

Keynote Speech

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Your Excellencies, distinguished participants, ladies and gentlemen, good morning.

It gives me great pleasure to address this seventh OECD–ADB Forum on Asian Perspectives. I would like to thank the OECD Development Centre and the Government of France for their continued support of this annual activity.

Technology, Development and Poverty Reduction

Throughout the history of economic development, technology has been a focal point for efforts to improve economic welfare and reduce poverty. Along with capital, land and labour, technology is inextricably linked with national productivity and industrial competitiveness. The ability to create employment and wealth goes hand in hand with the ability to progress technologically. All the economically advanced countries have used technology to promote socio–economic development.

Per capita income varies across countries not only because of differences in capital stocks but also because of differences in productivity. Long–term differences in productivity depend largely on technological progress, which is a key factor distinguishing a dynamic, growing economy from a stagnant one. In a stagnant economy, technological progress occurs at a glacial pace, per capita income remains more or less constant and poverty persists. At the other end of the spectrum, a dynamic economy is characterised by sustained growth in both per capita income and technological progress. Technology contributes in two mutually reinforcing ways to growth in such an economy:

- *First*, steady technological progress can offset the negative effects of population growth, allowing a continued rise in real incomes; and
- *Second*, rising real incomes contribute to higher educational attainment, which in turn generally leads to smaller families.

Transforming a stagnant economy to a dynamic one poses a formidable challenge for many developing countries.

The impressive technological advances of the past several decades have changed the way people work and attempt to raise their standards of living. Permit me to dwell briefly on a few examples of the economic benefits brought by technological progress through the years.

In agriculture, the Green Revolution brought large economic gains and substantially reduced poverty in the Asia–Pacific region over the past three to four decades. Countries like Bangladesh, the People’s Republic of China and India have moved from periodic famines to near self–sufficiency in food production. In the past 30 years, cereal production in Asia has doubled and calorie availability per person increased by over 20 per cent, while real food prices have fallen by 50 per cent. High–yielding varieties of rice and wheat made a critical contribution to this notable achievement.

Besides the Green Revolution, the world has made important advances in biotechnology, with implications for the health sector, while the energy sector, computers and transport and telecommunications, among others, have benefited enormously from the development of lighter and more durable materials. The continuing revolution in information and communication technology is making the most significant impact of all, however. It is creating profound, far–reaching economic and social changes.

As the “knowledge economy” emerges, technology becomes increasingly important. The knowledge economy brings with it a fundamental change in modern economies, characterised by a marked shift away from traditional production patterns toward a new economy dependent on knowledge and professional services. Today, an increasing portion of a nation’s comparative advantage depends on the country’s collective ability to leverage what its citizens know. The availability of the traditional production factors of land, labour and capital has become less important in the context of globalisation. Today, each of these traditional factors can be obtained in a different part of the world where it is easily available at a good price. Traditional production systems are changing under the impact of increasing automation, outsourcing and relocation. Knowledge, on the other hand, is not constrained by such factors or by national borders. A distinctive feature of the knowledge economy is the fast pace of change. The rapidly expanding knowledge economy makes goods, services and information quickly obsolete. Knowledge–based growth continues to shorten product cycles, drive prices downward and improve product quality through increased competition.

Issues of Technological Progress and Poverty Reduction

Rapid technological changes pose severe challenges to developing countries. These nations need to carefully manage the changes in order to ensure international competitiveness, sustained growth and poverty reduction. In this context, I would like to raise a few issues.

First, it is desirable to prepare a new long-term technology policy within the changing technological context. This policy should be compatible with the overall national development and poverty reduction strategy. While making the most of the opportunities offered by the emerging knowledge economy, the policy should address possible short-term negative impacts on employment through special safety net programmes and intensive vocational training. The long-term technology policy should focus on the major factors that reduce poverty. This will ensure that development resources are not spread thinly across too many areas. The main drivers of poverty reduction should play a leading role in disseminating technology and making it accessible to small-scale enterprises. You will agree that it is undesirable for developing countries with insufficient capital to seek capital-intensive technologies. The new policy must ensure that technological needs and priorities are jointly assessed on an ongoing basis by the government, industry and research institutes. This will help establish a strong link between technology policy, demand, and supply.

