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THE GEOGRAPHY OF ECONOMIC DEVELOPMENT

Inaugural Lecture delivered at the University College of Swansea on 10 October 1972

by PROFESSOR RICHARD GREENWOOD, M.A. Department of Geography

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THE GEOGRAPHY OF ECONOMIC DEVELOPMENT

My major interests in the field of economic geography concern the related themes of movement and change and I am bound to admit that, having regard to my own personal experience of inter-continental migration, a case could have been made for selecting the theory and practice of global patterns of movement as the subject of my inaugural lecture. I shall certainly wish to refer to this subject during the course of my talk, but I have preferred to attempt a review of some of the wider issues involved in the global pattern of economic development, which I believe is a matter of great importance to contemporary societies.

It was, of course, the decision of my scholarly predecessor in this Chair, Professor John Oliver, to accept the Foundation Chair of Geography in the new James Cook University of North Queensland in tropical Australia that set in motion a curious process of antipodal compensation which was to bring me from the University of Queensland to this College. When Professor Oliver and I learned of this outcome, I am not sure which of us was the more perplexed, and not the less so when it was reported that Professor Balchin had been heard to quote the ancient adage about the grass on the other side of the hedge being greener ! However, sufficient time has now elapsed to prove that all has worked out very happily for the two people concerned and I earnestly hope that a similar view will come to be held by those who are at the receiving end of my services in Swansea.

Geography is basically concerned with analyses of distributions—of physical phenomena, of people and social and economic activities. Indeed, geography exists as an academic discipline because of the marked inequalities in the texture of these distributions—both on a world scale and on a local scale. The word 'inequalities' is carefully chosen—these spatial irregularities are not

3

properly thought of as mal-distributions. It is quite impossible for a global earth composed of a great diversity of materials and spinning in an orbit in space to have a uniform climate, symmetrical continents and homogeneous landforms. And for this reason, the global pattern of physical and biotic resources is bound to be spatially irregular and the human response to this irregular resource pattern inevitably forms a complex system of contrasting, competing and complementary cells of activity which interact in ever-changing adjustment to contemporary pressures, strains and incentives. The economic geographer's primary objectives, therefore, include the interpretation of the nature and the consequences of these regional contrasts and interactions and of the processes whereby their character changes in time, and this clearly implies a central interest in the spatial manifestations of economic development.

There is, of course, a voluminous literature on the subject of economic development. Most of it has been written by economists who have devised a complex and sophisticated body of theory about the development process which is closely interwoven with the main fabric of economic theory. I dare not venture far into this field in public. My concern is rather with the regional patterns -the geography-of development and of the consequences of regional disparities in growth rates. At the same time, one cannot but emphasise the relevance of geographical techniques to many aspects of the development process, for the more that we learn about this process the less certain it seems that any one universal formula provides all the answers. The location, physical endowment, historical tradition, social systems and political institutions of a society are as significant as the stock of capital, the deployment of this capital, the propensity to save and the structure of the national accounts. Moreover, development theorists have for some years now been at pains to emphasise that social and political convictions and ambitions provide incentives that are quite as potent as material prosperity. Indeed, one of the primary (and largely unexpected) dilemmas of the present age is the measure of dissatisfaction and disenchantment that material affluence brings with it to communities at large—if not to individuals. The major field of contemporary social conflict seems to lie in the disequilibrium between wealth and welfare.

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The development process may most simply be regarded as a system in which people, resources, wealth and welfare are the main inter-acting parameters, and it is convenient to begin a review with population.

