrawal of the current old political establishment in China could be the catalyst needed to set in motion a transition from a centrally planned economy to a market economy. The erosion of the power base of the current system will then be exposed. As was the case in Central Europe, the transition to a market economy and a democratic system might then be realised within a short time. In Global Shift, China's transition to a market economy – in contrast with that of Central Europe – can rapidly generate a high-level path of economic growth. The more modest legacy of the centrally planned system in China may explain why the negative effects of a transition in that country are less profound than in Central Europe. China is, first of all, still largely an agricultural country; this implies that reconstructing the manufacturing sector will have a more restrained impact on the economy. Secondly, approximately 35-40 per cent of the Chinese economy (as opposed to 5-10 per cent in Eastern Europe) is already in private hands. The increase in growth, from 6.5 to 10 per cent during the 1978-89 period with limited liberalisation, may serve as evidence that a rapid transformation in China is possible.

The after-effects of the Chinese transition and the dynamism radiating from the entire Asia-Pacific region might also help prop up India, pointing its economic policy in a more "outward-oriented" direction. Here, too, favourable effects are expected, based on the cautious attempts at liberalisation made during the 1980s.

In Latin America, the problem is not policy reversal, which has already happened, but making the policy of stabilization and structural adjustment a success. The difficulty here is that even if a tight stabilization and reform policy is fully implemented, there is no guarantee of economic recovery. In fact, there is a danger that the stabilization policy may cause Latin American economies to get caught in a so-called debt overhang trap, with low growth and high debt service.

Unlike China and India, Latin America can therefore break out of its vicious circle only if the internal reform policy is powerfully supported by favourable external circumstances. In the distinctly market-oriented Global Shift scenario, these circumstances are created by developments in the world economy: a drop in real interest, strong economic growth in the Asia-Pacific region and the conclusion of a Free Trade Agreement with
North America. In this way Latin America is able to climb out of the debt overhang trap. Stabilization generates the beginning of a recovery in confidence, and promotes political stability. Entrepreneurs will then start again to focus on the long term and will be less shy of taking risks. Foreign investment will also be encouraged. Thus the favourable effects of the reform programme, aimed at liberalisation, privatisation and trimming of the government apparatus, are reinforced. Increased economic growth subsequently results in freeing up the financial means for tackling serious growth-impeding bottlenecks, especially in education, infrastructure and health care. As a result, the virtuous circle is given new impetus. In the long term this leads to a sustained economic growth of about 4.5 per cent. Consequently, real per capita income doubles between now and 2015.

- The Soviet Union

The backlash completely reverses glasnost and perestroika. Social inertia and lack of motivation grip the country even more tightly than is now the case. Nevertheless, under severe repression, the Soviet economy does stabilize in a short time. However, these circumstances are crushing for all the economic forces that in the longer run might have generated the structural recovery of the Soviet economy. In the longer term, then, the Soviet economy will still be brought down by its own "contradictions", and a new reform cycle will be set in motion before 2015.

b) European Renaissance

The scenario from a bird's-eye view

In European Renaissance, as in Global Shift, technological change plays an important role. However, its characteristics, as well as its rate of change, differ significantly. Accelerated technological dynamics characterise Global Shift, especially in the Asia-Pacific region. New opportunities for innovation are constantly emerging, incessantly challenging and eroding vested interests and market power. A vital role is played by new, relatively small entrepreneurial firms. Far-reaching trade liberalisation is also a contributing factor.

In contrast, in European Renaissance the dynamic interplay of these factors – entrepreneurship, openness of markets and characteristics of technological change itself – proceeds in another direction, making technological change less dynamic and fickle and more stable and smooth. In European Renaissance, new entrepreneurship encounters more barriers than in Global Shift. Huge funds are needed for research and development, involving large risks and uncertainties. Increasing returns to scale in finance, marketing and R&D continue to be very important. As a result, global competition increasingly leads to the emergence of worldwide oligopolies and strategic alliances. These "conglomerates" seek support from governments in order to reduce uncertainties. At the same time, governments compete with each other in order to attract TNCs. Consequently, strategic technology, industrial and trade policies gain in significance. This also implies a less unequivocal commitment to free trade than that exhibited by the Asia-Pacific region in Global Shift.

Judged from the prosperity circle, the emphasis in European Renaissance falls on the co-ordination perspective, while in Global Shift the emphasis lies on the free-market perspective. In other words, it could be said that the Global Shift vision of technology leans toward the early Schumpeterian ideas, while European Renaissance leans toward
the later Schumpeter of "Capitalism, Socialism and Democracy". The differences between the scenarios should not be construed as absolute, however; they should be interpreted as shades of difference. As reflected in the comparative strength analysis, the world of European Renaissance seems most compatible with the European and Japanese traditions.

America's current inability to co-operate is once again demonstrated in the failure of American politics to break through the stalemate of the budget deficit and in the inability of business to change the success formulas of the past. Trends from the 1980s persist relentlessly. The most important of these are the sluggish growth in labour productivity, the reoccurrence of a large deficit on the current account and the further deterioration of physical and human infrastructure, most harrowingly apparent in the inner cities of America's urban conglomerates. The deficit is especially important because it further inflames the protectionist mood. Fortress America is in the making. Protectionism stretches out farther, even affecting technological know-how. The problems are gradually coming to a head.

The economic development of the strong Asian economies, Japan and the DAEs is marred by the problems of the United States. The DAEs in particular are handicapped in their growth aspirations due to technological protectionism; they become increasingly dependent on access to know-how (Ernst and O'Connor, 1989). As a result, the economic development of the entire Asian continent is much less dynamic than in Global Shift.

Although Japan and the DAEs are forced into a defensive position, during the post-cold war era they are less inclined to bow to this pressure. They react by realigning their strong export orientation toward the United States to other regions, especially Europe, the Soviet Union and, most of all, each other. The Japanese system, with a great deal of informal co-ordination between government and business, remains largely intact.

Western Europe develops very favourably in the European Renaissance scenario. The high expectations of Europe '92 are fulfilled and the EMU is launched. The European process of integration is an important stimulus toward the strengthening of incentive structures on the West European product and labour markets. As an extension of this, a far-reaching process of reform of the West European welfare state is set in motion, especially in northwestern Europe. Attempts are made to combine the European tradition of social equity, apparent from the socio-economic aims of low unemployment and fair income distribution, with an increased sensitivity to economic incentives. In addition, education and labour are increasingly interpreted as two of the few social integration mechanisms still remaining. In European Renaissance, stronger incentive structures are achieved by introducing tighter checks and enforcement factors within the social security system - so-called non-price incentives - while maintaining by and large the relatively high West European standards for social benefits. The reform also leads to the introduction of a compulsory workfare programme, including retraining, continued education and acceptance of less desirable jobs. In this way the emergence of an "under"-class which looms in some European countries is averted.

Prosperous economic development leads to a relatively open economic bloc. There are few restrictions on foreign investments, especially those from Asia. The European Community is also willing to consider further expansion. By 2000 the EFTA countries will already be members of the Community, while a special status will have been granted to the Central European countries. By 2015 the European Community encompasses all of Europe, with the exception of the Soviet Union.
The rise of Fortress America and the tendency toward strategic trade and industrial policies significantly contribute to the formation of trade blocs. Multilateral free trade of more and more goods and services becomes endangered while managed trade lurks in the shadows. As a result, market structures in global markets become less competitive and technological change lacks the dynamism of Global Shift.

At a certain moment, between 1995 and 2000, a fundamental crisis in confidence emerges with respect to the American economy – for example, during a stock market crash. Foreign capital is withdrawn, the dollar is devaluated. Large increases in interest rates help to stop the rapid fall of the dollar. The economy ends up in a serious recession. Unemployment and poverty increase rapidly. The “hard landing” precipitates a rapid reduction of the American Government deficit, which only makes the recession worse\(^2\).

The negative after-effects of this recession on the Pacific region are far-reaching. Besides Canada, the most affected region is Latin America with its strong interrelations with the United States. The increase in real interest rates implies a recurrence of the debt crisis for this part of the world. Economic stagnation, political instability and continuing deterioration of the environment, specifically the deforestation of the Amazon region, are the results. Japan and the DAES are also affected. However, the reduction of their export orientation to the United States during the 1990s helps these countries mitigate the effects. The negative impact on Western Europe is more limited than in the Asia-Pacific region. This is primarily due to a weaker interdependence with the American economy and to two compensating forces: the progressive integration of Western Europe, and substantial improvement in economic development in Eastern Europe around 2000.

Glasnost and perestroika are revived in the Soviet Union. Within a few years a rapid breakthrough to political democracy is achieved. Republics striving toward independence, such as the three Baltic republics and Georgia, are granted complete independence. As an extension of the democracy, there also follows a transition to a market economy. Due to the large “legacy” of the past, the transition amounts to shock therapy that results in a deep depression with high unemployment and a sharp drop in the standard of living. Moreover, in this vast country with such huge problems, foreign aid has a mainly psychological significance. The process of transformation, however, proceeds so successfully that the economy already begins to show significant growth before 2000.

The Central European economies also thrive after the rapid but painful transition period to a market economy. External factors which contribute to the favourable development are the association of these countries with the European Community, which eliminates all barriers for trade and capital transactions, clearing the way for large-scale foreign investment. Sizeable European Community support programmes are also of importance, especially for physical infrastructure, energy and the environment.

In summary, the very favourable economic development of Europe and the Soviet Union, after the gloomy views of the last decade, explain why this scenario is called European Renaissance.

Finally, after a difficult adjustment period in the United States, a strong recovery begins somewhere during the 2000-2005 period. This also gives a boost to the world economy as a whole. The willingness to co-operate increases and results in the recovery of an open system of trade worldwide. This also improves opportunities for international talks on other global issues – such as the environment, where until 2005 hardly any progress is made. Up to 2015 the impact of these improved relationships on the global
environment is, however, hardly noticeable. A few key results of the European Renaissance scenario are summarised in Table 2.

### Table 2. Key results of the European Renaissance scenario 1990-2015

<table>
<thead>
<tr>
<th></th>
<th>NAM</th>
<th>WEU</th>
<th>JAP</th>
<th>CE/SU</th>
<th>DAEs</th>
<th>rASIA</th>
<th>ME</th>
<th>AFR</th>
<th>LAT</th>
<th>WLD</th>
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<tbody>
<tr>
<td><strong>Average annual growth rates in %</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Population&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.8</td>
<td>0.3</td>
<td>0.2</td>
<td>0.5</td>
<td>1.2</td>
<td>1.5</td>
<td>2.5</td>
<td>3.1</td>
<td>1.7</td>
<td>1.5</td>
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<tr>
<td>GDP</td>
<td>1.8</td>
<td>2.8</td>
<td>3.7</td>
<td>3.4</td>
<td>6.2</td>
<td>4.9</td>
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<td>2.8</td>
<td>3.1</td>
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<tr>
<td>Labour supply&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.8</td>
<td>0.6</td>
<td>0.2</td>
<td>0.5</td>
<td>1.7</td>
<td>1.6</td>
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<td>3.4</td>
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<td>1.6</td>
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<tr>
<td>Primary energy demand&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.6</td>
<td>0.7</td>
<td>1.7</td>
<td>0.2</td>
<td>3.6</td>
<td>1.8</td>
<td></td>
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<td></td>
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<tr>
<td>Exports&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3.1</td>
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<td>8.3</td>
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<td><strong>Levels 2015</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of world production (%)</td>
<td>21</td>
<td>27</td>
<td>15</td>
<td>12</td>
<td>6</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Share of world trade&lt;sup&gt;d&lt;/sup&gt; (%)</td>
<td>10</td>
<td>39</td>
<td>11</td>
<td>10</td>
<td>19</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Labour productivity (index US in 1990 = 100)</td>
<td>130</td>
<td>134</td>
<td>133</td>
<td>62</td>
<td>38</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td>30</td>
<td>34</td>
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<tr>
<td>Emissions of CO₂&lt;sup&gt;e&lt;/sup&gt; (index 1990 = 100)</td>
<td>116</td>
<td>101</td>
<td>139</td>
<td>94</td>
<td>187</td>
<td>142</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>) The regions are defined in Table 7.
<sup>b</sup>) See den Ouden, forthcoming.
<sup>c</sup>) See van Hamel, Stoffers and Wong, forthcoming.
<sup>d</sup>) Including intra-regional trade.
<sup>e</sup>) Including deforestation; disregarding deforestation would change the LDCs and global CO₂ emission index to 245 and 147, respectively.

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**A few regions further considered**

- **Western Europe**

The tensions and challenges which emerge in the European Renaissance scenario also influence the character of the integration processes of the European Community. In particular, the strained relationship with the United States, as a result of its setback, and the European character of many challenges drive home the message to many member states that during the post-cold war era Europe must stand on its own feet. This includes, for example, the transition process of Central Europe and the Soviet Union; environmental challenges; potentially massive waves of migration from Africa and Eastern Europe; the "embedding" of Germany in Europe; and the technology race, especially with Japan and the DAEs.

Many of these problems call for European co-operation and co-ordination. In European Renaissance, this will precipitate member states becoming more deeply involved in a relatively centralised integration process, despite many doubts and often against deep-felt instincts. The dynamics of the process are therefore directed with a relatively strong hand by the European Council and the European Commission. For example, new initiatives are launched by Brussels concerning foreign affairs, development aid (especially Africa), defence, environmental protection and energy policy, technology, industrial policy, social security (social minimum standards) and infrastructure.
Through the linkage of issues, this process of integration dispatched from above also has the tendency to reinforce itself. Because of this there is a continual albeit creeping transfer of sovereignty to Brussels. In an increasingly emphatic way this points to the democratic deficit of the Community, which in turn leads to more powers for the European Parliament and a stronger position and larger duty-related responsibility for the European Commissioners.

One important initiative which may serve as an example is the European Energy Community, which quickly assumes great significance because it is where a number of major policy issues are intertwined: aid for Eastern Europe, energy, the environment, technology policy and Community finances. Within the context of the European Energy Community on a West European level, a modest CO₂ tax is levied. In addition, there are regulations aimed at promoting energy conservation. There is a European Research and Development programme for the environmental and energy fields, similar to ESPRIT. The European Energy Community organises transfers of know-how and technology in the environmental and energy fields to Central and Eastern Europe. The European Energy Community also implements a major plan for infrastructure, in which gas from West Siberia is transported to Western Europe. In exchange for gas, the Soviet Union can import modern capital goods to modernise, for example, its very inefficient and polluting energy and transport systems. As a result, growth of primary energy demand in Western Europe is modest, while CO₂ emissions are stabilised at their 1990 level. This stabilization is achieved, in particular, by means of an increase of the share of natural gas in total energy use. For Central and Eastern Europe the results are even more favourable; despite a cumulative 130 per cent growth of production, CO₂ emissions fall by 5 per cent.

- Central Europe

Within the time horizon of the scenario, Central Europe becomes completely integrated into the European Community. There is a mutual strengthening going on between the process of political integration and increasing co-operation with West European companies. After the transformation of the economic system which is already under way, it is business co-operation in particular that maintains the momentum in the process of development. By the mid-1990s the Central European economies will be in a position to leave behind the recession caused by the process of reform. From that moment on, they manage to sustain an annual growth of about 6 per cent on average. In spite of this, though, the real per capita income in Western Europe is still 40 per cent higher in 2015.

Central Europe is especially attractive because of low labour costs. Together with the population's high level of education, geographic proximity and successful developments in Western Europe, this explains the great interest shown by West European companies in direct investment. The low wage costs are reflected in the sectoral structure and trade patterns. Although there is a good deal of intra-industry and intra-firm trade, the general picture is still that of importing capital goods and exporting labour-intensive products.

- The Soviet Union

The Soviet Union accomplishes the take-off much more on its own strength than does Central Europe. This happens through implementation of radical political and economic changes, coupled with scaling down in all areas. The Soviet Union turns into a loose confederation of autonomous republics operating within one economic space.
Agriculture is privatised and large industrial monopolies are broken up. The forces of market competition bring about company closures on a large scale and lead to sharply increasing unemployment. Major social tensions will arise, because means for a social safety net are lacking. These tensions do not, however, come to a head since the recovered autonomy and reborn small-scale dynamics give sufficient hope and strength to the population, enabling them to endure. During the first 5-10 years, the dynamics become especially apparent in agriculture, the trade sector and small-scale services, while substantial productivity growth is achieved in mining and quarrying. Although for a period of three generations the self-employed practically disappeared from the stage, new entrepreneurship quickly emerges, living off experiences gleaned from barter in the informal sector (Shiller, Boycko and Korobov, 1991). After a sharp relapse in production, this dynamic brings about an increasingly perceptible resurrection of the entire economy after a few years. Nevertheless, unemployment will not drop back below double figures until well into the next century.

Although the financial aid which the Soviet Union receives from the West is only a drop in the bucket, and although large-scale foreign investment is holding back until the next century, an increasingly closer co-operation with Western Europe still emerges. This occurs in the context of, inter alia, free-trade agreements and the European Energy Community. In addition, by means of joint ventures, the enormous environmental problems are starting to be tackled. Agriculture also profits to a significant degree from the transfer of technology.

Not until the next century will large-scale companies experience rapid development. Surprisingly, not only traditional sectors such as steel and textile industries but also high-value-added sectors appear rapidly, based on the know-how of advanced space and weapons technology. Consequently the entire economy grows by more than 5 per cent over a long period.

c) **Global Crisis**

At first the crisis nature of this scenario is difficult to imagine. Even though the euphoria of annus mirabilis 1989 has passed, there still remains the feeling that the world stands on the brink of a new era, offering many new opportunities for co-operation and growing prosperity. Regardless of this optimistic beginning, in the United States the 1990s do not really seem to be breaking away from the trends of the 1980s (Krugman, 1990, Chapter 16), while in Western Europe high expectations about Europe '92 are not met. Although no dramatic setbacks take place, the process of economic decay is, slowly but surely, settling in to stay.

For the United States it implies continuing weak productivity growth together with a worsening physical and human infrastructure. The "twin deficits" only drop at an exasperatingly slow rate and real capital costs remain high. In Western Europe it gradually becomes clear that Eurosclerosis has not really been conquered and the integration process loses momentum. As a result, moderate growth once again causes rising unemployment.

For Japan too, the trends of the 1980s continue. Emerging bottlenecks such as the ageing population are taken care of with relative ease, for example by increasing the labour participation of women and vigorously introducing labour-saving technology. Rapid growth continues and large current account surpluses persist. This means that although Japan once again displays great flexibility in the economic sphere, from a
social-political viewpoint it remains essentially unaltered. As far as the outside world is concerned, it remains "a closed Japan Inc." that competes in an "unfair manner".

The further rise of the Far East on the one hand and the economic impotence of Europe and America on the other ensure a continuous deepening of tensions on trade issues during the 1990s. The discussions become more grim because America and Western Europe feel increasingly more threatened, while Japan-bashing strongly feeds Japanese angst. At the same time, Japan appears to feel increasingly self-confident and powerful, and no longer allows Europe and America to tell it what to do.

The optimism at the start of the 1990s has at the end of the decade completely faded away. The major regions of the world gradually degenerate into antagonistic protectionist blocs, in which the DAES increasingly depend on Japan. As a result, market structures are again becoming less competitive. The diffusion of new technology is consequently delayed. Both factors contribute toward further slackening of global economic growth. Moreover, economic antagonism between the three large blocs also mars international talks about environmental problems. Apart from fine statements of intention, no real progress is made on these issues during the 1990s. As a result, energy consumption and greenhouse gas emissions grow unchecked.

In this context of antagonism, moderate growth of both production and – even more so – world trade, and continuing low prices for commodities, it is impossible for regions like Africa, Latin America and parts of Asia to attain a path of "self-sustained" and sustainable economic growth. Consequently, during the 1990s economic growth in these regions will only slightly exceed the high rate of population growth. The few signs of change currently visible in some parts of these regions will be crushed.

In these regions, poverty-stricken and confronted with a vast increase in population, the hectic and careless search for water, food and energy continues relentlessly, inevitably wearing nature out at a fast rate. As a result, the world will be startled to an ever-increasing degree by reports about the consequences: famine, disease and floods. Ultimately for these regions, the 1990s do not look as if they can be considered any different from the 1980s: a lost decade.

The same applies to Central Europe and the Soviet Union. While the Soviet Union, despite the odds, continues to muddle through the current situation, in Central Europe the economies are hard hit by the moderate growth of the world economy and especially that of Western Europe. Much needed foreign investment fails to arrive and industrial restructuring is bogged down. Consequently, confidence reaches a low ebb. Populist leaders will emerge, offering quick solutions and feeding nationalistic feelings and tensions; this will in turn further impede economic development.

The world seems to become more and more trapped in a vicious circle. Everywhere tensions are slowly but surely mounting. Most regional economies and the entire world system become more fragile, while the formation of blocs obstructs any effective approach to the problems. At some stage then, a disruption takes place which, in view of the fragility of the system, assumes the nature of a system shock. Theoretically such a shock could occur in many fields. The Global Crisis scenario assumes a serious worldwide crisis in the field of world food supply, due to happen around 2000-2005.22 Because of simultaneous extreme drought in, for example, the United States, the Soviet Union and China, food prices skyrocket in a short time by more than 100 per cent. In Africa and Southern Asia in particular, the impact is horrifying, causing widespread death and migration. The agricultural crisis will be interpreted by many as decisive evidence of
lasting deterioration of agricultural land, and for this reason be considered an eco-shock. Others associate it with the greenhouse effect. A deep economic recession is set in motion by the shock: Global Crisis.

No matter how serious the food crisis might be, the crisis itself does not explain the depth of the economic recession, no more than the oil crises of 1973 and 1979 can fully explain the weak economic performance of the 1973-83 period. The economic recession of the Global Crisis scenario during the period following 2005-2010 can only be understood when viewed in combination with the precarious situation into which the world economy has drifted, characterised by rigidities and a complete loss of confidence.

For some time global economic growth drops from about 2.5 per cent in the 1990s to less than 1 per cent per year in the first decade of the 21st century, implying for the poorest regions a severe fall in per capita real income. A few years after the acute crisis, the world economy begins to show signs of recovery. The crisis also creates new windows of opportunity. Consequently, a period of recovery is ushered in during which international co-operation is an important positive factor in fields such as the environment, energy and agriculture. The late response does, however, bring with it many extra costs, both globally and regionally, all of which slow down the recovery process.

In retrospect, the 1990s will widely be interpreted as a period of muddling through, a decade of missed opportunities culminating in a Global Crisis. Seen from an historical perspective, Global Crisis can only be characterised as a scenario of very slow economic progress. A few key figures for Global Crisis are summarised in Table 3.

| Table 3. Key results of the Global Crisis scenario 1990-2015<sup>a</sup> |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | NAM  | WEU  | JAP  | CE/SU | DAEs | rASIA | ME   | AFR  | LAT  | WLD  |
| **Average annual growth rates in %** |      |      |      |      |      |      |      |      |      |      |
| Population<sup>b</sup>           | 0.8  | 0.3  | 0.2  | 0.5  | 1.2  | 1.5  | 2.5  | 3.1  | 1.7  | 1.5  |
| GDP 1990-2003                    | 2.1  | 2.1  | 3.8  | 0.1  | 6.0  | 4.4  | 3.8  | 3.1  | 3.5  | 2.6  |
| 2003-2009                        | 0.2  | 0.7  | 1.5  | 0.7  | 2.0  | 2.7  | -1.0 | 0.0  | 1.0  | 0.8  |
| 2009-2015                        | 2.3  | 2.3  | 3.0  | 2.6  | 5.5  | 5.0  | 1.8  | 3.0  | 4.0  | 2.9  |
| 1990-2015                        | 1.7  | 1.8  | 3.0  | 0.8  | 4.9  | 4.2  | 2.1  | 2.3  | 3.0  | 2.2  |
| Labour supply<sup>b</sup>        | 0.8  | 0.5  | 0.1  | 0.4  | 1.7  | 1.6  | 3.2  | 3.4  | 2.1  | 1.6  |
| Primary energy demand<sup>c</sup>| 0.8  | 0.8  | 1.8  | 0.4  |       | 3.4  |       |       | 1.8  |       |
| Exports<sup>d</sup>              | 2.9  | 3.2  | 5.0  | 2.7  | 6.3  | 4.3  | 2.4  | 2.5  | 3.5  | 3.7  |
| **Levels 2015**                  |      |      |      |      |      |      |      |      |      |      |
| Share of world production (%)    | 25   | 26   | 16   | 8    | 6    | 9    | 4    | 1    | 5    | 100  |
| Share of world trade<sup>e</sup> (%) | 13   | 38   | 12   | 5    | 19   | 4    | 3    | 1    | 4    | 100  |
| Labour productivity (index US in 1990 = 100) | 122  | 105  | 115  | 37   | 28   | 15   | 13   | 3    | 32   | 28   |
| Emissions of CO₂<sup>f</sup>     | 118  | 117  | 138  | 110  |       |       | 190  |       |       | 149  |

<sup>a</sup> The regions are defined in Table 7.
<sup>b</sup> See den Ouden, forthcoming.
<sup>c</sup> See van Hamel, Stoffers and Wong, forthcoming.
<sup>d</sup> Including intra-regional trade.
<sup>e</sup> Including de/re-forestation; disregarding de/re-forestation would change the LDCs and global CO₂ emission index to 251 and 156, respectively.
d) Balanced Growth

The scenario from a bird's-eye view

The revived and ever-stronger striving toward sustainable economic development, combined with continuous strong technological dynamics, constitutes the dominating forces of the Balanced Growth scenario. This gradually manifests itself worldwide in a new Zeitgeist, and calls for a new balance between economic perspectives. The environmental challenge will evoke a shift to the co-ordination perspective. This shift will mitigate the strong free-market emphasis of the 1980s without, however, destroying its positive impact. As a result, a new paradigm emerges which in a subtle way tries to balance the strong elements of the free-market and co-ordination perspectives. This paradigm could be identified with the equilibrium perspective.

During the next years, the weak points of the major industrial countries will be corrected from this new paradigm. The United States reduces the government deficit and improves education and infrastructure. Western Europe strengthens incentive structures and Japan opens up to the world economy. At the same time, reform processes continue or gain new strength in regions such as the Soviet Union, India and China. In all these cases, the result is a complete transition to a market economy during the second half of the 1990s. Worldwide economic growth will consequently be structurally higher than it was during the 1980s.

These positive developments on a regional level also stimulate an open and cooperative attitude on the international level. A breakthrough is achieved in the GATT talks: trade of agricultural products is extensively liberalised and all sorts of non-tariff barriers are drastically reduced. Through more competitive market structures, trade liberalisation confers a strong growth impulse on the world economy, reinforcing in turn favourable developments on a regional level.

There is more growth, primarily due to specialisation and dynamic economies of scale, but also because more competitive market structures stimulate innovation. This leads to a rapid diffusion of the rich technological potential which already exists. In Balanced Growth, the incentives to innovate do, however, remain quite strong. The fact is, the technological dynamics generated are so powerful that there is little chance of maintaining any long-lasting market positions by means of major market power. Small, technologically dynamic companies play an important catalysing role in the process.

The virtuous circle created by all these developments in Balanced Growth also has a geographical dimension. It helps to crack the strong internal, growth-impeding factors in regions such as Africa and Latin America. In addition, the virtuous circle lends powerful support to the "market economies in the making" in Central Europe and the Soviet Union. Economic development spreads across the globe and assumes what may be called a strong multipolar character. The golden age of the period 1950-1973 seems ready to repeat itself.

The co-ordination element is a factor just as important as the free-market element in Balanced Growth. This is most apparent from international treaties on security and the environment. A primary result of the Soviet Union's transition to a market economy is the possible further reduction of armament and defence spending in the world, in the order of half the magnitude of the current level (around $500 billion). This will make possible a sizeable reallocation of production factors - especially in the Soviet Union, greatly stimulating that country's economic development in the long term. Formalizing
this arrangement in an international treaty also implies a de facto development toward a global security system.

Perhaps even more spectacular is the realisation of an international treaty toward reducing greenhouse gas emissions. On the initiative of the developed countries, the world community decides to set up a CO₂ tax as a sort of insurance against the risks of greenhouse gases. The developing countries, especially countries with rich coal and oil deposits such as China and India, are, however, prepared to participate only on condition that they will be compensated for the adverse results of the tax. The developed countries agree to this to a large extent on condition that the aid is specifically used to generate sustainable development. This means the treaty assumes a strong no-regrets nature.

Important aspects of the treaty are:

- Introduction of a global CO₂ tax on coal, oil and gas to go into effect in 1998, amounting to about $190 per ton carbon (1990 prices) during the 2000-2015 period; this tax is levied at the border and counterbalanced by a reduction in other taxes.
- Aid for terminating the deforestation of tropical rain forests, especially in Brazil, and where possible – for starting reforestation; this can also help to abate erosion of agricultural land.
- Compensation to the LDCs for the adverse effects of the CO₂ tax by means of an increase in development aid, especially (as mentioned) aid directed toward sustainable economic development. For instance, this includes a transfer of know-how and technology in areas such as energy, agriculture, infrastructure and water. Furthermore, aid aimed at education and, in a number of cases – especially for African and Latin American countries – at debt relief.
- Non-co-operating countries are threatened with reduction of development aid and the introduction of trade tariffs.

The interplay of the global CO₂ tax, technological dynamics and competitive market structures provides powerful incentives to save energy, to substitute low-carbon fossil fuels and to develop and introduce sources of renewable energy. As a result, energy intensity is halved in Balanced Growth with very limited sacrifices in terms of global production, approximately 0.15-0.25 per cent annually. Actually, in the developed countries, almost complete decoupling of economic growth and energy use will have been achieved. In addition, the share of low- or zero-carbon fossil fuels in global energy use will have increased from 39 to 51 per cent. The combined impact of this co-ordinated policy is that by 2015, worldwide energy-related CO₂ emissions will have increased by about 7.5 per cent, with a (cumulative) global economic growth of 145 per cent. Total emissions, including reductions in deforestation, decrease by as much as 25 per cent compared to the 1990 level.

To summarise, in Balanced Growth the next twenty-five years can be considered a kind of transition phase between the present, in which energy use predominantly involves non-renewable fossil fuels, and some point in time during the 21st century when energy will be produced primarily from renewable energy sources. Only with the emergence of a backstop technology – elicited, for example, by the CO₂ tax – eliminating carbon dioxide from fossil fuels would it be possible once again to obliterate this scenario. Under such circumstances, the existing vast reserves of coal would again play a major role in the worldwide provision of energy.

As mentioned, within the context of the CO₂ treaty, there is also aid earmarked for tackling urgent problems in the field of agricultural production. This concerns further
intensification of the transfer of know-how and technology aimed at preventing deterioration of agricultural land, the application of sustainable irrigation techniques and aid for more intensive fertilization. As a result, in Balanced Growth, world food production doubles during the next twenty-five years, with a relatively modest real price increase for agricultural products. Furthermore, due to the multipolarity of economic development in this scenario, the “hunger in the midst of plenty” paradox gradually loses significance.

In summary, Balanced Growth is characterised by its strong and multipolar growth. In addition to the already existing centres of growth, new ones arise during the scenario period; even Africa catches up, albeit slowly. With this, Balanced Growth marks the decisive point of take-off for the LDCs. Balanced Growth also shows that rapid economic growth based on a combination of free market and co-ordination is compatible with sustainable economic development. More precisely, although the world economy in 2015 may not yet quite have reached such a state with regard to some crucial issues, especially the greenhouse effect and world food supply, it can certainly have made substantial progress in that direction. Some key results of this scenario are summarised in Table 4.

Table 4. Key results of the Balanced Growth scenario 1990-2015
d

<table>
<thead>
<tr>
<th>Average annual growth rates in %</th>
<th>NAM</th>
<th>WEU</th>
<th>JAP</th>
<th>CE/SU</th>
<th>DAEs</th>
<th>rASIA</th>
<th>ME</th>
<th>AFR</th>
<th>LAT</th>
<th>WLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population(^b)</td>
<td>0.8</td>
<td>0.3</td>
<td>0.2</td>
<td>0.5</td>
<td>1.2</td>
<td>1.5</td>
<td>2.5</td>
<td>3.1</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>GDP</td>
<td>3.1</td>
<td>3.2</td>
<td>3.1</td>
<td>2.5</td>
<td>7.0</td>
<td>6.1</td>
<td>3.2</td>
<td>4.9</td>
<td>5.6</td>
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<td>6.6</td>
<td>8.1</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Levels 2015

| Share of world production (%)   | 25  | 26  | 11  | 8    | 7    | 10   | 4  | 1   | 7   | 100 |
| Share of world trade\(^d\) (%)  | 15  | 39  | 7   | 6    | 20   | 5    | 2  | 1   | 6   | 100 |
| Labour productivity (in 1990 = 100) | 169 | 152 | 122 | 51   | 45   | 23   | 17 | 6   | 58  | 39  |
| Emissions of CO\(_2\)\(^e\)     | 79  | 87  | 89  | 74   | -----| 65   |    |     |     | 73  |

\(^a\) The regions are defined in Table 7.  
\(^b\) See den Ouden, forthcoming.  
\(^c\) See van Hamel, Stoffers and Wong, forthcoming.  
\(^d\) Including intra-regional trade.  
\(^e\) Including de/re-forestation; disregarding de/re-forestation would change the LDCs and global CO\(_2\) emission index to 171 and 106, respectively.

A few regions further considered

- The United States

In Balanced Growth, the “weak” points of the United States will be corrected during the 1990s, implying a major break with the policies of the 1980s. The increasingly visible negative consequences of 1980s’ policies are an important domestic factor in the reorientation process preceding this policy change. These include the deterioration of education and physical infrastructure, the decline of America’s inner cities and the
Savings and Loan crisis. The strong "government, get off my back" attitude diminishes as a result. The challenge of Europe '92 and the end of the Gulf war form external factors which can also contribute toward getting one's own house in order. After the policy reversal, it becomes apparent just how large the American capacity for "collective action" and adjustment still is.

In practical terms, this reorientation really means a sizeable plan for improvement, especially with regard to the quality of American education and physical infrastructure. Substantial extra amounts are allocated toward this end. At the same time, however, the American Government's budget deficit should be reduced. In addition to cut-backs in defence, a modest increase in taxes is unavoidable and accepted; this is implemented by introducing the CO2 tax.

Consequently, there is a sharp rise in national savings. A further increase is pursued by means of tax returns to promote private savings. In this scenario, however, as long as the private savings ratio has not yet recovered, the American Government creates a substantial surplus in the government budget. The drop in real capital costs which is induced as a result subsequently sets an investment boom in motion.

The Zeitgeist also leads to a renewal of the "American System of Manufacturing". In the factories, there is a shift from the exaggerated free market (individualism, temporary labour relations, Taylor model) to the co-ordination perspective (co-operation, more permanent labour relations, flatter organisations), leading to a better balance between the two.

In this way the United States' competitiveness, as well as productivity growth, greatly improves. There is a shift across the board toward knowledge and high-value-added sectors. Around 2000 this will result in a sizeable structural surplus on the current account while protectionist pressure drops significantly.

- Western Europe

Balanced Growth is distinguished by rapid internationalisation, strong technological dynamics and very competitive market structures. In Western Europe, such circumstances call for reinforcement of the relatively weak incentive structures currently in place. In northwestern (especially continental) Europe, this means cutting back on the relatively generous welfare state systems. Basic social security arrangements will be introduced with lower levels of benefits, in addition to which supplementary insurance can be decided on an industrial, company or individual basis. All sorts of paternalistic subsidies on consumption are cut. In contrast to this austerity, a number of primary tasks of the government, such as education and infrastructure, are intensified.

The Balanced Growth world also affects the character of the West European process of integration. In the Balanced Growth scenario, the process of integration is driven by market forces and policy competition. The internal market and the EMU constitute the institutional context where market forces are free to operate. This is why the transfer of national sovereignty to Brussels remains modest in this scenario. In view of the technologically dynamic nature of the scenario, such a transfer might even prove to be counter-productive. No binding rules for tax and spending policies will be imposed by the European Commission; nor will it regulate, for example, social policies of member states (van Hoek and Groot, 1991). Exceptions concern issues which create strong external effects, for example trade and the environment. For these issues, a Community-level
policy will be developed. The European Commission will also represent the Community on an international level for these policies.

The process of policy and market competition will determine the extent to which differences between member states can be maintained, for example with respect to welfare state arrangements. For countries showing strong economic performance, this will not pose any problems; countries showing poor performance, however, may be forced to adjust. For these countries, sovereignty of action is still quite extensive in principle – the capacity to act has, however, significantly decreased.

In this decentralised view of the integration process, it is also fitting that the European Free Trade Association (EFTA) countries and Central European countries become members of the European Community fairly quickly. At the same time, the perspective of rapid entry is also an important psychological factor strengthening the resolve of the Central European countries in implementing difficult parts of their transition programmes, especially the privatisation of state industries. In Balanced Growth, striving toward political unification is relegated to the background. Many countries consider it to be an unnecessary strait-jacket which is stifling the countries' individual national and cultural identities.

- Japan

During the past forty years, economic values have to a large extent been the measure of all things in Japan. In the last few years there have already been signals that this is due to change. Young, well-educated Japanese in particular no longer want to be workaholics; they wish to enjoy life, and assign a much higher value than older generations to the quality of life. This extends to housing, recreational opportunities, foreign travel, leisure and the state of the environment. They are also more outspoken and critical. Among the various indications of these changes are the public outrage expressed at a few recent political scandals and – something quite different – the drop in the savings ratio. In Balanced Growth, this trend gains further strength and gets new impetus from the global trend toward sustainable growth. More and more people feel attracted to this new set of social and cultural values. Another interpretation of these developments is that after the economic catch-up, Japan will enter a phase of socio-cultural catch-up with other developed countries.

