6 Introduction

2. Various critics claimed that the concept was too complex and/or that Kuhn was himself inconsistent in his interpretation of it (see e.g. Masterman in Lakatos and Musgrave, 1970).

3. Kuhn also generated a certain amount of linguistic confusion, for in the literature of the social sciences we now find the term 'paradigm' used in at least two senses: by many in some approximation of Kuhn's original interpretation, by others (e.g. Preston, 1987) as an alternative to 'exemplar'.

4. These are the categories identified by Kuhn (op.cit.: x).

5. See e.g. Preston, 1987: Chapter 2.

6. These factors can also be expected to influence subsequent paradigm espousal

where scope for choice exists.

7. Kuhn explicitly refers to the possible occurrence of compatibility between the preliminary perspectives that emerge in a new discipline. Furthermore, the fact that a new paradigm emerging in a mature science must be able to resolve the majority of the problems resolvable by the paradigm now to be abandoned may also be interpreted as implying at least a degree of 'lower-level' compatibility even while the overall perspective from which the problem is approached changes.

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2. THE THEORETICAL HERITAGE

In the 1940s and early 1950s some economists began to focus on a body of data and of associated problems that were sufficiently distinctive, and of sufficient importance, to justify, in the opinion of many who turned to them, the search for a new analytical perspective with which to confront them. The focus of their attention was twofold: firstly the causes of the relative poverty of underdeveloped countries, and secondly the potential way forward for these economies, the specification of the route to economic progress in these largely pre-industrial regions.

However, development economics emerged not as a totally new discipline, but as a sub-division of an existing one. The economists who turned to these issues consequently brought with them a certain stock of intellectual baggage. While the problems that they set out to investigate were distinct from those that constituted the contemporary subject matter of mainstream economics, it was inevitable that they should bring to bear on these problems, wherever it seemed appropriate, elements of the intellectual capital of the existing discipline. Furthermore, in so far as there were conflicting analytical approaches associated with the existing discipline, there was also the possibility that these might be reflected in any debate about fundamentals within the new sub-discipline.

Initially the main preoccupations of this emerging group of economists were largely with a dynamic macro-economics: the specification of those variables and relationships which could provide the key to future economic expansion, and the analysis of possible long-term growth paths and strategies. However, the focus of the bulk of mainstream economic theory for the previous seventy years or so had been on a different set of issues: those associated with the maximisation of short-run efficiency in resource allocation, supplemented, since the 1930s, by a preoccupation with short-run macro-economic management. The analytical method used to confront these issues was in both cases comparative statics. We shall see later that these same issues have also become a growing focus of attention in development economics, but they were certainly not the prime concern at the

Within the corpus of mainstream economic theory there were, however, outset. important exceptions to the general rule: instances in which theoreticians had, in the more or less recent past, turned their attention to dynamic issues. Most notable amongst such contributions in the first half of the twentieth century had been, firstly, Schumpeter's seminal work The Theory of Economic Development (first published in German in 1911) and, secondly, the work of Harrod and Domar on the conditions needed to sustain long-run economic growth in the industrially advanced countries, published respectively in the late 1930s and 1940s-work which, to paraphrase Harrod, attempted to give a dynamic perspective to Keynesian theory.

Furthermore, for anyone who chose to go back in time, the corpus of literature produced by the classical economists from the late eighteenth to the mid-nineteenth century was concerned to a notable degree with the analysis of long-run economic growth: with its causes, with its impact on other macro-economic variables, and with the prospects for sustaining growth in the long term. There was also a further reason for returning to this literature. It had been generated in a context in which the economies subject to analysis were in certain respects structurally more similar to the underdeveloped economies of the mid-twentieth century than to the industrialised, technologically advanced economies that they themselves had become.1

Then, there was also the body of literature that represented Marxist political economy. This was of relatively little influence in the West in the 1940s. However, within that literature there was a dynamic theory in Marx's own work, a subsequent body of analysis of economic imperialism and its implications for colonial development, and another body of analysis debating the route to growth for an independent but initially largely agricultural socialist economy: the Soviet Union.

The core of this chapter provides a brief overview of the main elements of dynamic theory concerned with the causes of, and constraints to, long-run economic growth that had accumulated in the corpus of economic literature by the mid-twentieth century. The summary will be largely chronological, but will also employ an element of thematic grouping. Finally, at the end of the chapter the neo-classical paradigm is reviewed because, although it is not primarily dynamic in orientation, it is also part of the intellectual heritage that, as already noted, has had a considerable influence on development economics.

The primary purpose of this review is not to identify the dominant paradigms of the past, so there will be no attempt to explore systematically the overall intellectual frameworks of which the theories reviewed formed part. The reader interested in a fuller review of these frameworks may find this elsewhere (see e.g. Barber, 1967; Deane, 1978). Rather, the primary

purpose of this review is to identify potentially relevant elements of theory-chiefly theoretical relationships that may be used to explain aspects of the processes of economic growth and rising labour productivity. We shall also briefly note the context of the development of these theoretical contributions. However, as will be seen in later chapters, specific theoretical models, concepts and analytical techniques originally developed in one context, and as part of a particular intellectual framework, may sometimes be lifted from one intellectual perspective and adapted to the purposes of another.

THE CLASSICAL LEGACY

Among the classical political economists the three most original contributors to dynamic theory were Smith, Ricardo and Marx. The theoretical contribution of Marx was, however, so distinctive that it is customary to single out Marxian theory from the main body of classical political economy. This section will refer chiefly to the pre-Marxian literature on economic growth, while Marxism will be discussed in the section that follows.

Prior to the founding of the classical school, another group of economists had, earlier in the eighteenth century, also studied the process of economic growth. In France the physiocrats analysed the scope for advances in both total output and output per worker, concluding that these could only be generated by the agricultural sector: only labour employed in exploitation of the land was capable of generating surplus output in excess of the value of material inputs and the labour employed. Expanded agricultural output leads in turn to an increased supply of food and raw materials to other branches of the economy, permitting an expansion of manufacturing output also; but manufacturing itself could never generate economic growth, for artisans add to their raw materials only the value of their own labour.

The physiocrats' ideas represented a reaction to contemporary economic policy in France, which discriminated against agriculture while deliberately promoting, and subsidising, the development of manufacturing. This policy was geared to generating national self-sufficiency in manufacturers. In so doing it reflected the mercantilist philosophy of the times.2

From the work of Adam Smith-the founding father of the classical school-onwards, there is a recognition that a growth dynamic can be generated in manufacturing as well as agriculture: this sector too can generate advances not only in total output but in labour productivity. The classicals, indeed, perceived the scope for productivity advances to be greater in manufacturing than in agriculture, and some saw in this fact reason for considerable pessimism concerning the prospects for sustained overall advances in productivity and mass welfare.

These developments in perception were associated with the articulation of a number of propositions concerning the causes of growth, some of which were completely new, and with a new elaboration also of the constraints to growth.

Adam Smith

When Adam Smith published the Wealth of Nations in 1776, agricultural and industrial revolutions were both already under way in Britain, and the book is written in a tone of optimism concerning the prospects for long-run growth. At the time Smith was writing he also observed that producers in parts of Europe had been, and were, experiencing an extension of both domestic and foreign markets. Two factors, improvements in law and order along actual and potential trade routes, and the expansion of low-cost waterborne transport, were resulting in greater exchange over longer distances. For Smith, the primum mobile of expanding national output and labour productivity is this same extension of the market. It is this which both makes growth possible and simultaneously provides the necessary inducement not only to expand production, but to do so in a manner which increases labour productivity. Extension of the market provides opportunities for an increase in the division of labour, and, observes Smith, the division of labour-or specialisation-raises labour productivity for three reasons:

- 1. Workers become more efficient in the performance of particular tasks.
- 2. Job specialisation reduces time spent switching tasks.
- 3. Job specialisation also increases the scope for designing improved tools and machines to raise labour productivity.

However, while market expansion provides the opportunity and inducement for growth in output and productivity, the latter will only occur if firms respond to new opportunities by committing increased resources to production. It is noteworthy that of Smith's three routes to increased labour productivity only the third is necessarily predicated upon investment in capital equipment. All three, however, require that firms mobilise additional working capital in order to take on extra labour. If this happens on a scale that exceeds the rate of growth of the labour force, it will result, at the national level, in a movement of labour away from what Smith classed as unproductive activities such as services towards greater engagement in productive activities (i.e. those which generate a material output).

However, before an expanded outlay on production can occur there must be a prior increase in savings. Increased savings can only be achieved by those groups in society who have sufficient income. Smith identified three such groups: landlords, merchants and manufacturers. However, Smith, as was typical of the classical economists, did not expect the landlord class to constitute a major source of productive investment. Landlords derive their income from the ownership of property, for the right to exploit which others pay them. Being removed from the sphere of production, and generally perceiving little incentive to enter it, the traditional landlord class spends its income on consumption of commodities and on the hiring of unproductive labour (retainers, entertainers, etc.)

