

Austrian Capital Theory and the Undeveloped Areas:
An Overview

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Commentary
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In the study of society, worthwhile analysis requires underlying information which is significant and reliable. Without such a base, the analysis may perhaps be fanciful and ingenious, but it cannot be illuminating.

—P. T. Bauer¹

I

It would be almost impossible to overrate the significance of the topic set down for this discussion. Before we can come to it, however, some ground-clearing appears to be required. Apparently it is necessary to say that the study of the less-developed world is a specialism in its own right. This discipline has a vast and now-substantial literature, including a mass of detailed and specific studies of various areas and topics. Any serious contribution to this study would therefore do one or both of the following: examine some aspect of the *specialist* professional literature *or* analyze some of the statistical or other data available for the different less-developed territories. The paper circulated for this session does neither. I therefore proceed to the topic itself. [p. 380]

The Category of Underdevelopment

We may begin, most appropriately, with the category: “the underdeveloped (or the ‘less-developed’) areas.” This class is obtained, as Professor Bauer has pointed out, by the process of negative definition: Countries are classified here because they do *not* have certain characteristics—those found in the developed territories. In other words, the entire (noncommunist) world, bar the U.S., Canada, Western Europe, Australia, New Zealand, and Japan, is lumped together; and the basis for this lumping is a set of general features which is *not* possessed by the countries *within* the grouping, but which *is* possessed by those *excluded* from it. Thus the LDCs are thrown into the one category *not* because they have something positively in common, but because they do *not*: They all *lack* what the developed countries have. It follows that a category established by negative definition cannot convey anything of *analytical* substance about the items herded into it. But to so herd the LDCs together is to say implicitly that the

¹ P. T. Bauer, *Dissent on Development* (London: 1971), p. 19.

differences among them are *not* analytically significant, i.e., these differences are quite negligible for purposes of further study.

It is therefore worth taking a bird's eye survey of the various countries and regions designated as "underdeveloped," to get some idea of the tremendous scale and range of the social, economic, and cultural diversities that are jumbled into the one classification.

To start, we may examine the countries of Latin America. This is the only part of the underdeveloped world which has received substantial numbers of immigrants, almost wholly during the nineteenth century, and almost entirely from Southern Europe. The exception is Brazil, in which, along with the Caribbean, a significant part of the population was coerced from Africa. In the British areas, Indian indentured labor was added after emancipation. Concomitantly, a major historical discontinuity occurs throughout [p. 381] Latin America after about the seventeenth century. Latin American economies and societies took their present (twentieth-century) shape as a result of the growth of the international economy during the nineteenth century. Both people and capital flowed into these areas, and a range of commodities were newly produced and supplied, principally to Western Europe and developed North America, but also to the rest of the world. Because the Latin American territories were part of the global production process, they participated in the worldwide distribution of the manufactured consumer goods that came out of this far-flung process. Consequently, an immensely larger population obtained a far wider range of goods and services than would have been possible otherwise. Culturally, significant proportions of all Latin American societies belong to the Spanish- or Portuguese-speaking worlds; however, at lower income levels these influences are increasingly combined with a variety of local, indigenous components, and there still remain many tribal peoples with very few outside contacts in the interior (and at the extreme tip) of South America. In the Caribbean, a distinctive regional culture has developed, however with many local variations.²

We come now to Africa. The North African littoral is part of the Mediterranean and the Islamic worlds; a complex urban culture has been present since Arab times (at least), while Egypt belongs to the Middle East. In moving away from the North African coast, tribal and pastoral societies appear. Sub-Saharan Africa contains some of the world's poorest regions: Chad, Niger, Mali, and Mauritania. Most of the territory of these countries is, in fact, the Sahara. But many parts of West Africa have been commercialized since the Islamic period (if not earlier), and there are significant differences among the various tribal groups in this regard. The trans-Saharan trade in slaves, gold, and salt (and, later, guns and kola nuts) began at least in Roman times; one consequence is that the frontiers of the Islamic [p. 382] and the African tribal worlds overlap in northern Nigeria, with complex cultural results. European trade with the various coastal regions of West Africa opened in the fifteenth century—the Portuguese came first, followed by the Dutch, English, French, Danes, etc. The Atlantic slave trade represented a diversion and extension of the trans-Saharan trade, but other commodities, notably gold and ivory, were also exchanged (for guns, beads, Indian cotton cloth, etc.). Abolition of the slave trade to the British colonies (in 1808) brought a political and economic crisis; there followed the development of cash crops and the emergence of a new political structure in many parts of West

² The most recent standard reference on Latin American history is Leslie Bethell, ed., *Cambridge History of Latin America*, 5 vols. (Cambridge: 1984–1986). For the economic aspects in particular, see Bill Albert, *South America and the World Economy from Independence to 1930* (London: 1983); J. R. Ward, *Progress and Poverty in the Caribbean* (London: 1985).

Africa. Growth of cash crops accelerated during the later nineteenth and early twentieth centuries, producing profound social changes.³

Some coastal regions in East Africa are known to have traded with the Roman Empire. Later, these regions were drawn into the Indian Ocean trading network by the Arabs. This network was itself part of the far wider net of commercial relationships which stretched from Cairo to Canton.⁴ Apart from the coastal strip, the division of labor was much less extensive in East Africa. In the inland areas, subsistence agriculture or nomadic pastoralism was the norm. Eastern Africa was drawn into the global economy only toward the later nineteenth century, when significant settler societies began to be established in Kenya and the two Rhodesias. Central Africa, in general, has been far less affected by trade than other parts of the Continent, with the exception of the diamond-mining areas.

The complexity of Southern Africa virtually defeats easy summary. From the sixteenth century onward, the African societies of the region were themselves in a state of social and economic flux, with many migrations northward and westward, and much fission and warfare. These societies were variously agricultural and pastoral. The first Dutch settlers arrived at the Cape in the seventeenth century, with Malay and African slaves. They gradually expanded eastward, some as agriculturists, but mainly as pastoralists. The nineteenth century saw the first English settlers, who were virtually all involved in commerce and industry. During the later nineteenth century, Natal acquired a significant English population, followed by an even bigger Indian population, mainly indentured labor for the sugar plantations, but also including some professionals (traders and lawyers— among the latter was Gandhi). Thus in the Cape and in Natal, a considerable part of economic activity was intimately linked with the international economy of the nineteenth century—either resulting from its growth or being drawn into its ambit. As one consequence, rapidly growing numbers of Africans were increasingly assimilated into this wider exchange system as rural and urban workers. By contrast, the farmers and pastoralists of the two Boer republics (Transvaal and Orange Free State) remained very largely outside the international economy, although some continuing contacts were unavoidable. Toward the end of the nineteenth century, diamonds were discovered in Kimberley, on the border between the Cape and the Transvaal, and gold was discovered on the Rand in the Transvaal. There followed an enormous influx of mainly English immigrants and very large mining investments into a Boer-dominated economy which was almost wholly agricultural and pastoral, and almost entirely inward-looking. Thus the mining sector of the Transvaal was essentially an extension of the world economy; the rest remained almost entirely outside. In the Cape, on the

³ The most recent standard reference on all aspects of African history is J. D. Fage and Roland Oliver, eds., *Cambridge History of Africa*, 8 vols. (Cambridge: 1975–1986). An earlier economic history is by A. G. Hopkins, *An Economic History of West Africa* (London: 1975); a more recent survey is J. Forbes Munro, *Britain in Tropical Africa, 1880–1960* (London: 1984). For an excellent survey of the history of slavery in Africa, see J. D. Fage, “Slavery and the slave trade in the context of West African History,” *Journal of African History* X (1969). Some long-term effects of the abolition of the slave trade are discussed in A. G. Hopkins, “Economic Imperialism in West Africa; Lagos, 1880–92,” *Economic History Review* 21(1968). Studies of social and economic change in the twentieth century include Polly Hill, *Migrant Cocoa Farmers in Southern Ghana* (Cambridge: 1968); idem, *Studies in Rural Capitalism in West Africa* (Cambridge: 1970); Sara S. Berry, *Cocoa, Custom and Socio-Economic Change in Rural Western Nigeria* (Oxford: 1915). Kristin Mann has recently published a study of urban sociology in West Africa.