Demographic developments leading to an enormous shortage of labour give the younger generations an especially strong position from which to win compliance with their demands (shorter working days, opportunities for working part-time). The worsening of the Japanese competitive position which results, in combination with major inefficiencies in the sheltered sectors, will subsequently force Japan to become more open in order to salvage its competitive position in the most vital sectors of the Japanese economy, those with the most productive jobs. From a political viewpoint, the attention given to "quality of life" will lead to more spending on environmental problems, public housing and infrastructure.

As a result, Japan’s exceptional economic performance, compared with other industrial countries, gradually weakens without the country degenerating into a second-rate economy. This means the process of catching-up with the United States, measured in terms of labour productivity per hour, continues.
6. Conclusions and final remarks

Many conclusions may be drawn from this study with respect to the comparative strength analysis, future trends and world scenarios. This section, however, will be limited to a few evaluating remarks and some conclusions concerning the scenarios in general. It will then focus on certain challenges of a global dimension.

The first remarks concern the methodology used in this study, especially the role of the prosperity circle. As stated in the introduction, the main purpose of LT studies is to stimulate and organise public debate on LT economic development. On the one hand, this purpose requires a theoretical framework which describes the multitude of mechanisms responsible for economic development. This framework should, of course, concur as much as possible with modern economic theory. On the other hand, in order to stimulate public debate, it should be geared to the interested non-expert's perception of his environment and also be expressed in a language he or she can understand.

In order to meet both these requirements, the authors have descended from economist heaven, spangled with systems of equations both tedious and impenetrable for the non-economist, and have attempted to translate its framework into everyday language. This has resulted in the prosperity circle which comprises, as explained in Section 2, three perspectives on economic development: equilibrium, co-ordination and free-market, bringing together the main schools of economic thinking.

Although there is no pretence whatsoever that the circle represents a conclusive theory of development, it does serve well as a tool in this scenario study. In addition to a common language, it provides the organising principles and leitmotif for the study. It is used extensively, especially in the comparative strength analysis, but it is also reflected in the world scenarios.

Those scenarios may now be taken to represent the culmination of our knowledge on LT issues. The prosperity circle, comparative strength analysis and long-term trends are combined to give four impressions of the future which attempt to identify the possible chains of events and interwoven mechanisms which lead to the divergent sketches of the world economy, each entailing its own opportunities and bottlenecks. It is hoped that these glimpses of the future will provide a starting point for the debate on LT issues.

Generally speaking, it is felt that the scenarios presented are plausible – for example, with regard to the economic growth rates, which now range between 2.2 and 3.6 per cent annually, and between 0.7 and 2.1 per cent on a per capita basis. This range, although substantial, easily falls within the scope of all conceivable per capita growth rates which, according to the authors' superficial assessment, fluctuates between 0 and 3 per cent annually. Plausibility makes the scenarios equivalent, implying that no scenario can be discarded beforehand. It does not, however, exclude surprising developments. Indeed, surprises are themselves plausible; they are to be expected, as history within the last decade has once again so clearly proved.

Finally, although scenarios are uncertain, policy-oriented conclusions may be drawn from them, which will now be addressed.

The first and foremost conclusion which can be drawn from Balanced Growth, and indeed from the entire study, is that balanced economic growth which is ecologically sustainable and embraces the entire world is still a quite realistic possibility. Although no conclusive evidence can be offered for this conclusion, the authors have tried to substantiate it with research concerning global environmental problems, world food supply and
the depletion of non-renewable materials, for example. Balanced Growth is basically optimistic – a "can do" scenario. The conditions which must be met can be met. This is not to say, however, that this bright scenario will easily materialise. Regionally as well as globally, formidable changes are required and many factors may inhibit them from emerging. Some of these obstructing factors, especially on the global level, will be further discussed in the final part of this section.

Finally, it is noted that even in this optimistic scenario with rapid economic growth in, e.g., the Soviet Union and Africa, the income gap between these countries and the developed countries will only narrow at a very slow rate (see also Table 4).

The Global Crisis scenario is the counterpoint of Balanced Growth. It explores the risks and dangers of unintentional neglect of and late response to regional and global challenges. As a result of this neglect and late response, the world may end up in widespread distress, a dilemma which can only be corrected at high cost. The policy message conveyed by this scenario is clear; dismissing it as unduly gloomy and pessimistic is, in the authors' view, absurd, tantamount to a complete denial of twentieth century history.

Even more than Balanced Growth and Global Crisis, the Global Shift and European Renaissance scenarios have distinctly regional focuses. They explore particularly divergent developments with respect to the United States and Western Europe. They drive home the message of just how vulnerable the largest economies in the world are, as well as the profound "radiating" effects their economic performance may have on other regions. This view of their vulnerability is based on the comparative strength analysis in which major weaknesses in these regions were identified. For the United States, this requires improving the driving forces of the co-ordination and equilibrium perspectives, while Western Europe should reform towards the driving forces of the free-market perspective. Successful adjustment of their respective weaknesses is implemented in the Balanced Growth scenario for both regions. Failure to do so is explored for Western Europe in Global Shift and for the United States in European Renaissance. In these cases it is anticipated that both regions will fall behind.

Although the weaknesses of the American and European economies are unambiguous, the authors are not completely deterministic with regard to the solution of these problems. The LT study leaves room for a scenario in which the United States' strong points could initially break through the weaknesses which have the potential of dragging down economic growth. In this case – the Global Shift scenario for the United States – the improvement of weak points such as education and infrastructure follows in the wake of recovery, rather than preceding it. Conversely for Western Europe, in the European Renaissance scenario price incentives in product and labour markets are mainly strengthened through the implementation of Europe 1992. In welfare state arrangements, however, changes in price incentive structures remain limited. Instead, non-price incentives are strengthened. This boils down to a reform within the co-ordination perspective.

For the United States and Western Europe, both strategies involve taking serious risks, presenting policy-makers with stark choices. A strategy as envisioned in Balanced Growth, which implies a strong convergence of the American and European economic systems, runs in many ways contrary to the cultures and traditions of both and will encounter a great deal of opposition as a result. The alternative strategy, Global Shift for the United States and European Renaissance for Europe, fits in nicely with their cultural traditions, but does pose the risk that nothing actually changes, ultimately causing the weak points to become even more predominant.
At the same time, it is clear that "doing nothing" because of adaptation impotence will be economically "punished" more promptly than in the past within the global village.

After considering these general conclusions drawn from the scenarios, the next step is to focus on the truly global challenges faced by the world community. Three problems stand out, and indeed figure prominently in the scenarios:

- global environmental problems;
- the threat of some regions further delinking, especially sub-Saharan Africa;
- threats to the world trade system.

Widely divergent developments are depicted for the three (referring only to the Global Crisis and Balanced Growth scenarios).

These global challenges will not be viewed as surprises. For some time now there has been widespread consensus about them, as well as about the indispensability of international co-operation and co-ordination in order to make any progress towards solving or relieving them. For trade and environmental issues this is self-evident. It also applies, however, to Africa, a continent which – even if reforms were successfully implemented – will for years to come still be far too weak to generate sustained economic development by itself.

Yet for the world community, the very nature of the African challenge is different than that of trade and environmental challenges. Failure of economic development in Africa and a few other LDC regions will not immediately hamper the world economy. First and foremost, the challenge of delinking involves taking care of the serious backlashes within these regions themselves; in combination with the current population explosion, this could very well lead to human suffering on an unprecedented scale. In the long run, however, the very presence of a huge "under"-class inside the global village will probably result in major spillovers affecting the development of the developed countries. This includes forms of political unrest, in addition to the strain caused by massive migratory movements and global environmental problems which are getting out of control (de Swaan, 1989, Chapter 7).

The LT study also illustrates, however, that international co-operation is no simple cure-all which transpires as a matter of course. This is a point that should be emphasized. Many obstacles inhibit international co-operation and co-ordination (Cooper, 1985). Historically, lack of trust is one of the most important factors. However, even when trust does exist, other factors may impede international co-operation. Nations may, for example, differ over the objectives to be pursued; they may have different views about the causes of problems, about the impact of policies aimed at tackling them, or about the distribution of costs and benefits of co-ordinated policies. Even if all these problems could be overcome and agreement reached, there would still be more to solve. In many cases nations do not comply with agreements; the violation of GATT rules is a notorious example. Similarly, in the Balanced Growth scenario, certain governments could decide to subsidise the construction of energy-processing industries to divert CO₂ tax revenues from other countries (Geurts and Timmer, 1991).

These problems make clear just how difficult the global challenges really are. It is the authors' view that, in trying to cope with them, OECD Member countries should bear a special responsibility. Moral principles as well as self-interest may be advanced as motives supporting this view. In favour of the argument, suffice it to say here that economically as well as politically, these countries are the most powerful in the world. In
addition, they have the greatest capacity, scientifically and technically, to appraise existing future trends and discern emerging bottlenecks and opportunities. Because of their power and their knowledge, they have the greatest potential by far to take the initiative in coping with these challenges. Their resolve may be decisive in breaking deadlocks which, as indicated, will inevitably arise. If successful, there is no reason whatsoever to despair over the future of the world economy, as is illustrated by the Balanced Growth scenario.

Whether the OECD Member countries will accept this responsibility and act accordingly is another question, however. This requires more than sound economic analysis and policies, no matter how indispensable they may be: it requires what this paper has termed social innovation. No simple rules can be offered as to how to bring this about. Indeed, the history of the twentieth century is full of examples where it failed to appear, or where it only emerged after a severe crisis, often with grave human misery as a result. There are also, however, examples of success. If those experiences are any indication, two preconditions stand out: an open democratic society and far-sighted leadership, uniting fearlessness, humanity and a vision of the future.


<table>
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<th>CE/SU</th>
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<td>5.3</td>
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<td>3.1</td>
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*a* The regions are defined in Table 7.

**Source:** OECD, World Bank, United Nations, IMF.
Table 6. Regional¹ shares of world population, production, trade, energy consumption and CO₂ emissions, and levels of labour productivity and income per capita (PPP basis) in 1990

<table>
<thead>
<tr>
<th>Share of world population (%)</th>
<th>NAM</th>
<th>WEU</th>
<th>JAP</th>
<th>CE/SU</th>
<th>DAEs</th>
<th>rASIA</th>
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<td>6</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>46</td>
<td>5</td>
<td>9</td>
<td>9</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Share of world production (%)</td>
<td>29</td>
<td>29</td>
<td>13</td>
<td>11</td>
<td>3</td>
<td>6</td>
<td>4</td>
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<td>Share of world trade (%)</td>
<td>18</td>
<td>44</td>
<td>9</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>100</td>
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<tr>
<td>Share of world energy consumption (%)</td>
<td>28</td>
<td>15</td>
<td>5</td>
<td>21</td>
<td>32</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
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<tr>
<td>Share of CO₂ emissions (%)³</td>
<td>22</td>
<td>12</td>
<td>3</td>
<td>19</td>
<td>44</td>
<td></td>
<td>100</td>
<td></td>
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<tr>
<td>GDP per man-hour (index US 1990 = 100)</td>
<td>97</td>
<td>77</td>
<td>55</td>
<td>30</td>
<td>13</td>
<td>8</td>
<td>17</td>
<td>4</td>
<td>≈25</td>
<td>23</td>
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<tr>
<td>GDP per capita (index US 1990 = 100)</td>
<td>97</td>
<td>70</td>
<td>76</td>
<td>30</td>
<td>16</td>
<td>9</td>
<td>≈20</td>
<td>≈5</td>
<td>≈20</td>
<td>24</td>
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</tbody>
</table>

¹ The regions are defined in Table 7.
² Including deforestation.
Source: OECD, World Bank, United Nations, International Monetary Fund, British Petroleum, Intergovernmental Panel on Climate Change, A. Maddison, authors’ estimates.

Table 7. Definition of regions

<table>
<thead>
<tr>
<th>Abbreviation/Region</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAM – North America</td>
<td>United States, Canada.</td>
</tr>
<tr>
<td>WEU – Western Europe</td>
<td>Including Yugoslavia, Israel and Turkey.</td>
</tr>
<tr>
<td>JAP – Japan</td>
<td>Albania, Bulgaria, Czechoslovakia, Hungary, Poland and Romania.</td>
</tr>
<tr>
<td>CE – Central Europe</td>
<td>Hong Kong, Singapore, Taiwan, South Korea, Malaysia, Philippines, Indonesia and Thailand.</td>
</tr>
<tr>
<td>SU – Soviet Union</td>
<td>Also includes Melanesia, Micronesia and Polynesia.</td>
</tr>
<tr>
<td>DAEs – Dynamic Asian Economies</td>
<td>Northern Africa, Bahrain, Cyprus, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arabic Republic, United Arab Emirates, Yemen.</td>
</tr>
<tr>
<td>rASIA – Rest of Asia</td>
<td>Eastern, Middle and Southern Africa.</td>
</tr>
<tr>
<td>ME – Middle East</td>
<td>South and Central America and the Caribbean.</td>
</tr>
<tr>
<td>AFR – Sub-Saharan Africa</td>
<td></td>
</tr>
<tr>
<td>LAT – Latin America</td>
<td></td>
</tr>
<tr>
<td>WLD – World</td>
<td></td>
</tr>
</tbody>
</table>

¹ Also includes Australia, New Zealand and South Africa.
² From 1990 onwards, the former German Democratic Republic is part of Western Europe.
³ Excluding Albania.
⁴ Excluding Israel, Turkey, the DAEs and the Middle East.
⁵ Excluding South Africa.
Figure 2. Results of world scenarios
GDP, primary energy and CO₂ emissions
(index 1990 = 100)

Balanced Growth
Global Shift
European Renaissance
Global Crisis

NAM  WEU  JAP  CE+SU  LDC  Effect of re- & deforestation on CO₂ emissions
Notes

1. The study is carried out in co-operation with several Dutch research institutions: the National Institute for Public Health and Environmental Protection (RIVM), the Netherlands Energy Research Foundation (ECN), the National Institute for Physical Planning (RPD), the National Institute for Transport Planning (DVK), and the Central Bureau of Statistics (CBS). Contributions have also come from the Port of Rotterdam, Schiphol Airport, the NEA and various consultants. Although most of these research institutions are government or government-sponsored agencies, the study does not reflect the official policy views of the Dutch Government. The international part of the study will be officially published at the end of 1991. The LT scenarios for the Dutch economy will be published in January/February 1992.

2. For a discussion of this phenomenon at the national level, especially with regard to the decline of the United Kingdom economy, see for example Landes, 1969, Chapter 5; or Elbaum and Lazonick, 1986, pp. 1-17. For descriptions of the problem at the business level, see for example Miller, 1990 and Pascale, 1991. See also Jones, 1987, Chapter 13.

3. For a broad and detailed analysis, see Dertouzos, Lester and Solow, 1990.

4. The deeper explanation for this Eurosclerosis should be sought in the social and political climate which developed during the 1960s. Economic growth was increasingly taken for granted; economic success reinforced the belief in the navigability of the economy. Against this background, attention was focused on other social problems. The stress was increasingly placed on the actual distribution of wealth rather than on its creation. This led to the enormous growth of the welfare state. The way of thinking inherited from the sixties and the vested interests it created have influenced the political and psychological climate much longer and more strongly in Western Europe than in Japan or the United States.

5. According to the report, for three out of every four emerging technologies, Western Europe lags behind Japan and the United States in information science, advanced materials and biotechnology. Computer-integrated manufacturing is the exception. Another indication is provided by UNIDO, 1990, Table II, page 15. Here, based on Japanese research, the relative positions in twelve industrial sectors are determined for Western Europe and Japan; Western Europe’s position is considered “somewhat inferior” to “inferior” in eight of the twelve.

6. UNIDO, 1990 and various World Development Reports by the World Bank were among the sources used for this section.

7. This position is based on Fishlow et al., 1990; World Bank, 1989; various country surveys from The Economist; and UNIDO, 1990.

8. This criticism concerns not so much government intervention in itself as the quality thereof.

9. There were, to be sure, other contributing factors brought on by the debt crisis of the 1980s, particularly the sharp increase in real interest rates.

10. The analysis of the Soviet Union and the world scenarios of Section 5 have not yet been revised for the impact of the failed coup attempt of August 1991.

11. About 65 per cent of the population growth from now until 2015 will take place in these areas.
12. "Old-age dependency ratio" is defined as the number of people older than 65 in relation to the number of people between the ages of 15 and 65.

13. For the CPB LT study, extensive use was made of various issues of State of the World, World Watch Institute; World Resources, World Resources Institute; and State of the Environment, OECD.


15. World Resources 1990/91, p. 29, arrives at a similar conclusion.

16. This section is a concise summary of Stolwijk, 1991.

17. In preparing this section, use was made of the following publications: Kusters and Minne, forthcoming; Draft OECD Report Technology and Economic Growth, Paris (1990), Chapter 9; United Nations, 1988.

18. For more on this, see Landes, 1969, Chapter 1; and Cipolla, 1976, pp. 297-300. Living, housing, working and thinking patterns are also transformed. As a result, since 1750 the "appearance" of Western society has changed faster than it did during the entire previous eighteen centuries.

19. The explosive growth during the second half of the 1980s (more than 20 per cent annually) also reflects, however, large discrepancies in the balance-of-payments positions of the major areas.

20. Anne Krueger (1987) describes this mechanism as follows: "Because capital inflows have diminished while debt service obligations have increased, domestic savings available to finance new investments are low despite high rates of return on activities newly profitable after policy reform. Simultaneously, because of high debt service ratios and slow growth, foreign financing for these newly profitable activities is not forthcoming. In these circumstances, exports cannot grow for lack of capacity expansion, debt service ratios will remain high, and countries may therefore remain uncreditworthy".

21. This "hard landing" scenario has already been described many times; the first reference is in Marris, 1985.


24. For a detailed discussion of these results, see van Hamel, Stoffers and Wong, forthcoming; with respect to CO₂ emissions this result concurs more or less with the accelerated policies/higher growth scenario of the IPCC/Response Strategies Working Group; see Draft Report of the Expert Group on Emission Scenarios, February 1990. For references, see Note 13.
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Long-term Prospects for the US Economy

by

Maurice Ernst and Jimmy W. Wheeler
Hudson Institute, United States

1. Introduction

A long-term assessment of the US economy can provide only scenarios, not forecasts. Because major changes can be expected in the basic social, technological and political environment, most of the recognised parameters of economic activity can also be expected to change and new, heretofore poorly recognised influences may emerge. Under such fluid circumstances, formal economic models are of limited use. Instead, scenario analysis is used as a device to help identify the main forces at work, to assess their impact and interactions, and to gain insights into the resulting policy challenges for the United States and the other OECD Member countries.

The scenario analysis provides quantitative estimates for the 1990s. The central, "Surprise-Free" scenario represents the impact of interacting forces and trends, and plausible private and public policy adjustments to these forces and trends. It represents a process of generally gradual change and adjustment. Results are presented in the form of a plausible range rather than as a single series. Alternative optimistic and pessimistic scenarios are obtained by postulating major changes in conditions and policies that, in combination, could yield very different results. Beyond the year 2000, forces are identified that could significantly affect economic growth, structural change and international economic relations, but no quantitative estimates are given.

This paper is organised as follows:
- a brief discussion of the global political, security, technological and social environment of the next twenty years and of the trends in economic institutions;
- a brief assessment of US economic performance over the past decade;
- an analysis of the principal forces likely to affect US economic performance in the 1990s and beyond, and an assessment of the plausible impact of these forces and their interactions to form a Surprise-Free scenario;
- the construction of "Virtuous Circle" and "Slow Growth" scenarios;
- an assessment of the implications of these alternative US economic futures for the international economy and for economic relations with other OECD Member countries.
2. The global context

Fundamental change in the global security environment

The unexpected collapse of the Soviet empire – and the largely unprepared rush towards democratic and market-oriented policies and institutions within much of that empire – will force a fundamental reassessment of the institutions and arrangements developed during the cold war. The economic implications of these changes are complex and poorly understood. On the one hand, the end of the cold war, and especially the virtual disappearance of the threat of a Soviet blitzkrieg into Western Europe, almost guarantees that US and NATO military expenditures will decline substantially for at least several years. On the other hand, the demand of the Eastern European countries, the eastern part of Germany, and the USSR for Western economic aid and private capital is likely to be very large, and the drive of these countries to become part of Western economic institutions, including the European Community, will create new strains and problems. At the same time, the highly uncertain process and outcome of political and economic transformation in the USSR itself has major implications for political stability and the balance of power in Eastern Europe and other areas close to the USSR, as well as for Soviet-Western relations. In the Third World, the collapse of the Soviet military threat and the discrediting of Communist doctrine and related economic policies and institutions are encouraging political evolution in a more democratic direction and greater reliance on market forces. However, the end of “bipolarism” is also giving regional powers more scope to extend their influence and could lead to an intensification of regional arms races, which in turn will pose major challenges for US policy and for international co-operation, notably in arms control.

The potential impact of these uncertain trends on the global economy appears to be much greater in the very long term (twenty to thirty years) than in the current decade. The direct influence of the Soviet and East European economies on the global economy has been very small for forty years, and is still small. As these economies become successfully integrated into the global economy they will play a much larger part, but the process will take many years, especially in the case of the Soviet Union. Only under an optimistic political scenario – and then probably not until the late 1990s at the earliest – is the integration of the former “Eastern bloc” countries likely to force substantial changes in the growth and structure of Western economies and institutions.

The spread of “postindustrial” values and preferences

Economic progress itself has created new values and preferences. As societies became more affluent and older, they grew more risk-averse and more concerned about “quality of life” issues, such as health, safety, the environment and equity, which in turn resulted in policies that slowed economic growth as conventionally measured. These basic social trends are likely to continue into the foreseeable future, even though during the past decade there has been an increased awareness of the costs and rigidities often imposed by social and environmental programmes and legislation, and sometimes a greater willingness to weigh costs and benefits. The spread of postindustrial values interacts in complex ways with the concurrent spread of economic conservatism and market orientation worldwide. Experiences of the 1970s and 1980s – in developing countries, in Eastern Europe and the USSR, in China, and indeed even among the OECD
Member countries – provide powerful lessons about the potential gains from capitalist approaches. Only reliance on markets seems to offer the flexibility, innovation and dynamism required to deal effectively with the vast changes sweeping the globe. On balance, the lessons learned will tend to contain adoption of extreme anti-progress policies to deal with major social and environmental issues in most countries.

Dealing with such issues as global warming, acid rain, the AIDS epidemic, health care and insurance, and product safety and liability poses major challenges not only for domestic policy in each country, but also for international relations. While the European Community will be moving toward common policies and standards in many of these areas, the process will be highly contentious. The United States will increasingly be assessing the impact of its unique political and legal processes on its economic competitiveness. Some of these issues, moreover, have a potentially strong impact on international trade and the world economy, and therefore are most appropriately dealt with through collective action.

The economic impacts of these trends will be highly diverse. On average, the growing reliance on markets worldwide should stimulate global economic progress and social well-being. However, the main beneficiaries will be those who find effective market-based approaches to dealing with a growing social and environmental agenda.

The new technological revolution

Technological change is accelerating and becoming more global in scope. The nature of the new technological revolution is already visible, but only some of its impacts are known; others are still speculative or controversial. For example, whereas new information technologies will facilitate the development of small, decentralised economic units, their efficient production may require economic concentration in order to take advantage of economies of scale.

Computing, telecommunications, the biological sciences, new materials and other technological activities are producing breakthroughs that will transform major industries, alter trade patterns and shift the location of production. Inexpensive information storage and processing permit the development of cheap and reliable robots, communications, controls and sensors that in turn permit the automation of manufacturing, engineering, science, medicine and even education. Development of fibre-optic networks will accelerate and spread access to these technologies. In some industries, technology may reduce labour costs in advanced countries to the point where low-wage underdeveloped countries lose their former competitive edge. In other industries, the new technology may enable developing countries to "leap-frog" stages of technological development by reducing the need for skilled labour that is certain to be in short supply. In any event, the new technologies will spur the productivity of labour and capital, sometimes in unexpected ways.

Advances in biotechnology are potentially revolutionary. Biological advances are beginning to offer higher crop and livestock yields and promise major improvements in food processing and storage (Avery, 1991, Chapter 2). In a world market already glutted with subsidised agricultural products, a potential for increasing production that some believe exceeds that of the "green revolution" poses obvious challenges for national policies and international co-operation. In other areas of biological advance, the potential for enhanced human health and longevity is just beginning to be tapped. In an environ-
ment of possible labour shortages in the industrial countries, considerable economic gains could result in just a few years from extending the economically productive years of an already lengthened life span. At the same time, the growing expectation of a longer, productive life will tend to strengthen the escalating trend in health care costs, which has become a serious economic burden (notably in the United States).

Materials technologies are among the most dramatic and least understood of the potentially revolutionary new technologies. Major potential exists for advances in hardness, strength, temperature tolerance, and adaptability to specific applications. These trends will tend to reduce further the share of raw materials in manufacturing and construction.

The impacts of this continuing wave of innovation on future progress are highly controversial. It will intensify competition and rivalry among firms and countries. It will spur productivity growth and accelerate pressures on mature industries. Thus, high technology is almost certain to be the frontier of friction in international trade. Most governments view technology as a critical driver of economic progress and consequently treat the promotion of technological advance as a high priority in national policy. Without consistent international ground rules, such national policies necessarily come into conflict. The current negotiations over intellectual property rights, government procurement and trade-related investment measures do not begin to deal adequately with the technology challenge.

The changing nature of global economic competition

It has become commonplace to observe the growing economic interdependence among nations. Trade as a share of production is at an historic peak; services are entering international commerce to an increasing extent; financial markets have become global; direct investments are creating truly global products; and advanced technology has become an accessible global commodity. Regional trends, moreover, point toward even more global integration, as the European Community moves to 1992 and beyond, North America moves toward a free trade area and perhaps eventually a common market, and the delayed but now intense restructuring of the Japanese economy stimulates trade within the Asia-Pacific region and outside as well.

These trends will intensify competitive pressures in virtually all markets, force firms to adjust, and intensify pressures on governments to block or at least ease these pressures. Indeed, greater international economic interdependence seems to be creating growing frictions over the management of trade issues, high technology competition and even military burden-sharing (as shown during and since the Gulf war). In the United States, there is strong concern that American firms are not competing on a level playing field, and that this competitive disadvantage is damaging not only current sales but – more importantly – future industrial development. At the same time, many firms are dealing with the new challenges not only by undertaking major managerial improvements, but also by creating co-operative networks with foreign firms, so that all sides can take better advantage of technological, scale and marketing opportunities.

The governments of the OECD Member countries thus face extraordinarily difficult challenges over the next decade and beyond. Individually, they will have to manage not only traditional demands for protection, but also the potentially protectionist and self-defeating aspects of industrial and technology policies. The latter policies will be the most difficult to manage because so little is known about their impact on the economy,
future growth, and foreign trade. In many cases, particular industries and technologies are supported because of presumed positive externalities or assumed "strategic" necessity. These assumptions may indeed prove well based, but the uncertainties allow for a wide difference of opinion as to what policies should be adopted. Certainly the evidence for strong positive national benefits from industrial targeting is far from persuasive (Grossman, 1990, pp. 87-125). Moreover, policy approach differences become even more difficult to reconcile on an international scale. In particular, GATT – as presently constituted – is clearly not capable of dealing with industrial and technology policy issues, except in marginal ways.

3. US economic performance: positive and negative features

Trends in macroeconomic performance

In the United States as elsewhere, any attempt to distinguish economic trends from cycles contains a large element of judgement and arbitrariness. For example, the 1980s show an annual growth rate of 3 per cent for GNP – close to the post-World War II average – if the end-year is 1989, but a rate of only 2.7 per cent if 1990, a recession-affected year, is included. Many studies produced a few years ago contrasted the relatively rapid economic growth of the period ending in 1973 with the much slower growth in the years after 1973 and ending in the mid-1980s. However, 1973 was an inflationary boom year, while by the mid-1980s the US economy was only part way through the process of shedding the distortions that developed during the inflation of the 1970s, and of reaping the benefits of disinflationary policies introduced during 1979-81. Some economists even fail to discern a clear downward trend in GNP growth over the past forty years, preferring to see fluctuations around an annual rate of about 3 per cent.

For simplicity and convenience, and because the first years of the past four decades were not at drastically different points of the business cycle (1960 and 1990 were years of slow growth and 1970 and 1980 of small decline), the data in Table 1 are presented as average annual growth rates for each of the past three decades. These data yield the following judgements:

- Economic growth was markedly slower in the 1970s and 1980s (2.7-2.8 per cent) than in the 1960s (3.8 per cent).
- Growth of GNP per capita also declined, although less than for total GNP.
- Growth of GNP per person employed fell by three-quarters in the 1970s, but showed some recovery while remaining low (below 1 per cent annually) in the 1980s.
- Growth of output per hour in the non-farm business sector fell by 60 per cent in the 1970s and showed another decline in the 1980s as a whole.
- Trends in manufacturing differed from other economic sectors, as the growth of output, after declining somewhat in the 1970s, largely recovered (to a rate of 4.6 per cent) in the 1980s and, with employment and man-hours declining, the growth of productivity reached record rates.
- In the service industries, trade and construction, however, labour productivity stagnated or declined while employment continued to grow rapidly.
- These production and labour productivity results were achieved with a capital stock that grew at a nearly constant rate in gross terms, but at a steadily declining
rate in net terms, because of an increasing share of machinery and equipment – which depreciates rapidly – in total capital investment. The overall share of gross investment in GNP showed no trend.

Table 1. **US economic trends, 1960-1990**

<table>
<thead>
<tr>
<th></th>
<th>1961-70</th>
<th>1971-80</th>
<th>1981-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNP</td>
<td>3.8</td>
<td>2.75</td>
<td>2.7</td>
</tr>
<tr>
<td>Non-farm business</td>
<td>4.0</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.1</td>
<td>2.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Other non-farm business</td>
<td>3.9</td>
<td>3.0</td>
<td>2.75</td>
</tr>
<tr>
<td>Manpower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>1.25</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Employment</td>
<td>1.8</td>
<td>2.25</td>
<td>1.7</td>
</tr>
<tr>
<td>Hours worked, non-farm</td>
<td>1.4</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Hours worked, manufacturing</td>
<td>1.4</td>
<td>0.4</td>
<td>-0.3</td>
</tr>
<tr>
<td>Hours worked, other non-farm</td>
<td>1.4</td>
<td>3.1</td>
<td>2.7</td>
</tr>
<tr>
<td>Labour productivity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per capita</td>
<td>2.5</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Per worker</td>
<td>2.0</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Per hour, non-farm business</td>
<td>2.9</td>
<td>1.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Per hour, manufacturing</td>
<td>2.6</td>
<td>2.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Per hour, other non-farm</td>
<td>2.5</td>
<td>-0.4</td>
<td>-0.2</td>
</tr>
<tr>
<td>Capital stock</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total gross</td>
<td>3.5</td>
<td>3.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Total net</td>
<td>3.9</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Government gross</td>
<td>3.4</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Government net</td>
<td>3.6</td>
<td>1.7</td>
<td>1.8</td>
</tr>
</tbody>
</table>


US macroeconomic performance during the past two decades was sufficient to maintain a clear and fairly constant lead of some 30 per cent over Western European countries in per capita GNP and productivity, measured in terms of purchasing power equivalents, but not enough to prevent a continuing although slowing catching-up process on the part of Japan (Table 2). The United States leads Western Europe and Japan by some 40 per cent in per capita consumption, but is close to Western Europe and has fallen far behind Japan in per capita investment.

In trying to interpret these trends, it is important to bear in mind that some serious problems of economic measurement exist, not for lack of competent statistical work, but rather because of inherent difficulties. It is quite likely, for example, that measures of output (and therefore of productivity) in services fail to capture many improvements in quality and convenience. A major measurement problem results from the increased unbundling of business services that were formerly treated as part of value added in manufacturing, because the output of such services is difficult to measure independently.
Table 2.  Gross domestic product per capita in international dollars\(^a\)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>56</td>
<td>61</td>
<td>66</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Germany</td>
<td>68</td>
<td>71</td>
<td>75</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>France</td>
<td>66</td>
<td>72</td>
<td>74</td>
<td>71</td>
<td>70</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65</td>
<td>68</td>
<td>66</td>
<td>66</td>
<td>69</td>
</tr>
<tr>
<td>Sweden</td>
<td>77</td>
<td>82</td>
<td>77</td>
<td>72</td>
<td>75</td>
</tr>
<tr>
<td>EC</td>
<td>61</td>
<td>65</td>
<td>66</td>
<td>64</td>
<td>65</td>
</tr>
<tr>
<td>All OECD</td>
<td>70</td>
<td>73</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
</tbody>
</table>

\(a\) Based on OECD calculations of GDP valued in dollars of constant 1985 purchasing power. 
Sources: OECD National Accounts 1966-1988 and OECD Main Economic Indicators.

Output of some (e.g. government) services, moreover, is measured by labour inputs in the United States (thereby assuming no change in labour productivity), whereas at least some West European countries make fairly arbitrary allowances for productivity growth. As employment in services continues to rise as a share of the total, any downward bias in the measure of services output has an increasing impact on the overall measure of GNP.

On the other hand, US measurement methods for manufacturing output appear to be biasing growth upwards in comparison with earlier periods and other countries. The use of a hedonic index to calculate a price deflator for sales of, and investment in, computers and related equipment yields annual price declines in excess of 15 per cent in the 1980s, when other prices were generally rising. Although this methodology may indeed make realistic adjustments for the impact of rapid technological change in this industry, it is not used in other industries or in other countries (Gordon and Bailey, 1989). The result is that computer output accounts for some 30 per cent of the growth in manufacturing output in the 1980s (but for very little in earlier years).

**Evolution of macroeconomic imbalances**

Much debate concerning US macroeconomic policy in the 1980s has centred on the impact and causes of the sustained dual deficits in international current account transactions and in the federal budget. Although there are a variety of direct and indirect linkages among the factors causing both deficits, the two have evolved in different ways.

Net imports of goods and services have been broadly correlated with the real dollar exchange rate (with a substantial lag): the deficit developed and grew rapidly following the massive appreciation of the dollar during 1980-83 (to a peak of 2.5 per cent of GNP in 1987), then declined steadily (to 0.7 per cent of GNP in 1990) as the dollar fell to more realistic levels (Table 3). Whereas during 1984-88 the net inflow of foreign capital to finance net imports was equivalent to over 10 per cent of domestic investment, it was only 5 per cent of investment in 1990. Apart from the depreciation of the dollar, factors underlying this improvement in US international transactions include more rapid economic growth among the country’s main trade partners, major efforts by US manufacturers to cut costs so as to enhance their competitiveness, and a stronger response from US exporters to new market opportunities. Although foreign capital inflow into the United States is by no means insignificant, it is no longer a major factor sustaining US economic growth.
<table>
<thead>
<tr>
<th>Year</th>
<th>Net exports of goods and services*</th>
<th>Real exchange rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Net exports of goods and services*</td>
<td>(March 1973 = 100)</td>
</tr>
<tr>
<td>1973</td>
<td>16.8</td>
<td>1.2</td>
</tr>
<tr>
<td>1974</td>
<td>16.3</td>
<td>1.1</td>
</tr>
<tr>
<td>1975</td>
<td>31.1</td>
<td>1.9</td>
</tr>
<tr>
<td>1976</td>
<td>18.8</td>
<td>1.0</td>
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<tr>
<td>1977</td>
<td>4.1</td>
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<td>1978</td>
<td>4.1</td>
<td>0.2</td>
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<tr>
<td>1979</td>
<td>18.8</td>
<td>0.7</td>
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<tr>
<td>1980</td>
<td>32.1</td>
<td>1.2</td>
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<td>1981</td>
<td>33.9</td>
<td>1.1</td>
</tr>
<tr>
<td>1982</td>
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<tr>
<td>1983</td>
<td>-6.1</td>
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</tr>
<tr>
<td>1984</td>
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<td>1985</td>
<td>-78.0</td>
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<td>1986</td>
<td>-97.4</td>
<td>-2.3</td>
</tr>
<tr>
<td>1987</td>
<td>-114.7</td>
<td>-2.5</td>
</tr>
<tr>
<td>1988</td>
<td>-74.1</td>
<td>-1.5</td>
</tr>
<tr>
<td>1989</td>
<td>-46.1</td>
<td>-0.9</td>
</tr>
<tr>
<td>1990</td>
<td>-38.0</td>
<td>-0.7</td>
</tr>
</tbody>
</table>

*a* National accounts definition.


The federal fiscal deficit, however, has proved highly resistant to efforts to reduce it. It rose sharply from a range of 3-4 per cent of GNP in the mid- and late 1970s and early 1980s to 5-6 per cent of GNP in 1983-86. The deficit has since levelled off in a range of about 3 to 4 per cent of GNP in spite of declining defence expenditures and a growing surplus on “off-budget”, mainly social security, accounts. Because of the impact of the economic recession, the fiscal deficit will certainly increase in 1991.

Large federal budget deficits have been sustained at a time when personal savings rates were falling (from a normal 6 to 7 per cent of disposable income to 4 to 5 per cent). In spite of these trends, the United States was able to finance gross investments averaging from 15 to 16 per cent of GNP during 1984-89, or about the long-term average rate. This was achieved mainly with depreciation allowances that were growing steadily and, until recent years, with foreign capital.