In contrast to the landlords, manufacturers and farmers employ labour for productive purposes, while merchants, through their trading activities, may also come to realise the potential profitability of investment in production. Smith did not, however, identify farmers as an important potential source of increased savings. He took the view that most small tenant farmers were left with insufficient income after paying rent to undertake significant savings. Rather, it is merchants and manufacturers who, out of past profits and in pursuit of their own increased gain, can be expected to generate the bulk of the savings that are needed to exploit new markets.

Not only did Smith see manufacturing (together with trade) as a more important source of increased savings than agriculture, but he also saw it as a more important source of increased output. The scope for increasing labour productivity through specialisation is much greater in manufacturing. In agriculture the seasonal sequence of tasks makes it impossible to develop enterprises in which different workers are simultaneously engaged upon the various stages of the production process. However, there is some scope for productivity increase-both of land and labour-in this sector through technical innovations, such as improved rotations and increased use of manure, and through provision of greater incentives to farmers including the break-up of large tenanted estates into more owner-operated units³ and a reduction in the tax burden. 4 Smith thought too that the purchase of land by innovatory, profit-conscious merchants would help to raise agricultural efficiency.5

However, for Smith, unlike his successors, the more limited scope for technical change in agriculture was not a problem. Since physical subsistence is man's first priority, in principle the expansion of agricultural supplies must precede and underpin the development of urban-based manufacture. 6 However. Smith observes that the town 'may not always derive its whole subsistence from the country in its neighbourhood, or even from the territory to which it belongs, but from very distant countries.'7 While subsistence is necessary, national self-sufficiency is not.

Indeed, Smith further observed that in all the modern states of Europe the natural precedence of agricultural development over manufacturing had been inverted, 'and manufacturers and foreign commerce together have given birth to the principal improvements of agriculture's (via means that included the promotion of improvements in law and order and transport, the consequent enlargement of markets, the concomitant increase in incentives to invest in farm improvements, and also investment in agriculture by profitminded merchants). Smith, in contrast to the physiocrats, saw the urban sector, with its merchant and manufacturing classes, as the leading, dynamic sector in economic growth in contemporary Europe.

At some distant point in the future, growing economies might reach the point where all scope for the development of their productive capacity would have been exhausted, when they would have reached their 'full complement of riches', given their natural resources and opportunities for international trade. However, Smith did not see the attainment of a stationary state by the growing economies of Western Europe as imminent, nor did he analyse in any detail the factors likely to bring it about (although he observed that a country with economically repressive laws and institutions, such as China, could induce such a state prematurely). 10

From his analysis of the causes and sources of economic growth, Smith generated policy recommendations geared to sustaining this process. Firstly, governments should eliminate all obstructions to free trade and competition. Controls on international trade and government creation and protection of monopolies should be abolished. Law and order along trade routes should be enforced, and the laws of primogeniture and entail, which served to prevent the break-up of large landed estates, should be rescinded.

A twentieth century reinterpretation of Smith

At the time Smith wrote the *Wealth of Nations* (between 1766 and 1776) the industrial revolution was in its infancy. It is therefore to his credit that he already recognised that in industrialising nations manufacturing and not agriculture would be the main source of growth.

By the beginning of the twentieth century both the structure of production in Western Europe and North America, and the production technologies used, had changed dramatically. It was from this very different perspective that Young, in 1911, published an article that drew its inspiration directly from Smith, but which reinterpreted Smith's analysis in the light of the accumulated evidence of the subsequent 140 odd years.

In Young's view, Smith was correct to emphasise the importance of the extension of the market for economic growth. However, the market does not just expand through an increase in area or population, but because per capita income grows. This increase in per capita income is in turn due to the increasing division of labour and the associated increase in labour productivity, and this latter comes not so much from increases in dexterity and time-saving—the two factors most emphasised by Smith—but from increasing mechanisation. It is mainly the increasing capitalisation of the production process, together with the associated rise in labour productivity, that leads to growth in per capita incomes. The consequent increase in demand induces another round of the virtuous spiral of expansion, with an increase in demand for capital goods to raise labour productivity still more. (Young was writing some 40 years after the expanding British economy had begun to encounter shortages of labour.)

Young identified three possible impediments to this virtuous spiral, but he did not expect them to be overwhelming. They were as follows:

- 1. Inelastic demand for certain products.
- 2. Supply inelasticities due to shortages of raw materials.
- 3. The high investment costs of exploiting new technologies.

These potential constraints could be overcome in two ways. Firstly, even if for certain branches of production demand is inelastic, it is still possible to raise per capita output and income in these branches through technical innovations that cut costs and raise labour productivity. Likewise Young thought that advances in science and technology would make it possible to break raw material supply inelasticities (through reducing extraction costs or development of substitutes) and that similar advances would help to lower the investment costs of exploiting new technologies.

Classical growth theory continued: the problems imposed by agriculture

Not all the classical economists, however, were as sanguine as Smith or Young concerning the prospects for prolonged economic growth and an associated rise in real wages. In the first half of the nineteenth century first Malthus and then Ricardo – two economists whose economic theory in other respects diverged 11 – gave reasons for supposing that the agricultural sector could impose a break on rising real wages and, in the case of Ricardo, on overall economic expansion as well.

Malthus

In An Essay on the Principle of Population, written in 1798, Malthus shows himself to be more concerned with what could be expected to happen over time to mass welfare in an economy than with economic growth per se. These concerns were probably prompted by contemporary events, in particular the younger Pitt's proposed revision of the Poor Laws to give larger allowances to families with more children, and the poor harvests and food shortages of preceding years (see Barber, 1967: 52).

Malthus' analysis is based on a mixture of argument and factual assertion, the essence of which may be summarised as follows. Economic growth generates increased demand for labour and hence rising wages. Rising wages lead in turn to an increase in population and hence labour supply: with an increase in living standards parents choose to have more children and, in addition, a higher proportion of children survive infancy. These points were commonly made by the classical economists. The distinctive feature of Malthus' thesis is the next step in his analysis.

Malthus asserted that any rise in mass living standards could only be temporary because the increase in population would rapidly outstrip the capacity of the agricultural sector to meet the growing demand for food, for additional land brought into cultivation is generally less fertile than that already cultivated. It is in this context that Malthus made his famous, but unsubstantiated, assertion that while population grows in a geometric progression (i.e. by a constant proportion each time period), agricultural output can only grow in arithmetic progression (i.e. by a constant absolute amount per given time period).

Malthus took the view that a rise in wages and mass living standards, followed by a period of population expansion, could only be succeeded by one of growing food shortages and mass misery. This would in turn result in a decline both in the birth rate and in infant survival until, as a result of the decline in population growth, labour shortages re-emerge, and the cycle repeats itself. The only acceptable way out of this impasse was for the working classes to exert greater restraint on family size, but Malthus did not anticipate this happening. He concluded that only in a society with an unequal distribution of wealth and income could some people-the wealthy minority-persistently enjoy high living standards. In a society with equal income and wealth distribution all would experience periods of fluctuating well-being and misery.

Malthus does not provide any sound justification for his proposition concerning the respective growth rates of population and agriculture. Indeed in later editions of the Essay the progressions were no longer insisted on, although the basic thesis is sustained and buttressed with historical material (see Roll, 1961). Ricardo, in contrast, undertook a more sophisticated analysis both of the constraints to agricultural growth and of the impact of these constraints upon the rest of the economy.

Ricardo

Ricardo, like all the classical economists, observed that economic growth is financed out of the profits accruing from productive activity. If growth is to continue, it follows that the share of profits in national income must remain positive. For Smith this was not a problem, because although he thought that during periods of economic expansion wages would tend to rise and the return on capital to fall, he also thought that with the expansion of production the absolute volume of profits accruing to manufacturers would expand, thereby providing the means to finance further growth. Only at some indefinite point in the future would the net profit rate fall to zero. Ricardo, however, foresaw that during a phase of economic growth profits might quite quickly be eroded to such an extent that growth itself would be brought to a halt. (He too was partly motivated in the development of his ideas by the prevailing conditions of the time, including an early nineteenth century amendment to the Corn Laws which gave increased protection to British agriculture at a time of poor harvests and rising food prices. 12)

Ricardo's argument, which begins on the same lines as Malthus', was as

follows. Economic growth leads to an increase in demand for labour which in turn leads to a rise in wages and, consequently, an increase in population. Both the latter generate an increase in demand for food. All this is already familiar. Ricardo, however, then introduces his own analysis of the consequences of rising food demand.

