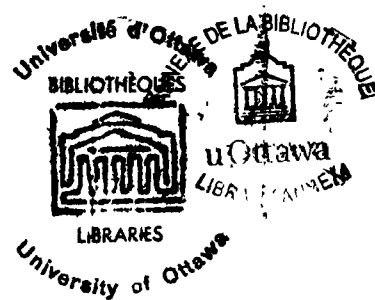


**UNEQUAL GROWTH IN THE WORLD ECONOMY**

**Its Repercussions on Growth and  
Stability in an Interdependent  
World Economy**

by: D. C. Taylor

Thesis presented to the Faculty of Social,  
Economic and Political Sciences of the  
University of Ottawa through the Department  
of Economics as partial fulfillment of the  
requirements for the degree Doctor of  
Philosophy.



Ottawa, Canada, 1961

UMI Number: DC53781

### INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

**UMI<sup>®</sup>**

---

UMI Microform DC53781  
Copyright 2011 by ProQuest LLC  
All rights reserved. This microform edition is protected against  
unauthorized copying under Title 17, United States Code.

---

ProQuest LLC  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106-1346

### ACKNOWLEDGEMENT

This thesis was prepared under the guidance of the Director of the Department of Economics, Reverend Father F. Brault, O.M.I., Ph.D.

An expression of gratitude is also due to Leonard B. Rist and many of his associates in the International Bank for Reconstruction and Development, for the many years of exposure to their helpful ideas and counsel led to the germination of some theories presented herein and stimulation of the writer's thinking on economic development generally.

## TABLE OF CONTENTS

	Pages
INTRODUCTION: A STUDY IN HUMANTICS	111
PART I - THE SETTING OF THE PROBLEM	
Chapter 1 - Levels of Development and Rates of Growth.....	1
Chapter 2 - Essential Growth Forces.....	26
Chapter 3 - Population and Growth.....	52
Chapter 4 - Projected and Attainable Rates of Growth.....	77
PART II - INTERNATIONAL RETARDATION EFFECTS	
Chapter 1 - Historical Growth Rates.....	109
Chapter 2 - Differential Growth Rates and Foreign Repercussions.....	161
Chapter 3 - Development Stages and the Balance of Payments.....	194
Chapter 4 - Instability in the World Economy.....	236
Chapter 5 - Interdependent Growth Models.....	286
PART III - THE ECONOMICS OF FRUSTRATION	
Chapter 1 - Political and Social Implications of Growth Lags.....	327
Chapter 2 - Stability or Frustration in the World Economy.....	340

LIST OF TABLES

Table	page
I. - International Differences in Per Capita Income and Related Measures, 53 countries, 1939 . . .	8
II. - Growth Rates in GNP or National Income in Developed Countries. . . . .	13
Appendix I Table I - Per Capita Income in U. S. dollars in 1949. . . . .	17 to 19
Appendix II Table I; % Rates of Population Growth per Decade. . .	20 to 22
Appendix II Table II % Rate of Growth per Decade of Total Income, Population and Per Capita Income . . . . .	23 to 25
IV. - Per Capita Income, Rate of Growth of GNP, Investment, and Capital-Output Ratios in Selected Countries, 1945-54. . . . .	78
V. - Estimated Population of 19 Regions of the World in 1925, 1950 and 1975 on High and Low Assumptions, Percentage Increases in 1925-1950 and 1950-1975, and increase from 1950-2000 . . .	101
VI. - Projected and Past Annual Rates of Growth. . .	103a.
VII. - India's Relative Position in the World: Selected Indices. . . . .	140
VIII. - Twenty Years of Growth: 1956-1976 - INDIA. . .	145
IX. - The Balance of Payments by Stages of Development	198
X. - Types of Balance of Payments . . . . .	198

## INTRODUCTION

### The Larger Problem

The theory of economic growth, an area of specific investigation that has only so very recently claimed unique identity, is rapidly expanding in statute and character. While this process of developing a comprehensive theory takes place, the infinite possible ramifications and applications must be explored and related to the only slowly solidifying central body of the theory. What may be and should be embraced by the theory of economic growth as such cannot be defined with precision at this stage of tentative probing, reflection, testing and coalescence.<sup>1</sup> It can be ventured at least, that a complete theory of economic growth must contain applicability to economies at every stage of economic progress and maturity, from the static subsistence level to the dynamic mature industrial stage, meaning inclusion of economic development, economic growth, economic progress, economic expansion, and economic evolution. It must be a comprehensive doctrine that relates to short, long and very long run periods of analysis. Since growth is a process of

---

<sup>1</sup> S. Kuznets - Toward a Theory of Economic Growth in National Policy for Economic Welfare at Home and Abroad. Columbia University Bicentennial Conference Series, Doubleday, Garden City, N.Y., 1955, edited by Robert Lekachman, for an excellent statement of this question.

change over time, the new body of theory must represent the final reality of dynamic economics.<sup>2</sup> And since any fully satisfactory theory of growth must also explain the absence of growth, stagnation, interruption to the growth process, recession, the obstacles and threats to growth, instability, and the uneven pace of growth over time, it must also take over and elucidate the whole body of business cycle theory. In final form the theory of economic growth must be an extraordinarily widely ramified theory of economic dynamics, related to which most other main branches of economic theory will be systems of partial and special analysis.

The technique of analysis by mathematical models will continue to be revealing and relevant for this related partial analysis, but it does seem that even in its most elegant form it will not contribute much to the understanding of the many facets of growth economics.<sup>3</sup> The problems of growth are essentially related to a study of the process of economic

---

<sup>2</sup> Which has not been realized, as shown by R. F. Harrod in Toward a Dynamic Economics, London, Macmillan & Co. Ltd., 1948.

<sup>3</sup> Henry J. Burton - "Growth Models and Underdeveloped Economies," J. P. E. August, 1955, makes an attempt which is more interesting than illuminating because of the generalized model and excessive simplification of causal factors. The contributions of Harrod - Hicks - Domar - Fellner - Hamberg are important and significant but deal with one aspect of the theory of growth and apply only to industrial societies, and is really trade cycle theory somewhat broadened.

change over time, and while this is the functional importance of the mathematical model approach, all elements of comparative statics must disappear in growth because the movement is not a fluctuation about an equilibrium position, nor a simple movement from one equilibrium position to another. Growth is a disruptive process changing not only the quantitative aspects of the component variables but their qualitative nature. And there are no constants. All elements become variables in the growth process, which is one of continuous change. The result is that there are no stable equilibrium positions. Any system of period analysis, which is truly the basis of the model technique, could only capture a series of pictures of unstable disequilibrium as the economic system adjusts in all its aspects to head toward equilibrium positions that are never attained, because new changes constantly occur to create ever changing equilibrium targets before any such position is ever reached. This must be the nature of a fully dynamic system.

This being so the methodology must have other foundations. A rationale of the observed phenomena can be and is being evolved, constituting the theory of economic growth. Any untested or unproved theory may be interesting but not persuasive, hence verification must be sought. The historical approach is an obviously necessary supplementary tool of analysis, because any theory must be an account of the

occurrences of the past, as well as the present. Perhaps one day deductions based on past experience may become sufficiently refined to warrant extension into the future. Reinforcing this approach, but not identical with it, is the empirical method. It is not identical because the historical approach is interpretative, relying on often inconsistent and usually incomplete data which is generally coloured by the biases and preconceived intent of the investigator. Truly empirical testing must be based on a test case approach, with all relevant data assembled in sufficient detail, accuracy and consistent form. These lines of inquiry must be the foundations of investigation and proof.

The range of relevance in terms of society is the remaining question in the delineation or definition of the problems faced in evolving a theory of economic growth. Sometimes with dismay and sometimes with excitement, investigators in this field have all been forced to recognize that the inevitable overlapping of the various disciplines of social science becomes most entangled in the dynamics of growth. The growth process is a very involved one and it is impossible to segregate economic growth in rigorous isolation from the other strands in the pattern. Demography, sociology, anthropology, psychology, history, ethics, politics, are all entwined in both the causation and consequences of economic growth and cannot be ignored. All other things refuse to

remain equal so no Bell jar approach by the economist will make them so. Hence, in venturing into this enchanting wonderland of economic study the economist must assume the gigantic task of formulating or contributing to a general philosophy of social evolution. He must become all seeing and try to become all knowing.

Humanities, or the General  
Philosophy of Social Evolution

Humanities is admittedly a contrived word. But then we are dealing with an elusive subject in economic growth that defies description in any adequate sense in established terminology. Humanities is a word that implicitly pretends to capture in an omnibus fashion the spirit conveyed by the words humanism, humanics, humanity and humanities all at the same time. Whereas the now rare word humanics means the science or study of human nature and human affairs, humanities would then mean the science or study of the nature and affairs of humanity, with the emphasis on group behaviour, or social organization, attitudes and activities. This is surely the substance and essential nature of the study of economic growth.

To study economic growth comprehensively and rationally it is necessary to turn back the academic clock and reject the modern specialization in social science and the exclusive areas into which the huge subject has been

compartmentalized and departmentalized. First, we must reject the narrowed discipline of economics as a field of study and revive the older task of the student of political economy. For, even while academic fashion segregates political science from economics as branches of social science, the economic behaviour of the individual in society and of society organized in the nation state become increasingly conditioned to the guiding hand of government as the economy becomes progressively socialized, and laissez-faire doctrines and the significance of economic man exercising free choice dim in reality. To take the long leap at once, it must be recognized that what is required, to give proper direction and perspective to the study of economic growth, is concentration on the task of formulating a comprehensive philosophy of society. Left to the particular disciplines, we could expect such a philosophy of society to be developed by the economist in terms of economic behaviour, by the sociologist in terms of social forms, attitudes and traditions, by the political scientist in terms of political organization and techniques, by the psychologist in terms of personal and communal motivation, and by the anthropologist in terms of evolutionary man and his culture and traditions. Any satisfactory philosophy of society must account for social evolution, which cannot be done without a synthesis of all these terms of reference. The study of economic growth and development is exactly an

attempt to understand social evolution. It is a study in humanities.

This means that the economist, in accepting the challenge of economic growth as a field of study, has unwillingly or willingly assumed the mantle of responsibility for a general philosophy of social evolution. To achieve this the economist must ignore the narrow confines of his own discipline and actually seek cross fertilization by intrusion across the barriers of all the disciplines within the compass of the social sciences, and beyond even into the humanities. He must become a humanist studying humanities, instead of remaining an economist studying economics.

**PART I**

**THE SETTING OF THE PROBLEM**

## CHAPTER I

### LEVELS OF DEVELOPMENT AND RATES OF GROWTH

The most striking feature of the world economy is the absolute lack of homogeneity. This generalization applies with equal validity regardless of what characteristics are the subject of comparison; climate, population, resources, productive activity, levels of income, standards of living, organization of economic life, institutional arrangements economic and non-economic, cultural patterns including modes of living, education, religion and political forms. These categories of comparison are merely representative and not an exhaustive list of significant socio-economic characteristics.

Clearly, even those factors specifically mentioned are not independent. Productive activity is directly related to resources; levels of income determine standards of living; institutional arrangements must be shaped to the organization of productive activity and this, in turn, is related to climate and geography generally.<sup>1</sup> Unquestionably there is

---

<sup>1</sup> Ellsworth Huntington, Mainsprings of Civilization, New York, Mentor Books, 1959, Part III, made an interesting analysis of the influence of climatic environment in this and earlier works like Civilization and Climate.

an intricate interconnection between many of these characteristics of economies and their peoples that may never be reduced to a single cause-and-consequence analysis. Probably the most embracing statement of the case is that any individual country's economic history is in many ways the product of its economic geography, and that the two together account for the pattern of economic growth, making due allowance for random factors.<sup>2</sup>

Such a conclusion as this implies a strong element of economic determinism in the evolution of economic society as expressed in growth patterns. If man's environment is pre-eminent in shaping his path of progress, culturally and economically, our proposed investigation into differential rates of economic growth could presumably isolate cause and effect, account for the inequalities in these terms and indicate with reasonable accuracy future trends. However, the validity of this general proposition has not been sufficiently established to warrant such an approach.<sup>3</sup> Its only real significance is that it gives recognition to the causal interconnection of economic and non-economic circumstances

---

<sup>2</sup> Griffith Taylor, Canada, Toronto, University of Toronto Press, 1945, approaches his problems with this persuasion, see p. 617.

<sup>3</sup> Arnold Toynbee, A Study of History, abridgement by D. C. Somervell, Oxford University Press, 1947 and 1957, gives no support to such an absurdly simple theorem.

in shaping patterns that will be perpetuated or broken, either way strongly influencing the pace and path of economic growth.

The model approach to analysing growth patterns as they have evolved and growth paths as they should appear in projection would be not only valid but almost exclusively appropriate if economic determinism, rooted in the country's economic geography and exemplified in its economic history, truly reigned supreme. The flaw on which this neat approach falters is the old one-dimensional concept of human life represented by Adam Smith's "economic man". The institutional organization of society within which man makes his living is the complex product of the local culture as it has developed, a manifestation of cultural influences among which economic forces, incentives and responses are but part of a large, many hued pattern. The complexity of the origins of cultural forms and their role in the rise and fall of civilizations needs a more diversified examination which would have to be an inspired philosophic analysis<sup>4</sup> in the all inclusive terms of humanitics.<sup>5</sup> The necessity of giving recognition to so many influencing factors in economic evolution, among which are unpredictable and irrational elements like acts of God, war, status, religion, and human desires

---

<sup>4</sup> Toynbee, op. cit., is the nearest thing to this lofty aim.

<sup>5</sup> See Introduction on Humanitics.

of conflicting motivation, denies the possibility of reducing society to a system of mathematical functions that would demonstrate the complex variety of past growth paths and allow prediction through projection.<sup>6</sup>

Narrowing the approach to essentially economic elements, the extreme diversity in factor endowments and production opportunities are ample for a primary explanation of the wide range of economic attainment. Although economic growth is a study of real dynamics, any comparison of the levels of economic development, or economic attainment at different points in time, necessarily must be statistically quantified and this obliges dependence on comparative statics, however inappropriate to the larger problem. The factor supply and the existing economic environment at any time are the pre-conditions of the nature and scale of production and productivity in any consistent sense. Over time this dictates an inevitable divergence of growth paths in terms of pace and pattern. Their very diversity creates enormous difficulties in reducing them to some common basis of comparison among qualitatively unequals in order to measure quantitative inequalities of either rates of economic growth or attain-

---

<sup>6</sup> T. Haavelmo - A Study in the Theory of Economic Evolution, Amsterdam, North-Holland Publishing Company, 1954, tried his hand at this.

ments in economic development.<sup>7</sup>

Ignoring for the moment the deficiencies in available statistical series and their resulting inadequacy for international comparisons, some consideration must be given at the outset to the differences in the levels of economic attainment of the various members of the world economic community. Although there is considerable force in the arguments made by Simon Kuznets<sup>8</sup> against the use of per capita income statistics as the basic measurement for economic growth, a question that will receive attention later in this chapter, there is really no acceptable alternative measurement of levels of economic attainment.<sup>9</sup> The statistical comparison

---

<sup>7</sup> Irving B. Kravis, "The Scope of Economic Activity in International Income Comparisons," included in Problems in the International Comparison of Economic Accounts; Studies in Income and Wealth, Volume Twenty, by the Conference on Research in Income and Wealth, National Bureau of Economic Research, Princeton University Press, 1957, clearly demonstrates the problems of statistical measurement created by the need "to find a concept of economic activity that will be useful in comparing national incomes".

A. J. Youngson, Possibilities of Economic Progress, Cambridge University Press, 1959, Chapter 1, pages 3-22, covers other aspects of the same problem.

<sup>8</sup> Simon Kuznets, "Problems of Comparisons of Economic Trends," in Economic Growth, Brazil, India, Japan, edited by Kuznets, Moore, and Spengler, Durham, N.C., Duke University Press, 1955.

<sup>9</sup> Despite Youngson, op. cit., and his protests on grounds of the immeasurability and incomparability of welfare.

would have no meaning at all expressed in terms of gross national income because aggregating ignores the considerable differences in sizes of economies. Elephants cannot be compared with mice on the direct basis of mass if attainment of growth potential is the purpose of the comparison.

As stated earlier, differences in factor endowment must lead to wide differences in economic achievement. Since in a social sense the most significant factor is population, a comparison of real, if limited, meaning may be made by reducing income aggregates to a common unit of persons by using per capita income statistics rather than national income. This does abstract from the incomparability of economic units of unequal size without making any apparent value judgements by the choice of units of comparison. There are unavoidable complications entailed in the comparability of the statistics on a per capita basis because of unequal counting, biases to underestimation in subsistence economies, exchange-price shortcomings of money income comparisons, and many other failures of refinement and international uniformity in national income concepts.<sup>10</sup> For lack of better data or more

---

<sup>10</sup> On this problem the literature is considerable, the best being Simon Kusnets, Economic Change, N.Y., W. W. Norton & Co., 1953, and Toward a Theory of Economic Growth, op. cit., and Problems in Comparisons of Economic Trends, op. cit.; Colin Clark, Conditions of Economic Progress, MacMillan and Co., London, second edition, 1951, where he develops his International Units to avoid some of these

acceptable indices, then, our comparison of levels of economic attainment must be made in units of per capita national income converted, often with difficulties connected with the artificiality of exchange rates as a measure of relative purchasing power, to United States dollar.

Table I of Appendix I to this chapter, presents the most comprehensive and up-to-date comparison of per capita income levels available, prepared and published by United Nations.

For the sake of broader perspective and some simplification of these results in the hands of a competent analyst it is worth while also including similar data derived from compilations made for the United States Department of State by Simon Kuznets to help in the formulation of its Point Four Program.

---

problems; Milton Gilbert and Irving B. Kravis, An International Comparison of National Products and the Purchasing Power of Currencies, The Organization for European Economic Co-operation, Paris, 1953; Prof. G. Tagliacarne, "Monetary and Consumption Indices in International Comparisons," in Review of Economic Conditions in Italy, Banco di Roma, Nov. 1954, tries to escape the limitations of money income comparisons by devising a composite index of living conditions but this has its own shortcomings of impracticability and non inclusiveness.

TABLE I

International Differences in Per Capita Income  
and Related Measures, 53 countries, 1939\*

	Groups of Countries by Per Capita Income				
	I	II	IIIa	IIIb	III
1. Per Capita Income (US\$)	461	154	86	31.5	41
2. Percent of Total Population	20	16	11	53	64
3. Per Capita Income, Index	100	33	19	7	9

Groups of countries distinguished in the columns of the table are by size of per capita income. The following countries, arranged in declining order of per capita, are included in each group:

I (per capita income over \$200): United States, Germany, United Kingdom, Switzerland, Sweden, Australia, New Zealand, Canada, Netherlands, Denmark, France, Norway, Belgium, Chile, Argentina.

II (per capita income from \$101 through \$200): Union of South Africa, Finland, Chile, Austria, USSR, Italy, Greece, Czechoslovakia, Hungary, Bulgaria.

IIIa (per capita income from \$51 through \$100): Cuba, Yugoslavia, Poland, Japan, Venezuela, Egypt, Palestine, Costa Rica, Colombia, Peru, Panama, Ceylon, Mexico, Uruguay, Dominican Republic.

IIIb (per capita income from \$22 through \$50): Haiti, Nicaragua, Guatemala, Bolivia, Honduras, El Salvador, Brazil, Ecuador, Paraguay, India, Philippines, China, Indonesia.

\* Simon Kuznets - Economic Change, op. cit., pages 219 and 220; and in Colin Clark, Conditions of Economic Progress, op. cit., particularly in Chapter 3, similar results are presented.

The most striking conclusions to be drawn from these data are that the levels of economic attainment diverge widely, and that it is only relatively few countries, accounting for only about 20 per cent of the world's population, which have attained levels of production and consumption demonstrating any satisfactory achievement along the road of economic progress. This can probably be accounted for by one or any combination of three causal conditions: i) a low, neutral or negative rate of economic growth; on the part of the majority of countries; ii) a slow start along the path of economic progress for many where low income stagnation must have persisted for centuries; iii) a high rate of population increase in many countries that dissipated gross income gains in the Malthusian fashion. Actually, Kuznets demonstrates that the rate of population increase is highest among those countries with the lowest level of per capita income and lowest among those countries with the highest per capita income. This population dilemma has such a special bearing on the growth problem that it is treated in some detail in a later chapter.

That in some countries change in all the conditions that prevent economic growth was long delayed is regrettable, for they must today and for some time to come suffer the privations enforced by relatively low levels of production and consumption. If for these countries the necessary break

with the past has finally been achieved and progress is underway, the prospects are bright for economic improvement in the future, unless the diffusion effects of a high rate of population increase deny the individual any real possibility of welfare improvement. Still using the measure of per capita income as the indicator of economic attainment, and over time of economic growth, latecomers to the experience of economic growth showing a rising per capita income may yet repeat the history of those that have already advanced into Group I, in either table. If these emerging economies are achieving an accelerating growth rate, or prospectively may do so, their problems are of interest but need give us no concern, except how to ensure that conditions remain appropriate to the sustaining of this growth process.

Those countries displaying a low, neutral, or negative rate of economic growth are a very serious problem, in direct ratio to their proportionate significance as a sector of the world economy. The evidence already examined gives a clear picture of a major part of the world population living a depressed existence and presumably trapped in the vicious circle of poverty.<sup>11</sup> But to identify particular countries as falling into this category of worrisome dead-centre

---

<sup>11</sup> Gerald M. Meier and Robert E. Baldwin, Economic Development: Theory, History, Policy, New York, John Wiley and Sons, 1957, see pages 319, 320.

poverty,<sup>12</sup> or as having emerged into the circle of promise but still at low income because of a late start, is impossible from the statistics so far examined.

Intertemporal comparisons must be made if we are to consider not only comparative international levels of economic attainment but national and international comparative rates of economic growth. For this purpose it is not so certain that per capita income statistics will afford the best measurement of growth, unless some rather dubious qualifying assumptions are made about the meaning of economic growth. Without elaborating the issues involved at this point, it is sufficient to recognize that population increase is a positive growth factor but that in other senses economic growth must be measured apart from population changes otherwise a false deflation of real achievements will appear.<sup>13</sup> To illustrate the point, a country enjoying a continuing, average annual rate of increase of national output, or income, of 2.5 per cent would by any standard be achieving a high rate of economic growth. Yet, there are many countries today with an annual rate of population increase of 2.5 per cent or more, and if this factor is applied to reduce the measurement

---

<sup>12</sup> Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries, Oxford, Basil Blackwell, 1953.

<sup>13</sup> Simon Kuznets, Problems in Comparison of Economic Trends, op. cit., pages 11-13.

of growth to the sole basis of unit, or per capita income, calculation, the statistical picture for the country would be one of neutral growth, or apparent stagnation. It is preferable to avoid a prejudgement on this question until the evidence is examined and the determinants of economic growth segregated and properly weighted, if this is possible. The evidence, then, should be presented both in terms of national aggregates and per capita income units.

Excellent as Table II is, as far as it goes, it does not go far enough for the central problem of this study. Unfortunately I cannot surpass the efforts the two outstanding students of growth in statistical terms, Colin Clark and Simon Kuznets. To quote the latter:

Even disregarding questions of detail concerning components, estimates of national income made over a period sufficiently long to permit observation of growth, and acceptable even by lenient standards of statistical reliability, are now available for only fourteen countries, almost all of them economically developed and with high levels of per capita income. However, we have estimates for recent years for a much larger number of countries (70 to 75). Even though many are exceedingly crude, these current estimates, combined with the few available for long periods, can yield a basis for some reasonable inferences about national income trends over the last century. Of the two billion people in the countries for which estimates of national income were available for 1949, over 30 per cent had per capita income of less than \$50; almost one-quarter more, between \$50 and \$100. At the other extreme ... (are countries) ... which together account for 11 per cent of the population covered and in which per capita income was \$600 or more. The 400 million of world population for

TABLE II

Growth Rates in GNP or National Income  
in Developed Countries\*

Country	Period	Aggregate Growth Rate	Per Capita Growth Rate
U. S. A.	1869/78 - 1953	3.75%	2.0%
	1946 - 1953	4.0%	2.2 %
	(1937 - 1953)	4.4 %	3.0 %
Canada	1870 - 1952	3.5 %	1.7 %
	1946 - 1953	4.25%	2.0 %
	(1938 - 1954)	5.1 %	3.3 %
U. K.	1870 - 1954	1.85%	1.25%
	1946 - 1954	2.75%	2.25%
France	1860 - 1954	1.0 %	0.8 %
	1949 - 1954	3.75%	2.8 %
Germany	1860 - 1954	2.0 %	1.1 %
	1950 - 1954	9.0 %	7.75%
Netherlands	1900 - 1954	2.3 %	0.9 %
	1948 - 1954	5 %	3.6 %
Sweden	1870 - 1954	2.3 %	1.7 %
	1947 - 1954	3.5 %	2.6 %
Norway	1900 - 1954	2.85%	2.15%
	1947 - 1954	4.25%	3.25%
Denmark	1870/79 - 1954	2.6 %	1.5 %
	1947 - 1954	3.6 %	2.9 %
Italy	1900 - 1954	1.6 %	0.85%
	1947 - 1954	6.3 %	5.4 %
Australia	1886 - 1950	3.2 %	1.3 %
	1946 - 1952	3.1 %	0.9 %
Belgium	1846 - 1953	1.9 %	3.6 %
	1948 - 1953	4.0 %	1.3 %

\* IBRD Economic Staff - Statistical Tables on Economic Growth, March 8, 1956, unpublished document; see Appendix II, Table II for a more complete presentation of similar data.

whom no national income estimates are available would be mostly in the lower income brackets. One may therefore conclude that over 60 per cent of the world's population had per capita incomes of \$100 or less; that less than 10 per cent had per capita incomes of \$600 or more. ... The current income levels in many countries are desperately low, i.e. low to the point where the means of subsistence are hardly adequate. In these countries the per capita income could not have grown very much over the last hundred years. ... It follows that if any secular rise in per capita income did take place in these countries over the last century, it must have been much smaller than the rise observed among the developed countries. For most of the older countries in this category (excluding some Latin American countries, Java under the Dutch rule, and Egypt in recent decades) population growth over the last century, while substantial, was at an appreciably lower rate than in countries that enjoyed a rapidly rising income per capita. It follows that growth of total national income, in constant prices, during the last century was also at a much lower rate in most currently underdeveloped countries than in countries now in the upper ranges of the income pyramid. Since the countries with currently high per capita income (with some exceptions such as Japan) displayed the high rates of growth in per capita income during the last century, one hundred years ago international differences in per capita income must have been narrower, certainly absolutely and probably relatively than they are today.<sup>14</sup>

In very general terms the statistics, and the Kuznets analysis of them, demonstrate that the rich are getting richer. It is only during the past decade that economic growth has become a truly world wide force stirring practically all parts of the world economy and catching them up in a general forward movement. The statistical evidence of this

---

<sup>14</sup> Kuznets, Toward a Theory of Economic Growth, op. cit., pp. 25-27.

will be examined in some detail in later chapters. But even without this encouraging phenomenon, which may be only an explosive burst of minor significance in the long history of man, or may be the welcome dawning of a new era of world wide secular expansion, it is fair to claim that the crowning achievement of economic progress is that the Marxian corollary to the increasing richness of the rich, that the poor are getting poorer is not sustained but rather belied by the evidence. Nonetheless, it is indisputably true that the rate of growth of the richer, more highly developed countries surpasses that of the poorer, less developed, proving a positive correlation between that rate of growth and the level of income or stage of development. This is a critical problem, for it means that the lead of the advanced countries is increasing and the income gap challenging the underdeveloped countries is widening, despite recent positive achievements in development.

It is this problem that will be studied in the following chapters. Two major questions will be investigated: 1. Is the disparity in growth rates inevitable? 2. What consequences would flow from a continuation of this trend of unequal rates of progress, for the rich and for the poor?

However, before attempting to answer the key questions it will be necessary to look rather more closely at some of many aspects of the process of economic growth in order to establish some terms of reference for the

investigation. Clearly no judgements about the future can be made simply on the basis of statistical evidence of levels of economic attainment and past rates of economic growth. We must have some understanding of the nature of the economic growth, the conditions that foster or retard growth, the determinants of the rate of growth, and even to what extent growth is self-sustaining.

APPENDIX I

TABLE I

Per Capita Income in US dollars in 1949\*

## A. High income countries, \$600 or over, in descending order

United States	1,453
Canada	870
New Zealand	856
Switzerland	849
Sweden	780
United Kingdom	773
Denmark	689
Australia	679

## B.1. Intermediate income countries, \$300 to \$600

Norway	587
Belgium	582
Luxembourg	553
Netherlands	502
France	482
Iceland	476
Ireland	420
Israel	389
Czechoslovakia	371
Finland	348
Argentina	346
Uruguay	331
Venezuela	322
U.S.S.R.	308
Poland	300

---

\* United Nations Statistical Office, National and Per Capita Incomes, Seventy Countries, 1949, New York, Statistical Papers, Serie E, No. 1.

## B.2. Intermediate income countries, \$100 to \$300

Cuba	296
Hungary	269
South Africa	264
Portugal	250
Italy	235
Austria	216
Chile	188
Panama	183
Yugoslavia	146
Colombia	132
Greece	128
Costa Rica	125
Turkey	125
Lebanon	125
Mexico	121
Brazil	112
Southern Rhodesia	101
Peru	100
Syria	100
Japan	100
Egypt	100

## C.1: Low income countries, \$50 to \$100

El Salvador	92
Nicaragua	89
Iran	85
Iraq	85
Paraguay	84
Honduras	77
Dominican Republic	75
Ceylon	67
India	57
Bolivia	55
Pakistan	51
Afghanistan	50

## C.2. Low income countries, less than \$50

Philippines	44
Saudi Arabia	40
Haiti	40
Yemen	40
Ecuador	40
Ethiopia	38
Liberia	38
Burma	36
Thailand	36
South Korea	35
China	27
Indonesia	25

## Continental averages for countries covered

1. North America (excl. Mexico)	1,405
2. Oceania	703
3. Europe	379
4. Latin America	152
5. Africa	120
6. Asia	46

## APPENDIX II\*

TABLE I

	19th Century	20th Century	Per Capita Income in U.S. \$ in 1949
	% Rate of Population Growth per Decade		
<u>Europe</u>			
1. Switzerland	6.6	7.3	849
2. Sweden	8.1	6.5	780
3. United Kingdom	13.2	5.6	773
4. Denmark	10.0	10.7	689
5. Norway	9.8	7.4	587
6. Belgium	8.4	5.1	582
7. Luxembourg			553
8. Netherlands	9.2	15.0	502
9. France	3.8	0.85	482
10. Iceland			476
11. Ireland	-1.6	-1.7	420
12. Czechoslovakia		0.5	371
13. Finland	12.2	8.7	348
14. U.S.S.R.	10.7	12.8	308
15. Poland			300
16. Hungary	6.8	6.3	269
17. Portugal	5.3	9.4	250
18. Italy	6.0	7.0	235
19. Austria	7.0	3.8	216
20. Yugoslavia			146
21. Greece	9.7	12.8	128
22. Spain	4.5	8.2	
23. Bulgaria	5.4	13.1	
24. Germany	9.4	4.1	
			<u>379</u>
Countries covered			

\* Simon Kusnets, an unpublished statistical appendix prepared in connection with A Theory of Economic Growth, op. cit.

TABLE I (Continued)

North America

25. United States	29.1	14.7	1,453
26. Canada		21.0	<u>870</u>
Countries covered			<u>1,405</u>

Latin America

27. Argentina	34.0	30.6	346
28. Uruguay		21.2	331
29. Venezuela		27.5	322
30. Cuba		27.2	296
31. Chile		14.8	188
32. Panama			183
33. Colombia		23.5	132
34. Costa Rica			125
35. Mexico	7.7	13.7	121
36. Brazil	18.0	25.2	112
37. Peru			100
38. El Salvador		13.3	92
39. Nicaragua		18.2	89
40. Paraguay			84
41. Honduras		23.1	83
42. Guatemala		13.3	77
43. Dominican Republic		33.3	75
44. Bolivia		12.4	55
45. Ecuador			40
46. Haiti			40
47. Jamaica		14.3	
48. Porto Rico		17.9	
Countries covered			<u>152</u>

Oceania

49. New Zealand		18.8	856
50. Australia		17.3	<u>679</u>
Countries covered			<u>703</u>

TABLE I (Continued)

Asia

51. Israel		389
52. Turkey		125
53. Lebanon		125
54. Syria		100
55. Japan	14.4	100
56. Iran		85
57. Iraq		85
58. Ceylon	16.4	67
59. India	9.2	57
60. Pakistan		51
61. Afghanistan		50
62. Philippines	22.7	44
63. Saudi Arabia		40
64. Yemen		40
65. Burma	12.3	36
66. Thailand	22.5	36
67. South Korea		35
68. China		27
69. Indonesia		<u>25</u>
Countries covered		<u>46</u>

Africa

70. South Africa	20.9	264
71. Southern Rhodesia		101
72. Egypt	15.1	100
73. Ethiopia		38
74. Liberia		<u>38</u>
Countries covered		108

TABLE II

% Rate of Growth per Decade of Total  
Income, Population and Per Capita Income

Period	Income	Population	Per Capita Income
<b>1. U.K. (excluding Southern Ireland)</b>			
1. 1860-79 to 1880-99	29.5	11.5	16.1
2. 1880-99 to 1900-19	21.9	10.0	10.7
3. 1900-19 to 1920-39	11.4	5.5	5.5
Weighted geometric mean	20.9	9.0	10.7
<b>2. France (including Alsace- Lorraine)</b>			
1. 1840-79 to 1880-99	18.4	2.5	15.5
2. 1880-99 to 1920-38	10.2	0.7	9.4
Weighted geometric mean	14.5	1.7	12.7
<b>3. Germany (pre 1914)</b>			
1. 1860-79 to 1880-99	44.5	9.9	31.5
2. 1880-99-1895-1914	28.3	13.7	12.8
Weighted geometric mean	37.3	11.5	23.2
<b>4. Italy</b>			
1. 1861-80 to 1881-1900	37.9	6.6	29.3
2. 1881-1900 to 1901-1920	6.6	6.7	-0.1
3. 1901-20 to 1921-38	5.4	7.1	-1.6
Weighted geometric mean	15.9	6.8	8.5

TABLE II (Continued)

<b>5. <u>Switzerland</u></b>			
1. 1890-5-9 to 1925-29	29.8	7.9	20.3
2. 1925-29 to 1944-51	12.2	7.1	4.8
Weighted geometric mean	22.7	7.6	14.1
<b>6. <u>Denmark</u></b>			
1. 1870-89 to 1890-1909	35.3	10.8	22.1
2. 1890-1909 to 1905-20	32.1	12.9	17.0
3. 1905-20 to 1921-39	30.5	10.6	18.0
Weighted geometric mean	32.7	11.3	19.4
<b>7. <u>Sweden</u></b>			
1. 1861-80 to 1881-90	27.5	6.4	19.9
2. 1881-90 to 1901-20	35.1	7.1	26.3
3. 1901-20 to 1921-44	26.1	5.9	18.9
Weighted geometric mean	29.4	6.5	21.6
<b>8. <u>United States</u></b>			
1. 1869-88 to 1889-1908	52.4	23.2	23.7
2. 1889-1908 to 1909-28	39.8	19.0	17.6
3. 1909-28 to 1928-48	22.6	12.0	9.4
Weighted geometric mean	37.7	18.0	16.8
<b>9. <u>Canada</u></b>			
1. 1870-80 to 1890-00-10	45.7	15.8	25.8
2. 1890-00-10 to 1910-20-28	39.9	23.5	13.6
3. 1910-20-29 to 1929-39-50	30.8	16.6	12.2
Weighted geometric mean	38.6	18.5	17.1

TABLE II (Continued)

<b>10. <u>Australia</u></b>			
1. 1901-03 to 1921-30	34.7	19.5	12.8
2. 1921-30 to 1941-50	27.3	12.8	12.7
Weighted geometric mean	31.3	16.4	12.8
<b>11. <u>New Zealand</u></b>			
1. 1901 to 1925-29	28.5	24.5	3.3
2. 1925-29 to 1946-50	34.7	12.6	19.6
Weighted geometric mean	31.3	19.0	10.3
<b>12. <u>Japan</u></b>			
1. 1878-92 to 1893-07	56.5	11.4	40.5
2. 1893-07 to 1908-22	41.1	13.6	24.2
3. 1908-22 to 1923-37	60.7	12.1	43.3
Weighted geometric mean	52.6	12.4	35.8
<b>13. <u>Netherlands</u></b>			
1. 1900-09 to 1925-39	27.9	15.0	11.6
2. 1900-09 to 1948-52	23.4	14.2	8.2
<b>14. <u>Norway (G.N.P.)</u></b>			
1. 1900-09 to 1930-39	33.6	7.8	23.9
2. 1900-09 to 1946-50	32.7	7.9	23.0

## CHAPTER 2

### ESSENTIAL GROWTH FORCES

The assorted statistical and historical evidence that has been collected by many investigators indisputably proves that dynamic secular expansion characterizes some economies and some economic regions, while virtual stagnation simultaneously persists in other economies and regions. This regional contrast is equally observable in the national sense, e.g. the industrial north of Italy as opposed to the inert south, and in the international sense, e.g., North America and West Europe as opposed to Africa and Asia. There is no magic, however, in simple geographic differentiation because these general international regions have their islands of contrariness to common trends, such as the Caribbean Archipelago and Spain in the world's leading growth regions, and the Union of South Africa and Japan in what had long been continents of stagnation. Such phenomena over a prolonged period cannot be dismissed as quirks of fate or temporary incidents.

It is also demonstrable that where real economic progress takes hold as a dynamic process that it somehow becomes self-sustaining. In the opposite case, economic stagnation and even regression seem to be self-

perpetuating.<sup>1</sup> No attempt can be made at penetrating the mysteries of differential growth rates before the more basic problem of "growth or no growth" is set in some order.

Economic growth is such an infinitely complex process that the coexistence of many conditions seems to be necessary.<sup>2</sup> Basic growth forces can be identified as the indispensable dynamic elements among the many necessary economic and non-economic requisite conditions. The insistence on recognizing the complexity of factors is that the mere occurrence of these basic growth forces at any time is no guarantee that secular growth will be set in train. Without the coexistence of all the appropriate circumstances it is observable that growth may be a forward spurt that soon exhausts itself and not a self-sustaining secular process. Among these conditions are adaptability in the social structure and harmonious, purposeful political control to give a progressive lead and stability. It is possible for the dynamics of growth to be frustrated, diffused or wasted in an inappropriate

---

<sup>1</sup> Gunnar Myrdal - Economic Theory and Underdeveloped Regions, Duckworth, London, 1957, takes this question of the inertia of growth spirals and depressed statics as a major theme in several chapters.

<sup>2</sup> Harvey Leibenstein - Economic Backwardness and Economic Growth, John Wiley and Sons, New York, 1957, pp. 40-41, makes a comprehensive summary of the static characteristics of backward economies, the obverse of which must generally exist in the dynamic growth economies.

social or political setting where status, corruption or instability prevail against constructive progress.<sup>3</sup>

The very complexity of growth elements and the multiplicity of the possible combinations of them in various relative strengths offers the analyst an almost unlimited choice of points of attack in search of a break-through to the determination of the basic growth essentials. The variety of approaches used in the ever-growing literature illustrates the predicament. If an attempt was made to catalogue these many possible methods they could probably be grouped under the following approach type headings: i) philosophical, ii) historical, iii) empirical, iv) theoretical, v) focal (by which is meant here the focussing of attention on pre-selected major determinants). Actually each of these methods, or systems of emphasis, tends to blend into the others, with the overlapping probably most marked for adjacents in the list.<sup>4</sup> A detailed review of the increasingly voluminous

---

<sup>3</sup> John D. Adler - "The Fiscal and Monetary Implementation of Development Programs," American Economic Review, May, 1958, Papers and Proceedings - p. 584. "A large portion of the death rate of ambitious development programs has been due to the lack of liaison between the planners, official and unofficial, and the authorities in charge of the fiscal and monetary policies."

<sup>4</sup> In referring to these alternative approaches as systems of emphasis a key feature of economic analysis as a general science is explicitly stated. The art of economic analysis in connection with any problem is the proper weighting of the variables involved, or the degree of emphasis

literature under these categories would occupy at least one sizeable book, and while it would be a revealing and valuable exercise it would not be especially germane for our problem since it would provide a rich background without adding directly to its solution. Limitations of space, therefore, dictate a fickle sampling of some of the more appealing thoughts that the army of scholars have developed in their different ways.

Beginning with the most comprehensive approach sweepingly designed in the broadest of terms, the fascinating and persuasive discussion by Arnold Toynbee<sup>5</sup> of his concept of "challenge and response" as a central dynamic in the growth of civilizations, some very relevant conclusions are indicated. Toynbee demonstrates that achievements are not proportionate to the lushness of natural advantages enjoyed, but often in inverse ratio. But this argument is saved from reductio ad absurdum by recognition that the extremity of harsh conditions

---

assigned to the respective influencing factors in any situation. Often violently conflicting conclusions may be derived from analysis of the same set of conditions by two or more analysts, each being free of bias and objective, simply due to the differences in value judgements adopted, causing contrasting emphasis. In the present problem this sort of shifting weight of emphasis gives rise to the several choices adopted by writers in selection of focal areas of growth, or prime causes.

<sup>5</sup> Arnold J. Toynbee - A Study of History, Somervell abridgement, cited.

can break the strongest spirits and frustrate almost super-human efforts. The compromise conclusion is phrased finally in terms of a "golden mean" and "enough but not too much". All of which strongly implies for the economist that natural climatic, geographical and geological advantages are not in themselves the mainspring of progress, and that what is probably more important is the real effort put forth by men to utilize the potentialities of their environment. It would appear that progress is maximized where the degree of effort called forth is most intense, because the environment does not yield its fruits without a struggle, and yet there must exist sufficient potential of wealth that the challenge is not insurmountable. This particular philosophical consideration of progress in the widest sense has peculiar importance because it crystalizes the too-often ignored heart of the problem of economic progress, that growth is not simply dependent on economic criteria but is really a problem of man's readiness and eagerness to utilize existing opportunities and make new ones in a purposeful search for material betterment.

To restore a proper balance to these abstract considerations in the context of economic growth a quotation from de Jouvenel is appropriate:

In brief, people are not sufficiently clear as to the fact that what we call "production" can never be anything but the processing of natural resources, and depends entirely on those natural resources. It would be absurd to regard certain natural resources as the source of economic development, as its

effective cause - as was done by those who declared that England became the world's leading industrial power because she was carried to that position by the wealth of coal in her subsoil; there was coal in other parts of the world. But it is permissible and salutary to regard natural wealth as a material cause, in the Aristotelian sense of the term.<sup>6</sup>

Turning attention to economic writers who have explicitly dealt with the question of growth forces, a quotation from Howard Ellis on prime causes is instructive:<sup>7</sup>

Our survey has pointed especially to four moving causes: innovation (in the broad sense indicated by Schumpeter); cultural factors, of which the chief seems to be political; third, the autonomous factor of the "balanced growth"<sup>8</sup>; and fourth, the increase of population in countries not already overpopulated.

In this same article Ellis imputes to Kuznets the notion that population increase and capital accumulation are the prime movers in economic progress. This may be a fair judgement based on some of the writings of Kuznets but he broadens the conclusions elsewhere.<sup>9</sup> His most generalized treatment of the problem lists and discusses the groups of processes which he describes as:

---

<sup>6</sup> Bertrand de Jouvenel - "From Political Economy to Political Ecology," in the Eastern Economist's Supplement on the Problems of Economic Growth, April 26, 1957.

<sup>7</sup> Howard S. Ellis - "Conditions and Rates of Economic Growth", in Journal of Farm Economics, December, 1955, p. 811.

<sup>8</sup> Ragnar Nurkse - "Some International Aspects of the Problem of Economic Development", in American Economic Review, Papers and Proceedings, May 1952.

<sup>9</sup> Simon Kuznets - "Toward a Theory of Economic Growth" in National Policy for Economic Welfare, cited, p. 58.

....the strands that seem to be woven always into the fabric of economic growth and seem sufficiently distinct on the surface even though they are basically interrelated through the factors behind them. There are at least five such topics for which there are subtheories that eventually should be united into one theory of economic growth; population growth, growth of the stock of knowledge, long-term processes of internal adaptation to growth potentials, external relations of national units in both cooperation and conflict, and theoretical interrelations among these complexes; and whatever components within each can be distinguished.

Discussing a deliberate approach to the stimulation of economic development by the responsible planning authorities, W. Arthur Lewis<sup>10</sup> summarizes his main thoughts as follows:

When the government of a poor country decides to try to accelerate economic growth, it needs to adopt measures of four kinds: (1) changing institutions and habits, (2) providing new services and commodities, (3) controlling private activities, and (4) mobilizing finance for development.

This prescription is noteworthy in that it explicitly assumes that no automatic process of economic growth will come into being simply through the creation of the necessary pre-conditions for economic growth. In his highly respected book, Lewis elaborates this assumption in some detail to show that effective development planning is a clear responsibility of government and is virtually essential for continuing

---

<sup>10</sup> W. Arthur Lewis - "Sponsored Growth: A Challenge to Democracy," in the Eastern Economist's Supplement on the Problems of Economic Growth, April 26, 1957.

economic development.<sup>11</sup>

Meier and Baldwin endorse Lewis' recommendations with some changes of emphasis only:

Various general areas for government action are suggested. First, the government may have to establish markets by promoting suitable institutional arrangements. Second, government enterprise is needed in those fields where profits are too low or the risks are too large to attract private enterprise. Third, government enterprise is justified in those activities in which, even though they might be performed by private enterprise, the results would be less satisfactory than those of government performance. Fourth, government direction is needed to promote external economies, and more generally, "balanced growth."<sup>12</sup>

Elsewhere Lewis has also underlined another very vital aspect of the growth process with the statement:

The central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5 per cent of its national income or less, converts itself into an economy where voluntary saving is running at about 12 - 15 per cent of national income or more. This is the central problem because the central fact of economic development is rapid capital accumulation (including knowledge and skills with capital). We cannot explain any "industrial

---

<sup>11</sup> W. Arthur Lewis - The Theory of Economic Growth, Allen and Unwin, London, 1955, presenting views shared by United Nations - Measures for the Economic Development of Under-developed Countries, New York, 1951, and very positively by Gunnar Myrdal - Development and Under-development, National Bank of Egypt, Fiftieth Anniversary Commemoration Lectures, Cairo, 1956, also, with rather different emphasis, by Seymour E. Harris - Economic Planning, Knopf, New York, 1949, but rejected critically by F. T. Bauer and B. S. Yamey - The Economics of Under-developed countries, Cambridge Economic Handbooks - Cambridge Press, 1957.

<sup>12</sup> Meier and Baldwin - Economic Development, op. cit., p. 361.

revolution until we can explain why saving increased relatively to national income.<sup>13</sup>

This key problem of raising the savings-investment rate, or in broader terms capital formation and the financing of economic growth, has been a central theme of a considerable section of the body of literature on economic progress.<sup>14</sup> No matter what other measures are taken or obstacles are overcome in the social, cultural, political or other economic spheres there is no solution to generating rising income unless there is a satisfactory rate of savings and investment, or substitute capital supply from foreign sources.