⁴ Studies of Asian trade include K. N. Chaudhuri, *The Trading World of Asia and the East India Company* (Cambridge: 1978). The Indian Ocean trade is considered in Ashin Das Gupta, *Indian Merchants and the Decline of Surat, 1700–1759* (Wiesbaden: 1979).

other hand, diamond-mining was simply added to the numerous links that bound the Cape economy to Britain and hence to the world.⁵

Finally, to Asia. The cultural, linguistic, sociological, and economic diversity here is so vast that generalization is virtually impossible. Not only do we find here the world's oldest civilizations (bar that of ancient Egypt) but also a far greater degree of cultural and social continuity than elsewhere. To begin with, Southeast Asia was one of the three [p. 384] areas where modern man emerged from his prehuman ancestors (the other two being East Africa and the shores of the eastern Mediterranean), while the valleys of the major river systems saw the first appearance of settled agriculture and urban settlement. Moving on (rapidly) from prehistory into historic times, we have a range of substantial literary and artistic contributions from the major cultures of Asia: in literature (Sanskrit, Arabic, Persian, Turkish); philosophy and mysticism (Indian and Islamic); art (Persian, Turkish, Indian); classical music (Persian and Indian); and classical dance (Indian and Southeast Asian). The social structure of South Asia is unique in both its complexity and continuity. The division of labor—specialization and exchange—has thus proceeded to a far greater degree, and over a much longer period, in most parts of Asia as compared to other regions outside the developed countries. When the first Portuguese, Dutch, and English traders arrived in India during the sixteenth and seventeenth centuries, they found an established trade network. Integrating themselves into this network, they not only extended it to Lisbon, Amsterdam, and London, they also participated extensively in intra-Asian trade itself. Trade expanded substantially in the course of the eighteenth century; and in the nineteenth century, regional specialization and exchange developed on a scale never seen before. Agricultural output not only expanded, the area under cultivation increased well beyond previous centuries, and an entire range of peasant exports appeared and grew substantially (e.g., jute, hides and skins, oilseeds, rubber, some tea, coir and other coconut products, etc.). There was a substantial growth in inter-Asian trade as well as with the developed areas.⁶

This rapid satellite sweep over the LDCs has been so compressed that it should be seen only as a highly limited indication of some of the material available on these areas. But even this very superficial overview makes it clear that the economic and social differences *among* the less-developed [p. 385] areas are far more vast than those found among the developed countries. It

⁵ For South African history, see the *Cambridge History of Africa*, op. cit. A selection of other works would include Monica Wilson and Leonard Thompson, eds., *The Oxford History of South Africa*, 2 vols. (Oxford: 1969); Robin Palmer and Neil Parsons, eds., *The Roots of Rural Poverty in Southern and Central Africa* (London: 1977); Shula Marks and Antony Atmore, eds., *Industrialisation and Social Change in South Africa* (London: 1982); idem, *Economy and Society in Pre-industrial South Africa* (London: 1982); Leonard Thompson, ed., *African Societies in Southern Africa* (New York: 1969); Philip and Lona Mayer, *Townsmen and Tribesmen*, 2nd ed. (Cape Town: 1974).

⁶ For the Islamic world, see P. M. Holt et al., eds., *The Cambridge History of Islam*, 2 vols. (Cambridge: 1977, 1918). A new *Cambridge History of India* is now underway; several volumes are already out. The most recent study of Indian economic history is Dharma Kumar et al., eds., *Cambridge Economic History of India*, 2 vols. (Cambridge: 1982, 1984). Studies of trade include Om Prakash, *The Dutch East India Company and the Economy of Bengal, 1630—1720* (Princeton: 1985); K. N. Chaudhuri, *The English East India Company, 1600—1640* (London: 1965); idem, "The Structure of the Indian Textile Industry in the Seventeenth and Eighteenth Centuries," *Indian Economic and Social History Review*, XI (1974). Some later developments in agriculture are examined in George Blyn, *Agricultural Trends in India, 1891—1949* (Princeton: 1966). For one case study of the effects of economic change on social structure, see Robin Jeffrey, *The Decline of Nayar Dominance* (1976). Wider studies of Asian trade and its relationship with Western Europe include Holden Furber, *Rival Empires of Trade in the Orient* (Minneapolis: 1976); Ralph Davis, *English Overseas Trade, 1500—1700* (London: 1973). For peasant exports, see especially W. A. Lewis, ed., *Tropical Development, 1880—1913* (London: 1970); A. J. H. Latham, *The International Economy and the Under-developed World, 1865—1914* (London: 1978). Intra-Asian trade is studied in F. E. Hyde, *Far Eastern Trade* (1973).

is also clear (I hope) that the underdeveloped world is so heterogeneous that only the most general of generalizations is really possible. To go beyond this, it becomes necessary to deal with particular regions or countries; the most useful and informative studies do in fact have a (sic) such a concrete and specific focus.

We may now examine some of the conventional assessments made of less-developed countries as a group.

Comparative National Income Estimates

Comparisons of per capita incomes are now entrenched in many treatments of underdevelopment. Clearly, the exchange rate selected critically affects any such comparison; hence purchasing power parity exchange rates are now frequently used. The underlying rationale of such a comparison is stated very clearly by the authors of a recent extremely comprehensive study: “It is self-evident that it would be highly desirable to have a complete set of real national accounts figures denominated in a common currency covering a large number of countries and a long period of time.”⁷ In other words, the analytical significance of these numbers is not a matter requiring investigation. But this attitude merely submerges some fundamental problems with the meaning to be attached to such figures.

Let us take, for example, the per capita income of \$140 (U.S.) per annum, attributed to the poorest LDCs in 1985. Now, this sum would suffice for only a few days’ living in the U.S. But it seems that in the poorest countries, people not only live on such an annual income, they multiply themselves at what we hear is a disastrous rate. Furthermore, only at *thirty* times this average income do we reach the level of bare subsistence in the U.S. Thus the starkest American poverty occurs at an extremely high income level, while it [p. 386] would be impossible to even exist in the U.S. on many of the very highest incomes obtained in the poorer countries.

Should we now try to be more “realistic” and so raise these figures? But how high do we go? If we proceed up to the very lowest income at which life is just sustainable in the U.S., then we suggest that the goods and services produced in a developed and underdeveloped country are broadly similar; and we imply that the difference between the two lies simply in the numbers of people at the very bottom of the income distribution: the bulk of the population is found here in an underdeveloped area, whereas in a developed country only a small minority of people would receive the very lowest incomes. But clearly the type and range of goods and services produced in the underdeveloped world are vastly different from those produced in the developed areas, and there are substantial variations among the underdeveloped countries themselves. In short, the higher values for per capita incomes in the developed areas cannot mean simply that they produce some multiple of the absolute level of output found in the less-developed countries: rather, these outputs differ (sic) *essentially—in kind*, and not merely in quantity. The absolute figures cannot capture the reality: that the vast majority of the population in the underdeveloped world produce and consume goods and services that differ in *nature* and in type from those found in the developed regions. Only if we realize this *first*, can we make any sense of the numbers: quantities have meaning only as part of the historical context which produced them—they are historical data, in short.

⁷ R. Summers and A. Heston, “Improved International Comparisons of Real Product and its Composition, 1950–80,” *Review of Income and Wealth* June 1984:218–19. For a careful and comprehensive assessment of national income comparisons, see Dan Usher, *The Price Mechanism and the Meaning of National Income Statistics* (Oxford: 1968).

Absolute figures cannot convey a further important aspect of the real situation: the extreme variety in the goods and services produced in the various less-developed territories. Thus, the people of Thailand consume rice and other tropical or semitropical products, while the Tunisians eat mainly millet, dates, and similar items produced only in very arid regions. Buffalo meat is readily obtained in Thailand [p. 387] and camel meat in Tunisia, but not vice versa. In these circumstances, a *qualitative* assessment may well be possible as to the relative prosperity (or poverty) of people in the two countries, but it is not clear what could be meant by any strictly *quantitative* comparison of incomes.

Per capita income measures only the physical output of goods and services, in any case. Hence it soon began to be felt that, especially in the LDCs, per capita income failed to bring out the true condition of the poorest groups. For this reason, the use of a wide range of economic and social indicators is now suggested, such as the per capita consumption of newsprint and of energy; average calorie consumption; per capita availability and type of housing; life expectancy; infant mortality; literacy; etc. (The last three have been combined into a “Physical Quality-of-Life Index.”)⁸

But these indicators are not entirely unambiguous either. For example, calorie requirements are highly specific to the individual concerned—they depend on physical workload (and how it varies over time), metabolism and general physical makeup, and general physical condition. In Hong Kong, infant mortality rates fell below American and British rates by 1970; they have nearly halved since then. In many less-developed territories, such as Hong Kong, Sri Lanka, and Costa Rica, life expectancy is close to that of the developed countries and there is a high degree of literacy. Urban areas in general have higher death rates and lower life expectancy than rural areas, yet net migration is always from the latter to the former, because they have greater opportunities (both material and cultural). Kerala (in southwest India) has India’s highest literacy rate, relatively low infant mortality, and moderately high life expectancy. But it is a major source of emigrants to the urban areas of north India. Scotland, since the seventeenth century, has had one of the best-educated populations in the developed world (school children in England and Wales are still well behind their Scottish counterparts). Before 1914, infant mortality [p. 388] rates in Scotland were below those found in England and Wales, while life expectancy was higher. But the Scots have always been emigrants.