Ricardo's starting point is the fact that in every country land supply is fixed. It is also of variable quality. At any point in time farmers meet agricultural demand by cultivating the better land and avoiding the less good as far as possible. However, as demand increases, it is necessary to increase the total area cultivated by bringing less good land under the plough. This has several consequences:

- 1. On marginal land the costs per unit of output are higher than on intramarginal land. Thus marginal costs rise as output expands.
- 2. It is the marginal cost of production that determines the price of food. Consequently, since there is no comparable problem of fixed asset quality in manufacturing, the price of food relative to that of manufactured goods rises as food production rises.
- 3. As a result, money wages in manufacturing must rise to cover workers' subsistence costs. Manufacturers, in other words, have to pay out a higher proportion of their revenue in wages simply to enable workers to buy their subsistence requirements, and profit rates are therefore lowered.
- 4. It might be assumed that the higher agricultural prices would raise the profits of those farmers who cultivate the more productive, intramarginal land, but Ricardo shows that this cannot occur.
- 5. Rather, land rents will be bid up as farmers compete with each other for the better, temporarily more profitable, 13 land.
- 6. As a result of the increasing scarcity value of good land, and the consequent rise of rents, there is a redistribution of national income towards the landowning class, while the share of profits is reduced.
- 7. This process can be expected to continue until, as a result of steadily rising marginal food production costs, and, hence, wage costs as a proportion of revenue, profits in both farming and manufacturing are squeezed to zero.
- 8. At this point all economic growth will come to a halt.

Ricardo did, however, identify two possible ways out of this impasse. These were the introduction of technical innovations in agriculture, and the use of international trade to obtain lower cost food in exchange for manufactures. If one or both of these conditions are fulfilled, then growth may continue while real wages remain buoyant as a result of the rising demand for labour. 14

For Ricardo the main significance of expanded trade lay not so much in the enlargement of the market per se as in the fact that it could lead to a

decrease in the price of wage goods and greater efficiency in resource use through specialisation according to comparative advantage.

In The Principles of Political Economy and Taxation Ricardo's analysis of the reasons why, and the route by which, growing economies might reach a stationary state is quite dispassionate. Yet the amount of space which he devotes to this issue is sufficient to indicate that he took it seriously.

Mill

Ricardo's Principles were published in three editions between 1817 and 1821. The Corn Laws were finally repealed in 1846. Two years later J. S. Mill published his Principles of Political Economy, perhaps the last great text of the mainstream classical political economists. After two revisions, the third edition appeared in 1852. Mill's analysis of economic growth was not particularly original. To a large extent he articulated what by then were the generally received theories of the classical school, incorporating the theoretical innovations of Ricardo. However, one of the book's most striking features is Mill's optimism concerning the prospects for sustaining long-run growth compared to Ricardo's pessimism. In this respect the wheel seems to have turned full circle, for Mill's optimism is as great as Smith's. The reasons Mill gives for this optimism are a belief in the boundless prospects for improvements in technology, 15 the opportunities for increasing imports of cheap wage goods (including food) and opportunities for capital export.¹⁶

This greater optimism was probably also partly a response to the changed economic conditions of the time. Not only had the Corn Laws been abolished; the British economy had recovered from the recession that followed the Napoleonic Wars, various institutional reforms, most notably in money and banking, had been implemented, and the Poor Laws had been modified to promote the free movement of labour (Barber, op.cit.: 88).

What still preoccupied Mill, however, was a fear, somewhat in the Malthusian tradition, that among the 'labouring classes' increases in real wages would continue to be quickly eroded by population increase.¹⁷ Among the changes that he wanted to see were increased voluntary restraints on population growth amongst working people, which, unlike Malthus, he was confident could be achieved, combined with a more equitable distribution of the fruits of economic growth.18

Comment on classical growth theory

Classical growth theory was not a completely monolithic whole. There were disagreements and contradictions within it. There is no such thing as a single classical growth paradigm. Rather, we have a body of increasingly tightly articulated theory, reflecting a range of different perspectives and preoccupations within which there are, as Deane has observed, a number of recurring key factors and relationships. The former include capital accumulation, institutional factors, trade, technology, population growth and natural re-

The first four of these factors recur in one or more paradigms of economic development and underdevelopment, although, as we shall see, the interpretation of their significance varies. Thus, for example, expansion of international trade according to existing comparative advantage is sometimes seen as a stimulus, and sometimes as a constraint to economic development, 19 while unquestioning adoption of modern technology has also been shown to be problematic.

The agricultural sector in modern development theory

Meanwhile it is notable that none of the paradigms of economic development that are reviewed in later chapters have given the same emphasis as some of the classicals to a possible brake on growth due to diminishing returns in agriculture. In so far as agriculture has been a focus of attention in development economics, the reasons for this interest have been more diffuse. The rising costs of agricultural production do not receive the same emphasis as in the early nineteenth century, but instead the focus is variously upon the role of agriculture in surplus generation, equity and employment creation, demand creation for the industrial sector, and foreign exchange generation.

There are a number of probable reasons for this modern day relative lack of interest in the Ricardian analysis of diminishing returns. They include the following facts:

- 1. In the past, and in some cases still today, parts of the Third World, particularly in Latin America and Africa, seemed to have abundant land.
- 2. Land tenure systems in some parts of the Third World, particularly Africa, have been different from those assumed by the classical economists.
- 3. In some larger (e.g. Brazil, India), and/or more industrialised Third World countries (including countries such as South Korea and Taiwan) agricultural production and productivity have not imposed a long-term brake on growth.
- 4. Meanwhile enormous breakthroughs in agricultural research and productivity in the industrially advanced countries, already partly transmitted to some developing countries through the 'green revolution', may be interpreted as an indication of what the Third World has in prospect, while simultaneously increasing the supply of agricultural exports to it.

Only in poor semi-arid countries with low irrigation potential do diminishing returns appear to constitute a serious threat to growth.

THE CLASSICAL MARXIST PERSPECTIVE

Karl Marx was only twelve years younger than Mill, but their interpretation of contemporary economic conditions was very different. Mill saw in the beginnings of working class organisation which he observed signs that the contemporary economic system could be reorganised and modified to give a more equitable distribution of wealth and improvements in mass welfare. However, in the 1840s, such improvements were for the most part still to come. The living and working conditions of the working class were, for the majority, exceedingly harsh: a working day of up to fourteen hours, chronically inadequate public health measures, a bare subsistence wage and insecurity of employment, inter alia. Marx, observing these phenomena, and exploring their causes, saw his role as that of exposing to the working class the true nature of the capitalist economic system, within which he regarded a genuine shift in the distribution of economic and political power away from the capitalist class as impossible.

Marx chose to take as one of the central features of his analysis of capitalism the nature of the relationship between capital and labour. No prior classical economist had explored this issue in such depth (nor, indeed, had any earlier observations concerning this relationship pointed to the same conclusions). Neither had any prior classical economist explored the implications of the anarchical nature and the internal contradictions of the capitalist mode of production, with its inherent risks of periodic overproduction and its need for cheap labour to sustain profits alongside its simultaneous need for an expanding demand to absorb rising output.

Marx's political economy

The rest of this section briefly sketches the central elements of Marx's political economic theory.20 Numbered points are used because the Marxist perspective has, since the early 1970s, experienced a revival in development economics. The summary is therefore structured in such a way as to aid comparison with the summaries of the various paradigms of development economics which are presented in the next chapter.

- 1. The ideal state for all societies is one of material abundance in a context of communal ownership of the means of production, where all individuals work, each according to their ability, for the good of society and are rewarded according to their need.
- 2. Marx considered that no society had yet achieved this state. To attain it would require the social, political and economic transformation of society.
- 3. Furthermore, to achieve such a transformation, a society would already have to have reached a certain level of development of the

forces and relations of production (see 7. below), and of the state apparatus necessary to sustain these.

- 4. However, the study of history revealed that the directions of economic change observable in Western Europe (and impinging on much of the rest of the world) were tending towards the creation of the conditions necessary for a successful transition first to socialism and then to communism.
- 5. The key impulses in this tendency can be identified through an examination of the essential nature of different modes of production, and, above all, the factors that distinguish the capitalist mode from pre-capitalist ones.
- 6. An important feature of Marxism is its emphasis upon the close interconnections between the economic, political and cultural aspects of social organisation and activity. Generally the polity and culture of a society reinforce a particular pattern of class dominance associated with a particular mode of production, where the latter is comprised of two main component parts: the forces and relations of production.
- 7. The 'forces of production' refer to the mode of combination of labour with the instruments of labour and raw materials. These forms of combination vary with the technology employed. Meanwhile production relations comprise the class distribution of control over the means of production, together with associated forms of organisation of production and different modes of appropriation of the output.
- 8. Marx identified five modes of production: the Asiatic, ancient (or slave), feudal, modern bourgeois (or capitalist) and communist.
- 9. The distinctive form of the relations of production that characterises each mode is appropriate to, and conditioned by, a given stage in the development of the forces of production.