The essential contributing factor of a high marginal rate of savings is prominent in Adler's considerations as well, but he also develops another important factor that is seldom explicitly analyzed. With regard to the availability of resources, the size of the market, and the technological

---

<sup>13</sup> W. Arthur Lewis - "Economic Development with Unlimited Supplies of Labour," Manchester School, May, 1954.

<sup>14</sup> As significant representative writings, see Ragnar Nurkse - The Problems of Capital Formation in Underdeveloped Countries, Oxford Univ. Press, 1955; U.N. - Domestic Financing of Economic Development, New York, 1950; Charles Wolf and Sydney C. Sufrin - Capital Formation and Foreign Investment in Underdeveloped Areas, Syracuse Univ. Press, 1955; Capital Formation and Economic Growth - National Bureau Committee for Economic Research, Princeton Univ. Press, 1955, especially the contributions by Huznets, Goldsmith and Rostow; A. K. Cairncross - "The Place of Capital in Economic Progress" - in Economic Progress, edit. L. Dupriez, cited.

and organizational interaction of various industries, he lays stress on the importance of external economies to lower costs, increase productivity and stimulate income growth, in these words: "If the rate of economic growth of underdeveloped countries is to be accelerated, main reliance has to be placed on the creation of external economies through the availability of social overhead capital".<sup>15</sup> Which thought also links back with the one earlier mentioned concerning the role of government and the necessity for planning. It should not be an unexpected result that as more additions are made to the list of growth determinants and stimulants so will the uniqueness of these factors pale and their mutual interdependence become more apparent.

Since the provision of social overhead capital, often a basic requirement of further economic growth or development, is frequently beyond the means of underdeveloped countries, trapped by the vicious circle of poverty which enforces a low rate of savings and investment, there is almost invariably initial dependence on foreign capital supply.<sup>16</sup>

---

<sup>15</sup> John D. Adler - The Fiscal and Monetary Implementation of Development Programs, op. cit., p. 590.

<sup>16</sup> U.N. - Methods of Financing Economic Development in Underdeveloped Countries (with contributions from F.O.A., IBRD, and ILO), New York, 1949, and many other U.N. and private publications.

This raises two highly important issues. As the many protagonists of the thesis that given adequate supplies of capital the process of economic development will take root anywhere and allow these countries to realize their full potential argue, the actual flow of foreign capital, both private and institutional or governmental, is woefully inadequate for the needs of these capital starved areas. One can easily take issue with these one-eyed extremists and demonstrate that in many instances the underdeveloped countries have not the absorptive capacity, in terms of institutional readiness, internal stability, and especially entrepreneurial and technical skills, to utilize investment capital in greater volume for efficient productive purposes.<sup>17</sup> A second equally important question of debt carrying capacity has been largely ignored because of its intricate nature and the inaccessibility of the pertinent statistics upon which its resolution depends. Only very recently has the Research Staff of the International Bank for Reconstruction and Development filled this gap by coming to grips with the inescapable problem of the debt carrying capacity of debtor countries related to their existing domestic and foreign indebtedness, levels of income, rates of savings and balance of payments structure, with due

---

<sup>17</sup> Cairncross - "The Place of Capital in Economic Progress," op. cit.; and C.N. Vakil and P. R. Brahmanand - "Technical Knowledge and Managerial Capacity as Limiting Factors on Industrial Expansion in Underdeveloped Countries" - in Economic Progress, edit. Dupriez, cited.

regard for expansiveness and flexibility of all these.<sup>18</sup> Gauging the capital absorptive capacity of a country by criteria of debt-income ratios may smack too much of hard headed finance but it is realistic economics. Fortunately this determinant does not set a limit to the actual capital supply because other international lending channels exist to supplement the supply of hard loans with soft loans and grants-in-aid, like the Colombo Plan, the U.S. International Cooperation Administration and the new Development Loan Fund.

One other writer who gives explicit attention to the importance of the rate of saving but combines it with other significant requirements for the initiation of a continuous growth process is W. W. Rostow. He briefly summarizes his own viewpoint as:

For the present purposes, the take-off is defined as requiring all three of the following related conditions: (a) a rise in the rate of productive investment from (say) 5 per cent or less to over 10 per cent of national income (or net National Product); (b) the development of one or more substantial manufacturing sectors, with a high rate of growth; (c) the existence or quick emergence of a political, social and institutional framework which exploits the impulses to expansion in the modern sectors and the potential external economy effects of the take-off and gives the growth an on-going character.<sup>19</sup>

---

<sup>18</sup> Debt Servicing Capacity and Postwar Growth in International Public Indebtedness - Economic Staff of the International Bank, prepared by Dragoslav Avramovic, August 27, 1957, a confidential report not for public use.

<sup>19</sup> W. W. Rostow - "The Take-Off into Self Sustaining Growth", in The Economic Journal, March, 1956, also in his book, The Process of Economic Growth, W.W. Norton & Co., New York, 1952, he was exploring similar but less precise notions in the various "propensities".

In this sample survey of the variety of theories and areas of emphasis in the ample literature it would be a serious omission to neglect the direct attack that Professor Spengler has made on the central problem of this chapter, which he presents in the following manner:

The factors affecting economic growth, being manifold in quantity and quality, may be variously subdivided. (1) They may be subdivided into (i) factors which operate relatively directly and immediately upon various indices of economic growth and (ii) factors which operate upon these mediately and indirectly through the medium of factors included in (i). (2) They may be subdivided into (i) relatively constant factors, such as climate, which merely condition or constrain growth; (ii) factors such as the relative "fulness" of employment, increases in which, being possible only up to a point, can exercise only a limited and non-continuing influence upon economic growth; and (iii) factors such as improvements in technology and increases in the stock of capital which, being susceptible of continuing augmentation, may continuously push certain growth indices upward. (3) While still other subdivisions are possible, they will not be utilized in this essay.<sup>20</sup>

He then goes on to describe several of the more important direct determinants of economic growth, through which the state and social structure influence growth indirectly. The first determinant is the rate of increase in output per worker which is dependent, in an indeterminable relationship, on the rate of increase of productive equipment. Any

---

<sup>20</sup> Joseph J. Spengler - "Social Structure, The State, and Economic Growth", in Economic Growth: Brazil, India, Japan. Editors, Kuznets, Moore and Spengler, Duke University Press, Durham, N.C., 1955.

immutable proportionality between income and wealth cannot be established. The second determinant is the amount of investment made in individuals for health, general education, technical training and general well-being, which conditions the individual's capacity for increasing output. He concludes that international differences in personal investment appear to be responsible in a significant degree for international differences in per capita income. The third determinant is the rate of shift of productive population from agricultural to secondary and tertiary industry.<sup>21</sup> This is particularly true when it entails the transference of underemployed labour out of agriculture in overpopulated countries.<sup>22</sup> Naturally this process reaches a point of diminishing returns when the marginal output of the last worker transferred was equal in agriculture or in secondary industry. The fourth determinant is the labour input, which depends on the size, efficiency and industry of the working force, the hours worked per week and the degree of avoidance of unemployment or underemployment, and it might be mentioned

---

<sup>21</sup> Colin Clark - Conditions of Economic Progress, prev. cited bears this out with detailed statistical data, in fact it might be termed his central theme.

<sup>22</sup> Ragnar Nurkse - Capital Formation in Underdeveloped Countries, cited, is responsible for directing attention to the importance of underemployment in agricultural communities as a wasted asset.

of work stoppages arising from political, social or industrial disputes. The fifth is the level of technology and its rate of improvement. The sixth is the supply of entrepreneurial skill and the freedom to use these skills. Finally, he also discusses population growth as a direct growth factor, always in terms of aggregate income and generally stimulating some rise in per capita income, although recognition is given to the diffusion and retardation influences of an overly rapid rise in population.

Under indirect determinants, Spengler discusses only some factors. Among these he includes: (1) human values that influence goals and the measure of effort put forth; (2) institutional circumstances facilitating or impeding the accumulation and diffusion of scientific and technical knowledge; (3) laws and institutions relating to contract, property holding, taxation, market organization for goods and factors of production. All of which he shows are closely related to the cultural patterns of a country.

Separately he discusses the involved question of the role of the state, which clearly differs as the structure and ideology of the state varies. Then he turns attention to the role of social structure in influencing economic growth, dealing with sociological problems of individual and collective action, status and social mobility, forms and goals, all of which have considerable bearing on the

willingness and capacity to accept change and achieve improvement.

Leaving Spengler, but not his ideas, it is an appropriate place to give attention to the more or less definite statements of F. C. Mills, whose comments in some senses complement this analysis while stressing the essential determinant of the rate of productivity, which is a complex of all factors covered by Spengler. The central doctrine expounded by Mills is contained in this passage:

Economic resources may be used for maintenance, for defense, or for material progress. Maintenance includes the support of the population (which may be a growing population) at an established consumption level and the full upkeep of an existing stock of capital equipment. .... Economic progress is possible when there is a margin of output over and above the needs of maintenance and defense. .... The aggregate physical output may be expanded by an increase in the input of human effort or by an increase in output per unit of labour input.<sup>23</sup>

This idea is also neatly captured by Professor Raul Prebisch of the Economic Commission for Latin America who links productivity with savings in his simple statement: "The margin of savings depends ultimately upon the progressive increase of labour productivity".<sup>24</sup>

---

<sup>23</sup> F. C. Mills - Productivity and Economic Progress, Occasional Papers 38, National Bureau of Economic Research, Inc., New York, 1952, pages 2-3.

<sup>24</sup> Raul Prebisch - The Economic Development of Latin America, and its principal problems, United Nations, Latin American Success, 1950, p. 37.

Prebisch also directs our attention with persuasive emphasis to industrialization as another growth essential, a thought given ample recognition by many other writers as well. Industrialization has already been included as a specific growth force in the remarks quoted from W. W. Rostow, in which "the development of one or more substantial manufacturing sectors, with a high rate of growth", was stated as a requirement for the take-off into self sustaining dynamic growth. It also enters as a significant determinant in Spengler's approach, the rate of shift of productive population from primary to secondary industry. Prebisch explicitly makes his case for industrialization, while in countless other writings it is implicit in the prescription of the necessity for intensification of capital formation and rising productivity. The allure of industrialization is probably contained in the prevalent but usually undefined conviction that W. W. Rostow has explored elsewhere in a provocative article, that: "In some meaningful sense, over-all growth appears to be based, at certain periods, on the direct and indirect consequence of extremely rapid growth in certain particular key sectors."<sup>25</sup> Certainly economic planners around the world are devoted to the conviction that rapid

---

<sup>25</sup> W. W. Rostow - "Trends in the Allocation of Resources in Secular Growth", in Economic Progress, Edit. L. H. Durpiez, cited, p. 370

growth can only be accomplished if manufacturing industry is promoted as the key sector. The logic of the Lenin-Stalin persuasion that economic strength and prosperity can be measured by and must be based on electrification, the prerequisite of industrialization,<sup>26</sup> is irresistible to all who seek the positive road of progress by state action either through force or persuasion.

Obviously industrialization must claim an important place among the key determinants of economic growth. The fact that all the advanced and richer countries are highly industrialized is in itself sufficient proof. The amount of attention devoted to this aspect of economic progress is impressively indicated by the listing of 2290 separate titles of books, reports, monographs, and essays in the United Nations' Bibliography on Industrialization in Underdeveloped Countries.<sup>27</sup> Partly because of its recognized and well publicized importance, but also because a more detailed examination of its place in the growth process will be made later in Part II, this generator of progress will be passed by with only this casual attention in this chapter.

The foregoing survey of growth determinants may by

---

<sup>26</sup> Maurice Dobb - Soviet Planning and Labour, in Peace and War, International Publishers, New York, 1943.

<sup>27</sup> United Nations - Bibliography on Industrialization in Underdeveloped Countries, Lake Success, 1956.

this time have evoked a feeling of critical protest in the reader on the grounds that what has actually been done is to probe in a variety of directions for the dynamics of economic development, which is not the same thing as investigating the dynamic process of economic progress. Up to this point the literature has been skimmed for specific prime causes that may establish a self-sustaining basis of economic growth where static stability, or retarded stagnation, has existed before. This approach has not been the simple consequence of parroting the popular treatment of the problem. As an analytical method it is logically justified. Only by the comparative examination of advanced countries enjoying the benefits of secular expansion and of underdeveloped countries in stagnation can it be determined what factors and forces are present in the one group and absent in the other. By this means the dynamic growth forces can surely be identified. Even after isolation of the key determinants of "growth" or "no growth", attention is focussed on the underdeveloped economies because empirically these growth forces are effective generators of progress in the advanced economies, but it is still not certain that their implantation in the stagnant setting will automatically promote a self-sustaining growth process. Secular progress is such an involved manifestation of complex forces, both economic and non-economic, that it still remains to determine what combination of conditions in

what balance is required for the transformation from stagnation to progress in terms of both prime causes and necessary responses. This difficult question has certainly not yet been satisfactorily answered in the foregoing pages. Evading this challenge for the moment, it does seem necessary to give some overt attention to the dynamics of growth in advanced economies.

Essentially all the growth forces identified so far plainly do exist in the expanding economies of the world. The proportionate strength of such key determinants as savings-investment - income ratios, rates of population growth, planning and political management, education advance and social responses, balance and adjustment among the parts, varies greatly among the expanding economies. But then, too, so do the comparative growth rates. By implication there should be an optimum combination of growth factors and circumstances. Yet, it is probable that the creation of an optimum growth model<sup>28</sup> would be an elegant academic abstraction with little relevance to reality, because there is no uniformity in growth potentials, for both economic and social reasons.

It is sufficient for the purposes of this chapter to lay some stress on innovation, the growth force that only

---

28: T. Haavelmo - A Study in the Theory of Economic Evolution (Contributions to Economic Analysis 3), Amsterdam, North Holland Publishing Company, 1954.

claims prime importance in industrialized societies, and probably has pre-eminent importance only when a satisfactory rate of savings-investment is achieved. In an advanced industrial society, once the natural advantages offered in the opportunities to exploit existing resources have been utilized fully, a practicable diversification has usually taken place. This should result in a productive structure that makes the best economic use of factors of production with regard to opportunity costs. Also, the scale of production in respective industries and sectors will have been pushed to the optimum rate in relation to the extent of the market. Investment then would find appropriate application only in the maintenance of the stock of fixed capital, or normal replacement investment. This would serve to maintain income, if consumption is sufficiently high and idle savings are not accumulated. Here is a picture of high income stagnation. The only remaining dynamic element in the economy would be by extension of the market at home through population increase, or possibly abroad through increasing income and import demand. However, a high rate of investment empirically has been possible, giving rise to ever growing productive capacity and real national income in such advanced societies through the autonomous investment possibilities contingent upon a constant stream of innovation, allowing a changing and expanding economy. Adaptability, the desire for change and progress,

increasing technical knowledge, venturesome entrepreneurs, and conducive political and social conditions are requisites for innovation in these advanced economies, even as they are in different forms for investment generally in the underdeveloped economies.<sup>29</sup>

Strictly speaking, we have not solved the sticky problem of assessing the weight of impact of growth forces either in the underdeveloped or the advanced economies. Identification has been made of the leading determinants of the expansive impulse, that in a proper setting do seem to take hold and become self-sustaining for secular progress. But what is meant by "a proper setting" has not been defined with any precision, and probably cannot be, if for no other reason than that no two sets of circumstances, physical or cultural, are comparable, so that the operative strength of the determinants must be different as these conditions of the economic

---

29. J.A. Schumpeter - The Theory of Economic Development, Cambridge, Mass Harvard University Press, 1934.

R. F. Harrod - Towards a Dynamic Economics - London, Macmillan and Co. Ltd., 1948.

E. D. Domar - "Capital Expansion, Rate of Growth and Employment," Econometrica, April 1946, and "Expansion and Employment," American Economic Review, March 1947.

J. K. Hicks - A Contribution to the Theory of the Trade Cycle, Oxford, The Clarendon Press, 1950.

D. Hamberg - Economic Growth and Instability, New York, W. W. Norton and Company, Inc., 1956.

These works have developed, elaborated and refined the concept of autonomous investment related to innovations as the key dynamic in an advanced industrial economy, not only as the prime growth force but as key variant over the trade cycle.

environment vary. For those defenders of the faith who may protest that these statements under-rate the fine exactness of the reputedly sophisticated understanding of economic processes achieved by modern practitioners of the arts of analysis, the author in his turn protests that we delude ourselves if we pretend to have really grasped the dynamics of the short term cycle. Complete understanding would permit dependable prediction within tolerable margins of error, which in turn would provide almost infallible grounds for suitable policy delineation. Our understanding is gradually improving, but we still fail in attempts to detect and project the consequences of dynamic economic interrelations in terms of time, intensity, and proportions. Having failed to penetrate the economic complex of the short run growth spurt, it would be not merely audacious but presumptuous to profess detailed appreciation of the qualitative and quantitative complications of the long run process of secular expansion. The characteristics and the general conditions can be grasped piecemeal, as the authors quoted in this chapter have done very ably. But, as they all admit, an integrated theory of growth is not yet attainable. This being so no direct answer to the question of how to achieve a specified rate of growth over a continuous period, regardless of the particular conditions prevailing, will be attempted here. The best that can be hoped is that the following chapters will contribute something to the elucidation of this fundamental problem.

Partly in reiteration of the several conditions of progress, and partly to demonstrate in another way the complexity of the matter, an alternative approach to classifying and appraising these growth forces might be indicated briefly. It would be repetitious to evaluate in detail the nature and significance of these elements of progress, which surely must be the old forces wearing new labels only. This alternative possibility is to group the individuals comprising the economic society according to their major roles in economic life, admitting that the indicated groups are never mutually exclusive, and study them for attitudes, motivation and responses serving to stimulate or retard economic growth under a variety of circumstances. The suggested groups would be: consumers, and producers, subdivided as workers and entrepreneurs; savers and investors; innovators and followers; government, as policymaker and administrator; social, institutional and religious groups; and finally man as a self-propagator.

Reference might be made to one final system of classification of growth forces, according to whether they are endogenous or exogenous. This is a significant approach to the central problem because it sheds light on the degree to which any country, underdeveloped or advanced, may sustain the momentum of its own economic growth self-reliantly, and perhaps automatically. Within the group of endogenous factors and forces would certainly be included the supply of all

factors of production, including natural resources, although the utilization of these factors is the reflection of numerous direct and indirect causes, several of which may be considered as exogenous. Back of this is the broad basic situation embraced in the economic geography of any country. Other main endogenous elements are, in an essential sense, the rate of population increase, the rate of domestic savings and investment, and social adaptability. Turning to exogenous forces it is easiest to think of these as all those growth influences which are borrowed, like taste, techniques, competitive dissatisfaction and the will to seek change, and foreign capital, aid and guidance of every kind. In addition, there are the always present exogenous influences arising out of international relations, mainly commercial. These, of course, vary in strength depending on the foreign trade coefficient of each country, but are reflections of the terms of trade, the rate of market growth for exports, and in consequence the capacity to import as reflected in the balance of international transactions. This classification of growth forces as endogenous or exogenous would undoubtedly falter over some areas of prime cause that would refuse to fall neatly into either category, being either indirect in origin or chain of impact, and could only be called neutral forces. Similar to those that are indefinite as to origin, are others which are imprecise as to time, being evolutionary

in origin and application, and these too should be called neutral.

The only safe general conclusion is that regardless of what approach is used to determine essential growth forces, or whatever system of classification may be adopted, no clear and precise pattern of causes and results will emerge. The factors involved are many and infinitely complex in their interrelationships. As stressed before, no two cases are identical either in economic or non-economic terms. This does not mean that the various aspects of the problem defy understanding. But it does mean that the number of possible cases is almost limitless, which does prevent the inclusion of all within any conceivable formula or law of economic growth.

## CHAPTER 3

### POPULATION AND GROWTH

In the preceding chapter population increase has been identified as a major growth force. However, in Chapter One the statistics showed that countries swarming with teeming hordes are not generally the richest. In fact, those countries that have had the highest rate of population growth during the twentieth century are at the lower end of the income spectrum. Even when the national income rise is at a healthy annual rate, the dissipation effects of a high rate of population growth results in a low rate of per capita income growth. Admittedly aggregate growth is positive growth. Also comfort may be taken from the fact the worst of the Malthusian<sup>1</sup> forebodings have not come to pass. But is it enough to be able to tread water hard enough to keep the people's heads barely above the water line of subsistence?

The evidence is regrettably sparse in precise

---

<sup>1</sup> Malthus - An Essay on the Principle of Population (1798). Even today it is necessary to repeat that the First Essay contained his pessimistic statement of the case and that in the Second Essay (1803) the possibilities of expanding population along with increasing standards of living and thus economic growth entered his theories.

statistical terms for the heavily populated, poor, underdeveloped countries, but what there is contains mixed implications. There are indications that population is not a pure growth force; that in addition to the income dissipation effects there may be positive retardation effects wasting and annulling some of the economic progress otherwise attainable. It is these mixed implications which must be given serious consideration if growth paths are to be projected and international interactions are to be understood.

The population dilemma, which is the diffusion of national income gains among an ever increasing population to restrict the improvement in living standards, is peculiarly associated with the problems of economic development. In the advanced or economically developed countries the population dilemma disappears, almost axiomatically. By attaining a sufficiently high rate of expansion, the widening market and increasing supply of labour are positive benefits of population growth more than off-setting the income dissipation consequences, despite the worries expressed by organized labour in protest against easy immigration policies. Also, in advanced countries the population growth rate has become attuned to economic circumstances.<sup>2</sup> The statistics cited

---

<sup>2</sup> H. H. Villard - "Some Notes on Population and Living Levels," Review of Economics and Statistics, May, 1955.

in Table I, Chapter 1, are not absolutely conclusive as empirical evidence but they do show unmistakable correlation between population trends and rates of economic expansion for advanced countries. The empirical evidence supports the sociological logic of responses of urbanized, literate people, among whom family formation is at least as much deliberately planned as it is accidental.<sup>3</sup> It seems to be a fair premise that any tendency to stagnation among the richer, more advanced countries would result in an increasing hard core of structurally unemployed, a probable withdrawal of women from the labour force and consequently a reduction in the number of family units budgeting on double income, a virtual end to overtime earnings and supplementary job income, all of which would combine to dampen expectations of ever widening consumption horizons, and this would have an inevitable impact on the size of the planned family unit. Plainly stated, the rate of population increase would be arrested, or at least slowed down. In underdeveloped, overpopulated countries, persistent and even increasing rural underemployment, or disguised unemployment,<sup>4</sup> never has acted as a check to the

---

<sup>3</sup> Dennis H. Wrong - "Trends in Class Fertility in Western Nations," C.J.E. P.S., May 1958.

<sup>4</sup> Ragnar Nurkse - Problems of Capital Formation in Underdeveloped Countries, cited, popularized this concept in the literature, although Alfredo Navarrete Jr. and Ifigenia M. de Navarrete in "Underemployment in Underdeveloped Economies;" International Economic Papers of The International Economic

growth of population, and it is in these countries that the population dilemma is acute.

The economist has no easy task arriving at a definite position in regard to population trends and projections because these are shaped by the particular traditions, habits, customs, religious influences and other sociological circumstances peculiar to the particular cultural pattern.<sup>5</sup> Population questions can never be treated adequately in purely economic terms. Basically this is the demographer's field and the most tempting way out of this complex set of problems for the economist is to withdraw gracefully and leave it to

---

Association, No. III, The MacMillan Company, New York and London, 1953, p. 236 attributes its origin to Joan Robinson, Essays in the Theory of Employment, 2nd edition, London, 1947, p. 62. The reality of disguised unemployment existing on a large scale, in the usual sense of zero or less than zero marginal productivity, is disputed by Jacob Viner - "Stability and Progress: The Poorer Countries' Problem," in Stability and Progress in the World Economy, edited D. C. Hague, MacMillan and Co., London, 1958, p. 50, while in the attendant discussion the concept was defended by Professor C. N. Vakil, p. 67, and Professor Ragnar Nurkse, p. 70.

5 Woytinsky, W. S. and Wotinsky, E. S. in World Population and Production, Trends and Outlook - the Twentieth Century Fund, New York, 1953, in chap. 7, pp. 241-262, clearly demonstrate the uncertainty and conflict in methods and views associated with attempts to ascertain population trends and make projections and forecasts, which must allow for a spread between high and low estimates to have practical value, which method was adopted by Royal Commission on Canada's Economic Prospects - Final Report, November, 1957, Ottawa, Canada, pp. 97-106, and with greater explanation in Output, Labour and Capital in the Canadian Economy, chap. 4.

the demographer. However, the economics of population cannot be dismissed by abandoning the responsibility for its understanding to other disciplines, because population is another generic description of society, the very stuff of the economist's problems. People are producers, as entrepreneurs or workers, they are consumers, and they are investors. Abstract terms, like factors of production, and extent of the market, are simply dehumanized descriptions of population in economic terminology with restrictive qualitative and quantitative connotations. Population, then, is both the beginning and the end of the economist's task and there can be no deep understanding of either the structure of an economy or the motivation of economic action that does not reach back into the confusion of sociological patterns.<sup>6</sup> There is absolutely no escape from the obligation to deal with this most unyielding of matters in any treatment of growth problems, for people are the only real generators of economic change, the source of dynamics.

Since population is such a many natured beast, it cannot be fully considered in the great variety of ways required for adequate understanding in any brief discus-

---

<sup>6</sup> Margaret Mead, Cultural Patterns and Technical Change, UNESCO, 1952, reprinted as Mentor Book, New York, 1955.

sion.<sup>7</sup> The limited approach used in this chapter will be restricted to two main questions: 1) consideration of the significance of population growth as a prime element in the process of economic growth, a question carried over from the previous chapter; 2) the influence of population on the relative rates of economic growth as it affects international comparisons of leads and lags.

#### Population as a Growth Factor

The most basic generalization specifying the real significance of population as a growth factor is offered by Belshaw.<sup>8</sup>

Output in an economy is a function of the size and efficiency of the labour force, and of the size and quality of the stock of wealth which it uses. Wealth consists of capital and natural resources. The primary determinants of growth are an increase in the labour force and in the stock of capital, and innovations which improve the quality of labour, capital or organisation.

---

<sup>7</sup> Woytinsky and Woytinsky, op. cit., best treat the subject in all its complexity.

United Nations, The Determinants and Consequences of Population Trends, Population Studies, No. 17, New York, 1953, contributes enormously to an understanding of the relationships between population changes and social and economic conditions, statistically, and analytically and in a comprehensive review of the literature.

<sup>8</sup> Horace Belshaw, "Population Growth and Levels of Consumption in New Zealand", The Economic Record, Vol. XXXI, No. 60, May 1955, p. 2.

In elaborating this statement, Belshaw points out that while levels of consumption rise with growing population it is not a necessary consequence, for the improvement in the rate of rise of consumption might have been greater with a slower rate of population growth. This approach to the question has the merit of clearly stating: i) that population increase is a positive growth generator, ii) that it is not an automatic and independent growth generator, iii) that economic growth in per capita income terms is not always positively or proportionately responsive to population increase. Due to a concentration of attention on direct consequences without regard to secondary effects of population growth, the conclusions tend to be over simplified.

Another excellent statement of the essential considerations comes from Spengler:

The population problem usually arises because labour is not the only economic factor of production and therefore not all output is imputable to labour. If labour were the sole factor of production and there were no economies of scale, the population problem would not manifest itself until the amount of space available per head had begun to prove inadequate. Even given economies and diseconomies of labour organization, per capita output would tend to increase until the labour force had reached a size commensurate with full realization of the net economies of labour organization; beyond this point diseconomies would outweigh economies of organization and per capita income would decline until it had descended below the level deemed desirable, given the size of the population. Not all output is imputable to labour, however. Only in the neighbourhood of 80 per cent of net output is attributable to labour in various forms, the balance being imputable to the nonhuman productive agents utilized

jointly with labour. The population problem comes into being, therefore, because the stock of these agents available for use with labour becomes too small.<sup>9</sup>

Disregarding momentarily the fact that a large or rapidly growing population entails complex problems, it can be stated that human resources are the most important single factor of production and therefore the prime economic asset. Natural resources would be valueless without labour to exploit them and consumers to utilize their product. Capital would not be generated without the human acts of production, saving and investment. Taking Spengler's statement of the relative importance of labour in the productive processes as responsible for 80 per cent of net output, and the initial simplifying assumption of this paragraph, it might be expected that there should be a direct proportionality between total output and total population. While this result does not hold in reality, for the reason stated and others that must be considered presently, there is perhaps a message of hope for these countries confronted with a population problem in such an unsophisticated conclusion. It may well be that the truly relevant problem for heavily populated, underdeveloped countries is how to realize the potential of this major productive agent and turn a burden into the asset it should be.

---

<sup>9</sup> Joseph J. Spengler, "The Population Problem: Dimensions, Potentialities, Limitations", American Economic Review, Vol. XLVI, No. 2, May, 1956, Papers and Proceedings, p. 338.

The promise of this simple approach is, however, not easily realized. A well reasoned study of the United Nations succinctly points up the critical difficulties:

In any analysis of the economic effects of the size of populations and changes in their rates of growth, it is necessary to keep in mind the fact that consumption is involved no less than production.

The implications of change in the number of producers depend upon the relationship between population and the other factors of production, land and capital. Where land resources are abundant in relation to population, it is the fact that the number of producers is small that is likely to constitute an obstacle to industrialization. Many of the countries that have experienced a fairly rapid rate of industrial expansion in recent years - Argentina, Australia, Canada and the Union of South Africa, for example - have been those in which population growth, whether by natural increase or by immigration, has contributed to a better use of natural resources. The resultant increase in production gave rise not only to an increase in incomes, and hence in the demand for manufactures, but also to an increase in the margin of savings, and hence in the capacity to invest in industrial plant.

The advantages of an increasing population, however, can be realized only if the volume of investment is sufficient to supply the growing labour force with an increasing per capita amount of productive equipment so that average output can be raised. In a country with a low per capita level of income and a severe shortage of capital, rapid natural growth of population tends to add to the difficulty of saving and investing enough to achieve this result; for in such circumstances, a large part of the new capital formed each year is pre-empted for the working equipment, education, housing, health service and so forth required merely to maintain the existing level of capital assets per person, before anything becomes available for new industrial investment. Consequently, excessively rapid growth of population may hinder the industrialization even

of a country with relatively abundant land and other natural resources.<sup>10</sup>

The main complicating issue so effectively established in the quoted section is the importance of factor proportions, which was also stressed by Spengler. Underpopulated countries encourage immigration because: i) natural resources are relatively plentiful and under-utilized; ii) larger population permits economic installation and efficient employment of social overhead capital;<sup>11</sup> iii) a larger body of consumers widens the market, permitting economies of scale, greater specialization, and rising productivity.<sup>12</sup> The antithesis of this situation is the overpopulated country where the disproportionate supply of the one factor, labour, combined with restricted labour mobility and obvious market imperfections prevents more efficient techniques of production and higher productivity.<sup>13</sup> This situation is a complex of economic and social reasons on both the sides of cause and

---

<sup>10</sup> United Nations, Processes and Problems of Industrialization in Under-Developed Countries, New York, 1955, p. 15.

<sup>11</sup> W. Arthur Lewis, The Theory of Economic Growth, George Allen and Unwin Ltd., London, 1955, p. 211.

<sup>12</sup> Ibid., pp. 323-324.

<sup>13</sup> H. S. Eckaus, "The Factor Proportions Problem in Underdeveloped Areas", American Economic Review, Vol. XLV, No. 4, September, 1955.

effect. The question is cogently put by Professor Viner: "The most obvious cause of regional poverty is a regional scarcity of productive resources relative to population."<sup>14</sup>

The question of factor proportions and the relative importance of population, as labour force and consuming market, has many complicated ramifications that can be dealt with more effectively in the second section of this chapter when the lead and lag effects of population on differential international growth rates is considered. For the moment the point under consideration is the real importance of population increase as a dynamic factor in the process of economic growth. This redefinition of the immediate centre of attention also suggests that this is an appropriate place to insist on precision of thought when dealing with the population problem. It is a common error to discuss the population problem in loose terms that convey the idea that overpopulated countries and countries with a high rate of population increase are the same. Kindleberger very properly corrects this misapprehension in the following statement:

Too little attention has been given to the fact that the population problem is not encountered everywhere. Some countries which are growing at rates in excess of 3 per cent per year, a high rate, are not densely populated - Mexico and Venezuela, for example. In fact, apart from a number of Caribbean islands, Latin America is not

---

<sup>14</sup> J. Viner, Stability and Progress, op. cit., p. 43.

overpopulated, and Africa and substantial parts of Asia - Burma, Siam, Malaya, Sumatra and Borneo - are not. Moreover, in some areas, such as India, East Pakistan, and China, the density of present population is more significant than rates of increase, which are moderate.<sup>15</sup>

In the immediate context the rate of population increase is the more significant matter, although clearly the growth impulse of a given rate of population increase must differ among countries of varying population densities. This proposition stands on the discussion of relative factor proportions, for the population absorptive capacity of any economy is directly dependent on the existing labour force and the available supply of food, natural resources and capital. Accordingly any generalizations about the growth impulse of different rates of population growth are subject to qualification appropriate to the existing size of population and state of economic advancement.

Definitely population is never a neutral factor in the growth process. In regard to size of population in any country there are always three possible situations; it may be growing, declining or static. The impact on the economy of any rate of population growth, from high positive to negative, naturally varies considerably with the given size of the population in relation to the size of the country in

---

<sup>15</sup> Charles P. Kindleberger, Economic Development, Economic Handbook Series, The McGraw-Hill Book Company, Inc., New York, 1958, p. 204.

question, extent of resources, supply of capital and state of development. Also the quality and character of existing population in terms of education, skills, responsiveness to change and conditioned cultural attitudes, determine an economy's ability to respond progressively. Provided that these influences do not impose barriers of unresponsiveness on the productive system so that secular stagnation prevails, allotting to the hard core of unemployed in the industrial society or the redundant body of underemployed in the agricultural society the additions to labour force thereby wasting a productive asset, rising population would contribute to total output. Unless marginal productivity of the additional workers exceeds average productivity, which is unlikely except in cases of acute labour scarcity, mere population growth would apparently not directly lead to a rise in per capita income. This suggests a positive growth impulse in aggregate terms but a negative one in the more significant per capita measurement. Empirical production function studies verify this conclusion.<sup>16</sup>

The indirect, or associated, effects on per capita output are, however, much more complex than implied in this elementary statement of economic logic, which is simply the

---

<sup>16</sup> United Nations, The Determinants and Consequences of Population Trends, op. cit., p. 225.

principle of diminishing returns.<sup>17</sup> The wider problem is well stated as follows:

For a better understanding of the possible effects of population changes on the per capita quantity of physical assets, and thus on per capita output, it is necessary to consider how the quantity of such assets may change as population grows or decreases. Four aspects of this question required attention: first, the influence of population growth upon the formation of capital; secondly, the limitations resulting from the difficulty or impossibility of reproducing certain kinds of assets; thirdly, the possibility that an extension of the settled areas or an increase in the density of settlement may permit economical utilization of natural resources which were previously underdeveloped; and fourthly, the possibilities of increasing the supply of productive assets through foreign trade.<sup>18</sup>

Some positive elements are contributed by population increase to a rise in per capita output due to these relationships to changes in physical assets, although there are negative effects as well. Undiluted positive results follow in all instances where the greater populations allows improvement in economic organization.

In general, industrial societies in periods of full employment are stimulated by a rising population because of the increasing market. Secular expansion and the maintenance of full employment require a rising scale of investment, and in particular a dynamic market providing continuing incentive

---

<sup>17</sup> Ibid., Chapters XIII to XV.

<sup>18</sup> Ibid., p. 226.

to innovation and autonomous investment. The growing market caused by population increases encourages and supports this flow of investment. In turn, the stream of innovation implies a constantly changing technology and rising productivity.

Generalizing on the positive growth effects of increasing population in economies that have not succeeded in making the "break through to the stage of self-sustaining growth",<sup>19</sup> cannot be so pat. There are too many countries, both densely and moderately populated, with per capita incomes in the low range of bare subsistence, where population has grown rapidly enough over the past century and a half warranting only the conclusion that there have experienced continuous static stagnation in the sense of per capita income being maintained at nothing better than dead level.<sup>20</sup> These do not support any generalized thesis that population increase carries with it any automatic generator of economic growth.

A plausible theory might be contrived to justify a growth model directly motivated by population expansion. It might be argued that underdeveloped agricultural economies

---

<sup>19</sup> Rostow, op. cit.

<sup>20</sup> Wotinsky and Wotinsky, op. cit., Chap. 2, pp. 33-45 and Chap. 12; and amply illustrating the point for the case of India - Daniel Thorner, Long-term Trends in Output in India, pp. 103-128, and Kingsley Davis, Social and Demographic Aspects of Economic Development in India, pp. 263-315, both in Economic Growth: India, Japan, op. cit.

are obliged to raise agricultural output to feed the greater population, which would compel investment and the breaking down of traditional methods of landholding and cultivation to begin the process of change. Resulting dislocations and adjustments arising from rural overcrowding should give an impetus to some migration and almost inevitably urbanization. This, in turn, would create concentrated market areas and the necessary labour supply conducive to industrialization. As this structural revolution occurs in the economy the responsibilities of government to assist the process and ameliorate the distress of dislocations should lead to social investment in public utilities, education, technical assistance and health measures, all of which are stimulants to better social organization and living, and higher productivity. Industrialization and higher productivity would then lead to greater savings in the hands of an emerging middle class, the necessary entrepreneurial group. The cumulative possibilities of increasing investment, diversified industrialization and rising total and per capita income follow. A test case representative of such a model is England in the eighteenth century.<sup>21</sup>

Searching for empirical support for such a theoretical model of growth out of poverty, generated purely by population

---

<sup>21</sup> See Part II, Chapter 1.

pressures themselves, Japan's magnetic charm must claim attention. As a test case in the process of development Japan is fascinating, but it is also unique, and hardly representative material for a generalized theory. As Irene Taeuber puts it, "the 'success' of Japan's solution to the demographic problems of modernization is not a sufficient answer to the question of its relevance to planning for the future in other areas."<sup>22</sup>

#### Population and Relative Rates of Growth

Having failed to establish a simple resolution of the problem of the direct role of population as a growth factor, it might be instructive to consider the same basic problem in a different way. The shift in emphasis involved in turning to the influence of population on the relative rates of economic growth, as it affects international comparisons of growth rates, has two virtues; probable future responses to population problems will assume more importance than historical experience; and, the inherited problem of existing population densities can be more fully recognized in connection with rates of population growth. There is little promise that the results of investigation from this altered

---

<sup>22</sup> Irene B. Taeuber, "Population and Labour Force in the Industrialization of Japan, 1850-1950", p. 319, in Economic Growth: Brazil, India and Japan.

viewpoint will be any more conclusive than in the foregoing section, but at least the question will be related rather more directly to the central theme of this thesis.

It is common in the literature to regard the population factor as not only an obstacle to economic development, but as THE critical obstacle. Since population growth implies growth of the labour force it is a growth factor, and up to the point that additions are subject to diminishing returns the population increase is a boon rather than an obstacle to progress.<sup>23</sup> Again the importance of relative factor proportions is the key consideration and so long as the capital-labour ratio can be maintained or improved, the bogey of diminishing returns to additional labour supply does not arise.<sup>24</sup>

There are still today well favoured regions and economic entities where population, or, in terms of factors of production, labour, is relatively scarce. Canada, Australia, and the Federation of Rhodesia and Nyasaland, are conspicuous examples. In these regions there is a plentiful wealth of natural resources awaiting development giving assurance of a continuing, rapid rate of increase in income. Such richly endowed but underexploited territories are best

---

<sup>23</sup> Harvey Leibenstein, Economic Backwardness and Economic Growth, John Wiley and Sons, Inc., 1957, pp. 55-56.

<sup>24</sup> W. M. Cordell, "The Economic Limits to Population Increase," The Economic Record, Vol. XXXI, No. 61, Nov., 1955, pp. 242-261.

described as frontier economies. Historically such frontier economies have achieved truly phenomenal rates of economic progress and in the future too they should outstrip the pace of expansion achieved elsewhere. Generally, in the frontier economy capital is also scarce relative to resources but it is seldom a limiting factor because the profit opportunities induce a high rate of investment and easily attract foreign capital supply. Labour is the real need for development and greater population to widen the market. The underdeveloped countries that fall into this frontier economy class, and there are several that qualify to varying degrees especially in Latin America and Africa, can reasonably be expected to achieve high rates of economic growth in the future once limiting social, organizational and institutional circumstances are overcome.

In many parts of Asia there is a real population dilemma because population is excessive and diminishing returns have appeared to create the extreme situation of disguised unemployment. But as Maurice Zinkin points out, Asia's actual rate of population increase is no greater than that of North America and can still act as a growth incentive by maintaining a balance of age distribution, up to the point where overcrowding of the land results and the possibilities of providing employment for the increasing labour force disappear. In the case of India, there is no gain from the additions to population because the country is

already overpopulated and the new labour supply is superfluous until economic progress catches up.<sup>25</sup> The significant point here is that it is past accumulated population and not the rate of population increase that is the problem. Although this does not invalidate the common prescription for curing the distress inherited from the past by checking population growth in the future.<sup>26</sup>

The population dilemma of excessive build-up in the past compared to available resources and the achieved rate of economic growth, imposing an obstacle to future gains in per capita income with prevailing rates of population increase, is complicated by several influences that might be only transitional difficulties that will disappear in the growth process or they may prove to be insurmountable and actually frustrate even superhuman efforts to achieve the break through to self sustaining growth.

The dissipation effects of a rising rate of population increase, because mortality rates are falling while fertility rates remain unchanged, threatens to nullify net progress. There are already one or two instances of countries where the annual rate of population increase is near the repro-

---

<sup>25</sup> Maurice Zinkin, Development for Free Asia, Chatto and Windus, London, 1956, pp. 224-225.

<sup>26</sup> United Nations, The Determinants and Consequences of Population Trends, op. cit., pp. 282-283.

ductive maximum of about 3 1-2 per cent, corresponding to a birth rate of 45 per thousand and a death rate of 10 per thousand.<sup>27</sup> In such countries savings are generally insufficient to maintain the investment rate necessary to allow a continuing rate of income development in excess of 3 1-2 per cent, so that neutral or negative progress in per capita terms is almost inevitable. Their situation is neatly described by Henry H. Villard.

Short of the point of maximum total output, the principle of diminishing returns suggests that as population (and labour) increases, so will output (and income). But population growth may have adverse effects on saving and capital formation and even on the rapidity of technological change. For in an economy interested in general welfare, rapid population growth may keep average income, and therefore average savings low . . . . in any event, until we know more about the interrelationship of increases in population and total income, it seems appropriate to consider the two as independent variables. If this is correct, it follows that the rise in living levels is a function of the excess of the rate of increase in income over the rate of increase in population.<sup>28</sup>

Aggravating the problem is the increasing social cost of such a rapidly expanding population for health, sanitation and education, absorbing public funds, otherwise available for more immediate productive investment, and

---

<sup>27</sup> United Nations, Measures for the Economic Development of Under-Developed Countries, op. cit., see p. 45.

<sup>28</sup> Henry H. Villard - "Population Growth and Per Capita Income in Under-Developed Areas", in Selected Readings in Economics, ed. C. Lowell Harris, Prentice-Hall, Inc., Englewood Cliffs, N.J., 1953, p. 466.

family costs for subsistence obliterating any possibilities of accumulating savings. Only if there is positive hope that the dissipation effect will be automatically resolved in the very process of economic development is there any real prospect that such countries can attain a satisfactory rate of improvement. This might well be achieved if the social changes entailed in development are conducive to either a decline in the birth rate or an increase in the rate of savings. Demographers suggest that the experience of Europe might be repeated to accomplish this evidently desirable decline in the birth rate as industrialization, urbanization and the emancipation of women alters social attitudes, the social and economic status of women and the economics of family formation.<sup>29</sup>

These problems will plague us in estimating growth rate potentials or projections, as discussed in the following chapter. There is simply no reliable guide to the expected interaction of population growth and economic development, each on the other. The positive growth stimulus of a high rate of population increase may or may not be a more than adequate offset to the income dissipation effects over

---

<sup>29</sup> Woytinsky and Woytinsky, op. cit., p. 261 and pp. 283-284. United Nations, Processes and Problems of Industrialization in Under-Developed Countries, op. cit., pp. 116-126. United Nations, Determinants and Consequences of Population Trends, op. cit., pp. 262-287.

time, with the directly derived economic growth coefficient obviously varying with the density of past accumulated population. Equally the rate of population increase may be responsive in either direction or neutrally to the changes resulting from economic progress, or more probably in opposite directions at different time stages.<sup>30</sup>

There is no denying that in the early stages of development a high rate of population increase, particularly against a heritage of an already fairly densely populated economy, is an almost insurmountable obstacle to income growth in per capita terms, and sometimes even in aggregate terms. Two particular problems are involved: 1) The essence of rising income is rising productivity, and yet welfare requirements direct investment from productive processes, while the redundancy of labour necessitates planned development of a labour using rather than labour saving type.<sup>31</sup> 2) The first requirement is to provide food for the growing population, yet agricultural output in underdeveloped countries is notoriously unresponsive to increasing needs, meaning recourse to marginal arable lands in the crowded or geographically unfavourable countries, combined with increasing reliance on

---

<sup>30</sup> Walter Galenson and Harvey Leibenstein, "Investment Criteria, Productivity and Economic Development", Quarterly Journal of Economics, August 1955, see pp. 364-368.

<sup>31</sup> Planning Commission, Government of India - The New India, Macmillan, Toronto, 1958, see pp. 91-102.

imported foodstuffs at high cost in terms of limited foreign exchange resources, which are desperately required to permit the fulfilment of the larger economic development plans.<sup>32</sup>

At a later stage in the process Spengler's<sup>33</sup> conclusion must surely come about, being that the rate of natality must decline to slow down the rate of population increase and allow real per capita gains in output and, after some lags, in consumption and welfare. He argues that such an outcome will result from, a) pressure on family income resulting from declining infant mortality coinciding with heightening consciousness of it due to the changing social status of women; b) rising income and consumption expectations and aspirations swinging the bias of choice from children to goods; and c) pressure of necessity on governments planning for growth to intervene with public measures to check the birth rate.

As expected, this approach to the population dilemma has not been at all conclusive in indicating, either in the dimensions of time or amount, the consequences of population trends on the expected growth rate. Some of the more obvious

---

<sup>32</sup> Food and Agricultural Organization - Millions Still Go Hungry, Rome, 1957, and, an unclassified despatch from Canadian Embassy Santiago, Chile, reporting on ECLA Report on Economic Conditions in Chile, July, 1958.

<sup>33</sup> Joseph J. Spengler, The Population Problem, op.cit.

and some of the more obscure elements in the causal process have been considered, while some others that are significant but rather more remote from the central problem, like social and occupational mobility and technical change in the setting of high and rising population, have been passed over. It is unsatisfactory to leave the population problem hanging in this way but the references cited should indicate that others have not yet succeeded in resolving the issues involved.

## CHAPTER 4

### PROJECTED AND ATTAINABLE RATES OF GROWTH

After such a prolonged and high paced boom as the world economy has been enjoyed in the postwar period, the inevitable tendency is to think in terms of an ever upward spiral of growth.<sup>1</sup> Yet, in view of longer historical experience, it might be reasonable to adopt a more sober and less entrancing premise of future rates of expansion. What premises are reasonable can only be defined in relation to a general theory of the growth process, and no complete

---

<sup>1</sup> Dr. A. G. Abramson, Permanent Optimistic Bias - A new Problem for Forecasters, Commercial and Financial Chronicle, February 20, 1958.