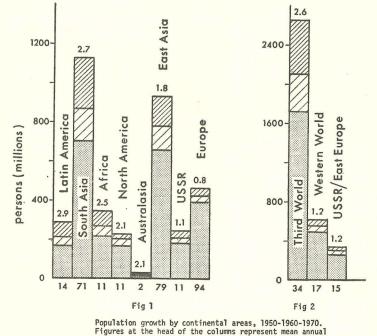
We are very familiar with the threat to human welfare implied in the progressive acceleration in the rate of population growth in the twentieth century world. United Nations estimates tell us that some 1,146 million people have been added to the global population during the twenty years 1950-70 ; that the total population now numbers some 3,700 millions ; that the present annual rate of increase of 2% adds 73 millions every year ; and that a continuance of this growth rate compounded would double the total to 7,400 in 35 years—soon after the end of the century.

To understand the significance of such projections, it is helpful to look at the geography of population growth one of the irregular spatial patterns to which I have referred. If we could imagine the world's people spread evenly over the continents (omitting icebound Antarctica), the mean density would be of the order of 27 per square kilometre—about the same as for Breconshire which is one of the more sparsely settled areas of Britain. Doubling the mean density would bring the world average to that of the present figure for Carmarthenshire, which is not particularly overcrowded. Indeed, one might speculate that a world made up entirely of Carmarthenshires would be a very agreeable place. Unfortunately, such visions are quite unrealistic. Great tracts of mountain and desert, inhospitable sparselands and intractable forests and swamplands segregate the majority of the world's people into the more productive areas. In some of these, the pressure of people on resources is extremely great and further increase threatens disaster. Other areas, however, seem to have the space and resources for more. Yet contemporary growth rates exhibit little sympathy with available resources.

Looking at this problem on a continental scale, and ranking the continents according to their population growth, we see that the highest rates occur in Latin America and Africa and these have comparatively low overall densities (Fig. 1). In these two continents, the problems relate much more to social and political organisation and shortage of capital for technological development than to a dearth of lebensraum or physical resources, although they do include some areas of congestion, notably in Caribbean and Indian Ocean island communities.

Third in growth ranking comes Asia, whose importance is critical because over 2,050 million people or 57% of the global population live there. True, Asia is the largest landmass and the mean population density (for what the figure is worth) is only about 80% of that of peninsular Europe. But the Asian growth rate is three times that of Europe ; some 45 million new Asians are added to the total each year (the equivalent of the present population of peninsular Europe is being added to Asia each decade) ; and the great concentrations are so geographically peripheral that the foci of acute pressure are rapidly spreading from the traditional nodes in China, Japan, Java and India to encompass the whole southern and eastern periphery. And India and Pakistan provide the world's most intractable population problem.

In the remaining areas—Europe, the U.S.S.R. and the New World—*natural* population increase is not in itself such a pressing phenomenon—for four reasons. The first



Figures at the head of the columms represent mean annual growth rates, 1963-70. Figures at the foot of the columns represent mean population densities, 1970.

is that, on a continental basis, there is an inverse relationship between growth rates and settlement densities. The crowded lands of peninsular Europe have the world's lowest population growth rates—only 0.8% per annum over the past seven years ; the U.S.S.R., which occupies one seventh of the world's land area, is not significantly greater with a 1.1% p.a. growth rate ; and the New World of North America, Australia and New Zealand with their relatively small populations and great aggregate of physical resources and material wealth have the highest growth rate—2.1% p.a. In the second place, these 'Western' and 'Russian' societies are able, by virtue of their wealth and technological advancement, to redistribute population gainfully from region to region and from country to city to reduce-or even to capitalise onlocal pressures and to create new opportunities for employment and production. In the third place, these societies are able to draw on the resources of the remainder of the world for their sustenance and enrichment. And in the fourth place, these societies have a growing awareness of the need to control population growth-economic prosperity appears to have brought with it, over the long period, the motivation as well as the ability to contain population increase. Now, of course, these generalisations are not intended to imply that the affluent world is in a demographically healthy situation. To do so would grossly under-rate the growing pressures that technological unemployment brings, the cultural problems which accompany increased population mobility (especially the influx of south Europeans into north and central Europe and of West Indians, Africans and Asians into Europe) and the real threat to living space and amentities in the heavily urbanised man-made environments. But if we view the Western World in a global context and if we consider population in relation to the second parameter of development-wealth-we cannot but appreciate our relative good fortune in comparison with that of the peoples of the Third World in which two thirds of the world's population lives at much humbler living standards and in which the rate of population growth is significantly higher.