**The changing role of US foreign trade**

The US economy is being increasingly integrated into the world economy. Imports and exports of goods and services are 12 to 13 per cent of GNP, double the share in 1970. Although large exchange rate fluctuations obscured the long-term trend in the 1980s, this trend is clearly upward. Imports have penetrated nearly all domestic markets, while the number and diversity of American firms involved in exports has rapidly multiplied since the fall of the dollar opened up foreign market opportunities. Foreign trade is not yet as normal an activity in the United States as in Western Europe, but is rapidly becoming so. Non-price factors affecting competitiveness, such as more rapid improvements in foreign
manufacturing, product technology and quality control, are apparently responsible for at least part of the remaining US trade deficit. For example, Japanese technological and managerial advances appear to underlie the continuing deficits in automobiles and some high technology products, especially consumer electronics and electronic components. In contrast, the United States has regained a surplus in high technology trade with Western Europe (Table 4).

<table>
<thead>
<tr>
<th>Table 4. US foreign trade balance in high technology manufactures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billion dollars</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>World</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>Asian NIEs</td>
</tr>
<tr>
<td>European Community</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>Other countries</td>
</tr>
</tbody>
</table>


Over the past thirty years, the United States has held its own in terms of its share of OECD exports (about 25 per cent), valued at constant exchange rates (Table 5). As long as the dollar remains at reasonable levels, this share should at least be maintained, and may well increase.

<table>
<thead>
<tr>
<th>Table 5. US exports and imports of goods and services</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a percentage of the OECD total*</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1960</td>
</tr>
<tr>
<td>1970</td>
</tr>
<tr>
<td>1975</td>
</tr>
<tr>
<td>1980</td>
</tr>
<tr>
<td>1985</td>
</tr>
<tr>
<td>1989</td>
</tr>
</tbody>
</table>

a) At current prices and 1985 exchange rates.

Alternative perspectives on US economic health and competitiveness

Not surprisingly, evaluations of US economic performance in the 1980s differ widely, depending on political ideology and policy objectives. Evaluations also vary over time, not only in response to new information but also because of waves of optimism or
pessimism that travel through the country via the media. The differing views are supported both by the selection of macroeconomic data and by giving emphasis to different causal factors.

The pessimists point to the following:

- among macroeconomic factors, the persistence of fiscal deficits, low personal savings rates and a declining rate of net investment, and the consequent limitations on needed social, R&D and infrastructure expenditures;
- the stagnation of real wages over nearly two decades;
- the evidence of low and stagnant educational achievement in the country as a whole and of social deterioration in the inner cities;
- the growing lags in the building of physical infrastructure, such as roads and electric power-generating facilities, which either have already or probably will in the future constrain economic growth;
- serious deficiencies in the management of US firms, resulting in poor integration and utilisation of new technologies, an overly hierarchical approach to personnel management, arm’s-length relationships with suppliers that prevent mutually beneficial co-operation, and insufficient use of opportunities for co-operation with competitors;
- the loss of technological leadership, mainly to Japan, in a number of high technology industries such as semiconductors; and
- the sluggishness of large service-providers, such as schools, hospitals, and insurance companies, in taking advantage of new information technologies to rationalise production and raise productivity.

The optimists, on the other hand, focus on the following factors:

- the ability of the economy to increase employment rapidly – "the great job machine";
- the acceleration of technological change;
- the increasing efficiency of financial markets, both nationally and globally, which permits capital to be channelled quickly to the highest-yielding uses;
- the increasing competitiveness of markets for goods and services as a result of deregulation and freer international trade;
- a generally improved climate for business, both in the general policy debate and in the regulatory process;
- the rapid expansion – and evident inventiveness and flexibility – of small-scale business, which accounts for all of the increase in US employment and for a large part of product innovations in the past decade or two;
- the substantial achievements during the 1980s of US manufacturers in cutting labour costs, improving production processes and product quality, and expanding exports;
- the United States’ greater flexibility vis-à-vis most foreign economies in adjusting to changing conditions because of less regulation, greater labour mobility, and an emphasis on individual initiative;
- the fact that a great many difficult adjustments to the shocks of the 1970s are over, and a belief that the United States is only beginning to reap the benefits from these adjustments.
4. Principal forces affecting future US economic growth

The fundamental issues

The basic question that any assessment of future US economic growth must deal with is how quickly labour productivity can be increased, especially in the service industries. Although there is obviously a considerable margin of error in any projection of employment and man-hours, demographic factors are such that the growth of labour input is certain to slow greatly in the next decade and beyond, to the lowest rates since the 1930s. Table 6 below illustrates the problem – showing what annual rate of growth in labour productivity would be needed to achieve alternative rates of growth in GNP, for a given range of employment/man-hour projections in the 1990s, in comparison with the 1980s and the past thirty years.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment</td>
<td>2.1</td>
<td>2.25</td>
<td>0.8-1.2</td>
<td>0.5-0.8</td>
</tr>
<tr>
<td>GNP per worker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual:</td>
<td>1.0</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected: at GNP growth of</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0 %</td>
<td></td>
<td></td>
<td>1.6-2.1</td>
<td>2.1-2.5</td>
</tr>
<tr>
<td>2.5 %</td>
<td></td>
<td></td>
<td>1.3-1.7</td>
<td>1.7-2.0</td>
</tr>
<tr>
<td>2.0 %</td>
<td></td>
<td></td>
<td>0.8-1.2</td>
<td>1.2-1.5</td>
</tr>
</tbody>
</table>

Source: Authors' own calculations.

If the growth of employment declines by half, as most projections indicate, then the growth of labour productivity will have to double to sustain the same growth of GNP. The question is, what is a reasonable range of projection for labour productivity in view of the many uncertain forces affecting capital formation, the productivity of labour and capital, innovation and market growth, and the interactions among them? An assessment of these forces is given below. A range of possibilities is considered either explicitly or implicitly in each case. Efforts are made to understand which influences are likely to have the strongest impact on each major factor and the sensitivity of growth estimates to variations in these factors. Although some estimates are essentially qualitative, other estimates can be checked for rough quantitative consistency. Because of the approximate nature of both the estimates and the relationships among them, no attempt is made to formalize a model of the future US economy.

Underlying the estimates are some basic assumptions about the international environment and basic economic policy:

– the absence of major wars, unchecked disease, or other global factors that could cause severe and sustained economic disruption;
– a continued expansion of world markets;
– basic economic policies in the United States and the other major OECD countries designed to keep inflation relatively low and real interest rates positive.
The changing structure of production

In the United States, as in all advanced economies, the structure of production will continue to shift from manufacturing to services, just as in the past it shifted from primary production in agriculture and mining to manufacturing. The structural shift will be much clearer for employment than for value added because growth of labour productivity will be faster in manufacturing than in services, although this difference will be partly offset by more rapid price inflation in services. It is important to keep in mind, however, that the distinction between manufacturing and services is an artificial one that is becoming less and less meaningful. In a sense, modern manufacturing itself can be viewed as a composite of services – e.g. research, development, planning, manufacturing proper, marketing, and customer service – that ultimately contributes to the value of final products. Where some of these services are performed outside the manufacturing industry, the growth of their output may be understated by conventional measures, while their contribution to the final product may not be given sufficient weight. For example, manufacturing industries purchased services equal to less than 10 per cent of value added in 1967, 18 per cent in 1977, and 25 per cent in 1987 (Leveson, 1991).

Even so, over the next ten to twenty years, the biggest economic challenge for the United States will be to raise labour productivity in services. As mentioned earlier, labour productivity gains in manufacturing were already high in the 1980s (4 per cent a year), and are unlikely to be increased in the next decade or two. In the case of services, the results of recent efforts to computerise many operations often have been disappointing, although some industries have shown large, often unmeasured efficiency gains.

Demographic factors

Over the next twenty years, the baby boom generation that reached working age in the 1970s and early 1980s will be passing into the more mature years but will remain, for the most part, within the labour force (Table 7). The percentage of Americans above age 64 will not change significantly until after the year 2010, nor will overall dependency ratios. Population growth is expected to slow, however, even if immigration increases.

Most projections show slower growth for the labour force and employment than for population because participation rates are lower in the 45-64 age brackets, whose share of total population will rise, than in the 18-44 age brackets, whose share of the total will fall.

<table>
<thead>
<tr>
<th>Year</th>
<th>Under 18</th>
<th>18-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-64</th>
<th>65 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>28.0</td>
<td>13.3</td>
<td>16.5</td>
<td>11.4</td>
<td>19.5</td>
<td>11.3</td>
</tr>
<tr>
<td>1990</td>
<td>25.7</td>
<td>10.4</td>
<td>17.5</td>
<td>15.1</td>
<td>18.7</td>
<td>12.6</td>
</tr>
<tr>
<td>2000</td>
<td>24.5</td>
<td>9.4</td>
<td>13.8</td>
<td>16.4</td>
<td>22.9</td>
<td>13.0</td>
</tr>
<tr>
<td>2010</td>
<td>22.2</td>
<td>9.6</td>
<td>13.3</td>
<td>13.2</td>
<td>27.8</td>
<td>13.9</td>
</tr>
<tr>
<td>2020</td>
<td>21.3</td>
<td>8.5</td>
<td>13.3</td>
<td>12.8</td>
<td>26.4</td>
<td>17.7</td>
</tr>
<tr>
<td>2030</td>
<td>20.7</td>
<td>8.4</td>
<td>12.1</td>
<td>13.0</td>
<td>24.0</td>
<td>21.8</td>
</tr>
</tbody>
</table>

a) Middle series projections.
There are, however, reasons to expect that labour force growth will be more rapid than indicated in most official forecasts, which range from 0.7 to 1.0 per cent per year:

- A new law will allow immigration to rise to at least close to the “high” Census Bureau projection of some 800 000 a year (net); the percentage of that figure entering the labour force will be higher than the corresponding percentage of the general population. Major new immigration legislation is possible but unlikely in the 1990s. There are many possibilities beyond that time.
- Participation of women in the labour force, especially in the 40-64 age group, may increase significantly. (Census projects a small increase over the next ten years, followed by a levelling off.) Improved provisions for flexible working hours would help this trend.
- Increasing numbers of men and women beyond the normal retirement ages may continue to participate in the labour force on a part-time basis. The information revolution should help to facilitate flexible working hours. Further social security reforms that reduce or eliminate the disincentive to work would also help, as would reduced marginal tax rates on income.

Overall, total working time can be expected to increase a bit faster than the population of working age – most likely in the range of 8 to 12 per cent over the current decade, with growth declining to a range of 5 to 8 per cent in the following decade.

Demographics are likely to affect labour productivity in conflicting ways:

- The ageing of the workforce will clearly increase the average level of its experience and skills, and can be expected to enhance its reliability and stability. Older workers have more on-the-job training and lower “quit rates”.
- By the same token, older workers, being less footloose, may also be less flexible, i.e. less willing to learn new ways and to change jobs or, if necessary, job location. Worker mobility will tend to be enhanced, however, by the trend away from “defined benefit” pension plans that have little portability, toward “defined contribution” plans where benefits are quickly vested and fully portable.
- The increase in the percentage of minorities in the working age population (from about 16 per cent in 1990 to 17 per cent in 2000 and 19 per cent in 2010), who will constitute a large part of the increment in the workforce, will work against productivity growth because minorities tend to be less well trained when they enter the workforce.

On balance, it is likely that demographic factors alone will have a slight positive impact on labour productivity.

**Labour quality and skills**

It is widely recognised that the United States has a serious and growing problem with regard to the education, skill and overall quality of its workforce. The quality of new labour has been declining, or at best not improving, at a time when the need for higher skills is increasing rapidly.

The increased demand for labour skills is partly due to the slowing growth of the workforce and partly to structural change in economic activity and technology. To achieve the substantially faster growth in labour productivity that will be required to sustain a healthy growth of output, better skilled labour will be needed. At the same time,
evolving technologies, as well as basic economic trends, will reduce the number of relatively unskilled jobs—such as garage attendants, clerks and assembly line workers—while increasing the number of jobs requiring higher skills, such as computer technicians, engineers and health care specialists. In manufacturing, there will be fewer production workers, and these will be expected to perform a variety of tasks and to exercise considerable judgment rather than do repetitive work on an assembly line. To avoid a serious mismatch between the demand for and the supply of skilled labour will require major improvements in general education and labour training (Johnston and Packer, 1987).

Much has been said about the low educational standards of American public schools during the past decade or so, compared with those of most other advanced countries or those in the United States in the 1950s and 1960s. Although educational deficiencies were said to put "a nation at risk" seven years ago and innumerable piecemeal reforms and experiments have been introduced since then, there appears to have been little if any real progress. Only recently have proposals for basic educational reforms—such as giving full management autonomy to individual schools, measuring and publicising educational achievement, and giving parents a choice of schools—begun to be considered seriously at the political level. There is a great deal of opposition to basic reform from vested interests in the school bureaucracies and teachers' unions. Moreover, according to public opinion polls, it seems a majority of Americans, although aware that national educational standards are too low, are still satisfied with their own school. Nevertheless, the educational issue is certainly being taken much more seriously and reform is being pushed hard by business groups. The chances are, therefore, that improvements in American public education will begin to occur in the 1990s and will pick up steam in the next decade.

As the supply of new entrants to the workforce has begun to shrink, American business has become increasingly concerned about their lack of skills or general social preparation for work. Many firms consider the poor preparation of new labour to be their most serious problem. In major urban areas, the problem involves not only weak education but also a lack of discipline, reliability or other basic work habits that is especially prevalent among the "underclass", who suffer from poverty, disintegrated families, the drug culture and dependence on welfare programmes. Many firms have established worker training programmes to teach "basic" as well as more advanced skills, but the great majority of American firms are too small to afford substantial formal in-house training. There is also a need for increased training and retraining of the existing workforce so as to adjust to changes in product demand, technology and management. As the workforce ages, retraining will present an increasing challenge.

The problem of educating and training the workforce can be eased only through cooperation between business, non-profit-making associations and the various levels of government. In addition to pressuring the government to improve public education, business is trying to develop an improved network of post-high school technical training institutions, both public and private. Government immigration policy can also ease the skills problem. The recent immigration bill allows thousands of new immigrants a year to be admitted because of their skills. Even larger increases in the number of skilled immigrants would help, but it will probably be years before this option is seriously considered.

Overall, it is reasonable to expect a gradual improvement in US education and workforce training over the next twenty years. History indicates that Americans can bring about change very quickly once they become really exercised about a major problem. The
key question is how soon this point will be reached. A reasonable scenario appears to involve an improvement in labour quality that is quite slow in the 1990s, but becomes fairly rapid after 2000.

The supply and use of capital

A clear improvement in labour productivity performance will almost certainly require at least maintaining and possibly increasing past rates of capital formation. There must be sufficient investment to accelerate capital-for-labour substitution, and to expand more rapidly the physical infrastructure as well as to increase productive capacity. The question is how much capital will be available, overall and for particularly critical uses.

The slow-down in the growth of the labour supply itself will probably create strong economic incentives to substitute capital for labour. During the surge in employment of young people and women during the 1970s and part of the 1980s, real wages stagnated or declined, and employers consequently had little incentive to adopt capital-intensive techniques. Vast numbers of people were employed in low-skill service occupations at – or not far above – the minimum wage, which itself had fallen to low levels in real terms. During the 1990s and beyond, however, real wages are likely to increase because of the much slower growth of labour supply, so that capital-for-labour substitution will accelerate, especially in services. The impact of higher real wages for unskilled labour in Western Europe can already be seen in the automation of, for example, the payment of fares in parking lots. Similar changes can be expected in the United States. In manufacturing, use of robots will become far more widespread and integrated. All of this will require more capital. The rate of growth of the capital-labour ratio in the private, non-farm business sector fell from 2.1 per cent during 1960-69 to 1.7 per cent in 1970-79, and then returned to 2.2 per cent in 1980-87. It is reasonable to expect the rate of growth of this ratio to increase further in the 1990s.

The United States probably cannot sustain respectable economic growth rates over the next twenty years without considerably larger public and private investments in physical infrastructure. There is no doubt that the building of critical infrastructure in advance of demand for its use (such as the railroad boom of the past century and construction of the interstate highway system in the 1950s and 1960s) created large positive externalities for economic development, in effect helping to create that demand. There have been no such programmes in the United States for twenty years. The existing infrastructure is barely keeping up with demand – and, in the case of highways, is even deteriorating – because of budgetary constraints at the federal and state levels. Privately financed infrastructure, which is of increasing importance, is also growing too slowly, at least partly because of regulatory constraints – electric power capacity will probably become strained later in this decade, and even the expansion of modern telecommunications networks is slower than necessary to take advantage of state-of-the-art technologies. Table 8 shows that net (undepreciated) capital stock in both public (state and local government) and private infrastructure has grown at a sharply declining rate. Gross (undepreciated) figures, however, show a less dramatic drop.

Major improvements in productivity in transportation are probably not possible until large new investments are made in modern road, rail and air facilities. Development of a modern, integrated fibre-optic network that could rapidly spread technological change – the most likely future equivalent of the railroad and highway construction booms – also will require government leadership and facilitation, if not funding.
Table 8. **Growth of US physical infrastructure**

Annual rates of growth of net capital stock in constant dollars

<table>
<thead>
<tr>
<th></th>
<th>State and local government</th>
<th>Private transport</th>
<th>Private communications</th>
<th>Private utilities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-60</td>
<td>4.6</td>
<td>-0.7</td>
<td>6.6</td>
<td>5.5</td>
<td>3.6</td>
</tr>
<tr>
<td>1961-70</td>
<td>5.6</td>
<td>0.4</td>
<td>6.8</td>
<td>3.6</td>
<td>4.0</td>
</tr>
<tr>
<td>1971-80</td>
<td>2.1</td>
<td>1.4</td>
<td>5.8</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>1980-88</td>
<td>1.0</td>
<td>-0.8</td>
<td>3.5</td>
<td>2.0</td>
<td>1.2</td>
</tr>
</tbody>
</table>


There is reason to believe that the funds to finance a stable or slightly increased rate of gross investment will be available. Private savings rates may rise and the federal government deficit should fall. At the same time, a likely decline in the demand for housing should free up construction capacity and funds that could be shifted to infrastructure construction and other uses.

The determinants of personal savings in the United States are complex and uncertain (Borembarg and Evans, 1990). A plausible but unverified model of the dynamics of the personal savings rate in the United States (i.e. the percentage of personal savings to disposable income) would be as follows: a long-term downward trend due to postwar social change, rising wealth and the increasing availability of retirement benefits and public and private insurance; a life cycle effect, reflecting a changing population distribution among age brackets with typically different savings rates; and a variety of economic effects that at various times can either raise or lower savings, such as inflation rates, the growth of unrealised capital gains, and the business cycle itself. Over the next two decades, the life cycle effect will almost certainly be positive – there will be a marked shift in population distribution in favour of the age groups that normally have the highest savings rates. Much more uncertain is whether what appears to have been a long-term downward trend due to socio-economic change will continue and, if so, for how long. If US savings rates are not increased one way or another over the next two decades, the nation will be hard put to finance the rapidly increasing demands on the social insurance system after 2010, when the older, dependent population will increase rapidly. Americans may become sufficiently concerned about the reliability of future social security commitments to raise their personal savings well in advance of the problem. A plausible estimate is that this motivation for saving will increase as the period of likely difficulties in social security approaches, thereby eventually reversing the long-term socio-economic trend. Finally, if policies favouring relatively high real interest rates continue and tax deductions for interest on consumer credit remain limited, savings may increase at the expense of consumption in consumer durables.

It is also reasonable to expect the federal budget deficit to decline, at least as a share of GNP. The almost certain decline in military expenditures should be sufficient to finance some new civilian programmes and reduce the deficit at the same time, especially if the rapid escalation of Medicare costs can be brought under control. To finance a substantial increase in infrastructure expenditures may, however, require borrowing on a substantial scale – a procedure that is not treated as part of the regular budget in most other countries because government investments should pay for themselves. Because a heavy burden for financing both infrastructure and development of human capital falls on
the states, some way will have to be found to increase federal support to the states, expand their taxation capacity, or shift a growing share into private hands.

Both demographic and economic factors point to a substantially reduced level of housing construction. The number of young people looking for housing will decline. And there is little reason to believe that the postwar boom in property values that ended in the past two years will resume. This boom encouraged people to buy initial homes in anticipation of capital gains, and then to upgrade to more expensive homes by realising these gains. Negative real interest rates were paid on mortgages. With inflation down and relatively high real interest rates generally expected to continue, the incentive for new investment in housing should remain relatively low. In the long term, reduced investments in real estate may lead to larger personal investment in financial assets such as stocks and bonds, thereby facilitating the expansion and modernisation of private business.

While saving and investment behaviour is highly uncertain, it would not be surprising if the following changes occurred:
- a recovery of personal savings rates to the earlier norm of 6 to 7 per cent later in this decade, representing more than 1 per cent of GNP, and some further increase in the next decade;
- a downward trend in the federal deficit from 3-4 per cent to around 1-2 per cent of GNP;
- an elimination of the net inflow of foreign capital, from a level of about 1 per cent of GNP;
- a consequent increase of total savings (and gross investment) on the order of 2 per cent of GNP;
- a decline in the share of housing in total investment;
- a slow build-up of investment in infrastructure; and
- a fairly rapid expansion of productive capacity, and especially of investment for labour-saving purposes.

Although it seems likely that increased investment rates can be financed, the productivity of investment will depend greatly on technological change, the quality of management, and government policies and regulations.

Development and use of technology

As mentioned earlier, there will be immense opportunities for technological improvements in the next ten to twenty years, improvements that can create not only labour savings but also lower capital costs and new and better consumer products. The constraints on technological change are sometimes insufficient funds – some innovations, such as state-of-the-art semiconductor technology, require a great deal of capital – but for the most part stem from resistance to change, lack of understanding or perspective, or an incentive system that stresses short-term profits rather than long-term improvements.

The United States has consistently spent about 2½ per cent of its GNP on Research and Development, among the highest shares in the world. Some 40 per cent of R&D is financed by the federal government, including one-third for defence purposes. Self-financed R&D expenditures by industry have been increasing fairly rapidly, to about 3 per cent of industrial sales. These expenditures, however, are relatively smaller than those in Japan, which are also growing more rapidly.
Because the federal government looms so large in US R&D, the linkages between its programmes, notably those for national defence, and commercial R&D are a major issue. There is considerable evidence that military R&D, once an important source of commercial spin-offs (for example, in jet aircraft, computers and micro-electronics), has become increasingly isolated from the economic mainstream – that commercial spin-offs are now few and that weapons development even fails to take sufficient advantage of available commercial technologies. During the past several years, a major debate has been under way concerning the desirability and possible nature of a federal “technology policy”. The minimalists favour continuing to limit federal R&D expenditures mainly to basic research and to national defence, space, health, energy and agriculture. The activists, however, believe that the government must expand or, in a period of falling defence budgets, shift into commercially useful R&D in co-operation with private business, develop dual-use (military-commercial) technologies, use technological opportunities to try to revitalise industries deemed important to national defence, and take the lead in building dual-use infrastructure, such as a fibre-optic network. The activists’ agenda includes an emphasis on developing R&D consortia such as SEMATECH, and creating a new federal agency to integrate R&D.

There are also many concerns about constraints on effective innovation in the private sector. In many firms, communications between R&D and manufacturing have been weak, resulting in unnecessarily lengthy cycle times for new products. There has also been an overemphasis on product technology – which can often be developed by imaginative individuals or small groups working independently – at the expense of process technology, which requires a more integrated understanding of a firm’s operations. There is also widespread complaint about the lack of “patient capital” – that is, the supply of funds with which new technologies and methods can bring major payoffs only after several years. Finally, there is concern about the regulatory and liability risks of innovation (discussed below). There are no easy fixes to these problems, but the increased awareness of their existence is already bringing improvements within the private sector – improvements that should spread rapidly in the 1990s.

Apart from improving the linkages between military and commercial technology and playing a more pro-active role in commercial technology development, the federal government could encourage risk-taking in new technologies through such measures as cutting or eliminating tax on capital gains, reducing corporate income tax, improving depreciation allowances on private business and easing the regulatory burden. Many such measures are being debated at the political level, and some are beginning to be implemented.

With government and private sector trends toward improving the conditions for innovation, it is reasonable to expect progress in the development and utilisation of new technologies by American business.

**Improving management in the private sector**

The efficient development and utilisation of human and physical capital and of technology will challenge American business managers:

- To expand labour training and productivity substantially may require managers to treat their employees as “human capital” rather than a source of current expenses. More and more firms may have to make longer-term commitments to
“career” employees. This is already a key management concern in many high technology firms.

- To utilise labour and technology more fully, the organisation and flow of work throughout firms will have to be revamped. One of the lessons painfully learned from the Japanese is that they gained a competitive edge in many industries by carefully rationalising management rather than through any technological lead.

- Better integration of supplies with requirements, improved quality control, and more rapid technological change can also be realised through better interfirm co-operation, especially between large firms and their subcontractors. Some improvement in co-operation is already occurring.

- More difficult to achieve will be a reduction of the so-called “short-term” bias in management decisions, of which the shortage of “patient capital” is but one aspect. The factors that are blamed for US “impatience” include a higher cost of capital than in Japan and Germany, forms of ownership and control that stress “bottom line” quarterly financial results rather than growth of the enterprise and its market share, and the unique characteristics of American society and its approach to problem-solving. There is at least some evidence that international differences in the cost of capital are shrinking as financial and capital markets become more integrated and forms of financing in Japan and Germany become more similar to those in the United States. There remains a difference in business perspectives that results from the fact that linkages among firms, their buyers and suppliers, and banks are closer in Japan and Germany than they are in the United States; these closer linkages expand the knowledge horizons of each firm, promote stability of interfirm relationships, and (thereby) probably tend to reduce the perceived risk of some major long-term projects.

**Risk and regulation**

An important constraint on the efficient use of labour, capital and technology in the United States has been government regulation for environmental and social reasons and the increasing liability of private firms to lawsuits. As mentioned earlier, Americans, like people in other advanced countries, have become less tolerant of personal risks and more insistent on security as their living standards have grown. This fundamental social trend has taken many forms; some, like the expansion of social security and Medicare, are paid for mainly through higher taxes, while others, like private insurance, environmental regulation, and product safety, are paid for directly or indirectly mainly by private business. The regulatory and legal constraints are the most difficult to evaluate in terms of both costs and benefits. It is virtually certain that these trends in basic social attitudes will continue into the foreseeable future – the question is, how will they be managed? The answers are highly uncertain. On the one hand, social concerns about environmental and safety issues are increasing rapidly. On the other hand, in the 1980s there have been growing attempts to ease the burden of government regulation on the private sector.

In the environmental control area, organised pressure groups in the United States have achieved great access to and widespread publicity in the media, have impacted strongly on public opinion and (consequently) have strongly influenced national, state and local politics. Environmental problems such as acid rain, global warming, nuclear risk, chemical pollution, and the use of chemical additives in food have been presented to the public as absolutes, by dramatising supporting evidence and ignoring contrary evidence or
considerations that would put problems in perspective. As a result, new proposed regulatory legislation has often set essentially zero-risk standards and made no provisions for cost-benefit analysis. Business resistance to this political tide has been weak so far, but will no doubt increase as the burden of environmental regulation grows. The uncertainty and high costs imposed by the recent Clean Air Act revision drive home how important it is to push for incorporating cost-benefit considerations.

Business is also being hurt by the fundamental shift in the interpretation of tort law by the courts towards a concept of strict liability – that is, making a manufacturer, for example, liable for damages sustained by an individual using a product even though he (the manufacturer) was in no way negligent and could not reasonably have anticipated the risk. The courts have in effect placed the burden of ensuring product safety solely on the manufacturer and associated organisations so as to reduce both physical and financial risks to consumers. The growing belief that the risk of liability suits may discourage firms from introducing technologies that could actually make products safer is spurring a search for legal reforms.

Federal government policy during the 1980s has been to try to eliminate unnecessary regulations, but progress has been slow at best. The normal tendency of Congress when trying to be responsive to popular desires in environmental, safety, health and equal opportunity issues is to pass legislation which in turn is elaborated in federal regulations. These are difficult to simplify and rationalise. In the long term, it is reasonable to expect that the continuing social trend favouring risk avoidance will one way or another impose increased constraints on economic growth and efficiency. Moreover, just as California has often set the trend for the United States, so US trends may anticipate those of Western Europe.

International economic relations

The interdependence between the US economy and those of the rest of the world will continue to increase. The ratio of both imports and exports of goods and services to GNP will rise, and the distinctions by producers and buyers between the domestic and foreign markets will continue to evaporate. Despite occasional bursts of nationalistic protectionism, foreign investment in the United States will increase, as will US investment abroad. Indeed, the international linkages among firms will continue to develop, making the nationality of ownership more and more uncertain and complex. International specialisation in production, technology and services will become even more intense. Although the media play up the economic “war” with Japan, American firms are likely to look more for mutually productive relationships with Japanese firms than to protective measures to keep them out. With the depreciation of the dollar and the outstanding performance of US exports, the steam has gone out of the drive to limit imports with VERs and other protective measures. In the high technology industries (e.g. semiconductors), the cry is not for import protection but for tax and other government stimuli for investment and R&D.

The prospects look good for a North American free trade area, which could eventually become a common market. This prospect can only be good for world trade. Mexico already does some 70 per cent of its trade with the United States. The main impact of a free trade area would be to spur and then cement Mexico’s commitment to an open, free market economy, a development from which the rest of the world can only benefit.
At the global level, the United States will work for the successful completion of the current GATT negotiations and subsequently will press for new international arrangements to establish accepted rules for technology and "industrial" policy, direct investment and other increasingly important issues that generally fall outside GATT's traditional boundaries. The OECD would be a logical starting point for such negotiations because most of its Member countries are at a similar stage of economic development and have many common interests. Less advanced countries, such as South Korea, could join the OECD when ready to make the necessary commitments. Many other developing countries might well choose to stay outside, but it would make little sense to accept only very weak agreements for the sake of global coverage.

It is also reasonable to expect increased monetary co-operation among the major countries – notably the United States, Japan, and Germany – in the interest of reducing exchange rate fluctuations. With the broad tendency toward convergence in inflation rates and the shrinking of major payments imbalances, such co-operation seems less difficult to achieve than in the past.

**Surprise-Free scenario**

A Surprise-Free scenario for the US economy is a plausible path that reflects the interaction of major demographic, social, technological, political and economic forces. It takes into consideration not only the relevant trends, but also the plausible adjustments to these trends. Some of the trends are clear, others uncertain; some forces work to raise economic growth, others to lower it. Maintaining the 2.7 per cent GNP growth rate of the past twenty years requires that the growth of labour productivity accelerate enough – a doubling or better – to compensate for a 50 per cent decline in the growth of man-hours. This does not seem likely, given the serious constraints on labour quality, social trends, and institutional resistance to technological and managerial change. The potential for more rapid economic growth through larger investment and accelerated technological change exists and probably could be financed through increased savings, but evidence is lacking that this potential can soon be realised.

On balance, it seems likely that the growth of the US economy will be slower in the 1990s than in any of the postwar decades. The GNP growth rate estimate ranges between 2.3 and 2.7 per cent. On a per capita basis, however, the estimate (1.6-2.0 per cent) straddles the 1.7 per cent average of 1971-90, and permits a clear improvement in living standards.

The range does not represent any estimate of statistical probability – it is essentially judgemental. Indeed, it does not represent the limits of estimates for man-hour and labour productivity, because it seems unlikely that high or low results for these will occur simultaneously.

The main features of the Surprise-Free scenario are the following (see also Table 9):

- a rate of GNP (GDP) growth of 2.3 to 2.7 per cent;
- a rate of growth of GNP/GDP per capita of 1.6 to 2.0 per cent;
- a rate of growth of man-hours worked of 0.8 to 1.2 per cent;
- a rate of growth of output per man-hour of 1.2 to 1.9 per cent;
- a slow improvement in the quality of labour;
- an increase in the share of gross investment in GNP of one to two percentage points;
- a marked increase in real wages and per capita consumption;
- a moderate (4 to 5 per cent) annual rate of inflation;
- a slight increase in the share of imports in GNP;
- a sufficient increase in exports to eliminate the remaining deficit on goods and services account;
- a reduction of the federal budget deficit to 1-2 per cent of GNP.

Table 9. Scenarios for the 1990s
Average annual rates of growth for the years 1991-2000

<table>
<thead>
<tr>
<th></th>
<th>Slow Growth</th>
<th>Surprise Free</th>
<th>Virtuous Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GNP/GDP</td>
<td>1.8</td>
<td>2.3-2.7</td>
<td>3.2</td>
</tr>
<tr>
<td>GNP/GDP per capita&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.1</td>
<td>1.6-2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Man-hours</td>
<td>0.8</td>
<td>0.8-1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>GNP per man-hour</td>
<td>1.0</td>
<td>1.2-1.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Inflation rate</td>
<td></td>
<td>4.0-5.0</td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td></td>
<td>2.6-3.0</td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td></td>
<td>2.8-3.2</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Using the intermediate Census Bureau projections.

Source: Authors' own calculations.

Beyond the year 2000, it seems wise to eschew even such very broad quantitative estimates; the uncertainties are too great. The chances are high that the growth of employment and man-hours will slow further, as will the growth of population, but there will have been more time for the technological, social, and institutional influences of productivity to change. Perhaps the biggest challenge for the United States, as for many other countries, will be to provide resources to cover the needs of a rapidly ageing population. This issue is likely to become highly divisive, socially and politically, well in advance of the period when the costs must be borne. The management of rising demands for personal security will also be a major challenge. Moreover, in an increasingly integrated world economy, estimates for individual countries become less and less meaningful outside a global context.

The conventional wisdom is to project some slow-down in economic growth in the next century. Although this is probably what a Surprise-Free scenario would yield, one cannot be confident in this judgement. Moreover, the fact is that conventional measures of economic growth will represent improvements in welfare less and less adequately.

5. Alternative scenarios

**Virtuous Circle scenario**

This is a scenario in which good luck and good management interact to yield economic growth rates of about 3.2 per cent, well above the average of the last twenty years, and about equal to the forty-year average. Given the uncertainties concerning the
impact of policies, it may be difficult to differentiate between "luck" and "management".

Few people believe that anything equivalent to the highly favourable conditions for economic growth of the 1950s and 1960s can be found in the future. These conditions include a strong sense of national purpose, a vast amount of accumulated consumer demand and technological opportunities in the wake of depression and world war, a willingness to work hard for economic and social improvement, and the unique ability of the United States to control the international environment. All of these conditions have diminished or disappeared. The possibilities for rapid growth in the future will come mainly from the new technological revolution and from the prospects for the continued freeing and globalisation of markets. How, then, can these possibilities be better realised?

- The most critical condition is to improve the quality of labour. This requires fundamental reform of public education to be undertaken very soon if it is to have any significant impact in the 1990s. A greater medium-term impact can be obtained from establishment of a much-improved system of post-high school technical training, in co-operation with the business community. Allowing larger numbers of skilled immigrants would also help, as would better-conceived socio-economic programmes to bring the "underclass" into the mainstream.

- An improved quality of labour would make it much easier to utilise technological change effectively. Having workers that can take on more responsibility enables management to rationalise production so as to take advantage of flexible technologies. At the same time, demonstration effects would stimulate broader improvements in management.

- Another critical condition for rapid growth is a change in the thrust of government policy away from regulation and toward leadership and stimulation. Government action to develop and stimulate leading-edge technologies and infrastructure programmes with large positive externalities would enhance technological change in the overall economy. This would require a change in current US policy. At the same time, the current policy emphasis on working for freer, more competitive markets and on at least mitigating the pressure for increased regulation should be continued or strengthened. Actions to ease or rationalise regulation would facilitate the growth of privately financed infrastructure, probably stimulate technological change, and minimise the anti-growth effects of social and environmental legislation.

- In the international arena, economic growth would be enhanced by an early GATT agreement, followed by progressive agreements on investment and technology policy. Co-operation in monetary policy, and to some extent in fiscal policy, to keep the exchange rates between major currencies within moderate limits would also be helpful. In turn, rapid US growth and a co-operative environment in the industrial countries would help to ease critical Third World problems such as debt, and this would generate strong positive feedback, especially for the US economy.

- If the fundamental conditions for rapid growth could be established, the necessary funds would be obtained. This presumes, of course, that the financial system will emerge fairly healthy from the current crises in building and loan associations and real estate generally. Barring serious financial constraints, the recovery of the economy from the current recession could be rapid (3 per cent growth or more by 1992), which in turn would create an atmosphere of optimism about the future.
Because fundamental conditions change only slowly, this optimistic growth scenario is only 0.5 per cent a year higher than the upper end of the Surprise-Free scenario by the year 2000. However, it has the potential for doing even better beyond the turn of the century.

**Slow Growth scenario**

A Slow Growth scenario involves bad luck and/or bad management. It is represented by a GNP growth rate of 1.8 per cent, or only about 1 per cent a year per capita and per worker. Although not a complete disaster, this scenario would allow very little improvement in the standard of living over the next decade and would make little provision for funding the heavy burdens of an increasingly dependent population in the longer term. It is a scenario likely to lead to severe political conflicts over income distribution – between rich and poor and between generations. Finally, the sluggishness of the economy would encourage protectionism against imports and foreign investments.

A plausible start for this scenario would be a very sluggish recovery from the current economic recession caused by serious disruptions in the financial community, which would not manage the debt burden and the depressed real estate market adequately. If, after a decline, GNP growth remained in the 1 to 2 per cent range through 1993 – unlike previous recessions when recovery was rapid – an atmosphere of general pessimism could set in. With revenues barely increasing, governments would be unwilling to undertake new programmes, and efforts for educational reform and renewed infrastructure investment would be greatly weakened. Business too would turn conservative in its investment policies. Increased calls for protection would hamper the growth of world trade while slow growth would make foreign investment in the United States less attractive. Pressure would also build to restrict immigration, thereby reducing the labour supply.