Leonard B. Rist, World Economic Growth - A Forward Look, an unpublished paper presented to the professional staff of the International Bank for Reconstruction and Development, February 15, 1956, in the preparation of which John H. Adler contributed, draws bolder conclusions from the evidence. He states categorically: "In spite of differences from country to country, the postwar rate of growth in each of the individual countries for which records are available have been above their past long-term growth rate." After analysing the known facts he shifts to what he calls the "realm of impressions" and concludes, "that the potential growth is quite substantial, that there is no real danger that it will be interrupted by a major world depression, and that, therefore, we are going to see over the next ten or fifteen years a considerable increase in production, income and international trade. Of course, we assume away the possibility of a world war." (A basis of forecasting that is strikingly similar to the assumptions and viewpoint of The Royal Commission on Canada's Economic Prospects - Preliminary Report, December 1956, Introduction, page 4).

## PROJECTED AND ATTAINABLE RATES OF GROWTH

78

Table IV.- Per Capita Income, Rate of Growth of GNP, Investment,\* and Capital-Output Ratio: in Selected Countries, 1945-54

	Period	Average per capita GNP, 1953 (in \$)	Average rate of growth of real GNP or GDP <sup>1</sup>	Gross fixed investment as % of GNP or GDP	"Gross" incremental capital- output ratio <sup>2</sup> Column (4) ÷ (3) (5)
	(1)	(2)	(3)	(4)	(5)
Austria	1948-54	400	8.3	18.9	2.3
Belgium	1948-53	839	4.0	15.8	4.0
Denmark	1947-54	846	4.7	17.3	3.7
France	1949-54	803	3.7	16.4	4.4
Germany (F.R.)	1949-54	628	12.4	20.1	1.6
Greece	1948-54	197	8.5	13.8	1.6
Iceland	1947-54	424	3.0	13.9	4.7
Italy	1947-54	366	6.3	18.3	2.9
Netherlands	1948-54	619	5.0	19.4	3.9
Norway	1947-54	829	4.6	27.6	6.0
Portugal	1947-53	190	4.8	13.9	2.9
Sweden	1947-54	994	3.6	19.2	5.3
United Kingdom	1947-54	840	3.3	13.2	4.0
All countries OECD	1947-54	615	5.8	16.3	2.8
Canada	1947-54	1,615	3.8	21.0	5.5
United States	1947-54	2,258	3.3	16.4	5.0
Argentina	1945-53	900	3.2 (3.4)	16.9	5.3
Brazil	1945-53	350	6.7 (7.7)	14.6	2.2
Chile	1945-53	580	2.1 (3.1)	11.6	5.5
Colombia	1945-53	260	4.7 (6.5)	15.5	3.3
El Salvador	1945-52	232	3.5 (7.5) <sup>3</sup>	14.0	4.0
Honduras	1945-52	140 <sup>4</sup>	5.0 (6.3)	11.8	2.3
Mexico	1945-53	268	4.9 (4.7)	13.1	2.7
Peru	1945-53	166	3.8 (6.0)	13.2	3.5
All countries Latin America	1945-53	250	4.8 (5.4)	15.0	3.1
Burma	1947/48-52/53	51	2.2	11.3	5.1
Ceylon	1947-53	114	3.0	17.7 <sup>5</sup>	2.8
India	1948/49-53/54	100	2.9	9.2 <sup>5</sup>	3.2
Malaya	1947-53	250	3.9	8.8	2.3
Pakistan	1948/49-52/53	52	2.2	n.a.	n.a.
Thailand	1947-53	65	7.2	n.a.	n.a.

\*John H. Adler - "World Economic Growth - Retrospect and Prospects", Review of Economics and Statistics, August, 1956.

1. The growth figures have been derived from gross product estimates which do not include the effects of changes in terms of trade. For the Latin American countries, rates of growth of gross income (including the effects of the terms of trade) are shown in parentheses. The estimates are for the gross national product in the case of the European countries, Canada, the United States, Honduras, and India, and for the gross domestic product for all other countries. The differences between GNP and GDP are so small for the countries for which GNP estimates are shown as to leave the growth rates virtually unaffected.
  2. The "gross incremental capital-output ratios" shown in column 5 differ from the normal concept of incremental capital-output ratios - which is also used in the text - because they have been computed by dividing gross investment rates by the annual rates of growth of the national (or domestic) product. Perhaps the simplest way to derive net rates would be to deduct a number of percentage points of GNP, or GDP (4 per cent? 5 per cent? 6 per cent?) from the gross investment rates. If such a "standard procedure" is used, the "net" capital-output ratios become somewhat smaller than the gross rates in the case of countries with high gross investment rates, and considerably smaller for countries with low gross investment rates. The magnitude of the incremental capital-output ratios for the OEEC countries and for Latin America, are influenced by the "abnormally" favorable rates (Germany, Austria) and the "abnormally" unfavorable rates (Argentina, Chile) alluded to in the text.
  3. 1946-1952.
  4. 1952.
  5. Derived from estimates of net fixed investment (average for the period: 6 per cent of net national product).
- n.a. - Not available.

Sources: European countries, Canada, and the United States; OEEC, General Statistics (OEEC Statistical Bulletin); OEEC, 6th Annual Report. Latin America: for all countries except Honduras: U.N. Economic Commission for Latin America, Economic Survey of Latin America (1951-52, 1953); figures for all Latin American countries combined have been adjusted on the basis of the Pan American Union series on terms of trade; in the case of Colombia, El Salvador, Mexico, and Peru, further adjustments have been made in the national product or investment series

or commonly accepted doctrine has yet been produced. Thus, all alternative possibilities must be considered in their general and particular relevance to establish a basis for realistic expectations in the projection of growth trends.

Spurt and pause, or expansion and gestation phases, seem to typify the economic growth process,<sup>2</sup> as they do in natural and cultural growth.<sup>3</sup> The acceptance of this precept

---

on the basis of (unpublished) IBRD memoranda. Honduras: Manual Tosco, Estadísticas del Producto e Ingreso Nacional 1925-52 (Tegucigalpa, 1954).

Southeast Asia: Burma: Ministry of National Planning, National Income of Burma; Ministry of National Planning, Economic Survey of Burma. Ceylon: Department of Census and Statistics, Statistical Abstract of Ceylon, data adjusted for price changes by IBRD Economic Staff; India: Central Statistical Organization, Estimates of National Income; Planning Commission, The Second Five Year Plan - A Tentative Framework, Malaya: Frederick Benham, The National Income of Malaya (London, 1951); IBRD, The Economic Development of Malaya (Baltimore, 1955). Pakistan: Ministry of Economic Affairs, Report of the Economic Appraisal Committee (1952); Central Statistical Office, National Income Estimates (1955). Thailand: J. Gould, Preliminary Estimates of the Gross Geographical Product and Domestic National Income of Thailand (Bangkok, 1953); for 1951-53; IBRD Economic Staff. For countries for which product and investment estimates were available only in money terms, corrections for price changes have been made by IBRD Economic Staff. For India and Pakistan, estimated depreciation allowances have been added to the net national output estimates.

Population Data: United Nations, Statistical Yearbook.

<sup>2</sup> H. Giersch, Stages and Spurts of Economic Development, in Economic Progress, Ed. L. H. Dupiez, cited.

<sup>3</sup> K. E. Boulding, "Toward a General Theory of Growth", The Canadian Journal of Economics and Political Science, August, 1953.

effectively absorbs business cycle theory into the general body of the theory of economic growth. Admittedly, there are many who argue forcefully that the violence of economic fluctuations has been subdued by the mastery of our greater understanding of economic phenomena, the determination of national governments and international bodies to control the catastrophic extremes of inflation and deflation, and the superior armory of effective controls now possessed by governments and supported by the more sophisticated approach of industry to planned investments on the basis of long run trends rather than short term events. But even a dampened down cyclical fluctuation around the secular trend line would disallow predication of the secular rate of growth as being the simple projection of a growth rate experienced in a particular period that might be short enough to be identified largely with any single phase of the long cycle. In any event, it is inevitable that economic development at least must display this unevenness of pace through the operating of expansion and gestation phases resulting from a combination of factors, including the lumpiness of technological advances, the uneven flow of investment capital, particularly foreign capital, periodic trends of improving or deteriorating terms of trade, which in combination with the balance of payments consequences of inflation accompanied

economic growth means periodic exchange difficulties.<sup>4</sup>

Optimism based on immediate past experience must also be modified by consideration of long wave influences, as well as the shorter cyclical fluctuations related both to income and to trade. Empirical evidence, particularly for the United Kingdom where the growth process can be and has been studied over a long period, indicates that the secular growth rate after an industrial revolution, or the "take-off" into self-sustaining growth<sup>5</sup> is high for perhaps 100 years and then loses some of its momentum.<sup>6</sup> This experience is attributed to a slowing down in the rate of population increase and lessening opportunity for productive investment as the stock of fixed capital reaches a near optimum level, which has the companion effect of reducing the scale of external economies and the potentialities of increasing returns. In consequence, the real rate of increase in productivity gains is reduced because the investment share

---

<sup>4</sup> U. N. Economic Commission for Latin America, Analyses and Projections of Economic Development, Vol. 1, An Introduction to the Technique of Programming, New York, 1955.

<sup>5</sup> W. W. Rostow, "The Take-off into Sustained Growth", Economic Journal, March 1956.

<sup>6</sup> S. Kuznets, Population, Income and Capital, in Economic Progress, op. cit., Buchanan and Ellis, Approaches to Economic Development, op. cit., and Meier and Baldwin, Economic Development, op. cit.

devoted to replacement of fixed plant has become greater, resulting in a lower net increase in new productive investment, assuming a constant percentage rate of GNP saved and invested. A companion, and not fully independent, factor is the probability of a rising trend in the capital-output ratio with advancing economic maturity.<sup>7</sup> This lowering of output yield as the stock of capital increases is, of course, exactly what might be expected, applying the theoretical reasoning of Keynes in exposition of the concept of the marginal efficiency of capital.<sup>8</sup> An extension of these

---

<sup>7</sup> John H. Adler, World Economic Growth, op. cit., p. 282, states, "The most significant conclusion that emerges from a comparison of the investment and output figures on the countries in the three areas is the fact that where income and rates of investment are low, the yield of investment in the form of additional output is proportionately greater than in countries with higher incomes and higher rates of investment. The limited period for which data are available and the doubtful precision of the data make this conclusion rather tentative. But nevertheless, it is probably significant that the capital-output ratio - the relationship between investment and additional output - is 2:1 or slightly higher in India, where both income and investment are low, while it averages around 3:1 for Latin America with higher income and investment, and comes to approximately 4:1 for most countries of Western Europe, Canada and the United States. In a number of countries, capital-output ratios did not conform to this average, but in all instances plausible and even obvious reasons can be advanced for an "abnormally" favorable or "abnormally" unfavorable ratio."

<sup>8</sup> John Maynard Keynes, The General Theory of Employment, Interest and Money, Macmillan and Co., Limited, London 1936, p. 136 and p. 308. James S. Duesenberry, Business Cycles and Economic Growth, McGraw Hill Book Co., New York, 1958, p. 205 and p. 780 makes exactly this application of reasoning.

retardation influences on the rate of economic growth comes into discernible relief if analysis is done in terms of absolute as well as percentage rates of gain. If the rate of productivity increase declines over time due to a shrinking of the rate of net new investment and rising capital-output ratios, then the rate of economic growth, measured in terms of increases in GNP, and probably in terms of increases in per capita income gains depending on the rate of population growth, will fall. In such a setting of lowering marginal efficiency of capital it would be unreasonable to assume a rising rate of investment so that there would be no offset to the decline in rate of growth and the absolute gain from period to period would be of a declining order as well. With a falling scale of absolute investment the subsequent growth rate will suffer further contraction. The interrelated process suggests a sort of investment-growth multiplier effect that conceivably could produce the quasi-static equilibrium condition, predicated by Keynes, in advanced maturity.<sup>9</sup>

Belying the inevitability of this process is the evidence of growth rates in the United Kingdom and all of Western Europe in the postwar period. Obviously it is not only conceivable but an established possibility that new areas of innovation based on technical revolution can reverse this investment and growth situation to let loose

---

<sup>9</sup> Keynes, *ibid.*, page 220.

powerful new growth forces. A shift in demographic forces can equally set in motion acceleration of the growth rate. Both the technological and demographic stimuli are in evidence in the revival in the rate of economic growth that has occurred over the last decade. It is a challenging assignment to the forecaster to appraise the strength and durability of medium term growth forces and determine their reliability against apparent opposing long term secular trends.

Short run forecasts based on the technique of projection are extremely hazardous, for no one can deny the capricious influence of random short term variables. Business forecasters are generally prepared to predict the course of the world economy, a national economy or any region or sector of it, for six months ahead, and make more qualified estimates extending up to a year. Beyond that very short run period, commonly described as the foreseeable future, erratic shifts in prices, interest rates, investment levels, or work stoppages through strikes, and in the international economy, sudden reversals in the terms of trade or other elements controlling the balance of payments, may too easily occur to allow any safe prognostications of production and income levels for the two to three year period.

With the long run totally uncertain, if projection of prevailing trends is the only technique of calculating levels of economic attainment, and middle-short run as

unsettled as next week's weather, then only the medium term, of from three to ten years, may be safely treated by the forward looking growth economist. Simon Kuznets not only supports this persuasion, that economists are restricted to short term problems by the nature of their knowledge and the tools of existing analytical techniques, but is convinced that there is much less knowledge of the functioning of the structures of the authoritarian or of the less developed economies outside of the Western orbit.<sup>10</sup> Although the Royal Commission on Canada's Economic Prospects did undertake to

---

<sup>10</sup> Simon Kuznets, "On Comparative Study of Economic Structure and Growth of Nations," Supplementary Memorandum H. to The Comparative Study of Economic Growth and Structure, National Bureau of Economic Research, Inc., New York, November 1958, a preliminary and confidential mimeographed report of a mid-year conference, p. H. 1 states: "This memorandum assumes the need for more knowledge and better understanding of the functioning structures and growth (or stagnation) patterns of economies the world over. . . . . The need is assumed here because of an impression that the present corpus of economic knowledge and theory is perverted by reference to the economic and social institutions of the free Western part of the world, and has been increasingly geared to emphasis on short-term problems of the free, advanced economies. There is much less knowledge of the functioning of the structures of authoritarian or of the less developed economies outside of the Western orbit; and the response of these economies to various impulses presents an unanswered intellectual challenge -- in the sense that much of what happens is incomprehensible in terms of accepted economic theory; and at the time it occurs is a surprise, often unpleasant. The same is true of actual growth experience, even in the advanced economies proper, and all the more so in the rest of the world. If this impression is valid the need for more observation and analysis -- of the growth experience in the free developed countries themselves and of the structure and growth patterns in the rest of the world -- is clear if

peer through the hazy curtain of time's uncertainty and capture a view of Canada's conceivable economic situation twenty-five years hence, largely by the trend projection method, the investigators and authors were fully aware of the hazards involved and the unreliability of the conclusions reached.<sup>11</sup>

By far the best systematic set of forward looking data yet assembled was recently prepared by the Economic

---

better understanding, i.e., clearer recognition of the elements of order and constraint that would permit a valid interpretation of both occurrences and contingencies, is to be attained."

<sup>11</sup> Royal Commission on Canada's Economic Prospects, November 1957, pp. 1 and 2. "We have examined economic experience in Canada, and to a lesser extent in other countries, over the last two or three decades to discover trends that might be projected into the future to give some idea of what the next quarter century might hold for Canadians. We have also borne in mind the comparative stability of the ratios between some of the grand economic variables that will be changing over the years that we have to survey; and we have had constructed for us some models or orreries in which these slowly changing ratios might be seen to hold together the moving planets of the economic universe. But we should not like the reader to be deceived by any occasional impression of assurance or coherence that he may receive from these pages. We are well aware that we have not found it possible to compose our forecasts into complete consistency. We are even more conscious that the degree of certainty and consistency that our forecasts may from time to time suggest can be misleading. The fact is that a four-dimensional space-time continuum is a very slithery medium in which to plot the paths of even a few economic stars of the largest magnitude. The trend lines that we have projected into the future have had to be bent this way and that, and we know that guesses and intuitions have as often swayed our hands as any clear analysis or any clear apprehension of coming economic developments. The probability is therefore overwhelming that the future will not be obliging enough to conform to what we have predicted."

Staff of the International Bank for Reconstruction and Development, based on national projections, such as those contained in the Canadian Gordon Report, and those done by World Bank economists working on Survey Missions to various assisted countries.<sup>12</sup> This excellent undertaking is clearly the evolutionary product of the intellectual and practical curiosity stimulated in the mind of Mr. Leonard Rist, Director of the Bank's Economic Staff, when he and John Adler grappled with this problem in 1956.<sup>13</sup> The results presented in this document will be utilized freely at a later stage in this chapter. At the moment the significant feature of the Report is that the period covered is seven years, 1955 to 1962. The year 1955 was taken as the base year because it was the most recent one for which data on income, output and population were generally available. Thus these economists, with the most complete data resources possible to assemble on a fundamental problem that the World Bank had been studying theoretically and empirically from every conceivable angle for twelve years, treat only the medium term by the technique of projection. The same study verifies our conclusion that the medium-short run, of up to three years, cannot normally

---

<sup>12</sup> I.B.R.D., Economic Staff, World Economic Growth 1955-1962: Estimates Based on Existing Projections, an unpublished mimeographed report, December 11, 1958.

<sup>13</sup> L. Rist, op. cit., and John H. Alder, op. cit.

be studied in this way. The authors express uncertainty during the time of writing about the severity of the then current recession, the rate of recovery, and the growth impact on primary-exporting countries of the adverse shift in the terms of trade, leading them to qualify even the seven year projection with the tentative conclusion that the effects of this recession and possible future ones during the period might reduce growth rates to the lower range of derived estimates and possibly postpone the date of attainment to 1965.

National planners for economic growth and development find themselves similarly restricted.<sup>14</sup> Which accounts for why five year plans and occasionally seven year plans have become the universally popular periods. More often than not it becomes necessary to revise projections and targets for these plans at the end of the second or third year in light of the altered balance of economic forces or the emergence of new sector trends that upset the original projections. Experience teaches that projections are simply forecasts of probable results on the assumption of established

---

<sup>14</sup> Seymour E. Harris, Economic Planning; the Plans of Fourteen Countries, Alfred A. Knopf, New York, 1949.

United Nations, Department of Economic Affairs, Economic Development in Selected Countries; Plans, Programmes and Agencies, Lake Success, New York, Vol. I, October 1947, Vol. II, February 1950.

United Nations, Economic Commission for Latin America - Analyses and Projections of Economic Development; I. The Economic Development of Brazil, New York, April 1956; III. The Economic Development of Colombia, Geneva, November 1956.

trends continuing without interruption or distortion, while planning targets are usually intended levels of attainment based on the most optimistic range of expectations derived from these projections.

In a forward looking study of the problem of economic growth possibilities and probabilities there must be some objective basis of quantitative determination of rates of growth. If the technique of projection is limited to ten year forecasting, as the general extreme, some alternative technique must be used to evaluate the more distant future. The only alternative so far devised, or theoretically promising, is the technique of model building. The essential approach in constructing growth models must be to accept a set of assumptions which fix the parameters in the system and abstract from ungovernable and erratic influences inconsistent with predictability, like war, irrational political policies and even extreme depressions. The additional given data that must enter the model as constants, can appropriately be classified as (a) natural data, referring to material resources and economic geography generally, (b) psychological data, referring to all human qualities relevant to economic growth ranging from social attitudes and welfare values to technical skill, and (c) institutional data, referring to the organization character of the economy in question. Such data are no longer susceptible to easy assumptions over anything

but the short run and without severely limiting assumptions that would be damaging to the value of the model can not readily be incorporated as constants. As Tinbergen says, "These data are the very subject of comparison now."<sup>15</sup>

The key variables usually included are national income, national consumption expenditure and investment, imports and exports, capital stock, labour force, and possible additional sector components and relative prices. The imprecision of distinction between constants and variables is further testified by Kaldor who points out that:

There is general agreement that the critical factors determining the trend rate of growth are to be sought in the savings propensities of the community (which determines the rate of capital accumulation), the flow of invention or innovation (which determines the rate of growth of productivity) and the growth of population. Until recently, these factors were regarded as the parameters of a growth model..... But more recently, there has been an increasing awareness ..... (that none of these) ..... are independent variables with respect to the rate of increase in production; and that the actual rate of progress of a capitalist economy is the outcome of the mutual interaction of forces which can adequately be represented only in the form of simple functional relationships (like supply and demand curves) rather than by constants.<sup>16</sup>

Growth models are certainly not to be disparaged as

---

<sup>15</sup> Jan Tinbergen, Comparative Studies of Economic Growth, p. K-4 in appendix K of The Comparative Study of Economic Growth and Structure, op. cit.

<sup>16</sup> N. Kaldor, "A Model of Economic Growth", p. 591, The Economic Journal, December 1957.

a methodological tool of analysis. The contributions of Kalecki,<sup>17</sup> Harrod,<sup>18</sup> Domar,<sup>19</sup> Haavelmo,<sup>20</sup> Hamberg,<sup>21</sup> Kaldor,<sup>22</sup> and Duesenberry,<sup>23</sup> to cite only some of the foremost contributors to the evolution and refinement of this technique, are highly significant in achieving finer precision into the study of the process of economic growth. They have been instrumental in shifting the terms of economic thought from a static to a more truly dynamic basis and, accordingly, in gradually winning acceptance of the fact that equilibrium is an ever-changing, never-attainable stable balance of the elements and sectors in the economy, national or world, because over time there is economic change involving not only the relationships but the nature of the economic factors. It

---

<sup>17</sup> M. Kalecki, Studies in Economic Dynamics, London, Farrar and Rinehart, Inc., 1943.

<sup>18</sup> Roy Harrod, Toward a Dynamic Economics, London, Macmillan & Co., Ltd., 1948.

<sup>19</sup> E. D. Domar, "Capital Expansion, Rate of Growth and Employment," Econometrica, April 1946, pp. 137-147; and "Expansion and Employment," American Economic Review, March 1947, pp. 34-35.

<sup>20</sup> T. Haavelmo, A Study in the Theory of Economic Evolution, Amsterdam, North-Holland Publishing Company, 1954.

<sup>21</sup> D. Hamberg, Economic Growth and Instability, New York, W. W. Norton & Co. Inc., 1956.

<sup>22</sup> N. Kaldor, op. cit.

<sup>23</sup> James S. Duesenberry, Business Cycles and Economic Growth, New York, McGraw-Hill Book Company, 1958, Chap. 10, pp. 199-239.

is the lesson of Heraclitus that all is flux. Economists have only begun to realize the truth taught by this venerable Greek after 2500 years. The objection to economic models, especially of the econometric variety, is that they have to a greater or lesser degree common characteristics limiting their usefulness. The National Bureau of Economic Research conference listed some of these as: 1) reference to aggregate economies without distinguishing sectors; 2) lack of generality in respect to countries or over time as relationships and constants change; 3) omission of non-economic variables; 4) usual reference to United States only in econometric models; 5) lack of empirical testing against real experience of any economy; 6) radical simplification of reality.<sup>24</sup> Which failures are more than enough to invalidate model building and analysis as a useful method of predicting future growth rates or growth paths.

It is only fair to admit that the most erudite practitioners of the art of model analysis are fully aware of the limitations of the technique. Domar puts the problem in its proper light:

Economic growth is determined by the very essence of a society, and a comprehensive theory of growth should include physical environment, political structure, incentives, educational methods, legal

---

<sup>24</sup> National Bureau, The Comparative Study of Economic Growth and Structure, op. cit., chap. VIII, pp. 19-20.

framework, attitude to science, to changes, to accumulation - just to name a few. None of these could be properly taken as an independent variable, and the required system of simultaneous relationships, whether expressed in symbols or in words, would be impossibly complex, and probably useless. The treatment of the subject therefore falls into two rather sharply differentiated parts: general treatises and highly simplified symbolic models, with a wide gap between. Neither approach taken by itself is satisfying. The former is usually deficient in analysis, and the latter is too narrow and deceptively exact.<sup>25</sup>

The truth is that the impressive school of model builders while firmly establishing dynamic economics as a way of thought are still captives of the unconquered limitations of their own technique, which is yet tied to comparative statics founded in stable equilibrium assumptions and moving in time only in the sense of period analysis.<sup>26</sup> While the cause and course of economic growth may not be revealed by study of models, it is both fair and important to

---

<sup>25</sup> Evsey D. Domar, "Economic Growth: An Econometric Approach", American Economic Review, Papers and Proceedings, May 1952, p. 481.

<sup>26</sup> Ibid. Again we must give Domar credit for exceptional insight, p. 490-1, "We start by discarding the idea of equilibrium as a state of rest to which a stable system is expected to return. (This distinguishes our approach from other dynamic models where movements of the variables are treated as deviations from some constant equilibrium magnitudes.) Our economy never returns. Its equilibrium may be said to exist if its component parts in their process of growth retain some proper relationship to each other, such as output to capital, steel to coal, costs to prices, or whatever else we are interested in."

emphasize that they are invaluable for focussing attention on significant relationships, for formulating hypotheses more clearly and for raising questions that might be obscured in a purely discursive assembling of significant facts and factors.<sup>27</sup>

Only brief consideration need be given the sole remaining methodological technique that promises one day to help the forecaster handle quantity determination with greater assurance, namely input-output analysis. There are three promising aspects for students of economic growth to the research being carried on in this field: i) its subject matter is factor input and product output, which concentrates attention on productivity, comparative for both area and time, and thereby gets to the heart economic growth; ii) it deals with sectors rather than the aggregated economy, thereby overcoming one of the objections to model analysis; iii) it is based on a massive collection and comparison of statistics, which could help greatly to lend substance to the projection of trends. As an answer to a generalized procedure for making long-range growth estimates input-output analysis holds little promise. Even in the short run it

---

<sup>27</sup> Ibid. Henry J. Burton: "Growth Models and Underdeveloped Economies" - The Journal of Political Economy, August 1955, pp. 322-336, demonstrates the point whereby use of very simply model analysis he is led to conclude that the capital absorptive capacity of underdeveloped countries is limited by the rate of technical and behaviouristic changes.

offers help in application to growth study of underdeveloped countries because of the impossibility of assembling the required statistical data.<sup>28</sup>

This intricate and elusive problem of calculation and measurement of growth rates and prospects is strikingly well expressed by Professor Mises:

The impracticability of measurement is not due to the lack of technical methods for the establishment of measure. It is due to the absence of constant relations. If it were only caused by technical insufficiency, at least an approximate estimation would be possible in some cases. But the main fact is that there are no constant relations. Economics is not, as ignorant positivists repeat again and again, backward because it is not 'quantitative'. It is not quantitative and does not measure because there are no constants. Statistical figures referring to economic events are historical data. They tell us what happened in a non-repeatable historical case. Physical events can be interpreted on the ground of our knowledge concerning constant relations established by experiments. Historical events are not open to such an interpretation.<sup>29</sup>

Lacking mathematical models of sufficient elegance and sophistication to permit the inclusiveness and the flexibility to give a comprehensive growth picture over an

---

<sup>28</sup> Alan T. Peacock and Douglas Dossier, "Input-Output Analysis in an Underdeveloped Country: A Case Study", The Review of Economic Studies, October 1957, pp. 21-25.

<sup>29</sup> B. Herbert Frankel, "Some Conceptual Aspects of International Economic Development of Underdeveloped Territories", Essays in International Finance, No. 14, May 1952, Princeton University, p. 8, quoting Ludwig von Mises, Human Action - A Treatise on Economics, Yale University Press, 1949, p. 56.

extended period of time we must be satisfied with a non mathematical, pseudo-model unhampered by these limitations, involving sufficiently elastic assumptions that it may be married to the projection technique to permit long term growth predictions. Kuznets is very doubtful about even this possibility, "So far as I know, we have no adequate theory of economic growth of nations, and none that would securely establish a specific model of long term change in national product."<sup>30</sup> But he may be unduly pessimistic, as Colm points out in comment, because granting that unqualified long-range economic forecasts are beyond our ability, it should be possible to formulate a qualified and non-specific estimation of future forms and sizes without rigid extrapolation of past data.<sup>31</sup> Colm, however, correctly indicates that a loose model of the sort suggested would at best give an approximate range of possible levels of economic attainment. In effect, this is the task that the Canadian Gordon Commission assumed and the results are of this class.

Obviously the long-range projections developed would be only as good as the assumptions adopted and the comprehen-

---

<sup>30</sup> Simon Kuznets, "Concepts and Assumptions in Long-Term Projections of National Product", in Long Range Economic Projection - Studies in Income and Wealth, Volume Sixteen, National Bureau of Economic Research, Princeton University Press, 1954, p. 13.

<sup>31</sup> Gerhard Colm, Comment, ibid., p. 38.

siveness of the factors included in the model. Since Kuznets is correct in denying that there is any accepted or adequate theory of growth to use as the framework for a model, there can be no dependable basis for formulating assumptions or selecting factors. From the brief investigation of essential growth forces in Chapter Two the nature of such a generalized model can be inferred. The key variables that would have to be related, but not necessarily in order of importance, include population, savings and investment, capital-output ratios, technological advance, government policies, productivity, foreign trade, and a rate of cultural adaptation. The last mentioned may appear to have peculiar importance for underdeveloped countries but it still has relevance even for advanced countries in view of the adjustments frequently required and often resisted in response to new techniques, new products and new facilities. This single key variable, which is mostly non-economic in motivation but significant in its economic influence, illustrates the immense problems of postulating defensible assumptions in weaving these and other variables into a growth pattern permitting predictability. At most times cultural adaptation is likely to be a limiting factor on the rate of economic growth, for, as Professor Duquesne tells us, the rate of dislocations must not exceed the rate of welfare

gains.<sup>32</sup> Yet at times the urge for change outruns the plasticity of the economic system when the revolutionary spirit takes hold and a violent clamour to sweep away everything associated with the past burns with insatiable urgency.

At this stage we are ill-equipped to make the necessary assumptions relating these, and associated, variables. It is hoped that the exploratory analysis of Part II will improve this situation. At this juncture all that can be attempted is to consider some of the growth estimates that have already been made for the medium term using the projection technique, and some looser guesses that have been made for the longer run, and realize the significant implications of these estimates.

Indisputably population is one of the key determinants of economic growth rates and almost the overriding one, both relatively and absolutely, when the customary measurement of growth in per capita terms is used. Despite the fact that population trends are less susceptible to short term influences than the other key variables of any growth model, demographic prediction is extremely hazardous. United Nations

---

<sup>32</sup> Louis Duquesne de la Vinelle, "Economic Policy as an Instrument of Progress", in Economic Progress, op. cit. pp. 416-417, further states: "The ideal is to exploit to the utmost the plasticity of the economic system. But there is a limit which should not be exceeded, under penalty of arousing against progress the hostility of those who are meant to benefit from it."

experts in their recent attempt to develop population projections fully recognize the difficulties:

The population models employed in this report are an over-simplification of facts. But so are all demographic schemes and, in fact, any conceptual framework in the social sciences. . . . . The number of factors which affect social phenomena, however, is so great that to isolate them all and take each into account exceeds the powers of the intellect.<sup>33</sup>

The detailed analysis and many findings of this group are well summarized in the following table.

Earlier reference was made to the work of Leonard Rist of the International Bank for Reconstruction and Development in attempting to predict future growth rates.<sup>34</sup> His findings are worth considering. His projections are done on an area basis with due regard for recent past performance, anticipated growth of the labour force, and productivity trends, with allowance for special influences. The conclusions drawn are based upon more exact data for the industrialized areas and permit more refined estimates for the United States and Europe related to evaluation of the expected rate of increase in labour force and productivity as annual average factors. For Latin America and Asia, undergoing some structural transition and acutely dependent on the terms of

---

<sup>33</sup> United Nations, The Future Growth of World Population, U. N. Department of Economic and Social Affairs, New York, 1958, p. 39.

<sup>34</sup> Leonard B. Rist, World Economic Growth - A Forward Look, pp. 8-12.

Table V. - ESTIMATED POPULATION OF 19 REGIONS OF THE WORLD IN 1925, 1950, AND 1975 ON HIGH AND LOW ASSUMPTIONS, PERCENTAGE INCREASES IN 1925-1950 AND 1950-1975, AND INCREASE FROM 1950 to 2000 (MEDIUM ASSUMPTION)\*\*

Region	Population (millions)			Increase (per cent)		Population in 2000 per 100 population in 1950
	1925	1950	1975	1925-50	1950-75	
Central America .....	21.0	34.7	66.6-72.3	65	92-108	432
Tropical South America...	50.6	84.4	150-163	67	78-93	402
Northern Africa .....	29.0	42.7	70.4-76.4	47	65-79	344
Southern Africa .....	8.7	13.9	22.5-24.4	60	62-76	339
South-West Asia .....	45.9	63.3	107-116	38	69-83	325
Pacific Islands*.....	2.2	2.9	5.0	32	71	297
Caribbean .....	10.5	16.3	25.1-27.1	55	54-66	294
South-East Asia .....	118	171	259-280	45	51-64	291
East Asia (without Japan)	453	595	884-958	31	49-61	286
Central South Asia .....	343	466	680-737	36	46-58	281
Middle Africa .....	109	142	202-230	30	42-62	227
U.S.S.R. ....	163	181	266-275	11	47-52	209
Temperate South America..	17.2	27.2	40.4-41.7	58	49-53	205
Australia and New Zealand	7.4	10.2	15.5-16.0	38	52-57	204
Northern America .....	126	168	232-240	33	38-43	186
Japan and Ryukyu Islands.	59.7	83.6	110-117	40	32-40	183
Southern Europe .....	105	132	158-166	25	20-26	156
Central Europe .....	117	128	151-156	9	18-22	143
Northern and Western Europe .....	120	133	149-154	11	12-16	135

\*For this region, no alternative assumptions were made.

\*\*United Nations, The Future Growth of World Population, U. N. Department of Economic and Social Affairs, New York, 1958, p. 26.

international trade, it is more difficult to relate labour force to population changes and to estimate productivity trends since determination of investment rates is more difficult. He arrived at potential growth rates over the next ten to fifteen years for the four areas considered and then modified these by a reduction of approximately 1-2 of 1 per cent per year to reach his final estimates of likely average annual rates of rise in GNP, duly qualified by assumptions that appropriate government policy could be depended upon to foster growth and that major cyclical disturbances would not upset the pattern.

United States -	3 1/4 - 3 1/2%
Western Europe -	2 3/4 - 3 1/4 %
Latin America -	3 3/4 - 4%
Asia	- 3% or less

The more ambitious study undertaken by the Economic Staff of the International Bank for Reconstruction and Development,<sup>35</sup> as stated previously, consolidates all the earlier studies of growth projection and produces area results for the period 1955-1962, or possibly 1965, that are not strictly comparable with Hist's estimates since they are for representative countries within areas rather than for inclusive areas.

---

<sup>35</sup> UBRD Economic Staff, World Economic Growth 1955-1962: Estimates based on Existing Projections, op. cit.

These projections are based on the United Nations population forecasts, and sector trends and projections for industry and agriculture. They conveniently summarize most of the results in one table, reproduced on page 103a.

For comparative purposes one final set of projections is worth including here, both because it differs to some degree from those already quoted and because it includes some areas excluded from the other estimates. This is from the Special Studies Project Report III of the Rockefeller Brothers Fund, the work of a large panel and the Fund's staff.<sup>36</sup> Here, again, it is stated that the attempt to foresee the stage of progress of the world economy 10 to 20 years in the future can only be done in the most tentative terms because of limitations of statistical and economic knowledge. However, the importance for policy guidance of such projections are so important that an attempt is made, subject to the qualification: "Such projections are of course subject to modification as the world moves ahead in economic, social, scientific and political fields."<sup>37</sup> The resulting projections appear:

If recent trends in the world economy should continue, we would see growth rates in total production of goods and services, as shown in the chart:

---

<sup>36</sup> Report of the Rockefeller Brothers Fund Special Studies Project, Report III, Foreign Economic Policy for the Twentieth Century, New York, Doubleday & Company, Inc., 1958, pp. 71-75.

<sup>37</sup> Ibid., p. 72.

Table VI - PROJECTED AND PAST ANNUAL RATES OF GROWTH \*

Country	Aggregate GNP <u>a/</u>			Per Capita GNP <u>a/</u>			Industry			Agriculture <u>c/</u>	
	Post	Long	Pro-	Post	Long	Pro-	Post	Long	Pro-	Post	Pro-
	World	Run	jected	World	Run	jected	World	Run	jected	World	jected
	War II			War II			War II			War II	
<u>North America</u>											
United States	4.2	3.8	3.1-3.8	2.5	2.0	1.5-2.2	4.3	4.1	3.3-4.0	1.5	1.5-2.0
Canada	4.7	3.5	3.6-4.5	2.0	1.7	1.3-2.1	3.3	4.0	3.6-4.4	3.2	1.6-2.3
<u>Europe</u>											
OEEC Countries	5.2	n.a.	3.3	4.4	n.a.	2.6	6.9	2.5 <sup>d/</sup>	4.6	2.0	2.1
<u>Latin America</u>											
Brazil	5.5	4.5	3.5-4.5	3.0	2.2	1.1-2.1	7.3	n.a.	4.5-5.5	3.0	3.7
Colombia	5.4	4.0	3.5-4.5	3.1	2.4	1.2-2.1	7.5	n.a.	5.0-6.3	2.0	3.5-4.0
Mexico	5.8	6.5	5.5	2.9	3.7	2.6	5.8	5.4	5.9	5.2	5.0
<u>Asia</u>											
Japan	8.5	(3.3)	4.5	7.0	n.a.	3.5	15.0	7.2	3.0-8.5	1.5 <sup>e/</sup>	1.2
India	3.2	n.a.	3.5-4.5	1.9	n.a.	2.0-3.0	6.0	3.8	7.0-8.5	4.1	2.5-3.5
Pakistan	2.5	n.a.	2.8-3.3	1.0	n.a.	1.3-1.8	23.2	n.a.	6.5	1.0	1.8-2.3
Philippines	6.0	n.a.	5.0	4.0	n.a.	2.4	7.0	n.a.	n.a.	7.1	n.a.
<u>Africa</u>											
South Africa	4.0 <sup>b/</sup>	n.a.	3.3	2.0 <sup>b/</sup>	n.a.	1.1	n.a.	7.9	4.5	2.0	1.4
<u>Oceania</u>											
Australia	5.0 <sup>b/</sup>	3.2	4.1	2.5 <sup>b/</sup>	1.3	1.7	6.0	3.7	5.0	2.2	2.1

a/ Rates of growth in output, excluding the effects of changes in terms of trade, unless otherwise specified.

b/ Rate of growth in real income, including effects of changes in terms of trade. Statistics on growth of output were unavailable. For most of the listed countries, movements in the terms of trade caused little or no divergence between rates of growth in output and income. However, in three cases, there was a significant difference between rates of growth in output and in income. For the post-World War II period, we have:

Brazil - 5.5% (output) - 6.3% (income)  
 Colombia - 5.4% (output) - 6.7% (income)  
 Pakistan - 2.5% (output) - 1.8% (income).

c/ Long-run growth rates for agricultural output are not available.

d/ Including also Finland, Iceland, Spain, Yugoslavia.

e/ 1950/52-1954/56 rate: 4.4%.

Time periods and sources: Appendix VIII. \*IBRD Economic Staff, World Economic Growth 1955 - 1962: Estimates Based on Existing Projections, op. cit., page 23.

- 4 per cent in the United States
- 5 per cent in other free industrial countries, including Western Europe, Canada, Japan
- 3 per cent in Latin America and perhaps
- 2 per cent in other less developed areas
- 6 per cent in the U.S.S.R., 3 per cent in the satellites, and 2 per cent in Red China

Since this same Report immediately turns to conclusions that are close to the heart of the central theme of this dissertation further direct quotation seems appropriate:

The broad conclusion that emerges from these projections of recent trends is that existing economic disparities among nations would widen. At recent growth rates in total production, output per capita in the free world industrial nations would increase 43 per cent in ten years and would double in twenty years. However, the increase in per capita output in the less developed areas taken as a whole would work out at only 14 per cent in ten years and 29 per cent in twenty years. Clearly, past rates of economic growth must be bettered throughout the free world, and particularly in the less developed areas, if we are to match the rising expectations of individuals everywhere. . . . . A widening disparity between the industrialized and the less developed nations would make the attainment of a peaceful community of nations increasingly difficult. A great deal depends therefore on the ability to speed up the rate of growth of the less developed regions.<sup>38</sup>

The problems involved in disparate growth trends for various areas and countries of the world has attracted surprisingly little attention in the new voluminous literature on economic growth. The above quotation is one of the few explicit references to the importance of differential growth

---

<sup>38</sup> Ibid., p. 75.

rates. One other reflection on this apparent situation that considers some implications of the observable trends is also worth quoting:

The only danger international trade presents to growth is the danger that we will not sufficiently recognize how important it is for our continued growth. We must advance together with all the rest of the world. That means enlarged foreign investment on our part, and participation in reducing everywhere obstructions to the movement of men, money and goods. This can be looked at from a purely practical angle of self-interest. Further participation in world trade would result in even wider markets than we now have. After all, our population is only 6 per cent of the total on the planet, and a large part of the world hungers for the good products we can provide.

Our gain would be higher production and greater sales of products we can make with the greatest efficiency. At the same time we would benefit from less costly sources of supply for the things we either do not produce at all or produce less efficiently than others. Our own economic growth would thus be fostered in the lands with which we traded. That is, great gains, sharable all around, would come from a more intensified international specialization of labour and wider use of world resources.

As one looks over the world it is apparent that different peoples have reached different stages of growth. Quite a few are merely at the stage of excited aspiration. Many of these are societies that have been traditionally stagnant in their social organization. Underneath most of the world-wide unsettlement so evident in recent years is the natural urge of awakening peoples to share the better living conditions achieved by nations more advanced industrially. This recognition of the benefits of economic growth is the principal yeast under the ferment of nationalism characteristic of this era. It has been aptly described as a "revolution of rising expectations".<sup>39</sup>

---

<sup>39</sup> Research and Policy Committee of the Committee for Economic Development, Economic Growth in the United States; Its Past and Future, New York, CED, February, 1958, p. 53. The

The problem that will be investigated in Part II is even wider in context than this perceptive statement embraces. Although we have been forced to accept the conclusion that dependable prediction of future growth paths and patterns is truly impossible, the best projections of attainable economic growth give a fair measure of what might reasonably be expected. In aggregate terms it is indicated that already advanced, industrialized countries have higher expectations of continuing expansion than the underdeveloped areas. When population projections are married to these gross national product figures the growth outlook in per capita income terms is clearly in favour of a still higher rate of gain for the advanced economies. Finally, since these growth rates are expressed as percentage improvements the absolute differential in favour of the high income countries is further magnified by translating the data back into money terms. In these absolute terms even parallel rates of improvement of 3 per cent per annum in all areas would still mean that the income gap between the peoples of rich and poor countries would progressively widen. Thus the first conclusion, that the rich are getting richer and while the poor are not getting poorer absolutely they are relatively.

---

underlined sentence appears in italics in the text. The quotation marks are reproduced from the original.

The wider problem to be investigated is, - can differential growth rates and accelerating differentials in production levels and standards of living continue for a prolonged period without the lag setting up repercussions which must react unfavourably on the growth possibilities of the advanced countries as well? If the answer is that retardation influences can and will eventually be communicated to the faster growing, more advanced countries from the aspiring but constrained underdeveloped areas, then it becomes obvious that the maintenance of a high rate of economic progress in the world economy depends essentially on finding ways and means that will allow and stimulate a rate of growth in the low income areas exceeding their immediately apparent potential.

**PART II**

**INTERNATIONAL RETARDATION EFFECTS**

## CHAPTER I

### HISTORICAL GROWTH RATES

Against the theoretical background of Part I it is now appropriate to assemble significant empirical data on economic growth, over comparative periods for a representative selection of countries, in order to determine the historical mainsprings of progress and to permit analysis of the international interaction of differential growth rates. In anticipation, it can be expected that wide variations in rates of economic growth will be demonstrated from country to country in any particular period and from period to period in any particular country. The reasons for these variations must always be sought, but above and beyond this purpose will be the search for indications of international repercussions on growth rates communicated from one country to others. In Part I, where the broad subject of economic growth was reviewed to provide the necessary background for the explorations that are the purpose of this study, there was a vast body of literature to draw on. In Part II, where we proceed on a less well charted course, the resources to be drawn upon are not so rich or relevant. Even the empirical data for particular countries and periods are often wanting in the special information needed for our immediate purposes.

A considerable degree of selection has been exercised in choosing the countries to be reviewed. This choice has been conditioned by the special nature of the problem and the availability of sufficiently complete data for the alternative representative countries. Also, the brief review of the individual test-case countries that follows suffers badly from the limitations of space. Inevitably, there is incompleteness in each of the test-cases that makes them less than satisfactory. Without conscious bias or predisposition to represent the evidence as proof of conclusions arrived at in advance, the capsule form of presentation involves the unavoidable limitation of all economic analysis to an extreme degree, that of unbalanced emphasis. As might be expected, many of the valuable lessons to be learned from a study of the empirical experience of the pretended representative countries will be lost simply because some aspects of their growth paths will be stressed and others, of perhaps equal significance, receive little or no attention in the few pages allotted to each country.

#### England

As has been frequently recognized by writers using the historical approach to the study of economic growth, no single country offers more instructive experience than

England for case study.<sup>1</sup> Here, the story of change and progress is filled with dramatic instances of innovation in every sector of the economy, international dependence is historically deep-rooted and a continuous feature of the process of economic development, the population problem exerted its pressure throughout the transformation, and, free of the compulsion of competitive urgency and foreign induced social and political restlessness, economic growth proceeded as an autonomous rather than an induced and forced process, thereby exhibiting its basic nature more revealingly.

There are clearly defined stages in the economic evolution of England, each of which has been designated as a revolution by various writers, and with justification, because of the completeness of the changes involved and their far spread consequences. Yet, the agricultural revolution, the commercial revolution and the industrial revolution, were not short, sharp and violent, each distinct from the other in causation and consequences. These revolutions were spread over extended periods of time that are difficult to

---

<sup>1</sup> Norman S. Buchanan and Howard S. Ellis, Approaches to Economic Development, New York, The Twentieth Century Fund, 1955, Ch. 7, pp. 126-151, and Gerald M. Meier and Robert E. Baldwin, Economic Development, New York, John Wiley & Sons, Inc., 1957, Ch. 7-9, pp. 143-203, and A. J. Youngson, Possibilities of Economic Progress, Cambridge University Press, 1959, Ch. VIII, pp. 107-145, contain good, analytical, condensed studies of England as a case history. These sources have been heavily drawn upon in the following section.

delineate precisely and overlap each other.

