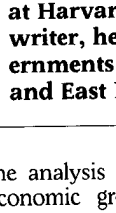
HS ON GLOBALISATION

w map of the world

rld is divided not by ideology but by technology. This demands, ıs argues here, bold new thinking on development

BY INVITATION



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e end of the cold war, old ideo- divisions are over. Virtually all laim allegiance to global mar- ›re intractable division is taking e based on technology. A small ›be, accounting for some 15% of ›pulation, provides nearly all of echnology innovations. A sec- ıvolving perhaps half of the ılation, is able to adopt these in production and consump- ıaining part, covering around a world's population, is techno- onnected, neither innovating at opting foreign technologies.

chnologically-excluded regions /s conform to national borders. e southern Mexico and pockets Central America; the Andean ıost of tropical Brazil; tropical Africa; most of the former So- ıside from the areas nearest to nd Asian markets; landlocked such as the Ganges valley states ıdlocked Laos and Cambodia; :p-interior states of China. (My lichael Porter and Andrew War- ently developing sophisticated f these new technological divi- :onfirming their importance in accounting for growth.)

Many of the technologically-excluded regions, especially in the tropics, are caught in a poverty trap. Among their greatest problems are tropical infectious disease, low agricultural productivity and environmental degradation—all requiring technological solutions beyond their means. Sometimes, the needed technologies are available abroad, but the countries are too poor to buy or license them on the necessary scale. Often, the technologies do not exist in appropriate forms, and poor-country markets offer scant incentives for research and development.

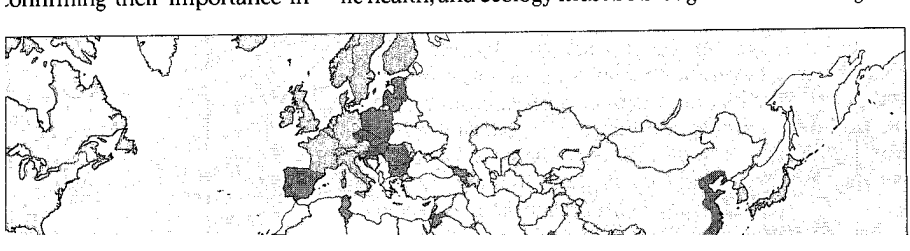
It is time for the rich countries to recognise this and respond. Note that the world's new boundaries are not fixed: many of the technologically excluded could soon become technological adopters, and a few (Taiwan, South Korea and Israel) have graduated from the middle group to become top-rank innovators. But such transitions are far from automatic. If more of the 2 billion people who live in the technologically-excluded countries are to join in the benefits of globalisation, three things need to happen.

First, the new technologically-driven character of the global economy must be properly thought through: geography, public health, and ecology must be brought into the analysis of technological cha economic growth. Second, gove need to change their approach to ai ing more, and more wisely. Third, p tion in international assistance ne broadened and recast. Multinatio and first-world universities and establishments need to be engaged official agencies charged with gl velopment (the IMF, the World Ban various UN agencies) must be refor

Rethinking globalisation

Development has traditionally bee a matter of accumulating physica man capital. Poor countries, wher well governed, are assumed to ha vantage in this: where capital is sca turns on new investments should which ought to promote saving a inflows of capital from abroad. Th tween rich and poor therefore n process known as "convergence".

But we now know that technol likely to converge than capital. I shows increasing returns to scale that regions with advanced techn best placed to inn ther. New ideas ar produced from a re tion of existing ide phrase coined b Weitzman), so env rich in ideas prod reactions of innov as with nuclear re



nis kind is unheard of. Few govern-ven have a science adviser. The re-depressing. There are 48 countries re than a million people (in 1995), l at least half of these living in trop-s: with a total population of 750m, c out just 47 of the 51,000 American ssued to foreign inventors in 1997.

urse, the technological capacity of my depends not just on its own in-s, but on its capacity to adopt the gies produced elsewhere. This can through three main channels. s can import technology embodied and consumer goods (cell-phones, ines, personal computers, immuni-They can license technologies from lders. And they can attract foreign estment (FDI), so that a multinat-rprise with proprietary technology oduction inside their borders. In all ntries must be successful as ex-pay for the imports of technology dividends on foreign investment). economists assume that all de-ountries are equally well placed to hnologies from abroad, but this is hinking. Whatever the channel, cal conditions are important. Suc-porters of technology tend to be ig markets or on principal sea oth. Technology is drawn across countries like Mexico; or to Poland ary, neighbours of the European to coastal China, Singapore, Hong port cities of South-East Asia and l states of southern India. It does easily to remote mountainous re-Andean countries), landlocked de-ountries (Central Asia), or regions r from seaports (inland China or dia).

ies that do not keep up with nology often collapse, unable aintain their standard of living, increase it. They usually depend w range of exports that lose their y in the world economy. Copper l by fibre optics. Natural rubber displaced by new synthetic ma-long-term decline in the terms of ny primary commodities is itself t of innovation.

raphic pressures magnify the countries typically experience

tory. Apart from adding to the poor countries' miseries, these demographic strains also lead to environmental harms (such as deforestation and reductions in biodiversity) which threaten everyone.

Rethinking aid

Much of the world, perhaps 2 billion people or more, will fail to share in the benefits of global growth without a complete change in international strategy. This needs to be undertaken on several fronts:

• **Public health and population.** The burden of disease on poor countries, especially in sub-Saharan Africa, is simultaneously a humanitarian catastrophe, a daunting barrier to development, and (through its effects on population) a first-order threat to critical regions of high biodiversity. Foreign investors shun the worst-affected economies, and the burdens of ill-health block development in other ways too. Sick children often face a lifetime of diminished productivity because of interruptions in schooling together with cognitive and physical impairment.

Donor countries' efforts to control infectious disease in the poor countries are small. Worldwide support for malaria control in Africa is probably little more than $50m-75m a year, although malaria claims perhaps 2m lives annually (a million or more directly, and another million or so from diseases in which malaria is a factor). Donor efforts for AIDS control in Africa have averaged no more than a few tens of millions of dollars a year in the past decade. The disease now claims more than 2m lives a year in Africa, with around 4m new infections a year, and around 23m infected Africans overall. Donor support for immunisation has been so small that many poor countries have not even begun to introduce vaccines that have been used routinely in the rich countries for years, and which could greatly reduce death and disease in Africa at modest cost. A donation of up to $1 billion by the Gates Foundation will at last address this urgent problem.

A serious effort would start with a proper battle against these lethal infectious diseases. The Clinton administration, rightly if belatedly, has recognised AIDS in the developing world as a national-security problem for the United States, because of the potential of the disease to destabilise vast regions. Africa's leaders have recently pleaded

cost of saving millions of lives i

• **Connecting the marginal**

In recent years NAFTA has b into the global high-tech econ European Union has develope arrangements with North Afr tral Europe. These preferentia have greatly helped the imme ciaries, but harm more distar drawing FDI and trade away. tion of global shipping makes trade routes linking marginal major markets tend to be much itive than the high-volume ro