This scenario is unlikely but by no means totally implausible. Once the belief that economic growth would be slow became widespread, it would be difficult to turn the economy around.

6. **The United States in the world economy in the 1990s and beyond**

These estimates indicate that the United States will continue to be the single most important influence on global economic developments during the next ten to twenty years. Only under the Slow Growth scenario does the risk of a reversion to severely protectionist policies seem high. In both the Surprise-Free and Virtuous Circle scenarios, the chances are that US foreign economic policy will continue to aim at the expansion of free markets throughout the world, the US market will continue to be one of the most open, and co-operative relationships among governments and firms will develop rapidly. In such an environment, US foreign trade is likely to grow faster than GNP and to hold its own as a share of OECD trade, at least if intra-EC trade is excluded.

However, even though the United States will still be the largest and most influential economic power, international economic co-operation will increasingly be built around a tripolar arrangement – the United States, the European Community and Japan. Each of these poles will be a focus of international trade and co-operation. The European Community will not only deepen its internal integration, but also attract other members and
close associates, notably from Eastern Europe. As Japan opens its own economy to foreign competition, it will expand economic specialisation and integration with other East Asian countries, although by no means at the expense of other markets. The United States will slowly develop a North American Common Market, which could expand at least into the Caribbean and Central America and grow ties to countries in South America. The chances seem slim, however, that this expansion of regional economic integration will lead to the creation of economic “blocs” that try to exclude outsiders. In the first place, technological, institutional and political change are freeing and globalising markets for more and more goods and services. Secondly, efficient, modern business organisations are less and less concerned about nationality and national boundaries. Business leaders are increasingly aware that gaining access to the technologies, markets, and management skills needed to compete in the modern world can rarely be achieved without foreign co-operation. Politicians in the United States and abroad will, of course, appeal to nationalistic feelings and will be successful at times in introducing protectionist measures. As in the entire postwar period, however, protectionism in the advanced countries will be swimming against a strong current which flows toward a freer international economy.

This generally optimistic picture does not hold up, however, in a Slow Growth scenario. Ever since World War II, the United States has been the leader in the global move toward freer markets and trade. In spite of a decentralised and contentious political system, the United States not only has played the key role in the creation and growth of such international institutions as the IMF, the World Bank and the OECD, but also has been a strong leader and negotiator in GATT. In the Slow Growth scenario, the US political majority in favour of free trade would probably evaporate and it would become impossible to resist pressures for increased protection on the grounds of “national security”, gaining a “level playing field”, or simply protecting employment. It is unlikely that either the European Community or Japan could take on the leadership role in global trade and investment policy, even if their economies were growing faster than that of the United States. Consequently, slow US growth might very well lead to slow growth in the rest of the world.

In order to minimise the chances that a Slow Growth scenario will develop, it is important to:

- prevent any major disruptions of the US and other financial systems so as to facilitate recovery from the current recession;
- follow stable, non-inflationary monetary policies;
- reach agreement soon on key issues in the GATT (agricultural subsidies, services, textiles);
- commit the major countries to a process for establishing multinational rules of industrial and technology policy and international direct investment.
Bibliography


North American Economic Integration in the 1990s

by

Wendy Dobson
University of Toronto, Canada

1. Introduction

Major forces are reshaping global patterns of trade and investment in ways that increase integration among the world's economies. In North America, the Canadian and US economies will increase an already high level of integration as they remove all remaining tariff barriers by 1999. Trilateral trade negotiations with Mexico are expected to create a tariff-free market of 360 million people in North America by the beginning of the next century.

The purpose of this paper is to examine the determinants of Canada/United States/Mexico integration and to examine the possible long-term consequences of the free trade agreements that have been, and will be, negotiated.

2. The context

Three forces will influence North American integration in the 1990s: macroeconomic policies; globalisation of production; and trade and finance policies. Macroeconomic policies in Canada, Mexico and the United States will be preoccupied with unwinding negative external consequences for trade and investment of past policies. Each government now shares the common objectives of creating and maintaining stable low-inflation environments so that the private sector can be the engine of growth.

Mexico's main policy objectives will be to achieve rapid economic growth, reduce inflation and restore the confidence necessary to reattract flight capital and to service its large external debt. Economic policies will emphasize fiscal and monetary stringency, deregulation, privatisation and further liberalisation of trade and investment policies. In the United States, attention in the early 1990s will focus on adjusting the policy mix (fiscal stringency combined with a gradual easing of monetary policy) in order to reduce reliance on foreign savings and reorient the American economy to export-led growth. In Canada, the objectives will be to reduce the federal budget deficit and achieve a 2 per cent inflation target by 1995. The policy mix will change as a result of a legislated cap on federal spending and a cap on public sector wage increases adopted in the 1991 budget.

These policy frameworks are influenced by the growing recognition that with rapid technological change in goods production (such as flexible manufacturing and economies
of scope), production locations are determined by operating costs in one country relative to another, and by such factors as national taxation or tariffs and other trade and investment barriers. Firms seek scale economies to cover the high costs of sophisticated technology by selling in world, rather than national, markets. National policy priorities are increasingly oriented towards "creating" comparative advantage through the promotion of skilled human capital, a competitive investment climate, and the restraint of policies that raise production costs or create barriers to trade and investment.

Global institutional frameworks for trade and finance that assume comparative advantage is based on natural endowments are being pressed to take account of the ascendency of multinational corporations and increasingly specialised international division of labour. A major source of pressure comes from policies in the large industrial countries. The United States, for example, has been receptive to initiatives to promote GATT-consistent regional trading arrangements in North America, both as a strategy to prod along the Uruguay Round of GATT talks (that include proposals to address these issues) and as a contingency in case they fail.

Comparative economic indicators for the three countries are presented in Table 1. Mexico's young and rapidly growing population, low per capita income, and low productivity emphasize basic economic differences with Canada and the United States. Its unsustainable external debt and still-high rate of inflation require continued reorientation of its macroeconomic policies. Mexico must also create at least a million jobs a year to keep up with its rapidly growing labour force, and to do even better if it wants to reduce

<table>
<thead>
<tr>
<th>Table 1. Comparative indicators of economic development</th>
<th>Canada</th>
<th>United States</th>
<th>Mexico</th>
<th>Unit of measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>26.3</td>
<td>248.2</td>
<td>86.4</td>
<td>millions, 1989</td>
</tr>
<tr>
<td>Urban</td>
<td>77</td>
<td>74</td>
<td>66</td>
<td>percentage</td>
</tr>
<tr>
<td>Fertility rate</td>
<td>1.7</td>
<td>1.9</td>
<td>3.5</td>
<td>1988</td>
</tr>
<tr>
<td>Labour force</td>
<td>13.4</td>
<td>122</td>
<td>26.1</td>
<td>millions, 1987</td>
</tr>
<tr>
<td>Labour force in services</td>
<td>75</td>
<td>75</td>
<td>31</td>
<td>percentage</td>
</tr>
<tr>
<td>GDP</td>
<td>543</td>
<td>5167</td>
<td>187</td>
<td>billion $, 1989</td>
</tr>
<tr>
<td>GNP per capita</td>
<td>16,960</td>
<td>19,840</td>
<td>1,760</td>
<td>$, 1988</td>
</tr>
</tbody>
</table>

Structure of production

| Agriculture | 4 | 2 | 9 | % of GDP, 1988 |
| Industry   | 40 | 33 | 35 | 1988 |
| Services   | 56 | 65 | 56 | 1988 |
| External debt | 39.67 | 328.76 | 97.4 | $, 1989 |
| Inflation  | 4.7 | 4.5 | 26.7 | CPI, 1989 |
| Exports    | 111.6 | 322.3 | 32.5 | billion $, 1989 |
| Imports    | 102.1 | 440.9 | 33.1 | billion $, 1989 |
| Trade bal. | 9.4 | -118.6 | -0.65 | billion $, 1989 |

underemployment. The radical restructuring that has occurred since 1985 in the Mexican economy to reduce the role of government and eliminate barriers to trade and investment is publicly supported, but this support is dependent on an improved record of job creation.

3. Canada/United States integration

The Canadian and US economies are highly integrated. Canada and the United States are each other’s largest trading partners; capital markets are so closely integrated that interest rate parity is the rule rather than the exception (the period since late 1988 being such an exception). Each is also among the largest investors in the other’s economy. In 1989, Canada’s stock of foreign direct investment in the United States was $50 billion, while US stock in Canada was $67 billion.

Canada depends on exports for 30 per cent of its GNP; 70 per cent of these exports are with the United States, many of them through intra-firm trade. Before negotiation of the Canada/United States Free Trade Agreement (FTA), most Canadian exports were concentrated in resources at relatively low levels of processing or in automotive products benefiting from the bilateral Auto Pact.

While the United States depends on exports for less than 10 per cent of its GNP, 22 per cent of these exports go to Canada. Since the early 1970s the United States has run a large merchandise trade deficit. In the early 1980s the large and growing federal budget deficit contributed to dependence on foreign savings, misalignment of the dollar and to the United States becoming the world’s largest net debtor. Declining international competitiveness as evidenced in the associated current account and trade deficits eroded support for liberal US trade policy. Policy direction is now influenced by three different philosophical orientations: the traditional multilateralists; proponents of unilateral and protectionist trade policy, who emphasize the use of trade remedy law against unfair foreign competition; and supporters of regional or bilateral agreements with selected countries as a complement to multilateral trade negotiations.

In 1985, the Canadian Government became alarmed at these developments and concerned about the increasing inadequacy of the GATT framework within which to conduct its relationship with the United States, and proposed negotiation of a bilateral free trade agreement. Its objective was to secure and enhance access to the world’s largest and wealthiest market. It was also recognised that obtaining this objective would encourage Canadian producers to “cut their teeth in the US market” to achieve the degree of competitiveness necessary for success in larger world markets.

In responding to the Canadian initiative, US Government objectives were broader: to send a strategic signal to Europe and Japan to return to the multilateral bargaining table for a new round of GATT talks and to institutionalise outward-looking trade policies. Even committed multilateralists agreed that GATT-consistent agreements with Canada, and possibly with Mexico, would be consistent with US objectives for liberalised world trade.

Negotiation of the FTA was completed in late 1987; the agreement was implemented on 1 January 1989. It creates a privileged trade relationship between Canada and the United States, but it moves forward and breaks new ground in important areas such as services and investment that have not yet been addressed in the GATT. The main features of the agreement include the following:
- The principle of national treatment.
- All tariffs on bilateral trade are phased out and will be removed by 1999.
- Rules of origin require that goods incorporating foreign components must add 50 per cent of their added value in Canada or the United States to avoid tariffs.
- New rules have been designed to promote freer trade in services, business travel, investment.
- New institutions were created to settle disputes in a fair and expeditious manner and to constrain the use of emergency safeguards; quota restrictions were prohibited. The agreement mandates negotiations over a five- to seven-year period to revise laws governing anti-dumping and countervailing duties.
- Pending GATT negotiations and further bilateral negotiations, some non-tariff barriers, such as supply management schemes, remain with respect to agriculture, as do domestic production subsidies (Lipsey and York, 1988).

The impact of the agreement during its first two years of existence is difficult to evaluate. Most importantly to Canada’s objectives, the record of dispute settlement indicates that the mechanisms are working largely as intended. Two dispute settlement mechanisms exist. One is a modified GATT instrument that can be used to resolve conflicting interpretations of the FTA. So far, two cases have been referred to this mechanism: one (salmon and herring) was decided in favour of the United States; the other (lobsters) led to a negotiated settlement between the two governments.

The second mechanism replaces domestic courts’ review of government regulatory bodies’ anti-dumping and countervailing duty determinations. It is considered superior to dispute resolution in the GATT because the procedure is shorter, because binational scrutiny increases the objectivity of the decision-making process, and because its decisions are binding.

So far, fifteen cases have been submitted, thirteen of them initiated by Canadians. In a number of these cases, the panels have agreed wholly or partly with Canadian objections (Royal Bank of Canada, 1991). One US challenge of a panel finding against a US complaint about Canadian pork subsidies was subsequently decided in Canada’s favour.

The overall economic impact is difficult to evaluate since Canada, which would be expected to make the most adjustments (and obtain the greater gains), has also experienced a severe recession in 1990/91. Canadian producers’ competitiveness has declined because of slow productivity growth, cost pressures and currency appreciation vis-à-vis the US dollar.

An additional element of uncertainty that will affect Canada/US integration in the 1990s is the relationship between the province of Quebec and the rest of Canada. Since the failure in June 1990 of the Meech Lake Accord, which would have given Quebec special status in the Canadian constitution, various options have been put forward for the future Canadian political and economic structure. One option is for Canada to become more decentralised politically while maintaining the economic union and to provide Quebec with the political mandate it believes necessary to preserve its language and culture in the “English-speaking sea” of North America. The other main option is for Canada to remain politically centralised and for Quebec to pursue its objectives in a sovereign fashion (and possibly as a separate entity). Two issues, therefore, are under intense debate in Canada at the present time: the first concerns the role of government (Canada has many overlapping jurisdictions between the federal and provincial governments); the other concerns reorganisation of national and provincial institutions. Resolu-
tion of these issues will be influenced by the realities of the three global forces affecting integration of the North American economy and by the political preferences of Canadians. This counterpoint of such inward- and outward-oriented forces is only beginning to be felt.

4. Mexican/United States/Canadian integration

The Mexican and US economies also are highly integrated. Between 1986 – when Mexico liberalised its trade laws – and 1990, the value of US exports to Mexico doubled. US imports from Mexico increased nearly 50 per cent in value (Schott, 1991). The direction in which the trade balance is moving implies that continued rapid economic growth in Mexico will contribute to an export-led recovery in the United States in the 1991/92 period. While Mexico accounts for less than 2 per cent of US foreign direct investment, it seeks to augment this flow to achieve its growth objectives. US/Mexican labour market integration is very high, weighted heavily by agricultural workers traveling back and forth between the two countries, which have complementary growing seasons.

The degree of integration between Canada and Mexico is small. In the late 1970s trade and co-operative arrangements were stimulated by developments in petroleum markets, but these declined at the time of the 1982 debt crisis. The stock of Canadian investment in Mexico represents slightly more than 1 per cent of Mexico’s total stock of foreign direct investment. Exports to Mexico from Canada account for 0.5 per cent of Canada’s total exports; nearly half of Mexico’s exports to Canada are auto-related. Exports of Mexican goods routed through the United States, especially horticultural products, are thought to be of considerable size.

The significance of the US market is large in both countries, while their markets’ significance to the United States is much smaller. The United States takes roughly 70 per cent of each country’s exports; relative shares of US imports have remained quite stable (Mexico at 6 per cent and Canada at 20 per cent) for a decade.

Rationale for trade negotiations

In view of the high level of economic integration and significant asymmetry between the United States and the other two economies, what is the rationale for the North American Free Trade Agreement (NAFTA) negotiations? Why would a free trade area work between two industrial countries and a developing country?

Mexico’s objectives in NAFTA are to reduce tariffs, to secure and enhance access to the US market, and to restore confidence in its economic policies. Mexico’s main economic objective is to attract external capital needed to sustain rapid growth in employment and living standards. After seeking such capital in Europe and Japan, the Mexican President concluded that the most promising source would be available through closer economic integration with the United States. Unilateral trade policy and other economic reforms since 1985 have already had a profound effect on the openness of the Mexican economy, bringing it more into line with the US and Canadian economies as would be necessary for a successful NAFTA (Schott, 1991, p. 4). Although the President declared publicly, early in his administration, that there will be ‘‘no common market’’ with the United States, he proposed the free trade area as a signal of political commitment
to embed policy reforms of the 1980s in an international agreement, thereby making it more difficult in future to return to the old inward-looking, statist policy framework.

US objectives in NAFTA are to promote economic and political stability in Mexico. Expanded trade and investment will promote the efficient use of labour, capital and natural resources in North America. It will lead to rationalisation of production that will raise the efficiency and productivity of US workers. By raising Mexican incomes and employment, not only does the United States gain from more exports to Mexico (and therefore more US jobs), but higher Mexican incomes in future are more likely to keep Mexican labour at home.

Canada’s objectives are to promote its competitiveness and dynamism, but beyond that, its objectives are largely defensive: to preserve Canadian gains in the US/Canada FTA, and to prevent the diversion of trade and investment from Canada to the United States and Mexico that would occur as a result of a bilateral US/Mexico agreement.

Mexico and the United States decided in June 1990 to proceed with negotiations. All governments originally viewed trilateral negotiations as too complicated. Subsequently, however, both Canadian and Mexican participants have discovered common interests; the prospect of negotiations is proving to be a catalyst for more extensive bilateral relations between the two countries. Thus Canada decided to join the negotiations in September 1990. President Bush then requested the US Congress to “fast track” ratification of the completed agreement. This approval procedure commits both the Senate and House of Representatives to accept or reject, but not amend, the agreement negotiated by the administration. Approval was obtained from the US Congress on 23 May 1991.

The negotiations: format and main issues

The trilateral negotiations could proceed in many different forms, but two main alternatives have influenced official decisions to date: “hub and spoke” agreements and “plurilateral regionalism”. The “hub and spoke” option would involve the negotiation of separate bilateral free trade agreements by the United States with each of the other countries. It would gain tariff-free access to their markets, but the “spoke” countries would gain tariff-free access only to the US market – not to each other. Trade is therefore diverted in each of the markets of the spoke countries to the benefit of the United States. Investment diversion can also be expected, since a plant in a spoke country would have tariff-free access only to the US market, whereas locating a plant in the United States would provide tariff-free access to all markets of spoke countries. In effect, the United States is placed in a superior bargaining position with each of the other partners. With interest being expressed in expanding free trade arrangements with countries beyond Canada and Mexico, the precedent of a “hub and spoke” model could be damaging to the individual participating countries over the longer term.

The “plurilateral regionalism” option would involve negotiation of a regional free trade area in which all the members have the same privileges and obligations. Each country has tariff-free access to all other members’ markets. All participants are treated equally. Instead of creating separate bilateral agreements, the three countries would negotiate one agreement. In theory, such an agreement subsequently could be expanded to other countries.

What model should be adopted in the negotiations has yet to be decided, and the model that eventually emerges is unlikely to be a tidy one. It is possible that the Canada/US FTA will provide a basis for building areas in which all three governments could
agree – such as tariff reduction, removal of quantitative restrictions or rules of origin. The United States and Mexico could negotiate bilateral agreements in areas concerning them particularly; Canada could seek to protect its interests by seeing that in future such agreements are phased into the core, as appropriate.

The main issues in the negotiations are likely to be the following:

- Between Mexico and the United States: Mexico will be seeking tariff-free access to the United States market; restraint of the unpredictable use of US trade remedy laws; and negotiation of a dispute settlement mechanism at least as effective as the one the United States negotiated with Canada. The United States will be seeking greater protection of intellectual property rights and access for US goods and investment in Mexico, particularly in financial services and the automobile industry. US interest groups will also press publicly for agreements on labour, safety and environmental issues. Two other issues of strategic concern between the United States and Mexico will be petroleum and migration. Although both sides have indicated in preliminary discussions that these issues are “off the table”, the United States could be expected to seek the phaseout of subsidies to Mexican oil consumers (liberalisation of investment restrictions is highly unlikely), while Mexico may seek an understanding about US regulations concerning Mexican labour.

- Between Canada and Mexico: Both countries want to create smoothly working dispute settlement mechanisms with the United States. It is difficult to see, however, how all three countries will agree to trilateral dispute settlement panels like those between the United States and Canada, for two reasons. First, the Mexican judicial system differs from those in the other two countries; secondly, trilateral panels will be difficult to manage because of the chances of two partners “ganging up” on the third. Canada will be watchful against Mexico gaining better access to the US market than Canada has already obtained. It will also likely share US interests in expanding access for services trade and investment in Mexico.

- Between the United States and Canada: Canada will be anxious to preserve the Auto Pact as embedded in the FTA and to preserve its offshore “transplants”. The United States may seek to reopen the issue of rules of origin (which restrict tariff-free access to 50 per cent local content – the United States would like to see 60 per cent in the auto industry). It may also seek to reopen exemptions in the FTA for Canada’s cultural industries, subsidies and countervail, intellectual property and pharmaceuticals.

The existence of the Canada/US agreement as a model on which to build makes it likely that the final trilateral agreement will resemble the FTA. A three-way negotiation will not be easy, however, and some of the issues will be contentious. Unless sufficient time is allowed for their resolution, the scope of the final agreement may be somewhat reduced.

5. Impacts of changing economic arrangements on the economic structure in North America in the 1990s

The potential impact of closer economic arrangements can be illustrated by means of three qualitative scenarios: a base case; freer trade scenarios; and a longer-term scenario for a common market or economic union.
Base case

The base case scenario is driven largely by the three forces – outlined in Section 2 – that are driving North American integration. The key factor will be the outcome of the Uruguay Round. In the case of a successful outcome, adoption of a multilateral subsidies and countervail code will accelerate the unfinished part of the FTA negotiations on the same issues, and improve confidence in Canada. Phasing out the Multifiber Agreement will benefit Mexican producers. US business will benefit from the creation of new rules to govern services trade and investment. All three countries will benefit from the removal of uncertainty about the future of the multilateral trading system.

In the pessimistic case (failure of the Uruguay Round), Canadian and Mexican Governments have recognised that forces in the United States pushing for unilateral trade policy and managed trade will be dangerous threats. These threats, plus the continued existence of tariff barriers, will reduce income growth and slow the rate of integration among the three countries, but they are unlikely to block it entirely.

Increased competitive pressures in US markets from East Asia and Europe could provoke US unilateralism that could affect Canada and Mexico as well. US economic dominance exercised in this way would provoke nationalist backlashes in both Canada and Mexico, and create pressures for the revival of inward-looking policies.

In Mexico these pressures would be exacerbated by difficulties in servicing its external debt. Painful choices would have to be made between debt-servicing and maintaining domestic growth that could lead to unilateral moratoria on debt-servicing and renewed tensions in the international financial system.

An offsetting force in the base case scenario will be the determination by global firms in Canada, the United States and other industrial countries to compete more successfully in world markets by investing in offshore low-cost production facilities. While the volume of world trade could be expected to decline overall, the pattern of trade could be expected to follow absolute advantage (in which raw materials are exchanged for manufactures) and evolve slowly into intra-industry specialisation as the basis for expanding trade.

Another key feature of the base case is the Mexican “maquiladora”, in-bond industries set up to take advantage of US legislation allowing foreign production using US inputs. In these industries, US components are imported duty free and in-bond into Mexico and are assembled or used in manufacturing other products which then are re-exported to the United States. US importers pay duty only on the value added by Mexican operations. Such operations would be expected to continue to mushroom in Northern Mexico as a way for third countries to produce for the US market. Maquiladora production poses a considerable competitive threat to Canadians, a threat which has been restrained by rules of origin provisions in the FTA (goods further processed in Mexico before being shipped to their final destination could qualify for favourable duty treatment in the United States, but not in Canada). Without the FTA, Canadian producers could also be expected to pursue similar arrangements.

Freer trade scenarios

Freer trade among Canada, the United States and Mexico will accelerate intra-industry specialisation and division of labour. Adjustment requirements in the protected
labour-intensive industries in Canada and the United States will be substantial initially, but will decline if Mexican incomes grow rapidly. As the Mexican economy develops, gains from trade can also be expected from intra-industry trade (a prominent feature of Canadian/US trade) in which producers in the different countries specialise in particular products or product niches within industries that are then traded across national boundaries — thereby increasing exports and imports in the same industries. In this way, trade between Mexico and the other two North American economies will be characterised by greater specialisation, rather than by complementarity between different industries.

Overall, the gains from NAFTA are likely to be greater, proportionately, in the smaller economies because of more assured access to the US market, and because of growth in trade and investment between Canada and Mexico. US producers will make substantial gains from their strategic access to both markets and from tariff-free access to a market in Canada 10 per cent enlarged in size by 1999 (when the Canadian/US FTA is fully phased in) and to a purchasing power equivalent in Mexico of a similar size⁵.

Trade liberalisation raises incomes, output and employment through several channels: income effects, reduced consumer prices, specialisation in production and economies of scale and scope, dynamic effects and reduced uncertainty. In the case of the Canada/US FTA, these effects have been quantitatively assessed for Canada, and for illustrative purposes are summarised below. A more qualitative assessment of NAFTA follows⁶.

FTA

- Income effects: real incomes are expected to rise by less than 1 per cent of GDP in the United States and by between 1 and 3 per cent in Canada over what would otherwise have occurred (Department of Finance, Canada, 1988; US International Trade Commission, 1991). Elimination of all tariffs between Canada and the United States and reduction of non-tariff barriers negotiated in the FTA are expected to reduce input costs, to spur productivity growth and greater competitiveness in Canada, and to raise exports (Department of Finance, Canada, 1988, p. 31).
- Reduced consumer prices: increased competition from imports is estimated to reduce Canadian consumer prices by 5 per cent (Department of Finance, Canada, 1988) and the prices of intermediate goods by 4 per cent, thereby stimulating retail sales through the positive effects on purchasing power.
- Product specialisation and economies of scale: enhanced scale economies resulting from more assured access for Canadian producers to the large US market are estimated to allow an economy-wide drop of 2 per cent in long-run production costs, and output expansion of 3.5 per cent (Department of Finance, Canada, 1988).
- Dynamic effects: it has been argued that Canada has a lower rate of adoption of known technological improvements than do other industrial countries (Daly and Globerman, 1976). If this slower rate is related to the time it takes to write off the value of older technology, then the higher the rate of output, the faster the rate at which new technology is introduced and the lower costs will be at any point in time (Lipsey and Smith, 1985, p. 33).
- Reduced uncertainty: the creation of new rules and procedures for the application of trade remedy law and the resolution of trade disputes will reduce uncertainty
and encourage investment and risk-taking. In the two years before the agreement was implemented, Canadian firms invested ten dollars in Canada for every dollar they invested abroad. By 1990, this ratio had changed to 30:1, a factor that moderated the severity of the 1990-91 recession. A major Japanese investment mission in 1989, however, counselled caution until it was possible to draw some conclusions about the FTA's potential for greater objectivity in the application of US trade laws (Keidanren, 1989).

Manufacturing output in Canada was expected to expand as a result of more secure access to the US market and opportunities to exploit dynamic economies and economies of scale. Highly protected producers, such as those in textiles and apparel, are responding to increased competitive pressure by reducing their production costs with greater access to imports, and by specialisation and longer production runs. Reduced tariff barriers to further processing will benefit natural resource producers, who will be able to diversify their manufacturing bases. Energy exports from the prairie provinces will benefit from greater market access and from enhanced investor confidence. In Ontario and Quebec, the auto industry benefits from preservation of the Auto Pact, and from rules of origin that encourage non-Auto Pact producers to use more North American auto parts.

More predictable application of non-tariff barriers and reduced hassle for business travellers are expected to be of benefit to service industries.

The employment impact of the bilateral agreement was expected to be of the order of 120,000 new jobs created by 1993 and greater security for 75,000 - 100,000 existing jobs that would have been threatened by the continuation of uncertainty about US trade remedy laws (Department of Finance, Canada, 1988).

Two years is too short a period to provide a basis for more than a qualitative evaluation of the actual impact of the new agreement. In addition, this period has been characterised by a severe Canadian recession (output has fallen 4 per cent and unemployment has increased to 10.2 per cent). Other policy changes have occurred – a 7 per cent value added tax was introduced in 1991 – and monetary policy has been tightened in response to inflationary pressures caused by an unsustainably large federal budget deficit and expectational factors affecting wage demands. Nominal interest rates peaked at 14 per cent in May 1990 and have since fallen to below 10 per cent, but a strong Canadian dollar in the range of $0.86 - $0.87 since 1989 (compared to PPP estimates of equilibrium at $0.80) has reduced the competitiveness of Canadian exporters. The adoption in February 1991 of an ambitious federal programme to restore fiscal balance and to reduce inflation, however, is preparing Canada to achieve lower inflation than that in the United States by mid-decade.

**NAFTA**

Trade liberalisation negotiated in NAFTA will operate through the same channels in Mexico as was expected in Canada from the FTA. Because of expanded prospects for low-cost production in Mexico as a result of NAFTA, US labour adjustment through occupational shifts and changes in relative wages is expected to be greater than in the wake of the FTA. Incorporation of the lower-skilled, less-developed third economy will increase opportunities to exploit different production functions. Mexico will also gain access to two high-income markets and currently low levels of integration between Canada and Mexico will increase.
Competition between Canadian and Mexican manufacturers exporting to the US market will increase, but much of their output is expected to be in complementary products. Both countries’ shares of fully manufactured products in total US imports have steadily increased, often in the same sectors: power-generating equipment, transportation, telecommunications equipment and other machinery and equipment (Hart, 1990, p. 71). An increasing proportion of Canadian trade is in semi-finished goods (producer goods, components and sub-assemblies). Mexico, with an abundance of low-cost labour and smaller endowment in natural resources, should be a natural location for assembly operations and labour-intensive manufacturing. Thus, while Canada and Mexico will compete in the same broad industrial sectors, each will develop expertise in different segments of the same sub-sectors or in related sectors. This is already the case in such areas as primary products, wood products (where Mexican demand may add to Canadian and US markets by diversion of trade from Europe), iron and steel, and even in footwear (where, for example, most Canadian exports are winter wear).

US producers will be the best placed to make strategic decisions based on advantages available in all three markets. Both Canada and Mexico rely heavily on foreign direct (particularly US) investment for capital and technology. In 1989, the stock of US direct investment in Canada totalled $67 billion, while that in Mexico totalled $17 billion (Hart, 1990, p. 74). Canadians will see the diversion of some US investment and trade to Mexico that might have been attracted to Canada, but such diversion is likely to be less than would be the case in the absence of trilateral negotiations.

The US share of the Mexican market far outstrips the Canadian share because of greater proximity and more direct investment. Many more US-based companies have production operations in Mexico; much of Mexican-US trade is intra-firm. Restrictions on trade exist nevertheless (and on trade and investment in Mexico). Phasing these out will be a key objective of the forthcoming negotiations and will have important sectoral consequences. The treatment of autos and machinery and equipment in particular will be a prominent issue. The Mexican auto industry is small, diverse and less efficient than that of Canada or the United States. US negotiators are likely to seek to phase out Mexican restrictions on investment and on imports, export performance requirements, and local content provisions. Canadian Auto Pact production and content safeguards will be of concern to the United States as well (the Mexican position on the issue is unclear). Canada’s interest will be to ensure that the duty-free treatment of imports from third countries in the maquiladora is rolled into new trilateral rules of origin.

Because of the efficiencies that can be realised in the auto industry from “lean production” (which emphasizes close relationships among components suppliers, research and development, and assembly), these activities are likely to be located near each other. Labour intensity and relative labour costs may determine the location of particular models: inexpensive, entry-level models may be concentrated in Mexico, and the more sophisticated, less price-sensitive models produced in Canada and the United States. This division of labour would limit the job losses of auto workers in those countries.8

The machinery and equipment sector will be important because of Mexico’s need for capital goods to modernise its infrastructure and production base. Rapid economic growth plus the phaseout of Mexico’s import licensing requirements and duties could be expected to increase its imports of capital goods, major household appliances, farm and construction machinery and equipment for food processing and pollution control (US
International Trade Commission, 1991, pp. 4-32 - 4-35). Some shifting of low-cost production to Mexico may also occur.

Phaseout of Mexican investment restrictions and import licensing would benefit US exports of services, agricultural products and cement, although the impact on total US exports will be small. Similar changes and better protection of intellectual property would encourage chemicals and electronics exports as well. Mexico would gain from the removal of US restrictions on imports of horticultural products, glass, steel, and textiles and apparel (US International Trade Commission, 1991).

Finally, the prospect of a phaseout of these restrictions has raised concerns about consequent labour market adjustment. As long as the US labour force is near full employment, NAFTA can be expected to have little impact on the employment level. It can, however, be expected to cause shifting of employment among occupations and affect relative wages and migration from Mexico. Factor price equalisation theory would predict that the gap between real wages will narrow with trade liberalisation⁹. Even in the short run, the impact of relatively lower Mexican labour costs can be expected to be mitigated by such factors as low productivity (the Nissan plant in Cuernavaca, for example, takes more than twice as long to produce a car as the Nissan plant in Tennessee), the low quality of Mexican infrastructure, and other important factors such as distance from customers (Hart, 1990, p. 73).

In summary, further liberalisation of trade and investment rules in North America will accelerate the pace of change already under way in the structure of North American production and employment. These changes will be characterised by specialisation within industries and increased intra-industry trade, rather than by elimination of particular industries. The magnitude of the impact of such trade liberalisation will be affected by the extent of concessions in the agreement. Time constraints on the negotiating process could restrict the size and quantity of these concessions and, therefore, the magnitude of the agreement’s economic impact. Introduction of NAFTA in the 1992-93 period, when an economic upswing is expected, will maximise the growth-augmenting dynamic effects, as well as the positive impact on economic confidence.

Common market scenario

The third scenario is one which focuses on further evolution in the longer term into a common market or economic union. Two steps would be required: first, creation of a customs union, in which external barriers to goods and services are harmonized among participants; second, freeing up of flows of capital and labour.

Liberalisation of capital flows is unlikely to be a problem. Since the mid-1980s direct investment has tended to flow quite freely among the three countries, as national restrictions have been removed in Canada and Mexico, and as a result of integration of international capital markets and the globalisation of production. In Mexico’s case, large capital requirements satisfied in the 1970s with debt must now be satisfied with foreign investment.

Labour flows pose a greater problem because of the large differences in productivity between Mexico and its two northern neighbours. Trade theory states that trade and factor flows are substitutes for each other and will flow to equalise factor incomes internationally. However, history has demonstrated that because of the difference in production functions, free trade will not equalise incomes quickly enough to remove the economic
incentive to migrate from the low-productivity to high-productivity country. A common market might reduce such pressure, however, in two ways: on the supply side, Mexican incomes would rise, thereby reducing the incentive to migrate; on the demand side, labour costs to potential Canadian and US employers of legal Mexican workers would rise, since benefits would have to be included. With the removal of barriers that currently deter such legal migration, however, it is unknown what the net impact on migration would be. Political pressures from US and Canadian groups would be expected, however, to resist legalisation of labour flows until income differentials have narrowed considerably from present levels.

US dominance will be an additional obstacle to a common market. Harmonization of commercial policies would entail Mexico's and Canada's adoption of US policies. Yet the United States uses trade and investment restrictions as instruments of foreign policy, the cases of China and Cuba being two examples. In each case, Mexico and Canada pursued different foreign policy and trade objectives.

In summary, the curtailment of sovereignty and political concerns about labour flows are important factors that make it unlikely that in the foreseeable future Canada and Mexico would propose even closer economic integration with the United States in the form of a common market or economic union.


The global implications of North American integration are of two kinds and are potentially offsetting. While there is a possibility of trade diversion, NAFTA is likely to be GATT-consistent (as is the Canada/US FTA) and trade creating; the interests of some of the participants will also be served by extending the arrangements to other countries. Of greater concern is the uncertainty surrounding the Uruguay Round and the future of GATT. Failure, or a small package, is a greater potential threat to smaller countries because of the possibilities for conflict and collusion among the world's three largest economies.

A commonly expressed concern about North American integration is that the area will become another inward-looking trade bloc, diverting trade from other countries – particularly the Caribbean and other parts of Latin America. Mexico will also attract investment from Canada and the United States to take advantage of plentiful supplies of low-cost labour, and will produce goods that might otherwise have been produced in Asia. At the same time, it must be recognised that in the foreseeable future, Mexico will experience severe constraints on its capacity to absorb such investment: it lacks the necessary infrastructure of electricity, transportation and communications, as well as supplies of skilled labour.

It would be wrong, for several reasons, to confuse North American economic integration with a North American trade bloc. First, for a trade bloc to develop, trade with economies outside the region would have to become more regulated as trade within the region becomes freer – say, through the adoption of common commercial policies and policies towards foreign direct investment. Secondly, the economic dominance of the United States is such that neither Canada nor Mexico is willing to sacrifice sovereignty in the way that would be implied by a trade agreement that is any closer than a free trade area. Thirdly, Mexico and Canada are also pursuing trade initiatives with other regions. Mexico, it should be remembered, unilaterally reduced its tariff barriers with the rest of
the world in its preparations to join GATT in 1985/86. Mexico has recently signed an
ambitious co-operative agreement with the European Community, and has signalled its
intention to revitalise movement in Latin America towards freer trade.

Indeed, the interests of the smaller countries around the Pacific Rim would be served
by pursuing the common objective of greater economic integration among themselves, in
order to reduce the dominance of Japan and the United States in their respective eco-
nomic regions. Many East Asians subscribe with some pride to their role of pedalling
the bicycle of world trade. They could be looking beyond East Asia to promote further
economic integration, for example with the North American economies.

The greatest threats to the world trading system of a failure (or a small package) in
Geneva come from the possible reactions of the Europeans, Americans and Japanese to
each other’s policies. In the United States, support for unilateralism – in the form of
increased use of Section 301 of the 1988 Omnibus Trade and Competitiveness Act –
could be expected to increase. With the breakdown of the transparent rules-based system,
support for managed trade will grow, with increased use of bilateral pacts such as the
Structural Impediments Initiative negotiated in 1990 with Japan. In order to avoid overt
conflict, the large countries may resort to co-operative outcomes in which markets are
shared, thereby distorting trade by allocating markets to firms with political clout rather
than to those that are the most efficient, and to the detriment of third countries.