Significant data on England's economic progress during the eighteenth century are not available in the form of reliable statistics, so that no attempt can be made to measure the rate growth of productivity or income prior to 1800. Covering the next fifty years, up to 1850, the data are limited and speculative, allowing only the rough estimate that for this period real per capita income rose by over 25 per cent.<sup>2</sup> In the modern, industrialized period, from 1870 to the present time, the growth rate in per capita income averaged 1.25 per cent per annum.<sup>3</sup> The percentage change per decade in per capita income over this more recent period reveals that a rising rate of growth was achieved through to 1897-8, reaching a peak rate of over 25 per cent per decade between 1885-1894, after which time the rate of progress slowed down to less than 6 per cent per decade between 1905-1929, followed by a rising trend that again took over allowing the past decade to equal the peak rate of sixty years ago.<sup>4</sup>

---

<sup>2</sup> Meier and Baldwin, op. cit., p. 176, derived from, Phyllis Dean, "Contemporary Estimates of National Income in the First Half of the Nineteenth Century," Economic History Review, VIII, No. 3, p. 53, April 1956.

<sup>3</sup> IBRD Economic Staff, Statistical Tables on Economic Growth, Washington, unpublished document, 1956, p. 16.

<sup>4</sup> Meier and Baldwin, op. cit., p. 181, supplemented for post-war years from, U. K. Central Office of Information-Some Notes on the United Kingdom Economy, Jan. 1958.

Comparing the growth of population intertemporally with the growth of income is revealing. During the nineteenth century when the preconditions for economic progress were being established there was a rapid expansion of population, averaging 13.2 per cent per decade.<sup>5</sup> For the entire twentieth century the population growth rate averaged only 5.6 per cent per decade,<sup>6</sup> with the decline progressive throughout the century. For the first forty years of the twentieth century population was virtually stagnant and only began showing appreciable growth again during the war and postwar years. By inference, the rapid population growth during the preconditioning period was one of the dynamic growth forces activating the subsequent progress. Again, population seems to be positively associated with income generation in the stagnation and renewed expansion phases of the two series. The increasing population, despite the relatively high population density of England, never became a retardant on per capita income growth because the Malthusian effect of land scarcity was compensated by immigration to vacant lands abroad, while domestically urbanization and industrialization proceeded hand-in-hand to absorb in more highly productive employment what had become redundant rural labour.

---

<sup>5</sup> See Chapter I, Appendix 2, Table 2.

<sup>6</sup> Ibid.

The highlights of England's economic development and dynamic growth can be briefly summarized, but for want of space cannot be discussed interpretatively for full significance. The agricultural revolution came first, with its changes in techniques, land tenure system, and rise in productivity. This led to the release of labour and the growth of towns. Narrow regionalism broke down before the conditions of rising agricultural output and increasing interdependence of towns and country. A market economy resulted and the process was stimulated by a new responsiveness to the profit motive. Meeting the needs of spreading trade, transportation facilities, roads, canals and riverways, were developed. It is pertinent to our larger problem to remark that these transportation facilities were created by private investors, at heavy cost, many of whom lost a good deal.<sup>7</sup> The new possibilities of trade and the real spread of trade meant that the commercial revolution was under way. This occurrence had important consequences in altering the dominant scheme of social values to allow the emergence of an increasingly wealthy and powerful middle class. In turn, this permitted a shift in political ideas favourable to the pattern of economic life that was emerging. As well, the changes produced the venturesome spirit required for the all-important

---

<sup>7</sup> Buchanan and Ellis, op. cit., p. 137.

innovating entrepreneurs who, having accumulated the necessary capital, made the industrial revolution possible.

Although the real beginnings of the industrial revolution are found earlier in the eighteenth century, it has been claimed that an important impulse behind the spurt, that gave it real momentum, was the period of isolation from the European continent due to the French Revolution and Napoleonic wars.<sup>8</sup> It is instructive to consider that the impetus came from two factors associated with this period: i) an inflationary environment created by a scarcity of goods, which stimulated production and encouraged innovation to raise productivity and exploit profit opportunities; ii) the imposed isolation from customary relationships created fortuitous circumstances for industrial undertakings unchallenged by the competition of foreign goods in the period of infancy. Both the United States and Canada have more recently profited industrially from like circumstances in periods of war.

This Napoleonic interval marks the "take-off" for England, and by 1815 it had become the modern world's first "maturing" society. Mechanization and industrialization were well established, finding solid expression in the factory system. All this was made possible by a high rate of investment from savings accruing to the middle class from commerce

---

<sup>8</sup> Ibid., p. 150.

and assisted by the redistributive effects of inflation.<sup>9</sup> Initially, the rising factory industry and the important associated inventions and innovations were associated with traditional industries like textiles, clothing, mines and metals, but presently came a wider application in a more diversified range of new industries. Three features of the British experience may seem almost incredible to the development ambitious countries of the twentieth century. First, this was the hey-day of laissez-faire doctrines in their birth place, England. In fact, free enterprise unassisted and unimpeded by state intervention was an economic philosophy evolved during this very period, and hence must be accepted as a child of the economic events. Secondly, the industrial revolution and the transformation into a maturing economy was achieved entirely with domestic capital, with the savings coming before the investment, for there were no available foreign sources of capital to tap, and even internal credit institutions only developed after economic progress was an accomplished fact. Thirdly, visible trade was continuously adverse and tended to show progressively unfavourable terms of trade as import demand for materials rose, an effect that was only offset by constantly improving productivity. An import surplus is expected in developing economies

---

<sup>9</sup> "Rostow on Growth", The Economist, London, August 15, 1959.

today, but only on account of the heavy increase in imports of machinery and equipment. England relied on the sale of services to fill the gap and actually became a capital exporter at a remarkably early stage of its maturity.

### Germany

An interesting continental contrast to England's course of economic development is provided by Germany,<sup>10</sup> where two new growth factors are evident. The demonstration effect influenced Germany significantly, as impressions of England's attainment filtered across the Channel. But neither political nor social conditions were conducive to emulating England's economic success, and the relatively weak middle class was in no position to supply the initiative and undertake the role of entrepreneur and capitalist, so the national state had to fill this important role.

In the first half of the nineteenth century the autocratic Prussian Government provided almost all the initiative and consciously established the necessary pre-conditions for the "take-off", which Rostow identifies as occurring from 1850 to 1873.<sup>11</sup> The state deliberately

---

<sup>10</sup> Buchanan and Ellis, op. cit., Ch. 8, pp. 152-174 is the main source of the material on the German case history.

<sup>11</sup> "Rostow on Growth", The Economist, and W. W. Rostow, "The Take-Off into Self-Sustained Growth", The Economic Journal, March 1956.

brought the feudal era to an end and encouraged improved agricultural techniques and new crops, that the English progress in agriculture might be shared. Next, the creation of the Zollverein meant basic German unification and the elimination of strangling duties, taxes and regulations that impeded trade, so that the essential of a wider market was achieved. This step was carried to logical completion with the establishment of the German Empire in 1864. With this accomplished, Prussia was able to provide support and encouragement to railroad construction and directly undertake some of the construction as state enterprise. Yet, at mid-century, Germany had made but little true industrial progress and remained an agricultural economy with only insignificant manifestations of urbanization, although the State had set up a technological institute to pass along instruction on borrowed English techniques in manufacture.

In one other important aspect England was both the dominant influence and a striking contrast to German development. Acutely sensitive of the competition of English manufacture, Germany adopted a protectionist policy to shelter its new industries in their infancy at the very time when free trade doctrines were for the opposite reasons flourishing in England. Yet, there is a parallelism here, for Germany was seeking by state regulation to establish the same isolation that international wars had created for the incu-

bation of new industry in England half a century earlier.

The rate of income growth began to gain some momentum in the first half of the century when all these changes were taking place. It was only after 1860 that the era of real progress began in the sense that a high rate of economic expansion measurable in aggregate and per capita income increase was realized. The average achievement over the next 40 years was a rate of total income increase fifty per cent greater than England in the same period, and since England's population was growing at a higher rate, a per capita rate of income increase double the English growth rate.<sup>12</sup>

After the turn of the century until 1914 Germany began to experience a slowing down in the rate of growth, even as England had as maturity settled in and the period of rapid innovation and heavy investment was over. However, the rate of German growth was still roughly twenty per cent greater than England's for that period. Interwar stagnation interrupted the process of real growth, but in the period since 1950 it has been resumed with a driving strength that has frequently been described as "the German miracle." During this postwar surge the German expansion rate has been

---

<sup>12</sup> See Chapter I, Appendix 2, Table 2.

two and half times the very satisfactory British rate of growth.<sup>13</sup>

In common with England, Germany's period of intensive and extensive economic development was largely financed out of domestic savings although internal capital was strategically supplemented by capital flows from England in the third quarter of the nineteenth century and later by the reparation payments from France following the France-Prussian war. Also in common with England, Germany's foreign trade expanded at a very rapid rate as this rapid growth of the economy took place. Unlike England, Germany borrowed techniques to compress the early period of industrialization and relied heavily on state initiative, support and protection.

#### Japan

Although the growth path followed by Japan is no close parallel to that of Germany, the two cases have one important feature in common. The State in Japan was also the instigator of economic progress and the guiding authority that effectively imposed industrialization on the nation.<sup>14</sup>

---

<sup>13</sup> IBRD Economic Staff - Statistical Tables on Economic Growth, op. cit., for the comparative statistics demonstrating these trends.

<sup>14</sup> William W. Lockwood, "The State and Economic Enterprise in Modern Japan", 1908-1938, Ch. 18, in Economic Growth; Brazil, India, Japan, op. cit.

There was no extended period of gradual pre-conditioning but an abrupt transition from a feudal, agricultural economy, with rigid hierarchies firmly dominated from the centre of power, the Imperial Palace, to the deliberate transformation into a modern nation, eastern style, dating clearly from the Restoration of 1868. The compulsion to change came from two pronged foreign influence after centuries of isolation:

- i) contact with the western world induced the demonstration effect and revealed the possibilities of borrowing technology;
- ii) fear of foreign domination inspired the desire for national progress to strengthen resistance to both military and economic threats from abroad.<sup>15</sup>

The vigorous initiative of the Meiji oligarchy in dispossessing the feudal overlords, establishing state owned industry, creating transportation facilities and other social overhead capital, funnelling off the savings of agricultural producers to finance industrial expansion and establishing a far reaching system of basic and technical education, sug-

---

<sup>15</sup> As Edwin P. Reubens, "Foreign Capital and Domestic Development in Japan", Ch. 6, in Economic Growth: Brazil, India, Japan, op. cit., quotes in a footnote, p. 196, from J. E. Orchard, Japan's Economic Position, p. 231, "Wars and the fears of wars have played an important part in bringing Japanese manufacturing industries to their present state of development. Industrialization was begun as a weapon against possible aggression from a foreign nation, and each of the three wars in which Japan engaged in the modern period - the war with China in 1894-1895, the Russo-Japanese War of 1904-1905, and the World War - was a powerful stimulus to industrial expansion."

gests a triumphant experiment in state capitalism. But this picture is so oversimplified as to be false.<sup>16</sup> Private enterprise was at no time suppressed and, once the process of industrialisation began to take hold, the old, landed nobility were encouraged to use their capital realized from expropriation to assume the entrepreneurial role. However, the driving leadership of the government and the responsive spirit of the people of all classes, a manifestation of their socio-cultural habits and a common sense of nationalism, are not sufficient to account for the progress achieved. Actually, in calculating the degree of government-induced growth, consideration must be given to the almost continuous leakage, or negative growth effect, of armament expenditures which absorbed 40-50 per cent of national revenue regularly from 1895 onward, a serious drain on Japan's limited capital resources.<sup>17</sup>

The lessons of Japan's truly phenomenal economic growth in the modern period are difficult to distil into easy rules that might be applied with equal effect in the underdeveloped world today. The period of intense government intervention, lasting from 1868 through 1882, was the effec-

---

<sup>16</sup> William W. Lockwood, op. cit., especially p.586-7.

<sup>17</sup> Lockwood, ibid., p. 590.

tive take-off period.<sup>18</sup> The great achievement of this period was the complete reorientation of the economy and the social philosophy at its foundations. Not only was there the dramatic shift from agriculture to industry, but an insular, aloof society turned outward of necessity and by design to achieve its ends. The secluded Japan, in which foreign trade was a negligible factor in its national income, emerged into the world economy and became increasingly shaped to a pattern of high interdependence, with foreign trade accounting for between 15 and 20 per cent of national income.<sup>19</sup> Industrialization and diversification required this extraordinary change because of the relative poverty of Japanese natural resources, while the rapid rise in productivity and the exploitation of the classic opportunities of specialization in a world of free multilateral trade, in textiles and especially the unique silk industry of Japan, meant an increasing need for foreign markets. After this take-off, state intervention faded in importance as private initiative and private capital took over the initiative to produce a rising momentum of growth. It is questionable whether or not this strange combination of forceful and effective government planning and

---

<sup>18</sup> W. W. Rostow, op. cit.

<sup>19</sup> William W. Lockwood, "The Scale of Economic Growth in Japan, 1868-1938", Ch. 5 in Economic Growth: Brazil, India, Japan, p. 145; and International Monetary Fund, Character and Role of Economic Planning in Japan, an unpublished paper, Washington, November 1957.

emerging virile private enterprise could be duplicated in present day experiments in economic development.<sup>20</sup>

Peculiar to Japan, as well, was the high rate of savings and investment in a country with such a very low level of per capita income. Even after 70 years of truly remarkable progress the per capita income is today only moderately better than \$200.<sup>21</sup> The net savings ratio rose from zero to about 17 per cent over long periods of pre-war development, and to over 20 per cent in more recent years.<sup>22</sup> This striking achievement was due primarily to two favourable circumstances: i) an extremely unequal distribution of wealth, with the high income recipients traditionally disinclined to lavish and wasteful expenditure so that they readily became the financiers and entrepreneurs of the new growth era; ii) the common people on subsistence income had a low marginal propensity to consume, and their small savings also played a significant part in the investment build-up. Conspicuous consumption did not drain off the income gains, nor did speculative investment frustrate the possibilities

---

<sup>20</sup> Lockwood, The State and Economic Enterprise in Modern Japan, op. cit., pp. 600-602.

<sup>21</sup> I.M.F., Character and Role of Economic Planning in Japan, op. cit.

<sup>22</sup> Reubens, Foreign Capital and Domestic Development in Japan, op. cit., p. 198. Colin Clark had calculated a figure of 25 per cent but this has been revised by Kazushi Ohkawa, The Growth Rate of the Japanese Economy, Since 1878, Kinokuniya, Tokyo, 1957, pp. 176-177.

of productive investment, so the government did not hesitate to tolerate what we call "creeping inflation" today, or actively to abet the sacrifice of stability for development, imposing certain sacrifices on the population.<sup>23</sup> Up to 1895 the substantial part of the rise in production was attributable to agriculture and cottage industry. Japan, thus, by concentrating its development efforts in the areas where factor endowment, high labour - low capital, dictated, achieved rapid early growth with low capital intensity and low average capital-output ratios.<sup>24</sup> There was greater capital intensity in industrial development as heavier industry and transportation gained more prominence after 1895. This shift, and an appreciable wastage of capital resources, came about with the increasingly heavy outlay on arms production, and associated with it was the inadequacy of domestic capital supply and increasing reliance on foreign capital.<sup>25</sup>

Averaging over the period 1878-1938, Japan's national income grew at the remarkable annual rate of 4.3 per cent, while per capita income increased at the rate of 3.2 per cent.<sup>26</sup>

---

<sup>23</sup> Reubens, ibid., pp. 198, 199 and 209.

<sup>24</sup> G. Ranis, "The Capital Output Ratio in Japanese Economic Development", The Review of Economic Studies, October 1958.

<sup>25</sup> Lockwood, The Scale of Economic Growth in Japan, 1868-1938, op. cit., Reubens, op. cit.

<sup>26</sup> G. Ranis, op. cit.; See also Chapter I, Appendix 2, Table 2.

Since 1950 the rate of improvement has been even higher. This pace of growth far outstrips that of the United Kingdom in the same period and was not even equalled by Germany or the United States. In Japan, we have an example of sustained economic growth at a high rate despite many material handicaps including, limited land area, relative poverty of natural resources and a dense population at the time of take-off, about 35 million in 1868, with a continuing high rate of population increase since, over 12 per cent per decade producing a total population of over 93 million in 1959. Naturally, this intensifying population pressure, accountable for by a marked decline in the death rate even though the birth rate has been falling, has led to problems and changes in Japan. Urbanization as a significant trend occurred mainly after 1920. This, in turn, necessitated an increasing shift from cottage to factory industry and did give impetus to industrialization. A redundant labour force makes unemployment and underemployment chronic problems, yet ones with which Japan has coped exceptionally well in the past.

After 70 years of particularly rapid growth per capita income stands today at not much over \$200, as stated earlier. This fact is a sharp lesson in international income inequality. An outstandingly high percentage rate of improvement is not so impressive when translated into absolute terms. The absolute income gap between Japan and the

already advanced countries of England, Germany and the United States widened during the period despite their lower rates of growth.

#### Canada

The problems of economic development in Canada are quite understandably regarded with envy by the older countries of the world. Apparently limitless natural resources mean that the effective checks on the rate of rise of national product are the paucity of labour supply to exploit the country's latent wealth and the limited capacity of the world to absorb its output. Capital supply has generally not been an impediment to growth in the modern period in any real sense because foreign funds have generally been readily available to supplement and sometimes supplant domestic capital on a scale fully commensurate with the absorptive capacity of the economy with due regard for factor proportion. In essence, Canada is a fascinating example of the frontier economy.<sup>27</sup> In spite of the impressive development that has already taken place, allowing Canadians to enjoy a standard of living at the peak of the international scale based on per capita income second only to that of the United States,

---

<sup>27</sup> H.M.H.A. Van der Valk, The Economic Future of Canada, McGraw-Hill, Toronto, 1954, Ch. 1.

Canada should certainly be regarded as an underdeveloped country if the test were attainment as compared to potential, rather than the accepted standard of rich or poor.<sup>28</sup>

Although Rostow quite properly identifies the take-off period for Canada as 1895-1914,<sup>29</sup> a conclusion amply supported by the mass of data painstakingly pieced together by Dr. O. J. Firestone,<sup>30</sup> a return to the scholarly, pioneer works of Dr. H. A. Innis<sup>31</sup> gives us forceful evidence that the seeds of economic growth were strewn in Canada with the very dust from the jackets of the early settlers from France and England. The culture of Canada and the character of its social traditions were from the first shaped by the challenge of the frontier and by the spirit of these restless, enterprising men and women who came seeking better things and eager to accept the dangers and difficulties entailed. Readiness for change is the most essential pre-condition for

---

<sup>28</sup> Royal Commission on Canada's Economic Prospects - Final Report, Ottawa, 1957, see especially Ch. 1.

<sup>29</sup> Rostow, The Take-Off Into Self Sustained Growth, op. cit.

<sup>30</sup> Dr. O. J. Firestone, Canada's Economic Development 1867-1953, Income and Wealth, Series VII, London, Bowes & Bowes, 1958.

<sup>31</sup> Dr. H.A. Innis, The Fur Trade in Canada, New Haven, 1930; and Problems of Staple Production in Canada, Toronto University Press, 1933; also see H. Q. Innis, An Economic History of Canada, Toronto University Press, 1943.

economic growth. Then, too, the borrowing of techniques, a supply of foreign capital, and access to foreign markets to absorb the rising product, were all advantages identified with the circumstances of colonialism under which Canada came into being. Finally, the occasionally, but decreasingly, hostile affinity with the United States nurtured a sense of independent enterprise which softened the sometimes harsh restraints of colonialism, and presently gave Canada a supplementary parentem in locus from which to import technology, capital, and an attitude of rising expectations, and to which it could export its increasing production of goods.<sup>32</sup> There was in fact no beginning in real poverty that had to be broken out of. As Hoselitz phrases it, Canada is a prime example of the expansionist pattern of growth, or to quote his complete, and very apt classification, "expansionist, satellite, autonomous."<sup>33</sup> That Canada did not develop as rapidly as the United States is attributed by Van der Valk as being rooted in a less urgent "economic time-spirit", or a somewhat less materialistic and venturesome attitude, due to the tempering influence of religious and cultural traditions.<sup>34</sup>

---

<sup>32</sup> Royal Commission Final Report, op. cit., Ch. 3, Canada and the United States.

<sup>33</sup> Bert F. Hoselitz, "Patterns of Economic Growth", Canadian Journal of Economics and Political Science, November 1955.

<sup>34</sup> Van der Valk, op. cit., Ch. 2.

Although Canada's economic development was slower getting under way than that of the United States, it is evident that the average rates of growth in the two countries since Confederation are closely parallel, allowing for variations in short period trends.<sup>35</sup> Post-war, since Canada has come to relative maturity, while still experiencing a high rate of population increase and an accelerated rate of development of natural resources, the rate of increase in productivity in Canada has outstripped that of the United States, leading to a higher rate of growth in aggregate income terms and a roughly equal per capita income increase.<sup>36</sup> Against the background of Canada's short history, and in particular the developments in the economy over the past fifteen years, the forecasts of growth evolved by the Royal Commission on Canada's Economic Prospects<sup>37</sup> do not seem excessively optimistic and strongly suggest that Canada may well surpass the United States in the rate of aggregate growth and quite possibly in per capita growth over the next few decades.

Staple commodities and export trade have been the

---

<sup>35</sup> See Appendix 2, Table 2, Chapter 1.

<sup>36</sup> IBRD - World Economic Growth, 1955-1962, op. cit.

<sup>37</sup> Royal Commission - Preliminary Report, December, 1956.

main supports of the Canadian economy throughout its economic history. The diversity of resources and changing emphasis of foreign demand account for the continuous change from period to period of the prime staple: fish, furs, timber, wheat, newsprint and minerals.<sup>38</sup> The importance of resource development as a continuing factor in Canadian economic growth cannot be neglected.<sup>39</sup> A somewhat different view is held by Galbraith who insists that natural resources will from now on play a largely passive role, with Canadian growth being mostly the result of more extensive or more intensive or technologically more proficient utilisation of known resources.<sup>40</sup> With increasing maturity, and particularly since 1939, the labour force has been progressively diverted into higher productivity fields of secondary and tertiary industry.<sup>41</sup> Yet, though export trade may have declined from 26 per cent to 21 per cent of gross national expenditure from

---

38 H. A. Innis, op. cit.

39 Firestone, op. cit.

40 J. K. Galbraith, "The Causes of Economic Growth - The Canadian Case", Queen's Quarterly, Summer, 1958, p. 180.

41 Royal Commission - Canadian Economic Growth and Development from 1939 to 1955; demonstrating the shifts that Colin Clark leads us to expect in his analysis in Conditions of Economic Progress.

1938 to 1955, export trade remains, and will continue to be, an extremely important factor in Canada's future growth and prosperity.<sup>42</sup> In this period urbanization and industrialization increased tremendously, but with the shift of labour population away from farms there was increasing mechanization of agriculture and a positive rise in output, reflected in the quite striking rise in agricultural productivity.

Population increase has definitely been a positive growth factor in Canada. This fact is an inevitable truism, given the characteristics of the frontier economy: vast area, unexploited resources and sparse population. It has not only encouraged a high rate of natural population increase but has influenced government policy to give active encouragement to immigration.<sup>43</sup> However, this heavy importation of labour and skills did not contribute to Canada's growth to the degree that might have been expected because of the offsetting drain of emigration to the United States. As Dr. Firestone points out, only one-third of the entrants contributed a population gain from net migration during the heaviest period of immigration, 1904-1913.<sup>44</sup> The tendency

---

<sup>42</sup> Royal Commission, Preliminary Report, op. cit., p. 13; see also John A. Stovel, Canada in the World Economy, Harvard Economic Studies, Vol. CVIII, Cambridge, 1959.

<sup>43</sup> Stovel, op. cit., p. 122; Royal Commission - Output, Labour and Capital in the Canadian Economy, February 1957, p. 172.

<sup>44</sup> Firestone, op. cit., p. 8.

was for Canada to import unskilled and semi-skilled labour and export highly skilled and professional personnel, thus, while gaining quantitatively losing qualitatively. In recent years, the exodus from Canada has tapered off so that net migration is contributing increasingly to the productive labour force.

Given the character of the people, at all stages, who make up the population of Canada, the wealth of resources available for exploitation, and the fundamental relationships with England and the United States, capital supply was never a real impediment to the country's economic growth. Even as early as 1870 investment was 13.1 per cent of G. N. P. and since has shown a rising trend, allowing for interruptions in war and depression years, with three periods of particularly high investment, 1896-1913, 1920-1930, and almost continuously since 1941, reaching peaks upward of 25 per cent.<sup>45</sup> With per capita income continuously high in relative terms, domestic savings averaged between 12 and 14 per cent last century and have risen to a 16 to 20 per cent range in the present century. Domestic capital formation alone would have sustained a satisfactory rate of economic growth. However, to quote the findings of the Royal Commission on Canada's Economic Prospects:

---

<sup>45</sup> Firestone, pp. 100-101; Stovel, p. 252; Van der Valk, pp. 35-37; Royal Commission on Canada's Economic Prospects - Final Report, p. 336.

The growth of the country, at any stage in its history, would have been much slower without large supplies of capital from foreign countries, principally from the United Kingdom and the United States. All our periods of great economic activity and expansion in peacetime have been characterized by heavy inflows of capital from abroad; in periods of economic stagnation, we have been importing very little capital. Canada has always been a debtor nation.<sup>46</sup>

And as Courtland Elliott puts it:

For example, the years from 1900 to 1913 were a period of developing boom in Canada. Prices and wages were rising and prosperity was rapidly increasing. Between 1900 and 1913 the population increased by 44 per cent. It was obviously a time when the physical requirements of the people for homes, schools, factories, railways, and municipal improvement required the application of capital.

Then, as now, neither the physical resources nor the productive capacity of the nation could meet the demand. The consequence was that no other country in the world absorbed outside capital so rapidly as Canada.<sup>47</sup>

One further quotation from the Royal Commission's Final Report is appropriate to the consideration of the role of foreign capital in Canada's economic development.

But the mere fact that Canada has been willing to borrow abroad and has always welcomed the investment of foreign capital here would not by itself have been enough to attract an inflow of capital to this country. Nor would the availability of rich and plentiful resources and opportunities for growth. Fortunately in addition the 'investment climate' in Canada has been favourable. Canada has

---

<sup>46</sup> Royal Commission - Final Report, op. cit., p. 380.

<sup>47</sup> Courtland Elliott, "The Role of Capital Imports", in Canada's Economy in a Changing World, ed. J. Douglas Gibson, Macmillan Co., Toronto, 1948, p. 249.

had a long tradition of freedom for the flow of capital and income across its borders. Canada has also had a long history of orderly and responsible government. . . . . Furthermore there is, of course, the basic fact that opportunities for profit are great in Canada and the risks involved are relatively small.<sup>48</sup>

The accelerated rate of economic growth made possible by supplementing domestic capital formation with the heavy foreign capital inflow was, of course, associated with a chronic and periodically huge deficit on current account transactions in the balance of payments. The statistical data and the implications of this method of financing rapid economic development have been given close scrutiny in recent literature.<sup>49</sup> In the first of the three periods of particularly high investment and rapid growth previously identified, 1896-1913, new investment amounted to more than five billion dollars of which about half was financed by foreign countries; in the second period of the 1920's investment is estimated at six billion dollars with foreign capital covering something like a third; in the final and presently continuing period the import surplus and the volume of capital inflow are higher than ever but only represent about 20 per cent of total

---

<sup>48</sup> Royal Commission, Final Report, p. 385.

<sup>49</sup> See: Stovel, Firestone, op. cit. and also Wm. C. Hood, Royal Commission - Financing of Economic Activity in Canada, and David W. Slater, Royal Commission, Canada's Imports.

investment.<sup>50</sup> Thus a country with a savings rate of 15 to 19 per cent has been able to sustain investment at a 20 to 25 per cent rate.

The role of government in stimulating, channelling and sustaining economic growth in Canada has been positive but largely indirect. Economic liberalism was the inherited and consistently practiced tradition. Controls on economic life have been shunned to the maximum degree, national investment planning has never been adopted, and direct participation in ownership and operation of industry and services has been restricted to cases of national necessity and areas of national interest. Even though no national policy of economic development can be identified in any period, the Canadian Government did make a solid contribution to the country's economic progress in two ways. First, as stated in the quotation from the Gordon Commission's Final Report, a favourable investment climate has always existed in Canada due to the long history of orderly and responsible government, and also there is a notably good record in maintaining fundamental financial stability, which is a prime requisite to creating an environment conducive to economic growth. Secondly, the government has taken proper initiative in certain strategic

---

<sup>50</sup> Van der Valk, op. cit., p. 36; Firestone, op. cit., p. 72.

phases, such as the railway policy in the beginning and since, which has allowed penetration and development of resources beyond the frontier, and in the obviously imperfect but basically well timed immigration policy.

### India

Among the newly-developing economies of the world none is a more significant test-case than India. Only in the last decade can it be said that India has entered into the take-off period, and it is still too early, probably by about six years, to determine whether or not this take-off will succeed.<sup>51</sup> The high significance of the Indian experiment lies in the international political importance of the contest in progress between Communist China and democratic India.<sup>52</sup> As the champion of economic planning in a free political economy as opposed to the overall planned and controlled economy, India is being heavily backed by the Western World to prove to all of South-East Asia the superiority of this path to economic progress and well-being. Also, India is a recent emergent from the subjugation of colonial status and much may be learned from its continuing experience of

---

<sup>51</sup> W. W. Rostow, The Take-off into Self-sustained Growth, op. cit.

<sup>52</sup> Wilfred Malenbaum, "India and China: Contrasts in Development", American Economic Review, May, 1959.

the handicaps and advantages of such a heritage. Finally, the population problem is most formidably in evidence in India, for there a fairly high rate of population increase continues to aggravate the difficulties of existing overpopulation and extreme poverty.<sup>53</sup> Not only must the vicious circle of poverty be broken but the population dilemma must be solved.

Historically, India is an interesting instance of arrested development. As Helen B. Lamb demonstrates in her fine study of Indian economic development under British colonial influence,<sup>54</sup> India had attained a high degree of development in pre-industrial terms and gained from British penetration modern business and political institutions, technology, capital and administrative practices, yet no dynamic momentum of economic development followed. This she attributes to the subordination of India to British political and economic interests, so that while economic development was in some ways stimulated, in many others it was inhibited. Commercial profits diverted initiative and capital away from productive undertakings. The same influences can be seen at

---

<sup>53</sup> Ansley J. Coale and Edgar M. Hoover, Population Growth and Economic Development in Low-Income Countries: A Case Study of India's Prospects, Princeton, N.J. Princeton University Press, 1958.

<sup>54</sup> Helen B. Lamb, "The "State" and Economic Development in India", in Economic Growth: Brazil, India, Japan, op. cit., p. 464.

work in agriculture where the ratio of food to non-food crops declined progressively, to such a degree that there was an absolute decline in gross food-crop production from 1893-1894 to 1945-1946 and a serious decline in the volume of food crops output per capita.<sup>55</sup> Income data, not to dream of valid statistics, are spotty, inconsistent and unreliable prior to independence, but from what is available an educated guess might be made that total national income did rise gradually throughout the period 1800-1945, but that for the last hundred years of that period per capita income increased only very slightly, if at all, and probably showed a declining trend in the twentieth century when population growth accelerated.<sup>56</sup> The following Table is quite revealing about India's relative advancement at about 1950.

Even before the war was over and the immediate objective of political independence had been achieved Indians were examining the problem of economic poverty and planning for its easement. In 1944 a Plan of Economic Development for India, later known as the Bombay Plan, was drafted.<sup>58</sup> This plan, however, was little more than a

---

<sup>55</sup> Daniel Thorner, Long-term Trends in Output in India, in Economic Growth: Brazil, India, Japan, op. cit., pp. 121-123.

<sup>56</sup> Ibid., p. 119.

<sup>57</sup> Seymour E. Harris, Economic Planning, New York, Alfred A. Knopf, 1949, Ch. XI, pp. 230-256.

Table VII - INDIA'S RELATIVE POSITION IN THE WORLD: SELECTED INDICES \*

	Per Cent of World's Population in Countries <u>f</u> /		Per Cent of World's Countries	
	Ahead of India	Behind India	Ahead of India	Behind India
Industrialism <u>a</u> / <u>h</u> / .....	51	49	43	57
Agric. density <u>b</u> / <u>h</u> / .....	57	43	69	31
Urbanization <u>c</u> / <u>h</u> / .....	59	41	51	49
Literacy <u>d</u> / <u>h</u> / .....	92	8	60	32
Per-capita income <u>e</u> / <u>i</u> / .....	57	43	73 <u>g</u> /	27 <u>g</u> /

- a/ Measured in terms of the percentage of occupied males who are engaged in agriculture. Dates primarily for 1947 or near there.
- b/ Number of gainfully occupied males in agriculture per square mile of agricultural land (i.e., land under crops or fallow). Dates same as (a/).
- c/ Percentage of population living in places of 20,000 or more. All data relate to the year 1950.
- d/ Percentage of population age ten and over able to read. Dates same as (a/).
- e/ Not based on world as a whole, but on seventy countries which include about 90 per cent of the world's population.
- f/ Excluding the population of India-Pakistan for industrialization, agricultural density, and literacy; and excluding the population of India for urbanization and per capita income.
- g/ These figures are meaningless, because colonies and other dependent territories are excluded.
- h/ Data gathered or estimated by the Division of Population Research, Columbia University.
- i/ Data from Statistical Office of the United Nations, National and Per Capita Incomes, Seventy Countries - 1949 (New York, 1950).

\* Kingsley Davis, "Social and Demographic Aspects of Economic Development in India", in Economic Growth: Brazil, India, Japan, p. 268.

statement of objectives. Focussing attention on the fact that per capita income in India was but 4 to 5 per cent of that in the United States, 7 per cent of that in the United Kingdom and about 30 per cent of that in Japan, the Bombay Plan set a keynote objective of raising GNP by 300 per cent and per capita income by 200 per cent. But it was too early for effective economic planning and the next few years were mainly devoted to the political and social problems of independence and partition, and on the economic side to the house-keeping chores of conversion to peacetime living and the new status. The 500 odd states of various sizes and importance were first brought together into one unified country with one currency and one system of communications before economic development could be tackled in a reasonable manner.<sup>58</sup>

The First Five Year Plan, 1950-1951 - 1955-1956, was undertaken when, "the Indian economy was in the throes of an inflation attributable to a financial hangover from the war-time years, aggravated by two bad monsoons at home and by the world-wide commodity boom which followed the outbreak of war in Korea. Imports of food and other commodities had to be greatly increased to relieve the shortage of domestic supplies, and heavy pressure was exerted on the balance of pay-

---

<sup>58</sup> H. V. R. Iengar, "India's Approach: Shades of Grey," in Private Investment: The Key to International Industrial Development, edited by James Daniel, New York, McGraw-Hill, 1958, p. 132.

ments resulting in a sharp fall in reserves in spite of increased foreign aid."<sup>59</sup> But the Plan was appropriate to the circumstances in emphasis, scope, targets and manner of execution, and proved to be a gratifying success. Underutilized facilities were employed more fully, and while the immediate need for increased agricultural output was particularly stressed, industrialization also was stimulated. Exceptionally favourable weather conditions, a factor which can certainly have a critical impact on the national product of essentially agricultural economies, made possible a bumper harvest in 1953-1954 and this was the turning point in the Plan. The target for agriculture was exceeded and, apart from the beneficial monsoons, much of this was due to land reclamation by private individuals, entailing little investment. Also, in industry there was a sharp improvement in labour productivity, so that great progress was achieved with an overall capital output ratio of only 2:1.<sup>60</sup> The net results of the Plan were a rise in national output of 17 per cent, against a target rise of 14 per cent, and an increase in output per head of about 9 per cent. Only a small fraction of the increase was attributable to the public sector, with

---

<sup>59</sup> IBRD - Report of Bank Mission to India, restricted report No. AS-54a, August, 1956, p. 24.

<sup>60</sup> Ibid., p. 13.

private enterprise still contributing over nine-tenths of national product.<sup>61</sup> Additionally, important accomplishments were the containment, and in fact lessening, of domestic inflation, and the avoidance of balance of payments difficulties, demonstrated by the increase in foreign exchange reserves over the five year period.<sup>62</sup>

The sense of urgency is conspicuous in India's approach to economic development. The First Five Year Plan had been a success, output had increased, the rate of savings had risen from about 5 per cent to close to 7 per cent, and much of the public investment initiated had not yet yielded its fruits and would enable further gains in output in the future. Yet, much remained to be done to ensure that the growth dynamic would not be lost and that income might continue to increase at an appreciably faster rate than population. This requires a rising rate of investment until the critical 10 per cent level is surpassed on a continuing basis.<sup>63</sup> Countless barriers could frustrate the realization of this goal. Impediments rooted in the social and cultural structure of the country, deference to caste and status, the

---

61 Ibid., p. 9.

62 Ibid., pp. 18-19.

63 Government of India Planning Commission - The New India: Progress Through Democracy, Toronto, Macmillan, 1958, p. 23.

extended family system, the poverty of education, attitude to manual work among the educated, and many others stand in the way of technical progress and sufficient initiative from private enterprise.<sup>64</sup> For these reasons, and partly also on ideological grounds, public investment and government economic planning are counted on to sustain and channel the momentum of economic growth. The First Five Year Plan had not run its course before a more ambitious Second Five Year Plan was drafted.<sup>65</sup> Although economic planning is done in precise terms on this five year basis, a period short enough to permit forecasting in the setting of reasonably stable expectations and an appropriate selection of priorities, the basic approach to economic development is framed in a more forward looking setting. The essential aims, as demonstrated in Table VIII, are to raise national income over a twenty year period by two and a half times and double per capita income, while advancing the structural maturity of the economy and its rate of investment to the point from which the momentum of self-sustaining economic growth may carry it constantly forward.

---

<sup>64</sup> IBRD Report of Bank Mission to India, August 1956, op. cit., p. 8.

<sup>65</sup> Government of India Planning Commission - Second Five Year Plan, New Delhi, February 1956.

Table VIII - TWENTY YEARS OF GROWTH: 1956-76\*

	AT THE END OF					₹ IN- CREASE 1956 TO 1976
	1st PLAN 1955-6	2nd PLAN 1960-1	3rd PLAN 1965-6	4th PLAN 1970-1	5th PLAN 1975-6	
National Income (Rs. crores)	10,800	13,480	17,260	21,680	27,270	152.5
Total Net Investment (Rs. crores) (Total for entire Plan period)	3,100	6,200	9,900	14,800	20,700	576.7
Rate of Investment (as % of national income)	7.3	10.7	13.7	16.0	17.0	132.9
Population (millions)	384	408	434	465	500	30.2
Capital-output Ratio (over the Plan period)	1.8:1	2.3:1	2.6:1	3.4:1	3.7:1	- -
Per Capita Income (Rs.)	281	331	396	466	546	93.9

(All at 1952-53 prices)

\* The New India, op. cit., p. 29.

The Second Five Year Plan was much more ambitious than the First, perhaps reflecting the enchantment of the success that had been achieved. It called for a total outlay more than twice as great as the total involved in the First Plan, with the aim of raising real national output by 25 per cent over the five years. It was intended to provide at least 8 million new jobs outside of agriculture and to bring about rapid industrialization and diversification of the economy. Higher taxes, considerably greater reliance on deficit financing, and much heavier dependence on external financing, characterized this costly programme.<sup>66</sup>

The fortuitous gains of favourable circumstances that had blessed the First Plan with an unexpected degree of success did not accrue a second time. Domestic inflation, as could be expected, flared up and caused rising consumer demand, some distortions, pressure on the balance of payments, and rising costs for planned projects, while the cost of foreign goods also rose to intensify these adverse effects. The timing of the Plan also got out gear, with the private sector investing and importing in excess of the planned rate, adding unexpected strain on the balance of payments and demonstrating the necessary imprecision of planning in a

---

<sup>66</sup> IBRD Report, op. cit.; and Planning Commission - Second Five Year Plan, op. cit., Ch. 2, pp. 22-39, The New India, op. cit., pp. 76-90.

democracy. Although fairly gratifying results were achieved in the first half of the Plan period the financial strain was unendurable and it became necessary to scale down the entire programme to the hard core of projects of highest priority.<sup>67</sup> Paring of the programme, more restrictive general import control, and new regulations discouraging to foreign suppliers of capital goods to the private sector, were not sufficient to close the foreign exchange gap and a massive international rescue operation became necessary to cover the external financing required even for the reduced plan. This joint operation in financial assistance of the International Bank, the United States, the United Kingdom, Western Germany, Canada and Japan provided \$350 million in 1958, substantial commitments on the same order again in 1959, and, with the precedent set, fresh doses of aid are expected to be provided in 1960 and subsequently.

Two highly significant conclusions can be drawn from this experience: i) a rate of economic development and income growth on the scale attempted by India is beyond the capacity of an underdeveloped economy with a high rate of population increase in the modern world economy; ii) the supply of foreign capital available to an underdeveloped

---

<sup>67</sup> Government of India Planning Commission - Appraisal and Prospects of the Second Five Year Plan, New Delhi, May, 1958.

country, even of good credit-worthiness and with privileged access to foreign capital sources, is insufficient to sustain a high rate of investment and growth without extraordinary, continuing assistance, so far as advantage exclusive to India because of its strategic situation.

### Brazil

Another newly developing economy, of importance beyond the well-being of its nationals, is Brazil. In the past, its income growth has been sporadic and always related to cycles of prosperity arising from a succession of staple crops enjoying an export boom; at various times, sugar, rubber, cotton and more recently coffee.<sup>68</sup> These cycles produced no continuous economic growth, however, until the last two decades when industrialization became increasingly firmly established and diversified, with considerable impetus from rising direct foreign investment.<sup>69</sup> Brazil is one of the very large countries of the world and known to be rich in natural resources, yet it lacks coal and developed or proved petroleum resources of any magnitude, and has an

---

<sup>68</sup> George Wythe, R. A. Wight, H. M. Midkiff, Brazil: An Expanding Economy, New York, Twentieth Century Fund, 1949, Ch. 4, pp. 62-116.

<sup>69</sup> George Wythe, Brazil: Trends in Industrial Development, Ch. 2 in Economic Growth: Brazil, India, Japan, op. cit.

inadequate railway transportation system. It would appear that there are tremendous opportunities for resource development, which in such a relatively underpopulated country might advantageously be exploited before embarking on industrialization in a major way, when circumstances for manufacturing industry seem only moderately propitious. The degree of success achieved in this adventure will certainly influence the growth paths chosen by other developing economies. Also, the rewards reaped by foreign industrialists and investors participating in the adventure, and the experience of foreigners at the hands of the Brazilian Government, in such important questions as the degree of freedom to transfer earnings and capital back home, will all be factors that will strongly influence the attitude of foreign investors to all of Latin America.

Like Canada, Brazil is a new economy whose importance as a part of the world economy and as a proper entity need only be considered over the past century. Due to a combination of climatic and geographic location influences, the preconditions for economic growth were not as favourable as in the case of Canada so that the take-off came some fifty years later. The early realization of independence deprived Brazil of the stimulus of imperial colonialism, which despite its other handicaps did give many other countries in the world the advantages of a source of capital for basic invest-

ment, borrowed technology, and a heritage of sound administrative practices and financial institutions. Economic progress had made no great impression on South America so that the demonstration effect, and its consequences of rising expectations to instil a restless urge for change and improvement, failed for a long time to stir the Brazilians. Thus, neither foreign nor domestic influences favoured rapid economic growth, and the challenging opportunities of the frontier economy called forth no evident response.

Up until 1940 this was a backward agricultural economy. Even the history of its agricultural development reveals the absence of stable growth. As Preston James recounts,<sup>70</sup> it has been an agriculture of the slash and burn type, in which human effort was largely unaided by capital, confined to a surprising small area of the vast country, and characterized by cyclical prosperity with shifting attention to a series of different cash crops as the speculative possibilities were exploited, and subsequently disappointed when the terms of trade would turn from highly favourable to distressingly unfavourable. Roughly 60 per cent of the actively engaged population were occupied in agriculture, according to the 1940 census.<sup>71</sup> The population had shown a continuously

---

<sup>70</sup> Preston K. James, "Brazilian Agricultural Development", in Economic Growth: Brazil, India, Japan, op. cit., pp. 79-81.

<sup>71</sup> T. Lynn Smith, "Demographic Factors Related to Economic Growth in Brazil", in Economic Growth: Brazil, India, Japan, op. cit., p. 248.

high rate of increase, rising from 2,419,406 in 1808 to 17,318,556 in 1900 and 41,238,315 in 1940,<sup>72</sup> partly due to a fairly high rate of immigration and partly to a high rate of natural increase. The waves of immigrants did provide a certain growth stimulus in this pre-industrial period, demonstrated in the periodic onslaughts on the frontier containing the agricultural sector. One of these expansive periods occurred in the 1920's, which might well have marked the inception of substantial and continuing economic growth had not the coffee cycle come to an abrupt and distressing end in 1930.<sup>73</sup>

The 1940 war years gave a tremendous boost to the Brazilian economy. During these years domestic industry developed, urbanization became accelerated, and foreign exchange was accumulated as a stake for an explosive expansion once peace was restored. The build-up of population had created a substantial domestic market and there had emerged a fairly extensive entrepreneurial class, derived from the initiative possessed and technically capable immigrants and their reflected influence and example on Brazilians. These influences produced circumstances conducive to the establishment of a broad industrial sector. Economic distress often

---

<sup>72</sup> Ibid., p. 242.

<sup>73</sup> Preston E. James, op. cit., p. 91.

provokes a redirection of attention and effort that later brings greater dynamism and productivity. Brazil is an instance of this, for it was the prolonged unprofitable period for export crops, from 1930 to 1945, that broke the monopoly of export crops on entrepreneurial talent and wealth, and permitted their shift into industry.<sup>74</sup> In addition to a large and growing domestic market, and the emerging entrepreneurial class, Brazil had the additional basis essential for extensive industrialization, the existence of a broad base of raw material resources.<sup>75</sup> All these circumstances, plus the capacity to import equipment and materials, induced a high rate of investment in industry.<sup>76</sup> Other favourable elements were the necessary complementary public investments on a fairly massive scale in transportation facilities, the necessity to encourage import substitution for balance of payments reasons which caused advantageous government exchange control and protection policies, relatively low wage rates and a progressive inflation which favoured high profits

---

<sup>74</sup> Joint Brazil-United States Economic Development Commission, The Development of Brazil, Institute of Inter-American Affairs, Washington, D.C., 1954, p. 6.

<sup>75</sup> IBRD - Current Economic Position and Prospects of Brazil, January 31, 1958, (a confidential report not for public distribution), p. 13.

<sup>76</sup> United Nations - Analyses and Projections of Economic Development: II. The Economic Development of Brazil, New York, 1956, p. 3.

and provided a continuing attraction not only to domestic investment but also to a rising inflow of foreign private capital, and a basic flexibility and adaptability of the Brazilian economy, due in large measure to the high degree of mobility of labour and capital.<sup>77</sup>

The real growth period of the Brazilian economy has gone on with some fluctuations since 1940. Gross national product has increased at an average annual rate of better than 5 per cent in real terms, and, with population increasing at the high rate of 2.4 per cent per annum, per capita income has risen at an average rate of almost 2.5 per cent.<sup>78</sup> This resulted in a rise in per capita income in terms of 1959 dollars from about \$80 to about \$200.<sup>79</sup> Such a rate of expansion was supported by an average rate of investment of over 14 per cent.<sup>80</sup> As has been discussed in the previous paragraph, this rapid growth was associated with an increasing rate of industrialization which increased manufactured goods

---

<sup>77</sup> See all three of the previously cited references on these points.