The extent of the present population disparity between the 'three worlds' and the effects of the differential rates of increase over the past decades are summarised in Fig. 2, and this may be compared with the disparities in wealth in the following table : Table A

	Gross De	omestic		
	Product, 1968		Estimated	
	Total	Per Capita	Population	
	\$US thou. mil.	\$US		1968
Developed market economies ¹ Centrally planned	1450	1812	800	million
economies ² Developing	539	1497	360	"
economies ³	282	179	1573	>>
World₄	2270	831	2733	>>

Notes : ¹N. America, Peninsular Europe, Oceania, Japan, Israel, South Africa.

²U.S.S.R. & Eastern Europe (excludes Mainland China).

³Asia (excludes Japan, Israel & Mainland China), Africa (excl. S. Africa) and Latin America.
⁴Excludes Mainland China, Mongolia, N. Korea & N. Vietnam.

Sources : U.N. Statistical Yearbook, 1969 & 1970.

- U.N. Yearbook of National Accounts Statistics, 1969, Vol. II.
- Professor E. T. Nevin's assistance in computing comparable values for the three areas for G.D.P. 1968 from published growth rate statistics is gratefully acknowledged.

On the evidence of these figures, the Third World of the Developing Economies (which excludes the Chinese Realm) has 58% of the global population but produces only 12% of the world's goods and services, and the average per capita value of production (which also approximates to the average per capita income) is only about one-tenth that of the Western World or oneeighth that of the Centrally Planned Economies. And this situation is the more discouraging if Third World population is rising faster than income.

One must, of course, appreciate the limitations of these statistics. One cannot unreservedly equate the real value of \$1,000 to an American urban community with \$1,000 to an Albanian village. One must acknowledge that the translation of all values of production into American dollars provides scope for misinterpretation. One may even express doubts about the varying degrees of accuracy of the statistics. Even so, it is clear that the Third World's income level is far below that of the rest of the world and it is important to know whether the Third World's position in this respect is improving or detereorating. Moreover, one can place more reliance on comparative statistics indicating the annual performance of individual nations than of comparisons between nations. Looking first at the three major groupings and using figures for annual growth of Gross Domestic Product rather than absolute totals, it appears that the Developing Economies -the Third World-achieved slightly higher growth rates than both Developed Economies and the world average in the early 50's, but that they have been less successful in subsequent quinquennia. Over the period 1950-68, the average annual growth rate was 2.4% for the Third World compared with 3.2% for the Developed Economies and 6.6% for the Centrally Planned Economies (Fig. 4).

A possible interpretation of these trends is that accelerating population growth has proved a major obstacle to the raising of per capita production in the Third World one notes, for example, that Asia's economic growth 1 ates 1950-68 have been nearly double those of Latin America and Africa (4.5% compared with 2.4 and 2.3\%) (Fig. 3). On the other hand, one could with equal conviction argue that Asia's superior performance reflects outstanding achievements of a few member nations—Japan, Israel and the Middle East oil exporters—which have lifted the general level of production despite population growth. And this suggests that a more convincing picture will be derived from examining the present ranking and the recent growth rates of individual nations. This is a most instructive exercise.

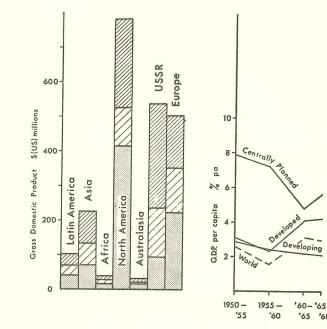


Fig 3

Gross Domestic Product by continental areas, 1950, 1960, 1968.