The intent of Mexico in particular, but also of Canada, is to increase rationalisation
and liberalisation in order to be globally competitive – in a manner that should be
familiar to East Asians. Both Canada and Mexico have tried inward-looking autarkic
strategies in the past, and found them woefully inadequate to the central objective of
ensuring steady growth in real living standards.

Mexico’s success in spurring economic confidence and the return of flight capital is
also a powerful signal to other Latin American countries to follow its lead. Chile, for
example, has indicated its intention to be the next country with which the US negotiates a
free trade area as part of the fulfilment of the 1990 Enterprise for the Americas Initiative,
and is already pursuing such an initiative with Mexico. There is no economic reason why
the currently contemplated free trade area should not be extended in this way to countries
which have undertaken fundamental reforms. It seems unlikely, however, that the United
States will have the same enthusiasm for negotiating a wider set of arrangements in the
near future for political and strategic reasons. First, such negotiations require a great deal
of political capital (in order to obtain fast track authorisation from Congress) to launch
and conclude. Conclusion of both the Uruguay Round and NAFTA will absorb available
US energy in 1992, and obtaining ratification will carry into 1993. Secondly, the United
States might pursue a wider set of bilateral agreements in the event of a failure of the
Uruguay Round, but it is more likely that efforts will be directed first towards the fast-
growing markets of the Pacific Rim, where US economic interests are greater.

To obtain more US attention, Latin American nations will have to demonstrate their
commitment to market-oriented reforms by first liberalising trade and investment among
themselves. More likely in the 1990s are arrangements between Mexico and its Latin
American neighbours. As Mexico pursues its goals of rapid economic growth, it in turn
will become a magnet for migrants from its poorer southern neighbours unless it sponsors
initiatives to improve their prospects for economic growth and trade. Indeed, President
Salinas has articulated his vision of Mexico as a “bridge” between the two
Americas.
7. Conclusion

Economic integration of the North American economy, already under way as a result of global forces, will accelerate economic growth in all three countries and create trade as well. Negotiation of NAFTA will accelerate growth of direct investment and incomes in Mexico. Implementing NAFTA in 1993 is likely to occur during an economic upswing which will magnify its growth-augmenting and trade-creating impact.

All participants in the trilateral negotiation are committed to a GATT-consistent outcome; Canada and Mexico are pursuing the expansion of trade and investment relationships with other countries as well, with a view to reducing US economic dominance in the region. Indeed, the lack of interest in closer economic arrangements like a common market (at least for the foreseeable future) can be traced to Mexican and Canadian concerns about US dominance.
Notes

1. The Auto Pact was negotiated in 1965 and provides for duty-free trade in specified automotive products; all US imports that contain at least 50 per cent combined Canadian and US content may be imported free of duty from Canada. In Canada, qualified manufacturers may import the same automotive products duty-free from anywhere in the world as long as they meet certain performance requirements.

2. The population of the province of Quebec, at 7 million, is 27 per cent of the Canadian population. Quebec population increased 0.8 per cent in 1985, compared to the 1.2 per cent Canadian average. Quebec provincial product accounted for 23 per cent of Canadian production in 1989.

3. These alternatives have been sketched out by Lipsey (1990).

4. President Bush, for example, has made undertakings to Congress on environmental, safety and labour issues that are explicitly bilateral with Mexico.

5. Assuming that the purchasing power equivalent of the 86 million person Mexican market is roughly a tenth that of the other two countries, since Mexico’s average per capita income is a tenth the US/Canada average.

6. Similar quantitative analyses for NAFTA are under way, but had not been published at the time this paper was prepared.


8. Wonnacott (1990), referring to predictions by James Womack of the Massachusetts Institute of Technology.


10. Japan’s economy accounts for 84 per cent of the output of the ASEAN-4 plus the Asian NIEs and Japan; the US economy accounts for 88 per cent of the output of the three North American economies. By contrast, Germany, with one-fifth the population of the big five European economies, accounts for only a quarter of total output.

11. Some anecdotal evidence indicates that immigration from its southern neighbours is already a problem for Mexico.
Bibliography


European Economic Integration in a Long-term Perspective

by

Emilio Fontela
Universidad Autonoma de Madrid, Spain
University of Geneva, Switzerland

1. Introduction

The postwar recovery stimulated in Europe a process of high economic growth and positive expectations lasting two decades. By the end of the 1960s it was obvious that social and economic systems were unable to continue moving along the same path; the Club of Rome’s message on limits to growth was widely accepted in the industrial poles of Europe. International monetary instability and the oil crisis acted as complementary factors to existing social discontent, resulting in a continual loss of momentum for Europe.

Since the mid-1980s, however, new growth expectations induced by institutional change (the EC Single Market) and by improvements in the world economic environment (the decline of oil prices in real terms, greater international monetary stability) have again to a certain extent stimulated investment, output and employment.

Before considering some alternative scenarios for the future, a brief synthesis of existing trends and issues is required.

2. Trends, challenges and policies in Europe

A brief survey of the existing literature on the future of Europe (based mainly on abstracts from the OECD Future Studies Information Base) affords an immediate identification of some basic demographic, social and economic trends, as well as some relevant issues.

**Demographic trends**

Low fertility rates in Europe, well below replacement levels, have resulted in a continuous ageing of the population. A few indicators tell the story: in the European Community, the population over 64 will rise from 42 million in 1985 to 63 million in 2025; there should be about 12.7 million fewer young people (0 to 19 years) in 2025 than in 1985 (International Labour Office, 1989); by 2025, 11 million more persons are
expected to leave the workforce than join it annually (compared to a net surplus of new entries to the job market of 2.5 million a year in 1988) if female participation rates remain the same as in the mid-1980s and net migration rates are nil (de Jouvenel, 1988); during the 1990s this long-term trend will slowly develop and by the year 2000 the working population will be only 1.5 million more than in 19901. Many issues are related to these demographic trends:

- Higher dependency ratios (aged persons to workforce) require a readaptation of social security schemes for inter-generation income transfers.
- Increasing female participation rates appear both as a cultural trend and a labour market need, thus forcing an institutional adaptation of existing work-education-leisure systems.
- Net immigration, already an observable trend despite high unemployment and a growing workforce, is likely to accelerate further when the European population at working age starts to decline in the late 1990s.

*Some economic structural trends*

According to many relevant indicators, the long-term economic competitiveness of the European Community is improving. An example of this evolution is the rate of change of unit labour costs (costs per worker divided by labour partial productivity of real GDP), which shows the extent of adjustment that has taken place since the major crisis of the second half of the 1970s (Table 1).

<table>
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<tr>
<th>Year</th>
<th>Rate of change (%)</th>
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<tr>
<td>1961-73</td>
<td>5.2</td>
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<tr>
<td>1974-81</td>
<td>13.6</td>
</tr>
<tr>
<td>1982-86</td>
<td>6.1</td>
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<tr>
<td>1987-90</td>
<td>3.9</td>
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*Source: EC Statistical Office.*

This adjustment process has involved deep sectorial restructuring; agriculture and basic manufacturing have lost ground in favour of light industry and advanced services; a new regional distribution of activities has been influenced by the development of sectors linked to the technological revolution of the Information Society.

The end result of many observable trends is still unclear; in the second half of the 1980s the less developed areas of the European Community (Spain, Portugal, the Mezzogiorno, Greece, Ireland) were recovering ground, but unequally in terms of EC per capita income average; studies on the trade of high-tech products or on technological agreements2 show a growing concentration of "new" activities in "old" areas; judging by existing EC infrastructure and the related flows of goods, services, capital, technology and people, there is a growing concentration of activity in a wide area that stretches from Southern England through the Paris area to Northern Italy along the Rhine axis3.

Perhaps the clearer structural trend is the growth and diversification of "dualism" (between unemployed and overemployed, between dynamic regions and de-linked
regions, between modern competitive sectors and protected inefficient activities). The regional development gap is particularly striking in this respect: per capita income in the richest regions in Germany is 3.5 times that of the poorer regions of Greece\(^4\).

Social tensions stemming from dualistic growth paths may prevent a proper functioning of the EC integration process in the future.

**Some challenges for the European Community**

The future of the EC during the present decade will depend on its eventual capacity to face four major challenges:

- Competitiveness in relation to the United States and Japan: according to OECD statistics, the share of highly R&D-intensive production in manufacturing is 25 per cent in the United States, 23 per cent in Japan and only 17 per cent in the EC; the European technology balance of payments shows a deficit of $2.5 billion (Japan is in equilibrium while the United States shows a surplus of $8 billion); all trends show a relative deterioration of the European position\(^5\).

- The New Frontier effect in relation to Eastern Europe and the Mediterranean southern region: growth in these border countries requires an investment effort which to a large extent has to be financed by EC savings. A surplus of savings now exists in Europe, but generating additional savings will require some changes in behaviour for households, enterprises and public administrations\(^6\).

- A multicultural society: even if the response to the New Frontier challenge is positive (high growth in Eastern Europe and the Mediterranean), surpluses in the working population in these areas are likely to remain, fuelling the ongoing migration towards EC (and EFTA) countries. The European Community, at the crossroads of strong historic civilisations, is facing the need for integration of new social groups with extremely different cultural backgrounds (Lesourne, 1986).

- Supranationality: the European Community has started a process of treaties, regulations, resolutions and directives that is creating a solid legal basis for a continuous transfer of power from the national states to some form of supranational power structure; the role of the jurisprudence established by the European Court of Justice (and obviously of the actions of the European Commission as first agent involved in the application of the agreed rules of the game) is likely to be essential in establishing the lasting nature of this process. Tensions could be further stimulated by the growing strength of sub-national regional institutions, allowing the national state to be challenged both from above and from below its traditional level of government rule\(^7\).

These four challenges offer the possibility of developing a strong Europe (competitive, surrounded by new growth poles, culturally enriched by diversity, and efficiently utilising supranational power to solve its main internal and external problems); needless to say, if the challenges are handled incorrectly, they may put Europe at a standstill for well over a decade.

**Some policies of the main economic and social agents**

While trends and challenges are helping to define the agenda of issues for the 1990s in the European Community, it is also necessary to consider existing positions of the main agents: the EC institutions, member countries, firms, unions and consumers.
The EC institutions have a clear picture of their goals, objectives and tasks for the 1990s:

- The Single European Market, abolishing obstacles to trade in goods and services, allowing for the free movement of factors of production; 1992 is unlikely to eliminate all the existing barriers, but the end of the century will certainly be characterised by an EC market in which national differences will not be more distorting than today's regional differences within any single market.

- A reasonable level of "cohesion" – that is, the notion of reducing differences in income and quality-of-life levels within the EC region (i.e. avoiding the "dualism" trap), an objective fully supported by all EC institutions that legitimates its regional policies (structural funds).

- A solid competitive position in high-tech sectors, preparing a collective answer to the competitiveness challenge raised by the United States and Japan. This objective is clearly behind the continuous priority given to technological R&D programmes.

While the last stages of the more ambitious Economic and Monetary Union are still being debated, these three objectives are now fully accepted by all countries; plans, programmes and tasks follow normal administrative procedures. The political debate is over.

Both large corporations and SMEs have been stimulated towards the internationalisation of their activities by the new EC objectives and related economic perspectives. In a recent survey, 74 per cent of European firms consulted indicated that they were looking for co-operative agreements with firms from other EC countries; well over 50 per cent of the international agreements between companies throughout the world include at least one European partner.

The European Confederation of Trade Unions is progressively building its strength to be able to negotiate at the European level, initially with the aim of developing a social environment within the EC with limited social "dumping" (i.e. productive activities aimed at a competitive advantage based solely on fundamental differences in social costs).

Studies show converging patterns of behaviour in household consumption, from "traditional" (36 per cent of European consumers in 1987) to "modern" (45 per cent); however, "modern" consumer patterns are moving away from uniformity, towards a diversity based on the multicultural characteristics of Europe (Paitra, 1991). The "modern" European consumer is a strong supporter of the EC integration process.

In concluding this brief survey of the policies followed by the main economic and social agents within the EC, it is noted that the EC institutions are now supported by firms, unions and consumers. National states may have different views on the speed and extent of the integration process, but it is becoming increasingly obvious that any attempt to stop the process will meet growing resistance from powerful economic and social agents.

3. Scenarios of the future of the European economy

Ten years ago, in the framework of the EC FAST Programme, a study involving long-term scenarios (1980-2000) was carried out (project PRESTO). To review this study
today is interesting, both for its content and for what, from today's perspective, can be considered to be missing.

The first interesting observation deals with the fact that PRESTO did not envisage a trend scenario despite the fact that such a scenario is always prepared in long-term futures studies, at least as a reference basis for comparison with other hypothetical alternative futures. The most likely reason for the lack of a trend scenario in PRESTO was the general feeling that the future as a simple continuation of the past was unthinkable (unrealistic, undesirable or simply impossible). The situation in Europe at that moment was characterised as "europessimism": GDP growth rates were down to zero (from close to 5 per cent during the 1950s); the inflation rate was above 10 per cent per annum; the unemployment rate was reaching 11 per cent; public savings, which had reached 5 per cent of GDP in 1970, were down to −1.5 per cent.

Thus PRESTO considered three scenarios:

a) A Scenario of Protection: building trade barriers offered some possibility of short-term benefits (e.g. in employment) but hardly improved the long-term prospects.

b) A Scenario of Openness: free trade, deregulation, clear preference for market solutions and competitiveness, with Europe following what was then the core of new British policies; the scenario showed economic results that were better than expected, but also growing dualisms.

c) A Scenario of Promotion: active EC policies for regional development and strong European action to improve the situation of the world economy (a Marshall Plan was mentioned for developing countries) in order to increase the foreign trade multiplier effects.

As usually happens in futures studies, the 1980s have developed along a path combining parts of the three scenarios, and have brought forward an entirely unexpected event: the Single European Act, the 1992 Single Market objective, and the related objectives of cohesion and competitiveness.

It may be said that the Scenario of Protection has been rejected, but not fully (if some of the claims regarding Fortress Europe are to be believed); the Scenario of Openness has more deeply inspired action (the Single Market is largely along these lines in terms of relations among EC member countries); the Scenario of Promotion has obviously been transformed by events from promotion in the outside world to promotion within EC borders.

This mix of protection, openness and promotion has been unexpectedly successful in economic terms:

- From 0.2 per cent in 1981, the EC GDP growth rate has gone up to 3.8 per cent in 1988 and 3.4 per cent in 1989; after the slow-down in 1991, growth should recover somewhat in 1992 and pick up further in 1993.
- The inflation rate is down to an average 4.7 per cent per annum, and member countries are generally converging to the average.
- More than 8 million jobs have been created in the second half of the 1980s (but the unemployment rate for the EC remains at 8.5 per cent of the active population).
- Public savings are again slightly positive, and the EC has developed a current account surplus.
During the 1980s, the "europessimistic" trends of the 1970s have been radically changed, confirming the impossibility of a simple trend scenario (as suggested by the FAST-PRESTO exercise). In the early 1990s, however, new trends have consolidated, and a trends analysis of the long-term future is again a reasonable possibility.

The international environment in the 1990s

While a decade ago the future of the international environment was expected to be turbulent (and proved to be so), at the present moment there is a general expectation of a "surprise-free" international environment to the end of the century:

- The major changes in the Soviet Union and Eastern Europe wrought by the end of the cold war are generally expected to be positive for the EC (New Frontier effects).
- The New International Order emerging from the UN action in Kuwait opens new horizons for the institutionalisation of World Society with positive consequences for world markets (a "surprise" favourable outcome for the debt problem of developing countries may even stimulate growth and trade).
- A new oil crisis has lost credibility (despite the rational long-term consideration of the "limits" of world supply).
- Efforts to achieve better international policy co-ordination of macroeconomic instruments are likely to continue, and even if GATT negotiations are facing difficulties, it is only the rhythm of further improvements in the functioning of the system that is in question.

For the European Community, this world environment scenario offers only positive expectations. In total, exports and imports of the EC with the rest of the world only reach 10 per cent of EC GDP, but it is clear that for many member countries, non-EC markets are an important generator of multiplier effects, and prospects for a more dynamic world environment will continue to encourage many new investment decisions.

In analysing possible future scenarios for the EC, it is always assumed that there is a positive foreign environment for the EC along the lines described above. Should a major event (e.g. a new energy crisis) seriously modify this environment, it will most certainly slow down the evolutions considered in the scenarios. As the Gulf events have again confirmed, in a period of great changes (in institutions) – such as the one occurring at present in Europe – psychological considerations play an essential role (investment was cut down by "europessimism" but then again stimulated by "euro-optimism").

European scenarios

From the analysis of current trends, and also from the knowledge of decisions already made by the main economic agents (and of their expected consequences), a Conventional Wisdom Scenario is progressively emerging, a view of the future of Europe that is close to a consensus among analysts.

Some aspects of this scenario are extremely clear (the Single Market, the trend towards "Europeanisation" of the economic agents), but the view becomes blurred when the emphasis of the analysis is widened to include broader institutional aspects (the "new architecture" of the EC) or policy options still considered to be entirely open (increasing the number of EC member countries).
The description of the Conventional Wisdom Scenario offered below is followed by a discussion of two alternative scenarios: the Scenario of Deepening (reinforcing the institutional strength of the EC), and the Scenario of Widening (contemplating a new enlargement of EC membership).

*Scenario of Conventional Wisdom*

*a) Growth prospects*

As indicated above, Conventional Wisdom is evolving towards increasingly positive expectations in the short, medium and long terms. In the autumn of 1989, when preparing its energy outlook, the EC research services indicated as “Conventional Wisdom” a GDP growth rate of 2.7 per cent per annum from 1990 to 2010; in December 1990 the conclusion of a research study of the EC indicated as average projections GDP annual growth rates of 3.0 to 3.5 per cent from 1991 to 1995 and 3.5 to 4.0 per cent from 1995 to 2000. Low oil prices following the Gulf war are likely to stimulate further this optimistic conventional view of the future. The fundamental justification of this improvement in expectations is to be found in the consensus of analysts around the growth effect of the Single European Market; static gains from the market may provide at least 4.5 per cent additional GDP (*European Economy*, 1988); dynamic gains even double this impact (Baldwin, 1989).

*b) The Single European Market*

Under this scenario it is widely accepted that:

- With free movement of capital and the new directives establishing an integrated European private financial system, the efficiency of financial markets will increase, interest rates and financial transaction costs will decrease, and investment and competitiveness will be stimulated.

- With the free provision of services, and in particular of business services (transport, insurance, distribution, etc.), all transaction costs will be reduced, generating vast multiplier effects of productivity gains.

- Public sector practices (procurement, monopolies) will be increasingly open to market competition, and in general, public administration itself will be subject to competition (in the absence of fiscal harmonization, public administrations will have an incentive to improve their overall performance, i.e. the relation between the value of services provided to economic agents and the fiscal cost to them of these services).

- The adjustment process in the less competitive member countries (which may be different for each productive activity) will not be very severe, and all will benefit from considerable long-term gains derived from economies of scale (the “size of the market” effect).

Although the question has not yet been considered in any document, it is highly improbable:

- that all the EC directives envisaged for the establishment of the Single Market will actually be implemented by 1993; in particular, tax harmonization is proceeding very slowly;

- that these EC directives, when implemented, will be sufficient for a real Single
Market to be fully operational (at least to the level required to justify fully the positive expectations raised by the economic studies mentioned above).

One should therefore include, as part of the Scenario of Conventional Wisdom, the ongoing development process of the Single Market during the 1993-2000 period; at the same time, however, there is little doubt among analysts that the Single Market will become a real stimulating force for the EC during the current decade.

c) Cohesion

The Conventional Wisdom Scenario incorporates some results of the studies on the impact of the Single Market which show that enhancing competitiveness within the European Community as a main factor of restructuring will negatively affect the less-developed regions of the Community. This view explains the interest placed on increasing the budget share of structural funds (investment funds oriented specifically towards these less-developed regions); doubling of structural funds for the 1989-93 period has brought them at least to the (still modest) level of 1 per cent of GDP.

The reasoning behind the growth of structural funds during the 1990s is their triggering effect on infrastructural development; it is generally believed that by increasing linkages (transport, communications, energy) between the "core" and the "periphery" within Europe, and by diffusing investments on R&D, education, training or even environmental protection and quality-of-life services, the EC will facilitate the development of a system of "equal opportunities" for growth, with final responsibilities for success or failure to be accepted at the local level.

The need for a clear territorial "vision" of Europe becomes obvious in this Scenario.

d) Competitiveness

The Conventional Wisdom Scenario, as portrayed by the most recent quantitative projections, does not take into consideration any possible loss of competitive power on the eve of the Single Market, as can be seen in Table 2:

<table>
<thead>
<tr>
<th>Table 2. Annual growth rates</th>
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<tr>
<td></td>
</tr>
<tr>
<td>Labour productivity</td>
</tr>
<tr>
<td>Unit labour cost</td>
</tr>
<tr>
<td>Exports, goods &amp; services</td>
</tr>
<tr>
<td>Imports, goods &amp; services</td>
</tr>
<tr>
<td>Current account (% GDP)</td>
</tr>
</tbody>
</table>

While it is difficult to expect major changes during this decade in the high-tech position of the EC relative to Japan and the United States (despite the increase in R&D community programmes, the efforts involved are still small in the competitive context), it is clear that the EC's leading position in medium -- and, to a lesser extent, low -- R&D industrial activities more than compensates.
Trade frictions with other areas of the world are certainly to be expected as a negotiating tool, in order to force corrections of eventual inequalities in treatment (the “reciprocity” idea is another aspect of this same question), but they do not, in this scenario, appear to contain a component which is menacing for the European economy.

This scenario is centred on the European Single Market and on what is normally expected to be a faster growth of intra-Community trade of goods and services. Adjustment costs will certainly be high, but the impact of internal competition is likely to be higher than the impact of foreign (non-EC) imports.

**Scenario of Deepening**

While Conventional Wisdom stays with the full exploitation of the European “push” provided by the Single Act, the Scenario of Deepening envisages a future with additional impulses towards a United Europe. Three aspects of the Deepening process appear to be particularly relevant: Economic and Monetary Union; Social Europe; and the new institutional architecture.

a) Economic and Monetary Union

In April 1989, the report on Economic and Monetary Union (the Delors Report) outlined an expert’s view of the next European developments, which can be expected to deepen seriously the integration process. The proposals include:

- increasing further the mobility of production factors;
- convergence of economic policies;
- stronger competition policy;
- fixed exchange rates, followed by a single currency;
- fixed ceilings for public deficits of member states;
- and an independent European Central Bank with full powers for monetary policy.

b) Social Europe

The growing fear of “social dumping” in the Single European Market, the union’s strengthening at European level, is pushing towards a growing EC presence in the institutional framework of the labour market. The Scenario of Deepening carries with it binding norms for protecting working conditions, health and safety measures, welfare payments, employment guarantees and active labour market policies at the level of current “best practice” in order to avoid the “lowest common denominator” that will naturally evolve from pure institutional competition between national systems.

c) Institutional architecture

What the exact content of the new institutional architecture might be is still unclear. It is obvious, however, that should the Deepening Scenario be followed to its conclusion, some serious rethinking of the role of the Parliament, the Council and/or the Commission would be required.

Many alternatives are possible – confederation, federation, European supra-state – and some are very complex.

Mutual recognition of institutional national systems (the principle emerging from the Cassis de Dijon ruling by the European Court of Justice that is finally leading the

127
formation process of the Single Market) is the essence of a confederation; additional harmonization measures in fiscal as well as social and welfare policies will open the door to a stricter European federal state; however, in the clear image of EMU in the Delors Report, there are definite elements of joint decision-making for macroeconomic policy which go well along the lines of a traditional federal structure.

In this scenario, considerable weight is to be given to the role of elected representatives, and in particular to that of the European Parliament in its relations with the Council and with Brussels' more "executive" branch, the Commission.

A quantitative exploration of the Scenario of Deepening has not been made by analysts, although there have been some hints suggesting further additional positive impacts apart from those expected from the Single Internal Market. The reasoning is simple: anything done to push further the European market towards a "national" situation is positive for all operators (or at least for those directly benefiting from the "size of the market").

Perhaps the results would be more controversial were the focus to be concentrated on one particular aspect of the future – territorial "dualisms". Is the Deepening Scenario likely to address this key issue positively?

The elements to be considered are the following (in line with the EMU proposal of the Delors Report):

- Greater mobility of labour and capital was very useful in the United States to reduce regional income disparities (Barro and Sala-i-Martin, 1990); however, inside the European Community, cultural differences are a natural handicap to labour mobility, while capital mobility is likely to favour existing growth poles.
- Wage flexibility allowing the poor regions to keep wages low will very soon be in contradiction with the Social Europe concept of more uniform wage costs; furthermore, it is doubtful whether low wages are an important criterion for new investment inside the EC (considering the opportunities along this line provided by the New Frontier countries of the Mediterranean or Eastern Europe).
- Convergence of macroeconomic policies is easily identified with common restrictive (anti-inflationary) policies, probably entailing higher costs for the backward regions that need more expansive policies.
- Competition policy that allows the market to function in a wider economic field may fight successfully against the incentive policies adopted in the backward regions to promote investment.
- Fixed exchange rates or a single currency replaces the backward regions in their present context (e.g. the Mezzogiorno inside Italy) but within a wider area. Experience has shown in the past that the possibilities of an automatic readjustment by the backward regions' action alone are extremely low. The constraint of adjustment to a foreign trade deficit is totally transferred in real terms; if wages cannot be kept at a low level (pressures of Social Europe), emigration appears to be the only answer.
- Ceilings on public deficits reduce the possibility of introducing more expansionary policies in backward regions (this proposal was not very realistic, as shown by the latest debates on the subject).
- Finally, a European Central Bank keeping price stability as its main policy obviously crushes any hopes for expansionary policies in less-developed member countries.
From this brief survey of the arguments, it is clear that the most likely consequence of the Scenario of Deepening is an increase in territorial dualisms. It is therefore understandable that current discussions on Deepening often lead to the idea of "variable geometry" in the integration process (some countries simply postpone adopting some of the measures proposed on the road to EMU).

The dangers of "variable geometry" developing are also easily identified: once along the path of "institutional diversity", it will be tempting for many countries to renegotiate some of the agreements reached on the Single Market.

Thus the "institutional architecture" aspect of the Scenario of Deepening becomes crucial. It is only through political power that rapid development of a unifying economic, social and monetary union can be achieved. A decade is probably too short a period for European political power to develop sufficiently to cope with the difficulties of this process. The Scenario of Deepening probably ends up with a strongly integrated European core and some countries having special "adjustment" conditions. Only a generous capital transfer policy from the "core" to the "periphery" could then avoid an increasing gap in wealth and income. Cohesion policies are therefore at the heart of this scenario.

**Scenario of Widening**

The above discussions of the Conventional Wisdom Scenario and the Deepening Scenario have been restricted to the present twelve member countries of the European Community.

Several alternatives can be envisaged for the EC's further extension:

- EFTA countries negotiate a European Economic Area for 1993.
- From Turkey to Morocco, some Mediterranean countries have indicated officially or unofficially their interest in joining the EC.
- Some Eastern European countries would also contemplate a similar move to consolidate their transition process towards the market system.

**a) EFTA**

In the Widening Scenario the main extension that can be envisaged during the 1990s is related to the EFTA countries (all or at least a majority of them). On economic grounds this extension raises few problems: these countries are in a stage of development comparable to the European "core" and could well afford the financial cost of developing the European "periphery" (cohesion policy).

Should the EC develop along the Conventional Wisdom Scenario lines, this form of Widening will simply consist in replacing at some point the European Economic Area by a full adhesion to the EC treaties.

However, this kind of process becomes more complex if the EC rapidly evolves along Deepening Scenario lines, since at that point of replacement, barriers to entry – as perceived by the EFTA countries – will be higher (the fact that the Deepening Scenario requires a new institutional architecture puts heavier constraints on some of these countries).
b) The New Frontier

For Eastern European countries, as well as for neighbouring Mediterranean countries, the issues raised in relation to possible adhesion to the EC are rather similar. Contrary to EFTA, these countries would eventually constitute a second-level periphery, and their full participation in the EC institutions could only postpone for a long period any movement along the Deepening Scenario path.

Most probably, therefore, the Widening Scenario should include the creation of a new “associate” position in the EC offering some of the advantages (including access to the market, to cohesion policies and to competitiveness policies) and even some special features (e.g. a specific development programme).

This rapid exploration of the Widening Scenario shows two developments basically compatible with, and to some extent complementary to, the Scenarios of Conventional Wisdom and of Deepening:

- a European Economic Area including the six EFTA countries, following both mutual recognition and harmonization patterns;
- a Development Belt including Eastern European and Mediterranean countries, possibly aided by a specific development plan, and with some of the active advantages and constraints of the EC economic system.

Going beyond these proposals towards complete integration of new countries raises additional development difficulties for the Deepening Scenario during the 1990s.

From the key point of view of “dualisms”, the perspective of a Development Belt may be seen negatively by the less-developed regions of the EC, which may even expect more disparities in relation to the “core” than in the Deepening Scenario.

A detailed study of this issue is obviously necessary, but an analysis of the relation of less-developed Spanish regions with Mediterranean growth scenarios appears to show that they could be the main beneficiaries of a more solid development in the Maghreb; the less developed regions of the EC may well become leading suppliers for the markets of the Development Belt in this scenario.

4. Europe and the world economy

As the experience of the PRESTO scenarios of the 1980s clearly shows, the 1990s may see for Europe a combination of Conventional Wisdom, some Deepening and some Widening. In any event, the evolution seems quite clear and the European Community has a good chance of meeting the challenges raised in Section 2 of this paper (competitiveness, the New Frontier, the multicultural society and even supra-nationality). While there is little to be done against population trends apart from accepting a higher level of immigration, dualisms are the one trend that will raise more difficulties in the future and will therefore require a more active policy.

All these future scenarios are analysed from within the EC; as mentioned in Section 3, only one scenario for the outside world has been considered, and it is a favourable one. It is necessary at the concluding stage of this analysis to return to its premises.

a) A favourable international environment for Europe is basically defined by international monetary stability, and by a continuous evolution towards free trade.
Capital and erratic currency fluctuations and protectionism are threats to open economies, and the EC is an open economy (agriculture is more an exception than the rule). A successful outcome to the Uruguay Round, a strengthening of the G-7 and continuous institutionalisation of the international economic system (e.g. new regional institutions or extensions of OECD activities) are of vital importance to the EC.

b) Developing countries have been an important market for European industry and technology, and will continue to be so in the future if a growth process is promoted again in this world region. Finding a solution to the debt problem and to the instability of export receipts for basic materials is a necessary step in which the EC is asked to participate [it is cautiously acting in this direction for the African, Caribbean and Pacific (ACP) countries].

c) In these two areas [(a) and (b)], the interest of all OECD countries, and in particular of the two that are more dependent on the world system (because of their lack of raw materials and energy) – the EC and Japan – are basically the same. By placing relations with Japan at this higher level, trade tensions on a limited number of special items will be brought down to their normal level.

d) The twelve EC countries together will produce a larger share of world output than the United States before the end of the decade, but unless the EC follows the Deepening Scenario, its political power will remain far behind its economic power. A strengthening of relations between EC institutions and the United States may be essential in the transition period towards the EMU (at the end of the process, only EC institutions should be in a position of having a direct economic negotiating power with the United States).

e) The DAEs are among the fastest growing economies in the world, and in terms of both trade and direct investment the EC has relatively well established links with them\(^\text{17}\). The definition of a co-operation strategy is under way.

It is clear that during the 1980s the EC has focused inward, identifying its internal problems and finding solutions. At the beginning of the 1990s the European path is clear; the only question is one of speed. If the Conventional Wisdom is confirmed, high economic growth will favour higher speed for integration; any type of crisis will slow down the process. However, in any circumstances it is evident that international economic relations are regaining importance for the EC: building a favourable foreign environment for higher internal growth is a task increasingly understood in Europe.
Notes


8. Surveys and statistics (Fordat) collected in the framework of FAST-MONITOR, EC. The survey on plans for interfirm agreements was conducted in 1988.


13. Figure 1 below is extracted from Commission of the European Communities, Directorate-General for Science, Research and Development, FAST-MONITOR, "First Biennial Report on the Social and Economic Implications of New Technologies" by the ASSESS Group, February 1991, p. 161. It illustrates this leading position of the EC in the trade of medium technology goods.
14. These ideas are further developed by P.C. Schmitter, Stanford University, in his (as yet unpublished) studies on the European Community as a novel form of political domination.

15. Following ideas mainly developed by J.A. Gallego Gredilla, Instituto Nacional de Prospectiva, Madrid.


Bibliography


The Evolution of Europe 1990-2010

by

Jacques Lesourne
Le Monde
France

1. Introduction

A range of factors will, it is quite clear, exert their influence on all three pillars of the developed world – North America, Japan and Western Europe – over the next twenty years. These factors include ageing populations set amidst the teeming growth of the Third World; local, regional and planetary environmental problems looming increasingly large; continuing technical revolution fuelled by the new information technologies and genetic engineering; differentiation within the Third World, which will carry greater weight in the economic and political arena; governments too large to deal with small problems and too small to tackle the large ones; an increasingly internationalised world economy as market barriers come down; and the emergence of more and more multinationals, with competition among firms being compounded by competition among governments.

In considering what lies ahead for Europe, these common factors are less telling than some that are specific to the European land mass. These too are clear: the continent is largely shoreless, and split into a large number of states; it is faced with an “external proletariat”, in Africa and Western Asia, from Marrakesh to India and China; the western part of the continent is embarked on a wholly new creation, the European Community; social harmony has been restored only through a tenuous balance between markets and government.

Against that background, what method can be employed to identify the developments – arising by chance, inescapable, or willed – that may decide the continent’s future? One possible course is to start at Europe’s periphery, with the Soviet Union and the proletariat outside, then look at Central Europe, and end with the Community, which will need analysis from two angles: its construction per se and the development of the societies that go to make it up. Only then is it possible to move on to comprehensive scenarios, sketched rather than painted in detail but sufficiently clear to serve as a basis for discussion.
2. The Soviet Union and its future

Is the Soviet Union part of Europe? This question is no easier to answer now than it was in the past, whether what is meant is the region as a whole or its Slav core. What can be said is that three times this century the Russian empire has decisively influenced the destiny of Europe: in 1917 when it became the bastion of communism, in 1945 when it split Europe in two, and in 1989 when its internal crisis opened the way to German unification and to the collapse of the people’s republics. These were three crucial events, and the first two strongly influenced policies in Western Europe after the Second World War. The establishment of NATO and the adoption of market economics and the welfare state in Europe were all due, in no small measure, to fear of the Red Army and of revolution. Present-day Europe has in part built itself up against the USSR whose military might, by consolidating transatlantic ties, made the term Europe applicable equally to the Twelve and to the 35 members of the Conference on Security and Cooperation in Europe (CSCE).

What then lies ahead, and how might developments impact on Western and Central Europe?

Three dichotomous forces are currently at work:

- on the ethnic front, between the continuing fragmentation of the Federation and attempts to rebuild the Union on a fresh basis;
- on the economic front, between the increasing chaos of central economic planning and the launch of reforms allowing scope for market forces;
- on the political and social front, between growing anarchy that is sowing the seeds of future unrest and the authoritarian stance of the bulk of the bureaucracy.

Prospective analysis throws up a few conjectures and a great many uncertainties. First, the conjectures:

- On the ethnic front, distinctions probably need to be made between the Slav republics and Kazakhstan which will certainly be part of tomorrow’s hard core; the Islamic republics that – while loyal for the time being – will never be assimilated; and the Baltic, Caucasian and Moldavian fringes, where the intense desire for secession may well win the day.

- On the economic front, perestroika has set off such far-reaching disorganisation that it is impossible to predict a bright future for the region’s economy, even twenty years hence. At best, even with a coherent programme of transition to a market economy, per capita income may be expected to fall over the next five years, followed by growth that is modest but distributed unevenly: across the country, with relatively small pockets of development; across sectors, with a decline in heavy industry and an expansion of services; and in human terms too, with a substantial widening of income differentials.

- On the political front, there is an uneasy co-existence of anarchy, democracy and totalitarianism, and the likelihood of a clear-cut scenario seems fairly poor. If anarchy prevails too long it could sooner or later lead to an authoritarian scenario, but the military and the police can hardly manage to secure economic development, while movement along democratic lines is liable to arouse little enthusiasm among the general public. The most likely scenario seems a succession of phases where anarchy, authoritarianism or moves towards democracy dominate, interspersed with coups d’état of varying severity.
These conjectures, quite obviously, lead to considerable uncertainty.

The USSR of the year 2025 could well lie somewhere between two extremes:

- the most favourable hypothesis: a democratic Soviet Confederation with no security problems in relation to Europe or the United States, shorn of its Islamic republics, with an unevenly developed economy strongly integrated with that of the West, accounting for 10 per cent of world output and providing its members with a per capita income amounting to around three-quarters of the EC average;
- the worst hypothesis: a centralised authoritarian State imposing its will on all or part of the present USSR, using its strategic nuclear arsenal to maintain its external security, managing as well as it can a mixed economy with ill-defined areas of deregulation, with a 7 per cent share of world output and real per capita incomes around half the EC average or less.

These two pictures also hold for the year 2000, but with one important difference: even under the most favourable hypothesis the average income differential with the West would widen, since self-generated growth would only barely have resumed. Moreover, a third scenario may be slipped in between the first two, that of decade-long anarchy where anything goes.

What influence may these scenarios exert on Western Europe?