Social indicators and per capita income figures may also contradict each other. If the poorest part of the population multiply their numbers most rapidly, per capita income must fall. But if the poorest people increase in numbers, then clearly death rates have fallen and life expectancy has risen: which means living standards have improved, in direct contradiction to the obvious interpretation of the income figures.⁹

Statistics

It is evident that much (if not all) of the analytical literature on the less-developed countries must rely completely and without question on the statistics produced by the governments of these areas. Some assessment of their compilation is therefore in order. I quote some comments and

⁸ For discussions of the objections to the use of per capita income, see T. N. Srinivasan, “Development, Poverty and Basic Human Needs, Some Issues,” *Food Research Institute Studies* XVI (1977). The difficulties with the use of social indicators are discussed in chapter 3 of P. P. Streeten et al., *First Things First* (New York: 1981).

⁹ See, too, P. T. Bauer, *Dissent on Development*, pp. 60–61.

conclusions from an expert observer with years of firsthand experience at the grass roots in both West Africa and South India:

. . . statistical procedures are based on conditions peculiar to advanced countries—where only a small minority of the world's population lives.

. . . the quality of the final presentation mainly depends on the reliability of the statistical material obtained from respondents in the field, not on the methods of processing it.

. . . the fact the matter is in tropical countries [statistics] can only be “extracted” by . . . many convolutions, blandishments and deceits, including guesswork, which is not necessarily inspired. At later stages the material . . . from the field is commonly fudged, cooked and manipulated by various people [p. 389] at higher levels, the main purpose being to ensure that the trends will be found convincing by those at still higher levels—as well as to compensate for presumed biases which are usually unrelated to the realities of tropical conditions.

The plain fact is that in rural tropical conditions, where so many prevailing circumstances are wholly unimaginable to those in authority in advanced countries, there are many types of statistics . . . conventionally presumed to be indispensable, which cannot be collected with a sufficient degree of reliability to justify the trouble involved.

. . . bad statistics may be worse than no statistics, since they rigidify the deep channels of our false flows of thought.¹⁰

We have here further confirmation that quantitative materials are historical in nature—inseparable from the specific historical context which formed them.

Population Numbers

Population growth is held to be not just a handicap but the equivalent of a natural disaster for the less-developed areas. Let me begin by setting out the usual arguments in support of this proposition.

Death rates have fallen sharply but birth rates have remained high. In consequence, the population is quite young, with a substantial percentage below working age— i.e., less than 15. This means the dependency ratio is high, and since life expectancy is shorter than in the developed world it also means a shorter working life (given that people enter the workforce at the normal age of 15). As a large proportion of the population is too young to work, and as working life is relatively short, more resources are devoted to consumption, relative to investment. The entire economy (including and especially the foreign trade sector) is biased [p. 390] toward consumption, particularly the production of food. Thus per capita savings and

¹⁰ Polly Hill, “The Poor Quality of Official Socio-Economic Statistics Relating to the Rural Tropical World; With Special Reference to South India,” *Modern Asian Studies* 18 (1984):491–514. The quotations are from pages 491, 492, and 493.

therefore the rate of growth of capital per head are both reduced. As a result, investment in human capital is retarded—spending on health and education has to slow down. More people have to remain in the low-productivity agricultural sector, where (moreover) there are no reserves of unused land (as there were in the nineteenth century in the areas of white settlement). As the urban population grows, more capital has to be used for urban infrastructure, which is less productive than other investments. Thus employment growth is reduced, absolute poverty increases, and income-inequality is intensified—all because of population growth.¹¹

These contentions need examination.

Dependency Ratio and Working Life

The dependency ratio and length of working life depend critically on the age selected for entry into the workforce. But this last is itself determined by life expectancy and the availability of nonhuman resources. In the developed world, 15 years is equal to 20 percent of a life expectancy (at birth) of 75. In most LDCs, life expectancy is much shorter—around 55 to 60 years; in the poorest countries, it is between 40 and 50. Twenty percent of this range gives between 8 and 12 years, which is exactly when most people in the less-developed world *in fact* begin to work. If they could afford to delay until they were as old as 15, then some 25 to 37 percent of their life expectancy would have passed; and if this same scale were applied to the developed areas, then people would be *assumed* to enter the workforce *only* between the ages of 19 and 28. Such an assumption would, of course, raise the dependency ratio and reduce the imputed working-life—both contrary to fact. During the sixteenth and seventeenth centuries in England, [p. 391] work started at the age of 8, when not only was life shorter then, but nonhuman resources were also far scarcer. This is precisely the general kind of situation found in the LDCs in the twentieth century: where life ends early, it also has to begin early.

Population Growth

High rates of population growth accompanied rapid economic growth in nineteenth-century Britain and in Hong Kong after 1945; the former had to cope with rapid urbanization as well.

Taking Hong Kong first, population rose by 2.78 times between 1951 and 1987 (36 years). The same increase took 80 years in Britain and 106 years in India (see Appendix, Table 1). In 1961, the crude birth rate in Hong Kong was still 35 per thousand, about the same as in Britain in the 20 years to 1880, or in rural India during the 10 years to 1985. Some 41 percent of Hong Kong's population was under 15, exactly the same proportion as in India in the same year (1961).

But Hong Kong's economic growth was already visible as early as 1956, when Professor F. C. Benham published his pioneering study.¹² By 1969, the colony had become the largest exporter in the underdeveloped world, surpassing even the oil countries (except for Libya). It also exported more than New Zealand, Finland, Iceland, and Ireland. In 1987, Hong Kong came second to none in the less-developed world; and it now ranked higher than Australia, Denmark, Norway, Austria, Switzerland, and Spain (in addition) in the value of its exports.

¹¹ These arguments are summarized from G. M. Meier, *Leading Issues in Economic Development*, 5th ed. (New York: 1989), pp. 433–88.

¹² F. C. Benham, "The Growth of Manufacturing in Hong Kong," *International Affairs* 32(1956).

This economic expansion attracted large numbers of immigrants (many illegal). Nevertheless, the proportion of the population under 15 in 1971 was still about 56 percent, the same figure as in India in 1987, and in Britain up to 1891. This proportion dropped to 25 percent in 1981 [p. 392] (Hong Kong). And between 1961 and 1983, the birth rate fell by 55 percent, although the percentage of women in the relevant age group increased (Appendix, Table 2).

Thus in Hong Kong the economy was expanding vigorously well *before* the age structure changed significantly or the birth rate declined. Looking now at nineteenth-century Britain: Between 1801 and 1914, the population rose 3.9 times (it doubled in 52 years and then increased by 95 percent over the next 61 years). Virtually all this growth went into the urban areas: The urban population increased nearly 9 times (from 34 to 79 percent of the total) between 1801 and 1911. Britain had a very youthful age-structure during this period: 49 percent of the population was under 20 in 1821, and this proportion remained at or above 45 percent up to 1891. In the years between 1840 and 1880, the birth rate rose (from 33 to 35 per thousand) before beginning its long and continued decline. It fell by nearly 21 percent over the 74 years to 1914 (Appendix, Table 3).

The Indian demographic picture is somewhat different. The population increased by some 3.6 times between 1871 and 1987. (Britain achieved this same percentage increase in 104 years, i.e., 12 years *less* than India.) It took 89 years for the Indian population to double; however, it then rose by 82 percent in only 27 years. More than two-thirds of this increase was in the rural areas; 32 percent went to raise the numbers living in the urban sector. Urban growth was very slow to 1921 (the total rose by only 38 percent in 50 years). It then accelerated, and total numbers increased by over seven times over the following 66 years. The urban proportion, however, rose from only 9.5 to nearly 26 percent between 1871 and 1987. The Indian population has remained very young, though there are now a few very faint signs that it may be getting a little older. In 1931, 49 percent of the population was under 20. This proportion rose to just under 50 percent in 1971 but had fallen slightly to 48 [p. 393] percent by 1987. (At the other extreme, 4 percent were aged 65 and over, as compared with 3 percent in 1961.)

Turning now to birth rates: The data before 1947 are drawn from undivided India (present-day India, Pakistan, and Bangladesh combined). Thus the data from the following period are not strictly comparable. If we assume, however, that such comparisons are *not* misleading, then we may take both sets together. The Indian birth rate rose by about 4 percent from 1881 to 1911; thereafter it declined by approximately 24 percent over the 74 years to 1985 (dropping from 49 to 37 per thousand). (This reduction was not steady, of course; the birth rate moved in both directions. (See Appendix, Table 4.)