<sup>78</sup> Joint Development Commission - Development of Brazil, op. cit., pp. 3-5; IBRD, Report on Brazil, 1958, op. cit., pp. 1-3.

<sup>79</sup> This calculation does not exactly match any of the several conflicting estimates that have been made but seems fairly accurate to the author.

<sup>80</sup> IBRD Report, op. cit., p. 2; U.N. Economic Development of Brazil, op. cit., Ch. 1, pp. 9-21.

output at an annual average rate of over 7 per cent, so that from contributing to gross national product only half the contribution of agriculture in 1939 industry now surpasses the agricultural sector.<sup>81</sup>

Perhaps unfortunately, agriculture has not been static. Whereas increasing diversification of agricultural output was realized to a moderate extent, and this helped to support rising consumption as incomes grew and population increased, and at least prevented greater dependence on imported foodstuffs, the conspicuous gains have been in coffee output over the last five years. Coffee production has increased from about 14 million bags to over 30 million bags due to both more extensive and more intensive production. This was the delayed response, characteristic of the coffee cultivation cycle, to the continuous rise in world coffee prices from 18.5 cents per pound in 1946 to 78.7 cents per pound in 1954.<sup>82</sup> Overproduction was the natural consequence and world prices began their decline which became sharp through 1957 and 1958. Some stability has been achieved since about mid-1958 at a price close to 32 cents per pound, due to the agreement among coffee producers to stabilize the market through marketing quotas. While the period of high

---

<sup>81</sup> IERD Report, p. 3.

<sup>82</sup> Ibid., Appendix Table 14.

export earnings, when the terms of trade favoured Brazil, stimulated and maintained the importation of machines and materials needed in the industrial expansion, the subsequent adverse shift in the terms of trade has brought acute balance of payments problems. Once again the vulnerability of a monoculture is demonstrated and the important issue is raised of the dangers of over-specialization.

Brazil's recent growth has been rapid, and it has not been free of acute problems. It has been accompanied by severe price inflation as a continuous feature, both of domestic and foreign origin.<sup>85</sup> No serious, and certainly no effective, attempt has been made to throttle back the inflation, which in Brazilian eyes seems to be identified with the process of rapid economic growth. Fiscal deficits, an ever expanding money supply, and the constant pressure of rising demand for both consumption and investment, have jointly perpetuated the inflation. This inflation has not prevented economic growth, but indisputably it has retarded sound growth and encouraged speculative investment at the expense of productive investment and saddled the economy with distortions that will be an enduring handicap in the future.

---

<sup>85</sup> Joint Development Commission, op. cit., Ch. III, pp. 37-45.

As might be expected, this internal financial instability has led to intense balance of payments difficulties.<sup>84</sup> Brazilians prefer to emphasize the shifts in the terms of trade as the prime cause of balance of payments difficulties, thereby pointing to the instability of world markets for primary goods as the culprit more than the instability of the Brazilian economy. These theoretical concepts will receive more detailed study in later chapters of this book. The growth consequences for Brazil of the balance of payments situation are of more immediate interest. A huge foreign debt has been built up, imposing on Brazil for several years to come a heavy, fixed amortization burden, while the world coffee position prevents any appreciable increase in export earnings, thus a chronic payments deficit, a perpetual shortage of foreign exchange and continuing dependence on foreign borrowing lie ahead. This situation impairs the prospects of withdrawal of profits or capital for foreign private investors and discourages new investments. Without adequate supplies of foreign exchange it will be difficult, if not impossible, for Brazil to continue to import the machinery and equipment required for future development. The high debt-service ratio that has been built up detracts from the

---

<sup>84</sup> IBRD Report, op. cit., pp. 18-21.

country's international credit-worthiness and will reflect on its ability to obtain institutional credits.<sup>85</sup> Increasing reliance on medium term suppliers' credits would simply aggravate the problem, even assuming they would be obtainable.

Although Brazil has made tremendous advances in recent years along the path of economic growth, the instability that has accompanied this growth seriously jeopardizes the prospects for continuing this same rate of expansion. The case of Brazil gives rise to important speculation about the conditions necessary for long term continuous growth. It reveals that progress can be made by underdeveloped countries in closing the income gap between them and the advanced countries, but suggests that this can be achieved only in spurts that must be followed by pauses, during which stability is restored and preparation made for the next forward burst. If space permitted it would be desirable to review the test-case of Turkey, which in many respects is strikingly similar to the Brazilian case, where this spurt and pause process has occurred. Unless the successive spurts are on a rising order, it is likely that the long term average growth rate will fall short of, or do no better than equal, that of the advanced economies.

---

<sup>85</sup> IBRD, Debt Servicing Capacity and Postwar Growth in International Public Indebtedness, August 1957, (confidential report not for public use).

Conclusions

Unfortunately, the empirical evidence afforded by this selection of test-cases does not lead to any clear and precise conclusions about growth forces or growth paths. Rather, one sees in it all a crazy mosaic in which the dimly perceived pattern is at best that of an impressionist's designing, displaying probably as many contradictions as consistencies of form. Growth can apparently be gradual or headlong, autonomous or induced, self-financed or highly foreign dependent, planned or unplanned, government sponsored or the product of private enterprise, associated with over-population or under-population, based on a paucity or a superfluity of land and other natural resources.

There are, however, several significant implications that may be drawn, that at this stage must be considered only as tentative conclusions. One is that late entrants in the development race have achieved in the past, and therefore may equally well in the future, growth rates over extended periods outpacing the strong running early starters. This can, apparently, permit the late starter in some cases to overtake and pass the early leaders. In other cases, even a faster rate of relative economic growth sees the absolute progress differential continue to increase. Growth rates are very relative, and in initial absolute income

differential between two countries of say ten times could only be closed if the combination of income and population growth rates in the respective countries was almost impossibly favourable to this result. However, it is also well to realize that the welfare significance of absolute increments and even almost of percent increments, to income are in geometric progression as we descend the scale of income levels. Another obvious lesson is that in the take-off and early post take-off periods an economy undergoes far reaching structural changes, as a rule involving a leap forward in productivity and often more nearly full employment of factors as well as more productive combination of factors, thus the output gains are on a high order. As underutilized factors become more fully employed and the initial transformation gains of a more efficient application of productive factors are absorbed, the future growth rate cannot be expected to maintain the initial spurt. The initial gains also tend to be statistically exaggerated as the underdeveloped economy becomes increasingly monetized, commercialized, and specialized, leading to value counting of goods and services previously not entering into income calculations.<sup>88</sup> Income inequalities and inflation also seem to be common ingredients of early economic growth that stimulate further investment

---

<sup>88</sup> A. J. Youngson, Possibilities of Economic Progress, op. cit., p. 9.

and growth. The instability of the early take-off period based on these dangerous circumstances has in most instances tended to disappear as substantial economic progress continues over a prolonged period, and a new, more enduring pattern of growth emerges.

## CHAPTER 2

### DIFFERENTIAL GROWTH RATES AND FOREIGN REPERCUSSIONS

The brief review of sample test-cases which occupied our attention in the foregoing chapter contains ample evidence to support the thesis of the "centre and the periphery" developed by Meier and Baldwin.<sup>1</sup> In line with this theory, it is clear, that as countries develop a high trade dependence they emerge from the extremely underdeveloped stage under the impulse of shifting from a subsistence economy to a market economy. As usual, there are exceptions to this general theory. It can be belied if, as in Saudi Arabia or Iraq or Kuwait, the export commodity is oil or a primary resource of high extractive value whose production is financed by foreign capital and ranks low as an occupation for the local labour force. In such instances a high trade dependence can result without the economy being touched in depth, leaving the agricultural mass of population still in the subsistence stage. In the more general case, where the export staple is wheat, or cotton, or wool, or coffee, then the mass of population does become converted

---

<sup>1</sup> Meier and Baldwin, Economic Development, op. cit., Ch. 7, pp. 143-158.

to a market economy and the new dependence on and participation in the world economy open the door to cumulative change. Since trade is the linking factor between the centre and the periphery the gains are on both sides. It is not a question of dependence, but of interdependence. In the economic growth that subsequently becomes possible in the periphery there is commonly, "external dependence on the centre as the source of a large proportion of imports, as the destination for a large proportion of exports, and as the lender of capital."<sup>2</sup> In the process of economic growth, even as in international trade, it is not simply a matter of dependence of the periphery on the centre but of interdependence, with the centre also dependent on the periphery.

The central purpose of this book is to enquire into this neglected question of interdependence in the economic growth process of the world economy. Some countries started later than others to develop and grow. Some countries have developed and grown at a slower rate than others. The inevitable result has been a progressive widening of the income gap between the centre, or centres, and the peripheral economies. Starting from the assumption that there is a vital interdependence between all the parts of the world economy, the implication is strong that the lagging periphery must in

---

<sup>2</sup> Ibid., p. 147.

time become a drag on the income growth prospects of the centre. Just how this retardation effect operates is the immediate problem. If retardation is communicated back to the advanced countries, the possibilities of stimulating the growth rate of the underdeveloped countries must be regarded with more serious concern, for they, then, become the ultimate pace-setters in the progress of the world economy. Of equal interest is the corollary, in the event of a secular deceleration in the rate of economic growth of the advanced centre, or a tendency to high income stagnation, that peripheral countries as a group undergoing a fairly rapid rate of economic growth could provide a sustaining force, through interdependent complementarity, for the advanced countries.

There are obvious difficulties in attempting to pursue this provocative but elusive concept in a compartmentalized manner, dealing with income aspects first, balance of payments considerations in a later chapter, and growth paths for the parts of interdependent world economy as a still later proposition. Yet, as the economist learns to regret by repeated experience, it is impossible to look in every direction and say everything all at the same time. Accordingly, it becomes necessary to approach our problem by narrowing the focus on successive stages.

For example, in this chapter a major theme will be

the part-thought of Meier<sup>3</sup> that:

Looking back to a time when many presently rich countries were poor . . . . . The export sector was a key propulsive sector. As overseas demand widened the market for particular commodities, there were induced effects on the growth of other domestic industries and on the creation of new factors and new products. Exports created new effective demand, new production functions were established, and export expansion was used to finance necessary imports. The growth of exports had effects analogous to a rise in autonomous investment, which, in turn, induced additional investment; export expansion was thus a basis for a multiplier accelerator process which caught hold and boosted the economy upwards.

The opposing view of Myrdal<sup>4</sup> will be considered only in the following chapter when dealing specifically with balance of payments aspects. This selective emphasis is not being adopted on the grounds of biased interpretation, but is rather dictated by the obvious necessity of some degree of simplification of the involved cobweb forces reacting simultaneously. The first area of attention is mainly confined to the income effects of differential international growth rates through the foreign repercussion factor and its possible retardation effects.

---

<sup>3</sup> G.M. Meier, "International Trade and International Inequality," Oxford Economic Papers, October 1958, p. 283.

<sup>4</sup> Gunnar Myrdal, Development and Under-development: A Note on the Mechanism of National and International Economic Inequality, National Bank of Egypt, Cairo, 1956; An International Economy, Routledge and Kegan Paul, London, 1956; Economic Theory and Under-Developed Regions, Duckworth, London, 1957.

The essential content of the theory propounded here is that for long term secular growth to be realized at its maximum rate, or in any event at a sustained high rate, that national fragmentation of the world economy must progressively give way to a more economically unified world market. This is the notion conveyed by Hicks when he states that national income inequality can be regarded as one aspect of the general problem of personal income inequality.<sup>5</sup> He briefly demonstrates that the richer countries have advanced in great measure due to the equalization of income which promoted capital accumulation and rising productivity. This process can continue until profits decline to the point where the incentive to invest disappears. However, by casting the net wider to embrace the world economy the process can continue, of equalizing incomes and promoting further investment and rising productivity. For as Nurkse states, the inducement to invest is limited by the size of the market.<sup>6</sup> Reduction in any cost of production, and especially transportation costs, tends to enlarge the extent of the market, enhancing investment opportunities and leading

---

<sup>5</sup> J. R. Hicks, "National Economic Development in the International Setting," Central Bank of Ceylon Bulletin, March, 1957, pp. 8-9.

<sup>6</sup> Ragnar Nurkse, "Some International Aspects of the Problem of Economic Development," American Economic Review, May, 1952, p. 571.

to rising productivity, which is the real measure of economic growth. Although Nurkse goes on to discuss retardation effects on underdeveloped countries of coexisting in a world with high income-high consumption economies, through the discouragement of national savings in these underdeveloped countries attributable to the demonstration effect inducing a high propensity to consume, he could have taken the turning we have chosen and considered the longer run retardation effects on advanced countries of perpetuating a world market narrowed by the poverty of a large segment of that market.

The natural starting point of such a theory is the fundamental doctrines of Adam Smith. He believed that the core of increased productivity was specialization, which in turn was limited by the size of the market, as Kindleberger mentions.<sup>7</sup> From which concept, he tells us, derives the thesis expounded by some economic historians that the process of growth is primarily one of increasing the size of the market. The growth of markets and the increased division of labour made possible thereby also directly increase income.<sup>8</sup> The application of this principle to the wider world market is the foundation of classical international trade

---

<sup>7</sup> Charles P. Kindleberger, Economic Development, McGraw-Hill, New York, 1958, p. 92.

<sup>8</sup> Ibid., p. 100.

theory. Briefly, the ruling doctrine of comparative advantage demonstrates that specialization through international trade is to the advantage of all trading nations, because this ultimate extension of the market permits greater concentration of output in industries and commodities of higher productivity thereby increasing income.<sup>9</sup> No one claims to have invalidated the doctrine of comparative costs as a general principle of long term validity, although the logical extreme of complete specialization is unacceptable.<sup>10</sup> These limitations of degree will be postponed for discussion in the following chapter. The essential point is that the more progress made in widening the world market, the greater will be the opportunities for at least partial and selective specialization, and the greater the gains in productivity and income. Haberler has stated this proposition categorically, and carries it further in the contention that trade raises income and by so doing promotes economic development, through the enhanced possibilities and greater incentives to save and invest.<sup>11</sup> These results hold true for highly developed countries as well as for less developed ones.

---

<sup>9</sup> Ibid., p. 238; and Jacob Viner, International Trade and Economic Development, Oxford University Press, 1953, p. 34.

<sup>10</sup> Kindleberger, op. cit., pp. 239-255.

<sup>11</sup> Gottfried Haberler, International Trade and Economic Development, National Bank of Egypt, Cairo, 1959, p. 6.

The primary gains from trade are not an end to the growth and income impulse imparted to the domestic economy. There are in addition secondary and tertiary stimuli conveyed through a complex of multiplier effects. Since more attention has been specifically paid to these relationships in the analogous theory of interregional trade, a brief diversion into this byway is useful.

In a generalized statement, one student of interregional trade sums up the situation: "Economists have long been aware that the levels of income, employment, and output of regions which trade with one another are interrelated."<sup>12</sup>

A more detailed analytical account of the process of regional economic growth by North is based entirely on the proposition that the growth dynamic in regions is the export base.<sup>13</sup> This theory, as developed in the less complex context of interregional trade, admirably demonstrates the proposition advanced by Meier that the export sector has been the key propulsive sector in international economic development.<sup>14</sup> North contends that the export base not only determines the initial level of absolute and per capita income in

---

<sup>12</sup> Leon N. Moses, "The Stability of Interregional Trading Patterns and Input-Output Analysis", American Economic Review, December, 1955, p. 803.

<sup>13</sup> Douglass C. North, "Location Theory and Regional Economic Growth", J. P. E., June, 1955, pp. 243-258.

<sup>14</sup> See quotation cited on p. 131.

a region but also determines the amount of residentiary secondary and tertiary activity. It also significantly influences the character of subsidiary industry, the distribution of population and the pattern of urbanization, social and political attitudes and the sensitivity of the region to fluctuations of income and employment. An increase in demand for a region's exports results in multiple effects by inducing increased investment, not only in the export industry itself but in all other kinds of economic activity. Ultimately, he expects, long-run factor mobility should result in more equalization of per capita income between regions. This latter effect will certainly be slower to appear in international economic relationships because of the more resistant barriers to factor movement.<sup>15</sup>

In the international setting Haberler explicitly questions the income equalization possibilities of trade. He considers that in many cases the head start with respect to

---

<sup>15</sup> Albert O. Hirschman, The Strategy of Economic Development, Yale Studies in Economics No. 10, Yale University Press, New Haven, 1958, Ch. 10, pp. 183-201; and Gunnar Myrdal, Economic Theory and Under-Developed Regions, Gerald Duckworth & Co. Ltd., London, 1957, Ch. 3, pp. 23-38, and Ch. 5, pp. 50-65; both attach great importance to the distinction between the process of interregional equalization and the international equalization, stressing respectively the roughly corresponding concepts of "polarization" and "trickling down", Hirschman, and "backwash" and "spread" effects, Myrdal, with both seeing impediments to factor movement as a greater barrier in the international process.

level of income, and perhaps also rate of growth of income, of the advanced countries may be insurmountable for the lagging economies, and that in many of them the population dilemma is too powerful a retardant diluting the income gains from expanding trade.<sup>16</sup> However, he does argue strongly that international trade increases income for any country by pushing out production functions and production possibility curves in four different ways:

- i) It enables a country to import capital goods of all description which are needed for economic development.
- ii) Trade serves as a transmission belt for the dissemination of ideas, technological know-how, skills, managerial and entrepreneurial services.
- iii) Trade is the vehicle for international capital movements.
- iv) Free trade is the most effective anti-monopoly policy; in other words, trade makes for healthy competition.<sup>17</sup>

The identification of expanding world trade with rising income and general prosperity, as well as greater economic stability, is the basic precept of post-war international economic relationships. These ideas are the very foundations of the International Monetary Fund and the General Agreement on Trade and Tariffs. In a somewhat narrower world, they are clearly fundamental to the formation of the European Economic Community and the Free Trade Area. So

---

<sup>16</sup> Haberler, International Trade and Economic Development, *op. cit.*, pp. 15 and 17.

<sup>17</sup> Ibid., p. 15.

widespread are these ideas, and so general is their acceptance that it seems almost superfluous to labour the point and build up the evidence in this text to prove once again their validity. We shall dwell only briefly upon the concept of the cross fructification of trade and prosperity, and mainly to emphasize the very real interdependence of the parts of the world economy in the process of economic growth.

Statistically the marked correlation between rising world industrialization, income growth and foreign trade, is admirably demonstrated and analysed in Folke Hilgerdt's now classical work.<sup>18</sup> A somewhat earlier work that has made a lasting impression on post-war economic thinking and policy formulation was Hal Lary's book, which for the shorter period of the interval between the two catastrophic world wars also clearly establishes the significant correlation between levels of economic activity and levels of world trade.<sup>19</sup>

This statistical verification of the coincidence of high trade levels and high income levels is convincingly sustained for the period 1953 to 1958 in the most recent report of the O.E.E.C.<sup>20</sup> It is there shown that during the years

---

<sup>18</sup> League of Nations, Industrialization and Foreign Trade, 1945.

<sup>19</sup> Hal B. Lary, and Associates, The United States in the World Economy, United States Government Printing Office, Washington, 1943.

<sup>20</sup> O.E.E.C., Policies for Sound Economic Growth, 10th Annual Economic Review, 1959, see especially pp. 83-89.

of rising prosperity from 1953 to mid-1957 there was a continuous high rate of increase in the value of O.E.E.C. member countries' and United States' imports from primary producing countries, and a corresponding rise in imports of primary producing countries from the industrialized world, as these latter proceeded with development programmes. The onset of recession checked income growth for the advanced countries, which reduced demand for primary imports, and in turn producers of these goods suffered reverses in the terms of trade, as well, which reduced their international purchasing power and reflected in their capacity to purchase manufactured goods. This pattern of events is not unique to the period reviewed, nor a phenomenon peculiar to the short run; it is representative of the inevitable responsiveness of trade to income.

The same O.E.E.C. report provides some useful data on the question of international interdependence. It states that primary producing countries depend on Europe for 40 per cent of their export earnings and on the United States for about 20 per cent. Thus, their prosperity is closely linked with the level of European and American demand for their products. Equally, although in a more marginal sense, changes in the imports of primary producing countries react upon the economies of the industrialized countries, since exports to primary producers represent 6 per cent of Europe's gross

national product and 2 per cent of American gross national product. Reflecting merely passingly, at this point, on these figures, the importance of exports to primary producing countries for the economic health of the United States cannot be lightly dismissed as insignificant, because the European dependence on the demand of underdeveloped countries is considerably greater and these European countries are major markets for American exports, so that a contraction in import demand in underdeveloped countries would have secondary contractive effects on United States' exports, without even considering the progressive effects attributable to the foreign trade multiplier.

In the present context long run economic repercussions of differential national and regional growth rates are the subject matter of the analysis. The suggestive and revealing theoretical development of the concept of the foreign trade income multiplier and its very significant element, the foreign repercussion factor, cannot be directly applied to our long run problem, partly because of the rigorous, and thus limited through abstraction, nature of the foreign trade multiplier theory, and, more important, because it is essentially concerned with relatively short run consequences in a basically static system.<sup>21</sup>

---

<sup>21</sup> Fritz Machlup, International Trade and the National Income Multiplier, Blakiston, Philadelphia, 1943; and

This technique of analysis comes closest to having direct applicability to our problem in the international economic model building of Polak.<sup>22</sup> In his model the basic relationships are that income is determined by exports, and imports are determined by income, although both exports and imports are influenced by certain autonomous factors, including autonomous investment, autonomous fluctuations in government finance, crop fluctuations and measures of commercial policy. These autonomous influences are treated by Polak as "shocks" that are transmitted by the system, which system is studied in terms of the mechanism of transmission through which the multiplier effects arise. The international reflection ratio is obtained as the product of the marginal propensity to import and the multiplier. In summarizing the results and attempting to test findings against empirical data, it is shown that from 1929 to 1932 the volume of United States imports declined by 39 per cent, and world trade fell by 25 per cent in the same period. U.S. imports accounted for about 15 per cent of world trade in 1929, thus the primary contraction on world trade was about 6 per cent in volume terms. The calculated world trade multiplier of

---

William C. Hood, Some Aspects of International Trade in the Theory of Employment, an unpublished Ph.D. thesis submitted to the University of Toronto, 1948.

<sup>22</sup> J. J. Polak, An International Economic System, George Allen and Unwin Ltd., London, 1954.

2 raises the total effect of the United States contraction of imports on world trade to 12 per cent, or roughly half the total contraction, and associated reductions in capital flows and service imports raise the total impact to about 60 per cent or more. Neither multipliers nor foreign reflection ratios would have the same values in any long run application of this type of analysis, but at least the international trade-income interdependence would still be paramount in the system.

The extreme dependence of underdeveloped countries for their immediate prosperity and possibilities of future development on the continuing possibilities of a high and rising rate of export earnings, which in turn depends on prosperity and stability in the advanced countries, is a theme that has been treated so frequently and fully in economic literature that it hardly warrants fresh establishment.<sup>23</sup> No one is likely to take issue with the statement of this proposition made by Jacob Viner:

The opportunities open to an underdeveloped country in the foreign trade field are certain to be a vital factor in determining the rate at which it can make economic progress. No country except the United States has attained a high level of per capita income which has not maintained a high ratio of imports to total national product, and no country

---

<sup>23</sup> See particularly League of Nations, Economic Stability in the Post-War World, Princeton University Press, 1945.

except possibly Russia, can in this respect make the United States its model without courting perpetual poverty.<sup>24</sup>

A recurring fear of these less developed countries, and of many international economic analysts, is that within the limits of their exchange earning capacity they offer an expanding market to industrialized countries but that the rate of increase of their export opportunities is not commensurate. The discussion is usually in terms of relatively short run adverse shifts in the terms of trade reflecting some lag in import demand for primary produce in industrialized countries, despite the more rapid rate of rise in productivity and income in these countries compared to the less developed areas. An unsophisticated theoretical treatment of this sort of situation created by unequal rates of increase in productivity would turn the terms of trade in favour of the lagging trade partner. However, Harry Johnson makes the important point that the slower progressing primary producing countries may very easily suffer a disadvantageous turn in the terms of trade due to their high income elasticity of demand for imports and the low income elasticity of demand for imports in the advanced countries.<sup>25</sup> This influence is

---

<sup>24</sup> Jacob Viner, International Trade and Economic Development, Oxford University Press, London, 1957, p. 116.

<sup>25</sup> Harry G. Johnson, International Trade and Economic Growth, George Allen and Unwin Ltd., London, 1958, p. 101.

an important aspect of the dollar shortage problem that commanded so much attention in the literature over recent years. A parallel proposition was expounded by Hicks, that technical progress in the United States is strongly biased in favour of import substitutes.<sup>26</sup>

It is dubious that these problems are highly relevant to our longer run consideration of trade opportunities and their impact on differential rates of economic progress between advanced and underdeveloped regions. All the convincing arguments that the dollar shortage had become a chronic condition appear fairly empty in light of the quite dramatic shift in the balance of payments experienced by the United States since 1957. One theoretical cause of a permanent dollar shortage, the high rate of improvement in productivity of the United States which other countries find difficult to equal because of the U.S. lead and its highly capital intensive industry, has been exploded in recent years by the growth achievements of Europe generally, especially Germany, and also of Japan.<sup>27</sup> This evidence at least proves once again that no lead in the rate of economic growth is insurpassable and that lags may be overcome from

---

<sup>26</sup> J. R. Hicks, "Inaugural Lecture," Oxford Economic Papers, June 1953, and reprinted in Essays in World Economics, Oxford University Press, London, 1959, as Ch. 4. "The Long-Run Dollar Problem," pp. 82-83.

<sup>27</sup> GATT - International Trade 1957-1958, Geneva, 1959, p. 8.

one period to another, even relatively short periods. The balance of payments reversal can also be attributed to the unrestrained psychology of ever rising expectations in North America, where rising living standards and rising wages are based not only on past and present gains but anticipate future gains as well. This inflationary impulse transferred the competitive advantage in international trade to European exports.<sup>28</sup> No longer was the American position saved by a higher rate of inflation abroad than at home.

Partly due to these developments, and partly due to an altered trade and industry philosophy, it is becoming increasingly doubtful that the Hick's proposition of the technical bias in the United States toward import substitutes will long be significantly valid, if indeed it still is at the present time.

Very recently a leading article in the New York Journal of Commerce gave wide publicity to the increasing use of foreign made parts in U.S. manufactured products, particular mention being made of the radio and bicycle industries' growing reliance on foreign produced components.<sup>29</sup> It has

---

<sup>28</sup> John J. Deutch effectively emphasized these two points of lost competitive advantage and comparative rates of growth in his paper delivered in Montreal, March 8, 1960, at the panel discussion entitled, Whither Canada's Export-Import Trade?

<sup>29</sup> Jerome Oelbaum, "Use of Foreign Parts Growing," The Journal of Commerce, New York, February 24, 1960, see p. 1.

become, almost an industry-wide practice to turn the United States market for portable transistor radios over to Japanese affiliates of American companies, with actual marketing being done under the U.S. company label. Similarly, in foreign operations such as the oilfields in the Middle East the U.S. oil companies' purchases of U.S. made pipe has in the last few years dropped from 90 per cent to 2 per cent, with savings to the purchasing companies of 20 - 25 per cent. Which facts do suggest that unimpeded international trade does contribute to income equalization between trading partners and competitors, although it could never be expected to result in income equality between countries.

This slight digression has more pertinence to our main problem than might appear from the particular theories and facts considered. For one thing, it is sufficient to justify putting aside any further discussion of the long popular "chronic dollar shortage" problem. It no longer exists for European countries. For the underdeveloped countries it becomes increasingly clear that the fundamental question is one of foreign exchange shortage, not just dollar shortage. Many aspects of this persistent exchange shortage may be conveniently postponed to the next chapter, where problems associated with a chronic disequilibrium in the balance of payments of countries attempting to accelerate the pace of economic development will be discussed. In this chapter, in

attention will be directed to the income or purchasing power facets, which reveal that underdeveloped areas unable to earn sufficient foreign purchasing power have their capacity to buy imports from the advanced countries, and each other, constrained. This must reflect unfavourably on the volume of world exports and the level of world income. The multiplier ripples increase the importance of this loss through the intermeshing foreign repercussion factors. Circular causation operates in the network of world trade, as in the other vicious circles of poverty, to check the rate of growth of the underdeveloped regions so that they both produce less and consume less than would have been the case without the impediment of the foreign exchange shortage. Today, the advanced countries may deplore the relative failure of growth of demand in primary producing countries for their exports only, and give no heed to their own import dependence on the produce of these countries. The wealthier countries may soon have deep regrets that the export production of these basic suppliers has stagnated, or even declined, as greater emphasis is placed on import saving production.

The import dependence of the United States may conveniently be taken as illustrative of the situation for all advanced industrial countries, always realizing that Europe is much more heavily import dependent. While the value of Europe's total imports from all sources has been roughly in

the proportion of 1 to 2 to the value added by its manufacturing activity, in the United States the corresponding ratio has been on the level of 1 to 10.<sup>30</sup> As stated earlier the underdeveloped countries depend on Europe for absorption of 40 per cent of their exports, and on the United States for 20 per cent. By the same token, Western Europe's exports to non-industrial areas of the world are 30 per cent higher than those of North America.<sup>31</sup> The key relationships, that are pertinent to problems of interdependent growth rates and world economic interdependence through trade, are that the industrial areas of the world account for between 62 and 64 per cent of total world export and that 40 per cent of these exports from industrial countries are destined to non-industrial countries, while the non-industrial countries, out of their 36 to 38 per cent of total world exports, depend on industrial countries to absorb 70 per cent of their total exports.<sup>32</sup> Although losing some of its relative predominance in both world production and world trade in recent years, as recovery and economic growth in other parts of the world, particularly Western Europe and Japan, have gained strength, the United States

---

<sup>30</sup> GATT - International Trade, 1954, Geneva, pp. 63-64.

<sup>31</sup> GATT - International Trade, 1957-1958, Geneva, 1955, p. 99.

<sup>32</sup> Ibid., p. 11, Table 2.

still accounts for over 40 per cent of world production and over 16 per cent of world trade.<sup>33</sup> It is this very pre-eminence of the United States in the world economy that compels consideration of its foreign trade dependence, even though its total sales of goods and services amount to only between 6 and 7 per cent of its national income, and imports of foreign goods and services usually to a somewhat smaller percentage. Since the following discussion focuses on trade in commodities, it is well to state that merchandise imports amount to only about 3 per cent of gross national product. These figures highlight the marginal role of trade in the United States' economy and give reason to heed Jacob Viner's warning against exaggerating its role.<sup>34</sup>

The famous Paley Report,<sup>35</sup> however, establishes two principles of prime importance that forcefully emphasize that the role of foreign trade in the American economy, and equally the role of the American economy in world trade, should not be minimized. In the first place, the Paley Commission predicts a two-fold increase in the real gross national product

---

<sup>33</sup> Ibid., pp. 5-9.

<sup>34</sup> Jacob Viner, "The Role of the United States in the World Economy", in National Policy for Economic Welfare at Home and Abroad, ed. Robert Lekachman, Doubleday & Co., Inc., New York, 1955, p. 180.

<sup>35</sup> Resources for Freedom, a report to the President by the President's Materials Policy Commission, June, 1952.

of the United States between 1950 and some year in the 1970's, usually assumed to be 1975. And this projection is considered by some authorities to be too conservative. This alone would mean a tremendous increase in both exports and imports. Secondly, it contradicts the prevalent assumption that the secular trend of a declining American propensity to import can be expected to continue into the future, and argues that the import-income ratio has reached its nodal point and must begin to increase in future years.<sup>36</sup>

Before considering the enlarged influence that foreign trade is expected to exert on the American economy of the future, it is worthwhile to set in perspective the true measure of its present international interdependence by reference to the Rockefeller Report on U.S. international economic policy.<sup>37</sup>

Despite its relatively small percentage weight in our over-all economy, a vigorous and expanding foreign trade is essential for the vitality of our economy. We import half or more of a wide variety of metals and minerals essential to United States industry. Three-fourths of our newsprint is imported, all of our natural rubber, 18 per cent of our iron ore, and over 15 per cent of our petroleum.

Between 9 and 10 per cent of all the durable goods produced in the United States is sold abroad. Significantly enough, these sales provide the margin bet-

---

<sup>36</sup> Henry G. Aubrey, United States Imports and World Trade, Oxford University Press, London, 1957, pp. 14-17.

<sup>37</sup> Report of Rockefeller Brothers Fund Special Studies Project - Foreign Economic Policy for the Twentieth Century, Doubleday & Co., New York, 1958, pp. 38-40.

ween profit and loss for a large segment of American industries. Exports represent from one-fifth to one-third of the total sales of American production of civilian aircraft, textile, steel and rolling mill machinery and sewing machines. They represent 19 per cent of all motor truck and bus sales, 16 per cent for diesel engines, 14 per cent for agricultural machinery, and 11 per cent for machine tool production. American farmers depend upon foreign markets for the sale of 20 to 40 per cent of their wheat, rice, cotton, rye, barley, hops, grain sorghums, soybeans, leaf tobacco; and the same is true for domestically produced calf skins, fats and oils, dried fruits and processed milk.

..... Foreign trade provides more direct employment in the United States than the automobile, steel, chemical and textile industries combined.

The broad problem of determining the scale of future import dependence of the United States was, as mentioned, undertaken by the Paley Commission with the resultant Report largely addressed to the consequent policy implications of rising import needs. Since the publication of the Paley Report the same task of analysing and projecting U.S. import needs to the year 1975 has been undertaken for a more comprehensive group of import commodities, and with a shift of emphasis to the resultant effects on world trade balances and a more integrated net-work of world trade, by Henry G. Aubry.<sup>38</sup> The statistical material used here is derived from this latter work. Aubry shows that compared to a rise in United States imports, in constant dollars, in the period 1926 through 1952

---

<sup>38</sup> Henry G. Aubry, United States Imports and World Trade, op. cit.

of 37 per cent, or an annual rate of rise of 1 1-4 per cent, that the anticipated rise for the period of 1952 through 1975 is 83 to 101 per cent, or an annual rate of rise of 2 3-4 to 3 per cent. This prediction is based on the increasing exhaustion of domestic resources, and the natural process of growth of population and incomes in the United States leading to ever expanding needs.

In order not to misrepresent Aubry's data and his associated analysis, simply to make my own case, it is necessary to point out that in considering the regional origins of the higher imports he foresees the major gains accruing to Canada and Latin America. This is based on the expectations that the major commodities involved will be petroleum, coffee, iron ore, newsprint, nickel, aluminum, and other non-ferrous minerals.<sup>39</sup> To the degree that Latin American countries will be relied upon to produce the commodities necessary to the United States economy, if it is to enjoy the expected rate of continuous economic growth of 3 per cent or better in the future, the necessity for these underdeveloped economies to show progressive production and income increases is supported. However, since Canada is assumed to be even more important as a future supplier of goods and materials, the growth of output of the underdeveloped regions of the world seems to be

---

<sup>39</sup> Ibid., pp. 44-46.

relatively unimportant to the future well-being of the U.S. economy. This consideration does not actually invalidate the argument that is being made for international interdependence in the possibilities of future economic growth, so much as complicate the issue by secondary and tertiary extensions of foreign trade ramifications between Canada and its suppliers, and perhaps suppliers of Canada's suppliers. Aubry himself recognizes the importance of these wider extensions of trade, and in discussing the redistribution of the dollar supply does chart and review trade patterns that in the first ramification bring Western Europe within the compass of consequences and in the second circle of reflection being in countries in the rest of the world.<sup>40</sup>

A discussion of this same problem of United States dependence on imported materials is well presented by the staff associated with the Randall Commission, with greater stress on national security aspects.<sup>41</sup> In this study more emphasis is laid on the world-wide availability of resources, as seen in the following quotation:

Our long-run deficiency can be just as well aggravated by a decline in long-run availabilities in Canada and Mexico; or, where we are relying in part

---

<sup>40</sup> Ibid., pp. 46-54.

<sup>41</sup> Staff Papers Presented to the Commission on Foreign Economic Policy, U.S. Government Printing Office, Washington, February, 1954, see especially Ch. V, pp. 219-248.

on more distant sources such as the Philippines by a long-run decline in availabilities in such areas. Accordingly, the aim of our defense agencies has been to pursue policies which, while encouraging the long-run availabilities of United States production, will not at the same time disproportionately weaken the availability of other sources on which we expect fully or partially to rely in an emergency.<sup>42</sup>

The Randall Commission squarely faced the problem of the dependence of future American prosperity on progress and stability of the world economy and strongly recommended an enlarged and more widespread programme of financial aid and technical assistance to promote the foreign economic development which alone will be conducive to increasing world income and trade.

These same precepts have won endorsement from many other groups of experts who have given serious attention to the long range problem. For example, to quote the U.S. Committee for Economic Development:

The only danger international trade presents to growth is the danger that we will not sufficiently recognize how important it is for our continued growth. We must advance together with all the rest of the world. That means enlarged foreign investment on our part, and participation in reducing everywhere obstructions to the movement of men, money and goods. This can be looked at from a purely practical angle of self-interest. Further participation in world trade would result in even wider markets than we now have. After all, our population is only 6 per cent of the total on the planet, and a large part of the world hungers for the goods we can provide.

---

<sup>42</sup> Ibid., p. 220.

Our gain would be higher production and greater sales of the products we can make with greatest efficiency. At the same time we would benefit from less costly sources of supply for the things we either do not produce or produce less efficiently than others. Our own economic growth would thus be fostered and our standard of living bettered. Simultaneously, of course, growth would be fostered in the lands with which we traded. That is, great gains, sharable all around would come from a more intensified international specialization of labour and wider use of world resources.<sup>43</sup>

Another authority on this problem of the increasing dependence of the United States on the world economy, Roger Anderson, covers a good deal of the ground already reviewed and neatly paraphrases Peter F. Drucker to sum up the issues.

More extreme was the position taken in a recent article by Professor Drucker in which he stated that the Paley Commission seriously under-rated both the speed of United States economic expansion and the rate of which the demand for raw materials would grow. Developments of the past five years were said to have shown that raw material needs to increase much faster than production and consumption, perhaps twice as fast. It appeared reasonable to guess that, in order to double national income within 15 to 20 years, the United States would have to import the equivalent of at least one-quarter of its total industrial production. The problem for the future would be not the dollar shortage, but how to earn enough foreign exchange to pay for United States imports. Other countries, too, would have greater material demands and the aim of United States policy should be to promote the rapid industrialization of the countries that produce raw materials. This, it

---

<sup>43</sup> Research and Policy Committee of the Committee for Economic Development - Economic Growth in the United States, Its Past and Future, New York, 1958, p. 53. The underlined sentence appears in italics in the original text.

was suggested, would both expand the demand for United States exports and increase the availability of raw materials.<sup>44</sup>

This accumulation of evidence should be adequate to establish that the United States is not so self-sufficient as to be immune to foreign reflection of the state of prosperity elsewhere in the world in the short run, or the repercussion effects of slower growth rates in the rest of the world on its long run growth potential. The discussion has built up a picture of increasing dependence of the United States on the world economy. It can be concluded that the United States needs a world environment of economic growth to ensure the income sustaining prospect of increasing demand for its rising production of goods for export, and to insure rising foreign production of the materials and goods required to meet expanding American needs. And to recall an important point stipulated and satisfactorily substantiated at the beginning of the discussion on United States' interdependence with the world economy, the rest of the advanced countries in the world are much more intensively foreign trade oriented, which means that this conclusion applies to them with even greater force.

No pretense is made here that the advanced countries

---

<sup>44</sup> Roger V. Anderson, The Future of Canada's Export Trade, prepared for and published by the Royal Commission on Canada's Economic Prospects, Ottawa, March, 1957, p. 62.

of the world cannot continue to experience economic growth unless the underdeveloped countries also achieve substantial growth rates. The argument is simply that the world economy is progressively becoming more closely integrated and interdependent, hence a lagging growth rate in the significantly large and heavily populated underdeveloped regions would be a positive check on world progress and retard the potential growth rate of the advanced economies. History proves that differential growth rates in national economies are possible in both short and prolonged periods. The theories and facts reviewed in this chapter give rise to doubts that extreme growth rate inequalities can continue indefinitely, particularly if the view that the world economy is becoming increasingly integrated and interdependent is valid.

An urgent question that may not be ignored is the corollary growth implications for the underdeveloped countries contained in these facts and conclusions. If the long run growth rate of the advanced countries is linked to that of the underdeveloped countries, then even more so must the reverse be true. The Rockefeller Report sums up the matter in reference to the United States and world at large:

Basic to world economic growth is an expanding and vital United States economy. We produce 35 per cent of the world's goods and services. Our exports and imports constitute 16 per cent of the world's trade. Relatively small fluctuations in our imports can have a major effect all over the world and catastrophic consequences for weaker economies geared

to a few commodities. A United States recession can have a violent effect on other free world countries. Conversely, an expanding and reasonably stable United States economy is essential to world growth. A growing United States economy will import more goods from abroad, thus providing dollars for economic development. It will create additional resources for foreign investment.

The importance of the United States as a market and as a source of supply is fundamental. In fact, perhaps the greatest single economic contribution the United States can make to the free world, and hence the greatest responsibility of the United States lies in efforts to promote the growth and stability of the American economy.<sup>45</sup>

The very nature of the underdeveloped economies, their structure, their vulnerability to external economic forces, their reliance on foreign markets to earn command over urgently needed foreign equipment and materials for development, their dependence on foreign capital supply, substantiate the precepts of the foregoing quotation. Indisputably, these lagging economies could not possibly achieve high growth rates except in a prosperous world economy.

Such a conclusion, however, does not theoretically deny the possibility of the less developed countries achieving higher growth rates than the more advanced countries. One student of Asian prospects takes an optimistic attitude based on the qualifying assumption that effective human effort in

---

<sup>45</sup> Rockefeller Fund - Foreign Economic Policy for the Twentieth Century, op. cit., p. 27; the issues involved are elaborately treated by Hal Lary in The United States in the World Economy, op. cit.

planning, administration and search for change do in fact open the opportunities for increased agricultural yields, diversification and extension of modern industries, and effective utilization of the underutilized labour force.<sup>46</sup>

These views are significant because they emphasize the important possibilities of stimulating economic growth that depend on human will, effort and ingenuity above the critical role of the rate of capital investment, which is the key element in the growth rate of industrialized countries. Not that the underdeveloped countries can aspire to break their strangling poverty without a rising rate of capital formation, but if the governments of the industrialized countries ever become sufficiently sophisticated in their economic thinking to follow the advice of the National Planning Association of the United States the needed capital would be available in more ample supply in times of recession in the advanced countries.<sup>47</sup>

Capital exports to foreign countries, particularly to areas in the early stages of industrial development, could also be encouraged when domestic expansion slackens. This would maintain the ability of foreign countries to buy in the United States and would support production in the export industries. .... In such a situation, it would be more constructive if an effort were made by the industrialized countries to use their idle capacities for the mutual

---

<sup>46</sup> Wilfred Malenbaum, "The Asian Economic Potential," the Annals of the American Academy of Political and Social Science, July, 1958.

<sup>47</sup> Gerhard Colm and Theodore Geiger, with the assistance of Manuel Helzner, "The Economy of the American People; Progress, Problems, Prospects," National Planning Association, Washington, March 1958, p. 90.

advantage of the less developed countries and themselves.

It is conceivable that high income stagnation could become a secular condition in one or more of the industrialized countries of the world, due to excessive capacity and declining investment opportunities.<sup>48</sup> In these circumstances the urgency for channeling capital abroad would be a persistent condition which would relieve the domestic situation in the manner described in the above quotation, and would permit an accelerated rate of growth in the recipient countries. Such a situation is not dissimilar to what actually did occur in England, and which did stimulate economic growth in Canada, the United States, Argentina, and elsewhere with redundant British capital.

The long run possibilities of structural changes in the world economy conducive to a marked shift in relative international growth rates will be considered more fully later in this book. On the income side, the main issue of mutual dependence of advanced and underdeveloped countries for sustained long term growth, as well as short term prosperity, has received sufficient attention for the moment.

---

<sup>48</sup> Alvin H. Hansen, Growth or Stagnation in the American Economy, The Review of Economics and Statistics, November, 1954, pp. 409-414.

## CHAPTER 3

### DEVELOPMENT STAGES AND THE BALANCE OF PAYMENTS

The problems of economic development are so complex and so variable that students of the process of growth have been induced to search for some broad pattern of evolution that would reveal characteristic forms identifiable in terms of the time dimension, and thereby facilitate analysis of definable problems at respective stages of progress.<sup>1</sup> In order to deal with balance of payments problems associated with economic development, so far largely neglected in this study, this approach of looking for a pattern of economic evolution with characteristic stages is a convenient technique. In a very important sense this method of analysis is dictated not only by the need to discover the form of economic experience, which brings it within the range of comprehension, but the equally important analytical necessity of abstracting from the dynamic confusion of continuous change

---

<sup>1</sup> Jan Tinbergen, The Design of Development, the John Hopkins Press, Baltimore, 1958, a study undertaken for the Economic Development Institute of the International Bank, stresses the need for policy makers, or government planners, to discern this sort of pattern in what exists and what is sought; "General programming has to supply a bird's-eye view of the pattern of future development of the country, and to show the possible and most desirable development of the national product and its components." p. 9.

a more nearly precise situation rendered stable enough in the sense of time to permit use of the easier quasi-static tools of analysis.

Economic historians have long been fascinated by the notion of stages of development. Adam Smith, Marx, and List are notable examples among the many earlier writers, while Colin Clark is one of the moderns who has made a very real contribution to understanding the process of economic growth by using a stage type of analysis based on the admixture of primary, secondary and tertiary production to delineate scales of advancement.<sup>2</sup> Perhaps it would be more literally correct to state that the balance of payments problem will here be considered in line with the suggestion of Meier and Baldwin that:

It might be more suitable to view the most distinguishing characteristics of different countries in terms of their domestic economic organization and their external relations in the context of world markets.<sup>3</sup>

The difficulties encountered in any attempt either to distinguish a predictable pattern of growth that is

---

<sup>2</sup> W. S. Woytinsky and E. S. Woytinsky, World Population and Production, Twentieth Century Fund, New York, 1953, Ch. 13, offers a good discussion of the classification of economic patterns and the use of stages of economic history.

<sup>3</sup> Gerald M. Meier and Robert E. Baldwin, Economic Development, cited, p. 145.

typified by explicit stages of development, or to assign individual countries to particular groups determined by the characteristics of the internal economic organization and external economic relations are numerous. As Kindleberger shows there is a distressing lack of uniformity among economies that seemingly should be classed together.<sup>4</sup> The mongrel economies so outnumber the pure-breeds that we are in difficulties organizing a show. Several countries have skipped stages of development and break the pattern, while others exhibit characteristics that would place them half in one class and half in another. However, the classification that Kindleberger employs for the balance of payments on current account by stages of development is useful and reasonable, in a broad sense. The refinement of the classification based on the fundamental relationship that

$$X + Id = S + M$$

or, the sum of exports and domestic investment is equal in equilibrium to the sum of domestic savings and imports, revealing that

$$\text{if } M > X, \text{ then } Id > S,$$

is particularly useful in determining the behaviour of the balance of payments at different stages of development arising

---

<sup>4</sup> Charles P. Kindleberger, International Economics, Richard D. Irwin, Inc., Homewood, Illinois, 1953, Ch. 19, pp. 361-377.