The military danger is still there and will remain until such time as the USSR – or its successor – has become a contented or peaceable democratic zone like North America or Western Europe. The threat could conceivably take one of two forms: nuclear blackmail by an authoritarian government wishing to wrest economic advantages, or simply pledges from the West of non-interference in its domestic affairs; or military adventures by segments of the armed forces in a situation approaching civil war that could threaten foreign countries.

From an economic standpoint, the period may be split into two decades:

- The 1990s are unlikely to see investment on any major scale by Western firms; European governments and the European Bank for Reconstruction and Development (EBRD) will of course be lending to the USSR, but the funds will be swallowed up in the economic chaos with the risk of a debt crisis oddly similar to that of the Third World in the 1980s; at the same time, several million Soviet citizens will attempt to emigrate to the Common Market countries in quest of jobs and income.
- The first decade of the 21st century may, by contrast, see the beginnings of a genuine integration of the region’s economy with that of Europe, though this could happen only if democracy and the market economy gained a foothold in the western part of the Soviet Union, which is by no means sure.

3. **Crowded in by an external proletariat**

Like North America, Europe has dealings with all parts of the Third World. However, the most decisive influence on its future course is likely to come from three regions.

The first, the Arab world, is spread out along one of the world’s major geopolitical fault lines, is splintered into rival states, and has Israel as a thorn in its side. It is unstable both economically and politically. Explosive population increase, rapid urban growth,
uneven distribution of oil resources, industrial and agricultural misdevelopment – all these offer scant hope of any steady and equitable rise in living standards. At the same time, the ideological rifts are widening: internally, between the desire for democracy and the appeal of fundamentalism; externally, in the love-hate relationship the Arab world maintains with Europe. This world runs the risk of being torn apart by war, terrorism and revolution, and Europe could well find itself caught up in some of these conflicts.

The second is sub-Saharan Africa. The most reliable studies suggest that per capita incomes could rise by 0 to 0.5 per cent a year over the next fifteen years. There are many reasons why this part of the world has become marginalised: government by bureaucrats, the military or the urban bourgeoisie, more responsive to the needs of town-dwellers than to those of the countryside; industrial development hampered by limited markets and high unit labour costs; ineffective state enterprises; agriculture held back by lack of investment and manpower training. The Africans, with their many ethnic divisions, too remote from Europe to make it the scapegoat for all their ills, having no sense of being heirs to one of the world’s great civilisations, are likely first to turn upon themselves and their conflicts will initially be purely local, though some of the most enterprising among them will seek to change their personal destinies by emigrating to Europe, and particularly the United Kingdom and France.

The third region extends eastwards, from Istanbul to Kabul and from Tashkent to Isfahan, and is mainly Turkish- or Persian-speaking. The revolution in Iran, the Afghan conflict, the disturbances in Central Asia, the clashes between Armenians and Azeris and the Kurdish tragedies have finally made Europeans aware of the importance of a region that borders on Europe, Russia, China, India and the Arab world. On its western side lies Turkey, whose future ought to be a constant deep concern of European policy-makers since its political stability and economic and social progress are essential to peace on the continent.

The Arab, Turkish and Persian mix that characterises the first and third regions, stretching from Morocco to Kirghizia, is so complex that its future cannot be depicted with any degree of certainty. However, several types of scenarios are possible: the region’s domination by a few anti-Western theocracies or dictatorships; a mixture of unstable countries and states slowly finding the route to stability through controlled economic progress; continuing internecine strife in the region, with each nascent power pitted against a coalition of the others, and the West seeking, as in the past, to gain from the family feuds.

Whatever the scenario turns out to be, this area may be expected, for both economic and political reasons, to be the source of large-scale migration to Western Europe. It is hard to predict what that scale might be, but the number of migrants (including those from sub-Saharan Africa but not from Central or Eastern Europe) settling in the European Community countries could well stand at around 30 million by the year 2025. The kind of societies and cultures that will ensue will necessarily be complex, varying according to country, local conditions and pace of arrival. The range of possibilities includes three extreme hypotheses:

- assimilation – but in a world where Europe is bound to hold a lesser place and where cultural relativity will be accepted as a matter of course, this will be slower and fraught with more difficulties than in the past;
- confrontation between cultures (North African, Turkish and African societies being recreated on European soil and sparking off xenophobic – sometimes violent – reactions among the native populations);
– cultural diversity (with mutual acceptance of minority groups by the majority and vice versa).

Should this analysis prove correct, the policies of EC member states will be profoundly affected – not only their domestic policies (natality, nationality law, education, minimum wage), but their foreign policies (in such areas as foreign aid, preferential trade agreements, security, etc.) as well.

4. A Central Europe in quest of prosperity

The people’s republics of Central Europe, after forty-five years as the Western bastion of the Soviet empire, have now in a sense become the eastern marches of the Community. The West wind has supplanted the East wind, and faith in socialist central planning has given way to trust in parliamentary democracy and market forces.

For the Community, these countries’ success or failure is a matter of limited importance in that the countries in question account for only 3 per cent of world gross product and less than 15 per cent of the Community’s present GDP; yet a great deal in fact hinges on success, because if democracy and the market economy make headway in this region, the message will be heard in the depths of Asia and Latin America.

Today everyone is aware that Central Europe is not a homogeneous bloc; each country is now free to choose how it will effect the Great Transition, and to decide on the order, speed and extent of its own reforms. In seeking to read the future they must hence be considered individually. Recent events suggest a division into two groups: Poland, Czechoslovakia and Hungary, which are well along the road to democracy and a market economy; and Romania and Bulgaria, whose policies are more ambiguous.

For the first group of countries, three types of scenario are conceivable: (1) buoyant growth after several years of flat or even declining output, with per capita incomes slowly rising over a long period (around forty years perhaps) to the Austrian average; (2) subdued growth – certainly no more than that of Western Europe – hampered by social rigidities and the impedimenta of their socialist past; (3) Latin American-style development based on inflation and mismanagement. The first type of scenario would be the most conducive to active democratic life, while the other two types could be combined with some form of populism.

The prognosis for the second group of countries is on the evidence more gloomy since they are still governed by regimes whose credentials have not yet been established, and offer Western firms little incentive to invest there.

While it is illusory for Western Europe to believe it can influence the course of the USSR, with Central Europe matters are rather different. In ten years’ time the bulk of these countries’ foreign trade is likely to be with the Community, and if their economies start to take off, Western firms will actively compete in developing these new markets.

Before moving on to consider the European Community itself, what conclusions can be drawn from this analysis of its geopolitical and geo-economic environment on the threshold of the 21st century?
5. The environment of the European Community

From the vantage-point of Brussels, the world is made up of seven regions:
- the two marches of the European Community: the EFTA countries with high living standards, closely integrated with the Community economy and with a deep-seated democratic tradition; and the Central European countries, moving towards a market economy, where democratic aspirations are strong but democracy itself is still not firmly established;
- the two "outer perimeters": to the east the USSR, fast disintegrating, swinging between democracy and authoritarianism, and whose disarray harbours new dangers; and the Arabo-Turkish-Persian area prolonged by sub-Saharan Africa, a region whose development is misdirected, racked by political, economic and ideological conflicts (bounded to the west by Turkey, at once Asian and European);
- the two other poles of the developed world: North America to the west, the major partner in NATO; and Japan and the newly industrialising economies to the east;
- the rest of the world, which – stretching from Latin America to China – accounts for the remaining quarter of world output.

Rough calculations on the basis of a continuity scenario give the following figures for the respective shares of these regions in world output around the year 2025: Western Europe (EC and EFTA), 19.2 per cent; Central Europe, 3.1 per cent; the USSR or its successor, 9.8 per cent; Africa and Western Asia, 7.7 per cent; North America, 20.2 per cent; Japan, 9.2 per cent; rest of the world, 30.8 per cent.

These figures, to which undue weight should not be attached, call for two comments: first, European Eurasia, from Shannon to Vladivostok (Western and Central Europe and the USSR), could account for 32 per cent of world output, roughly the same as the whole of the Pacific basin (North America, Japan, the newly industrialising East Asian and South East Asian economies); secondly, the 36 per cent share of the Third World would derive as to half from the Asian giants and the countries gravitating around them, with Latin America accounting for somewhat more than a quarter and Western Asia and Africa for somewhat less.

What scenarios could describe this environment twenty years on? Some are outlined below, all of which will have to incorporate three variables:
- The extent of co-operation between the poles of the developed world, ranging from close macroeconomic co-operation and a substantial opening up of trade with North America, Japan and Europe, to poor macroeconomic co-operation and some stepping up of protectionism (Hypotheses A and B).
- The nature of Soviet development, with the emergence of either democratic or authoritarian structures. Should authoritarianism prevail, one of two foreign policy strategies might be adopted: withdrawal to some extent from the world arena or maintenance of an active presence in Africa and Asia (Hypotheses a, b and c).
- The kind of future lying ahead for the Arabo-Turkish-Persian area: a cohesive and rather hostile group or a divided and unequally developed region (Hypotheses 1 and 2).

From the twelve combinations, the following scenarios are worth noting:

i) Economic liberalisation and democracy: the Soviet community and part of the
Arabo-Turkish-Persian world become increasingly assimilated in the world economy and democracy prevails (Aa2).

ii) *Resumption of the cold war:* the Soviet region, once again under an authoritarian regime, allies itself with a relatively hostile Arabo-Turkish-Persian zone, bringing about a *rapprochement* between Europe and the United States (Ac1).

iii) *The emergence of Eurasia:* a democratic Soviet community moves closer to Europe, with both in latent conflict with the Arabo-Turkish-Persian countries, while the internationalisation of the world economy is impeded by protectionism in various forms (Bai).

iv) ‘‘Euro-Orient’’ co-operation: an authoritarian Soviet community turns in on itself and protectionism impedes the development of a global economy; Europe steps up its co-operation with Western Asia and Africa (Bb2).

v) *Europe becomes isolated:* in a world where protectionism is rife, Europe finds itself on its own, having to deal with an authoritarian and interventionist Soviet Union and a hostile Arabo-Turkish-Persian zone (Bc1).

While some will find these scenarios fanciful, they at least have the merit of demonstrating the diversity of possible environments for Europe as they appear after the fall of the Berlin Wall and the Gulf war.

However, the nature of Europe’s environment will in part depend on the attitudes and actions of the Europeans, and on the kind of Community they build for themselves.

6. The multiplicity of possible futures for the European Community

Before discussing the forces at work within the Community itself, two questions should be asked: will the reconstruction of eastern Germany succeed? And, how much uncertainty surrounds Germany’s options following unification?

To the first question, the answer seems plain: sooner or later eastern Germany will have the same per capita income as the rest of the country. However, it is important to avoid underestimating the harshness and cost of the transition, or the time it will take, just because the final outcome is known. Fifteen years seems a realistic estimate; this would mean that the GDP per capita curves for the east and west of the country would probably intersect in or around the year 2005.

The second question has a great many ramifications. There is a high probability that German options will fall within a narrow range determined by Germany’s firm integration in the West European economy, the growing influence of Central Europe on German economic and cultural life, and German society continuing to be profoundly marked by pacifist, conservative social democracy. On this basis, the possible scenarios are no more than variants of one central scenario:

- The first variant is a German economy more open to the east, more involved in the reconstruction of the Soviet economy, more internationalised, a German society calmly confident of its security and with little inclination to participate in any action to safeguard Europe’s vital interests;
- The second is quite different: a German economy less open to the east, more wary of the USSR or its successor, more threatened by competition from Japan and more concerned about Europe’s security *vis-à-vis* the east and the south.
To move from one to the other implies little in the way of changes; yet snowballing effects among the large EC countries mean that slight national shifts can be greatly amplified at Community level.

The Community’s future looks set to be governed by interaction between three main forces: its deepening, its broadening, and its security.

The forces deepening the Community are embodied in a few ambitious projects, each leading to a new treaty among the member countries: the Single Market, Economic and Monetary Union, Political Union, implementation of the Schengen agreement, and so on.

This opens up several possible future paths:

– Hypothesis A: the construction of the European Community slowly runs out of steam; the internal market does come into being but Economic and Monetary Union is not achieved; then gradually, without any decision being taken formally, the enterprise ceases to make headway, external trade policy becomes passive, governments introduce measures – ostensibly to safeguard the environment or certain social groups – that create new barriers; ultimately, the whole ambitious construct becomes simply an organised free trade area.

– Hypothesis B: the status quo; the Commission is vigilant in its administration of the Common Market; the EMU project becomes bogged down in its first stage but is not abandoned.

– Hypothesis C: the gradual emergence of a federal-style Europe with several new treaties being signed before the turn of the century. What is the credibility of this hypothesis? The federations that are breaking up today were imposed upon the countries concerned and comprise a diversity of cultures. History provides no example of heterogeneous federations brought about through a slow democratic and egalitarian maturing process. In this sense the Community is something entirely new.

The deepening of the Community is at odds with its broadening. Potential new members appear to fall into three groups. The EFTA countries (Austria, Finland, Norway, Sweden and Switzerland) are all stable, democratic and developed; aside from their number, however, there is the thorny problem of neutrality, Norway being the sole member of NATO. The former communist countries converted to democracy and the market economy, with the strongest contenders being Hungary, Czechoslovakia and Poland. The third group consists of just one country, Turkey, the Mediterranean pillar of NATO, bulwark of Europe, half-European, half-Asian, whose presence in the EC would pose a problem of Community identity.

Were the Community to accept all three groups, its membership would rise from 12 to 22 and its institutions would have to be completely recast in order to operate effectively. Two extreme hypotheses may be suggested:

– The Community would become much broader, with 20 to 25 members ten or fifteen years from now, but would probably be little more than a vast common market (Hypothesis a).

– The Community would be held strictly at its present size, with around 10 other countries becoming associate members under a multilateral treaty or, at worst, bilateral accords setting out specific arrangements (Hypothesis b).
The third force is security. The Western security system seems to be frozen today, and there is no European security mechanism to speak of. There are many reasons for this: defence and national sovereignty are closely intertwined; no political consensus has been reached on another formula; and NATO has proved a success even if it has often been on the brink of breakdown.

This is not the place to discuss how the threat from the east or south might evolve over the long term, but the first two parts of this paper suggest that the threat should not be belittled. This being so, what hypotheses might be hazarded as to the possible institutional response of the NATO countries? Four hypotheses appear feasible:

- Greater neutrality; the alliance becomes a political one, seeking to reconcile its members’ security stances as far as it can, with the European countries (apart from the United Kingdom and France) simply maintaining minimum-strength conventional forces on their soil (Hypothesis 1).
- NATO is reborn, through the formation within its ranks of a European group with specific responsibilities and the return of France to the fold (Hypothesis 2).
- The emergence of a European defence system (excluding strategic nuclear weapons), with NATO becoming solely a forum for consultation (Hypothesis 3).
- Primacy of collective security within the CSCE framework (Hypothesis 4).

The deepening, broadening and security hypotheses spawn a wide variety of scenarios, even if unlikely combinations are discarded. The following are just a few that are worth thinking about:

- i) An integrated Community, defined by the three dimensions of deepening, geographical limitation and European defence (Cb3);
- ii) An Atlantic Community, combining deepening, geographical limitation and a reborn NATO (Cb2);
- iii) A schizophrenic Community with two corner-stones: deepening and geographical limitation, and collective security (Cb4);
- iv) A fragmented Europe characterised by loss of Community impetus, geographical broadening and neutrality (Aa1);
- v) Single-marker, collective-security Europe, characterised by the status quo, geographical broadening and collective security (Ba4).

This list reveals a common strand: the incomplete metamorphosis of postwar Western Europe, which the chill wind of communism helped to set in motion, is today – following the 1989 revolutions – capable of a host of other changes which can lead, without further turmoil or peril, to a wide variety of future Europes, many of them unviable.

The Community’s future prospects cannot, however, be summed up by these few considerations on its institutional structures. How European societies go about tackling their economic and social problems will be just as important.

7. The challenges from within European societies

Greatly simplifying, the challenges may be summarised in one question: in a context of ageing populations, immigration and increasing international competition, can the quest for competitiveness and a reasonable quality of life for all be reconciled?
This section examines each aspect of the dilemma, which appears more acute for Western Europe than for the United States or Japan.

The demographic ageing of Western Europe has become a familiar fact and the figures need not be presented again. The phenomenon will, however, undeniably pose daunting problems, at different times according to country: a lengthening of working life, limits on the share of pensions in GDP, and higher healthcare spending are just some of them.

Immigration, mostly of younger people, will have a beneficial effect on the age pyramid in European countries. However, problems of integration aside, the question of training will become much more acute since the cost of much of this labour will be higher – due to social legislation – than the resulting productivity warrants; a proportion of the immigrants will in fact be driven into the black economy or unemployment.

The quest for competitiveness will continue to be pursued on two levels, by firms operating on mostly internationalised markets, and by public authorities supplying economic agents with services which include education and training, pure research, communications, government administration and tax and regulatory measures.

In this environment of international competition, the European Community has a distinct contribution to make:

- It brings into play a three-tier power structure, made up of local and regional, national, and Community authorities. In this system, governments – apart from being service suppliers – are increasingly becoming both lobbyists defending special national interests in Brussels and co-decision-makers acting in the interests of the Community as a whole. The resultant contrast between the narrowing of governments’ room for manoeuvre and the persistent belief in an illusory national sovereignty could well give rise to serious crises.
- The Community is developing (slowly though incompletely) an awareness among its inhabitants that they share a common destiny, and that in exchange for the collective benefits this is yielding they must be prepared to accept considerable trade-offs. Attitudes on the future of the strategic industries or on the threat of industrialists of one particular country acquiring a world monopoly in certain sectors will hence depend on the balance struck between the Community’s vision of Europe and that of its individual member nations, with the former tending increasingly to prevail.
- The Community juxtaposes methods of regulating capitalism that differ widely across EC member states, but these methods are slowly converging. Even ten years ago, German, British and French capitalism operated very differently: the first, based on consultation between major undertakings, dominated by the concerns of industry and unreceptive to takeover bids, was at odds with the second, with its more financial and international bias and greater stock-market emphasis, and with the third, with its cohabitation of government and big business. In many respects, the implementation of the Single Market directives and the European dimension towards which the major groups are moving are laying the foundations for a European form of capitalism which, while akin to that of the United States, will probably retain its own methods of regulation.

Impelled to strive for competitiveness, European societies will nonetheless continue to be obsessed by the idea of quality of life being fairly shared by all. However, worldwide competition between different societies will do more than simply raise the average income level:
- It will accelerate structural changes, calling for society to provide some form of compensation for the losers in the process.
- With the Third World masses joining the labour market, and greater automation flowing from information technology, it will heighten inequalities in the distribution of the equilibrium cost of labour according to skills; the more highly skilled will see the cost of their labour rise by virtue of their relative scarcity worldwide; conversely, the unskilled or poorly skilled will see the cost of their labour decline owing to their relative overabundance on the world market.

That will place European societies before a growing dilemma:
- either they must agree that the spread of labour costs should be reflected in a similar spread of incomes, in which case they will become more inegalitarian societies with various fringe classes around the middle-class mass;
- or they must endeavour to correct the unequal distribution of primary incomes by raising compulsory levies in order to increase the supply of collective services or increase the cash available to the least well off, in which case three further challenges will have to be tackled: the difficulty of producing and distributing public goods efficiently; opposition among part of the population to over-socialised distribution of national income; and the appearance of adverse side-effects likely to reduce their international competitiveness.

That analysis suggests two families of economic and social scenarios. Before outlining them, it may be useful to point out the characteristics they are likely to share:
- Community countries where per capita income is low are likely to continue to experience more sustained growth which will gradually bring them closer to the Community average.
- No Community country is likely to have real per capita income growth that moves it for any sustained period away from the Community average (a significant contrast with the inter-war and immediate postwar periods, due to both high factor mobility within the Community and the pressure governments face as soon as their policy deviates excessively from the group "norms").
- The range of growth scenarios seems relatively narrow in the absence of geopolitical discontinuity, because the Community will at all events remain open enough for international competition to compel it to strive constantly for efficient factor use.

That will mean that both families of scenarios are in fact variants of the central theme of a Community market coexisting with a fairly high level of compulsory levies.

The first family would be a Community gradually developing in the direction of a more American model: more intensive competition, development of financial markets, a steady flow of immigration and a slow withdrawal of the welfare state would generate both stronger economic growth and greater inequality of income and wealth; rejected by part of the population, this type of development might lead to internal social conflict and conflict between Community countries, and (hence) policy changes steering towards a middle-of-the-road course.

The second family, on the other hand, would accentuate European features: more intensive competition would be counterbalanced by stronger welfarism holding down inequality of income and wealth; demographic immigration would be held down, while unemployment would remain significant among low-productivity individuals; overall
growth would be somewhat slower, making structural adjustment of the productive system more difficult; in any case, external pressure would make any great departure from the middle of the road difficult.

It can easily be seen that this description is a simplification, since it disregards the (albeit limited) areas for manœuvre that can be exploited at national level and the (often superficial) changes of policy flowing from elections.

8. The range of European scenarios

Three sets of partial scenarios result from the preceding:

- scenarios for the geo-political environment of Europe [economic liberalisation and democracy (1), resumption of the cold war (2), emergence of Eurasia (3), "Euro-Orient" co-operation (4), European isolation (5), etc.];
- scenarios for the construction of the European Community [integrated community (A), Atlantic community (B), schizophrenic community (C), fragmented Europe (D), single-market collective-security Europe (E)];
- scenarios for the economic and social development of Western Europe, which for want of better terms may be called liberal Europe (a) and social-democratic Europe (b).

A number of conjectures may also be put forward:

- The "external proletariat" (described earlier) will make its presence increasingly felt.
- Several Central European countries will move into steady or moderate growth.
- Per capita incomes should continue to move closer within the Community.
- In the absence of geo-political discontinuity, Community growth rates should fall within the narrow range of values observed between 1984 and 1991.

A number of major unknowns still remain:

- the future of the Soviet Union;
- the way in which the external proletariat will develop;
- the forms which Community construction will take.

An attempt is now made to combine these various points in order to bring out the fundamental linkages. Some assumptions about the geo-political environment can serve as the basis.

In a context of economic liberalisation and democracy(1), three courses are conceivable for Europe:

- a relatively strong Community [integrated (A), Atlantic (B) or schizophrenic (C)] opting either for a liberal (a) or a social democratic (b) course;
- a weak Community [fragmented (D) or broadened (E)] following a liberal course (b).

On the other hand, in the event the cold war is resumed (2), the Community is almost bound to be Atlantic (B) or schizophrenic (C), but the liberal (a) and social democratic (b) courses are both conceivable.
The emergence of Eurasia (3) logically rules out an Atlantic or schizophrenic Community and seems likely to be associated with either a single-market collective-security Europe (E), almost inevitably liberal (a), or an integrated community (A) with a more open socio-economic future, (a) or (b).

"Euro-Orient" co-operation (4) assumes an integrated Community (A) in a protectionist international environment, and accordingly is more in harmony with a social democratic course internally.

Lastly, European isolation (5) strengthens the probability of an integrated (A) social democratic (a) Community.

Building scenarios may quite rightly be seen as a rather fruitless game. In this case, however, it does bring out clearly some of the challenges that the Europeans will have to tackle over the next ten years:

1. the construction of a more integrated 12-member Community taking responsibility for security issues in conjunction with the United States;
2. association in the Community of other West European countries and democratic countries in Central Europe with market economies;
3. the quest for a compromise between competitiveness and equity, as economic globalisation looms;
4. pragmatic definition of a consistent policy towards Africa and Western Asia;
5. risk management with the Soviet Union or its successor, which is unstable in economic, ethnic and political terms;
6. sharing in management of major world issues, notably those concerning the environment and integration of the Third World, and in setting rules for the macro- and microeconomic operation of the global economy.
Notes


2. The term social democracy is used here not in the narrow political sense, as meaning the SPD, but in its broad sense.

3. The same of course applies to unskilled nationals.
Long-term Economic Issues in Japan and the Asia-Pacific Region

by

Masaru Yoshitomi and Naohiro Yashiro
Economic Planning Agency, Japan

1. Introduction

The Asia-Pacific is the most dynamic area in the world economy. Japan plays a key role in the region. The East Asian economies (NIEs and ASEAN) grew by 7 per cent during the latter half of the 1980s, compared with a global growth of 3 1/4 per cent. The sources of such dynamic development are high rates of domestic investment and saving, strong innovation and intense competition. Moreover, increased imports by the United States and Japan, as well as investment from the two major economies, have greatly contributed to the economic performance of Asia-Pacific developing countries.

However, the Japanese economy is likely to face serious constraints on economic growth in the medium to long term, namely: 1) rapid ageing of the population; 2) relocation of Japanese firms’ production base abroad; and 3) the need to reduce emissions of greenhouse gases (GHGs). How can Japan maintain its dynamic economic development while coping with these constraints? Were Japan’s macroeconomic performance to deteriorate in the future, what would be the major impacts on the Asia-Pacific economies?

This paper begins by examining the major constraints on Japan’s economic growth, followed by a likely scenario for Japan’s economy to the year 2010 based mainly on the report recently published by the Japanese Government’s Economic Council, Japan in the Year 2010. Finally, major policy issues concerning the scenario are discussed.

2. Major constraints on Japan’s economic growth in the future

Population ageing

While ageing of the population is encountered in virtually all OECD Member countries, the most striking feature of the phenomenon in Japan is its extremely high speed. In 1960, the share of the elderly in Japan’s total population was well below those of other major Member countries, but it is projected to exceed all others by the year 2020 (Figure 1). Rapid economic growth in the postwar period has been largely responsible, since it resulted in a significant fall in the fertility ratio and a rise in life expectancy. Demographic surveys suggest that the fertility ratio in Japan, which was as high as 4.5 in 1947 at the time of the “baby boom”, fell sharply to 2.1 in the 1960s and 1970s, and
further to 1.6 in 1989. This decline, particularly since 1985, stands in sharp contrast to a
general tendency of recovery in other major OECD countries (Figure 2). While one direct
cause is a rise in the average marriage age for women, which is now 25.8 years old (the
second highest in the world), two other important factors are the rising level of women’s
education and increasing female participation in the labour market. According to a recent
demographic projection, the fertility ratio will continue to decline to 1.5 by 1993. It will
then rise to 1.8 by 2010, but that level is still well below what is necessary for stabilizing
the population.

The declining fertility ratio has reduced the young population in absolute terms since 1980,
and raised the ratio of the elderly to total population (Table 1). This is likely to
result in the following:

- Impacts on the labour market, through decelerating growth in the labour force and
  changes in its age structure. The working age population (from 15 to 64) is
  projected to fall from 1995, followed by a decline in the total population begin-
  ning in the year 2010. The shrinking and ageing of the labour force are likely to
  affect Japanese labour market practices, which were established at a time when
  the young labour force was in sufficient supply and heavy emphasis was placed
  on seniority rule in wage determination. Also, the increasing share of elderly and
  part-time workers may cause the average quality of the total labour force to
deteriorate, particularly in terms of adaptability to new technology.
- Impacts on savings. The life-cycle hypothesis suggests that an increasing share of the elderly, other things being equal, would raise the ratio of dissavers to savers, so that household saving, accounting for roughly half of national saving, would fall from the current level of 14.2 per cent of household disposable income (SNA basis). However, it is possible that a relatively high level of labour market participation among elderly households in Japan and the observed strong incentive for leaving legacies may partly offset the decline².

- Impacts on capital investment. A decline in population, other things being equal, may lower the economy’s capital-widening requirements. Also, the associated reduction in the labour force could raise the capital-labour ratio, which would in turn lower the marginal productivity of capital. If the level of interest rates is not affected by the decline in capital productivity in a country operating in integrated world financial markets, the result may be a decline in investment demand. On the other hand, the scarcity of workers resulting from falling labour force growth should induce labour-augmenting technical change, partly offsetting the drop in marginal productivity of capital.

- Finally, impacts on the size of the government, with increases in tax and social security burdens on the working-age population. The level of such burdens in Japan is currently the lowest among major OECD Member countries, thanks to the favourable age structure of a population in which there is still a relatively low ratio of elderly. However, an expected sharp increase in the ratio of pension
Table 1. Population projections

<table>
<thead>
<tr>
<th></th>
<th>Million persons</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Annual rates, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>104.7</td>
<td>117.1</td>
<td>123.6</td>
<td>125.9</td>
<td>126.3</td>
<td>121.9</td>
<td>0.83</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14 years</td>
<td>25.2</td>
<td>27.5</td>
<td>22.5</td>
<td>18.2</td>
<td>18.5</td>
<td>16.7</td>
<td>-0.57</td>
</tr>
<tr>
<td>15-64 years</td>
<td>72.1</td>
<td>78.8</td>
<td>86.3</td>
<td>86.2</td>
<td>80.6</td>
<td>73.3</td>
<td>0.90</td>
</tr>
<tr>
<td>65 years and above</td>
<td>7.4</td>
<td>10.7</td>
<td>14.9</td>
<td>21.5</td>
<td>27.3</td>
<td>32.0</td>
<td>3.56</td>
</tr>
<tr>
<td>(share of total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14 years</td>
<td>24.0</td>
<td>23.5</td>
<td>18.2</td>
<td>14.5</td>
<td>14.6</td>
<td>13.7</td>
<td>13.7</td>
</tr>
<tr>
<td>15-64 years</td>
<td>68.9</td>
<td>67.3</td>
<td>69.7</td>
<td>68.5</td>
<td>63.8</td>
<td>60.1</td>
<td>60.1</td>
</tr>
<tr>
<td>65 years and above</td>
<td>7.1</td>
<td>9.1</td>
<td>12.1</td>
<td>17.0</td>
<td>21.6</td>
<td>26.3</td>
<td>26.3</td>
</tr>
</tbody>
</table>


beneficiaries to contributors, arising from both population ageing and the "maturity" of Japan's public pension schemes (which are based on the funding system), would inevitably lead to a larger government sector.

**Labour shortage**

The projected decline in the labour force could aggravate the shortage of labour, given the current level of the demand for labour per output. The average elasticity of labour with respect to output during the 1980s was 0.33, and was particularly high in the service sector. Thus, other things being equal, economic growth of 3 per cent, for example, would increase the demand for labour by 1 per cent. This, combined with slowing growth in labour supply, results in a widening of the potential labour demand-supply gap in the coming decades. The shortage problem has a bearing on two major issues: a shortening of working hours, and an increase in foreign workers in Japan.

First, the annual average number of hours worked in Japan was 2,052 in 1990, about 10 per cent higher than in the United States and the United Kingdom, and about 25 per cent higher than in Germany and France. While the average declined after reaching a peak in 1970, the trend halted in 1975 and stabilized thereafter until quite recently. This mainly reflects the behaviour of Japanese firms after the end of the high economic growth period: they minimised employment of regular workers who are assured long-term job security, and had recourse to overtime hours and part-time workers. However, in an increasingly tight labour market, reducing working hours – in particular, the introduction of two days off per week – has become inevitable for many Japanese firms.

Second, the number of foreign workers in Japan (excluding those who have permanent resident permits) was about 50,000 in 1989, accounting for 0.1 per cent of the total labour force. Although the number is much smaller compared with those in major European countries, it doubled between 1985 and 1989. Moreover, it is likely that the number of illegal foreign workers has increased significantly in recent years. Accepting more foreign workers in Japan may ease the expected tightening labour market conditions and inflationary pressure, which would allow higher economic growth. However, the
benefits of granting a large number of unskilled workers entry into Japan need to be balanced against the costs associated with deterring the upgrading of the country’s industrial structure and preventing improvement in the working conditions of peripheral workers (mainly women and the elderly).

**International implications of a surge of Japan’s direct investments**

Japan’s foreign direct investment (FDI) tripled in the latter half of the 1980s. There are two types of FDI: “cost-oriented” which flows from more developed to less developed countries, and “market-oriented” which flows among advanced countries. In recent years, the latter type has predominated. The share of the former has declined from a quarter of the total in 1980 to slightly over 10 per cent in 1989, while FDI toward North America and Europe has substantially increased (Table 2).

International implications of the surge in Japan’s FDI are as follows:
- First, Japan’s manufacturing FDI tends to follow comparatively most advantageous exports and, hence, to take place in most R&D-intensive industries. This is partly motivated by the need to avoid existing and potential trade barriers abroad, replacing exports from Japan with production by subsidiary companies in host countries. At least 20 per cent of Japan’s exports to the United States and the European Community are subject to some form of voluntary export restraint (VERs) or anti-dumping duties (OECD, 1989, p. 81). However, a more funda-

<table>
<thead>
<tr>
<th>Year</th>
<th>Total ($ billion)</th>
<th>North America</th>
<th>Europe</th>
<th>of which United Kingdom</th>
<th>Asia</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>4.7</td>
<td>34.0</td>
<td>12.3</td>
<td>(4.0)</td>
<td>25.3</td>
<td>28.4</td>
</tr>
<tr>
<td>1985</td>
<td>12.2</td>
<td>45.0</td>
<td>15.8</td>
<td>(3.1)</td>
<td>11.7</td>
<td>27.5</td>
</tr>
<tr>
<td>1986</td>
<td>22.3</td>
<td>46.8</td>
<td>15.5</td>
<td>(4.4)</td>
<td>10.4</td>
<td>27.3</td>
</tr>
<tr>
<td>1987</td>
<td>33.4</td>
<td>46.0</td>
<td>19.7</td>
<td>(7.4)</td>
<td>14.6</td>
<td>19.7</td>
</tr>
<tr>
<td>1988</td>
<td>47.0</td>
<td>47.5</td>
<td>19.4</td>
<td>(8.4)</td>
<td>11.8</td>
<td>21.3</td>
</tr>
<tr>
<td>1989</td>
<td>67.5</td>
<td>50.2</td>
<td>21.9</td>
<td>(7.8)</td>
<td>12.2</td>
<td>15.7</td>
</tr>
<tr>
<td>1990</td>
<td>56.9</td>
<td>47.8</td>
<td>25.1</td>
<td>(12.0)</td>
<td>12.4</td>
<td>14.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Manufacturing</th>
<th>Finance &amp; insurance</th>
<th>Real estate</th>
<th>Services</th>
<th>Commerce</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>36.4</td>
<td>8.1</td>
<td>–</td>
<td>5.3</td>
<td>17.0</td>
<td>33.2</td>
</tr>
<tr>
<td>1985</td>
<td>19.3</td>
<td>31.1</td>
<td>9.9</td>
<td>5.4</td>
<td>12.7</td>
<td>21.6</td>
</tr>
<tr>
<td>1986</td>
<td>17.1</td>
<td>32.4</td>
<td>17.9</td>
<td>7.0</td>
<td>8.3</td>
<td>17.3</td>
</tr>
<tr>
<td>1987</td>
<td>23.5</td>
<td>32.0</td>
<td>16.3</td>
<td>8.3</td>
<td>6.8</td>
<td>13.1</td>
</tr>
<tr>
<td>1988</td>
<td>29.4</td>
<td>27.9</td>
<td>18.4</td>
<td>7.9</td>
<td>6.8</td>
<td>9.6</td>
</tr>
<tr>
<td>1989</td>
<td>24.1</td>
<td>22.8</td>
<td>20.9</td>
<td>15.7</td>
<td>7.6</td>
<td>8.9</td>
</tr>
<tr>
<td>1990</td>
<td>27.3</td>
<td>14.1</td>
<td>19.5</td>
<td>19.8</td>
<td>10.8</td>
<td>8.6</td>
</tr>
</tbody>
</table>

mental motivation is the change in corporate strategy from domestic base-cum-export orientation toward global base-cum-local market orientation. Protectionist pressures have nevertheless been mounting, not only on direct exports from Japan but also on transplant production by Japanese firms.

- Secondly, the international division of labour in the Asia-Pacific region has been newly organised by Japanese FDI, contributing to further development of intra-industry trade between Japan and the region. As a reflection of the large labour cost differential between Japan and Asian developing countries, there has been extensive reallocation both of labour-intensive industries and of the production processes of certain industries. Thus, over 40 per cent of the output of Japanese transplant production in Asian developing countries is earmarked for export (over one-third to Japan), while in North America and Europe most Japanese transplant production is destined for domestic markets in host countries.

- Thirdly, the expected higher medium-term growth of the economies in rapidly integrating regions such as the European Community and North America has triggered the expansion of FDI aimed at exploiting growing markets in these regions. Liberalisation of financial markets worldwide has also stimulated Japan’s FDI in financial sectors.

**Concerns for the protection of the environment**

There is growing concern that economic activities in OECD Member countries have reached a level that will aggravate the global climate through emissions of greenhouse gases. While the greenhouse effect is more a global problem than one peculiar to Japan,

<table>
<thead>
<tr>
<th>Table 3. Contributions to the growth in CO₂ emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. CO₂ emissions by country (1987)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>OECD average</td>
</tr>
</tbody>
</table>

**Memorandum**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USSR</td>
<td>16.6</td>
</tr>
<tr>
<td>China</td>
<td>9.3</td>
</tr>
</tbody>
</table>

| **B. CO₂ emissions in Japan** |
|---|---|---|---|---|---|
| Average annual rate of increase in total CO₂ emissions | 9.0 | 13.1 | 4.2 | 0.5 | -0.5 | 3.7 |
| Real GNP growth | 9.0 | 11.0 | 4.5 | 4.5 | 3.8 | 4.6 |
| Changes in energy/GNP | 1.7 | 2.4 | -1.7 | -2.8 | -3.3 | -1.3 |
| Changes in CO₂/energy | -1.7 | -0.4 | 1.0 | -1.1 | -0.9 | 0.4 |

**Note:** Minus indicates energy saving.

**Source:** Economic Planning Agency.
the country does produce 4.3 per cent of the world total of CO₂ emissions (behind the
United States, the USSR and China), though emissions per capita in Japan are among
the lowest (Table 3,A). This paper will focus on the issue of GHGs (of which CO₂ accounts
for over half), since the problem of their emission is more closely related to economic
activities generally than are other environmental protection issues (e.g. disposal of radio-
active waste or pollution in coastal waters).