The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness.21

- 10. In the first four (i.e. pre-communist) modes of production it is possible to distinguish two components of output: the part that is used to sustain the work force, and the surplus, appropriated from the workers by the dominant class. Appropriation is legitimated through the rights of slave ownership, land ownership, ownership of other means of production by non-workers and through taxation and other forced levies.
- 11. In the pre-capitalist modes of production the object of production is to produce use values: part of the output is retained for direct use by the producers and the surplus appropriators, and part is exchanged in the market (either by the producers or the surplus appropriators) for other use values. This exchange relationship can be summarised by the

formula $C \rightarrow M \rightarrow C$: commodities (C) are produced, some of which are exchanged for money (M), which is then transformed by the seller into other commodities.

- 12. In the pre-capitalist modes, the dominant class after meeting its subsistence needs uses the surplus for luxury consumption, support of the state apparatus and public works of an unproductive nature (e.g. the monuments of ancient Egypt and ancient Rome, the churches and cathedrals of medieval Europe).²² Given these forms of use of the surplus, there is no inbuilt tendency to economic growth in these modes and, if technical change occurs, it does so very slowly.
- 13. Capitalism differs from all three pre-capitalist modes in a number of important respects. These include the objective of production, the use made of the surplus by the capitalist class, capitalism's inherent drive to technological progress, its tendency to increase both the socialisation and the alienation of labour, and its inherent tendency to periodic crises of overproduction and underconsumption.
- 14. In this mode the means of production are owned by the capitalist class whose dominant objective is not to produce use values but to accumulate wealth in the form of exchange value.²³ This objective determines the use of the surplus, which now becomes transformed into surplus value, and it gives to capitalism an in-built dynamic not possessed by previous modes.
- 15. The capitalist begins each round of the production process with a stock (M) of financial capital (i.e. exchange value). With this he buys raw materials, maintains his existing equipment and hires labour, all in order to produce commodities (C). These he sells in order to realise an augmented exchange value: M'. Thus this process may be summarised by the formula $M \rightarrow C \rightarrow M'$. The difference between M' and M is the surplus value generated in production and realised through exchange. 24
- 16. With the augmented exchange value the capitalist adds to his means of production, buys more raw materials and hires more labour, in order to increase his stock of material and financial capital yet further.
- 17. Meanwhile, the mass of the population, divorced from ownership of the means of production, sell to the capitalists the only commodity that they possess—labour—in order to be able to buy the means of subsistence.
- 18. It is through the terms of hire of labour that capitalists are able to generate surplus value (M'-M).
- 19. Surplus extraction occurs as follows. The exchange value of a commodity has three components: c + v + s. c represents the value of the material capital that is used up in production: wear and tear on equipment, raw materials and semi-finished goods. Clearly the full

value of c must form part of the value of the finished good if production is to be commercially viable. Meanwhile v represents the cost of labour: for the same reason it too must be reflected in the value of the finished good. The value of v is partly physiologically and partly socially determined. Wages must be at least sufficient to permit the survival and physical reproduction of labour. However, social convention may set wages at a somewhat higher level. Finally, s arises as follows. Each worker has to work a certain number of hours to produce the value of his wage. Through requiring labour to work each day for longer than this the capitalist generates surplus value s. The ratio s/v Marx defines as the rate of exploitation of labour. s

- 20. Under capitalism two classes, with opposing interests, dominate economic activity—capitalists and proletariat. The more powerful of these two classes, the capitalists, also dominates the state, and uses state institutions to promote its own interests.²⁶
- 21. The driving need of the capitalist class constantly to enlarge its wealth gives to economies dominated by this mode a dynamic which is not present in pre-capitalist modes. However, the nature of this dynamic is such that it leads inevitably to the creation of the preconditions for the transition to socialism.²⁷ This occurs in the following manner:
- 22. The capitalist objective of surplus accumulation through production and exchange leads capitalists to compete against each other for available markets, striving to increase their market shares by undercutting or buying out weaker competitors. There is, thus, an inbuilt tendency towards increasing centralisation of capital.²⁸
- 23. One instrument of competition is the constant search for technical innovations that will lower production costs. Such technical change tends to be associated with enlargement of plant size, combined with increasing specialisation of labour.²⁹
- 24. Meanwhile, the anarchy of capitalist competition, in which individual firms expand output without any central co-ordination, leads to periodic crises of overproduction and underconsumption.³⁰ Crises may also be caused by a decline in the rate of profit due to capital intensification and/or to increasing labour scarcity and rising wages.³¹ During these periods of crisis weaker firms collapse and/or are bought out by the stronger ones.
- 25. During each crisis of capitalism, labour is laid off and wages tend to fall. Consequently, in the stronger firms which survive the initial rise in costs and/or drop in demand, the rate of profit tends to rise again. Employers may also try to raise the rate of surplus per worker by forcing labour to work longer hours for the same wage.³²
- 26. The processes outlined in 22 and 23 lead jointly to the replacement of competitive capitalism by monopoly capitalism.

- 27. Meanwhile, the development of the productive forces under capitalism, the enlargement of plant size and increasing specialisation of labour lead in turn to increased awareness on the part of the workers of their mutual interdependence in production. However, these developments also lead to increased monotony of work and to increasing alienation of the work force from the work process and from the capitalist class which imposes this process.³³
- 28. Ultimately a fresh and particularly deep crisis, with an associated widespread loss of employment, will move the proletariat to rise up and seize both the means of production and state power from the capitalist class, establishing in their stead a socialist workers' state. In this the groundwork will be laid for the transition to a communist society.
- 29. Not only does the capitalist mode of production prepare the way for this transition through raising the social awareness, and alienation, of the working class, but it also does so in another very practical sense. The development of technology and the increasing concentration of production which capitalism generates, create a context in which the centralised co-ordination of production in the social interest becomes a more practicable proposition.³⁴
- 30. Marx wrote little on the colonial world, but what he did write suggests that he thought capitalism in the colonies would play the same roles, destructive, creative and exploitative, that were already manifest in more industrially advanced economies. With the penetration of capitalism into Asia and Africa, old, stagnant modes of production would be undercut and destroyed, and in their place would be established a new capitalist mode, generating a steady development of the productive forces, but tending in precisely the same directions that we have just reviewed.³⁵

The study of political economy is, in the Marxist perspective, geared to the need to unfold this knowledge to those who may ultimately use it: the working class. Economists studying the Third World who work within this perspective hold, unlike the neo-Marxists, that it applies to underdeveloped economies as well as to industrially advanced ones.

Lenin on imperialism

Several decades after Marx's death in 1883, Lenin published, in 1917, a long pamphlet entitled *Imperialism: the Latest Stage of Capitalism*, the aim of which was to explain the First World War in terms of inter-imperialist rivalries. In it, Lenin sought to take account of certain developments in the capitalist mode of production which had become increasingly apparent after Marx's death.

The essence of Lenin's thesis was that monopoly capitalism had reached a new 'over-ripe' phase. Capital had accumulated faster than the outlets for profitable new investment. Consequently large industrial combines, supported by the financial power of the major banks, were using imperialism as a basis for sustaining the rate of profit; the colonies were being used as outlets for surplus finance capital as well as captive markets for the products of industrial capital and as sources of cheap raw materials.

Lenin's analysis contains a significant modification of Marx's sanguine attitude towards capitalist development prospects in the colonies. On the one hand, imperialism was a spur to the development of capitalism in the periphery: 'capitalism is growing with the greatest rapidity in the colonies and in the overseas countries' (Lenin, op.cit.: 91).36 On the other hand, however, this rapidly developing capitalism was imperialist not indigenous, and its development was actively suppressing any scope for the latter to emerge. The undercutting of local producers by cheap manufactured imports from the more advanced centres of industrial capitalism, and foreign (rather than local) investment of equity and loan capital in mines, plantations and infrastructure, with the associated outflow of profits and interest, were stifling indigenous capitalist development. Rather than accumulating surpluses and expanding production, local producers of manufactures were being forced out of production by more advanced capitalist producers elsewhere in the world. Viewed in this light the prospects for the development of indigenous industrial capitalism in the colonies appear much poorer than Marx himself had thought. A substantial part of the inspiration for the neo-Marxist paradigm of underdevelopment is to be found in Lenin's work.³⁷

SCHUMPETER ON GROWTH, DEVELOPMENT AND ENTREPRENEURSHIP

We have seen that for the classical economists the *primum mobile* of economic growth was, variously, the expansion of the market, saving and investment out of profits, and the driving determination of the capitalist to accumulate ever-increasing wealth. In all cases, as Deane emphasises, investment, albeit if only in additional working capital and labour, is recognised as an essential precondition for expanded output.

In 1911 Schumpeter published the first German edition of his analysis of economic development. The first English edition – a translation of the second in German – appeared in 1934. In this study Schumpeter breaks with classical growth theories in several key respects.