Mean annual GDP per capita growth rates for the three groups of economies.

Fig 4

Table B shows the ranking in 1968 according to per capita G.D.P. for a substantial number of nations (but excluding the Centrally Planned Economies of Europe and Asia) :

Table B

GROSS DOMESTIC PRODUCT PER CAPITA 1968 — \$ US

	New Wor			
	Peninsular		Latin	10.
	Europe	Asia	America	Africa
?5000 (1971)		Abu Dha	ıbi	
4912		Kuwait		
3955	USA			
2905	Sweden			
2621	Canada			
2539	Switzerla	nd		
2264	Australia			
2214	France			
2156	Luxembo	ourg		
2147	Norway			
2146	Denmark	L.		
1967	W. Germ	nany		
1884	Belgium			
1777	Netherla	nds		
1739	Iceland			
1702				Libya
1666	New Zea	land		
1583	United K	Kingdom		
1527	Finland	-		
1451			Puerto Ri	со
1348		Israel		
1314	Austria			
1306		Japan		
1268	Italy	0 1		

TABLE B (continued)

977 868 748	368 Ireland 748 736 Spain 713 Greece 700 557 523 584 553 53 584	& Asia	Latin America Venezuela Trinidad	Africa	
736 713 700 657 623 584 553 518			Singapore	Argentina Uruguay Mexico Chile	S. Africa
479 448 441 423 357 338 307 299 297 292 283 275 268 267 267 262 261 255 242 224		Portugal	S. Arabia (Lebanon (Turkey Iraq Iran Taiwan Taiwan Philippines Jordan	Guatemala Brasil Guyana Peru Salvador Dominica	
			13		

12

TABLE B (continued)

	New World	6		
	Peninsular		Latin	
	Europe	Asia	America	Africa
223		Syria		
22 I				Rhodesia
219				Ghana
214			Paraguay	
190				Morocco Tunisia
173		Korea		
169				UAR
157			Bolivia	
149				Cameroon
148		S. Vietnam	(1967)	
140		Ceylon		
130		Pakistan		
121				Kenya
106				Madagascar
100				Sudan(1967)
99				Uganda
93		Indonesia		
86		_	Haiti	
78		India		
76				Nigeria (1966)
70		Burma		
69		Nepal		Congo
67				Tanzania
57				Malawi

One can do no more in this context than draw attention to four groups of features of particular interest :

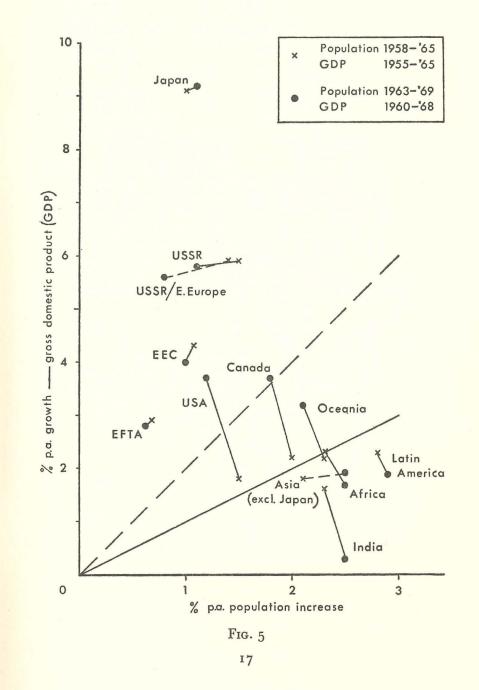
- The superior ranking economies (arbitrarily identified as those with a per capita G.D.P. in excess of \$1500 per annum) fall into three types—the New World (USA and Canada, Australia and New Zealand), Western and Northern Europe and three oil exporters (two Persian Gulf Sheikhdoms and Libya).
- 2. The remarkable spread of values for European countries (the figure for Sweden is almost double that for Finland) ; the E.E.C. average is \$1818—the resultant of high values for five members but a lower figure for Italy. The E.E.C. value is 15% above that for the United Kingdom which is only marginally above the threshold value for the top ranking group.
- 3. There is an interesting array of nations in what might be described as the intermediate group with G.D.P. values arrayed throughout the considerable range \$1500—500—Austria, Ireland and southern European countries other than Italy; the highly commercialised Asian nations—Israel, Japan and Singapore; the oil-boosted economies of Venezuela and Trinidad; the multi-racial economy of South Africa; and the more advanced economies of Latin America (surprisingly excluding Brasil).
- 4. A long list of low-income Third World countries with, again, a substantial range of values ranging from \$500 per annum down to \$50. We see that the financial centre of gravity of the Latin American group is significantly higher than those of the Asian and African groups. The values for East and West African nations (including Rhodesia) are

