

Foreword by the Commonwealth Secretary-General

Technological change arouses strong and conflicting emotions. There is apprehension that new technologies will be economically and socially disruptive but also hope that their vast productive potential can be harnessed to raise living standards and eliminate poverty. There are fears that the power and speed of technological change in communications are fast eroding national sovereignty but there is awareness of the opportunities which are presented by closer interdependence between nations. There is a sense of injustice aroused by the overwhelming concentration of technological R & D in countries which are already rich but also a sense of pride in the technological advances which are being made in many developing countries despite major resource constraints.

The subject is as difficult and complex as it is important. The mandate from Commonwealth Heads of Government, acting on the recommendation of Employment and Labour Ministers, that the Commonwealth Secretariat should constitute a Working Group to examine the management of technological change was, therefore, a particularly challenging one. I was fortunate to be able to assemble a very distinguished group of men and women who were able to bring to bear on the problem their very considerable experience derived from government service, business enterprises, trade union work and academic analysis, in a cross section of Commonwealth countries. The Group's Chairman, Professor Menon, is a noted physicist, and in his capacity as Chief Scientific Adviser to the Government of India and member of its Planning Commission he is at the centre of his country's vigorous programme utilising emerging technologies for development. I am grateful to them all.

While the details of the subject under study are highly technical, the essentials are not, and they touch on some of the central issues confronting policy-makers. For example, a major theme of the international community during recent years, and one which has been

reflected in Commonwealth Secretariat reports and activities, has been the need for governments to recognise the reality of growing international interdependence and to advance multilateral cooperation accordingly. The development of technology is constantly widening and deepening interdependence. Satellites, multinational computer systems and 'telematics' are creating opportunities for rapid international communications between individual companies and governments. As public—though not government—responses to the African famine have recently shown, the concept of a 'global village' is no longer in the realm of futurology. The rapid international transmission of data is making traditional tools of national economic management obsolete. It has facilitated instant movement of massive amounts of capital which can now overwhelm governments of even the most powerful countries unless they are willing to harmonise their policies with those of others. The expansion of robotics into manufacturing and the advance of new materials technology and biotechnology are transforming patterns of trade and specialisation worldwide; yet existing multilateral arrangements to ease the inevitable frictions and encourage international adjustment are inadequate for their growing tasks.

Unemployment is a problem almost all Commonwealth countries share. In the countries of the OECD there are an estimated 30 million unemployed. In the developing world, the lack of resources to pay benefit means that unemployment is not measured by the length of the dole queue; but it is nonetheless endemic in terms of the underemployment, sometimes chronic, of human potential. Fear of growing unemployment lies behind resistance to much of the introduction of new technology, especially that associated with microelectronics. For politicians, the prospect of robots and computer-based systems being used to replace labour in manufacturing cars or clothes, in harvesting cash crops, or in operating banks and government offices, is deeply worrying. I am sure this is what some Employment and Labour Ministers had in mind when they asked the Secretariat to convene a Group to examine the management of technological change. Yet, as the Group's Report brings out, the overall impact of technological change on employment has been historically positive and can remain so. New jobs are being created by the new technologies, both directly and indirectly, as more wealth is generated by improved productivity. In the past, technology has been a major source not only of higher living standards, but also of increased employment. There is no reason why this should not continue. Its achievement will be materially helped by suitable economic policies not least at the macro-level. Indeed, technology must not become a scapegoat for failures of economic policy which have led to high unemployment.

Among policy-makers in developing countries, emerging technologies are often regarded with apprehension. This is induced by a sense of

impotence; also by a feeling that what is appropriate in richer countries may not be so in poor ones. These fears are understandable. But the Group's Report gives abundant evidence that where technology is directed, and adapted, to meet the needs of low-income groups, it can be a powerful force for good, especially in agriculture and rural development, where in many forms it could be even directly employment-generating. And this is true not only of technology in its traditional forms, but also in relation to the emerging technologies. The successes of some Commonwealth Asian countries with 'green revolution' technology is a measure of the potential. I have been struck, too, by reports from the UN Women's Conference in Nairobi in July 1985 of the contribution which could be made to ease the arduous existence of rural women in developing countries by the diffusion of a few simple and well-established technological innovations in water filtration and the growing of subsistence food crops. Because of technology, human societies have it in their power to raise living standards worldwide and thus eradicate mass poverty and hunger. But the question of how to utilise that power takes us into politics and economics rather than into technology itself.

What can and should governments do? I hope this Report will be useful in suggesting practical guidelines to answer that question, while recognising that societies vary greatly in size, wealth, goals and needs. Unfortunately there has recently been an unhelpful degree of polarisation in the debate about the role of government, based on extreme positions on free market and planned societies. When it comes to technology policies these extremes are particularly unhelpful. There is clearly a major role for private entrepreneurs who will innovate and take risks, and who will respond to market incentives; this is especially true in small-scale agriculture. But there is also a critical role for governments: in basic research; in education and training; in building up a domestic R & D capacity, particularly in areas such as agriculture; in reordering priorities to take into account basic needs; and, through forecasting and assessment, in identifying those technologies which can be of benefit to society as a whole.

If the Report is to have enduring value it will be as a basis for action both at national level and through regional and wider multilateral cooperation. The Group expresses the hope that the Commonwealth could itself prove a suitable vehicle for education and training, technological cooperation, and information exchange. Where possible, we in the Secretariat shall endeavour to help in this field.

It gives me pleasure to present this Report, on a subject of great current relevance, to Commonwealth Governments and to the international community generally.

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