Firstly, Schumpeter draws a clear distinction between economic growth and development. The former consists of a gradual process of expansion of production—producing more of the same, and using the same methods in order to do so. Economic development, in contrast, is a more dramatic and

disruptive process. It consists, in Schumpeter's terminology, of the carrying out of 'new combinations of productive means', such that either the conditions of production of existing goods are transformed, and/or new goods are introduced, or new sources of supply or new markets are opened up, or an industry is reorganised (e.g. the creation of a monopoly position or the breaking up of a monopoly position).³⁸ In each case innovation is entailed: in production methods, products, markets or industrial organisation.

Schumpeter characterises these five aspects of economic development as giving rise to 'productive revolutions', a phrase that emphasises both the transforming aspect of development, and the fact that changes of this type tend to cluster together, so that development, rather than being a smooth,

continuous process, occurs in fits and starts.

A central aspect of Schumpeter's analysis is his specification of the three common features which, in his view, are inherent in most instances of economic development, and without which that development cannot generally occur. Each of these Schumpeter places in opposition to another element which, in his view, has, in earlier theorisation of economic advance, been assigned a misplaced importance. These three essential features are as follows:

1. The mobilisation of existing factors of production and their combination in new ways.

2. Extension of credit, which is generally essential in order to provide the necessary command over these factors in the market.

3. The presence of an economic entrepreneur, which is a sine qua non for the initiation of this process of resource mobilisation and for carrying it through to completion.

For Schumpeter the essential feature of economic development is not the incremental accumulation of new capital, but the mobilisation of existing factors for new uses.

As a rule the new combinations must draw the necessary means of production from some old combinations. . . Different methods of employment and not saving and increases in the available quantity of labour, have changed the face of the economic world in the last fifty years.

(Schumpeter, 1961: 68.)

If new combinations of factors of production are carried out by existing firms, or by individuals with substantial wealth, then a problem of finance may not arise. The initiators of the new combinations may either already have the necessary factors, or be able to buy them. However, Schumpeter argues, the situation is usually different. Firstly, 'new combinations are, as a rule, embodied, as it were, in new firms . . . in general it is not the owner of stage-coaches who builds railways'.39 Secondly, even large firms usually need extra finance to implement this type of innovation. Some finance comes from other investors, but most is provided by banks, and most of it is generated by bank credit creation. The onlending of savings deposits is, Schumpeter

argues, far less significant in the financing of economic advance than the expansion of the money supply by the banking system.40 The banker, by creating finance capital for particular purposes, has himself become the capitalist par excellence.

The capitalist provides the finance, and carries the risk, of economic development, but he does not bring it about. This is done by the entrepreneur-someone who has the foresight to perceive new opportunities and who takes the initiative to pursue them. He persuades the capitalist(s) to provide the necessary finance and uses this to organise a new combination of productive factors. In the absence of individuals who have these innovatory and organisational talents, and the motivation to use them, economic development cannot occur. In the early stages of the industrial revolution the entrepreneur and capitalist were usually one and the same person: the manufacturer. However, in more industrially advanced societies, the two functions are generally separated, the role of entrepreneur often being fulfilled by company managers, or members of boards of directors. Furthermore, entrepreneurship is not a full-time, permanent occupation. It is a function that certain individuals perform at certain points in time:

everyone is an entrepreneur only when he actually carries out new combinations, and loses the character as soon as he has built up his business, when he settles down to running it as other people run their businesses.

(Schumpeter, op.cit.: 78.)

Thus, for Schumpeter, the crucial features of economic development are not the mobilisation of savings by capitalists to finance the accumulation of more productive capital, but the actions of entrepreneurs in mobilising credit to finance the procurement of existing factors of production in order to combine them in new ways. Innovation lies at the heart of development, and the innovator is the entrepreneur. In emphasising that by the twentieth century the activities of entrepreneur and capitalist, previously conjoined, had become separated, Schumpeter may be interpreted as simply updating one element in classical theory. However, by distinguishing between growth and development, and emphasising the importance of credit creation, as opposed to savings, in financing development, he distanced himself from the classical economists.

Schumpeter's emphasis on the importance of entrepreneurship has a potential relevance in the Third World which has been noted by a number of development economists from Walt Rostow onwards.41

THE 'KEYNESIAN REVOLUTION'

The 1930s international economic recession witnessed what is widely known as the 'Keynesian revolution' in economic theory. During the 1930s, first Kalecki and then Keynes identified the role of effective demand in the determination of aggregate output and employment.⁴² The suggestions that attempts to increase savings during a recession may exacerbate the downward spiral of output and employment, and that increased public sector spending during a recession might be a virtue not a vice, were indeed largely innovatory.43 Kalecki's papers on these issues were not widely read in the West until the 1970s, but Keynesian macro-economic theory quickly achieved a wide influence.

Keynesian theory, incorporating the assumption of downward rigidity in money wages, entailed a clean break with the orthodox view that under competitive conditions each resource will be fully employed, as did his argument that economists need two economic models, one for analysing economies operating at full employment, and one for those operating below full employment. The analytical method of Keynesianism, on the other hand, remained based on the comparative statics employed by the neo-classical school. The focus is still on the determinants of equilibrium (in this case the equilibrium levels of aggregate output and employment), and of the determinants of change therein-but now equilibrium may occur at below full employment.

Keynes' major contribution to economic thought-the so-called 'Keynesian revolution' - was his theorisation of the causes of, and policy solutions to, unemployment (Keynes, 1936). However, a subsequent major contribution came in his proposals for the reform of international economic institutions which were partially implemented in the 1940s (see Singer in Thirlwall (ed.),

Views on the relevance of Keynesian economics to development economics have varied. In the 1950s and 1960s none of the leading early development economists acknowledged the direct inspiration of Keynes in their theoretical work. Indeed Arthur Lewis (1954) explicitly rejects the relevance of Keynes' work for development economics, emphasising the irrelevance of Keynes' assumption that in economies below full employment not only labour but also land and capital are in unlimited supply, and also of Keynes' view that long-run economic expansion is embarrassed not by a shortage but by a superfluity of saving (Lewis, 1954, reprinted in Agarwala and Singh, 1963: 400, 401). As we shall see, most early development economists also rejected the very notion of tendency towards equilibrium and the analytical method of comparative statics which emphasises this.

On the other hand, some economists today detect the influence of Keynesianism in varying aspects of development economics, although views vary on whether this influence has been positive or negative. Suggested areas of influence include the adaptation to analysis of developing economies of the Harrod-Domar growth model (itself based on the Keynesian perspective - see the next section), the structuralist concern with the role of aggregate demand as the engine of growth⁴⁴ (see Chapters 3 and 5), and the propensity of early development economists to think in macro-economic terms (see e.g. Lal, 1983: 8).

The views that have been expressed concerning both the relevance and influence of Keynes' work in development economics may be classified in three groups - those that identify an active but negative influence, those that regard Keynesianism as irrelevant, and those that detect a positive influence. Essentially, those that hold the first and third view argue that although certain economists (e.g. Lewis, Myrdal and the Latin American structuralists) may have insisted upon the irrelevance of Keynesian theory to development economics, in fact Keynesianism influenced, albeit subconsciously, the attitude of mind with which they approached the latter.

The negative influence of Keynesianism has been emphasised most forcibly by neoclassical economists such as Harry Johnson and Deepak Lal. The main features of this influence are, they suggest, as follows:

- 1. Lack of confidence in the ability of the private sector to achieve full utilisation of productive resources (Johnson, 1971).
- 2. Hence, emphasis upon state interventionism (Johnson, op.cit.; Lal,
- 3. Overemphasis on the role of investment in the determination of aggregate output and employment (Johnson and Johnson, 1978).
- 4. A focus on macro-economic policy to the exclusion of micro-economic efficiency issues (Lal, op.cit.).

It is noteworthy, however, that points 3 and 4 are also features of classical economic theory, whose influence some development economists (e.g. Arthur Lewis) explicitly acknowledged.

In contrast, amongst the defenders of the Keynesian influence is Hans Singer. Singer lists a number of instances of such influence, each of which he regards as on balance meritorious. They include the following:

- 1. An attitude of mind which recognises (a) the need for more than one economic model to analyse different types of economic system; (b) the need for macro-economic policy.
- 2. The inspiration which Keynes gave to the development of national income accounting and hence also the systematic collection of macroeconomic data.
- 3. His recognition of the potential of economic protectionism as a measure for the maintenance of national output and employment (albeit in the United Kingdom in the 1930s).
- 4. Keynes' proposals on institutional reforms with respect to international trade and finance.

Clearly there is a lack of consensus on both the extent and merit of the Keynesian influence on development economics which derives from the varying points of view of the evaluators. On two points, however, there does appear to be agreement. First, it is an accepted fact that Keynes himself had no particular interest in less developed economies; any relevance that his work has had has been incidental. Secondly, that influence has been, again in

Singer's words, largely upon the 'attitude of mind' of various development economists rather than in terms of specific elements of theory.