lamentably low. But the most disheartening of all the figures are those for the densely populated, high population increase lands of India, Indonesia and Pakistan, with the U.A.R. and the Philippines in nearly the same critical situation. These are the real social and economic trouble spots of the world.

Now, of course, it is not entirely fair to select any single year for an analysis of this kind. 1968, for instance was an excellent year for the Japanese economy but Australian primary production was low because of severe drought. 1968 was a good year for Libya but disastrous for Egypt and Nigeria. And so we must set these statistics in temporal motion to iron out the short period fluctuations and identify longer period trends. Fig. 5 represents an attempt to do this in very generalised terms. The basic statistics are by no means ideal but they do facilitate the identification of medium-period trends in the relative growth rates of population and Gross Domestic Product.

The crosses show relative growth rates between the mid 1950s and mid 1960s. Japan had the greatest material gain, followed by the Centrally Planned Economies, EEC and EFTA. This ranking is not unexpected as the 1950s brought major post-war reconstruction and great technological development. By comparison, North American and Australian growth rates were less spectacular. Australasia and Asia plot close to the break-even line (production was at much the same growth rate as population). But in Africa and Latin America and in India—population outstripped production.

The dots represent an approximation to average growth rate ratios in the 1960s. The high ratio leaders maintained their supremacy but—Japan excepted showed small losses in performance. North American and Australasian economies exhibited important gains. But most of the Third World showed marked deterioration, the small increase for Asia representing big gains for the few big oil exporters and losses in most other economies—



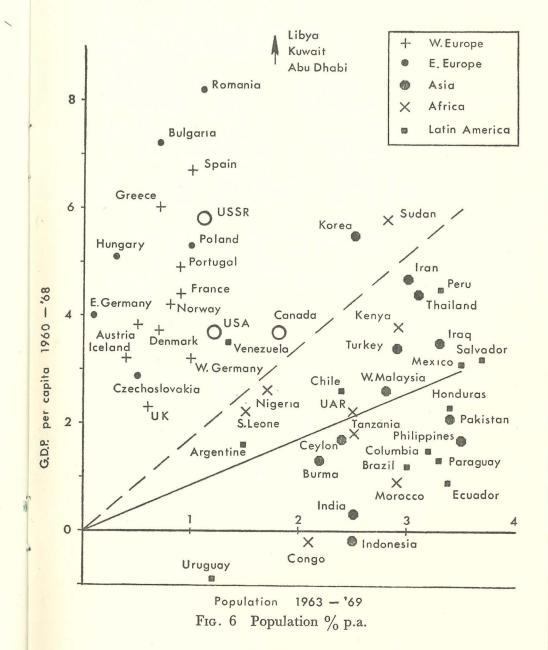
notably in India and Pakistan. On this evidence, the rich nations appear to be getting richer and the poor nations poore1, and this was as much a consequence of demographic factors as it was of economic factors.