Population estimates are available for both Britain and India for some earlier periods. During the eighteenth century, the British population appears to have grown by just under 57 percent, while numbers in England (alone) seem to have risen by 82 percent between 1541 and 1701. The population in India is conjectured to have increased by about 50 percent or so between the middle of the seventeenth century and 1871.¹³

In summary: If we compare the demographic features of Britain (from 1801 to 1914) with those of India (during the years 1871 to 1987), then we find the following: British population growth was faster and proportionately greater, and its urban ratio was about three times higher,

¹³ C. G. A. Clay, *Economic Expansion and Social Change*, vol. 1 (Cambridge: 1984), Table I; Phyllis Deane and W. A. Cole, *British Economic Growth, 1688–1956*, 2nd ed. (Cambridge: 1967), Table 2; Kingsley Davis, *The Population of India and Pakistan* (New York: 1951), p. 24; *Cambridge Economic History of India*, vol. I., p. 167.

as compared with India. Both populations were about as young, with Britain being only slightly the older. The birth rate in both countries declined by about the same percentage over the same number of years, with the Indian rate falling perhaps a little more. For the periods before any census, the English (and British) population definitely appears to have expanded much more rapidly than the Indian, which indeed seems to have been virtually static for long periods.

In short, with regard to age structure and birth rates, [p. 394] the British and the Indian demographic experience appear to be similar over the census years considered; while for these years and for the periods immediately preceding these years the English population certainly grew much faster. Urbanization was also far more intensive.

Thus Britain seems to have had the *greater* burden of population in relative terms. Yet economic growth in the two countries could hardly have been more dissimilar. English economic expansion is rooted in the medieval period; by the sixteenth and seventeenth centuries, it was dearly pulling ahead of Western Europe. The British consumption patterns established in the latter part of the nineteenth century are still very largely found in the twentieth century. During this same period, India was still subject to famine (the population rose by just 11 percent between 1871 and 1901).¹⁴

Two inferences seem to be clear. Firstly, the demographic history of a country is specific to that country: its demography can be understood only in the context of its own economic history. Secondly, static economies and static numbers go together: in extreme environments, such as the desert or the Arctic, populations are completely stable (as Professor Bauer has underlined). Conversely, population growth *requires* economic growth to *support* it: The English economy and population expanded together while in India growth in numbers was miniscule, so long as growth in resources was minimal. (Even the slight increase in population in the 30 years to 1901 is a considerable acceleration over previous centuries.)

Infant Mortality and Death Rates

Declining infant mortality and falling death rates are the two main causes behind population growth in the LDCs. The first is one of the clearest and most unambiguous signs [p. 395] available of a general improvement in living conditions, while the second means a longer life expectancy. Thus population growth is itself an early manifestation of an increase in the supply of real resources.¹⁵

Between 1911 and 1985, Indian infant mortality fell by one-half, from 212 to 106 per thousand. By contrast, the rate in England and Wales declined by only 19 percent in the years between 1840 and 1914, from 154 to 124 per thousand. Thus by 1980, infant mortality in India

¹⁴ A survey of the recent literature on medieval England is Kathleen Biddick, "Malthus in a Strait-Jacket? Analysing Agrarian Change in Medieval England," *Journal of Interdisciplinary History* XX (1990). See also H. E. Hallam, *Rural England, 1066–1348* (London: 1981); C. Dyer, *Standards of Living in the Late Middle Ages* (Cambridge: 1989); J. Langdon, *Horses, Oxen and Technological Innovation, 1066 to 1500* (Cambridge: 1986). A good survey of early modern England is found in C. G. A. Clay, *Economic Expansion and Social Change*, 2 vols. (Cambridge: 1984). For Victorian consumption patterns, see C. H. Wilson, "Economy and Society in Later Victorian Britain," *Economic History Review* 18 (1965); W. Hamish Fraser, *The Coming of the Mass Market, 1850–1914* (London: 1981); D. Oddy and D. Miller, eds., *The Making of the Modern British Diet* (London: 1976). For Indian famines, see Ira Klein, "When the Rains Failed; Famine, Relief, and Mortality in British India," *Indian Economic and Social History Review* 21 (1984); Michelle McAlpin, "Dearth, Famine and Risk: The Changing Impact of Crop Failures in Western India, 1870–1920," *Journal of Economic History* 39(1979).

¹⁵ See P. T. Bauer, "The Population Explosion, Myths and Realities," in *Equality, The Third World and Economic Delusion* (London: 1982); also his *Dissent on Development*, pp. 60–64, 123–26.

had fallen to the level which prevailed in England and Wales around 1914, and it continued to fall thereafter. But the overall decline was far greater—more than 2.5 times that found in England and Wales over the same number of years. The implied betterment in Indian life is just as substantial. (See Appendix, Table 5.)

Life expectancy data for India strongly support this inference. Between 1871 and 1985, life expectancy more than doubled for both men and women, with men doing somewhat better. Since 1921, men have expected to live a little longer than women, but since 1970 female life expectancy has been rising a little faster. (See Appendix, Table 6.)

By tradition, female infants and children receive less care and resources than male offspring, so female mortality has been, and is still, higher than male. Previously, female infanticide was practiced in many areas; it still continues in a few regions. (Many urban parents have adapted this custom to current medical technology, which is used to abort only female fetuses.)¹⁶ Both customs limit the number of females and thus set a ceiling to potential births. But as resources increase, it becomes *possible* to abandon or curtail the practice of female infanticide and this effect would be included among the statistics of declining infant mortality. The same growth in resources underlies the recent slight acceleration in female life expectancy.

Again, demography is part of a particular historical [p. 396] context and the actual significance of demographic data can be seen only in that context.

Food Supplies

As regards food supplies: In the nineteenth century vast amounts of capital had first to be invested in railways, shipping, storage, and distribution facilities and land improvements, before the North American prairies, Argentina, Uruguay, and Australasia could be used to produce food for Britain and Western Europe. Before then, the British and Western European population was fed from the accelerating productivity of their own agricultural sectors.¹⁷

In the LDCs in the twentieth century, agricultural productivity is still extremely low. Precisely for that reason, there is a vast scope for raising, improving, and further diversifying agricultural output—on *existing* land. Moreover (as Professor Bauer repeatedly points out) many areas in the less-developed world are in fact very sparsely settled. Professor Colin Clark has estimated that if all suitable agricultural and forest land available throughout the world was fully utilized, then some 47 billion people could be supported at American levels of production and consumption. At Japanese standards, it would be possible to support 157 billion. (Professor Clark further estimates that if the birth rate continues to fall in the developed world, then the twenty-first century could see in these areas a fall in population equivalent to that resulting from the Black Death. If this extrapolation does come about, the LDCs may yet find an outlet for their “excess” numbers...)¹⁸

¹⁶ Even in urban areas, doctors and nurses report female births with apologies; only male births are occasion for congratulations.

¹⁷ For the vast growth in transport investment and the international trade in foodstuffs in the nineteenth century, see W. Ashworth, *A Short History of the International Economy*, 4th ed. (London: 1987); J. Foreman-Peck, *A History of the World Economy* (Brighton: 1983); R. R. Perren, *The Meat Trade in Britain* (London: 1978). The substantial expansion of English agriculture from the sixteenth to the nineteenth centuries is comprehensively studied in the following volumes of the *Agrarian History of England and Wales: Vol. IV, 1500–1640*, ed. Joan Thirsk; *Vol. V, 1640–1750*, ed. Joan Thirsk (1985); *Vol. VI, 1750–1850*, ed. G. Mingay (1989).

¹⁸ Colin Clark, *Population Growth and Land Use*, 2nd ed. (London: 1977), p. 153 and chap. X.

Unemployment

Some economists now recognize that the underdeveloped areas do *not* have a “labor surplus.” Many, however, [p. 397] feel that the people of these areas are “underemployed” and so they attempt to measure the exact degree of such “underemployment.”¹⁹

Now most LDCs do share three general characteristics: very large supplies of labor, in relation to a very much smaller supply of capital; and a significant volume of subsistence production in agriculture (even though this is diminishing).

Hence, in such countries, most economic activity is characterized by partial—incomplete—specialization, and by a very high labor intensity, with a minimal input of capital. The bulk of their population is involved in agricultural activity, and all such activity is highly seasonal, with labor shortages at peak periods and a very much lower demand for labor at other times. This pattern is found, of course, in food production, too. For most people in these countries, this means their other economic activities, including the growth of cash crops, have to fit into the pattern set by subsistence production. Hence the nonfood crops selected are those that demand labor at other times. So, too, agricultural workers can only take such supplementary employment as will counterbalance the seasonal demands from agriculture.²⁰

Many agriculturalists engage in petty trade from time to time, in both agricultural commodities and other goods (as when a farmer returning from market buys items for resale in his village). In many areas, agricultural workers produce a range of simple craft goods (including low-quality cloth) during the off-season.