HARROD AND DOMAR ON THE CONDITIONS FOR GROWTH WITH FULL EMPLOYMENT

Harrod (1939) states that his purpose is to give a dynamic dimension to Keynesian economics-a purpose that is also implicit in Domar (1947). However, the growth model that these two economists generated also revives two classical themes: the focus is on growth not development, and it is assumed that growth is financed out of savings.

In 'An Essay in Dynamic Theory' Harrod raised once again a question that Schumpeter had answered negatively: that is, whether an economy can sustain a steady rate of growth for an indefinite period, growing at the same rate each year with no digressions into recession or explosive expansion. However, while Schumpeter's analysis represented an attempt to theorise the actual experience of Western Europe, Harrod's was conducted at a much higher level of abstraction. His article was followed a few years later by the publication of an independent analysis by Evsey Domar which reached the same central conclusion.

In Domar's case, the starting point was a concern to establish under what circumstances a growing economy could sustain full employment. Harrod's article is summarised in what follows, since it is the more widely quoted of the two.

Harrod's model of unstable growth

Harrod begins his analysis by introducing the concept of the warranted rate of growth (G_{uv}) . This is the rate of growth which is sanctioned by the values of two other crucial variables - the planned national rate of savings, and the average value of the capital:output ratio as planned by producers. Planned savings represents the sum of the spending power which individuals and firms plan to withhold from consumption in a given period, and which, if the plans are fulfilled, can be made available to finance new capital formation. The capital:output ratio represents the value of the capital needed to produce a given output divided by the value of that output. It is a stock:flow ratio, whose value depends partly on the time period over which the output flow is measured. (The period conventionally chosen is a year.) If planned savings are represented as a proportion of national income, then this proportion divided by the planned capital:output ratio (c_n) gives the warranted rate of growth of output.

$$G_w = \frac{S}{c_p}$$

For most of his analysis Harrod assumes that savings plans as a proportion of national income are fulfilled. He then focuses his attention on c-its determinants and the consequences of failure by producers to achieve planned c. Harrod observes that c_p is essentially technically determined. It represents the value of all capital (fixed and revolving) required to produce one unit of output in a given time period, when machines are working the optimum time (allowing for maintenance and repair), and when there are no additions to, or reductions from, the stock of working capital; c_p is a weighted average of the individual c_pS for all the different sectors of the economy. This average is assumed to be constant: the marginal capital:output ratio equals the average. The amount of investment that producers plan to undertake in any given period is given by the value of the extra output that they wish to produce, multiplied by the relevant capital:output ratio.

Harrod next makes an arbitrary, and much criticised, assumption as to the basis on which producers plan to expand production: if the rate of growth of output that occurred in the previous period was that which producers had planned that it should be, then they will plan to repeat this growth rate in the next period. Critics have asked why producers should plan to implement the same growth rate of output rather than to achieve the same absolute increase in output, and, equally important, whether they would really adopt such a short time perspective, basing their plans only on the outcome of the previous period. Harrod indicates that he is aware of these difficulties, but assumes them away for the purposes of his analysis.

In Harrod's model output plans may not be fulfilled because aggregate demand may not behave as expected. By the assumption noted above, this is not because savings plans, expressed as a proportion of national income, are either changed or unfulfilled. Presumably therefore, although he is not explicit about this, Harrod is assuming either that foreign demand changes, or that there is a change in the money supply, either of which would permit aggregate demand to rise or fall, without necessarily violating the savings assumption.

Producers adjust immediately to unanticipated changes in demand. At first they do so by working their plant overtime (i.e. at above planned capacity) in the case of an output increase, or by accumulating unsold stocks in the case of a demand decrease. In either event the actual capital:output ratio diverges from that which had been planned, and the actual rate of growth of output therefore diverges from the warranted rate. The actual growth rate, G_a , is given by the actual savings rate (which is assumed unaltered) divided by the actual capital:output ratio. Where output growth is above the planned rate, c will be forced below its desired level, and vice versa.

Important consequences flow from this divergence. If producers find that demand in a given period has been higher than anticipated, so that to meet it machines have been worked longer than planned and stocks run down, then in the next period they will increase their investment. However, the rise in investment will, through the multiplier, generate a further increase in demand. Once again capacity will prove inadequate and c_a will again be forced below c_p . The economy, in other words, having once diverged from the state of steady growth, now moves further and further away from that state, along an explosive growth path. In circumstances in which the initial divergence is due to a decline in the rate of growth of demand, exactly the opposite will occur, with net investment falling and eventually becoming negative (as worn-out capital is not replaced).

We are not required to conceive what would happen if these centrifugal forces were to operate indefinitely, because Harrod identifies certain buffers that not only bring both spiralling growth and decline to a halt, but, indeed, reverse each process. In the former case this occurs when the economy reaches full employment. Harrod assumes not only a constant c_n , but also a constant capital:labour ratio, and, given this assumption, the economy cannot, at full employment, grow faster than the rate of growth of the labour force G_n . G_n , which Harrod terms the 'natural rate of growth', is the maximum rate of growth allowed by population growth and labour-saving technical innovation combined. If either current G_a and/or G_w exceed G_a , then at full employment either or both will no longer be realised. If G_a is lowered, then in the next period investment plans will be revised downwards. Through the multiplier the slowing down in investment will lead to a decline in the rate of growth of demand. Investment plans in the next round will be further contracted, and the economy will move into recession. Recession in turn is brought to a halt because, at a certain point, dissaving will slow down the decline in consumption as households try to maintain certain mimimum standards of living. In economies with a welfare state the floor is raised by state welfare payments. With a slowing down, or halt, to the decline in consumption, producers who have been disinvesting once again begin to replace worn-out equipment. With increased employment in the capital goods sector, demand rises still further and once more the process is reversed.

We are now reaching the conclusion of Harrod's analysis. In his view the likelihood that an economy will grow steadily at full employment is extremely low. This would require that, with the economy already at full employment, $G_w = G_a = G_n$. If the economy is below full employment it is not enough for these equalities to hold, unlikely as this is, for if they do full employment will never be reached. For that to occur G_a , which may or may not equal G_w , must exceed G_n until the unemployed labour force is absorbed. But if G_n initially exceeds G_n , then when full employment is reached it is extremely unlikely that the triple equality will suddenly hold. It is far more likely that the slowing down in investment will lead the economy into recession. Leaving aside the full employment question, if $G_w = G_a$ below full employment, then steady growth may occur, but it is still a knife-edged

process. Any divergence of G_a from G_w will lead the economy away from the steady state growth path.

Harrod observes that the empirical evidence for the United Kingdom suggests that the warranted rate of growth exceeds the natural rate. Thus even if G_w equals G_a below full employment, cyclical swings in economic activity are inevitable unless government policy can bring the rates into line at full employment. Harrod therefore advocates lowering the warranted rate. For this he recommends use of a low interest rate policy which should tend both to lower the inducement to save and to raise c_p (by cheapening the price of capital relative to labour). He advocates too an anti-cyclical programme of public works in order to raise the floor of economic recessions. These are not sufficient conditions to achieve steady growth at full employment. They are designed, however, both to raise the possibility of achieving this and to reduce the degree of fluctuation in activity should this not be successful.45

In a separate article published in 1947 Evsey Domar reached similar conclusions to Harrod's. 46 Hence the growth rate equation g = s/v is generally referred to as the Harrod-Domar model. In this model the savings rate, together with the capital-output ratio, is reinstated as one of the key determinants of economic growth. Now, however, it is acknowledged that the rate may prove to be too high as well as too low. Subsequently, as we shall see, the Harrod-Domar growth formula was adopted by some development economists in order to estimate the target savings rate needed to achieve a target growth rate, the capital-output ratio now being taken as given.

THE NEO-CLASSICAL PARADIGM

The various theories that have been reviewed so far in this chapter constitute the main attempts to theorise the dynamics of long-run economic change that had accumulated in the corpus of economic literature by the 1940s. This chapter has concentrated upon this stock of theory for the reason given at the outset. That is to say, the first concern, and a continuing one, of development economics has been to identify the route (i.e. the means) to long-run economic progress in less developed countries.

There is, however, one other body of theory to consider. Some development economists have preferred to adhere to the predominantly short-run, efficiency-oriented perspective of the neo-classical paradigm, applying to developing countries both the efficiency-maximising tenets of partial and general equilibrium theory and the linked precepts of the law of comparative advantage. Since the neo-classical paradigm constitutes part of the analytical heritage which was available to development economists in the 1940s, it is appropriate to summarise its core here. A later chapter will examine its actual

use by development economists. Once again, since the paradigm is actively applied in development economics, a numbered point-by-point summary is used for purposes of easier comparison with the paradigm summaries in Chapter 3. Following that summary, a brief indication is given of the direction taken by later attempts to use neo-classical theory to analyse economic growth.