<sup>5</sup> Ibid., p. 370.

from the relationships of income level, and accordingly the rate of savings, to the rate of investment, and thus pace of development effort. This classification in its two forms is reproduced in Table IX.

For the sake of comparison, or more properly for the sake of corroboration, for it virtually duplicates the Kindleberger classification, Table X is reproduced, being the work of Geoffrey Crowther. The only real purpose gained in adding this similar example of stages of economic development and resultant balance of payments is that Crowther's presentation includes capital movements characteristic of each stage, an important feature in respect to further investment and growth.

At this moment the best known and most widely discussed example of the representation of a pattern of economic growth in a series of progressive stages is the contribution of Professor Rostow. His central thesis is that societies all begin at a primitive subsistence stage, evolve into market economies with greater structural complexities, which is a pre-conditioning period for subsequent development, then enter the take-off phase, during which the inertia produced by the momentum of development becomes strong enough to permit self-sustained growth to become a secular dynamic, and finally the economy emerges into maturity. This line of

Table IX - THE BALANCE OF PAYMENTS BY STAGES OF DEVELOPMENT, \*

Stage	Balance of Indebtedness	Balance of Payments on Current Account
1 .....	Young debtor	Passive
2 .....	Adult debtor	Balanced
3 .....	Mature debtor	Active
4 .....	Young creditor	Active
5 .....	Adult creditor	Balanced
6 .....	Old creditor	Passive

Table X - TYPES OF BALANCES OF PAYMENTS \*\*

	Balance of Trade Visible and Invisible + = Favorable - = Unfavorable	Interest and Dividends + = Net Receipt - = Net Payment	Capital + = Borrowing (or Accepting Repayment) - = Lending (or Repaying)
<p>In all three columns,            † signifies a net in-payment,            - signifies a net out-payment;            two symbols signify a larger payment than one.</p>			
Class A - Immature Debtor-Borrowers	-	-	†
Class B - Mature Debtor -Borrowers	+	- -	†
Class C - Debtor- Lenders and Debtor-Repayers	† †	-	-
Class D - Immature Credit or Lenders	†	+	-
Class E - Mature Creditor-Lenders	-	† †	-
Class F - Creditor- Borrowers	- -	+	†

\*Charles P. Kindleberger, International Economics, op. cit., page 370.\*\*Geoffrey Crowther - Balances and Imbalances of Payments, Harvard University, The Plimpton Press, Norwood, Mass., 1957, page 64.

thought first appears in his book of some years back.<sup>6</sup> The idea was elaborated in a journal article published a few years later and is well known in academic circles.<sup>7</sup> General interest was excited by his theories when the London Economist summarized the doctrines he had further refined in a series of lectures at Cambridge University.<sup>8</sup> His book which reprints the lectures added new zest to the controversy on Rostow's stages of growth.<sup>9</sup>

The stages of development identified in my treatment differ in no very significant way from the Rostow approach and the elaboration into six stages quite obviously borrows from the Kindleberger - Crowther division. Originality is not the present aim. What we are seeking is an acceptable set of categories of such generalized characteristics that all countries at whatever stage of development or progress can be classified in one or the other, with the object of studying the balance of payments influences common to all within each group. It is expected that such an investigation

---

<sup>6</sup> W. W. Rostow, The Process of Economic Growth, New York, 1952, Ch. 4, especially pp. 102-105.

<sup>7</sup> W. W. Rostow, "The Take-off Into Self-Sustained Growth", The Economic Journal, March, 1956, and reprinted in The Economics of Underdevelopment, cited.

<sup>8</sup> Rostow on Growth, The Economist, August 15 and 22, 1959.

<sup>9</sup> W. W. Rostow, The Stages of Economic Growth, Cambridge University Press, 1960.

should add to an understanding of the spurs and checks to economic growth imparted to the domestic economy through the external sector. To fit these purposes the classification adopted seemed appropriate.

The six stages of growth to be reviewed are: 1) the primitive society, or subsistence economy; 2) the export biased agricultural economy, the semi-market staple producer, or colonial stage economy; 3) the organizational or development preparatory phase economy; 4) the newly developing economy in the take-off period; 5) the self-sustaining, diversified but immature economy; 6) advanced maturity. As the analysis proceeds and certain specific balance of payments circumstances are identified with each stage, critics will find it relatively easy to dispute the basis of classification on the grounds that some countries will refuse to conform to the pattern. There is no way to avoid this difficulty except to invalidate the approach of stage analysis and study each country on an individual basis. Ultimately this will have to be done to understand particular national problems of development, but general principles can only be discovered if, in fact, patterns can be found. Individuality need not be confounded with uniqueness.

The primitive society must be either the earlier phase of the Rostow traditional societies or a complete stage in itself before the traditional society. The characteristics

of such a backward economy are well summarized by Leibenstein in his listing of attributes of underdevelopment.<sup>10</sup> The high concentration of activity in agriculture, low income, low savings, inefficient agricultural techniques, low yields, inadequate nutrition, low standards of public health and sanitation, prevalent illiteracy, crude technology generally, and a low volume of trade per capita, all apply. Being a subsistence economy, which, of course, means a non-monetized economy, the country is economically unorganized. Since the size of the market determines the degree of division of labour, and hence the level of productivity, it is structurally destined to remain backward and poor. The rural villages persist as centres of society, each separate from the other. Domestic trade is low and foreign trade even lower. It is a situation of static stagnation. Without foreign influences the demonstration effect is negligible or non-existent, so even the will to change does not exist. In such a primitive society, the initial stage for the indigenous population of every country, static as it is, we can only assume equilibrium in the balance of payments at a low level with virtually no capital account.

Such countries of this type that still do exist, and

---

<sup>10</sup> Harvey Leibenstein, Economic Backwardness and Economic Growth, John Wiley & Sons, Inc., New York, 1957, pp. 40-41.

there are a few like Afghanistan and Nepal, and even such parts or regions of other countries that answer the description, can hardly be said to be parts of the world economy. It is an indication that the frontiers of the world economy have not yet been pushed back to their ultimate limits. Despite the very marginal contribution promised by bringing them within the system of the international market, pursuing the proposition that a widening of the market through increased international trade raises real income for all participants, it is in the interests of sustaining the growth potential of the world economy to have these primitive societies emerge from virtual isolation, and perhaps later join the parade of progress.

The colonial type economy generally does not provide any great advance over the primitive society for the mass of the people in terms of the ultimate objective of economic development, rising welfare or well-being. The economic and social organization at this stage coincides closely to Rostow's traditional society.

.....food production typically absorbs 75 per cent or more of the working force; and from this primacy of agriculture there followed in turn a hierarchical social structure with little scope for vertical mobility - with wealth and power concentrated in the hands of those who controlled land rents. Social values were geared to the limited horizons which men could perceive. Income above minimum consumption levels was largely spent on non-productive or low productivity outlays - religious feasts and ceremonies, monuments, wars, high living for the land-

owning minority. Family and clan connections played a large role. Political power tended to lie in the various regions rather than in the capital; the landowners in any case usually maintained great influence over such central political power as existed.<sup>11</sup>

Even better, in many respects, is the analysis of the characteristics and problems of the colonial stage undertaken by Myrdal, who explicitly discusses the colonial system and its effects.<sup>12</sup> He emphasizes the very important point that the resultant social, economic and foreign trade features are the same regardless of whether the colonial status is based on political imperialism or economic imperialism.

Many of the under-developed countries were until recently under the political domination of a metropolitan power, some still are. Almost all of the under-developed countries, that were not colonies, were, and many are still, economically dominated from abroad with effects in the economic field which are closely similar to those under colonialism.<sup>13</sup>

The major structural change that has taken place in advancing from the primitive stage to the colonial stage is in the larger participation in international trade. Exploiting the natural national advantages in the production of some staple commodity, whether it be a food crop, a fibre crop,

---

<sup>11</sup> The Economist, Rostow on Growth, op. cit., August 15, 1959, p. 410.

<sup>12</sup> Gunnar Myrdal, Development and Underdevelopment, and also Economic Theory and Under-developed Regions, op.cit.

<sup>13</sup> Myrdal, Development and Underdevelopment, p. 51.

mineral ore, petroleum, or rubber, on a cash basis for sale in the market of the mother country, and to a lesser extent in the broader markets of the world, the economy has become commercialized in that particular sector. In most instances this development came about through the investment of capital, from the dominating country, devoted to the production of the primary product for export. Generally, these ventures were so profitable that the enterprises become self-supporting so far as investment capital is concerned.<sup>14</sup> There are notable exceptions, like the groundnuts fiasco in British Africa, and abortive rubber cultivation projects undertaken by American capital in Brazil. Some associated development in social overhead capital usually takes place, in road, railway and port construction, with foreign financing to permit marketing of the cash crop. But the colonial economy is not transformed in depth, it is not extensively commercialized or monetized. As Myrdal expresses it, the country still suffers from a relative lack of economic integration.<sup>15</sup>

Because of the lack of national economic integration and the extremes of income inequality associated with the export biased colonial economy, contrary to Kostow's asser-

---

<sup>14</sup> Myrdal, Economic Theory and Under-developed Regions, p. 53.

<sup>15</sup> Ibid., p. 51.

tion, there is a static nature inbred within such a society and economy. The only real capitalists are the merchants whose activities are centred in foreign trade. They feel compelled to fight rather than finance domestic industries, either at the dictates of the dominating country or of the law of profit, to preserve a market for imported manufactured goods received in exchange for the exported primary produce. Political power and broad economic power are vested in the feudal type, large-landowning group, and they have no interest in countenancing change in the system. Myrdal very cogently describes the interacting effect of internal and international inequalities, in the social and economic institutions, that tend through circular causation to perpetuate backwardness.<sup>16</sup>

To avoid the bias of unbalanced presentation of the facts, it is desirable to recognize the legacy of the colonial system which serves in the opposite way to establish in the colony some of the essential preconditions for economic development. The establishment of law and order, security of property, sanctity of contract, sound administration and the training of an efficient civil service, valuable contributions to social overhead capital in the areas of transportation facilities, education and health arrangements, even if on a limited scale, and the creation of banking

---

<sup>16</sup> Ibid., p. 60.

and other financial institutions, are all valuable contributions.<sup>17</sup> This legacy, however, is not inherited by countries that fall within the colonial category under the device of economic tutelage without actual political domination.

Internationally the system operates to give play to the "polarization" effects of Hirschman<sup>18</sup> or, what are the same things, the "backsetting effects"<sup>19</sup> or "backwash effects"<sup>20</sup> of Myrdal. In discussion of colonialism Myrdal is inclined to modify his description somewhat to "weak spread effects" attributable to the "enforced bilateralism"<sup>21</sup> associated with the economic relationships between the metropolitan and dependent countries. The former sought raw materials and a market for its manufactured goods. Conceptually, it was a narrow viewpoint, tinged with mercantilism, for it sought to squeeze some specific gains out of foreign trade, but in using monopolistic power to particular ends denied economic forces free operation that might well have

---

<sup>17</sup> Ibid., p. 56; and, Daniel Thorner, Long-term Trends in Output in India, in Economic Growth: Brazil, India and Japan, op. cit., p. 104.

<sup>18</sup> Albert O. Hirschman, The Strategy of Economic Development, op. cit., p. 188.

<sup>19</sup> Myrdal, Development and Under-development, op. cit., p. 31.

<sup>20</sup> Myrdal, Economic Theory and Under-developed Regions, op. cit., p. 30.

<sup>21</sup> Ibid., pp. 54 and 58.

led to expanding trade with greater diversification and increasing income gains for both parties. Initially, the colonial economy did benefit from the growth that took place in the export sector, but since the spread effects were held in check the dependent country tended to suffer from restrained development and worsening terms of trade as the scope of the markets where it could buy and sell were artificially restricted. As Myrdal observes, when enforced bilateralism was occasionally challenged it was not usually by themselves but by other industrial countries anxious for more multilateral conditions of international trade that would permit them also access to the colonial markets in two-way trade.<sup>22</sup>

The colonial economy during the often quite extended period of static equilibrium presents a characteristic balance of payments situation. Merchandise trade produces a favourable balance, except when adverse weather conditions lead to crop failure, or other blights or pests ravage the cash crop. The domestic market is still narrow so that effective demand does not yet lead to an offsetting or excessive inflow of imports. However, the trade surpluses do not mount rapidly for the, at least partially, enforced bilateralism operates disadvantageously for the dominated country in the terms of trade, leading to declining price for exports as output

---

<sup>22</sup> Ibid., p. 58.

increases. Although there must have some initial capital inflow and continuing flow on a reduced scale to create and maintain the social capital necessary to allow the marketing of the export produce, in the established system there is likely to be an outflow of capital seeking safer haven or more rewarding investment opportunities abroad. This unfortunate exodus of capital from woefully capital-scarce countries is the penalty of underdevelopment and the manifestation of concentration of wealth in the hands of a narrow group of commercial capitalists who are disinclined to engage in diversified productive investment. Apart from the possibilities of outward capital movements, there are certainly continuous outpayments of interest and profits to counterbalance the trade surplus. One reason for describing the balance of payments as being in static equilibrium, despite the apparent vulnerability of an export biased monoculture, is that the enforced bilateralism of the colonial system does operate to shield the dependent economy from the full force of market vagaries, since it has a preferential market for its export staple.

The development preparatory phase economy is in most respects what Rostow styles as the transitional society. The additional descriptive term applied to this stage in the summary identification of stages of economic growth earlier listed, the organizational society, is also a most appro-

private label. It is essentially an organizational period, rather than one of measurable economic progress. It is easily possible for a society to skip the experience of the colonial type economy, as, for instance, Japan did, but it is inconceivable for any society to emerge from poverty and stagnation without undergoing the transitional or organizational period. This may account for Rostow choosing to omit the colonial type economy as a specific stage of evolution. Although it should be realized that the development preparatory phase can very well occur as an advanced phase in the colonial stage, particularly in the cases of progress to independence under enlightened political tutelage. The essential organizational accomplishments can very well be the heritage of mature colonialism.

It is a period of overcoming obstacles to growth, of converting into a dynamic society "the backward economy in a stationary state of underdevelopment equilibrium."<sup>23</sup> But mostly the obstacles that are surmounted in this transition period are the socio-political ones, identified by Meier, rather than the impediment of low savings and investment. As he states: "There is, indeed, much truth in maintaining that a country is economically backward because it is poli-

---

<sup>23</sup> Ragnar Nurkse, Some Aspects of Capital Accumulation in Underdeveloped Countries, National Bank of Egypt, Cairo, 1952, p. 4.

tically, socially, and physically backward."<sup>24</sup>

If real future progress is to be made, a step that must be taken is a drastic revamping of the political framework.<sup>25</sup> The old power group of feudal landlords and princes of commerce must be broken, or divested of controls, to give room for forward looking, enterprising elements concerned with national welfare rather than the preservation of privileged status. In the process, political unification must be achieved in a way that gives rise to a sense of nationalism and the rule of law.<sup>26</sup> Only then can the idea of change become implanted and a growth perspective realized, that will release latent growth forces to break the habitual stagnation.<sup>27</sup> This break with the past must be felt throughout the entire social system, the readjustment finding first expression in a positive approach to improvement in health and educational services. Paralleling this political and social transition, there gradually emerges greater economic unification based on a permeation of the monetization or commercialization of the economy in depth, bringing about an

---

<sup>24</sup> Gerald M. Meier, "The Problem of Limited Economic Development", in The Economics of Underdevelopment, Agarwala and Singh, cited, p. 56.

<sup>25</sup> Paul A. Baran, "On the Political Economy of Backwardness", in Approaches to the Problems of Underdevelopment, op. cit., pp. 75-92.

<sup>26</sup> W.W. Rostow, The States of Economic Growth, op.cit., p. 26.

<sup>27</sup> Albert O. Hirschman, The Strategy of Economic Development, op. cit., Ch. 1, pp. 1-28.

increasing degree of national interdependence of the various sectors, and, if not the strong tendency, at least the opportunity for greater equalization. To foster this economic integration, the now unified government must create the institutional framework for order, education, finance and marketing.<sup>28</sup> There automatically follows a greater need for social overhead capital, related to these institutional needs and to facilitate production and marketing.<sup>29</sup> Finally, it may be expected that in this transitional period a greater diversity in economic activity will develop, associated with the national unification and wider market opportunities that should inevitably give rise to increasing urbanization and a more significant beginning of industrialization.

All this is not accomplished in a smooth, uniform process of evolution. Usually the process of transition, when obstacles to economic growth begin to be overcome, is uneven, incomplete and ill coordinated.<sup>30</sup> Nor is it possible for the preparatory political, social and economic changes

---

<sup>28</sup> P. T. Bauer and B. S. Yamey, The Economics of Under-developed Countries, Cambridge University Press, 1957, pp. 171-173.

<sup>29</sup> W. W. Rostow, The Stages of Economic Growth, op. cit., pp. 24-26.

<sup>30</sup> P. T. Bauer, Economic Analysis and Policy in Under-developed Countries, Duke University Press, Durham, N.C., 1957, Ch. 2, pp. 44-84, gives a more realistic version of irregular transformation.

to be brought about without painful readjustments demanding such extreme sacrifices of material status and cultural habits that the break with the past can be achieved without an effective social revolution.<sup>31</sup> A major impediment, obstructing the easy acceptance of the readjustment process, is that the rewards of immediate improvement in material well-being do not follow rapidly or automatically. The incentive of realized economic gains is not on display to induce a desire for change, for this is a preparatory period for later progress. Even though investment does rise, it is necessarily channeled into social overhead capital from which income gains are only slowly forthcoming.

The balance of payments similarly fails to exhibit immediate favourable results. This is due to the fundamental equation presented at the beginning of this chapter, which told us that if any country's national expenditure exceeds its national production then its imports must exceed its exports and be covered by foreign capital inflows.<sup>32</sup> Structurally what occurs in this period of transition is a reorganisation of the society and the economy that tends to raise national expenditure without necessarily raising national production. Even assuming that through reform of the land

---

<sup>31</sup> United Nations, Measures for Economic Development of Under-Developed Countries, New York, 1951, pp. 15-16.

<sup>32</sup> J. M. Letiche, Balance of Payments and Economic Growth, Harper and Brothers, New York, 1959, pp. 287-291.

tenure system and some improvement in technology, deriving from the administrative and educational efforts of the national government, there is some rise in agricultural output, there is operative at the same time a tendency to diversification of farm production oriented to the easier distribution in the domestic market, at the cost of cash crops and export earnings. Similarly, such industrialization as does occur means some diversion of productive agents, capital and labour, from agriculture. Finally, as the development preparatory phase proceeds a modernization of ideas and attitudes results that entails not only a sense of nationalism but of awareness of and involvement in the international setting. This, together with the probability of increasing urbanization, leads to the demonstration effect.

The poorer nations, in contact with the richer, feel continually compelled to keep their money incomes and outlays above what is warranted by their own capacity to produce. The result is an inflationary bias at home and a persistent tendency toward disequilibrium in the balance of payments.<sup>33</sup>

Generalizing, the development preparatory phase economy is unlikely to increase its export potential or its export volume, but is more likely to shift attention to the production of home goods at the expense of the staple cash

---

<sup>33</sup> Ragnar Nurkse, "Some International Aspects of the Problem of Economic Development", American Economic Review, May, 1952, p. 580.

crops for export. Import demand cannot fail to rise as the economy is progressively transformed from a subsistence to a market basis, as the demonstration effect comes into play, as some beginnings are made in industrialization giving rise to new needs for imported machinery and materials, and as capital investment increases, mainly associated with social capital formation. For all these reasons, Nurkse's contention that a persistent tendency toward disequilibrium in the balance of payments is supported. The trade gap must be covered by enlarged capital imports, which will tend to be forthcoming in response to the attractions of the political and economic unification that has taken place, and the profit opportunities of the new readiness for industry, to the degree that the outside world has confidence in the stability of the government and the economy of the emerging nation. Domestic capital will respond in a like manner, to the degree that confidence is engendered in the stability of the organizational society and in its prospects, to contribute to the growth process through investment, or, to the degree that confidence is lacking, to act as an income leakage and adverse factor in the balance of payments by seeking refuge abroad.

The newly developing economy in the take-off period logically emerges, if the preconditioning phase succeeds in cultivating the necessary social acceptance of the idea of change and the preparatory organization for economic growth.

The political and economic unification begun in the transitional period must be carried through to more effective completion in the take-off period, the administrative responsibilities of government broadened and the institutional framework elaborated. The essential change marking this phase is identified by Rostow and many others as the raising of the effective rate of investment from 5 per cent or less, to 10 per cent or more, of the national income.<sup>34</sup>

The main problem to be surmounted is the means to raise productivity, which undoubtedly requires this major increase in the rate of investment but even more significantly depends on successful mobilization and utilization of resources for higher production. Capital is merely one of the resources involved, and intensified application of it alone will not lead to the goal of self-sustained economic growth if investment is haphazard, wasteful and uncoordinated. Consequently, development planning in a centralized, comprehensive programme becomes necessary to determine the allocation of resources and the priority of development projects.<sup>35</sup>

---

<sup>34</sup> W. W. Rostow, The Stages of Economic Growth, op. cit., p. 8; and W. Arthur Lewis, The Theory of Economic Growth, op. cit., p. 226, and in fact all of Ch. 5, pp. 201-308.

<sup>35</sup> United Nations, Measures for the Economic Development of Underdeveloped Countries, op. cit., Ch. VIII & LX, pp. 49-68, and United Nations, Analyses and Perspectives of Economic Development, I. An Introduction to the Technique of Programming, New York, 1955, Ch. I, pp. 3-9.

In this period of development the economy becomes increasingly involved with and integrated into the world economy. It becomes truly internationalized. The demonstration effect operates with increasing intensity, influencing consumer tastes and expenditure, and national ambitions and expectations, to give rise to an accelerated demand for investment. The normally unresisted impulse to spend beyond income in public and private sectors alike must inevitably lead to internal financial instability, particularly when the inflationary pressure that is a normal manifestation of economic development is allowed to become uncontrolled inflation.<sup>36</sup> Development needs, the demonstration effect and the frequent inflationary consequences, all operate to raise the demand for import goods and equipment aggravating the tendency to balance of payments disequilibrium, which existed even in the pre-take-off period.

The challenge confronting economic planners in underdeveloped countries is, then, how to achieve a rapid rate of growth while avoiding the dangers and distortions resulting from inflation and while also managing to contain the balance of payments pressures sufficiently to stave off a liquidity crisis. Internal financial instability in itself can bring

---

<sup>36</sup> United Nations, Methods of Financing Economic Development in Underdeveloped Countries, New York, 1949, p. 19.

on chronic balance of payments difficulties, through the discouragement to production for export, stimulation of demand for imports, provocation of capital flight and hesitancy on the part of foreign investors.<sup>37</sup> While never underestimating the direct consequences of inflation on the balance of payments and in the growth process, more attention will be given to the stability question in the following chapter.

Assuming that the economic planners for any underdeveloped country do realize the dangers of inflation and genuinely do seek growth with stability, some consideration should be given to the alternatives open of specialization or diversification, and the meaning of balanced economic growth.<sup>38</sup>

The newly developing economy might easily find theoretical justification for a development policy framed to exploit the historic natural advantages of the economy in the expectation of reaping the maximum gains from international trade and the international division of labour. This policy would

---

<sup>37</sup> E. M. Bernstein, "Strategic Factors in Balance of Payments Adjustment" - IMF Staff Papers, August 1956, pp. 151-169; see especially p. 153.

<sup>38</sup> IMF Staff Mission, "Economic Development with Stability, a report to the Government of India," International Monetary Fund Staff Papers, Feb. 1954, pp. 313-386, treats fully the tasks facing planners and offers wise counsel in the specific case of India, duly considering these purposes.

dictate concentration of effort and investment in the particular primary production that had been the traditional export staple. Immediate advantages would be reaped because the capital intensity of primary production is relatively low compared to industry, thus the limited capital resources could yield high returns; or to put it another way, if, as is customary, the technological level in productive methods is low in primary production the capital-output ratio of new investment is also low, which strongly favours first attention to agriculture. In addition, such specialized development would ensure a rising income from exports, minimize the rise in imports for investment, and apparently offset the tendencies to balance of payments disequilibrium as higher income and the demonstration effect find reflection in rising demand for consumable imports.

This cheap avenue to success, however, cannot be travelled very far. As Myrdal complains with vehemence, the income equalization possibilities of international trade have not been realized in practice by primary producing countries.<sup>39</sup> This can probably best be explained by the fact that the elasticity of demand for primary goods, particularly agricultural produce, is relatively low, while the

---

<sup>39</sup> Gunnar Myrdal, Economic Theory and Under-developed Regions, op. cit., pp. 149-154.

price flexibility is quite extremely high.<sup>40</sup> Disregarding for the moment the instability in export earnings due to these relationships, it must be admitted that few countries have unlimited possibilities of increasing production of a few specialized commodities, by extensive methods because of the physical limitation of resources, arable land or mineral reserves, as the case may be, nor by intensive methods because once past the initial gains from the application of better technical methods the influence of diminishing returns must be felt progressively. From which it can be concluded that the income gains from extreme specialization are limited, and thus no effective programme of continuous economic growth can be based on such a narrow front.

Sooner or later, the path of diversification must be followed if the ultimate objective of continuous self-sustaining growth is to be achieved. It may come about through the foreign trade effects of specialization. The agricultural, or other primary, sector may very well be the lead industry that sets up a chain reaction inducing growth elsewhere in the economy in the Hirschmann manner, which suggests an erratic or uneven internal growth path.<sup>41</sup> As the

---

<sup>40</sup> United Nations, Instability in Export Markets of Under-Developed Countries, New York, 1952.

<sup>41</sup> Albert O. Hirschman, The Strategy of Economic Development, op. cit., pp. 51-75.

U.N. experts describe it, industrialization in underdeveloped countries must usually be discussed in connection with foreign trade. As productivity in agriculture rises following technical changes, there is a more ample supply of foodstuffs available to support a non-agricultural population, also a surplus labour supply becomes released for other occupations, so that diversification, which is for practical purposes synonymous with industrialization, follows.<sup>42</sup> The rise in export earnings from the higher output of the primary product also generates income which would mean higher demand for a variety of consumer goods, some of which may now advantageously be produced domestically, and at the same time raises aggregate savings and, accordingly, the supply of investment funds. Rostow also expects this experience of differing growth rates in particular sectors of the economy, and identifies:

Primary growth sectors, where possibilities for innovation or for the exploitation of newly profitable or hitherto unexplored resources yield a high growth-rate and set in motion expansionary forces elsewhere in the economy.<sup>43</sup>

Other writers make a strong case for "balanced economic

---

<sup>42</sup> United Nations, Measures for the Economic Development of Underdeveloped Countries, op. cit., pp. 59-60; and United Nations, Analyses and Projections of Economic Development, I, op. cit., pp. 6-7.

<sup>43</sup> W. W. Rostow, The Stages of Economic Growth, op. cit., p. 52.

growth", and notable among these are Lewis,<sup>44</sup> Nurkse<sup>45</sup> and Kindleberger.<sup>46</sup> Which doctrine is strongly endorsed by the United Nations publications, and not really opposed by Hirschman except as a fetish, but these authorities expect balanced growth to be induced by economic circumstances, provided always the government of the underdeveloped country does not obstruct their operation. Actually, the United Nations advises the underdeveloped countries to facilitate and support the logical course of development on many fronts by positive policies. The gospel of balanced growth makes the emphasis on positive policy stronger, and advocates economic planning centred on this principle.

The nice question in the whole controversy, of course, is what is proper balance in economic development. There is no single answer, for as emphatically demonstrated in earlier chapters no two economies are identical, and hence no two economies can follow identical development paths or policies. Using the word "balanced" with all the various qualifications that are appropriate, it must be agreed that a balanced programme is to be preferred to complete specialization and, in

---

<sup>44</sup> W. Arthur Lewis, The Theory of Economic Growth, op. cit., pp. 69-78.

<sup>45</sup> Ragnar Nurkse, Some International Aspects of the Problem of Economic Development, op. cit., pp. 257-263.

<sup>46</sup> Charles P. Kindleberger, Economic Development, op. cit., Ch. 9, pp. 149-167.

any event, if continuous economic growth is to be realized there must be a diversified development, which must be in some reasonable balance if any sort of near equilibrium, and hence stability, is to be possible.

Balance of payments reasons drive developing countries to encourage industrialization. Myrdal, incensed at the inequality and injustice of international economic experience, scorns classical international economic theories and insists on the necessity of fostering industrialization by any means for the economic salvation of underdeveloped countries.<sup>47</sup> In criticism of these views, Meier disputes the logic of Myrdal's arguments but in conclusion does not invalidate the principle of development through industrialization.

The remedy does not lie in policies of protection and deliberate industrialization at the expense of agriculture and foreign trade. Instead it depends on the promotion of those domestic conditions - particularly in the political, social, and institutional framework of the economy - that will permit the expansion of the export sector to induce secondary changes in the domestic sector. If this is accomplished foreign trade might then also serve the poor countries as an "engine of growth".<sup>48</sup>

The developing economy must attempt to spend beyond its income, if it is to maintain a rate of growth at least

---

<sup>47</sup> Gunnar Myrdal, An International Economy, op. cit., p. 226.

<sup>48</sup> G. M. Meier, International Trade and International Inequality, Oxford Economic Papers, October, 1958, p. 239.

equal to the advanced countries. This is identified with a high and rising import account. Since foreign exchange must be conserved for urgent priority needs, the more goods that can be produced domestically, almost regardless of cost in domestic labour and money terms, the better the prospects of carrying on the development plan without a forced interruption arising from a balance of payments crisis. Even though recourse to restrictive trade practices implies interference with the natural pattern of trade and a loss of export markets for industrialized countries, and is no remedy for the disequilibrium calling them into play, the practice can be justified.<sup>49</sup> Devaluation is no effective alternative if the elasticities of demand and supply are unpropitious and if the inflationary forces of excessive demand continue to operate due to the mechanics of growth. Nor is there necessarily any real loss in trade and income for the industrialized supplier countries, for rising production, exports and income associated with economic development promote the expansion of imports, but the diversification and selective trade controls do effect a change in the nature of the import goods purchased.

Reinforcing the attractions of economic diversifica-

---

<sup>49</sup> E. M. Bernstein, "Strategic Factors in Balance of Payments Adjustment," IMF Staff Papers, August 1956, p. 160.

tion in the newly developing economy, and contributing to the balance of payments problems, is the instability of export earnings. To illustrate the problem the evidence produced by a United Nations study group is striking enough. Some 218 averages of the year to year variation of import values for a large number of primary products from several countries over the period 1922 to 1949 were computed, which averages were strongly clustered about a 20 per cent variation, ranging from 10 to 30 per cent, with relatively few falling outside this dispersion pattern.<sup>50</sup> Specialization in production for export of one or few primary commodities is usually a mark of small economic size, and is usually accompanied by a high degree of dependence on foreign trade, so that fluctuations in export proceeds have a devastating effect on the domestic economy.<sup>51</sup> This foreign trade, and hence domestic economic, vulnerability of underdeveloped countries is partly a matter of extreme sensitivity to the foreign repercussion factor, finding expression in fluctuations in the volume of exports, and partly a matter of sharp adverse shifts in the terms of trade.

---

<sup>50</sup> United Nations, Instability in Export Markets of Under-Developed Countries, New York, 1952.

<sup>51</sup> United Nations, Commodity Trade and Economic Development, New York, 1953, pp. 9-10; see also IMF, The World Payments Situation, Washington, 1952, pp. 35-37.

The secular trend in the terms of trade for underdeveloped countries is a controversial subject. One widely quoted United Nations study offers statistical evidence of long-term deterioration in the terms of trade for primary producing countries.<sup>52</sup> A later United Nations study asserts that this unqualified conclusion is over-stressed, both on the grounds of statistical difficulties of establishing a long-term measure of terms of trade movements, and on the grounds of conflicting possible interpretations of the data.<sup>53</sup> Kindleberger considers the succession of theories and recent discussions of the problem and arrives at this conclusion:

My contention is that few generalizations on the terms of trade between world manufactures and world primary products are valid but that they tend to turn against the underdeveloped and in favour of the developed countries.<sup>54</sup>

Commenting on this paper, and this particular statement, both Singer and Meier stressed that long-run adverse shifts in the terms of trade, if they in fact do occur, handicap the efforts of underdeveloped countries to raise national income and deter their growth rates relative to advanced

---

<sup>52</sup> United Nations, Relative Prices of Exports and Imports of Underdeveloped Countries, New York, 1949, p. 22.

<sup>53</sup> United Nations, Commodity Trade and Economic Development, op. cit., pp. 11-12.

<sup>54</sup> Charles P. Kindleberger, The Terms of Trade and Economic Development, The Review of Economics and Statistics, Supplement, February, 1958, p. 72.

countries, but that the short-run instability of the primary producers' terms of trade is a more serious handicap in meeting problems of economic development.<sup>55</sup> This viewpoint reverts to our consideration of the instability of export earnings of underdeveloped countries, which question is particularly well summed up by Mr. Kanesathasan:

The price and income elasticities of world demand for and supply of primary products are such that fluctuations in economic activity in industrial countries cause great fluctuations in the prices of such commodities and in the export receipts of the countries producing them. The prices of industrial manufactures, which constitute an important portion of the imports of underdeveloped countries, do not fluctuate as widely as those of primary commodities, although they tend to rise in a boom and decline in a recession. The result is that the terms of trade of primary producing countries generally improve significantly in a boom and decline significantly in a recession.<sup>56</sup>

Over the past fifteen years the disturbing consequences of this sort of experience have adversely affected the economic development of the coffee economies, the non-ferrous metal economies, the wool economies and the rubber economies of the world. The income effects are in themselves serious and significant, but the impact is even more disruptive on the balance of payments. During boom periods,

---

<sup>55</sup> Ibid., Comment, pp. 85-90.

<sup>56</sup> S. Kanesathasan, "Export Instability and Contracyclical Fiscal Policy in Underdeveloped Export Economies; A Case Study of Ceylon Since 1948", IMF Staff Papers, April, 1959, p. 47.

when export earnings are very high, such countries, eager to accelerate the pace of development, expand their import budgets to facilitate the prosecution of an enlarging programme of capital projects. When world recession develops the contraction of export earnings is very sharp, but it is extremely difficult to reduce imports proportionately because the investment projects undertaken cannot be economically abandoned. Thus there results a pattern of boom and export surplus, expanding imports and relative equilibrium, recession and serious trade deficit which tends to persist in the form of chronic balance of payments difficulties.

Associated with this trade pattern has been a trend of heavy foreign borrowing and rising indebtedness creating debt servicing problems for the developing economies which greatly aggravate the balance of payments disequilibrium, and restrain growth possibilities. Turkey and Brazil are two conspicuous examples of countries which were led into extravagantly ambitious development plans by disappointingly short-lived periods of favourable terms of trade and high export earnings. In both cases the pace of domestic investment in various projects was expanded, import buying increased greatly, and use of foreign credit accelerated. The result was a rapid rise in foreign indebtedness and a rising burden of debt service obligations. When the terms of trade subsequently took an adverse shift the burden of

transfer payments on existing indebtedness was excessive for their debt servicing capacity. In both cases this required a severe curtailment of imports, considerably greater than the decline in export earnings, depletion of exchange reserves and reliance on forced loans from abroad in the form of unpaid commercial accounts. The need for additional foreign credits became acute, to roll over the outstanding debt and ease the short term strain of service obligations, and to maintain even a modified investment and development programme. Under these circumstances the international creditworthiness of such countries deteriorates rapidly and sources of foreign capital dry up.<sup>57</sup>

The discussion of the many complex aspects of the main influences on the balance of payments structure of newly developing economies has revealed certain characteristic circumstances. It is evident that the import propensities of such economies are high, for consumer goods as real income growth becomes manifest and the demonstration effect becomes very strong, and for investment goods as the pace of economic development gains momentum. Merchandise trade is normally only in balance, or occasionally in slight surplus, when the

---

<sup>57</sup> IBRD - International Public Indebtedness: A Study on Debt Servicing Capacity and Postwar Growth in International Public Indebtedness, Washington, 1957, a confidential mimeographed document, is probably the only systematic study of this problem.

terms of trade are exceptionally favourable for a particular country. More generally, and certainly whenever the terms of trade become unfavourable, visible trade tends to be in moderate or extreme deficit, depending upon world prices for the country's export staple and the severity and effectiveness of import control arrangements. Capital account is the balancing factor, since this is a period in the economic evolution of any country when its foreign borrowing is heavy. However, there is also a positive tendency to excessive borrowing to stimulate the rate of economic growth, resulting in an ever mounting debt service obligation. The overall balance of payments becomes precarious and subject to periodic foreign exchange crises which can only be met through the emergency facilities of one or other of the international financial agencies.

The self-sustaining, or diversified economy is less easy to define in specific terms than economies in the earlier stages of evolution. The characteristics of individual economies vary more widely at this stage and hence there is less conformity to a single pattern. In Rostow's terminology, this is the period when a society has effectively applied modern technology to its resources and productive processes.<sup>58</sup> This

---

<sup>58</sup> Rostow, The Stages of Economic Growth, op. cit., p. 59.

accomplishment has invariably led to and is identified with the crucial achievement of a rate of savings - investment of 12 to 15 per cent, or better. The economy has become diversified in the course of development, and accordingly is less completely import dependent while its export base has usually been transformed, to a degree, to less reliance on one or a few staple commodities. It is interesting to observe, however, that this transformation to the stage of early maturity has not in the majority of cases meant a decline in the importance of foreign trade, as measured by the ratio of foreign trade to national output.<sup>59</sup> Domestically, the process of development has led to a better balance of productive activity, with decreasing concentration of employment in agriculture, an important secondary industry and an ever increasing tertiary sector.<sup>60</sup>

Within this general framework, the differences between various economies, all of which may be at this same stage of development, may be great. The size of countries, the density of population, the character of natural resources and the extent of their exploitation, determine the particular economic histories of countries, and similarly the path

---

<sup>59</sup> Simon Kuznets, Six Lectures on Economic Growth, Free Press of Glencoe, Illinois, 1959, pp. 100-107.

<sup>60</sup> Colin Clark, The Conditions of Economic Progress, MacMillans, London, 1951.

and pace of future economic growth. The existing economic structure and the prevailing rate of growth, in turn, largely predicate the structure of the balance of payments. Clearly, it is difficult to generalise about the balance of payments.

It might be expected that the reduced import dependence and stronger export base would lead to a trade surplus. Theoretically such a trade surplus seems necessary to allow the economy in young maturity to repay the foreign indebtedness incurred in the previous stage. Empirically it is possible to find examples conforming to this model. If the investment opportunities in the country seem to be waning, with a declining marginal efficiency of capital, a tendency to export capital for investment abroad can also develop, reinforcing the outflow in amortization of foreign debt, and redoubling the need for a surplus on merchandise trade, or at least on overall current account. The higher the rate of domestic savings, the greater is the likelihood of net capital exports to occur. Sooner or later, the balance of payments must take this form if the mature debtor country is ever to advance in maturity and become eventually a creditor country. Since it is obvious that the immature, or underdeveloped countries must depend on the mature, or advanced countries for capital supply, the suggested pattern for the balance of payments is necessary for the progress of the world economy.

Canada, and some other countries, have reached early maturity without showing any signs of changing over from capital importers to capital exporters. Domestically, Canada had reached this stage of technological maturity, at the symbolic date of 1950, according to Rostow.<sup>61</sup> The example of Canada illustrates a deviation from the expected pattern for the balance of payments of a country at this stage of development. Meier concluded that capital imports continued to be attracted to Canada, for the period up to 1913, by the opportunities associated with Canada's economic development, and that the capital inflow, in turn, supported and prolonged the process of expansion.<sup>62</sup> This explanation is, if anything, even more appropriate to the period since 1950 when capital imports and economic growth have both been exceptionally high. A continuing high growth potential and attractive profit opportunities logically provide strong incentives to foreign private capital investment. A natural counterpart is a persistent, large deficit on merchandise trade.

Advanced maturity in the Rostow definition is the era of high mass-consumption.<sup>63</sup> But Rostow is little concerned

---

<sup>61</sup> Rostow, The Stages of Economic Growth, op. cit., p. 59.

<sup>62</sup> G. M. Meier, "Economic Development and the Transfer Mechanism: Canada", 1895-1913, Canadian Journal of Political Science, February, 1953, p. 17.

<sup>63</sup> Rostow, The Stages of Economic Growth, op. cit., pp. 73-92.

with balance of payments peculiarities at various stages. In the Kindleberger and Crowther classifications, based primarily on the balance of payments structure, this should be the period of the mature creditor. Logically, such a stage should be reached, as exemplified by the case of England, when an economically advanced country has become a creditor nation of long standing, which would entail heavy repayments from abroad on past credits and substantial earnings from foreign investments, ultimately accepted in the form of real goods and apparent as an import surplus. In keeping with Colin Clark's thesis that the tertiary, or service, sector of the economy becomes dominant with maturity, one could also expect that the sale of financial, freight, and other services would yield substantial foreign exchange earnings, reinforcing the need to accept a deficit in merchandise trade.

Such a situation has at times been reached by various advanced economies. However, it presupposes a degree of high income stagnation, or at least a significant slowing down in the rate of economic growth. For the long period of heavy capital export, that would first have to be experienced, suggests a declining marginal efficiency of capital at home associated with declining investment opportunities. This implies a declining growth rate, compared with other countries and with previous experience. To illustrate by

contrast, if the mature economy resembles the United States it would continue to enjoy a high growth rate and, from its ever-increasing income, supply capital for assistance and investment abroad in rising absolute volume, so that the export of capital would through steady augmentation exceed in payments on past capital transactions. This being so, the mature creditor receiving a net positive balance on capital account must be reflecting stagnation.

In the present day world economy there are so many underdeveloped economies aggressively pursuing plans to accelerate the rate of economic growth, which, as has been shown, means rising demands for foreign capital and heavy import surpluses, that to maintain the necessary balance in aggregate world trade and capital movements the mature countries must provide an increasing supply of capital and exhibit continuing export surpluses. This interdependent situation in part compels the advanced countries to maintain expansive economies, and in part generates the income growth through the export account. Under these circumstances the mature countries postpone dropping into the pattern of the mature creditor. However, this analysis does tend to confirm the argument of the previous chapter, by suggesting that a degree of stagnation likely does lie ahead for the advanced countries, once the newly developing economies become

growth self-sufficient in large numbers, unless several of these follow the pattern of Canada. The same growth retardation impact could be communicated through the balance of payments should the underdeveloped countries fail to achieve the break-out and lapse into low income equilibrium.

## CHAPTER 4

### INSTABILITY IN THE WORLD ECONOMY

Instability is the enemy of progress. So widely accepted is this precept that it has become a truism for students of economic growth. Yet the doctrine of stability, which has been vehemently endorsed by the respectable coterie of economic experts, is not one of resistance to change, because change is the engine of disturbance, but a doctrine based on the persuasion that instability is an eroding force that dissipates the real gains of change and progress. As Melvin de Chazeau states;

..... the stability we seek is not static equilibrium but continuity of opportunity in a dynamic society, and that cannot be gained by eliminating fluctuations in society's components parts.<sup>1</sup>

Nor have the proponents of stability blinded themselves to the inherent nature of the process of economic growth, which has always exhibited a spurt and pause pattern rather than a smooth path of upward progress clinging closely to a discernible trend line. Sir Dennis Robertson has effectively reiterated the observable fact that the path of growth leads through periods of pause and readjustment after

---

<sup>1</sup> Melvin G. de Chazeau, "Can We Avoid Depression in a Dynamic Society?" Harvard Business Review, July-August, 1954, p. 39.

periods of rapid expansion, but asserts that recognition of this pattern does not make of one a "full-blown stagnationist".<sup>2</sup> In his statement Sir Dennis briefly accounts for the unevenness of growth by referring to the inevitable lumpiness of the process of investment, the loss of balance vertically between the several stages of the productive process and horizontally between the different types of final output, and the extreme swings in psychological expectations.

Instability has been defined by Haberler as fluctuations in aggregate output and employment.<sup>3</sup> Linking this definition to the objective of a high rate of growth Professor Perroux seeks an effective policy of attaining balanced growth which would maximize the aggregate real product while keeping its fluctuations to a minimum.<sup>4</sup> The problems that these and other writers discuss are fundamental to our immediate purpose, but it is obvious that their attention is centred on instability and its impact on growth in the national economy, the natural, prime area of concern. But, as the title of this chapter indicates, there are broader complexities of an international character to be faced, for

---

<sup>2</sup> Sir Dennis Robertson, in Stability and Progress in the World Economy, ed. D. C. Hague, Macmillan, London, 1958, p. 16.

<sup>3</sup> Gottfried Haberler, "Monetary and Real Factors Affecting Economic Stability," Banca Nazionale Del Lavoro Quarterly Review, September 1956, p. 85.

<sup>4</sup> François Perroux, in Stability and Progress in the World Economy, op. cit., p. 113.

it is growth and instability in the world economy that somehow must be reconciled.

There is nothing novel in insisting upon consideration of stability problems in terms not only of the open economy but of the international economy. The United Nations Charter, particularly Articles 55 and 56, embodies the pledge of member states to pursue the objective of full employment for the maximization of the economic and social well-being of their citizens and, as well, to promote the achievement of a stable and expanding world economy.<sup>5</sup>

Once having discarded the fiction of the closed economy, it is actually impossible to discuss stability problems of any country without consideration of international influences felt and communicated through the balance of payments. Thus, without reviving this old, undesirable fiction, it is difficult to deal with instability and growth first from a domestic point of view and then separately deal with its international aspects. Despite the overlapping that must result, due to the true necessity of international equilibrium if individual nations are to achieve domestic economic equilibrium, which is not identical with but basic to domestic economic stability, and the inevitable reliance on national economic conditions and policies for the attain-

---

<sup>5</sup> United Nations, National and International Measures for Full Employment, New York, 1949, p. 5.

ment of international stability, for analytical purposes this two stage treatment of the subject will be followed. A further division of the topic that seems appropriate is to discuss stability and instability in relation to economic growth separately for advanced countries and for underdeveloped countries.

The importance of instability in a study of unequal growth in the world economy may very well be questioned. An explanatory comment seems called for. The problem of unequal growth has basically two aspects: (1) unequal growth between different regions, sectors and societies of the world economy; (2) unequal growth over time. The latter aspect, temporal differences in growth rates, is in part related to the normal growth cycle, the spurt and pause process which is everywhere evident, and in part related to the not totally distinct occurrence of the business cycle. The international impact of the business cycle is felt most acutely by the newly developing economies and seriously handicaps their possibilities of achieving rapid, smooth economic growth.<sup>6</sup> Unequal growth between the economic sectors of these underdeveloped countries is also a destabilizing influence that impedes realization of growth plans. In fact, unequal growth in whatever sense implies lack of balance which must find expression in some form of economic disequilibrium. Instability is the counterpart of disequi-

---

<sup>6</sup> Ibid., p. 12.

librium. The corollary is that stability must be established and maintained if inequalities in growth, over space, time and industrial sectors, are to be reduced and rendered consistent with overall equilibrium.