Retail transactions (in both rural and urban sectors) often involve extremely small quantities, e.g., one or two cigarettes or a bundle of a few matches. Here, the wholesale transaction is the purchase of the packet (or tin) of cigarettes or the box of matches. Retailing means the breaking down of these larger units into the smaller quantities demanded.

Much of the final processing of foodstuffs in these [p. 398] countries is done within the household. To take only one example, rice does *not* come in packets, cleaned, and ready to cook. It is bought loose, out of large open sacks, and has to be (tediously) picked over and washed (several times) before it can be cooked. Many other foodstuffs routinely require much preliminary work before they are ready for further preparation.

Some *similar* economic features were found in early modern England. A substantial part of the agricultural population also had nonagricultural “by-employments” (which were followed permanently). A wide range of consumer goods—possibly most of handicraft output—were produced in this way. Chapmen (travelling peddlers) were an important element in the retail distribution network. They covered large areas on foot (some had a packhorse or two), carrying a

¹⁹ For a survey of the history of thought on the topic of labor surplus, see Albert Berry and R. H. Sabot, “Unemployment and Economic Development,” *Economic Development and Cultural Change* 33(1984). Also see Meier, *Leading Issues in Economic Development*, pp. 161–69.

²⁰ All agricultural economists know that employment in agriculture is highly seasonal. For an early and still useful study of the issues, see P. T. Bauer and B. S. Yamey, *The Economics of Underdeveloped Countries* (Cambridge: 1957), chap. VI. Other studies include Colin Clark and M. R. Haswell, *The Economics of Subsistence Agriculture*, 3rd ed. (London: 1967), chap. VII. See also Uma Lele, *The Design of Rural Development* (Baltimore: 1979), pp. 23–24, 33–34, 36, 37, and Francesca Bray, *The Rice Economies: Technology and Development in Asian Societies* (Oxford: 1986), pp. 125–26.

surprising array of small consumer items. Sixteenth- and seventeenth-century households also had to process virtually all of their foodstuffs before preparation.²¹

Thus both in early modern England and in the underdeveloped areas of the twentieth century, we find a *similarity* in factor supplies: an abundance of labor and very little capital. For this reason, we find incomplete specialization, i.e., a much lower degree of the division of labor, as compared with the developed countries of this century. In the latter areas, specialization has gone immensely further, whereas in the LDCs, full specialization is found only in parts of the urban section. It is doubtful whether the concept of “underemployment” is quite adequate to this reality.

Illiteracy

People in the underdeveloped areas are far less literate than people living in the developed countries. Does the high degree of illiteracy found in the poorer countries necessarily contribute to their material backwardness? [p. 399]

Now literacy cannot be a *precondition* for economic development: if it were, mankind could never have left the Stone Age. Professor Bauer has frequently emphasized that illiterate populations have made outstanding material progress; witness the massive expansion of peasant exports from underdeveloped areas in the later nineteenth century. These exports were in many cases entirely new to the area, or else they represented an increase never known before. They included coffee, sugar, and other commodities from Latin America; cocoa, palm oil, and groundnuts from West Africa; jute, oilseeds, and hides and skins from India; and rubber from Malaya. Such production increased in aggregate about 2.7 times between the early 1880s and 1913. In India, peasant exports rose nearly 2.4 times over the same period; they constituted some 80 percent of *all* exports from India. Average illiteracy in India is still around 80 percent; this rate is even higher in the rural areas.

In sixteenth- and seventeenth-century England, literacy varied with region and economic condition; the minimum rate for men appeared to be 20 percent. The ability to read was more widespread than the writing skill (which is more difficult). In general, the highest income-groups were also the most literate; as income dropped, so did literacy—parents were less able to afford schooling for their children. Over time, as resources grew, parents were able to put more of their income into their children’s schooling. In 1839, some two-thirds of all men and half of all women were literate (in England and Wales) and the definition now covered *both* reading and writing.²²

Literacy, in short, is a form of investment. Such investment becomes both possible and necessary only as resources increase. Once again, it is economic expansion which provides the material means for the achievement of a wider range of ends. But the ability to participate in economic exchange, to seize opportunities—in a word, entrepreneurship—are all *independent* of

²¹ For by-employments, see Joan Thirsk, *Economic Policy and Projects, The Development of a Consumer Society in Early Modern England* (Oxford: 1978); also the *Agrarian History of England and Wales*, vol. 4. For chapmen, see Margaret Spufford, *The Great Re-clothing of Rural England, Petty Chapmen and their Wares* (London: 1984).

²² For literacy in England, see Margaret Spufford, *Small Books and Pleasant Histories* (London: 1981), chap. II; Edward Royle, *Modern Britain, A Social History 1750–1985* (London: 1988), pp. 343–52. For expansion in peasant exports, see W. A. Lewis, ed., *Tropical Exports*; A. J. H. Latham, *The International Economy and the Underdeveloped World*. A trenchant survey of the economic abilities of illiterate people is found in Bauer and Yamey, *The Economics of Underdeveloped Countries*, chap. VII, section 4. See also P. P. Bauer, *Economic Analysis and Policy in Underdeveloped Countries* (London: 1967), pp. 19–21.

acquired skills. The possible [p. 400] scope for such entrepreneurship depends on the specific real-world, i.e., historical, context we are concerned with.

The Composition of Exports and Imports

Development advisers no longer treat subsidized industrial output as a net addition to resources. It is now recognized that in rich countries *both* the industrial *and* the agricultural sectors are far more advanced than in the LDCs. But the expansion of “nontraditional”—i.e., manufactured—exports is now regarded as a means of achieving faster economic growth. Thus commodity exports are identified with slower growth, while the export of manufactured goods is seen as tantamount to higher growth.²³ This argument needs examination.

In the nineteenth century, both Australasia and Latin America expanded dramatically because of commodity exports; both regions exported *only commodities* up to at least 1914. Their economic expansion attracted substantial numbers of immigrants—about a quarter of the world total in the years 1846 to 1910. British emigrants to the Australian colonies rightly expected to earn at least twice as much as at home, while New South Wales MPs were convinced their colony had the highest per capita income in the world—including the U.S. Total population rose over three times in the course of the nineteenth century in both regions.²⁴

Until the 1920s, the two principal American exports were agricultural commodities, cotton and wheat.

Turning now to the period after 1945: Table 7, Part A (in the Appendix) gives data for 18 countries on the relative importance of *specific* commodities in their total exports in 1968 and in 1986. The group selected is made up of four developed countries, 12 underdeveloped countries, and Israel and South Africa.

In 1968, only half of the LDCs considered were more [p. 401] dependent on a few commodities than all four DCs. Tanzania was about as dependent as Australia and Israel (46 to 50 percent), while Guatemala and Malawi were about equal to Finland, Iceland, and New Zealand, with Argentina only a little behind (50 to 62 percent).

By 1986, eight of the LDCs had reduced their commodity concentration impressively: from an average of 76 to 36 percent of their total exports. The four developed countries had reduced their dependence by much less: their average fell from 50 to 43 percent of their total, even though Finland and New Zealand had diversified their exports considerably. And even then, Argentina, Brazil, the Philippines, and Thailand now have a far more diverse range of exports than Australia, Finland, and New Zealand; while Chile, Sri Lanka, and Uruguay are now about equal to Australia in their commodity concentration (just under 44 percent). Tanzania is about on a par with Iceland (somewhere about 58 percent).

Commodity Exports and Development

Dependence on commodity exports and the level of economic development have no necessary relationship. Both developed and underdeveloped countries are found among the principal commodity exporters, and much the same degree of dependence (whether high or low) occurs

²³ Meier, *Leading Issues in Economic Development*, pp. 5, 304–7.

²⁴ S. Kuznets, *Modern Economic Growth* (London: 1966), p. 296; W. Woodruff, *The Impact of Western Man* (1966), Table III.

among both. Some LDCs have a greater diversity in their exports, while some DCs are more heavily committed to a narrow range of commodities.

Export diversity has been harmful in one instance— that of New Zealand. Among developed countries, New Zealand is the most efficient producer (bar none) of dairy products and certain meat products. Virtually all its exports went to Britain. As the EEC is designed to preserve the unconscionably expensive French farmer, New Zealanders were forced (after 1973) to use their resources far less pro- [p. 402] ductively. The result was a considerable decline in the New Zealand rate of growth.

Parts B and C of Table 7 (in the Appendix) set out data on the proportion of primary products and manufacturers in total exports, and the percentage of manufacturers in total imports, for 11 developed countries (and 15 less-developed non-oil countries (Portugal, Israel, and South Africa are also included). The two years taken are again 1968 and 1986.