By the end of the nineteenth century most economists in Western Europe had ceased to focus their attention upon the analysis of long-run growth. This was now widely taken for granted, and from the last decades of the century attention was increasingly focused instead upon issues of allocative efficiency-how resources come to be allocated to different uses, and the criteria which need to be fulfilled if the value of the output generated from a given stock of resources is to be maximised. Economic analysis focused, in other words, largely upon decision-taking by firms and consumers and upon the role of market forces in resource allocation. Early preoccupation with the issues that are the main focus of the neo-classical perspective may be traced back to the work of Mill and Jevons. However, the core of the neo-classical paradigm was first clearly articulated in Marshall's Principles of Economics, which was published in 1890, and soon began to replace Mill's Principles as the standard text of mainstream economics. The paradigm, which is today spelled out in all mainstream texts on micro-economic theory, may be summarised as follows:

- 1. It is desirable to maximise aggregate economic welfare.
- 2. Welfare maximisation can only be achieved when the market value of goods and services produced at any given point in time is maximised.
- 3. Neo-classical theory is designed to show how these ends can be achieved through the operation of the free market.
- 4. In order to demonstrate this, it is necessary to make a number of explicit assumptions about the nature of the economic system. These assumptions include:
 - (a) profit maximisation by firms, which face cost structures characterised by the U-shaped cost curve;
 - (b) utility maximisation by consumers, who experience diminishing marginal utility in the consumption of different items;
 - (c) an infinite range of production technologies (all of which experience diminishing returns to scale at some point);
 - (d) perfectly competitive markets.
 - Given these assumptions, neo-classical theorists have generated the following propositions:
- 5. The prices for goods and services which are generated by the unimpeded operation of the market (i.e. by the forces of supply and demand) are normally the correct prices for the purposes of guiding resource allocation by producers and consumers. This is because free market equilibrium prices will simultaneously reflect marginal con-

sumer preferences and marginal supply costs. However, where a particular form of resource use generates external costs or benefits, prices should be adjusted accordingly. Generators of external benefits should be rewarded and vice versa.

- 6. Factor prices should also be determined through the operation of the free market. In this way producers will be faced with correct information concerning the relative opportunity costs of different factors of production.
- 7. Given consumer preferences, firms' production costs, the total value of monetary demand and free markets, there will be one set of equilibrium prices for all factors of production, intermediate products and final goods and services, at which all markets are cleared and the value of output maximised.
- 8. Given infinite technical choice and factor price flexibility, the maximum value of output and, hence, maximum social welfare, will always be achieved by the full employment of all factors of production. There will be no involuntary unemployment.
- 9. Relative factor prices determine factor income shares.
- 10. In the absence of government intervention, factor prices combined with the distribution of asset ownership determine interpersonal income distribution. This in turn determines, together with consumer tastes, the pattern of demand for final goods and services and hence. indirectly, the pattern of demand for factors of production.
- 11. The following propositions concerning growth can also be derived from the paradigm:
 - (a) sustained growth of output with full employment is possible provided there is a positive propensity to save and to invest in excess of the amounts needed for capital maintenance;
 - (b) output per worker will grow if the rate of savings and investment exceeds that which is required both for capital replacement and to equip any increase in the work-force;
 - (c) investment will occur at a rate determined by the interaction of the social rate of time preference, which will determine the supply of savings for any given rate of interest, and the marginal productivity of capital, which will determine the amount of investment that producers are prepared to undertake at that rate of interest.
- 12. The main corollary of neo-classical theory is that, in any market, price distortion will lead to a distorted pattern of resource allocation with a consequent reduction in efficiency and welfare.
- 13. Hence the key policy recommendation of the neo-classical paradigm is to remove all market distortions.

In the 1950s and 1960s the neo-classical perspective generated a distinctive body of highly abstract growth theory. Using the standard neo-classical assumptions, and assuming also no distinction between savers and investors

(and hence no need for an investment function) it was shown that an increase in savings can be expected to have a positive, but only temporary, effect on the growth rate (it will be associated with a relative lowering of the price of capital, and consequent increase in capital intensity per worker). The main source of long-run per capita income growth in these models is technical progress.

Neo-classical growth theory is not reviewed here, partly because it did not form part of the intellectual heritage of development economists in the 1940s and early 1950s, since it was developed later, but also because it has had no appreciable influence on development economics. The interested reader is referred to the excellent summary and the bibliography in Hywel G. Jones (1974).

SUMMARY AND CONCLUSION

The purpose of these concluding remarks is firstly to recapitulate the main points to emerge from those dynamic theories that were available to development economists in the 1940s and early 1950s, and secondly to indicate some of the main factors that could be expected to preoccupy development economists looking to these theories as a potential source of insights into economic change in less developed countries. (Later, the whole of Chapter 10 is devoted to the neo-classical paradigm and its use in development economics.)

Amongst the most notable features of classical growth theories—i.e. those given greatest emphasis by the classical theorists themselves – are the following:

- 1. The importance of market expansion as a stimulus both to expansion of total output and to raising labour productivity.
- 2. The importance of profits as the source of finance for new investment, in contrast to the unproductive use of land rents and the zero or minimal savings capability of wage-earners.
- 3. The potential of an agricultural sector dominated by rentier land owners to impose a brake on overall economic growth (Ricardo).
- 4. The need to liberalise trade as a means of enlarging the market (Smith) and of permitting the exploitation of comparative advantage (Ricardo).
- 5. The importance of technological change in raising labour productivity and in helping to meet the food and raw material demands of a rising population.

In the early twentieth century Arthur Young took Adam Smith's emphasis on the extension of the market a step further, arguing that technical innovation can itself generate an extension of the market through raising labour productivity and, hence, incomes and demand.

Turning to Marxian dynamic theory, among the basic points that Marx emphasises are the following:

- 1. The motive force of the capitalist system, and one of the factors that differentiates it from earlier modes of production, is the capitalist's drive to accumulate wealth through productive investment.
- 2. Capitalism is based on the antagonistic relationship of two classes, capitalist and proletarian. The former own the means of production and use the power derived from this ownership to extract and appropriate surplus value from the workers, the surplus value being used to finance further accumulation.
- 3. The drive to accumulate leads the capitalist to search constantly for means, including technical innovation, that will enable him to raise his rate of profit and/or undercut his competitors. The consequent development of the productive forces is the positive aspect of capitalism.
- 4. Meanwhile, capitalist competition also undercuts and destroys all backward pre-capitalist producers (artisans, peasants) as well as the less efficient capitalists.
- 5. As individual capitals expand, in association with technological advance, plant size rises, and labour becomes more specialised and routinised and also increasingly interdependent. Simultaneously workers become increasingly alienated from the labour process and the capitalist class.
- 6. The anarchic nature of capitalist competition leads to periodic crises caused by an underlying tendency to a decline in the rate of profit and by recurrent phases of overproduction and underconsumption. In these periods labour is laid off and wages fall.
- 7. As the scope for further unco-ordinated development of the productive forces approaches exhaustion, a final crisis will lead the working class to appropriate the means of production and instigate the transition to a new, egalitarian mode of production. Lenin, however, provided grounds for doubting whether the colonies would experience the same pattern of capitalist development as the imperial powers.

Also in the early twentieth century, Schumpeter sought to make an analytical break with the classical growth theorists. A clear distinction is drawn between growth and development: for Schumpeter growth is a slow and rather insignificant process, resulting from investment in additional capital financed largely by reinvestment of profits. Development is an innovatory process. It is this that provides advancing economies with their real dynamic. The key actors in development are not producer capitalists reinvesting profits, but the entrepreneurs who perceive opportunities for using existing resources in new ways and who organise and implement the exploitation of these opportunities, and the banks who create the credit that

enables the entrepreneurs to finance new enterprises. In the early stages of the industrial revolution capitalist and entrepreneur were usually one and the same, but with time their functions have become separated.

Finally, Harrod and Domar have provided a model of growth in which the rate of growth of output which is warranted is given by the planned savings rate divided by the planned capital:output ratio. Since current investment plans are largely independent of current savings and consumption plans, there can be no certainty that output will actually grow at the warranted rate, for investors may be forced to adjust to unanticipated changes in demand. Such adjustments entail short-run variations in the capital:output ratio followed by adjustment of investment plans. Both Harrod and Domar were concerned that the planned savings rate 's' in Western Europe and North America was too high for the maintenance of stable growth, for actual 's' warranted a long-run growth rate in excess of that permitted by the rate of growth of the labour force. The physical impossibility of carrying out a rate of investment at full employment sufficient to match 's' would generate periodic deflationary pressures.