A rather less discouraging interpretation can be justified, however, if we attempt an analysis by countries. Fig. 6 shows the ratios between population growth and per capita GDP for a period which is as close to the decade of the 1960s as dependable statistics at present permit. Above the broken line are those nations whose per capita production increased at more than double the population growth rate, and within this group it is interesting to see a generally inverse relationship between national product and growth rates—the lower income South and East European economies have gained relative to the higher income EEC and EFTA groups and some of the West European economies have experienced gains in relation to North American income levels.

Moreover, the intermediate group includes a number of Asian, African and Latin American nations in which production has outstripped population and these include such high population growth societies as Mexico, Thailand and Peru. There still remains, however, a group of problem economies that are well below the break-even line which include India, Pakistan and the Philippines as well as the arch-paradox of Brasil, and three disturbing cases—Indonesia, the Republic of the Congo and Uruguay show overall losses in production.

The interpretation of these variable trends in development rates is a major task that one cannot justifiably attempt in the present context, but it is hard to refrain from some generalised speculations on the subject.

One obvious reaction is that greater inducement should be made to encourage re-distribution of population, of material goods and of capital to reduce the inevitable strains of regionally unequal rates of growth. Very substantial adjustments of these types have in fact been made over the past half century and very substantial



material benefit has been derived from them, but in most cases constraints have operated to erode the expected benefits.

There have, for example, been massive long-distance population migrations-from Europe to the New World, within the U.S.S.R., the U.S.A. and Eastern Europe, from China to South East Asia and the results have been economically and socially beneficial, but in each case out-migration has permitted a population build-up in the emigration area and increasing resistance to inmigration has been encountered in the receiving areas. Moreover, the value of such re-distributions has been limited by the fact that they represent, in the main, migrations within major culture groups. Population exchanges between culture groups have, certainly, taken place but as they have grown in volume, the practical difficulties in the co-existence of unlike culture groups has generated widespread political resistance and governments have long rejected the proposition that people should be encouraged or allowed to move on a massive scale from areas of pressure and scarcity irrespective of culture disharmonies for the reason that such moves create more problems than they solve. In any event, most people would not choose to change their citezenship solely on the grounds of economic pressures. They would prefer an alternative solution.

A less controversial and more generally acceptable method of promoting development and satisfying local resource deficiencies is through the medium of international trade. Many empires have grown rich on this basis and many nations in Europe and the New World and in particular Japan—have been able to support growing populations in increasing affluence in this way. But trading depends on the capacity to produce a surplus of goods and services over and above those which are necessary to fulfil domestic needs and it depends on the ability to purchase goods abroad and many parts of the Third World lack these requisites. Moreover, the trends

in international trade in post-war years have favoured the richer nations to the detriment of the poor. The largest growth element has been in the exchange of manufactured goods between the nations with developed economies. A lesser but still significant growth element has been in the international movement of fuels and mineral ores. As we have seen, this has benefited a few oil exporters in the Middle East, Africa and the Caribbean and large capital inflows have been attracted to some heavily mineralized areas in the tropics with a consequent spin-off in the local economy, but the traditional mainstay of the developing economies-food exports-has shown the smallest increase (in prices as well as in volume). Of course, the decolonisation process in Africa, Asia and the Caribbean has temporarily interupted the continuity of the development process and many of the new nations of the 1950s and 1960s-the ex-colonies-have unwisely run down their primary exports more quickly than they have been able to build new sources of economic strength through diversification.

These dilemmas in the fields of migration and trade have served to highlight the significance of foreign aid, a practice that came into being to speed the rehabilitation of war damaged economies, that developed as a means of political support or ideological alignment and that has more recently been blended with an attempt at genuine and disinterested financial assistance to developing economies. The more disinterested types of aid, however, have unfortunately come at the time when it has come to be realized that foreign aid can bring as many problems as blessings. At worst, foreign aid has aggravated embarrassing political alignments, created excuses for dumping unwanted surpluses and generated military and economic aid which are more to the advantage of the donor than the recipient. At its best and most altruistic-so many critics argue—it has forced tantalizing and premature investment choices on developing economies by giving them access to limited loans before they are in a position

21

to make good use of them. How, in such a case, does a developing economy deploy its foreign aid among the competing claims of education, health, economic infrastructure, new industries and agriculture? The resultant dilemma hangs between the grant of aid that is inadequate for the purpose and aid that creates an impossible burden of indebtedness, which—even in an inflationary world—is bound to bring economic distress in the future.