Primary Products

These cover foodstuffs, raw materials, and fuel (except oil). Four developed countries are primary exporters (Australia, Denmark, Iceland, and New Zealand). Among the LDCs we may safely ignore Hong Kong and South Korea, leaving 13 countries whose principal exports are primary products. Between 1968 and 1986, the average ratio for these 13 LDCs fell from 79 to 65 percent of their total exports. For the developed countries, the decline was much less: from 78 to 72 percent. The relative change is nicely illustrated if we look at Australia's position. In 1968, ten LDCs had a higher proportion of primary exports, while three ranked below. By 1986, this situation had been exactly reversed: only three LDCs ranked above Australia; ten LDCs exported a *lower* percentage of primary products.

Manufactured Exports

In 1968, the two countries with the highest percentage of manufactured exports (over 90 percent) were Hong Kong and Japan—and Japan then was not really regarded as a developed country. West Germany and Britain came next (90 and 85 percent). South Korea was just equal to France (74 percent) and ahead of Finland and the U.S. (67 and 70 percent). [p. 403]

At the other extreme, Iceland and Sri Lanka were at the bottom (2.5 and 1 percent). Next up were Brazil, Chile, Malawi, the Philippines, and New Zealand (manufactures formed between 5 and 9 percent of their total exports). Australia ranked with Guatemala (23 to 24 percent). Denmark, India, and Pakistan were on a level (around 50 percent), with Jamaica not far behind (46 percent).

By 1986, South Korea had joined Hong Kong and Japan at the head of this league table: for all three countries, manufactures came to more than 90 percent of their total exports—and two of these countries were underdeveloped. West Germany and Italy were next (90 and 88 percent).

Malawi and Tanzania were now at the bottom—only 4 and 7 percent of their exports, respectively, consisted of manufactured goods. Iceland was level with Chile (9 percent). All twelve remaining LDCs outranked Australia (at 19 percent—only five had done so in 1968). Argentina, Sri Lanka, and New Zealand had expanded their manufacturing exports to around 25 percent of their total (joining Guatemala). Denmark, with 60 percent of its exports coming from its manufacturing sector, had been overtaken by Jamaica and Pakistan (65 and 67 percent); the Philippines were close behind (57 percent).

In sum, between 1968 and 1986, all LDCs (with four exceptions) *increased* the percentage of manufactured goods in their exports—some spectacularly, others moderately. Only Guatemala, India, and Malawai remained static, while Tanzania reduced its manufacturing proportion. Among the developed countries, Australia did likewise (but with no effect on its growth rate); New Zealand, on the other hand, now exported a much larger percentage of manufactures, with an adverse affect on its growth (as noted above).

Imports of Manufactures

Between 1968 and 1986, LDCs reduced slightly the [p. 404] proportion of manufactures in their imports, from 69 to 65 percent (on average). The developed countries, on the other hand, expanded theirs—from 63 to 73 percent of their total imports. (Japan is excluded because the bulk of its imports consist of raw materials and fuel, for obvious reasons.) The four primary exporters raised their percentage of manufactured imports from 74 to 80 percent. But the remaining DCs registered a more striking increase—from 56 to 69 percent. Thus manufactures now form a larger proportion of the imports of the developed countries as compared with the less-developed areas, while such imports have always taken a far greater share for the primary exporting DCs in comparison with the LDCs.

Conclusion

The percentage of primary exports, the percentage of manufactures in both exports and imports, and the levels of economic development are not necessarily related. Four out of eleven DCs examined are primary exporters. Of the nine countries with the greatest proportion of primary exports (over 70 percent), three are DCs. Two out of the three countries with the highest percentage of manufactured exports (over 90 percent) are underdeveloped areas. Two out of three countries with the lowest percentage of primary exports (under 10 percent) are LDCs. Of the nine countries with the lowest proportion of manufactured exports (less than 30 percent), three are DCs. Finally, the DCs are now proportionately heavier importers of manufactures than the LDCs, while the primary exporting DCs have always had a higher percentage of manufactured imports than the LDCs.

The composition of any group of exports or imports is part of the historical context from which they came— whether this context be the economic history of a country, region, or whatever. It is to this context we must go if we seek understanding. [p. 405]

II

In examining various features or facets of underdevelopment, we have seen that we are examining aspects of the economic history of these areas. In Professor Bauer's words:

. . . economic development is but one aspect of the total historical evolution of society, and one which . . . is inseparable from other elements of social life.²⁵

None of the older Austrians could have put it better.

²⁵ P. T. Bauer, *Dissent on Development*, p. 25. See also pp. 324, 336, 338.

How does the Austrian school framework—as evolved by the older Austrians from Menger to Lachmann—help us in comprehending the historical context known as the underdeveloped world? The answer—in exactly the same way as with any historical context—is by providing the historian with general theoretical categories to help him analyze the specific historical problem with which he is concerned.²⁶ In the Austrian view, the terms “developed” and “underdeveloped” are a form of shorthand referring to different sets of historical circumstances that the *historian* examines with the aid of selected theoretical categories.

Austrian capital theory provides these categories.²⁷ In the Austrian view, capital is not a homogeneous mass of plasticine. It consists rather of heterogeneous and specific capital goods. These goods may be classified into stages, according to whether they are closer to, or further from, final consumption. For example, a steel mill is remote from this stage, while a retail shop is only a stage or two removed. The steel mill by itself cannot produce goods for final consumption; a myriad of intervening investments are required, in machines, factories, transport facilities, a distribution network, and the like, to utilize the output from the steelworks and transform it eventually into an installed washing machine, a car in the garage, or some other final good. Likewise, a retail shop is a productive investment only [p. 406] if it too forms a link in a chain of complementary investment—in *other* stages further removed.

Thus in order to produce final consumption goods (and services), all these heterogeneous capital goods must be integrated into a capital structure—a series of chains of interlinked investments completed down to the final consumption stage. An incomplete chain is valueless. So, too, any good which does not fit into a completed capital structure is a *malinvestment*.

Extension of this capital structure means investment in stages further and further removed from final consumption. Such extension involves the production of a different mix of capital goods—goods that “fit into” a “lengthier” chain of production (i.e., one with more stages intervening between final consumption and the stage furthest removed).

Capital goods may be specific to a particular stage in a capital structure (e.g., a steel mill—it can be used only in stages well removed from final consumption), or they may be versatile—usable in a number of stages (e.g., electricity, which may be used in all stages of production). Some capital goods may be specific only to a relatively short capital structure (e.g., stone tools) or they may appear only when the capital structure has been extended quite some way already (again, a steel mill). Other capital goods may be usable in capital structures of varying lengths (e.g., coal, bricks, timber, an orchard, a wheat field).

The extension of the capital structure thus means that some capital goods will have to be discarded, while some *new* goods will also be produced, often for the first time—because they fit into lengthier production structures. As the capital structure is extended, so the flow of final goods and services is increased in quantity, improved vastly in quality, and becomes evermore

²⁶ Austrian methodology begins with Carl Menger’s dispute with the Younger German Historical School. See his *Problems of Economics and Sociology* (trans. 1963), chaps. 1–4. This was followed by Ludwig von Mises, *Epistemological Problems of Economics* (trans. 1960), *Human Action* (1966), Introduction, chaps. I, II. Hayek’s development of these ideas are found in “Scientism and the Study of Society,” *The Counter-revolution of Science* (1952) and in “The Facts of Social Sciences,” *Individualism and Economic Order* (London: 1948). See also “The Dilemma of Specialisation,” in his *Studies in Philosophy, Politics and Economics* (London: 1967).

²⁷ Austrian capital theory begins with Carl Menger, *Principles of Economics* (1976), chaps. I–III. See then Ludwig von Mises, “Inconvertible Capital,” in *Epistemological Problems*. For further development, see Friedrich Hayek, “Investment That Raises the Demand for Capital” and “The Maintenance of Capital,” in *Profits, Interest and Investment* (London: 1939); *Prices and Production* (London: 1935), chap. 2; *The Pure Theory of Capital* (London: 1941), pp. 46–49, and chap. 5; L. M. Lachmann, *Capital and its Structure* (London: 1956).

diverse. Again, some consumption goods and services disappear because they can be produced only in a shorter structure, while new items emerge that are specific to lengthier structures. [p. 407]

How are the separate investments made by separate production units (households, individual producers, firms) coordinated into a coherent capital structure? By means of prices—the returns earned on different investments. Those investments that are integrated into such a structure earn profits and make capital gains; malinvestments result in operating and capital losses.

When the capital structure is being extended, such losses are made on those goods specific to a shorter structure; other goods—those usable in a “lengthier” structure—make operating profits and capital gains. Returns rise especially on those investments appropriate only to a longer production structure. To produce the goods for such an extension, versatile resources must be moved out of shorter and into longer investment processes. At which stages (in the capital structure) these shifts occur would depend on particular circumstances, especially technical feasibilities. Such reallocations would entail a temporary decline in the rate of flow of final goods and services, until the extension was “completed.” This requires saving, i.e., willingness to postpone consumption. Such saving brings about and sustains the price relationships that lead to capital lengthening. But saving is also necessary to *maintain* the price relativities (at different stages) that create and maintain *any* given capital structure, whatever its “length.” The quantum of saving required is that which results in the appropriate price relationships; and both depend on specific historical circumstances.