It is impossible in a few pages to attempt any penetrating discussion of instability in the sense of economic fluctuations, which has been the subject matter of such voluminous literature. Little more can be done than to relate the business cycle to economic growth. A group of highly respected economists jointly produced a brief paper which succeeded very well in relating the two areas of study and in covering the elements of the problem of economic instability, which they defined as:

..... how to avoid mass unemployment and major fluctuations in the price level while maintaining steady growth in production.<sup>7</sup>

They assert that economic stability is but one of a number of important objectives for social policy, and, while conflicts may be expected between these objectives, that the attainment of economic stability is likely to promote other objectives as well. To quote these authorities again:

Progress involves change, reorganization of economic resources, replacement of the old by the new. A dynamic, progressive economy is one in which new techniques are constantly being developed and introduced, new products are seeking to attract

---

<sup>7</sup> "The Problem of Economic Instability," by Emile Després, Milton Friedman, Albert G. Hart, Paul A. Samuelson, Donald H. Wallace, American Economic Review, September, 1950, p. 505.

public favour and replace old products, new firms are challenging the old. Such an economy cannot be completely stable. Adaptation to change takes time and involves friction, with resulting dips or jogs in production and employment. On the other hand, willingness to venture into new lines and to develop new products and processes is greatly hindered if individuals and business firms must devote a considerable part of their energies and resources to adjusting themselves to substantial fluctuations in the general level of economic activity.<sup>8</sup>

They further state that:

The object of stabilization policy is not to prevent all fluctuations in components, but to see that they offset rather than reinforce each other. . . . . To stabilize the individual components of the economy, if we could do it, would be to throw away our prospects of progress and scrap the adaptive mechanism which facilitates progress.<sup>9</sup>

There are those who have persuaded themselves that this objective of offsetting fluctuation of components through built-in stabilizers, adroit and sophisticated handling of monetary and fiscal policies, and long range planning of investment schedules, has in fact been realized, putting an end to the fear of serious depression in the United States and other mature economies. Sumner Slichter specifically propounded this thesis.<sup>10</sup> De Chazeau hopes that it is attainable through non-cyclical investment planning of companies relatively independent of short term financial

---

<sup>8</sup> Ibid., p. 507.

<sup>9</sup> Ibid., pp. 516 and 517.

<sup>10</sup> Sumner H. Slichter, "break-Up of the Business Cycle", Harvard Business Review, January-February, 1955.

considerations and encouraged by confidence in purposeful and rapid enforcement of countercyclical measures by government.<sup>11</sup> Professor Perroux expounds a theory of balanced growth based on the persuasion that, in real terms, by which is meant utilization of factors of production and resultant output, the conflict between stability and progress has been overcome through positive and dynamic government policy and forward-looking oligopolies.<sup>12</sup> Countless other economists share these, or similar views, while virtually all present day writers stipulate or assume that major depressions belong to history and cannot occur again because of our better understanding of the forces generating business cycles and our better armory of weapons to offset them.

No one pretends, however, that instability has been eliminated from the system. Recessions, with or without a degree of price deflation, and inflationary booms are still very much present and only partly understood. Without complete understanding of the causal nature or exact timing of the milder business cycle experienced over the past fifteen years preventive action to eliminate its occurrence is not possible. The group of experts selected by the United Nations to study and report on the problem arrived at the conclusion

---

<sup>11</sup> Melvin G. de Chazeau, "Can We Avoid Depression in a Dynamic Economy"? Harvard Business Review, July-August, 1954, p. 39.

<sup>12</sup> François Perroux, in Stability and Progress, op. cit.

that the decisive determinant of fluctuations in the level of economic activity is the stability or instability of effective demand.<sup>13</sup> As they succinctly summarize the operative forces determining income generation in the dynamic system, there are both tendencies toward balance and possibilities of unbalanced movement in private savings and investment, government revenue and spending, and the balance of foreign trade, which together account for the strength or weakness of effective demand.

It is now realized that unbalanced movement of these elements is experienced because of the dynamics of the economy, and that to understand its workings attention must be paid to "necessary relations between the rates of growth of the different elements of a growing economy."<sup>14</sup> Following the lead of Harrod, a convincing theory of economic fluctuations has been elaborated, by such writers as Hicks, Domar and Hamberg, based on the theory that investment is the key to both growth and instability in the system, with the uncertainties being due to the differing behaviour of induced and autonomous investment. Hansen points out that the vola-

---

<sup>13</sup> United Nations, National and International Measures for Full Employment, op. cit., pp. 19-33.

<sup>14</sup> R. F. Harrod, Towards a Dynamic Economics, Macmillan and Co., London, p. 11.

tile factor which operates to cause stability or instability of effective demand, and particularly investment, is expectations, which, being psychological responses to economic circumstances and trends, are unstable and unpredictable.<sup>15</sup> So long as the investment swings, based on shifting expectations, do not move in the same direction simultaneously in all industries and sectors, and tend to counteract rather than reinforce each other, as Slichter believes now happens, then the recessions can only be of moderate severity.<sup>16</sup> This type of instability is identified by Professor R. A. Gordon as an intermediate or hybrid depression, which like the mild, or inventory recession, he considers manageable through proper monetary and fiscal policies.<sup>17</sup> He, however, is one who considers the possibility of a major depression in the event that the long building cycle does enter a downswing during the onset of a hybrid type depression, characterized by a serious impairment of investment opportunities.<sup>18</sup>

Relating the incidence of instability in the economic

---

<sup>15</sup> Alvin H. Hansen, "Toward a Dynamic Theory of the Cycle", American Economic Review, May, 1952, pp. 74-75.

<sup>16</sup> Sumner H. Slichter, Break-Up of the Business Cycle, op. cit.

<sup>17</sup> R. A. Gordon, Types of Depression and Programs to Combat Them, National Bureau of Economic Research, Inc., New York, 1954.

<sup>18</sup> Ibid., pp. 33-36.

system to the longer term problem of the rate of economic growth, some important conclusions may be drawn. It is the rate of investment and the continuity of investment that are the key influences on long run economic growth and short run economic fluctuations. Investment flows may be either from private or public savings. In most underdeveloped countries and in some advanced countries, public investment is the governor of the rate of economic growth, while in all countries it is the ultimate governor of the business cycle. Complete stability in the system is beyond attainment, because, regardless of how much or little of total investment is at the discretion of government, periodic inconsistencies are bound to develop in the economy between industries and sectors, due to mistaken planning or unrealized expectations, leading to temporary excess productive capacity or lagging capacity causing bottlenecks. So long as the distortions of economic balance are not serious or permanent, then the rate of growth may be checked but it will not be frustrated over the long run.

Reassuring as this brief review of real economic instability may appear, I must here express some doubts and reservations that will put me in the company of the pessimists. It is my opinion that defence expenditures are an excessively large part of total government expenditures upon which the level of prosperity, particularly in the United

States, has come to depend, and that this is a very unstable dependence indeed. While, on the other hand, the underdeveloped countries have likewise diverted an excessively large share of public investment into defence arrangements, which has been a costly handicap retarding their effective rates of economic development. In countries with a large capital stock, and perhaps some slowing down in investment opportunity, military expenditures can be an important sustaining force; in countries with insufficient capital stock the need is for an accelerated rate of capital formation and military expenditures are an economically wasteful allocation of scarce capital.

It may be argued, as does Arthur Burns, that military expenditures do not represent absolute diversion from civilian purposes, that the transfer payments involved are income sustaining, and that economic gains are derived in the form of technological advances arising from military research, notably atomic energy, and that the continuity of such expenditures is an income stabilizer.<sup>19</sup> Others hold different and conflicting opinions, as Fishman who concedes that national security spending impedes overall growth, and

---

<sup>19</sup> Arthur E. Burns, "Military Expenditures, Economic Growth and Stability," a paper submitted to the Subcommittee on Fiscal Policy of the United States House of Representatives, hearings on Federal Expenditure Policy for Economic Growth and Stability, Washington, 1957, pp. 509-517.

Hildebrand who insists that it has stimulated growth.<sup>20</sup> While Slichter considers this heavy security expenditure a stabilizing force, he obviously believes that it has been at the expense of more rapid economic growth for he suggests that should it taper off the government would undertake a large scale programme of planned development.<sup>21</sup> The witnesses already referred to and another one, David Novick, make some other important points.<sup>22</sup> The first is that serious sectoral instability results from the almost inevitable, abrupt changes in defence plans, with sweeping cancellation of orders and sudden shifts to new production. The second point is that defence expenditures are so massive that they constitute an important share of government spending, around 20 per cent, which prevents either significant increases or major reductions in the budget and accordingly seriously blunts the edge of anticyclical budgeting as a defence against economic instability.

Not only does this evidence show that on balance security investment is probably more destabilizing than stabilizing to the economy in the short run, but that it is

---

<sup>20</sup> Leo Fishman, pp. 518-522; George Hildebrand, pp. 523-541, ibid.

<sup>21</sup> Sumner H. Slichter, op. cit.

<sup>22</sup> David Novick, Federal Spending for National Security - U.S. Subcommittee, pp. 542-550.

largely an unproductive allocation of resources and an impediment to more rapid economic growth. Certainly defense costs affect the Canadian economy in both these ways, for relieved of this commitment Canada could proceed with economic development on a more self-reliant basis and reduce dependence on imported capital. This would strengthen and stabilize the Canadian economy by the consequent improvements in the balance of payments, a reduction in the inflationary influences of heavy government spending and the competition for relatively scarce resources, and through the combined effects of all these things allow the artificially overvalued Canadian dollar to settle to a lower rate. Reverting to the United States case, it must be concluded that either security spending there was also an inflationary force, as it certainly has been at least in certain periods, or, as several of the previously mentioned witnesses suggest, there is a fundamental tendency to secular stagnation in the United States economy.

Already the discussion has led into the subject of monetary instability, which certainly must be considered. Even in connection with the basic question of cyclical instability monetary factors must not be disregarded in favour of real factors only. Perhaps the best case made for treating monetary factors with full respect in modern literature, which is fashionably stressing investment, is

offered by Professor Haberler. After weighing the impact of both real and monetary factors, he concludes that monetary factors and policies play an important role in generating economic instability, to such a degree that he opines that the real cycle without the monetary complications is "a rather mild affair".<sup>23</sup> Yet he does concur with most other economists that monetary complications are unlikely to get out of hand again and lead to a major depression, characterized by mass unemployment due to a deficiency of effective demand. However, he is worried about secular inflation as a constant threat to stability:

But for other dimensions of economic stability than employment, for example, price stability, the outlook is definitely not so good. The low tolerance for unemployment, the strong inclination to suspect an incipient major depression in every slight actual or imagined dip in economic activity, the high propensity to apply anti-depression measures - all that coupled with the powerful urge to invest and develop, the constant pressure of organized labour for higher wages and, in some countries, of organized agriculture for higher prices, makes for secular, intermittent or continuous, creeping or galloping inflation.<sup>24</sup>

Inflation is characterized by a rise in prices in general. It may be a gentle but persistent rise in prices, known as creeping inflation, which is unassociated with the business cycle and can actually continue through a mild

---

<sup>23</sup> Gottfried Haberler, Monetary and Real Factors Affecting Stability, op. cit., p. 94.

<sup>24</sup> Ibid., p. 95.

recession, as it did in both Canada and the United States in 1957-1958.<sup>25</sup> The necessity of creeping inflation as the means to sustain a fairly high rate of economic growth while maintaining a continuously low level of unemployment, and the acceptability of mild secular inflation if it is the unavoidable price of economic progress, are controversial questions to which we shall revert presently. Inflation associated with the expansionist phase of the business cycle presumably could be avoided by dampening the swings of the cycle, and is a form of instability which the earlier discussion indicated must be contained in the interests of maximized, balanced growth. Finally, it is possible to identify extreme, or rampant inflation. It is in this latter guise that inflation exhibits all its most abhorrent effects. Uncontrolled inflation feeds on itself eroding the value of money in such a way that money loses its function as a store of value and destroys the incentive to save, for savers are penalized by a loss of purchasing power. When this happens sound productive investment ceases to have any appeal and speculation in real estate, commercial and financial ventures take over. The market economy practically ceases to have any rational foundations, for prices become volatile

---

<sup>25</sup> Edward L. Brink, "Inflation in the United States of America", in The Struggle Against Inflation; an International Comparison of Problems, The Institute of Bankers, London, 1959, pp. 52-55.

in the extreme and have no real influence on the allocation of resources, so urgent is the desire to translate money into goods. With the currency so weak and valueless, and the cost-price structure distorted out of reality, the balance of payments of such a country is thrown out of all semblance of equilibrium in the rush to buy imports and failure to market exports, even while hot money movements aggravate the drain on foreign exchange reserves. This is undeniably a picture of economic chaos with resource allocation a meaningless fiction and growth prospects completely nullified. Eventual financial and economic collapse must follow if uncontrolled inflation runs its full course. This is inflation as a naked evil for which there can be no word of approval. And so the natural premise follows; inflation is dangerous, contagious and loathesome, and like a bush fire is most easily controlled if never allowed to start.

The great unsettled issue of the post-war period is whether or not there is any necessary conflict between the policy objectives of price-level stability and full employment.<sup>26</sup> Associated with, but not identical to, this problem is the fundamental question, that has provoked so much controversy, of the degree of conflict arising from the objectives of price-level stability and a high rate of economic

---

<sup>26</sup> Joseph Aschheim, "Price-Level Stability and Employment Act Objectives", in Papers submitted before Joint Economic Committee, volume on The relationship of prices to Economic Stability and Growth, Washington, March 31, 1958, p.28.

growth. These specific questions have for several years been paraded before the attention of the Canadian public by the Governor of the Bank of Canada, who has endeavoured to win more intelligent public realization of the issues involved and to enlist support for constructive policies that might better achieve balanced growth without excesses.

In the Annual Report of the Bank of Canada for the year 1956, Governor Coyne stated:

The object of economic policy in the world today is to promote high levels of economic activity and employment with stability of prices - to facilitate economic growth at the highest rate that can be sustained for years at a time without endangering the stability of the currency or the cost of living. A hectic attempt to expand too fast is inconsistent with these objectives, and is also self-defeating. In addition to promoting inflation, it is bound to create excesses and distortions, overcapacity in some fields and deficiencies in others, and to end in a recession or depression which brings expansion for a time to an end. . . . . A policy of resistance to inflation is designed not to prevent economic growth but to increase it, by prolonging the period in which conditions favourable to growth may continue, and by discouraging the development of conditions, such as unsound credit practices and mounting prices and costs, which interfere with smooth and continuous adjustment to changing circumstances in a growing economy.<sup>27</sup>

Again in 1958 James Coyne looked back on a year of recession and repeated his theme:

. . . . . inflationary pressures inevitably create the kind of distortions which lead to some degree of

---

<sup>27</sup> Bank of Canada, Annual Report of the Governor, for the year 1956, pp. 10-11.

reaction or recession. . . . . surges of economic growth give rise to excessive optimism, and plans for physical expansion of industrial plant and equipment, of resource development and utilities, and of inventories, accelerate to a pace which far exceeds the current capacity to save. Unless adequate prevention measures can be taken, the result is rising prices and costs, and an increase in spending financed by credit on a scale which cannot continue indefinitely.

The objective of sound monetary policy, as I understand it, is not to prevent economic expansion but to encourage economic growth on a sound basis, not to slow down economic activity but to provide the conditions in which a high level of economic activity can continue indefinitely or with only moderate fluctuations instead of in sharp inflationary spurts followed by recessions. Insofar as monetary management is concerned there is no conflict between the goals of economic balance and economic growth. Quite the reverse. Any success achieved in maintaining economic conditions conducive to stability in employment, output and prices will improve the prospects of maximum long-term economic growth.<sup>28</sup>

In 1960, greatly worried by the unfavourable experience on current account in the Canadian balance of payments, and the mounting level of foreign indebtedness, ownership abroad of Canadian industry, and apparent loss of command of national economic destiny, Coyne returned to the attack with some shift of emphasis.

General measures such as monetary expansion and deficit spending if undertaken at the wrong time can undoubtedly stimulate inflation. They can do very little to cure unemployment not due to any

---

<sup>28</sup> Bank of Canada, Annual Report of the Governor, for the year 1957, pp. 14 and 22.

deficiency of total demand in Canada, or to improve the competitive position of small business and Canadian-owned enterprises. Indeed, when general economic activity is relatively high, even though there may be serious particular problems of the kind indicated, general measures of monetary expansion and deficit spending may contribute more to an increase of imports, and therefore to an increase in production and employment outside Canada, than to an increase of production and employment inside Canada. A reduction in spending, an increase in saving, restraint in foreign borrowing, and the encouragement of structural changes in the Canadian economy to replace imports with efficient domestic production would do much more to deal with the specific problems concerned than general expansionist measures of a monetary or fiscal character.

For the purpose of maintaining full employment, economic growth and a rising standard of living, we do not need to stimulate a temporarily high but unsustainable rate of consumer spending by means of more and more consumer credit, or of capital expenditures on a scale greater than our own capacity and willingness to save out of annual production for that purpose.<sup>29</sup>

The doctrine of growth with stability, resistance to inflation and maintenance of high employment, enunciated and elaborated with conviction and faith by James Coyne, protests not simply that there is no basic conflict between these objectives but that by moderating the excesses and eliminating inflation the longer term objective of real growth will become more readily attainable. However, it is evident in the 1959 report and similarly in the various important speeches made by the Governor in 1959 and 1960 that he has

---

<sup>29</sup> Bank of Canada, Annual Report of the Governor, for the year 1959, pp.7 and 9.

strong suspicions that one cannot maximize all the desirable effects and minimize the undesirable by the same magic of restraint. There must be a choice of ends; in gaining one aim the other must be sacrificed to some degree. He advocates moderation, less foreign borrowing and a more modest approach to economic growth. Without quite admitting it, Coyne knows that elimination of inflation means a slower rate of growth. His belief, however, is that smoother, better balanced growth is more beneficial in the long run.

A good representative selection of highly qualified witnesses were called before the United States Joint Economic Committee assigned the task of studying this very problem of economic stability and growth with prolonged sessions reserved for particular attention to the relationship of price changes or inflation to growth and stability.<sup>30</sup> A satisfactory cross-section of prevailing opinion on the significance of creeping inflation can be found in the testimony of these witnesses.

Grover W. Ensley concedes that there is an initial stimulus to investment, and consequently economic growth, arising out of mild inflation, due to the positive shift in the schedule of marginal productivity of capital implied in rising profit margins, but is convinced that inflation feeds

---

<sup>30</sup> Papers submitted by Panelists Appearing before the Joint Economic Committee - The Relationship of Prices to Economic Stability and Growth, Washington, Government Printing Office, March 31, 1958.

on itself and becomes stronger so that eventually it must be curbed with painful consequences of increasing intensity the longer price instability is tolerated.<sup>31</sup> He is persuaded that mild inflation is really as fictitious as being slightly pregnant. Thus, if inflation begins the process of growth must suffer interruption, sooner or later, and on balance there is a net loss of real progress.

Edwin G. Nourse stands along with Ensley, as "an exponent of safe-pressure stabilization with vigorous growth" in opposition to the "high-pressure economists". He is convinced that inflation leads to a misallocation of resources, and strongly urges business, labour and government not to be deceived by the attractions of apparent temporary gains in economic power or advantage from inflationary circumstances, but to join in resistance to preserve a few economy on which the economic well-being and future prosperity of the Nation firmly rests.<sup>32</sup> Endorsing these views also is witness Aschheim, but only after admitting that a policy of price stability might well entail a 5 percent unemployment margin, which suggests some under-utilization of resources,

---

<sup>31</sup> Ibid., Grover W. Ensley - The Employment Act of 1946: The Dynamics of Public Economic Policy, pp. 1-11.

<sup>32</sup> Ibid., Edwin G. Nourse - Employment Act Objectives and the Stabilization of Prices, pp. 13-21.

restraint on investment and moderation of growth objectives.<sup>33</sup>

Joining the others in condemning inflation as sin and upholding price stability as virtue is G. L. Bach, but his emphasis is rather different since he concludes that creeping or mild inflation is not as disruptive or meaningful at all, in real economic terms, as is usually claimed. He can find no convincing evidence that mild inflation reduces the output of society, nor that it increases the rate of economic growth, although by strengthening total demand it may speed economic growth in an economy that would otherwise be underemployed. Naturally, he agrees that sharp speculative inflation does induce an ensuing price collapse and recession.<sup>34</sup>

Again shifting the emphasis, William Baumol argues that "strong measures must be taken to prevent uninterrupted inflation". He is concerned not only that creeping inflation will gradually gain momentum and get out of hand but that continuous mild inflation brings an almost imperceptible attrition of savings and quality standards through the psychological conditioning of the expectations of producers, workers and consumers. However, he does believe that

---

<sup>33</sup> Ibid., Joseph Aschheim, op. cit., pp. 23-31.

<sup>34</sup> Ibid., G. L. Bach, How Important is Price Stability in Stable Economic Growth? pp. 33-47.

economic expansion definitely puts an upward pressure on prices, and that up to a point slowly rising price levels probably act as a stimulant to growth.<sup>35</sup>

Very necessary precision in the use of the word stability in relation to growth is introduced by the Fishmans, who point to the incompatibility of real stability with dynamic growth and insist that what is really sought is "economic growth proceeding at a relatively stable rate". They do not believe that all price rises are truly inflationary, only those not accompanied by or immediately followed by an increase in total production of at least equal significance. Price increases are characteristic of the expansionary phases, the periods when production and income are rising rapidly, but this is inevitable and if moderate and not uninterrupted neither actively destabilizing nor worrisome from a policy point of view.<sup>36</sup> This conclusion is not the unique heresy that it may seem for the respectable French economist G. Rottier reasons similarly and concludes that it is very doubtful whether price stability as such is a correct objective of economic policy.<sup>37</sup>

---

<sup>35</sup> Ibid. William J. Baumol, Price Behavior, Stability and Growth, pp. 49-59.

<sup>36</sup> Ibid. Betty G. Fishman and Leo Fishman, Economic Stability, Economic Growth and Price Stability, pp. 61-74.

<sup>37</sup> G. Rottier, "Control of Inflation in France: A Task for the Banker or the Butcher"? in the Struggle Against Inflation, op. cit., pp. 31-36, underlined words italicized in the original text.

Leaving aside the positive inflationists, of the creeping variety of course, like Alvin Hansen and Sumner Slichter, this controversy can be satisfactorily closed in this chapter by quoting the conclusions of Robert Turner, whose views coincide fairly well with my own.

The fact that long-run growth is strongly affected by short-run fluctuations forces us to re-examine the relationship between price-level shifts and growth in light of the conclusions reached in the first half of this paper regarding economic stability. If it is true that our economy has changed its character enough that a gradual upward movement in the price level is a necessary condition of relatively prosperous short-run business activity, this is a fact of great importance to economic growth. It would mean that efforts to restrain inflation by measures focusing on demand would not only create unemployment; they would inhibit the process of growth itself. Or conversely, we would conclude that inflation, in some uncertain degree, has become a necessary prerequisite to growth.

This is a distressing conclusion, at least to those who accept the premise in our opening paragraph to the effect that price stability is socially desirable. It is distressing because, while economic stability is a desirable objective, economic growth in today's world of international conflict is an imperative. The evidence is not conclusive, but it is strongly suggestive, that this growth cannot be reconciled with price stability.<sup>38</sup>

Instability is certainly not peculiar to advanced economies. Its manifestations and impact on underdeveloped economies, however, do not exactly parallel the experience

---

<sup>38</sup> Robert C. Turner, "Relationship of Prices to Economic Stability and Growth: A Statement of the Problem," in Papers before the Joint Economic Committee, op. cit., pp. 671-684, see pp. 683-684.

of more mature societies. Planners and economists in the newly developing economies frequently protest that established economic theory does not apply to them, for theirs are not true market economies and extensive poverty and imperfect financial institutions prevent the operation of economic motivation and normal fiscal and monetary policy. As Rao proves, Keynesian economics, too, have only limited application in underdeveloped countries.<sup>39</sup> Viner explicitly predicates a less complex demonstration of cyclical instability. He presents the usual explanation that poorer countries have investment cycles of smaller amplitude and the cycles involve smaller fractions of total national income, barely touching the subsistence villages except for the reflux of urban workers laid idle. The greater price flexibility of the export staples of these primary producing countries means that the trade cycle reflects more in price variations than in volume of output with consequent less impact on total employment. The readiness of government in these countries to resort to exchange depreciation and the printing press assists the other factors to offset the conjunction of falling domestic price levels, rigid wage scales and shrinking

---

<sup>39</sup> V. K. R. V. Rao, "Investment, Income and The Multiplier in an Underdeveloped Economy", in The Economics of Underdevelopment, Agarwala and Singh, editors, op. cit.

supplies of loanable funds, traditionally experienced in more advanced countries.<sup>40</sup>

Unemployment is thus not the major injury suffered by less developed countries during cyclical downswings, rather the chronic problem of underemployment and structural disequilibrium tend to be accentuated during this phase.<sup>41</sup> Instability in national income imparted through international trade channels is the main cyclical disturbance suffered. This problem has already attracted our attention in the previous chapter where balance of payments problems associated with unequal growth rates were discussed. It is a recurrent theme that must win attention again later in this chapter when we turn to a consideration of international instability. It is sufficient at this moment to reassert the problem, which can best be done by quoting Viner:

Receipts from exports play an especially large role in the national incomes of the poorer countries, and, because these exports consist primarily of agricultural commodities and raw materials, their prices, at least in terms of hard currencies, have an amplitude of cyclical swing far exceeding that of the prices of their major imports, of freight costs, and of external debt charges. Where the imports consist largely either of luxuries or of machinery and other supplies associated with investment in durable production facilities, the demand for imports has high income elasticity, and the

---

<sup>40</sup> Jacob Viner, Stability and Progress: The Poorer Countries' Problem, in Stability and Progress in the World Economy, ed. D. C. Hague, op. cit., pp. 58-59.

<sup>41</sup> R. S. Eckaus, "The Factor-Proportions Problem in Underdeveloped Areas," American Economic Review, September 1955.

decline in export receipts during depression therefore does not result in severe pressure on their international balances of payments. But in all the poorer countries the decline in real national income during a world depression presses hard on already low levels of consumption and of capital formation.<sup>42</sup>

It is apparent from this statement of instability affecting such countries that several serious impediments to economic growth arise. The dominant economic determinant of the pace of development is the rate of capital formation and, as emphasized by Viner, the decline in real national income caused by world depression deters capital formation. Rising productivity and higher total output in a world of stable prices would be equivalent to a rise in income, but in an unstable world commodities of unfavourably low elasticity of demand face terms of trade that frustrate these gains in the low phase of the cycle and also for some time after due to the oversupply that endures in world markets. Gradually the lesson of market economics is imprinted on the minds of the primary producers and there is a growing disinclination to invest in the exploitation of natural resources and production effort shifts away from areas of comparative advantage, raising the capital-output ratios and reducing the rate of real economic growth. While at the level of labour, social acceptance of the process of change is adversely affected by experience of the hardships of urban unemployment during

---

<sup>42</sup> Viner, op. cit., p. 59.

a depression phase and the forced reflux to the land, where even in conditions of underemployment a subsistence living may be had. Finally, the balance of payments difficulties plaguing these countries as the terms of trade turn adverse requires a contraction of import buying, interruption of development projects, and usually a prolonged disruption of economic plans.

Deflation, thus, is a serious element of instability in underdeveloped countries. Because of the less elaborate and sophisticated market and financial organization of the immature countries, inflation is likewise a more extreme experience. Unlike more advanced countries, inflationary pressures are ever-present in the newly developing economies. This is so because of the accelerated investment required by a development which is inevitably greater than the sum of domestic savings, conventional government revenue surpluses, and the supply of foreign financing. This inflationary pressure develops into overt inflation when it is not offset by fiscal measures, direct controls or import surpluses, and it is generally beyond the capacity of such countries to apply such offsetting policies.<sup>43</sup> The offset of import surpluses is effective only temporarily, because exchange reserves are

---

<sup>43</sup> United Nations, Methods of Financing Economic Development in Under-Developed Countries, New York, 1949, p. 19.

rapidly depleted and this leads to direct import and foreign exchange controls to prevent continuance of the import surplus. Once inflationary pressures are allowed to find expression in open inflation in underdeveloped countries inflation tends to become a chronic situation, and usually an accelerating impulse, for in these countries the administrative and economic mechanisms required for keeping inflation in check are less developed than in more mature countries.<sup>44</sup>

Earlier, when discussing inflation in relation to advanced economies, high level or rampant inflation was condemned as an eroding force that distorts the allocation of resources and is therefore destructive of sound, balanced economic growth. The evil is no less in the context of an underdeveloped economy. In fact, it may be even more dangerous because it tends to greater extremes and also tends to become a secular feature of the economy. It is worthwhile to quote a telling restatement of the indictment of inflation in the context of the affairs of a developing economy.

Inflation is a socially costly and economically wasteful means of increasing investment. It encourages excessive investment in inventories, real estate, and foreign balances; and it discourages investment in agriculture and certain fields of industry, particularly if controls hold down prices while costs rise. Thus, inflation diverts the limited resources available for development to sectors where their effect on production is negligible. This is not to deny that there may be a temporary increase in

---

<sup>44</sup> Ibid., p. 19.

investment as a consequence of inflation; but the experience of many underdeveloped countries is that after an initial increase, which may continue for perhaps two or three years, socially productive investment may revert to an even lower level than prevailed prior to the inflation. ....

Even in the short run, the problems confronting the Government of India would be greatly intensified by inflation. Inevitably, inflation would impair the international payments position of the country. Exports would become less profitable; foreign exchange receipts would decline. The lack of foreign exchange would make it difficult to acquire the imported equipment and materials required for the Five Year Plan. If the payments problem should become very acute, even the ability to maintain adequate imports of food grains and other essential goods, not directly related to the development program, might be threatened. Moreover, it would not be possible to attract foreign capital to supplement domestic resources for development if payments difficulties should emerge and persist.<sup>45</sup>

This is a most telling vilification of inflation as an avenue of development financing. Yet the truth must be faced that it does not settle the issue. Controversy rages on the subject of inflation in relation to development, even as it does on creeping inflation in relation to economic growth. Such a respected authority on the process of economic growth as W. Arthur Lewis offers a forthright recommendation of reliance on inflation, under appropriate circumstances.

---

<sup>45</sup> International Monetary Fund Report to the Government of India - "Economic Development with Stability," IMF Staff Papers, February 1954, pp. 316-317; for a lengthier statement of the same notions see E.M. Bernstein and I. G. Patel, "Inflation in Relation to Economic Development," IMF Staff Papers, November 1952, pp. 363-398.

If a community is short of capital, and has idle resources which can be set to creating capital, it seems very desirable on the face of the matter that this should be done, even if it means creating extra money to finance the extra employment. There is no loss of other output while the new capital is being made, and when it comes into use it will raise output and employment in just the same way as would capital financed not by credit creation but out of profits. The difference between profit-financed and credit-financed capital is not in the ultimate effects on output, but in the immediate effects on prices and on the distribution of income. . . . . The inflationary process does not go on for ever; it comes to an end when voluntary savings increase to a level where they are equal to the inflated level of investment. . . . . Essentially equilibrium is secured by raising the ratio of profits to the national income. The equilibrator need not however be profits; it might equally be government receipts, if there is a structure of taxes such that the ratio of government receipts to the national income rises automatically as the national income rises.<sup>46</sup>

Felipe Pazos, although intent on demonstrating the theoretical possibility of development without inflation, also presents some arguments in favour of inflation as an instrument for development, which he then opposes with a greater number of arguments against inflation.<sup>47</sup> The basic favourable argument is that inflation constantly raises the level of monetary income, thereby increasing effective demand and stimulating production, while creating profits and

---

<sup>46</sup> W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labour", in The Economics of Underdevelopment, edit. Agarwala and Singh, op. cit., pp. 421-422.

<sup>47</sup> Felipe Pazos, "Economic Development and Financial Stability," IMF Staff Papers, October 1953, pp. 248-251.

savings for new investment and higher production through raising prices faster than costs and redistributing income to profits in the hands of entrepreneurs. This process, it is argued, accelerates the rate of capital formation. A further favourable, though not theoretically commendable, effect of inflation is that it necessitates exchange and import controls which become a protective barrier behind which infant domestic industries come into being. Against inflation he sets the arguments that it leads to social injustice by redistributing income, misdirects investment and productive activity into speculative and high profit areas at the expense of sound production, fosters the export of savings, by putting a premium on liquidity discourages spontaneous savings, militates against the emergence of the needed security and capital market, leads to a high-cost, inefficient economy, and that it tends to become cumulative.

Another who is surprisingly tolerant of inflation in poorer countries is Jacob Viner, who does not believe that it is reasonably possible for such countries to resist its pressures. While not condoning inflation, he expresses the view that it is not so damaging to underdeveloped countries because of the lesser importance in them of the market and of longer term financial contracts. Also he suggests that inflation in these countries is chronic rather than intermittent and that they have fairly successfully adjusted

structurally to the continuous reality of inflation.<sup>48</sup>

In the previous chapter, when discussing balance of payments influences, it was demonstrated clearly enough that the characteristic deficiency of domestic savings when investment is being increased inevitably leads to inflation. Credit expansion becomes necessary to provide loanable funds for the private sector, while budget deficits are unavoidable if the government is to finance expanding public investment. Viner tends to overlook that it is inflation combined with rising debt which occurs, so that the device of inflation is not simply to recapture existing savings and channel them into new hands and uses but to borrow against future income, which is expected to be higher than present income as a result of the investment undertaken. Confronted with dead level poverty and the familiar vicious circle, surely it is very desirable to stimulate development, particularly in the expectation that it will become a continuous and cumulative process, even at the cost of some inflation. Unfortunately inflation does tend to become progressive. As a means of financing a dose of investment it is highly successful, but an economy adjusted to the experience soon develops a wage-price spiral that denies continuing redistributational gains to investment inclined entrepreneurs, then it tends to

---

<sup>48</sup> Viner, op. cit., p. 48.

stimulate speculation at the cost of productive investment.<sup>49</sup> From that point on development in the private sector ceases to be stimulated, although the speculative profiteers and the control protected industries would deplore its abatement. The government is loath to check the spiral because its development commitments, plans, and debt obligations could not be met out of current revenues if price stability were restored. Wholesale reform is needed before the devastating spiral of inflation can be brought to a halt. But inevitably a halt must be called and a stabilization programme adopted because rising inflation is almost invariably associated with rising debt, and while continuing inflation helps allow servicing of the domestic debt it progressively impedes ability to service the mounting foreign debt as balance of payments difficulties become increasingly acute. At this stage a stabilization programme entailing sweeping exchange, fiscal and monetary reforms becomes obligatory. By this time positive development has usually ground to a near-stop, and it takes some appreciable period of adjustment before a renewed burst of growth can be generated.

It seems to be almost inevitable that economic development be based on some degree of inflation. Attempts to measure the relationship between inflation and economic

---

<sup>49</sup> The Chase Manhattan Bank, "Inflation in Latin America", in Latin-American Business Highlights, Fourth Quarter, 1957, pp. 1-7.

development are regrettably inconclusive, as the investigator in one of the few statistical inductive studies of the problem himself concluded. The author suggests tentatively that the statistical evidence indicates that the rate of growth was higher when the rate of inflation was lower.<sup>50</sup> Some of his data actually support exactly the reverse conclusion. Similarly, the statistically supported review of inflation in Latin America prepared by the Chase Manhattan Bank does not lead to any clear, single conclusion about inflation and growth.<sup>51</sup> Low inflation is not associated with either high or low growth rate, nor is high inflation. Whether by chance or by some obscure economic reason, it is evident that the countries with continuous extremely high inflation have experienced relatively low growth rates, and the countries in the moderate inflation group have generally had relatively high growth rates. Perhaps the economic reasons for these results are not so obscure, for they do tend to conform to the indications of our discussion.

Only in recent years has international instability begun to receive the attention that it deserves. It is only natural and fully rational for individual countries to

---

<sup>50</sup> U Tun Wai, "The Relation Between Inflation and Economic Development," IMF Staff Papers, October 1959, p. 302.

<sup>51</sup> The Chase Manhattan Bank, Inflation in Latin America, op. cit.

consider that stabilization, like charity, begins at home. Elimination, or at least minimization of fluctuations of income and price in the domestic economy is the most effective contribution that any country can make to the ultimate objective of stability in the world economy. Instability in any part of the world economy is transmitted through the income effects of shifts in trade, directly or indirectly, to all other parts, with the impact proportionate to the economic importance of the generator of instability. As has become evident in considering instability in the domestic context, instability is a contagious and accelerating ailment of the body economic. In the world economy the infection also spreads and rebounds on the original carrier through the foreign repercussion factor. Because of the fact that the impact on the world economy is proportionate to the economic importance of the generator of instability the GATT panel of experts emphasized that:

The maintenance of a high level of employment and full capacity production on the part of the industrial countries is of utmost importance not only for them, but also for the less-developed countries which depend so much on the proceeds of their exports for their urgent import requirements. . . . . The less-developed countries are obviously in a much less favourable position to do anything about cyclical fluctuations in their exports (quantities, prices and proceeds) because these fluctuations are primarily produced by fluctuations in foreign demand over which they have no control.<sup>52</sup>

---

<sup>52</sup> GATT, Trends in International Trade, a Report by a Panel of Experts, Geneva, October 1958, p. 61.

A group of experts commissioned by the United Nations to study the problem of instability in the world economy stipulated that three main purposes must be pursued: (i) creation of a workable system of international trade for a stable and expanding world economy; (ii) acceleration of the orderly economic development of the underdeveloped areas of the world; (iii) prevention of the international propagation of fluctuations in effective demand. To achieve these aims they recommended government action: (i) to eliminate structural disequilibrium in world trade; (ii) to maintain stable international investment for economic development; (iii) to stabilize the flow of international trade by maintaining external disbursements on current account in the face of internal fluctuations of effective demand.<sup>53</sup>

As pointed out in a complementary report of a later date prepared under the auspices of the United Nations:

Not all the problems of international instability arise from broad fluctuations in economic aggregates. It is necessary, for example, to reckon with crop fluctuations and other irregular movements in the supply of, or the demand for, particular commodities, and with associated price fluctuations which may often be violent. Acute problems may also emerge as the result of permanent changes in the structure of demand or supply, such as the development of a cheaper substitute for an important commodity.<sup>54</sup>

---

<sup>53</sup> United Nations, National and International Measures for Full Employment, op. cit., p. 87.

<sup>54</sup> United Nations, Measures for International Economic Stability, op. cit., p. 5.

It is with this consideration in mind that Nurkse, dealing with the problem posed by the fact that instability of export markets for primary commodities makes any steady development policy difficult, urges that underdeveloped countries must make themselves less vulnerable to such fluctuations.<sup>55</sup> His reasoning is also influenced by the conviction that the other fundamental remedy, control of the business cycle by industrial countries, can never be sufficiently effective to eliminate serious swings in international commodity markets. His prescription for primary producing countries is industrialization to create a more diversified support to domestic economic activity and income tied to the home market, thereby lessening the vulnerability to swings in commodity markets. This recommendation is essentially the policy of balanced economic development that we considered in the previous chapter.

The specific impact of wide swings in world prices for primary goods must somehow be controlled if the underdeveloped countries are to suppress inflation, to achieve any prospect of balance of payments equilibrium, to plan and prosecute effective development plans without discontinuities.<sup>56</sup>

---

<sup>55</sup> Ragnar Nurkse, "Trade Fluctuations and Buffer Policies of Low-Income Countries", Kyklos, Vol. XI, 1958, p. 143.

<sup>56</sup> United Nations, Commodity Trade and Economic Development, New York, 1953, pp. 14-16.

Individual countries cannot prevent these price fluctuations but some have proved that domestic arrangements can partially offset the destabilizing effects on the national economy.<sup>57</sup> The essence of such country measures is to stabilize prices to domestic producers through a central marketing board which manages both cash income and disposable stocks in such a manner as to minimize income fluctuations to producers. The managed prices allow for some flexibility related to production costs and the trends of domestic prices in aggregate, but by insulating producers from the extreme and erratic swings of world market prices reduce the inflationary and deflationary cycles. It may well be, as Sir Sydney Caine observes, that the possibilities of this type of action have received too little attention while too much attention has been paid to full scale international action.<sup>58</sup>

Long-term export markets of primary products can probably most effectively be stabilized by means of buffer stock agencies. Since this device is not feasible for any single country to adopt, buffer stock schemes have to be organized on an international basis.<sup>59</sup> This method of dealing with

---

<sup>57</sup> Joseph A. Hasson, "Economic Stabilization in a Primary Producing Country", The Journal of Political Economy, June 1956, pp. 226-241.

<sup>58</sup> Sir Sydney Caine, "Stabilizing Commodity Prices," Foreign Affairs, October 1958, p. 137.

<sup>59</sup> Sir Sydney Caine, "Instability of Primary Product Prices: A Protest and a Proposal", Economic Journal, LXIV 1954.

the problem has been used in recent years in the International Tin Agreement but with only moderate success. The main difficulty is exactly that foreseen by the United Nations experts, namely the problem of providing the necessary capital finance and in particular the required pool of foreign exchange.<sup>60</sup> To succeed in their purpose, buffer stock schemes would have to be fully internationalized in management and financing in the manner of the proposal put before the United Nations for a World Food Reserve.<sup>61</sup>

The main types of possible commodity stabilization arrangements have been identified in United Nations' Reports as: long-term agreements on quantity and price, either multi-lateral or bilateral; the allocation of maximum production or export quotas to exporting countries; the allocation of maximum import quotas to importing countries; the fixing of minimum or maximum prices; and, buffer stock schemes.<sup>62</sup> The listing is concluded with the comment that a variety of arrangements are necessary to suit the problems of particular commodities, and that for some commodities a combination of

---

<sup>60</sup> United Nations, Measures for International Economic Stability, op. cit., p. 23.

<sup>61</sup> FAO, Functions of a World Food Reserve, Scope and Limitations, Rome, 1956.

<sup>62</sup> United Nations, Measures for International Economic Stability, op. cit., p. 21.

various types of schemes may be found appropriate. This is established in practice.

The Sugar Stabilization Agreement is basically an exporters' club, with importers as associate members, and operates on the basis of a multilateral allocation of export quotas and the fixing of minimum prices for free market sugar. It has been only relatively effective for it certainly has not stabilized prices, but it has prevented disorderly competition that would have driven prices even lower. The bilateral agreements existing for United States sugar purchases and for Commonwealth producers selling to the United Kingdom have probably contributed more than the International Sugar Agreement to stabilizing world sugar. A somewhat similar scheme is that operated by Latin American coffee producers without any cooperation from consumer countries, based on export quotas. It has succeeded in checking the decline of world coffee prices in face of huge producer surpluses. In contrast, the International Wheat Agreement commits both producers and importers to a schedule of maximum and minimum prices and quotas on both sides, with no restraint on quantities sold beyond the established quotas. Wheat marketing has remained orderly with remarkably stable pricing almost entirely due to the dominant position of strong, rich countries, the United States, Canada and Australia, who have the desire and the power to cooperate for the maintenance of stable marketing.

The various schemes that have been tried offer no impressive demonstration of success. Each has entailed administrative difficulties, an absence of realization in the short run of common interest on the part of importers and exporters, and many have run into snags of financing the accumulated reserve stocks. Any arrangement that does not rely on internationally pooled buffer stocks requires producer countries to keep excess supplies out of world markets by domestic purchasing of surplus stocks for liquidation or disposal in the future. It is almost impossible to expect underdeveloped countries to finance withholding stocks without reliance on inflationary methods. This being so stabilization in one direction is only achieved at the expense of instability in another direction.

As Klaus Knorr states, after reviewing the same ground outlined:

All the stabilization measures discussed above required, in varying degrees, controls over individual commodity markets. Their great problem, be it repeated, is to ensure that, while extreme short-term fluctuations of price are appreciably moderated, there is no serious interference with the allocative function of long-run market prices. An alternative to these measures would be to leave markets alone and instead to mitigate some of the consequences of extreme market instability. . . . . If major industrial countries - when subject to a business recession - were willing to maintain the disbursement of their currencies to the outside world as their imports fell, they would prevent balance of payments difficulties abroad from interfering with the maintenance of production. This could be done by short-term contracyclical lending. Such compensatory

lending would have beneficial effects all round. It would impede the propagation of depression from one industrial country to another; it would help to maintain foreign demand for the exports of the depressed country or countries; and it would permit underdeveloped countries to continue with their projects of economic development . . . . . some of the disruptive repercussions of slumping commodity prices would be effectively mitigated, and this would be a benefit of no mean proportion.<sup>63</sup>

This prescription parallels the recommendations of the United Nations experts in the study, *National and International Measures for Full Employment* as quoted earlier in this chapter. The idea of continuing an uninterrupted flow, or possibly an accelerated flow, of investment and capital movements during recessionary periods is obviously a first cousin of counter-cyclical budgeting as a domestic policy. It is an admirable proposal, but clearly idealistic. There are three prengs to this approach: the maintenance of international liquidity, the continuity of supply of investment capital, and the sustaining of the level of international trade. In all three progress have been made over the past fifteen years, but in all three through the instrumentality of international organizations.

International liquidity is possibly the key factor. It was because of the inadequacy of the foreign exchange resour-

---

<sup>63</sup> Klaus Knorr, "Market Instability and United States Policy", *Journal of Political Economy*, October 1954, pp. 384-385, (underlined word italicized in the original text.)

ces of many countries that the International Monetary Fund was created, to give members confidence and supplementary reserves that would enable them to deal with balance of payments maladjustments without resorting to measures destructive of national or international prosperity.<sup>64</sup> It was gradually realized that the resources of the International Monetary Fund were inadequate to fulfill this fundamental purpose effectively and that its operating procedures and rules were too restrictive. These deficiencies have been lessened over the past three to four years by easing the conditions for drawing tranches beyond the automatic gold subscription quota of each member, by providing stand-by privileges, and finally by substantially increasing quotas and, correspondingly, drawing rights of members.<sup>65</sup> The fund is not left entirely to itself to meet the problem of maintaining international liquidity. The European Payments Union, and to a lesser extent, its successor the European Monetary Authority, have contributed to overcoming the problem within its special region. The Export-Import Bank of Washington has made a notable contribution in the form of large balance of payments credits to various underdeveloped countries facing liquidity

---

<sup>64</sup> United Nations, Measures for International Economic Stability, op. cit., p. 11.

<sup>65</sup> Walter R. Gardner, The Role of the International Monetary Fund in Promoting Price Stability, IMF Staff Papers, April 1960.

crises, frequently in South America, but on other occasions elsewhere in the world including the United Kingdom. The United States Treasury has also provided currency stabilization credits to several Latin American republics. But even all this is not enough to meet the needs. Most suggestions for strengthening the supply and ready availability of means of external payment focus on further modifications and elaborations of the Monetary Fund. The GATT experts suggest that the Fund should help primary producing countries finance the accumulation of commodity stocks when necessary to avoid destabilizing a temporarily over-supplied world market.<sup>66</sup> A very recent proposal made by Robert Triffin would revive the intention of the Keynes Plan to increase international liquidity by internationalizing world foreign exchange reserves.<sup>67</sup>

The Monetary Fund also makes an important contribution to sustaining the level of international trade. To this end it works toward the elimination of quantitative import restrictions and foreign exchange controls which operate to the detriment of the free flow of goods in international markets.<sup>68</sup> Without the success of the Fund in creating the necessary

---

<sup>66</sup> GATT, Trends in International Trade, op. cit., p.64.

<sup>67</sup> Robert Triffin, "Improving World Liquidity", The Banker, January 1960, pp. 13-22.