Second, within the context of the focused approach of the new policy, it is important to identify and promote technologies that are most relevant to the particular country from the viewpoint of comparative advantage. India's experience in promoting information and communication technology shows clearly that a low-income country can also enjoy international advantages based on its abundant human resources. Similarly, the electronics industries in the Republic of Korea and Taipei, China are excellent examples of the benefits of appropriate technological progress.

Third, the new long-term national technology policy should be underpinned by a human resources development plan. The government should accord top priority to education at both primary and tertiary levels. A strong capability in science and technology cannot be developed without an appropriate human-resource base and a social and economic incentive structure to attract the best students and researchers to science and technology networks. I would like to emphasise the equal importance of primary education in a number of low-income Asia-Pacific countries with low levels of literacy. Low literacy is a severe impediment to both technological development and poverty reduction in these countries.

Fourth, research and development activities should be encouraged at all levels. In low-income developing countries, such activities are generally limited for various reasons. Among the most important are lack of financial resources, low policy and institutional support, inappropriate protection of intellectual property rights and inadequate means of making research products commercially viable. To address these issues, partnerships between the government and the private sector are important.

Fifth, technology transfer should be a matter of priority in developing countries with limited research and development capabilities. Firms must recognise that limiting themselves to technologies available domestically can sometimes give them access only to outdated and inadequate technologies. The choice between domestic development and imports should be based on a careful comparative analysis of long-term costs and benefits. The question often arises whether transferred technology is appropriate for developing countries. In many cases, capital-intensive agricultural and manufacturing

technologies imported by developing countries have not contributed to employment, poverty reduction, or an improvement in the balance of payments. Moreover, foreign technologies imported with substantial royalty payments should contribute significantly to generating foreign exchange earnings in order to avoid aggravating the balance of payments situation.

Finally, I would like briefly to discuss information and communication technology (ICT). The expeditious adoption and dissemination of ICT is a pressing task faced by developing countries. The positive role of ICT in raising labour productivity is now well documented in several countries, including the United States. US economic performance since 1995 has been remarkable. From 1995 through 2000, real GDP rose by more than 4 per cent per year, a significant advance from the early 1990s. The rapid growth since the mid-1990s has been driven by a marked increase in labour productivity, which rose by 2 to 3 per cent per annum, twice as high as the average rate during the preceding two to three decades. The country's large investment in ICT is generally regarded as a major cause of this development.

The ICT gap between developed and developing countries — or the “digital divide” as it is called — is an important development issue now. The problems created by the digital divide include a vicious cycle: lack of ICT leads to slower productivity growth and lower incomes, which in turn impede the use of the latest technologies, including ICT. Children from poor families who cannot afford ICT training are at a disadvantage in the job market. This can become a new factor in perpetuating poverty. It is therefore essential to facilitate the dissemination of ICT in developing countries by creating the necessary infrastructure and promoting education and training in related skills.

In recognition of the urgency to bridge the digital gap, in July 2000 the G-8 countries adopted a Charter on the Global Information Society at their summit meeting in Okinawa, Japan. This was a timely and important international initiative.

Concluding Remarks

Since its establishment in 1966, the ADB has accorded priority to assisting its developing member countries to acquire and upgrade technologies to help reduce poverty and facilitate economic growth. ADB assistance, with an emphasis on especially vulnerable individuals and enterprises, has focused on primary and technical education, vocational training, technology acquisition, research and development and the formulation of national technological development plans. It has covered all the important economic sectors, including agriculture, fisheries, forestry, manufacturing, finance, transport, rural telecommunications, energy and the social sectors. More recent ADB initiatives seek to address ICT issues in its developing member countries. An ADB strategy on ICT will be finalised soon. ADB has made a significant contribution to progress in its developing member countries. ADB reaffirms its commitment to continued close co-operation with these countries in upgrading technologies and eradicating poverty in the Asia-Pacific region.

Ladies and gentlemen, before I close, I would like to express again my deepest gratitude to the Government of France and the OECD Development Centre for their excellent co-operation in holding this forum. I wish you successful discussions on a number of important issues today. The discussions and recommendations of this forum will help developing countries in Asia and the Pacific, as well as in other regions of the world, to pursue technological progress and poverty reduction.

Thank you.