A capital structure once “completed” is not thereafter imbedded in concrete for all time. Any capital structure—*because* it is composed of *specific* capital goods—is an adaptation to a specific set of historical circumstances: the particular circumstances of time and place, of which all production is a part. As these circumstances change, the investments in the capital structure must be continuously adapted, or else the production structure becomes more and more disorganized and hence less productive. Information about changes [p. 408] in circumstances is acquired only by those in direct contact with that particular situation; as they adapt themselves to their changed perceptions, this adaptation sets off a chain reaction of adjustments. Thus a capital structure is an adaptation to all the relevant knowledge possessed by the participants in its formation.

The extension of the capital structure beyond the simplest and most rudimentary stage means extending the division of labor, i.e., greater specialization and exchange. As specialization is intensified over time, some lines of employment disappear, other occupations are modified, and new specializations appear. Thus an extended capital structure and an extended division of labor are two sides of the same coin—they are inseparable.

But to increase the degree of specialization and exchange requires the development—the historical evolution—of such customs and attitudes that support market exchange. (This does *not* mean “rational invention in full precognition of the results.” It only means the adoption—for whatever reason—of customs and practices that have the *effect* of extending the division of labor—which cannot be foreseen in any case.) Furthermore, extension of economic activity means an increase in economic disputes to be settled by a judge or arbitrator. Thus *if* exchange activity is to continue expanding, the legal rules that evolve must develop out of exchange and become evermore open-ended. Rules that limit those with whom economic interaction is possible—e.g., many tribal customs—must limit the extension of the market order. Thus the capital

structure is an aspect of the katallaxy²⁸—the wider exchange order—and both are inextricably linked with the historical evolution of some particular type of private case-law. In sum, an extended capital structure is an historical phenomenon which gradually emerges over time in the context of privately evolved legal rules.²⁹

Applying the above to the specific circumstances of [p. 409] both the developed and the underdeveloped areas: the major difference between the two is that in the areas known as “developed,” the capital structure is far more extended than in the LDCs where the production structure is much shorter. The reason for this is historical: the worldwide extension of the capital structure and the katallaxy, found in the twentieth century, is the result of the specific historical course taken in the nineteenth century. During this period, there emerged a global trading network, and investment too became worldwide. As part of this process, both people and capital moved from Britain and the Continent to the Americas and Australasia. As one result, the developed countries are those with English Common Law (or some other system of private case-law, such as Roman private law or Japanese mercantile law).

In the latter part of the nineteenth century, the expanding capital structure emanating from the developed countries (and especially Britain) came into contact with the far shorter production structures found in the underdeveloped regions of Africa and Asia. Tribal and peasant farmers and craftsmen were enabled thereby to shift out of a restricted local or tribal set of exchanges to participate at once in a global division of labor within a worldwide katallaxy. That is, *some* investments could be detached from an extremely short capital structure and linked with a production process which covered the globe. As a result, both output and population expanded, and output was diversified. In the process, a substantial adaptation of custom occurred, and parts of English Common Law were transferred to those parts of Asia and Africa that are now economically and socially more developed. In these areas we now find an incomparably more extensive division of labor than prevailed in the centuries preceding the nineteenth. (Thus to understand economic history, we need an understanding of social and legal history.)

The historical developments of the nineteenth century [p. 410] are the outcome of the economic, legal, and social developments that occurred in England from the twelfth century onward. That story must be told elsewhere.

III

I have tried to indicate in an extremely sketchy fashion how the Austrian school analytical framework can help to illuminate the historical reality. (I hope to deal with this subject in greater

²⁸ The origin of the notion of katallaxy is in Menger, *Problems of Economics . . .*, App. I. It developed from the distinction between organizations and spontaneous order in Book III. See then Mises, *Socialism* (London: 1951), pp. 289–318, esp. pp. 295–97. Both ideas are elaborated considerably by Hayek: “The Theory of Complex Phenomena,” “The Results of Human Action But Not of Human Design,” *Studies in PPE*; “The Confusion of Language in Political Thought,” “Competition as a Discovery Procedure,” *New Studies in Philosophy, Politics, Economics* (London: 1978); *Law Legislation and Liberty*, 3 vols. (London: 1977–79), vol. I, chap. 2; vol. II, chap. 10. See also “Economics and Knowledge,” “The Use of Knowledge in Society,” in *Individualism and Economic Order*.

²⁹ The idea of common law as a spontaneous order is found in Menger, *Problems of Economics . . .*, App. VIII. Menger was highly influenced by Burke and, through him, by the seventeenth-century common-law tradition. See thereafter Mises, *Socialism*, pp. 43–47, where for the first time, law and economic activity are recognized to be intertwined (p. 44). Further elaboration is found in Hayek: “The legal and political philosophy of David Hume,” *Studies in PPE*; “The Confusion of Language . . .,” *New Studies; Law Legislation and Liberty*, vol. I, chaps. 4–6, vol. II, chaps. 7–9.

detail in another place.) We may contrast this framework with a leitmotif or theme which runs, “Taxes and inflation are bad, saving is good.” Such a theme is, of course, highly commendable, but it has no *analytical* function; it serves only as a touchstone or litmus test, to help separate the sheep from the goats. As applied to many pronouncements by Böhm-Bawerk and by Mises, it shows that they come out on the side of the angels. Other economists just as clearly fail the litmus test. (For some results from this method, see the paper prepared for this session and printed earlier in this volume.)

As against such an approach, we find in the writings of the older Austrians a penetrating *analytical* framework whose full potential remains to be discovered.

[p. 411] **Appendix****Table 1: Comparative Population Growth**

	<i>Hong Kong</i>		<i>Britain</i>			<i>India</i>		
	<i>millions</i>	<i>Index</i>	<i>millions</i>	<i>Index</i>		<i>millions</i>	<i>Index</i>	
1951	2.02	100	1801	10.7	100	1871	214.7	100
1987	5.61	278	1881	29.8	278	1975	600.8	279

Table 2: Hong Kong Population, 1961–1981

	<i>Population under 15 (% to total)</i>	<i>Crude Birth Rate (per 1000 pop.)</i>	<i>Women Aged 20–39 (% to total)</i>
1961	40.8	35.0	14.1
1981	24.8	15.6 ^a	17.1

^a1983.

[p.412]Table 3: Britain, Population, 1801–1914

<u>Total Population</u>			<u>Urban Population</u>			<u>% to total</u>	<u>% rise in population going to:</u>	
<i>millions</i>	<i>Index</i>		<i>millions</i>	<i>Index</i>			<i>urban areas</i>	<i>rural areas</i>
1801	10.7	100	1801	3.6	100	34	(1801–1911)	(1801–1911)
1853	21.3	199	1911	32.3	889	79	95	5
1914	41.7	390						
<u>Age Structure (%)</u>						<u>Crude Birth Rate</u>		
	<i>under 15</i>	<i>under 20</i>				<i>Rate</i>	<i>% Change</i>	
1821	38.9	48.9			1840–1859	33.3	—	
1851	35.5	45.4			1860–1879	35.3	+ 6.2	
1881	36.5	46.3			1880–1899	30.0	–15.1	
1911	30.8	40.1			1900–1914	26.5	–11.8	
					Change, 1840–1914:		–20.5	

[p. 413] **Table 4: Indian Population, 1971–1987**

<i>Total Population</i>			<i>Urban Population</i>			<i>% to total</i>	<i>% rise in population going to:</i>	
<i>millions</i>	<i>Index</i>	<i>millions</i>	<i>Index</i>	<i>Index</i>				
1871	214.70 ^a	100.0	1871	20.3 ^a	100.0	9.4 ^a	urban areas	rural areas
1960	429.02	199.8	1921	28.1	138.4	11.2	(1871–1987)	(1871–1987)
1987	781.37	363.9	1987	201.8	994.1	25.8	32	68
<i>Crude Birth Rate (per 1000 population) (annual average)</i>								
<i>Age Structure (%)</i>			<i>Undivided India</i>			<i>Republic of India</i>		
<i>Under 15</i>	<i>Under 20</i>		<i>Rate</i>	<i>% Change</i>		<i>Rate</i>	<i>% Change</i>	
1931	na	49.1	1881–1901	47.0	—	1950–60	41.6	—
1951	37.5	47.5	1901–21	48.5 ^b	+ 3.2	1960–70	43.0	+ 4.1
1971	42.0	50.7	1921–41	45.8	– 6.5	1970–80 ^c	38.7 ^{cd}	–10.0
1987	37.2	48.0				1980–85	37.4 ^d	– 3.4

^aEstimated ^b1911–21: rate: 49.0 ^c1975–80: rate: 37.7. ^dAdjusted.