Emission of CO₂ depends on three factors: economic growth, the elasticity of energy
consumption to economic growth, and the elasticity of carbon consumption to energy use.
Total emission of CO₂ did not increase at all in Japan between 1975 and 1986, despite an
increase in real GNP during the period of over 50 per cent, since high oil prices
stimulated energy-saving technologies. However, following a large fall in real oil prices
in the 1985-86 period, the decrease in energy consumption per unit of output by Japanese
industry has slowed (Table 3,B). Moreover, the construction of new powerplants utilising
water or nuclear energy is becoming more difficult, resulting in increased dependence on
carbon-based energy.

Against this background, the Government of Japan has targeted a freezing of CO₂
emissions at the 1990 level from the year 2000 onwards⁵. Since the total amount of CO₂
in Japan is expected to increase by over 2 per cent annually over the next two decades,
such a freeze implies a serious constraint on economic growth unless there is develop-
ment in energy-conserving technologies equivalent to that of the period 1975-86.

3. Likely scenarios for macroeconomic development

The question of how serious the macroeconomic impacts of these three constraints
will be is an empirical rather than theoretical one. The following discussion utilises the
"turnpike model" for projecting the evolution of the Japanese economy to the year 2010.

The turnpike model and exogenous variables

Structure of the model

The turnpike model was originally developed by the Economic Research Institute of
the Economic Planning Agency (EPA) in 1973, and it has served as a macroeconomic
background model for long-term economic projections in the government’s preparation
of indicative economic plans since the early 1980s. The essence of the turnpike theory is
that a technologically efficient, balanced growth path of outputs is only determined in a
closed system, with any optimal output path (originating from any point) remaining in the
vicinity of a turnpike except during certain periods at the beginning and end of the
reference horizon⁶. This is a linear programming version of a dynamic Leontief-type
model with 22 industrial sectors, which produces an optimum economic growth path
under several constraints.

Major characteristics of the model include the following:
– an objective is to maximise the discounted sum of per capita consumption utility
  streams (including imputed benefits from social overhead capital stocks) over
time, with the associated "efficient" industrial and employment structures⁷;
- direct constraints on projected labour supply and technological changes defined as changes in input coefficients of intermediate products, labour and capital, which are exogenously determined;
- indirect constraints on external trade. There are ceilings for both the growth of manufacturing exports (in real terms) by industry and the share of imports of agricultural products.

**Projection of labour supply**

The major exogenous variables affecting economic growth in the model are expansion of the labour force and technological changes. The former depends on population growth, an increase in foreign workers, and (particularly) rises in the ratio of female labour force participation (LFP). Japan’s female LFP rates by age group have followed the typical M-shaped pattern, i.e. many Japanese women tend to withdraw from the labour market during their child-rearing period and return later (Figure 3). While the "saddle point" of this M-shape has risen over time, it is still lower than those of many OECD Member countries. On the basis of a conservative projection that expected increases in the LFPs in age and gender cohorts are assumed basically to follow the past trend, the average LFP is likely to fall in 2010 from the current level, even taking into account the rising labour force participation of women. This is mainly due to the fact that the increasing weight of older age cohorts with lower average LFP will more than offset the effect of increases in LFPs in each age cohort.

As a result, the growth of the labour force is projected to decline from 1.1 per cent annually during the past two decades to 0.6 per cent during the 1990s (about a 4 million

**Figure 3. Female labour force participation by age group**

![Diagram showing female labour force participation by age group](image-url)


156
increase between 1990 and 2000), and fall further to minus 0.2 per cent in the 2000s (about a 1.4 million decrease between 2000 and 2010) (Table 4). However, there is a possibility that an increase in the female LFP would accelerate, since a tightening of the labour market could improve their working conditions. There is a large potential supply of female workers, particularly in the child-rearing age cohorts. If the participation level of the Japanese female workers in this group were as high in 2010 as the current level in the United States (where the female LFP pattern is no longer an “M”), an additional labour supply of about 1 million persons could be expected, which would offset the projected decline in the labour force beyond the year 2000.

Table 4. Projection of the labour force

<table>
<thead>
<tr>
<th></th>
<th>Million persons</th>
<th>Annual rate increases, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>51.7</td>
<td>56.7</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>31.4</td>
<td>34.8</td>
</tr>
<tr>
<td>Females</td>
<td>20.3</td>
<td>21.9</td>
</tr>
<tr>
<td>(by age group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-24</td>
<td>11.6</td>
<td>7.3</td>
</tr>
<tr>
<td>55-64</td>
<td>5.6</td>
<td>6.5</td>
</tr>
</tbody>
</table>


Projection of technical changes

Though the current high level of investment is expected to be maintained, annual growth of capital stocks is likely to decline from an average of 5¼ per cent for the 1986-90 period to 3½ per cent during the 2000-2010 period. Thus, the extent to which an increase in total factor productivity can offset the declining growth of capital stocks is crucial for projecting long-term labour productivity growth. Currently, the average level of labour productivity of Japanese industry as a whole, measured at purchasing power parity (PPP) and on a man-hourly basis, is lower than those of major OECD Member countries by around 30 per cent (Figure 4). This result, which seems to contradict the strong external competitiveness of Japanese industry, comes mainly from a wide divergence between the PPP and the current exchange rate, and working hours in Japan that are longer by international standards. However, an expected stagnation of the labour supply, or even its decline, in the coming decades – as happened in Germany in the 1970s – is likely to induce capital-deepening investment as well as labour-augmenting technical changes. Indeed, a cross-section comparison suggests that many of the gaps in labour productivity growth between OECD Member countries can be accounted for by differences in labour force growth (Figure 5).

Total productivity growth is expected to accelerate slightly, from 1½ per cent in the 1980s to 1¾ per cent on average in the 1990-2010 period. As a result, despite a slowing of growth in capital stocks, average labour productivity growth is likely to decline only modestly, from 3½ per cent in the latter half of the 1980s to 3 per cent on average in the 1990-2010 period. Contrary to the previous period, the increase in labour productivity is
Figure 4. Comparison of labour productivity

At PPP and hourly basis

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Industry</th>
<th>Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>United States</td>
<td>147</td>
<td>126</td>
</tr>
<tr>
<td>Germany</td>
<td>120</td>
<td>102</td>
</tr>
<tr>
<td>France</td>
<td>125</td>
<td>136</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>122</td>
<td>96</td>
</tr>
</tbody>
</table>

At current exchange rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Industry</th>
<th>Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>United States</td>
<td>100</td>
<td>85</td>
</tr>
<tr>
<td>Germany</td>
<td>109</td>
<td>93</td>
</tr>
<tr>
<td>France</td>
<td>105</td>
<td>85</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>65</td>
<td>53</td>
</tr>
</tbody>
</table>

Source: Ministry of Labour.
more prominent in the tertiary sector, while productivity increase in manufacturing declines. This arises from the fact that the expected labour-augmenting technical change is likely to result not only from technological innovation but also from more efficient use of the existing labour force.

Major sources for increases in labour productivity are the following:

- Introduction of labour-saving technologies. In particular, wider use of computer-based information technology, not only in manufacturing but also in the tertiary sector, is likely to be stimulated.

- Labour adjustments by industry. Withdrawal of inefficient producers from industry and the shift of labour toward more efficient firms would enhance macroeconomic efficiency. In Japan, self-employed and unpaid family workers still account for a quarter of the labour force, mainly in the agriculture and distribution sector, and half of the self-employed workers are over 55 years of age. Their expected retirement from the labour market and the resulting shift of family workers toward salaried employment will contribute to improving average labour productivity in the sectors in question.

- Reduction of “excess employment”, particularly in the distribution and service sectors. Employment in Japan’s distribution sector accounted for 18 per cent of the country’s total, compared with 13-14 per cent in Germany and France. An expected reduction of workers per unit of output to a level similar to European standards will raise labour productivity, as long as the corresponding deterioration in the quality of services is not taken into account.
Economic growth and its pattern

A broad picture of Japan’s economic growth in coming decades can be drawn as follows. As labour productivity growth is projected to slow only slightly, the annual growth rate of real GNP will fall from 4.6 per cent in the second half of the 1980s to 3¼ per cent on average for the 1990s, and further to 2¼ per cent in the first decade of the 21st century. As the deceleration of economic growth is mainly due to a slowdown in the growth of the labour force, the growth of real GNP per worker will remain basically unchanged. Consequently, the risk of an increase in unemployment arising from insufficient demand growth will be minimal.

The pattern of economic growth will change. Consumption growth is projected to slow down following the declining trend of GNP growth. The annual growth in total investment is likely to fall substantially, from 9.1 per cent on average over the 1985-90 period to 3 per cent on average for the 1990s, and may remain at that level thereafter despite the further slowdown in GNP growth. As a result, the share of total investment in GNP (in nominal terms) is projected to fall from 32 per cent in 1990 to 29 per cent in 2000, but pick up again to a level approximating the average for the second half of the 1990s (30 per cent). This is mainly due to the rise in business investment, intended to substitute capital for labour.

On the other hand, the aggregate saving ratio will decline gradually, from 34 per cent in 1989 to around 29 per cent in 2010. This is mainly due to a fall in the household saving ratio arising from the population ageing. The current external surplus is likely to maintain during the 1990s the level reached at the end of the 1980s (1 to 1½ per cent of GNP). This is reflected in an expected decline in the aggregate investment/GNP ratio linked to the fall in the aggregate saving ratio. However, the current external surplus may fall to close to zero during the 2000-2010 period, as a rise in the investment/GNP ratio may be accompanied by a continued gradual fall in the saving ratio.

There will be a marked difference in the changing pattern of the industrial structure in the coming decades between the 1990s and the decade following. In the 1990s, the share of employment in the service sector is likely to increase with the expansion of information networks and other business services, which is associated with a continued decline in the agriculture and manufacturing sectors. However, in the 2000-2010 period, the declining trend of manufacturing employment may cease, mainly due to an increase in demand for labour-saving investment to meet a serious labour shortage. The projected industrial structure in Japan in 2010 more closely resembles that of Germany, with its relatively high share of machinery industries, than that of the United States, where the growth in service industries continues, supported by the relatively high growth of labour supply.

Various alternative simulations

These model simulation results stem from the assumption that there is no constraint on financing capital formation, and that the saving ratio is endogenously determined to maintain optimal growth. Also, as the economy is assumed to function always at full capacity, a possible increase in exports will simply be offset by a corresponding increase in imports, and consequently the economic growth path will not be largely affected by external factors. Thus, the major influences on economic growth are, given technological changes, changes in labour supply: (a) a reduction in the currently much longer (by
international standards) hours worked; and (b) a possible increase in foreign workers in Japan.

First, on the effect of shortening working hours, while a moderate reduction of total hours worked – from 2 052 in 1990 to 1 950 in the year 2000, and subsequently to 1 850 in the year 2010 – is projected for the standard case, there is a possibility of more rapid reduction, reflecting increasing labour market tightness. With a 1 per cent reduction in total hours worked, real GNP will decline by 0.4 per cent from the baseline. In this case, the impact on real GNP growth of the decline in labour input (on a man-hourly basis) will be partially offset by accompanying higher productivity growth.

Second, a possible increase in foreign workers in the coming decades would stimulate economic growth. A mechanical calculation indicates that, other things being equal, an additional one million workers in the first decade of the 21st century – the period in which the Japanese labour force is expected to begin to decline – would raise GNP growth by 0.2 per cent per year; an increase of 6 million foreign workers in 2010 (around 9 per cent of the total labour force) would prevent a fall in the economic growth rate in the 2000s from the previous decade.

**Impacts of CO₂ emission controls**

The standard economic growth mentioned above implies that emissions of CO₂ are projected to grow by \(1\frac{3}{4}\) per cent annually; this means that in the year 2010 the aggregate amount of CO₂ emissions will be higher than that in 1990 by 40 per cent\(^1\). It is worth noting that the rate of increase in CO₂ emissions per unit of value added is higher in the decade following the year 2000. This is mainly because the increasing labour shortage during that time will lead to increased substitution of capital and intermediate goods for labour, resulting in more intensive use of energy per unit of value added.

Thus, the trade-off between achieving the official target of limiting CO₂ emissions to the 1990 level on the one hand and maintaining economic growth on the other will become more serious beyond 2000. Such a trade-off naturally depends upon the extent to which policies are adopted to advance energy-saving technologies\(^1\). The following three cases can be considered:

- First, in the case of no further advance in energy-saving technologies, restraining CO₂ emissions at the 1990 level requires an equivalent reduction of GNP growth by, on average, 2 per cent per year, commensurate with the projected growth in CO₂ emissions between 1990 and 2010 (Figure 6).
- Second, under the assumption of halving the growth of household energy consumption over coming decades, the rate of increase in total CO₂ emission will be decreased by around \(\frac{1}{2}\) per cent. In this case, the necessary sacrifice of economic growth to meet the official target will be reduced by \(\frac{1}{2}\) per cent.
- Finally, the industry sector is assumed to achieve a CO₂ saving of 4 per cent, a rate equivalent to that of the 1975-86 period of great advance in energy-saving technology (Table 3). In this case, the net increase in CO₂ emissions is minimal, and no major reduction in economic growth will result.

Comparison of these alternative cases suggests that if oil prices reach the pre-1985 level or even higher, there is a possibility that improvement of energy-saving technology in the industry sector on a level with that of the past period, combined with energy-saving by households, may be sufficient to curb CO₂ emissions without sacrificing any economic growth.
Globalisation of Japanese firms

Globalisation of the activities of Japanese firms is likely to continue. In 1990, overseas production by Japanese firms amounted to only 6 per cent of their domestic production, compared with 25 and 17 per cent for US and German firms, respectively. However, a recent EPA survey on Japan’s major manufacturing industries indicates that the ratio of transplant production to domestic production is projected to rise to 20 per cent in 2010. The ratio of overseas production in the electronic machinery industry is projected to grow particularly fast, from slightly over 10 per cent in 1989 to nearly half of the total in 2010.

What are the risks of a hollowing out of domestic manufacturing activities? As overseas production substantially increases over the long run and substitutes for exports, Japan’s domestic industrial base might be eroded. This was feared particularly at the time of the sharp appreciation of the yen, but has not actually occurred. The factors that will reduce such risks are the following:

- First, investment behaviour. While Japanese manufacturing industries have increased FDI threefold (in yen terms) during the 1980s, this has coincided with heavy investment in the domestic market (Figure 7). Previous experience suggests that a 1 per cent increase in FDI (on a stock basis) in manufacturing will be associated with a 0.65 per cent increase in private capital stocks in the domestic market. This is mainly due to Japanese firms shifting labour-intensive production to Asian countries and domestic production toward higher value added goods.
Figure 7. Foreign direct investment and domestic investment
Manufacturing total
1975 - 1988

Electronic machinery
1975 - 1988

– Secondly, industrial structure. The share of manufacturing, particularly of machinery industries, in total industry is projected to remain relatively large in the coming decades. This mainly comes from the declining growth of labour, which is likely to limit the continued expansion of the service sector. The labour shortage would result in increasing demand for labour-saving investment, for maintaining the domestic production base for capital goods, and for improving labour productivity in the service sector.

– Finally, the employment policy adopted by firms. Most Japanese firms put a high priority on maintaining domestic employment. Thus, faced with the deterioration of cost competitiveness through a higher yen and domestic wage increases, firms pursue a policy of upgrading their products by investing heavily in research and development, rather than curtailing the cost of production. Indeed, with a rising ratio of overseas to domestic production, the manufacturing employment level is expected to be maintained, and the ratio of white-collar to blue-collar workers in manufacturing should continue to rise steadily – from 0.40 in 1985 to 0.55 in 2010 – partly reflecting the shift of production toward higher value added.

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>United States</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and mining</td>
<td>7.7</td>
<td>5.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>24.3</td>
<td>22.0</td>
<td>22.1</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machineries</td>
<td>10.5</td>
<td>10.1</td>
<td>10.5</td>
</tr>
<tr>
<td>Construction</td>
<td>9.4</td>
<td>9.7</td>
<td>9.3</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>18.8</td>
<td>18.2</td>
<td>18.4</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>6.0</td>
<td>6.0</td>
<td>6.1</td>
</tr>
<tr>
<td>Finance, insurance and real estate</td>
<td>4.0</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Electricity, gas and water</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Services(^a)</td>
<td>29.5</td>
<td>34.4</td>
<td>35.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\(^a\) Including restaurants and public services.
\(^b\) Including dwelling services.

Source: OECD, National Accounts.

4. Major policy issues

The following major policy implications can be drawn from the above analyses:

– It is likely that in the 1990s, Japan’s economic growth will decelerate in relation to its current brisk pace, though it would still exceed the average world level of 2 to 3 per cent, and the current level of external surplus is likely to continue.
However, beyond the year 2000, Japan’s economic growth is projected to decline to world average, with the external surplus falling to near zero. What are the major policy implications for the Asia-Pacific economies? Will the problem of the world savings shortage worsen? Will the dynamic development of the Asia-Pacific region be sustained?

- Only dynamic economies can maintain an equilibrium in the system of free trade and investment on a world level, particularly in the face of increasing protectionist pressures and the possible formation of inward-looking blocs in Europe and North America. How can the dynamic economies of the export-oriented Asia-Pacific region maintain the free, open system? Can they dismantle import restriction measures by their own initiative in further liberalising their own domestic markets, in order to support that system?

- Increasing concerns about protecting the environment through curbing the emission of GHGs in Japan may reduce economic growth to a level below its potential. What policies are required in an international perspective to minimise a trade-off between the long-run slow-down of economic growth and the need for freezing GHGs at their current level?

**Impact of the change in Japan’s economic growth pattern**

**Impact on world trade**

While a slow-down of Japan’s economic growth in the decades to come is likely, the negative global effect can partly be offset by an increasing economic integration of the Asia-Pacific region. Major elements behind this development are the following:

- First, since a dominant factor of the deceleration of economic growth in Japan is the declining growth of labour supply, the economy is likely to stay at its near-full capacity level in the medium term. Also, with an expected acceleration of wage costs – reflecting increasing labour market tightness – the shifting of labour-intensive production processes to other Asian countries will continue.

- Second, the ratio of Japan’s imports (and exports) to GNP has remained low compared with those in European countries. A large domestic market with a population of over 120 million, differences in factor endowments due to abundant capital and human resources relative to scarce natural resources, and distinctive production and management systems may together provide most of the explanation for Japan’s low level of manufactured imports. In addition, higher transportation costs arising from the long distance between Japan and other industrial economies have been an important factor in lowering the import ratio, which can also be observed in other OECD Member countries in the Asia-Pacific region (Australia and New Zealand) (Figure 8). However, the continued rapid development of manufacturing industries in the Asian NIEs and ASEAN, together with Japan’s FDI in the region, may narrow the income disparity between Japan and other Asia-Pacific countries, resulting in an expansion of intra-industry trade in the region, as is the case in Europe and North America.

- Third, with an increasing globalisation of Japanese enterprises, the share of intra-firm transactions in total trade is likely to increase. The share of Japanese multinationals in world exports has risen from 4.8 per cent in 1980 to 9.4 per cent in 1986, though it was still less than half the US multinationals’ share in 1987
Figure 8. International comparison of trade shares

A. Total imports, 1988
Percentage of GDP/GNP

Regression line
Portugal
Austria
Switzerland
Sweden
Canada
United Kingdom
Germany
Japan
United States

GDP $ billions

B. Manufactured imports, 1988
Percentage of GDP/GNP

Regression line
Portugal
Austria
Switzerland
Sweden
Canada
United Kingdom
Germany
Japan
United States

GDP $ billions

C. Manufactured exports, 1988
Percentage of GDP/GNP

Regression line
Portugal
Austria
Finland
Denmark
Sweden
Canada
United Kingdom
Italy
Japan
United States

GDP $ billions

Table 6. **Comparison of intra-firm trade**

\[\text{\$ billion}\]

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1983</th>
<th>1986</th>
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<tr>
<td><strong>A. Japanese multinationals</strong></td>
<td></td>
<td></td>
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<tr>
<td>Total exports</td>
<td>90.8</td>
<td>114.5</td>
<td>187.6</td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent company</td>
<td>82.7</td>
<td>106.5</td>
<td>171.3</td>
</tr>
<tr>
<td>Subsidiaries</td>
<td>8.1</td>
<td>8.0</td>
<td>16.4</td>
</tr>
<tr>
<td>Share in world exports (%)</td>
<td>4.8</td>
<td>6.8</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>B. US multinationals</strong></td>
<td>400.0</td>
<td>423.3</td>
<td>459.4</td>
</tr>
<tr>
<td>Total exports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent company</td>
<td>147.7</td>
<td>168.4</td>
<td>183.9</td>
</tr>
<tr>
<td>Subsidiaries</td>
<td>252.3</td>
<td>254.9</td>
<td>275.5</td>
</tr>
<tr>
<td>Share in world exports (%)</td>
<td>23.1</td>
<td>23.5</td>
<td>19.7</td>
</tr>
</tbody>
</table>

*Source: MITL, "Survey on overseas activities of Japanese firms".*

(Table 6). This is mainly due to the fact that Japan's multinationals were created relatively recently, and implies that they could expand further (as happened with their US counterparts).

**Impact of Japan's FDI**

Japan's FDI will continue to be an important contributing factor in the integration of the Asia-Pacific region. A major implication of increasing Japanese FDI is the transfer of "intangible assets" by Japanese enterprises to host countries. These intangible assets consist of industry-specific technologies as well as management and production systems which are closely related to industrial organisation in Japan. The latter's structure plays a major role in the development of high technology products (Yoshitomi et al., 1991), mainly because business transactions in high technology products (capital goods and some intermediate products) are often characterised by extremely detailed specifications which can only be satisfied by a small number of suppliers. Thus, relying on conventional anonymous markets is quite costly, as they entail transaction costs for repeated negotiations, securing a stable supply of specific products, and obtaining precise technological information on those products.

Many US and European firms have attempted to overcome this problem by integrating transactions vertically in an enterprise through in-house production of necessary components and specific capital goods. However, this approach may well entail a lack of economies of scale as well as overenlargement of the parent company to accommodate rapid technological developments. On the other hand, in Japan, long-term repetitive transactions in a business group (Keiretsu) are positioned midway between spot-market
transactions and in-house production systems. This reduces the costs associated with transactions of specific products, including those for securing a stable supply of scarce high-quality components, and at the same time allows room for competition (both in price and quality) among subcontractors in the medium term. Japan's FDI thus poses great challenges not only to US and European production and management systems, but also to Japanese multinational companies wishing to demonstrate Japan's legitimacy as a viable capitalist system.

**Impact on world savings**

The global savings shortage is increasingly a subject for discussion, against the background of strong demand for funds from the USSR, Eastern European countries and others. Moreover, the ageing of the population in Japan implies that the country's savings are projected to fall over the long term. Will this aggravate the global savings shortage? A savings shortage is a relative ex ante concept, i.e. investment demand minus savings. However, the world's savings and investment are always equal ex post; the mechanism that equates the two is a rise in real long-term interest rates. In Japan, an anticipated slowdown of household savings may well be offset by an accompanying decline in investment, in which case the current external surplus of 1 to 1½ per cent of GNP would be maintained in the 1990s. Thus, medium-term increases in the world demand for funds need to be financed elsewhere – for example, through reductions in the US budget deficit – in order to avoid further increases in world long-term interest rates.

**Curbing the emission of GHGs**

The emission of GHGs is a global problem, requiring international policy co-ordination. The ratio of Japan's CO₂ emissions to its GNP is among the world's lowest, due to the high level of the country's energy-saving technologies. If these technologies are transferred to other countries – particularly to the USSR and China, currently major CO₂ producers with the largest emissions of CO₂ per GNP – the overall effect of reducing GHGs worldwide will be significant. A mechanical calculation suggests that, because of the huge size of Japan's economy, a possible sacrifice of potential economic growth in the order of 1 per cent per year over the coming decade will cost an accumulated total of around 500 trillion yen.

Alternatively, against the background of the high opportunity cost that curbing the emission of CO₂ entails, a substantial amount of "Environmental ODA" can be considered as an alternative to sacrificing economic growth. Assigning appropriate quotas of the "CO₂ emission right" to each country and creating an international market for trading of the right would improve the efficiency of the world economy through the transmission of energy-saving technologies. As many countries with high emissions of CO₂ require not only energy-saving technologies but the means to finance capital stocks embodying these technologies, the transfer of technology may well accompany substantial outflows of FDI. Policy co-ordination including such "Environmental ODA" will further contribute to the development of the Asia-Pacific region.
Notes

1. The average life expectancy for males in Japan increased from 50.1 in 1947 to 75.9 in 1989; that for females also increased greatly between those years, from 54.0 to 81.8. In both cases the 1989 figures were the highest among major countries.

2. In Japan, the labour force participation rate of elderly males is particularly high: in 1989, for the group between 60 and 64 years of age it was over 70 per cent, and for the 65-69 age group it was over 50 per cent. Takayama (1989) found that the estimated savings ratio of elderly households was higher than the average.

3. Japan's public pension system was initially designed to be a funded scheme, i.e. benefits are financed in principle not by taxes but by social security premiums. While there are various programmes, the largest employees' pension scheme requires a minimum contribution period of 25 years, much longer than in other OECD Member countries (supplementary measures are available for those who have shorter contribution periods). As the current ratio of full pension recipients to total recipients is about 65 per cent, an eventual increase in the ratio to close to unity in 2020 will, along with the population ageing, increase the burden of contributors.

4. The proportion of employees working five days a week was still around 40 per cent of the total.

5. The government set the target on a per capita basis, or on an absolute basis if there is substantial development in energy-saving technologies. Actually, there is no real difference between the two standards, as the population is projected to grow by only 0.1 per cent annually between 2000 and 2010.

6. The model is so named because by taking a turnpike (motorway), one can save traffic time regardless of destination within a given area. The model's assumption of an optimal allocation of resources can be achieved either by "ideal" centrally planned economies or market economies with flexible price adjustments.

7. An alternative way is to make capital a major constraint, assuming a virtually infinite supply of labour. This type of approach is applicable to some Asian developing economies, but obviously not to Japan at present.

8. Removing these assumptions affects the composition of industries but has no significant impact on economic growth, as domestic supply is mainly determined by the availability of labour and technologies.

9. Projection of input coefficients of intermediate products, labour and capital of 31 industries in the years 2000 and 2010 are based on engineering information collected from interviews with specialists in respective industrial sectors.

10. The standard case of economic growth incorporates energy-saving technology equivalent to an average annual reduction in CO₂ emissions per unit of GNP of about 1.4 per cent between 1990 and 2010.

11. It is assumed that such policies would involve regulation imposing the reduction of output per industry necessary to attain a uniform curtailment of CO₂ emissions. This does not have any policy implications, but simply stems from a restriction -- inherent in the model's construction -- which allows no automatic substitution of energy inputs responding to price changes.
12. The “elasticity” of domestic capital stocks with respect to FDI on a stock basis varies by industry: 0.77 in the electronic machinery industry, 0.60 in the chemical industry, 0.52 in transport machinery, and 0.40 in the iron and nonferrous metal industries. The variations in coefficients reflect differences to the extent that FDI and domestic investment are complementary.

13. An increasing portion will be financed outside Japan; indeed, a third of FDI by major Japanese enterprises has already been financed abroad, of which 13 per cent was achieved through reinvestment of profits in their foreign affiliates.


15. The big difference in the extent of globalisation between Japanese and US enterprises can be observed in the following figures: in 1987, General Motors’ annual sales (14.2 trillion yen) were 2.4 times higher than Toyota’s (6 trillion yen), but GM’s total number of employees (813 000) was 12.7 times greater than Toyota’s (64 000). Therefore, annual sales per employee in Toyota were more than five times as high as those of GM. Also, Hitachi’s annual sales per employee were about twice as high as those of General Electric (Kenichi and Komiya, 1987).

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The Asia-Pacific Region in the 1990s

by

Steven Wong
Institute for Strategic and International Studies (ISIS)
Malaysia

1. Asia-Pacific boundaries

By convention, the term ‘‘Asia-Pacific’’ (or ‘‘East Asian’’) economies normally includes four North East Asian economies – Japan, the Republic of Korea, Taiwan and Hong Kong – and six South East Asian economies – Brunei, Indonesia, the Philippines, Singapore, Thailand and Malaysia.

If these have a common feature, it is their adoption of outward-looking development policies involving market mechanisms and government intervention to promote and regulate economic activity.

The People’s Republic of China is sometimes, though not always, included. Economic reforms since 1978 have made it partially open and market-reliant, and the close relationship it has with Hong Kong has integrated it into the regional economy. In addition, China’s land and population mass occupies most of the Asia-Pacific region, and the case for its inclusion is strong.

To a lesser extent, this applies to other socialist countries in the region. Economic interaction with these countries is generally much lower than with China but all have adopted, at least on paper, some measure of outward-looking economic reform. As such reforms take hold and the influence of political ideology declines, it is probable that these countries – Vietnam, Laos, Cambodia, Mongolia and North Korea – will be increasingly factored into the regional trade and investment matrix in the future.

An Asia-Pacific region so composed would contain sixteen economies of about 1.7 billion people, spread over 15.6 million square kilometres. The combined value of gross national/domestic product (GNP/GDP) was of the order of $3.5 trillion in 1988.

The region would also be diverse in just about any terms imaginable. Per capita incomes would range from among the lowest in the world (Laos at $180) to the highest (Japan at $21 020). Population sizes would vary from Brunei’s 200 000 to China’s 1.1 billion. Different social, political, economic and cultural systems make this picture of great diversity complete.

Yet in one respect, the countries involved are becoming alike: their growing economic interdependence. As Kenichi Kamiya, Chairman of Mitsui Bank, said of Japan:
Table 1. Per capita GNP, population and area of East Asia in 1988

<table>
<thead>
<tr>
<th></th>
<th>GNP per capita ($)</th>
<th>Population (million)</th>
<th>Area (thousand km²)</th>
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</thead>
<tbody>
<tr>
<td><strong>Market economies</strong></td>
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<td></td>
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</tr>
<tr>
<td><strong>North East Asia</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Japan</td>
<td>21,020</td>
<td>122.6</td>
<td>378</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>9,220</td>
<td>5.7</td>
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<tr>
<td>Taiwan</td>
<td>6,333</td>
<td>19.8</td>
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</tr>
<tr>
<td>South Korea</td>
<td>3,600</td>
<td>42.0</td>
<td>99</td>
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<td><strong>South East Asia</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Brunei</td>
<td>15,390</td>
<td>0.2</td>
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<tr>
<td>Singapore</td>
<td>9,070</td>
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<tr>
<td>Malaysia</td>
<td>1,940</td>
<td>16.9</td>
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<tr>
<td>Thailand</td>
<td>1,000</td>
<td>54.8</td>
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<td>Philippines</td>
<td>630</td>
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<td>Indonesia</td>
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<td></td>
<td></td>
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<tr>
<td>Mongolia (1990)</td>
<td>1,850</td>
<td>2.2</td>
<td>1,565</td>
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<tr>
<td>North Korea</td>
<td>1,047</td>
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<td>China</td>
<td>330</td>
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<td>Vietnam</td>
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<td>Laos</td>
<td>190</td>
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<td>237</td>
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<tr>
<td>Cambodia</td>
<td>190?</td>
<td>7.8</td>
<td>181</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>2,097</td>
<td>1,683.8</td>
<td>15,560</td>
</tr>
</tbody>
</table>


"The future of the Japanese economy is inextricably linked to the economies of East Asia. Japan’s relations with other economies are ‘built’ into its economic structure so that it is simply impossible to think of its further economic advancement without regard to these ties. Indeed the future development of the Japanese economy is inconceivable without the development of East Asia" (Kamiya, 1989).

2. Asia-Pacific players

Japan

So much has been said about Japan’s economic success that it hardly bears repeating. Its technological prowess, nimbleness in international business, high saving rate, work ethic, etc. have made it the world’s second largest economy in short order. In terms of dynamism, it is indisputably the world’s first.
According to recent projections by the Long-term Credit Bank, Japan is seen to be on a 4 per cent growth path to the year 2000, at which time per capita GNP should be $50,000 and its economy should account for 15 per cent of world output.

In order to get there, however, Japan will have to navigate past obstacles both global and domestic. Over the last six years, it has had to manage the diplomatic crisis of a massive global wealth redistribution in its favour. This has led to rising conflicts with the United States and the European Community – especially the former, since Japan has been a beneficiary of its security umbrella since 1951.

Despite rapid domestic demand increases in the period of the ‘Heisei boom’, the problem of embarrassingly high balance-of-payments surpluses remains. Nomura Research Institute forecasts that by 1995, the trade surplus will still be about $60 billion. It might be added that as the world’s largest creditor nation, some forecasts have it that even if its trade account were to be balanced, between $60 billion and $80 billion a year would be earned from 1995 to 2000 from interest and dividend income.

It is alleged that high trade barriers exist, especially in agricultural and non-traded goods production, and that lack of effective competition prevents foreign market access. All, some or none of this may be true, but the issue remains one of enormous importance in Japan’s future.

Population ageing and its implications, such as labour shortages and lower household savings, are considered serious domestic challenges that Japan has to face. Also of concern is the fact that the huge wealth amassed has fuelled a large ‘bubble’ economy that seems recently to have burst.

**Asian newly industrialising economies (NIEs)**

The past two decades were years of the Korean ‘miracle’. The ferocious intensity with which Koreans approached the issue of development saw per capita incomes grow at a rate doubling every eight years. Like Japan, South Korea has displayed a gargantuan appetite for savings, investment, work, skills and training, etc. Also like Japan, it has been backed by a pro-business government for good measure.

The Korea Development Bank anticipates more than 7 per cent average growth rate to 2000, which will give it a per capita GNP of approximately $16,000 = 4.4 times the level in 1988.

Domestically, the country does not appear to have weathered the appreciation of the won as well as Japan has that of the yen. Despite booming construction activity and signs of export recovery in late 1990, net exports have recently made a negative growth contribution.

Labour management problems constitute what many Koreans see as a major flashpoint for the economy. This is commonly held to be a factor in the fall in growth from about 12 per cent from 1986 to 1988 to 6.9 per cent in 1989.

Nevertheless, in the eyes of the international community, South Korea has attained adulthood and will need to conduct itself accordingly in the 1990s. In 1990, it was promoted to an ‘Article 8’ member of the International Monetary Fund and an ‘Article II’ party of the General Agreement on Tariffs and Trade (GATT), albeit with an eight-year moratorium.

Taiwan is the second richest Asian economy after Japan and also has pressing problems of managing accumulated trade surpluses. Its Council for Economic Planning
and Development appears to have modest expectations of its economic performance to the year 2000 – a mere 6.5 per cent average growth that would lift per capita income to $13 400 from $6 333 in 1988.

Taiwan is by far the most vulnerable Asia-Pacific economy because it is the largest exporter to the United States in terms of value. Taking a leaf from Japan’s book, it has adopted measures to stimulate domestic demand that are aimed at appeasing both the United States and its own populace. The Six Year National Development Plan (1991-96) envisages massive infrastructure expenditure that will drive expansion.

Both South Korea and Taiwan share problems associated with the appreciation of their currencies, trade frictions with trading partners and severe labour shortages. Negotiating the twists and turns will not be easy in the years ahead, especially as there will be at least three “drivers” behind the policy wheel: their governments, for whom economic growth is part of the security equation; their domestic constituents, who seek better standards of living; and their trading partners.

Hong Kong is China’s gateway to the world, intermediating its trade with many countries – including Taiwan, with which China has no official links. About 42 per cent of Hong Kong’s exports in 1989 were reported to be in the form of re-exports from China.

As one would expect of a true-blooded, highly open laissez-faire economy, it is difficult to target any long-term growth rate. Like the other two Asian NIEs, Hong Kong faces labour problems – but of a unique character. Its industries employ roughly two million blue-collar workers in South China but Hong Kong itself faces acute white-collar shortages in the professional, managerial and administrative categories. Excess demand for such labour is one explanation, but another is that Hong Kong may be losing between 0.8 per cent and 1.1 per cent of its population annually to emigration.

Singapore aspires to be the “Switzerland of the East” and achieve per capita income levels of $17 000 by the year 2000. This implies an average growth rate of only between 5 and 6 per cent per annum which, judging from past history, would appear easily achievable. Singapore does not, however, have Hong Kong’s easy access to an economic hinterland, and so it has had to embark on other policies for sustainable growth.

First, it offers itself as the “total business centre” in the region by providing incentives for multinationals to make Singapore their operational headquarters and/or international purchasing office. Secondly, it is attempting to move up the value-added and technology-intensive chain. Thirdly, it is embarking on a co-operative “Growth Triangle” which links it to the Malaysian state of Johor and the Indonesian island of Batam.

The four Asian NIEs have different economic and political complexities, but they have all earned their stripes, not only through export-oriented industrialisation but also through excellent management of their domestic economies.

The factors responsible for their success may well also be their future challenges. They will need to diversify their export markets. In 1989, Taiwan’s Premier Yu Kuo-Hua is reported to have told Parliament that Taiwan would work towards creating a common market that would bring together Japan, South Korea, Hong Kong and Singapore.