Probably the most valuable forms of aid so far have been in the fields of science, medicine and agriculture. The 'green revolution '—the introduction of hybrid, fast maturing and drought tolerant varieties of crops and improved techniques of cultivation and animal husbandry —has brought a remarkable increase in food production in some Latin American, African and Asian countries. Success in the control of endemic diseases in tropical areas has been quite remarkable, and the coupling of such medical services aimed at reducing mortality with medical and social efforts to curb fertility may well be more productive for the developing economies than the more commercial forms of assistance.

Perhaps the most useful way of concluding this review is to try to identify elements that have helped the development process in the intermediate group of nations whose growth rates are gaining on the performance of the fully developed economies. If we can do this, we may be able to find some clues as to how the poorer nations can design their development strategy.

One should no doubt mention first the old fashioned ideals of thrift, industry and innovation which, coupled with substantial and well timed external aid, have undoubtedly contributed to success in Japan and Israel (and perhaps the two Germanys should be included if we remember the state of their economies in 1950). Secondly, we cannot ignore political organisation. By means of total state planning and a fairly ruthless sacrifice of short period consumer gains and a considerable amount of social freedom in the interests of longer term national development, the centrally planned economies have clearly lifted their economies by their own bootstraps, though the experience of Indian planning suggests that this is not an automatic key to success. Thirdly, there has undoubtedly been a prosperity spin-off from the developed economies. This has operated in a variety of ways. Tourism from north-west Europe has had a tonic effect on certain sectors of the Spanish economy. Rising costs in the affluent societies are causing a flight of certain industries and services such as ship building, ship operation and even certain motor, electrical and electronic industries in the direction of the intermediate economies, and multi-national firms are shrewdly deploying their capital and manufacturing capacity among the lower-cost producers and multi-national joint ventures are dispersing capital-intensive development into such unlikely places as New Caledonia, Iran and Nigeria. And fourthly, many developing economies have come to place much higher charges on royalties for oil, minerals and industrial concessions, thereby using developed-economy capital for their own development programmes. These four elements, however, fall a long way short of providing a full explanation of the acceleration of the economic development of the intermediate nations over the last twenty years. Growing capital accumulations and investment funds and increased productivity have contributed in classical economic fashion and these accumulations represent the fruits of a long earlier period of more modest growth. The people of the intermediate nations have acquired a much more vivid awareness of the benefits of greater affluence through the revolution in the technology of international transport and the all-prevasive influence of the news media. And-reverting to an earlier themeit is not insignificant that nearly all of these nations have had low population growth rates so that increased productivity has marched ahead of population growth. Moreover, they have benefited in a comparative sense

from the many constraints on continued growth in the richest group of nations, in particular those imposed by constantly rising costs and industrial unrest.

Stimulants such as these, however, have barely touched the fringe of the economies that plot below the break-even line on Fig. 6 and it is here that the vicious circle of poverty, inability to save, shortage of capital and accelerating population increase inhibits the development process. And inevitably, but most regrettably, such nations are too preoccupied with internal politics, nationalist ambitions and economic inertia to create effective means of collaboration on matters of common interest. One of the most discouraging elements in the African, Latin American and Asian scenes at present is the disinclination of neighbouring countries to explore together the possibilities of joint programmes designed to maximize the benefits of economic co-operation.

It seems, however, that there is no ideal model for prescribing dependable accelerating economic growth for any type of economy—developed or developing—and that the regional pattern of development will continue to be variable and unequal. It looks as though the economic geographer will remain in business for very many years.