These were the main elements of dynamic theory that were available in the 1940s and 1950s for the early development economists to draw upon. In deciding whether, and to what extent, to draw their inspiration from them it was necessary to confront a number of controversial issues, including the following:

- 1. In conditions in which the industrially advanced coutries are consistently pioneering technological advance in manufacturing and agriculture, is free trade necessarily in the best interests of underdeveloped countries?
- 2. Is an increase in savings a necessary precondition for economic advance, or may other resource constraints (such as scarcity of entrepreneurial talent or organisational and administrative capability or foreign exchange) or market imperfections be more important?
- 3. If an increase in savings is needed, can this only be achieved by raising the share of capitalist profits in national income?
- 4. In underdeveloped countries, does an increase in savings by capitalists lead automatically to an increase in productive investment?
- 5. Can it be assumed that underdeveloped countries will pursue a similar path of capitalist development to the now industrially advanced ones?

How development theorists have answered these and related questions, and the extent to which they have felt able to apply pre-existing theories to the analysis of development and underdevelopment in contemporary underdeveloped countries, are issues that will be explored in the following chapters.

NOTES

- 1. See Hobsbawm, 1962: Chapter 1 for a description of this context.
- 2. Mercantilism emphasised the national advantages of a positive balance in international trade; see Barber, 1967: 16, 17, for a fuller account.
- 3. Smith, 1976: 486.
- 4. Ibid.: 491.
- 5. *Ibid*.: 507.
- 6. Ibid.: 480.
- 7. Ibid.: 480.
- 8. Ibid.: 483.
- 9. Ibid.: 194 and 473.
- 10. Ibid.: 197, 8. In Western Europe Smith observes that only in Holland has the return on capital reached so low a point that there seemed to be limited opportunities for further internal expansion. Even here, however, Holland's men of business can find ample profitable outlets in international trade and foreign loans.
- 11. For example, with respect to acceptance of Say's Law (see Barber, op.cit.: 66).
- 12. Barber, op.cit.: 70.
- Temporarily because the rise in rents eliminates the profit advantage on intramarginal land.
- 14. See Ricardo, 1911: 53.
- 15. 'Of the features which characterise this progressive economical movement of civilised nations, that which first excites attention, through its intimate connexion with the phenomena of Production, is the perpetual, and so far as human foresight can extend, the unlimited, growth of man's power over nature' (Mill, 1852: 254, 5).
- 16. Ibid.: Book IV, Chapter IV.
- 17. *Ibid*.: 34, 5. Smith had not anticipated this, arguing that while growth continued real wages would remain buoyant due to the expanding demand for labour, even though following the wage increase population would also tend to expand 'as nearly as possible in the proportion which the demand for labour requires' (Smith, *op.cit*.: 183).
- 18. Mill, *op.cit.*: 320. Mill also observed that given these conditions a stationary state could be preferable to continuing growth.
- 19. As Johnson has observed, during the classical era, 'two exceptions to the case for free trade were early recognised—the terms of trade argument and the infant industry argument—(but) these were not regarded as of great practical importance. Nor did the heretics who advocated protection as a means of promoting the economic development of the relatively backward regions—notably Hamilton in the United States and List in Germany—have any significant influence on the central corpus of economic theory' (Johnson, 1964: 3).
- 20. Some Marxists today emphasise that fundamentally Marxism is a method of analysis and not a dogmatic set of theories: a method which seeks to uncover the essential features of social processes and which emphasises that appearance and essence may radically differ (Ken Cole, University of East Anglia: personal communication, March 1988). However, many have found in Marx's Capital and in his other writings what is widely accepted as a specific body of economic theory, and it is with this that what follows is concerned.

38 The theoretical heritage

21. Marx, 1970a: 20.

22. Marx, 1970b: 333.

23. Ibid.: 714.

24. See Marx, 1970c: Chapter 1.

25. See Marx, 1970b: Chapter 11, pp. 212-218. 26. See Engels, reprinted in Feuer (ed.), 1959: 275.

27. See Marx, 1972: 437 and Marx, 1970a: 21.

28. See Marx, 1970b: 624-628 and Marx, 1972: 249-251.

29. Marx, 1972: 104.

30. See Marx, 1970c: Chapter XXI, esp. 493-499.

31. The rate of profit is approximately given by the formula s/c + v. If c rises relative to v, then s as a proportion of c+v will fall unless the rate of exploitation (s/v)rises sufficiently to compensate. (See paragraph 18 above for an explanation of these symbols.) See Marx, 1972: Part III, Chapter XIII and Chapter XIV pp. 250-259.

32. See Marx, 1972: 232.

33. See e.g. Marx and Engels, 1846, reprinted in Feuer (ed.), 1959: 295-7; and Marx, 1970b: 331.

34. See e.g. Marx and Engels, 1846, reprinted in Feuer (ed.), 1959, Marx, 1970c: 20-22, and, especially, Marx, 1972: 436, 7. However, see also Feuer, op.cit.: 29,30.

35. 'The country that is more developed industrially only shows, to the less developed, the image of its own future', Marx, Preface to first German edition of Das Kapital. See also Marx, 'British Rule in India', in Marx and Engels, Selected Works Vol. I, reprinted in Feuer (ed.) 1959: 511-518.

36. See also Lenin, 1962, quoted in Warren, 1980: 5, footnote 7.

37. See, for example, the citations in Baran, 1957.

38. See Schumpeter, 1967: 65-67.

39. Schumpeter, op.cit.: 66.

40. Ibid.: 73.

41. For more recent emphasis on this factor see Rimmer, 1984.

42. See Kalecki, 1971, Keynes, 1936, and the introduction by Robinson in Kalecki, 1976.

43. Though the latter was anticipated by Schumpeter.

- 44. See Palma in Seers, 1981: 51 and 68, note 41. In the latter reference Palma observes that Prebisch published a study of Keynes before he made his first analytical contributions to the Economic Commission for Latin America (ECLA). On the other hand, Singer suggests that the structuralist school rejected Keynesianism due to its overemphasis on demand-side issues (see Singer in Thirlwall (ed.) 1987: 78).
- 45. Kaldor's solution to Harrodian instability in 1957 Kaldor published a model of economic growth which offers an explanation of why, contrary to the predictions of the Harrod model, the growth experience of the western economies was relatively stable at close to full employment during the first post-war decade. Kaldor suggests that, contrary to Harrod's assumption, savings are not independently determined. Rather, they adjust to economic conditions through changes in the rate of profit. This flexibility, he claims, may well be sufficient to ensure sustained growth at full employment.

46. Domar's starting proposition is that net investment fulfils a twofold function. It expands employment and incomes in the short run, during the phase of physical capital creation, but it creates a potential flow of additional output for an indefinite future period (depending on the life of the capital created). If investors do not face the necessary expansion of demand to absorb new capacity, either

new equipment will lie idle, or old equipment will be scrapped early, or, if it is economic, equipment will be used to replace labour. Starting from full employment, for there to be continuing additions to productive capital while full employment of capital and labour is sustained, then Iσ (aggregate net investment multiplied by the output:capital ratio (σ') must equal $\Delta I.1/\alpha$ (the increase in demand which is given by the increase in net investment times the multiplier. where the latter is equal to $1/\alpha$, α being the marginal propensity to save). By a simple shifting of terms the equation $I\sigma = \Delta I$. $1/\alpha$ can be rewritten in the form $\Delta I/I = \alpha \sigma$. With a constant value of σ national income will grow at the same rate as investment. Thus since σ is simply the inverse of the capital:output ratio, Domar's fundamental equation is the same as Harrod's.

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3 · THE THEORETICAL DEBATE IN DEVELOPMENT ECONOMICS FROM THE 1940s: AN OVERVIEW

Since the mid-1970s various social scientists have reviewed the evolution of theorising about economic and social change in the Third World.¹ The approaches taken have varied in terms of purpose, coverage, the numbers of schools of thought identified, the categories used and the classification of individual theoretical contributions. It is impossible to review all these approaches here; all one can hope to do is to give some flavour of their variety.

Some analysts have adopted a partial approach, concentrating their review upon one or more analytical perspectives without attempting a general overview. These include Chenery (1975), Killick (1978), Seers (1979), Love (1980), Kitching (1982) and Chilcote and Johnson (1983). Chenery and Love both focus on the evolution of structuralism, although they each focus on different contributors to this school of thought. Killick reviews the dominant tendencies in economic thought on development in the 1950s, including some of the contributions that Chenery classifies as structuralist (but without himself using this classification), in order to demonstrate their influence on Nkrumah's policies. Seers focuses on the evolution of development economics in Western Europe and North America in the 1950s and 1960s (ignoring, for example, the development of structuralist thought in Latin America), in order to demonstrate its limited usefulness. Kitching selectively reviews the evolution of the populist content of development theory, while Chilcote and Johnson review the evolution of dependency theory (according to their categorisation of the latter).

Among reviews of the evolution of theorising on economic development by economists may be noted in particular those of Chenery, Killick and Seers (already mentioned), as well as Streeten (1981), Little (1982), Hirschman (1982) and Leeson (1983 and 1988). Meier (1984) also provides a useful (non-classificatory) review of the evolution of development economics in the early years (the 1940s and 1950s). The primary purpose of most of these surveys