Asian NIEs will also have to restructure their economies outwards and upwards. Sharp increases in capital outflows after 1987 indicate that they are already doing the first of these, although the second is more difficult to establish. Finally, they will need to prepare to expand domestic markets to cushion any drop in exports.
Table 2. Direction of East Asian exports
$ billion

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1986</th>
<th>1988</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asian NIEs to:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>8</td>
<td>14</td>
<td>27</td>
<td>15.2</td>
</tr>
<tr>
<td>Other Asian NIEs</td>
<td>6</td>
<td>6</td>
<td>16</td>
<td>8.9</td>
</tr>
<tr>
<td>ASEAN</td>
<td>7</td>
<td>6</td>
<td>15</td>
<td>8.4</td>
</tr>
<tr>
<td>East Asia</td>
<td>21</td>
<td>26</td>
<td>58</td>
<td>32.5</td>
</tr>
<tr>
<td>United States</td>
<td>19</td>
<td>51</td>
<td>67</td>
<td>37.7</td>
</tr>
<tr>
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<td>53</td>
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<tr>
<td>World</td>
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<td>178</td>
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</tr>
<tr>
<td><strong>ASEAN to:</strong></td>
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<td>16</td>
<td>10</td>
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<td>United States</td>
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<tr>
<td>Rest of the world</td>
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<tr>
<td>World</td>
<td>46</td>
<td>39</td>
<td>65</td>
<td>100.0</td>
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</tbody>
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*The ASEAN Four*

The four ASEAN economies, Indonesia, Thailand, Malaysia and the Philippines, entered the 1980s heavily dependent on renewable and non-renewable primary commodities. Collectively, they are responsible for the dragon’s share of world natural rubber, palm oil and coconut products, as well as sizeable shares of petroleum, natural gas and rice.

Events at mid-decade, however, took a toll in terms of lost or negative growth. In response, the ASEAN economies – following the examples of North East Asia – attempted to redirect their economies towards manufactured exports. Since domestic efforts would have taken too long, direct foreign investment was welcomed, and the results have been significant for three of them.

In the early 1980s, Indonesia undertook a policy turnaround stressing fiscal restraint, non-oil exports and extensive financial reforms. Oil prices still matter to the economy today, but future sources of growth are expected from trade and industrial liberalisation. What is more, the large surplus labour force ensures against the kinds of unskilled labour shortages that the other ASEAN countries are experiencing.

The author is not aware of any long-term growth projections, although some must surely exist. To hazard a guess, an average 5-7 per cent rate may not be out of order.

Thailand has been the “darling” of investors in the 1980s, and despite complaints of weak infrastructure, low levels of human resource development and growing income inequality, its growth record is enviable. The private sector has played a key role in the entire process; the country enjoys resilient agricultural, agro-based and manufacturing exports.

The confidence Thais have in their economy can be seen from the average growth target of 9 per cent in the Seventh Five-Year Development Plan (1992-96). In the
aftermath of the Gulf crisis, the Bank of Thailand recalibrated this to 8 per cent from 1991 to 1995 and 6.5 per cent from 1995 to 2000. No doubt it will have to do so again now that the war is over. On the way there, it is believed by some that the market of East and South East Asia will play a more important role, perhaps even overtaking the United States and the European Community.

Malaysia has enjoyed economic success following a seven-year austerity drive on the part of the public sector. For four consecutive years since 1987, it achieved GDP growth rates above 8 per cent, and most recently a 10 per cent rate in 1990. Like the other economies in East Asia, it too is having to pay a price of rising inflation, mounting current account deficits and labour shortages. These do not yet seem to be out of hand, and prescriptive macroeconomic policies have been put in place.

In 1991, Prime Minister Mahathir announced a growth target of 7 per cent until 2020, implying an eightfold increase in GDP over thirty years. Achieving this over such a sustained period of time will call for an immense national effort. Manufactured exports will have to be upgraded via technology and skill development, there must be a substantial contribution from the resource-based sector and, since the government is withdrawing from the economy, the private sector will have to take over the reins.

The Philippines has had more than its fair share of tribulations and sheer bad luck. Since the People's Revolution in 1986, macroeconomic stabilization has been the order of the day and the government has still to come to grips with problems not only of trade and industry but also of agrarian reform.

The government has a per capita GNP target of $1 500 by 2000, but for this to be achieved, the average growth rate would have to be in the vicinity of 10 per cent, a tall order for even the more successful Asia-Pacific economies. A reversal of fortunes is, however, in order, although this is more by way of hope than logical deduction.

Growth in Thailand and Malaysia has been virulent, leading the Asia-Pacific region and, in some years, the world. As in Asian NIEs, this has created schisms including surging factor prices and shortages and overtaxed infrastructure. ASEAN countries may have to make a transition towards producing more sophisticated, marketable products.

**China**

For the first decade of China's reforms (1978-88), average growth ran at a startling 9.6 per cent. In 1987 and 1988, however, the costs of the achievement mounted in the form of fiscal imbalances and runaway inflation. Severe “renovation” measures had to be taken and growth dropped to 4 per cent in 1989, the lowest in the decade. The measures mainly involved curtailing investment through reduced credit allocation and removing authority of provincial and local authorities.

In November 1989, the Thirteenth Central Committee of the Chinese Communist Party decided that austerity should be continued through 1991 and longer if necessary. Growth was targeted at around 5-6 per cent, inflation at below 10 per cent. It is anyone’s guess what a desirable growth rate might be in the 1990s, but it is clear that fundamental issues of how to proceed with economic reform will need to be addressed.

Japan, which has had close historical and economic ties with China, became the first country to announce the resumption of official development assistance (ODA) to China. Its share in China's exports and imports in 1989 was 16 and 18 per cent, respectively.
which is higher than those with the socialist blocs (6.5 and 7 per cent). China’s trade with the European Community and the United States, however, is still higher than that of Japan – 18 and 29 per cent, respectively. It also trades quite extensively with the ASEAN countries. In addition to traditional export items like natural rubber, lumber and petroleum, new items like chemical products and home appliances are increasing.

China also thinks about its future economic ties. In 1989, the Chinese Academy of Social Sciences proposed a North East Asian economic zone that would link the country with North Korea, South Korea, Japan and the Soviet Far East.

Other socialist economies

Amidst stagnating economic conditions, Vietnam’s Sixth Party Congress in December 1986 instituted doi moi (reforms) with three aims: first, increased food production, consumer goods and exports; second, reduction of government deficits, money supply and inflation; and third, an open-door policy to encourage investment.

Macroeconomic and industrial adjustment policies which followed in 1988 and 1989 partially paid off in the form of slower inflation and rising output, especially in agriculture. The Asian Development Bank (ADB) believes that the high rates of 8.2 and 8.1 per cent GDP growth recorded in 1989 and 1990, respectively, could extend into 1991, but beyond that estimates are very uncertain.

Hanoi has to tackle stubborn budget deficits, unemployment rates of more than 20 per cent, lack of basic infrastructure, poor human resources and, of course, finance problems. It will have no choice but to seek assistance from bilateral and multilateral sources for further economic growth. This, in turn, will depend on its policies in the region. Relations with Thailand appear to have improved since the withdrawal of troops from the border in 1989. Recently, Japan, South Korea and Taiwan have tried to expand economic contact with Vietnam.

Laos is classified as one of the world’s least developed countries. Growth was restored in 1988 and sustained in 1989, with GDP growth of 2.1 and 4.0 per cent, respectively, as against a drop of 2.4 per cent in 1987. The ADB estimates 5.2 and 5.5 per cent growth in 1990 and 1991.

The Government of Laos, like that of Vietnam, has instituted economic reforms – called the New Economic Mechanism (NEM) – which were endorsed at the Fourth Party Congress in November 1986. The NEM aims to deregulate the price and financial system, enhance the efficiency of state economic enterprises and promote domestic and international trade and foreign investment. Under the NEM, the urban-based private sector is being relied upon to diversify the economic structure.

Laos has had relatively close ties with Western countries, on which it depends for foreign assistance. Although more than 50 per cent of its ODA was from Council for Mutual Economic Assistance (CMEA) countries, aid from Japan, Sweden and multilateral agencies has been substantial. In the past, 50 to 60 per cent of its external trade was with CMEA countries. Today, its trade with Thailand in electricity and timber is one of its biggest sources of export earnings. Other trade partners are Singapore and Japan.

The Cambodian tragedy is due not only to the fact that serious economic reconstruction cannot begin until the civil war ceases completely, but also to the drain on resources stemming from it. The Kampuchean People’s Revolutionary Party, led by President Heng
Samrin, is recognised by only twenty socialist countries, and so trade and finance have been conducted mainly with the Soviet Union, Vietnam and the CMEA. The collapse of Soviet assistance will most likely pave the way for more liberal foreign trade, finance and technical transfer from various countries; in preparation, the ruling regime introduced liberal economic and constitutional reforms in 1989.

Mongolia has also followed the path to economic reform since June 1987, with a twist. It has gone one step further by introducing a multi-party system at the end of 1989 and holding free elections in July 1990. Although difficult to verify, Mongolia is reported to have had GDP growth of 6.4 per cent in 1990 and a surprisingly high per capita income of $1 850. The main sectors in this economy of 2.2 million people are mining and stock farming. In 1988, mining products accounted for 40 per cent of its total exports.

The Mongolian Government has been making efforts to improve diplomatic relations with China, Japan and the United States. It is also reported that it will join the Asian Development Bank soon, and has made a bid to be a member of the Pacific Economic Co-operation Conference (PECC).

North Korea is one of the most closed economies in the world. Data on the level of development vary widely; 1988 GNP per capita was reported by Soviet sources to be as low as $400, in contrast to its own estimates of $1 500. With its philosophy of self-reliance, the target of development has been to build an autonomous national economy using domestic resources and markets to the extent possible. The ratio of trade to GNP is around 25 per cent, compared with 67 per cent in the case of South Korea.

The country is believed to be far behind in technology and modernisation, and has the dubious distinction of being the only known communist country to default outright on its debts. Its main trading partners have been the Soviet Union and China at 58 and 13 per cent of total trade, respectively. Japan is its top trading partner among market economies.

North Korea’s main creditors have been the Soviet Union and China, although some developed countries such as Japan, Germany, France, Austria and Sweden have lent money. Responding to domestic needs and global changes, North Korea has been forced to shift its diplomatic stance in the 1980s. The Soviet Union can no longer fully financially support Pyongyang due to its own economic problems, and China is concentrating on its own economic reforms.

Short of economic crisis, it would be reasonable to expect that the economic policies of China and other socialist countries will continue to be determined by expediencies in the 1990s. Whether political reform will necessarily follow, as in the case of Mongolia, is uncertain, and it could be that Western countries will continue to dither over how best to assist economies under such circumstances.

For many countries of the Asia-Pacific region, and ASEAN in particular, however, there appears to be agreement that it would be politically dangerous to isolate these countries – which, for all their failings, are seeking to make the transition towards more open development.

3. The making of an Asia-Pacific economy

A 1989 report by the United States Congressional Research Service stated: "Whether a formal [Asia-Pacific] trading bloc is created or not is actually somewhat
immaterial because a *de facto* trading bloc [sic] already is emerging. It is arising out of economic necessity and, barring draconian barriers, will continue to grow regardless of whether or not free trade among the various economies develops”.

The term “trade bloc” is used too frequently and loosely. Yet, the trend towards tighter Asia-Pacific interdependence seems to be virtually undeniable. The region’s more successful economies have grown larger than national boundaries will allow, spilling over into other parts of East and South East Asia and spawning regional income and wealth-generating possibilities.

Cumulatively, the Asia-Pacific’s share of global output and trade is credible even now when compared to North America and the EC. In 1987, Japan’s economy was about 53 per cent of the United States’, while that of other economies collectively was around 14 per cent. The Mitsubishi Research Institute forecasts that by the year 2000, Japan’s economy will grow to 86 per cent of the United States’ and other Asia-Pacific economies will double to 29 per cent. Their estimation is that the combination of the Japanese and East Asian economies may actually end up 15 per cent larger than the US economy.

Even if this forecast is overly optimistic, given its growth momentum the Asia-Pacific region will most likely be an important participant in the world economy, perhaps becoming the third major economic region, on a par with North America and Europe.

By whatever measure chosen, a complex interlocking network of vital Japanese-Asian NIE-ASEAN-Chinese economic interests is becoming apparent. By degrees, socialist economies of East Asia may also come to be plugged into this network in the 1990s.

The main factor behind all of this is the outward migration of industries from market economies of the North to the South in a V-shaped “flying geese” pattern. Japan – with its bulwark economy and keen business instincts – is the prime mover, but now all Asian NIEs are really contributing.

Japanese businesses span the length and breadth of East Asia. In 1987, there were an estimated 6 647 Japanese overseas subsidiaries. Of this, about 2 400 or 36 per cent were located in the region, considerably more than in North America or Europe. It is further estimated that the 2 400 Japanese subsidiaries employed 587 000 people, or more than half of the 1.17 million workers worldwide and more than the total number employed in the American and European continents combined. The majority were in manufacturing.

The relocation of Japanese industries to South East Asia is leading to a regional division of labour. Taiwan, South Korea and Singapore may account for higher technology- and knowledge-intensive products, while countries like Thailand and Malaysia will engage in intermediate-intensity products. Indonesia and the Philippines, with excess labour forces, are in a position to benefit from assembly and low-end manufacturing.

In the field of electrical equipment manufacturing, for example, the trend started with basic assembly of component parts but is moving towards integrated and specialised production as the levels of technological development in countries rise. In the 1960s and 1970s, Japanese corporate strategy was to secure local markets. In the mid-1970s to the mid-1980s, this changed to one where Asia was used as an export base, partly to deflect growing trade frictions with the United States and Europe. From the mid-1980s onwards, another shift in corporate strategy was apparent: now, Asia was used to promote the globalised manufacturing of products so as to lower domestic costs and penetrate overseas markets.
The division of labour is also apparent in the automotive industry. Here again, Japanese multinational corporations started out by simply seeking access to home markets. Since then, the revaluation of the yen has forced them to co-ordinate production in their plants scattered throughout Asia. Investments are made with a view to mass production of parts so that scale economies can be captured. At the same time, transfer of production technology is emphasized to improve resource efficiency. Lastly, Japanese multinational corporations are also using Asia as a springboard to third markets.

From the examples of consumer electronics and automobiles, the complementary roles that Japan has with the rest of East Asia can be seen. The relocation of Japanese, Taiwanese, South Korean, Hong Kong and Singaporean production bases throughout the region are not only infusing capital but also spreading technology, skills, management and marketing methods, and other hardware and software critically needed for sustained long-term growth. The effects of industrial relocation are therefore much larger than the event.

**Foreign direct investment**

The Asia-Pacific region garnered about 17 per cent of all Japanese direct investments (FDI) made from 1951 to 1988. At historical cost, this amounted to $32.2 billion. While a 17 per cent share is still less than North America’s share of 40 per cent, it exceeds that of Europe’s 16 per cent.

In 1989, the combined investments of Japan, Taiwan, South Korea, Hong Kong and Singapore represented about 60 per cent of the total FDI made in the ASEAN Four. From 1986 – the year after the Plaza Accord – to 1989, Japanese investments jumped by more than seven times to $4.8 billion; those of Asian NIEs, a mere $284 million in 1986, swelled to $4.1 billion.

A recent survey of Japanese companies indicates that investment trends in South East Asia are continuing. It lists ASEAN as the top priority area of investment, followed by Europe and the United States. Until very recently the priority was reversed, with the United States the first choice, followed by Europe and ASEAN.

A common complaint made about previous waves of FDI in ASEAN is that they created “footloose” industries such as the assembly of electrical goods and electronic components. While this was true in the past, it may no longer be. For example, Japanese companies are not leaving Malaysia even though hourly production wages are, within ASEAN, now second only to Singapore. That may deter new investment to some extent, but the typical response is to automate and thereby reduce the labour content.

The reason is that whereas past Japanese investments were made with the aim of using ASEAN as an export base to escape US and European trade pressure, the high yen regime has now forced Japan to regard the ASEAN Four as an extension of Japan’s industrial machinery. The recent wave of vertically integrated, medium-scale Japanese companies supports this argument, as does the experience of past Japanese investments in the Asian NIEs.

What the Japanese call “globalisation of production” is really regionalisation, and their commitment to Asia-Pacific manufacturing will have to be long term. The case may be different with Japanese investment in the United States and Europe. Since Japan’s FDI is motivated by the need to diffuse trade tensions and get behind barriers, e.g. voluntary
Table 3. East Asian Investment Flows

<table>
<thead>
<tr>
<th>Source country</th>
<th>Malaysia</th>
<th>Thailand</th>
<th>Indonesia</th>
<th>Philippines</th>
</tr>
</thead>
</table>

Source: Host countries.

Export restraints in the auto industry, its investments will rise and fall inversely to the pressure applied.

As labour costs rise and as Asian NIE income and domestic consumption increase, Japanese investors should adapt to the situation. Manufacturing will be shifted upstream, more high-tech goods will be produced, and capital flows may shift into service industries. The pattern can be seen repeating itself in the ASEAN Four, particularly in Malaysia and Thailand.

A development to watch for is the extent to which countries like Malaysia, Thailand and Indonesia make their own overseas investments. This is already happening, though to a very limited extent by world standards. Nonetheless, the fact that these countries have begun to do so opens interesting possibilities. One is that these investments will go to less developed countries such as Vietnam, Laos, Cambodia and China. If they did, economic
ties within the region would strengthen and perhaps lessen the competition for regional investment.

**Trade**

The United States is still the single most important export market for the Asia-Pacific region, but intra-regional trade now makes up more than 50 per cent of Asian exports. Total trade between ASEAN and the NIEs increased 700 per cent from 1975 to 1988. Japan-ASEAN trade for the corresponding years increased by about 235 per cent. In fact, every year for thirteen years starting from 1975, the average growth of East Asia's trade was 16 per cent faster than the world's. In 1988, the combined exports of these countries made up more than a fifth of the world's total trade.

It is also likely that in the course of the coming decade, East Asia will be Japan's most important trading partner. Late in 1989, for the first time ever, its monthly trade with Asia exceeded that with the United States. While there is no particular virtue in having one trading partner substitute another *per se*, this accords with the logic of the market-place.

First, a number of Japanese multinationals have so-called "international co-ordination programmes" to reduce exports and promote imports. To those ends, they have established plants in East Asia which use state-of-the-art production equipment. The products made are of sufficiently high quality to meet the exacting standards of the Japanese home market. Advancing FDI has therefore irrevocably altered the region's trading patterns.

Second, given the US economy's continuing domestic problems, its markets may not be as easily accessible as they were in the past. The US economy is unlikely to grow at the same rates that it did in the 1980s, with US total debt hitting $12 trillion and set to go higher. The trend away from the United States is therefore opportune, since it diversifies markets. It is also what the United States has said it wants.

Third, Asia-Pacific markets are expanding rapidly as a result of rising incomes and prosperity, thereby offering Japan strategic opportunities to access such export markets and to diversify them as well.

Fourth, new markets are needed if the Asia-Pacific region is to keep its growth record intact. Several possibilities exist. One is Europe, although it should be kept in mind that Europe is wary of what it sees as exploitative forces in East Asia. A second possibility is Japan itself. Figures in recent years indicate that imports have been driven up by domestic demand consumption; however, the manufactured goods component is not yet comparable to that of the United States.

**4. Asia-Pacific issues in the 1990s**

As painted by the broad brushstrokes above, the dynamism of Asia-Pacific economies is quite apparent. What does not seem to have drawn equal attention, however, is the question of whether the same ease and rapidity with which economies attained their goals also carry the seeds of those economies' destruction.
The thesis that the spectacular achievements of the past twenty years have laid the foundation for economic progress in the next twenty is, of course, cogent. As Asian Development Bank President Kimimasa Tarumizu pointed out: "Domestic markets have become more important, trade linkages within the region have strengthened and economic restructuring, benefitting from high investment ratios, continues".

**Supply-side challenges**

Such assessments, however, take some things for granted and others too lightly. The capacity bottlenecks, even now apparent, will not go away and can probably abate only slowly in the 1990s. While high rates of investment are indeed adding to industrial capacity, the labour shortages pointed to are problematic in most of the rapidly growing Asia-Pacific economies, and acutely so in some cases. Escalating wages are also pushing down corporate profits while pushing up inflation.

For Japanese and Asian NIE industries with large cash reserves, the logical solution has been to invest abroad, and this they have done with methodical swiftness. However, for second-tier economies without such available excess investible funds, the transition primarily entails massive supply-side challenges of moving to higher value-added products. This requires more active research and development, technology transfer, skill development, entrepreneurship and so forth, which can only really be shaped over the long term.

For ASEAN and Asian NIEs alike, labour shortages highlight one of the most important elements of technological transfer, human resource development (HRD). To an extent, multinationals have been deeply involved in HRD as part of their standard multinational training programme. These tend, however, to be narrowly focused; what is needed in addition are HRD programmes at the national level.

Accompanying labour problems is inadequate physical infrastructure. In the case of Taiwan, congestion, power shortages and industrial pollution are apparently so bad that they have led the government to make the bold decision to try and spend more than $300 billion on public infrastructure over the next six years to raise the quality of life. Whether this will worsen or improve matters, at least over the short term, remains to be seen.

In Malaysia, the provision of infrastructure in the 1990s relies on partly or wholly privatised means. Whether more active participation by the private sector leads to investment "additionality" is a key question.

Japan’s ODA is heavily skewed towards Asia, particularly South East Asia. In 1989, 78 per cent of Japan’s ODA went to ASEAN and other East Asian economies. Nine of the top ten countries that receive ODA are located in Asia; among them, Thailand, the Philippines and Indonesia were foremost.

As a purely unilateral instrument, however, ODA has become a natural target for criticism. In the past, Japanese ODA loans were tied. Loans for building infrastructure projects required the hiring of Japanese construction firms, the purchase of Japanese machines and materials, and so forth. More often than not, the projects attracted Japanese FDI and led to the accusation that Japan was directing aid primarily for the benefit of its own private enterprises. Japan responded by increasingly untying its loans and making conscious efforts to increase the efficiency of its ODA by tailoring it to the needs of recipient governments.
Strands of policy thinking behind ODA, however, have been apparent. In the Japanese AID Plan announced in January 1987, the stated policy objective was, in essence, to marry Japan’s ODA with its outward flows of FDI.

“Within-country” risks such as capacity constraints are not the only main threats to more robust growth in the Asia-Pacific region. The diminishing effects of “latecomer” advantage and gradual exhaustion of the advantages of cross-border investments must also be given due consideration.

**Asia-Pacific co-operation**

The idea of formal economic co-operation arrangements among Asia-Pacific countries is not new. Different shapes and forms involving North East and South East Asian economies have been debated for more than two decades, but so far with little result.

In 1966, the first Ministerial Conference for the Economic Development of South East Asia was held in Tokyo and attended by Japan, (South) Vietnam, Cambodia, Indonesia, Thailand, the Philippines, Malaysia and Singapore. It highlighted the importance of regional co-operation and Japan’s increasing role. Japan, as Asia’s most powerful economy even then, accepted responsibility for assisting with regional economic development, while assiduously avoiding mention of any formal organisational mechanism.

Two years later, at the fourth Asian Parliamentarian Union in 1968, Indonesia proposed an Asian Economic Development Centre that would engage in economic, scientific and technical co-operation as well as co-ordination of trade and investment legislation in the region. The prospective members envisaged were Japan, South Korea, Taiwan, Malaysia, Thailand, the Philippines and Indonesia.

In 1970, four years after the Ministerial Conference, South Korea proposed an Asian Common Market. It envisaged a scheme whereby the six countries would initially co-operate in industrial fields such as petrochemicals and steel, and later add a payments union or clearance arrangement. Prepared by the Economic Planning Board and Seoul University, the suggestion excluded Japan, Australia and New Zealand on the grounds that they were “advanced” countries. They were, however, expected to provide financial support.

Japan’s Ministry of Trade and Industry was issued a consultant’s report in March 1988 that emphasized a need to shift thinking about ODA from the bilateral to the regional level. In short, it proposed a bold strategy of co-ordinating Japan, the Asian NIEs and ASEAN into “three-parts-one-body” via ODA, trade and FDI.

To implement this vision, it proposed constructing a mechanism called the “Asian Brain”, which controlled the types and flows of Japanese FDI to the Asian NIEs and ASEAN. In so doing, such a mechanism would determine who produced what and where within an East Asian-wide system. ODA would be the regulating tool to facilitate this. It even went so far as to propose using Asian NIEs as rerouting points for ODA, so that problems of an “overpresence” of Japan’s bilateral ODA would not occur.

The report concluded: “With a view towards setting up this gigantic economic cooperation with an appropriate role in international society, Japan’s exhibition of leadership in creating the Asian Brain would be a great contribution with respect not only to the Asian region but also to international society as a whole”.

184
This ingenious scheme, even if a political minefield, has all the attributes of economic rationality and, what is more, could in practice be implemented to a substantial degree as long as Asia-Pacific countries maintained liberal economic regimes. Japan's ODA could be catalytic in developing common regional infrastructure that would help close the regional ties that are already forming. Japanese ODA, as well as that from the more developed Asian NIEs, can be directed at improving such things as communication and transportation linkages.

All of this also takes cognizance of the fact that Asia-Pacific economies have become highly regionalised as a result of massive FDI flows among them. The latter are also building blocks for a larger regional economic structure, and promise to spur future economic growth and dynamism.

At the same time, it is apparent that such a consultative mechanism can be used to speak out against harmful obstacles to world trade. Asia-Pacific economies cannot continue to succeed if the global trade regime becomes more restrictive and non-liberal. Moreover, the importance of ensuring that the world trading system remains open, non-discriminatory and stable means that it cannot be dictated by the interests of a few. However, having a more liberal system will not occur just by wishing for it. It will take concerted action by those whose interests lie in it.

**Pacific economic co-operation**

Possible fragmentation of the world trading system, heightened industrial competition, issues of sustainable development, and much closer linkages between political, strategic and economic objectives forced on Asia-Pacific players by trading partners may be the key challenges that have to be faced.

In a 1990 book entitled *Pacific Destiny: The Rise of the East*, Robert Elegant asks the following questions: "Will the implacable Asian drive toward global economic hegemony led by Japan reduce other nations to tributaries in the next century? Can Japan be induced to realize that its headlong charge, never looking aside, will in the long term injure itself as well as others? Can the West, led by the United States, recoup?"

In the closing passage of his book, he answers: "The rise of the East is a magnificent achievement, a triumph of the human spirit and will that is in itself good. It is now up to the West, at least as much as the East, to ensure that it does not become injurious".

Whether Asia-Pacific economies see themselves as such or not and regardless of whatever good intentions they may or may not have, they have in the minds of many become one entity, economically dominant, and a threat that must be checked by "the West". Such feelings are not new, nor are they confined to those hoping to make bestselling authors' lists. They are behind the making of policies towards the regions, and if linear extrapolations hold true, they will also be behind those that are made in the future.

Probably more than at any time since the end of World War II, there is a need for multilateral rules and institutions. Paradoxically, however, now more than at any other time, the international economic system appears to be at its weakest.

It may come as a surprise to some that, at 66 per cent in 1989, the share of intra-Pacific trade in the total actually exceeds that of the European Community's. This deepening of economic integration has taken place without concerted or co-ordinated
efforts on the part of governments. It has occurred primarily as a result of the workings of the market-place and by efforts by each country to liberalise trade and investment with the world at large.

The move towards Asia-Pacific economic co-operation (APEC) is therefore timely and potentially of great significance in the 1990s. By associating themselves regionally, countries in APEC are responding not only in a positive way to the challenges of greater interdependence, but also in a defensive way to stymie protectionist tendencies.

Before there was APEC, countries in the region operated more or less independently and paid little regard to the degree of collective economic interdependence. External economic policies tended to focus almost exclusively on building multiple bilateral relationships. Despite the fact that the idea of APEC had been bandied about in various forms for more than two decades, the scope for co-operation is only now being discovered. Thanks to it, there is currently much greater realisation of the extent to which members collectively depend on one another.

In order to cater to the different interests of economies in the region, APEC had to be launched on a platform of sound fundamental principles. One of these is to encourage growth and development in the region by expanding trade and wealth-creating opportunities. This is a particularly important objective since some member countries are highly advanced while others are still in the process of advancing.

APEC hopes to sustain the growth and development process by ensuring that everyone wins through economic co-operation. Current efforts in trade promotion, human resource development, trade, investment and technology data exchange, energy, telecommunications and regional trade liberalisation are really only the tip of the iceberg. Future constructive efforts are limited only by the imagination.

At the same time, it is fully supportive of the multilateral global economic system. Multilateralism is about non-discrimination and about fair treatment of countries large and small, powerful and weak. The aim of strengthening the multilateral trading system through open regionalism is therefore consistent with the aims and objectives of all its members, who depend on the world economy for their well-being.

By working in a regional forum, Asia-Pacific countries have increased options to defuse – if not totally iron out – conflicts in more amicable ways than might otherwise be the case. It is almost inevitable that as countries move more closely towards one another, disagreements will arise. APEC, however, has the potential to curb, at least on the margin, the aggressiveness and recalcitrance of parties to a conflict. It can help to keep dialogue between them alive and contain domestic pressures either for actions that will further hurt relations or against actions that would improve them.

Regional co-operation through APEC obviously also amplifies rapport and communication among countries and leads to better overall relationships among its members. Breaking down informational, ideological, social and cultural barriers is something that cannot be taken for granted. Completely apart from its work projects, APEC has a latent capacity to build confidence and reduce conflict in the region – a problem that has plagued many countries in different parts of the world and hindered the cause of cooperation.

All of these objectives and others besides make a heady case for Pacific co-operation. For all its positive attributes, however, APEC cannot be expected to be responsive to all the problems or to exploit all the opportunities that present themselves to member countries in the coming decade. As with just about any endeavour in interna-
tional economics, there are strengths and there are weaknesses. For long-time observers of intergovernmental relations, this is neither surprising nor even cause for being overly concerned. So long as there is broad accord among constituents, measurable progress can and should be expected.

First, APEC has to be made more durable and robust than it is now if it is to realise its goals. An ever-watchful eye must be cast on complacency. Opportunities to co-operate must be exploited wherever and whenever possible.

At the same time, it is extremely important to think of APEC as an evolutionary process whose pace cannot be forced. More than one idea for regional co-operation has found itself on the rubbish heap of history simply because it sought too much in too short a time.

APEC strives neither to be a customs union nor to serve as a common market, but the object lesson of taking time in regional co-operation is nonetheless valid. Patience may be a difficult virtue to have, especially when confronted with a fast-changing global system, but undue haste is not the answer, either.

It is also a fact that for many countries, APEC is only one of several tracks being undertaken to support national interests. Australia and New Zealand, for example, have the ANZCERTA. The United States and Canada have their Free Trade Agreement, and the future inclusion of Mexico seems likely. Singapore, Thailand, Indonesia, Brunei, the Philippines and Malaysia have ASEAN.

Regional groupings such as these are not consistent or inconsistent with GATT or APEC per se. They address different sets of interests in ways that reinforce or conflict with each other, depending much more on the intent of members than on the type of institution that is formed. In any event, the sovereign right of a country to arrange its external affairs to its best perceived advantage cannot be questioned, even if it is with bad intentions.

A famous critic of Japan, Chalmers Johnson, has said: "The Europeans, Canadians and Americans are developing a united front in order to compete effectively with Japan and the other capitalist developmental states of East Asia". One fervently hopes that this is not an accurate statement of their intent in any sense of the word, although one might be forced, at a pinch, to admit it if only as a remote possibility.

A point which follows is that to be absolutely realistic, the extent to which the world economy is subject to politics and power must be recognised. The game of leverage and strategic advantage is played out constantly; throughout history, nations have made and changed their economic policies to suit what has been politically expedient. The upheavals that have been experienced since the end of the Second World War can be traced to the interests of Western countries that have supported multilateral institutions when it has suited them, and withdrawn support when it has not.

APEC, however, is first and foremost a consultative forum. Consultation is an economic good in the sense that "more is preferred to less". APEC is not now, nor is it likely in the future to be, in a position to oblige member countries to act consistently with a formal set of regionally constructed rules; ironically, it may be for this very reason that it will survive in coming years.
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Annex

Long-term prospects for the world economy

Participants

Vincent H.C. CHENG  Senior Manager, Head of Group Research, Hong Kong and Shanghai Banking Corp. Ltd (formerly Central Policy Unit, Hong Kong Government)

Peter DAVIES  Chief Economist, British Petroleum Company, United Kingdom

William G. DEEKS  Senior Vice-President, Global Issues, Noranda Inc., Canada

Wendy DOBSON  Professor of Economics, University of Toronto (formerly Associate Deputy Minister, Department of Finance), Canada

Maurice ERNST  Former Vice-President, Economic Research, Hudson Institute, United States

Emilio FONTELA  Professor of Economics, Universidad Autonoma de Madrid, Spain; University of Geneva, Switzerland

Oskar GRÜNWALD  Vice-Chairman, Austrian Industries AG, Austria

Kleo-Thong HETRAKUL  Deputy Director, Department of Economic Research, Bank of Thailand

JEOH Lam Keong  Senior Manager, Economics Department, Government of Singapore Investment Corporation

André de JONG  Head, Long-Term Analysis Division, Central Planning Bureau, The Netherlands

Jan O. KARLSSON  Under-Secretary of State, Prime Minister's Office, Sweden

191
<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Z. LAWRENCE</td>
<td>Senior Fellow, Brookings Institution, United States</td>
</tr>
<tr>
<td>Esmond LEE</td>
<td>Director (Principal Economist), Economic Analysis Division, Economic Services Branch, Hong Kong Government</td>
</tr>
<tr>
<td>LEE Kao Chao</td>
<td>Director, Council of Economic Planning and Development, Taiwan</td>
</tr>
<tr>
<td>LEE Sang-Tae</td>
<td>Director-General, Economic Information Bureau, Economic Planning Board, Korea</td>
</tr>
<tr>
<td>Jacques LESOURNE</td>
<td>Managing Director and Chief Editor, <em>Le Monde</em>; Professeur d’économie, Conservatoire nationale des arts et métiers (CNAM), France</td>
</tr>
<tr>
<td>Heinrich MATTHES</td>
<td>Deputy Director-General for Economic and Financial Affairs, Commission of the European Communities</td>
</tr>
<tr>
<td>Arne ØIEN</td>
<td>Secretary-General, Ministry of Finance (formerly Minister of Energy), Norway</td>
</tr>
<tr>
<td>Romano PRODI</td>
<td>Professor of Economics, Bologna University (formerly President and CEO of IRI and Minister of Industry), Italy</td>
</tr>
<tr>
<td>Chalermsak RABILWONTSE</td>
<td>Policy &amp; Planning Analysis, Overall Planning Division, National Economic &amp; Social Development Board, Thailand</td>
</tr>
<tr>
<td>Derek M. RILEY</td>
<td>Directeur études économiques, ELF Aquitaine, France</td>
</tr>
<tr>
<td>David ROBERTSON</td>
<td>Senior Research Fellow, National Centre for Development Studies, Australian National University (formerly Deputy Director-General, Office of National Assessment)</td>
</tr>
<tr>
<td>Christian STOFFAÈS</td>
<td>Directeur, Direction de l’économie, de la prospective et de la stratégie, Electricité de France (EDF)</td>
</tr>
<tr>
<td>Shu TAMARU</td>
<td>Deputy General Manager and Senior Economist, Research Department, Industrial Bank of Japan</td>
</tr>
<tr>
<td>TEH Kok Peng</td>
<td>Deputy Managing Director, Economics, Monetary Authority of Singapore</td>
</tr>
<tr>
<td>Loukas TSOUKALIS</td>
<td>Professor of Economics, University of Athens; Director, Hellenic Centre for European Studies (formerly Ambassador and Special Advisor for EC Affairs to the Prime Minister), Greece</td>
</tr>
<tr>
<td>Name</td>
<td>Organization/Position</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Patrice VIAL</td>
<td>Directeur de la prévision, Ministère de l'économie, des finances et du budget, France</td>
</tr>
<tr>
<td>Jimmy W. WHEELER</td>
<td>Director of International and Asia-Pacific Studies, Hudson Institute, United States</td>
</tr>
<tr>
<td>Steven WONG</td>
<td>Assistant Director-General, Institute for Strategic and International Studies (ISIS), Malaysia</td>
</tr>
<tr>
<td>Rong-I WU</td>
<td>Director, Taiwan Institute for Economic Research; Professor of Economics, National Chung Hsing University</td>
</tr>
<tr>
<td>Naohiro YASHIRO</td>
<td>Director, Quantitative Economic Analysis Division, Planning Bureau, Economic Planning Agency, Japan</td>
</tr>
<tr>
<td>Atsushi YOSHIKAWA</td>
<td>Director-General, Economic Research Institute, Economic Planning Agency, Japan</td>
</tr>
<tr>
<td>Soogil YOUNG</td>
<td>Senior Fellow, Korea Development Institute</td>
</tr>
<tr>
<td>Gerrit ZALM</td>
<td>Director, Central Planning Bureau, The Netherlands</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Makoto TANIGUCHI</td>
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</tr>
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</tr>
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LONG-TERM PROSPECTS
FOR THE WORLD ECONOMY

As the 21st Century approaches, attention is increasingly turning to the world economic and social environment in which governments, businesses and individuals will be operating over the next decade or so. The contributions presented in this report review the prospects of the world's major regions, assess the principal factors likely to affect the world economy over the longer term, and explore the implications of a wide range of questions — e.g. the North American Free Trade Agreement, economic and political integration in Europe, the dynamism of the Asia Pacific region, global environmental issues — that are set to shape the international policy agenda of the 1990s.