[p.414]Table 5: Infant Mortality Rates
(per 1000 live births; annual average)

England and Wales		Undivided India		Republic of India	
1840-59	154	1911-20	212	1951-61	139
1860-79	151	1921-30	176	1977-79	125
1880-99	140	1931-40	168	1980-85	106
1900-14	124				
1840-		1911-			
1914:	-19.2%	1985:		-49.8%	

Table 6: India, Life Expectancy, 1871-1985 (years at birth)

Undivided India					
		% Change	F	% Change	Index: 1871-1985
M					
1871-91	24.1	—	25.6	—	M:230
1891-1911	23.1	- 4.2	23.6	- 7.6	F:216
1921-41	29.5	+27.7	29.0	+22.6	
Republic of India					
1951-60	41.9	—	40.6	—	
1961-70	46.4	+10.8	44.7	+10.2	
1970-80	51.0	+ 9.9	49.9	+11.5	
1970-85	55.6	+ 9.0	55.2	+10.7	

[p. 415] Table 7.A: Principal Commodity Exports (% of total)

	<i>1968 (%)</i>	<i>1986 (%)</i>	<i>Commodities (listed alphabetically)</i>
Australia	45.9	43.5	beef, coal, iron ore, wheat, wool
Finland	60.8	37.4	newsprint, paper, wood, woodpulp
Iceland	62.3	58.4	aluminum and alloys, fish, fishmeal
New Zealand	60.9	33.7	beef and veal, butter, lamb and mutton, wool
Israel	50.2	26.8	citrus fruit, diamonds
South Africa	41.9	49.1	diamonds, gold
Argentina	57.9	29.0	corn, hides and skins, meat, wheat, wool
Brazil	53.5	24.3 ^a	coffee, iron ore, soybeans and products, sugar
Chile	88.0	44.0	copper, iron ore
Guatemala	62.2	64.5	bananas, coffee, cotton, fresh meat
Jamaica	80.9	60.5	alumina, bauxite, sugar
Malawi	62.1	85.1	peanuts, sugar, tea, tobacco
Pakistan	23.9	28.6	carpets and rugs, cotton, rice
Philippines	80.0	17.3	coconut products, copper, sugar, wood
Sri Lanka	89.5	41.9	coconut products, rubber, tea
Tanzania	47.6	59.8	cashew nuts, coffee, cotton, sisal
Thailand	69.5	27.6	corn, rice, rubber, sugar, tapioca products
Uruguay	86.4	43.7	hides, meat, wool

^a1984.

[p.416]Table 7.B: Composition of Exports/Imports—DCs

	<i>Exports of Foodstuffs Raw Materials, Fuel^a</i>		<i>Exports of Manufactured Goods</i>		<i>Imports of Manufactured Goods</i>	
	<i>(% of total)</i>		<i>(% of total)</i>		<i>(% of total)</i>	
	<i>1968</i>	<i>1986</i>	<i>1968</i>	<i>1986</i>	<i>1968</i>	<i>1986</i>
Australia	74.8	80.8	23.0	19.1	77.5	86.7
Denmark	49.8	40.0	49.9	60.0	69.9	73.6
Finland	32.9	19.2	67.1	80.8	68.0	71.4
France	25.6	24.0	74.1	76.0	60.1	68.9
W. Germany	9.0	10.2	89.7	89.7	52.6	67.5
Iceland	97.0	90.8	2.5	9.2	72.0	77.1
Italy	17.2	12.9	82.4	87.6	44.7	56.8
Japan	5.5	2.5	93.9	97.5	27.1	35.3
New Zealand	91.2	76.1	8.7	23.9	76.9	81.4
UK	12.9	12.6 ^a	84.5	75.5	47.8	72.9
USA	27.8	23.5	69.5	76.5	62.1	77.5
Israel	26.3	15.2	72.9	84.8	70.6	77.9
Portugal	37.3	20.3	61.4	79.7	63.4	62.0
So. Africa	59.0 ^b	59.5 ^c	41.0 ^b	40.5 ^c	83.1 ^b	88.5 ^c

^aExcept oil. ^b1971. ^c1983.

[p. 417] Table 7.C: Composition of Exports/Imports—LDCs

	<i>Exports of Foodstuffs Raw Materials, Fuel^a</i>		<i>Exports of Manufactured Goods</i>		<i>Imports of Manufactured Goods</i>	
	<i>(% of total)</i>		<i>(% of total)</i>		<i>(% of total)</i>	
	1968	1986	1968	1986	1968	1986
Argentina	87.6	73.6	12.3	26.3	74.4	73.8
Brazil	81.2	55.1 ^b	8.1	44.8 ^b	64.7	38.0 ^b
Chile	94.8 ^c	90.8	5.2 ^c	9.2	65.1 ^c	74.9
Guatemala	76.2	76.6 ^d	23.7	23.4 ^d	84.5	56.9 ^d
Hong Kong	7.6	3.1	92.1	96.9	64.2	81.8
India	48.2	50.4 ^e	51.2	46.9 ^e	58.7	59.7 ^e
Jamaica	54.3 ^c	35.1 ^e	45.7 ^c	64.8 ^e	68.8 ^c	53.9 ^e
So. Korea	25.7	8.0	74.3	92.0	64.4	63.2
Malawi	93.6	96.0 ^e	5.2	4.0 ^e	76.2	71.1 ^e
Pakistan	49.5	33.2	50.5	66.7	70.8	61.1
Philippines	92.9	42.9	7.1	57.1	69.4	66.9
Sri Lanka	98.6	73.3 ^d	1.2	26.7 ^d	42.9	56.3 ^d
Tanzania	86.6 ^f	92.7 ^e	13.3 ^f	7.3 ^e	82.7 ^f	76.8 ^e
Thailand	80.7	55.7	15.3	44.4	79.7	71.7
Uruguay	79.9 ^c	64.5	20.1 ^c	35.6	62.5 ^c	64.4

^aExcept oil. ^b1985. ^c1971. ^d1984. ^e1983. ^f1970.

Sources: *Hong Kong Statistics, 1947—67*; *Hong Kong Monthly Digest of Statistics* (January 1982); Hong Kong Director of Health, *Annual Report* (1963—64, 1983—84); B. R. Mitchell and Phyllis Deane, *Abstract of British Historical Statistics* (1962); Kingsley Davis, *The Population of India and Pakistan* (1951); *International Financial Statistics Yearbook* (1982, 1987); *UN Demographic Yearbook* (1967, 1980, 1981, 1985, 1986, 1987); *Historical Supplement* (1979); F. Crouzet, *The Victorian Economy* (1982), Table 20; *Indian Agriculture in Brief*, 15th ed. (1976); *International Financial Statistics, Supplement on Trade Statistics*, Nos. 4, 15.

Böhm-Bawerk developed the Austrian Capital Theory as an alternative explanation for the legitimacy of interest payment on "capital" and it has since been adapted by Hayek and Mises to explain policy-induced business cycles. Earlier attempts, especially by Alfred Marshall and J.B. Clark, to clarify the limited usefulness of Böhm-Bawerk's theory and the mistaken basis of his criticisms of the classical theory of interest were not successful. Neither were the debates between later neoclassicals such as Frank Knight and Hayek able to settle issues. The legacy of the controversy over interest and "capital" Austrian economists conceive of the market as a market process. A central assumption is that coordination of individual plans for supply and demand never works perfectly because plans concern the future and are hence subject to fundamental uncertainty (Holcombe 2014, 1). As a consequence, an equilibrium of prices and quantities of goods and services can never be reached. So while there are tendencies that pull markets towards an equilibrium state, Austrians argue that the market environment is subject to continuous changes in preferences, technology and knowledge. Furthermore, the information t Capital Theory and the Austrian School of Economics Its the Austrians claim to fame. Menger (1871) Böhm-Bawerk (1880 1921). Wieser. It can be confidently maintained that there is no area of production which could not materially increase its product over the result obtained by its present method (Böhm-Bawerk. 1959: 84-85). But a Sacrifice is Involved. Keywords Austrian school of economics, Austrian business cycle theory, capital, VECM. Table of Contents. It gives capital two-dimensions: The first dimension is value that can be expressed in monetary terms, and the second dimension is time, which denotes the time that elapses between the applying the production process to input and eventual emergence of the consumption good associated with them. The Austrian view of capital differs from classical and neoclassical approaches to capital, which is, according to Horwitz (2000, p. 42), that capital is seen as a homogenous entity that semi-automatically generates value. The details of the process of the value creation are not taken into account.