<sup>68</sup> Walter S. Gardner, op. cit.

conditions conducive to a world of multilateral trade the efforts of GATT to foster a higher level of trade by progressive, simultaneous reduction of national tariffs would have been meaningless. Probably the most encouraging feature of the success achieved by these two international organizations in breaking down obstacles impeding the international flow of goods has been the receptiveness of so many members of the world community of nations to the principle of prosperity through trade and to the growing sense of international responsibility to compromise narrow national policies for the strength and prosperity of the world economy. Even while such progress is being made in promoting freer world trade there is the recent trend towards regionalism in trade arrangements that has initially tended to fortify the international objectives but could ultimately result in exclusive regional trading groups and a retreat from the broader multilateral principles.

The international flow of capital is the final and in many senses the strategic facet of international stabilization. In the underdeveloped countries foreign capital is the main and often entire source of investment capital for the export sector of the economy. As Singer points out there is often a duality in underdeveloped countries, a monetized export sector where productivity is high, and for this reason it may not be a high proportionate source of employment but

is of extreme importance in its national income contribution, and a low earning, high employing, domestic agricultural economy, often still on a subsistence basis, that is relatively little touched by the flourishing export sector.<sup>69</sup> He argues that the flow of international investment will contribute to the economic development of these countries only if an absorptive process is stimulated whereby a good deal of complementary domestic investment is generated.<sup>70</sup> Of considerable significance to the immediate concern with the continuity of the flow of investment funds to these underdeveloped countries is Singer's other main proposition, that complementary domestic development is too frequently lacking because of the duality of the economy and under such circumstances the important multiplier effects of investment, in the form of cumulative additions to income, employment, capital, technical knowledge and growth of external economies, accrue instead to the industrialized capital exporting economy.<sup>71</sup> This being so, the stabilizing effects of sustained capital flows during recessionary periods is redoubled, for the recipient country is spared adverse foreign repercussions of income contractions abroad, its international liquidity

---

<sup>69</sup> H. W. Singer, "The Distribution of Gains Between Investing and Borrowing Countries", American Economic Review, May 1950, pp. 473-474.

<sup>70</sup> Ibid., p. 485.

<sup>71</sup> Ibid., p. 475.

is maintained, and the income of the capital exporting country is supported by the multiplier effects of its foreign investments, which contributes materially to maintaining the two-way level of foreign trade.

The theoretical justification of an international counter-cyclical foreign investment policy is strong, but it must be repeated that the concept is idealistic and difficult to implement as practical national policy. However, encouraging progress has been made in the post-war period towards reducing the cyclical fluctuations in the flow of international capital through the growing importance and increasing variety of international lending institutions. The International Bank has been criticized for its hard lending policies, but it has maintained a hard core flow of funds, providing the capital for strategic projects that have stimulated progressive economic development in recipient areas, and re-established respectability to international credit and thereby restored world confidence in foreign investment. This has promoted parallel lending by private foreign capital, and led to greater activity by other lending agencies existing as institutions of the individual industrial countries, and induced the creation of additional complementary lending institutions like the International Finance Corporation and the International Development Association, plus regional international arrangements like the European Investment Bank

and the Inter-American Development Bank.

The possibilities of expanding international capital flows based on a spreading realization of the profit opportunities of translating into practical reality the concept of the world economy have been provocatively explored by Perroux.<sup>72</sup> He sees the possibilities of internationalized investment and the export of industries transferring innovation which is endowed with the capacity to initiate changes and set off a whole train of complementary innovations. Until this ultimate goal is realized in a more wholesale fashion and balanced growth becomes a feature of the world economy he propounds that: "Different rates of growth of real output in different countries constitute one of the most important causes of instability."<sup>73</sup>

This cursory treatment of international instability may seem inexcusable in a work purporting to deal with inequality and instability in the world economy. This brevity can only be excused on the grounds that international stability will never be seriously approached as an urgent problem until individual countries achieve a better understanding of

---

<sup>72</sup> François Perroux, "The Quest for Stability: The Real Factors", in Stability and Progress in the World Economy, op. cit., pp. 121-125.

<sup>73</sup> Ibid., p. 121.

the destabilizing forces at work in their domestic economies and greater ability to control them, and a more vivid appreciation of the fact that international instability is in truth a subsidiary aspect of the over-riding problem of inequality in growth rates between sectors of the world economy. Unequal growth perpetuates international inequality, but of course so does international instability perpetuate growth inequality. Once the importance for the entire world economy of stimulating growth in the lagging sectors is realized, and progress is made in dealing with the challenge, then the nature of international instability problems will change materially. In this study, it is the long-run problem that is of concern, not the specifics of the existing instability question.

## CHAPTER 5

### INTERDEPENDENT GROWTH MODELS

The last chapter reviewed instability in its various guises and revealed that while instability is inimical to economic growth it is in most instances associated with the growth process, in one way or another. Both inflation and the business cycle appeared to be positive characteristics of a dynamic economy. International instability permeates through the income structure of the interdependent economies via the balance of payments. This international spread process is attributable to the fluctuations in prices of primary commodities of significance in world trade with resultant wideswings in the terms of trade, the repercussion effects on trade volume and capital flows of the domestic business cycle, and the lag influence of unequal rates of progress throughout the world disturbing the smooth pace of growth in the advanced economies to reflect in turn on the plans and prospects of the less developed economies. These indications, supported by the evidence in earlier chapters of the interdependence of the many segments of the world economy, lead to the conclusions that: 1) economic growth is an uneven process in time and in place; 11) stable economic growth is an interdependent function of both domestic and world economic forces.

The purpose of this chapter is to narrow attention to the essential economic generators of growth, first in the domestic economy and secondly in the international economy, in the hope of improving understanding of the process of economic growth and of the stability conditions necessary. Repeated emphasis has been placed on the non-economic and semi-economic aspects of growth, related to political, psychological and sociological actions and motivations, which are of prime importance but largely indeterminate influences on the pattern of economic progress. In this chapter it becomes necessary to abstract from these immeasurable and often erratic human elements of the economic system, for the method to be followed is to be a simplified approach to model building. Both mathematical and non-mathematical models will be considered, as necessary to produce the clarity and completeness required. Separate treatment will be given to growth models of industrialized economies, newly developing economies and the interacting world economy. Some specific attention to this technique of analysis is inescapable, for as the National Bureau report states: "It has been claimed that whoever discusses problems of economic growth uses a model, although it may not be cast in algebraic terms."<sup>1</sup>

---

<sup>1</sup> National Bureau of Economic Research, The Comparative Study of Economic Growth and Structure, a preliminary and confidential report, New York, November 1958, pp. VIII-17.

There is no particular virtue in undertaking a laborious exercise in economic analysis built from first principles and borrowing from a searching rereading of the classics that cannot pretend to originality, which originality is most likely to be one of a shade of emphasis based on neglected or traditionally misread passages of the earlier literature. I have not the inclination, the pretence to fresh interpretation, nor the space in this work to undertake such an exercise, thus I shall borrow unashamedly from the excellent, recent work of Benjamin Higgins.<sup>2</sup> His section on growth models is admirable for the selection of material covered and the comparative treatment of the various theories of economic growth, and has the additional appeal to me that his facility for algebraic representation of the respective systems far surpasses my own ability in this line.

Summarizing the Classical model, Higgins states:

For the Classical economists, the development of capitalist economies was a race between technological progress and population growth, a race in which technological progress would be in the lead for some time but which would end in a dead heat, or stagnation. Technological progress, in turn, depended on capital accumulation, which would permit increasing mechanization and greater division of labour. And the rate of capital accumulation depended on the level and trend of profits.<sup>3</sup>

---

<sup>2</sup> Benjamin Higgins, Economic Development: Problems, Principles and Policies, W. W. Norton & Co., New York, 1959. Part 2, pp. 85-213.

<sup>3</sup> Ibid., p. 87.

Since total output,  $O$ , depended on the size of the labour force,  $L$ , the stock of capital,  $Q$ , the amount of land available, here generalized to mean the supply of known resources,  $K$ , and the level of technique,  $T$ , then:

$$O = f(L, K, Q, T) \quad (1)^4$$

Since they tended to believe that the only real limitation on technological progress was the supply of capital for investment,  $I$ :

$$T = T(I) \quad (2)^5$$

Since investment decisions are based on profit expectations,  $R$ , or the return on fixed factors of production, and by definition net investment,  $I$ , equals the increase in stock of capital,  $dQ$ , then:

$$I = dQ = I(R) \quad (3)^6$$

Since of all the many complex influences on the level of profits they considered the main determinants to be the level of technique and the size of the labour force, which they considered varied directly with the population, then:

$$R = R(T, L) \quad (4)^7$$

Since the Classical school firmly believed in the "iron law of wages", that the rate of population growth

---

<sup>4</sup> Ibid., p. 87.

<sup>5</sup> Ibid., p. 90.

<sup>6</sup> Ibid., p. 91.

<sup>7</sup> Ibid., p. 91.

depends on how much money is available to pay wages and that any increase in the wage fund would ultimately lead to an increase in population and hence labour force to drive rates back to the subsistence level, or that the supply of labour depended on the size of the wage fund, then:

$$L = L(W) \quad (5)^8$$

Since the wage fund, they believed, could only be increased due to accumulated savings applied to investment, then:

$$W = W(I) \quad (6)^9$$

These six equations represent the propositions expressing causal relationships of the Classical system, but since seven variables are involved the system is indeterminate, but it is closed by adding an identity, that total output equals profits plus wages, or:

$$O = R + W \quad (7)^{10}$$

In the Classical model, the end result of capitalist development is stagnation. It was a concept of a mature economy in a stationary state. Higgins sums up the circularity of the system thus:

An increase in profits brings an increase in investment, and so an addition to the stock of capital, which permits capitalists to take advantage of the steady flow of improved techniques and also raises

---

<sup>8</sup> Ibid., p. 94.

<sup>9</sup> Ibid., p. 94.

<sup>10</sup> Ibid., p. 94.

the wage fund; that brings an accelerated population growth, which causes decreasing returns to labour on the land, raising labour costs and reducing profits. We could, of course, go on: reduced profits mean reduced investment, retarded technological progress, a diminished wages fund, and slowing down of population growth.<sup>11</sup>

Although Malthus did not differ in his fundamental theories from the model as presented, he was more explicitly concerned with the theory of economic growth and contributed several refinements of extraordinary significance. He was convinced that there was nothing automatic about the process of economic growth, and insisted that population increase in itself did not generate economic expansion unless it led to an increase in effective demand. Malthus did not assume that population and labour force grew together but recognized the possibility of unemployment. Neither did he believe that savings, or abstinence from consumption, on the part of entrepreneurs automatically increased investment and accelerated economic growth and hence income. He considered that income derived from consumption and investment, but higher investment arose not from reduced consumption but rather from growth and its resultant profits. Also, he recognized that economic growth brings structural changes diminishing the relative importance of agriculture in the economy, a positive sectoral approach. From this distinction of sectors of the

---

<sup>11</sup> Ibid., pp. 95-96.

economy, agricultural and industrial, he reached some perceptive conclusions about sectoral interaction and the need for balanced growth if the lagging sector is not to act as a drag on the growth rate of the other.<sup>12</sup>

Ignoring the distasteful ideology that he fathered, Karl Marx commands respect and deserves serious attention for his contribution to the evolution of a pure theory of economic development under the capitalist system. Higgins neatly summarizes the Marxian system in a set of eleven equations containing eleven unknowns, and compares it with the Classical model.<sup>13</sup>

$$O = f(L, K, Q, T) \quad (1)$$

$$T = T(I) \quad (2)$$

$$I = I(R') \quad (3)$$

$$R' = \frac{R}{W \neq Q'} = \frac{O - W}{W \neq Q'} \quad (4)$$

$$W = W(I) \quad (5)$$

$$L = L(I/Q) \quad (6)$$

$$C = C(W) \quad (7)$$

$$R = R(T, C) \quad (8)$$

$$O = R \neq W \quad (9)$$

$$O = C \neq I \quad (10)$$

$$Q' = u \cdot Q \quad (11)$$

---

<sup>12</sup> Ibid., pp. 99-106.

<sup>13</sup> Ibid., pp. 113-114.

In the Marxian system, the symbols  $O, L, Q, K, T, I, R,$  and  $W,$  have the same meaning as in the Classical model, while  $R'$  represents the rate of return on capital,  $Q'$  capital goods and inventories used up in producing  $O,$  and  $u$  user cost, or the relation of current capital costs to the stock of capital. It will be noted that Equations (1), (2) and (5) are the same in both systems. Equation (6) is the same except that Marx recognized the possibilities of unemployment and thus specifically represents by  $L$  actually employed labour. Equation (7) is crucial to the Marxian system and, with the exception of Malthus, plays no part in the Classical system. In Equation (3) investment depends on the rate of profit rather than the level of profits, thus bringing into the system the drag imposed on new investment by the stock of capital already accumulated. Equation (10) is significant in the Marxian system which stresses the division of the economy into capital goods and consumers' goods sectors, while in the Classical system it can be regarded as implicit but of minor importance. Equation (4) is the distinctive feature of the system, since this expresses the cause of breakdown.

As Higgins demonstrates this breakdown, the full significance of the key equation is seen by breaking up the wage bill into employment,  $L,$  and the wage rate,  $w,$  and by breaking up total output,  $O,$  into employment,  $L,$  and output

per man,  $o$ . Then, substituting, the equation becomes:

$$R' = \frac{L \cdot o - L \cdot w}{W / Q'}, \text{ or } R' = \frac{L(o-w)}{W / Q'}$$

In competitive capitalism, survival depends on constant introduction of improved techniques, which means accumulating capital, using more capital intensive and less labour intensive techniques. The result is that  $Q$ , and so  $Q'$ , increase relative to output. Thus the only way to maintain  $R'$  is to increase the spread between  $o$  and  $w$ .<sup>14</sup>

In appraising the Marxian system, Higgins notes two fundamental analytical errors:

First, Marx did not see that innovations can be capital saving as well as labour saving. If capital-output ratios fall through improved techniques, as they frequently do, the rate of profit can rise even though wages rise too. Second, Marx was trapped by the labour theory of value which he took over from the Classical school. By measuring everything in terms of man-hours, he attached a quite wrong significance to a fall in the rate of profits in terms of man-hours. He did not see that a rise in man-hour productivity and in real wage rates can be accompanied by a rise in money profits (and real profits), even though profits in terms of man-hours may fall as man-hours become more valuable. .... Marx did not foresee a process of economic development in which technological progress brings such increases in productivity and total output that both wages and profits can rise together.<sup>15</sup>

Highly significant as Schumpeter's contribution was to generating interest in the development process and to

---

<sup>14</sup> Ibid., p. 115.

<sup>15</sup> Ibid., p. 119.

deepening insight into the nature of the business cycle, his pure theory is more in the latter field than in the former.<sup>16</sup> His was not a complete theory of growth trends. What he did establish convincingly was the proposition that economic growth proceeds in bursts, followed by gestation periods. The discontinuity, which is the cyclical fluctuations in the system, arises from the lumpiness, or clustering, of innovations, which are responsible for the growth impulse, or the expansion phase of the cycle. His interest was, however, in the growth of capitalism and his explanation of the business cycle in terms of lapses from steady growth, accountable by declines in the rate of innovational investment, is a very real predecessor of modern theories.<sup>17</sup>

Nor can the name of Lord Keynes be omitted from any account of the evolution of the technique of building models of economic growth, for he contributed new insights and new tools. His methods were static, despite pretensions otherwise by introducing the time dimension and period analysis, and he was concerned with levels of income and employment rather than rates of growth of income, for in his system capital stock was treated as a constant even in face of a positive rate of net investment.<sup>18</sup> The theory of employment

---

<sup>16</sup> Ibid., p. 137.

<sup>17</sup> D. Hamberg, Economic Growth and Instability, W.W. Norton & Co., New York, 1956, p. 288.

<sup>18</sup> Ibid., Preface, p. xi.

and its equilibrium position is only of a short-run character.<sup>19</sup> The theory is essentially described by four basic equations.<sup>20</sup> The liquidity preference, or interest rate equation:

$$M = L(i, Y) \quad (1)$$

This equation postulates that the demand for money is a function of the rate of interest,  $i$ , and the level of income,  $Y$ . The consumption equation:

$$C = f(Y, i) \quad (2)$$

represents consumption,  $C$ , as being a function of income and the rate of interest. This equation may also be rewritten:

$$C = \bar{C} + C(Y) \quad (2a)$$

with the constant,  $\bar{C}$ , denoting autonomous consumption which is independent of income. The investment equation is in effect the marginal efficiency of capital schedule:

$$I = f_1(i, Y) \quad (3)$$

Finally, the income equation:

$$Y = \bar{C} + C(Y) + \bar{I} + I(Y) \quad (4)$$

in which  $\bar{I}$  represents investment that is independent of income but responds to all other effective influences, like the rate of interest, and is accordingly autonomous invest-

---

<sup>19</sup> *Ibid.*, p. 14; and James S. Duesenberry, Business Cycles and Economic Growth, McGraw-Hill Book Company, Economic Handbook Series, New York, 1958, p. 26.

<sup>20</sup> Hamberg, pp. 14-16.

ment, while  $I(Y)$  represents acceleration induced investment, or income responsive investment.

The recent forward spurt in the formulation of a comprehensive and dynamic theory of economic growth has its foundations in the pregnant contribution of Professor Harrod.<sup>21</sup> Inspired by the provocative theory presented in that book, Professor Hicks in his turn made a stimulating and original contribution.<sup>22</sup> Simultaneously Professor Domar began exploratory excursions into the same field in a series of journal articles, since republished in collected form.<sup>23</sup> In considering the essential properties of the model constructed on the lines devised by this school, and essentially these three writers, it will be convenient to follow Eisner and refer to models of the Harrod-Domar-Hicks variety as the H-D-H growth model.<sup>24</sup> Its originality lies in its explicit recognition of the fact that net investment not only creates income but also augments the economy's productive capacity by enlarging capital stock. Future investment decisions are

---

<sup>21</sup> R. F. Harrod, Towards a Dynamic Economics, Macmillans & Co., London, 1948.

<sup>22</sup> J. R. Hicks, A Contribution to the Theory of the Trade Cycle, Oxford University Press, London, 1950.

<sup>23</sup> Evsey Domar, Essays in the Theory of Economic Growth, Oxford University Press, London, 1957.

<sup>24</sup> Robert Eisner, "On Growth Models and the Neo-Classical Resurgence", The Economic Journal, December 1958, pp. 707-721.

influenced by the degree of utilization of the existing stock of capital, thus for future investment to increase, output must expand proportionately to the growth in the stock of capital. Accordingly, stress is put on the necessary relationship of employment as a function of the rate of growth of investment and income. The analysis is concerned with determining the steady rate of income growth sufficient to ensure the full capacity use of the growing stock of capital and the ability of this growth rate to maintain itself. The problem of stability or instability of the growth rate is accordingly emphasized. This is a true dynamic theory and is concerned with the long run.<sup>25</sup>

No attempt will be made in this chapter to present a simple H-D-H growth model, for while the algebra and peculiar contributions of these three are not so inconsistent that synthesis is impossible, simplicity and brevity of treatment would be. Instead, only some of the key equations representative of the more crucial aspects of the systems will be considered. The first of these concepts that demands attention is the Harrod notion of  $G_w$ , the warranted rate of growth of income.<sup>26</sup>

---

<sup>25</sup> Hamberg, op. cit., pp. 22-26.

<sup>26</sup> Harrod, pp. 77-100; Hamberg, pp. 64-80; Eisner, pp. 708-710; Higgins, pp. 146-161.

His proposition is that

$$G_W = \frac{s}{A_R}$$

where  $G_W$  is the percentage growth in income,  $dY/Y$ ;  $s$  is the propensity to save; and  $A_R$  is the accelerator,  $dK/dY$ , or the value of capital goods required for the production of a unit increment of output.

Recasting the equation in Eisner's terms, which are closer to Harrod's symbols:

$$G_W = \frac{s - d\#}{C_R}, \text{ or } G_W C_R - d\# = s,$$

in which  $C_R$  is defined as the required, or equilibrium, current capital output ratio which leaves entrepreneurs satisfied, and  $d\#$  stands for deepening, the proportion of output absorbed in lengthening the production process or increasing the capital-output ratio.

The system becomes elaborated and the fundamental problems of economic growth sharpened by introducing Harrod's  $G_n$ , or natural rate of growth. It is the maximum rate of growth of which the economy is capable under conditions of full employment with a given rate of growth of the labour force and rate of technological progress. Now, the measure of attainment in the realized growth rate may be assessed and the stability of the growth path determined.

To quote Eisner:

If the actual rate of growth is less than the warranted rate, investment demand must be less

than saving, and the rate of growth of output, and (eventually) the rate of output must turn down. But if  $G_n$ , the natural rate of growth is less than  $G_w$ , then the actual rate of full employment would be less than  $G_w$ . It follows that investment demand would have to be less than saving at full employment. Thus full employment could at best represent a momentary position of disequilibrium. A critical aspect of the problem, then, can be formulated as how to prevent  $G_w$  from exceeding  $G_n$ .<sup>27</sup>

And turning to Harrod for further explanation;

Let  $d$  (for deepening) stand for the value of new capital installations during the unit period, expressed for convenience as a fraction of income, involved in the lengthening of the production process. If inventions are 'capital saving',  $d$  is negative. Thus,

$$G_w C_r = s - d.$$

It may seem artificial to separate  $d$  from  $C_r$ . But it is logically possible; and it is right in principle. We want to keep  $C_r$  segregated as that capital requirement which essentially belongs to the growth of output as such, from the requirement for increased capital per unit of output.

$d$  may have a positive value because of the nature of the inventions occurring. It may also have a positive value because the rate of interest is falling. Our aim should be to get such a progressive reduction in the rate of interest that

$$G_w C_r = s - d = G_n C_r.$$

If  $d$  is positive,  $C_r$  will increase through time, and may eventually become so great as to enable us to dispense with  $d$ . At that point interest need fall no further. A positive value for  $d$  incidentally serves to raise  $G_n$ . A falling rate of interest may also - and this is of course important if it so turns out - reduce  $s$ .<sup>28</sup>

---

<sup>27</sup> Eisner, op. cit., p. 709.

<sup>28</sup> Harrod, op. cit., p. 96.

The prime issue to which Hicks applied himself in the study of growth models was the critical role played by the accelerator. Influenced by the shifts in effective demand, in a growing economy there will be a stepped process of induced investment, or a periodic ratchet effect which perpetuates itself through succeeding cycles, similar to Duesenberry's consumer responses.<sup>29</sup> Although in Hick's opinion the multiplier offers no explanation of the tendency of income to fluctuate, introduction of the accelerator, or induced investment, does provide a cycle maker.<sup>30</sup> Once investment is explicitly subdivided into induced and autonomous investment it becomes apparent that, even if induced investment followed a smooth path, the equilibrium, or stability, conditions of the system would demand that autonomous investment must also be smooth and continuous and bear a constant proportion to output.

One other whose contribution to the formulation of a realistic growth model can hardly be ignored is Kaldor.<sup>31</sup> His approach differs from Harrod and other writers in that he assumes that the general level of output at any one time

---

<sup>29</sup> James S. Duesenberry, Income, Saving and the Theory of Consumer Behavior, Harvard University Press, 1949.

<sup>30</sup> Hicks, A Contribution to the Theory of the Trade Cycle, op. cit., p. 56.

<sup>31</sup> Nicholas Kaldor, "A Model of Economic Growth", The Economic Journal, December 1957.

is limited by available resources, and not by effective demand. This assumption of a full employment economy tends to hark back to the Classical model. Also, he rejects any distinction between changes in techniques and productivity induced by innovation, as against a change in the supply of capital relative to labour. Thus, he stipulates that in societies with a low technical dynamism the rate of capital accumulation is also small, and conversely. Innovation, in a real sense of readiness to absorb technical change combined with the willingness to invest capital, is Kaldor's prime mover of economic growth. In his system the technical-progress function is assumed to have constant parameters, which is a hypothesis of a constant flow of invention and innovation over time. Although, he admits there can be a short term irregularity with growth of production and real income running ahead of the growth of capital, to be followed by periods when capital investment catches up and the stock of capital increases faster than income.<sup>32</sup>

The extraordinary multiplicity of growth models that might be constructed depending on the basic assumptions adopted, with some limiting assumptions necessarily accepted in every case, is perhaps best demonstrated in Hamberg's chapter on the Varieties of Growth Rates.<sup>33</sup> He indicates

---

<sup>32</sup> Ibid., pp. 622-623.

<sup>33</sup> Hamberg, op. cit., Ch. 5, pp. 147-198.

that there are essentially four types of growth rates. There is the maximum rate of growth permitted by the rates of growth of the resources of the economy, including the rate of technological progress, the rate of growth in the labour supply, and the rate of discovery of natural resources. This is a maximum permissible, or full employment rate, comparable to Harrod's  $G_n$ . Next, one can consider the rate of growth that is necessary to maintain full-capacity utilization of a growing capital stock. This warranted or required rate of growth, Harrod's  $G_w$ , may be treated with or without regard for entrepreneurial expectations. The actual or realized rate of growth,  $G$ , is another distinct type of growth that has also a variety of definitions, since it can be cast to encompass all short-run fluctuations, or any particular variety of them, or on the opposite extreme may be a completely smoothed trend line. Because of this variety of possibilities no one is ever quite satisfied with the models constructed by others. For example, Smithies admires the work of his contemporaries but finds that they have been so preoccupied with the conditions of steady growth that they have neglected economic fluctuations incidental to the growth process.<sup>34</sup> Perhaps seeming confusion is simply explained by the fact that an inclusive theory of economic growth has not

---

<sup>34</sup> Arthur Smithies, "Economic Fluctuations and Growth", *Econometrica*, January 1957.

yet been evolved, and thus it is impossible to represent a non-existent theory in a single model.

Instead of expecting too much and condemning model builders for failing to do what they never attempted, let it be admitted that growth models are not the final expression of a complete theory of economic growth.<sup>35</sup> They are, though, an invaluable tool of analysis, which the foregoing discussion of model building should demonstrate. There must be a finite relationship between the active economic variables of the system which can be expressed functionally, even though exact numerical values may not be yielded and despite the necessary exclusion of non-economic forces and influences which do vary, but unpredictably, and therefore must be included in the system simply as parameters. The key problems that may be better analysed because of the existence of models as an analytical tool are: (i) the precise identification of growth generators, and their interaction upon each other; (ii) some approach to a quantitative expression of the possible rate of growth, the desirable rate of growth, and a sharpened interpretation of any deviation from the actual rate of growth; (iii) the stability or instability of the longer run growth trend, which can assist in formulating

---

<sup>35</sup> Evsey Domar, "The Theoretical Analysis of Economic Growth", American Economic Review, May, 1952, pp. 479-495.

policy recommendations for the minimization of instability while adhering as closely as possible to the desired rate of growth. These are the problems that demand energetic research, and model analysis must be considered as an important aid in this task.<sup>36</sup>

#### Growth Models and Underdeveloped Economies

Model building for less advanced economies has not been a particularly popular activity among economists, principally for the very good reasons that these economies are not examples of the monetized capitalistic system and have not displayed any secular growth dynamics. As Bruton comments:

The postwar literature on growth economics has tended to distinguish the growth process in a relatively highly developed country from that in a so-called 'underdeveloped' area. In the former case the analyses have been characterized by severe rigor, with consequent imposition of restrictive assumptions setting definite and specific boundaries to the problems. To a large extent, work in this area is an extension of the savings-investment analysis of Keynes into more dynamic formulations. In discussions of the developmental process of the underdeveloped countries, however, there is the exactly opposite approach; the problem is usually very generally defined, rigor is frequently completely absent, and the variables considered inevitably spill over into areas which economists have long treated as beyond the scope of the discipline (for example, population and technological change). In the absence of a general framework - a model -

---

<sup>36</sup> National Bureau of Economic Research, op. cit., Ch. VIII.

within which to examine the problems of the underdeveloped country, much of the discussion has taken place in a virtual theoretical vacuum and consequently is often unsatisfactory both logically and practically.<sup>37</sup>

The stagnant subsistence economy is of no more than historical interest in the study of economic growth. Because of the static nature of such an economy the tasks of building an equilibrium model demonstrating the causes of its absence of growth would be relatively easy. It is the process of economic growth represented by the dynamic economy that is of interest. The recent vogue for describing underdeveloped economies as 'newly developing economies' expresses the central fact that these areas have begun to break out of the prolonged period of stagnation and that the dynamics of economic growth are taking hold. This being so, it can be inferred that some form of growth model could be devised for them as well as for advanced economies. The fluid and unstable nature of these developing economies may be tantalizingly elusive for the model builder seeking to capture a useful profile.

The need for models to aid in understanding the characteristics of the developing economy are quite clearly set out by Jan Tinbergen.<sup>38</sup> He discusses the elements of a

---

<sup>37</sup> Henry J. Bruton, "Growth Models and Underdeveloped Economies", The Journal of Political Economy, August 1955, p. 322.

<sup>38</sup> Jan Tinbergen, The Design of Development, The John Hopkins Press, Baltimore, 1958, for the Economic Development Institute of IBRD.

development policy and the essence of programming. Implicit in the techniques he advocates is the need for model building. Perhaps this is the most practical application of the economic model, for it is not set up as a theoretical abstraction but as a working model to which the developing economy is intended to conform. To formulate an economic plan there must be an intensive economic study in statistical and analytical terms to explain the nature of the existing economic structure. Only from this beginning can a general programme of development be postulated, first in terms of general aggregates and finally in detailed sector projections. This pattern of development then becomes 'The Plan' or the growth model to the attainment of which policy measures will be directed.

Recognizing the importance of all this, Higgins discusses the application of general theories of development and their corresponding growth models in these terms:

First of all, let us note that even the relationships in the 'agreed' system tell us some useful things about development policy. Look at the production function, for example. Even so simple a statement as this provides guidance as to the proximate causes of higher standards of living. Without capital accumulation, resource discovery, population growth, or technological progress, increases in output are impossible. When the form of the production is specified on the basis of empirical knowledge, the equation tells us also that the level of production depends not only on the quantities of factors of production and the degree of technological advance but also on the proportions in which the

factors are combined - a very important consideration. In other words, for every 'factor endowment', there is an optimal combination of the factors of production. One of the purposes of development planning is to find this combination and see to it that it is maintained.<sup>39</sup>

He then attempts a simply synthesis of all aspects of the general theories that seem useful as a guide to policy in underdeveloped countries, arriving at what he describes as 'planning equations'.<sup>40</sup>

$$O = a.Q \quad (1)$$

Here  $a$ , is the output-capital ratio;  $O$  is total output; and  $Q$  is the stock of capital. If  $a$ , is independent of the level of  $O$  and  $Q$ , it is the reciprocal of the incremental capital-output ratio.

$$dO = a.I \neq da.Q \quad (1b)$$

To get closer to the decision making process he breaks up investment into its three major parts: government investment,  $I_g$ , determined directly by the plan; induced private investment,  $I_i$ , brought forth by recent changes in income, effective demand, profits, etc.; and autonomous private investment,  $I_a$ , stimulated by long run growth factors, which equation appears as:

$$I = I_g \neq I_i \neq I_a(\dot{L}, \dot{K}, \dot{T}) \quad (2)$$

---

<sup>39</sup> Higgins, op. cit., p. 202.

<sup>40</sup> Ibid., pp. 209-213.

Simplifying by ignoring induced investment, which is only important if government investment succeeds in stimulating growth in the first instance, and by discarding population growth as a stimulus to long-run private investment, this is rewritten:

$$I = I_g \neq I_a(\dot{K}, \dot{T}) \quad (2a)$$

And substituting in (1b):

$$dO = da.Q \neq a_1.I_g \neq a_2.I_a(\dot{K}, \dot{T}) \quad (3)$$

This tells a good deal about the requirements of an effective development plan, which according to Higgins must be designed to: (i) increase government investment at least to the point where opportunities for private investment are maximized; (ii) increase the rate of resource discovery and technological progress; (iii) raise the parameter  $I_a$ , which means to encourage a higher level of private investment with the existing rate of resource discovery and technological progress; (iv) raise the output-capital ratio, or what is the same thing, reduce the incremental capital-output ratio.

Higgins suggests that it would be possible to go further and introduce different incremental capital-output ratios for each sector of the economy and every type of investment. This is an approach to model building to which we have not so far referred and offers a promising supplementary tool of analysis to the aggregative approach of general models. The Secretariat of the Economic Commission of Latin America has

done some interesting exploration of the possibilities of building input-output models that might have some applicability in studying income structure problems and measurement of import requirements in countries in their area.<sup>41</sup>

An interesting feature of Kaldor's model is that it explicitly accounts for radically different growth characteristics in what he describes as the two stages of capitalism.<sup>42</sup> As he says:

In terms of our model, the growth of the capitalist sector in the economy involved a dramatic rise in the technical progress function, and hence in the equilibrium rate of growth of productivity - the increase in savings, investments, both as a proportion of income and of capital, and the great acceleration in the rates of population growth, were consequences of this, and not its initiating causes.<sup>43</sup>

He shows that in the early stages of capitalist development, the period that is descriptive of the newly developing economies of today, the growth in productivity was not attended by a rise in the standard of living of the working classes. This suggests that in the early stage productivity rises, but not enough to raise wages above the subsistence level or permit the required rate of investment.

---

<sup>41</sup> ECLA, "The Input-Output Model", Economic Bulletin for Latin America, Vol. 1, No. 2, September 1956.

<sup>42</sup> Kaldor, op. cit., pp. 618-621.

<sup>43</sup> Ibid., p. 618.

The logic of his model proves that the capital-output ratio will show a steady increase, which is in accordance with both the Marxian and neo-classical models. However, since the share of profit in income will also increase continuously, the rise in the capital-output ratio will not necessarily imply a falling rate of profit on capital. The break-out is achieved when capital stock finally attains the level of 'desired capital'. From that point on profits are no longer determined in the Marxian manner, as surplus of production over subsistence wages, but the share of wages becomes a residual, equalling the difference between production and the share of profits as determined in a Keynesian manner by the propensities to invest and to save. From then on real wages will rise along with productivity and distributive shares become constant through time, and the system settles down to an equilibrium where the rate of growth of capital is equal to the rate of growth of income, so that the capital-output ratio and the rate of profit of capital also tend to remain constant over time.

Reverting now to Bruton, we can follow his unique attempt to examine a modified version of the Harrod-Domar model applied to underdeveloped countries undertaken with the aim of arriving at a more rigorous and systematic statement of the development process.<sup>44</sup> As he says, the central

---

<sup>44</sup> Henry J. Bruton, Growth Models and Underdeveloped Countries, op. cit.

proposition of the H-D theory depends on the assumption that investment is capacity-creating as well as income-generating. If the new capacity is to be utilized, equivalent new demand must be generated. Given a constant ratio between saving and income,  $s$ , and a constant capital-output ratio,  $k$ , it is evident that capacity will increase by  $s/kY$ . Then the increase in income must equal the increase in capacity:

$$dY = \frac{s}{k} Y$$

Dividing through by  $Y$  shows that income must grow at a constant percentage,  $s/k$ , in order to assure no idle capacity of capital equipment. If the labour force grows at a constant percentage rate,  $l$ , and productivity increases by a constant percentage rate,  $p$ , then for labour to be fully employed income must grow at a rate equal to  $l + p + lp$ , which indicates both the required rate and the maximum allowable rate without inflation.

Bruton argues that the characteristic sequence of technological progress is, first, major changes in technique, which innovations are sporadic and require capital deepening, but once in use there follows a constant flow of routine innovations that are of the capital-saving variety. These latter provide the necessary counteracting force to a rising rate of interest and diminishing returns, thus producing a constant capital-output ratio. Turning attention to the underdeveloped countries he contends that since their output

is low relative to that of advanced countries, their chief objective is to increase the capacity output of their economies as rapidly as possible. This means capital must be as productive as possible, or the capital-output ratio as low as possible. But the shortage of capital relative to labour means low productivity per worker and hence low real per capita income. The requirement is clearly capital deepening and a substantial raising of the technological level. Thus, it is dictated that the underdeveloped country must go through an initial period that runs counter to the dictates of the relative factor supply situation. Imported technology through the process of borrowing is likely to be of this capital deepening sort, for capital-saving innovations are organizational and must be generated later from within based on experience. Because capital supply is limited the emerging economy cannot transform its production wholesale, so that the major innovations are likely to replace labour with capital and intensify the problem of underutilization of labour. Evidently the problem is that  $l \neq p \neq lp > s/k$  with the situation becoming secularly more severe.

Interdependent Growth Models

Instructive as the consideration of growth models unquestionably is, all the systems reviewed so far in this chapter contain a fundamental weakness that places them in violent conflict with the central theme of this book. The customary approach in model building, because of the necessity of employing simplifying assumptions, is to revert to the traditional fiction of the closed economy. My basic theme is that economic growth must be discussed in the context of the world economy, for international interdependence is of paramount and increasing significance in shaping the destiny of individual economies. Accordingly, I have placed constant emphasis on the need for studying economic growth within the wider environment of the world economy. Obviously, it is my conviction that any really useful growth model should then be constructed for open economies in a form that gives full recognition to the essential interdependence of national economies through some form of growth repercussion factor. This requirement is particularly significant because growth models are intended to represent the dynamic working of the economic system over the long-run when the growth repercussion factor would have a cumulative influence.

The contribution of Simon Kuznets probably stands above that of any student of economic growth in the special area

of investigating comparative economic growth. In pursuing this problem in depth he has quite naturally become troubled by the gaps in our knowledge and the weaknesses in our lines of enquiry. In an excellent paper expressing his dissatisfaction and making recommendations for future study he lays particular stress on transnational factors and the interaction of growth complexes among nations.<sup>45</sup> The importance of international interaction is a recurrent theme but his persuasions on this usually neglected question is well represented by the following quotation:

Given the co-existence of different nations and the possibility of contact among them, there are bound to be relations of co-operation and conflict, peaceful exchange of goods and acts of dominance and exploitative aggression, and, above all, knowledge and imitation, attraction and repulsion. The combination of differences in the natural and historical endowments of nations with a community of human wants and sharing of a potentially common technology means a whole set of flows among nations, of relations of dependence. Thus, to some extent the treatment of nation-states as independent units is a fiction - tolerable only in so far as the ties of inter-dependence are reasonably limited relative to the internal structure and pattern of each nation.

Corresponding to a given complex of nations with their diverse characteristics, and the given state of the arts of international intercourse, there will be a structure of inter-actions among nations -- ranging from the peaceful flow of goods, capital, and people, to aggression, overt or potential. But this structure of international relations is

---

<sup>45</sup> Simon Kuznets, "On Comparative Study of Economic Structure and Growth of Nations", a paper in the National Bureau of Economic Research Report, op. cit.

continuously affected by economic growth. This latter, in so far as it stems from a complex of transnational factors and is essentially the spread of a major innovation in a world of separate entities called nation-states, must emerge simultaneously and generally in all parts of the world; or it must originate first in some one part of it -- usually the latter, since the diversity of the world at any given time means that only some part is far readier for an epochal innovation than others. If the latter alternative is true, the impact of economic growth on various nations is necessarily unequal: and the resulting changes in the relative position sets up changes in relations among them -- which usually end up in the transmission of impact of growth elsewhere, either positively or adversely. It may thus lead to imitation on the part of some, which, if successful, brings the next follower group of nations to the fore; or domination of others by the nation that forged ahead in economic growth. Whatever patterns of international relations existed before would be affected by the unequal impact of growth; and one can argue that the whole complex of international relations can best be viewed not only as typing the various nations at any given time into a structure of cooperation and competition, but even more as a mechanism of transmission of the unequal impact of economic growth, modified by some autonomous changes in the technology of communication across space and national boundaries.<sup>46</sup>

Although growth models and the theory associated with them have generally been formulated in the artificially narrow context of the closed economy the literature is not completely devoid of recognition of the need for the more comprehensive model. Harrod himself gives brief attention to the changes introduced into the system if foreign trade is taken into account.<sup>47</sup> The fundamental equation then

---

<sup>46</sup> Ibid., pp. 8-10.

<sup>47</sup> R. F. Harrod, Towards a Dynamic Economics, op. cit. pp. 101-115.

becomes  $GC = s - b,$

where  $b$  is the balance of trade expressed as a fraction of income. Also,

$$G_W C_T = s - b.$$

From which he concludes, regretfully because of its mercantilistic implications, that for a country in which  $G_W$  is tending to exceed  $G_N$  and there is by consequence a chronic tendency to depression, a positive value of  $b$  may be beneficial, because it tends to reduce the value of  $G_W$  and might bring it into better relation to  $G_N$ . In other words, a country where savings are high relative to the opportunities for investment and potentialities for further growth domestically will be helped by the opportunities for investment abroad. Which proposition definitely indicates that the maintenance of income and stability may be achieved by contributing to the growth feasibility of capital scarce countries abroad.

The first and still the most thorough attempt to internationalize the model was made by Harry G. Johnson.<sup>48</sup> His presentation is an extremely simple model using the traditional analytical device of a two country international economy, the Harrod-Domar assumptions of a constant propensity to save, a constant capital coefficient, and adds the

---

<sup>48</sup> Harry G. Johnson, "Equilibrium Growth in an International Economy", Canadian Journal of Economics and Political Science, November, 1953.

assumption of a constant price level. Working from the basic H-D system the shift to an open economy introduces the influence that imports as well as savings constitute leakages from effective demand, while exports as well as investment may fill the demand gap. Then the basic equation becomes:

$$(s / m)Y_t = I_t / X_t,$$

with the suffix  $t$  meaning in each case current rate. And also:

$$r_t = a(s / m - \frac{X_t}{Y_t})$$

in which,  $r_t$ , is the current rate of growth, and,  $a$ , is the output-capital ratio, which equation may be rewritten as:

$$r_t = a(s - b_t),$$

with  $b_t$  being the country's current export surplus expressed as a fraction of its production. Explicitly realizing that analysis in these terms is possibly misleading because of the treatment of several of the key variables of the system as constant, he quite properly concludes that the results are suggestive. Differentiating the last equation with respect to  $t$ , and solving the implicit differential equation in  $Y$ , and then manipulating the results he obtains verification of the initial equilibrium rate of growth.

As he phrases the meaning of this equation:

In short, the equilibrium rate of growth rises, is constant, or falls over time according to whether the rate of growth of exports is less than, equal to, or greater than the country's initial equilibrium growth rate.

The economic meaning of this result (bearing in mind the extreme simplicity of the model) is that if a country's equilibrium growth rate is higher than the rate of growth of demand for its exports, it must grow at an increasing rate if effective demand is to keep pace with capacity to produce. If its equilibrium growth rate is lower than the rate of growth of demand for its exports, it must grow at a decreasing rate if effective demand is not to outrun capacity to produce. Only if its equilibrium growth rate is equal to the rate of growth of demand for its exports will it be able to maintain equilibrium between effective demand and capacity by growing at a constant rate.<sup>49</sup>

Johnson proceeds to relax some of the rigid assumptions that usually prevail in multiplier theory and which are implicit in the basic equations. He drops the assumption that investment utilizes only domestically produced goods, that import goods are absorbed in consumption only and not used in production, and that trade surpluses are financed in a way giving rise to no international interest payments. From our point of view, his next approach to broadening the terms of analysis is even more significant. He elaborates the system to take account of the required rate of growth in the rest of the world, shifting away from the one country approach, and explicitly giving recognition to the fact that the foreign repercussion factor is always at work so that the requirements of equilibrium growth in the components of the world economy are interdependent. With these changes the system

---

<sup>49</sup> Ibid., p. 480.

becomes more complex and the equations more elaborate, and also it becomes increasingly difficult to draw simple conclusions from the results. He does succeed in demonstrating the interdependence of equilibrium growth rates between countries and the greater variety of destabilizing influences resulting.

Reverting to Bruton's analysis, who was specifically concerned with the applicability of growth models to underdeveloped countries, some interesting supplementary notions are explored.<sup>50</sup> He introduces foreign trade into the model as the foreign account counterpart of savings. Writing  $M$  for all debit items on current account and  $X$  for all credit items, and the ratio of  $(M - X)$  to income as  $b$ , he recasts the growth equation as:

$$\frac{dY}{Y} = \frac{s/b}{k}$$

from this he concludes that if  $b$  is negative the percentage rate of growth required to utilize all the increasing domestic capacity is less than it would be in the absence of trade. Also, if  $b$  is positive, then the allowable rate of growth is higher than it would be in the absence of trade. To investigate the time path of the relationship of imports and exports, he refers to the Kindleberger stage of development sequence.<sup>51</sup> If countries followed this sequence the

---

<sup>50</sup> Bruton, op. cit., pp. 330-336.

<sup>51</sup> See Table IX, p. 198.

foreign trade sector would tend to make the attainment of a higher allowable rate of growth possible when this is the desired situation, and then to make the required rate lower when this is desirable, which is when deflation threatens. Hence, the allowable rate of growth of underdeveloped countries is increased, and the required rate of growth of the mature economies is decreased.

The Bruton discussion then turns to the ratios  $M/Y$  and  $X/Y$  and their behaviour through time. It is not necessary to follow his analysis in detail, but his conclusions that  $M/Y$  shows a secular decline for advanced countries but tends to increase for developing countries deserve mention. This being so, it indicates that the availability of foreign exchange imposes a ceiling on the rate of growth of income. While capital imports alleviate the situation it appears that they would be permanently necessary. A much more detailed treatment of the suggested problems of the relationships between money, income and trade, supporting the Bruton conclusion on the growth restrictive effects of the supply of foreign exchange, is given in a lengthy and interesting paper by Polak.<sup>52</sup>

Continuing with this point of the relationship of supplies of foreign exchange as a major factor in the

---

<sup>52</sup> J. J. Polak, Monetary Analysis of Income Formation and Payments Problems, IMF Staff Papers, November, 1957, pp. 1-50.

international interaction of the forces of both economic growth and economic instability, it is appropriate to summarize the transmittal effects by a quotation from Letiche.

The record of the Great Depression too strongly confirms theoretical expectations, for the cyclical factors discussed above were intensified by exceptionally abnormal institutional conditions. The rise in the United States domestic investment, particularly during the inflationary spurt before the depression tended to generate a rate of growth in income and an excess of planned saving over planned investment. The disparity between the growth in physical capacity to produce and the growth of current demand and output became acute. As returns on domestic capital declined, the excess of planned saving not only failed to be invested abroad, but the flow of capital was reversed from a net outflow to a net inflow. The growth process was interrupted; excess capacity, unemployment, and inventories grew apace. Abnormally perverse monetary policies along with inflexible cost-price structures aggravated the deflation. Production became more and more excessive relative to expenditure, and pressures to expand exports and to reduce imports became terribly strong. It was the American economy that primarily generated the ensuing dollar shortage.<sup>53</sup>

I am not prepared to offer an elegant mathematical model that will build on this work that has already been done and demonstrate more convincingly the interdependence of country growth rates within the world economy over the long run. The central issue can be adequately illustrated by an extremely simple model. Based on experience and reasonable projections it may be anticipated that the industrialized

---

<sup>53</sup> J. M. Letiche, Balance of Payments and Economic Growth, op. cit., p. 305.

countries will show a growth in income of probably 35 per cent over the next ten years. Assuming constant  $M/Y$  and  $X/Y$  they would develop an increase in import demand of 35 per cent and an increase in export capacity of 35 per cent. For the underdeveloped regions a reasonable projection of income growth for the same ten year period might be 25 per cent. Again assuming for these areas constant  $M/Y$ , because of the restraining influence of exchange scarcity, and constant  $X/Y$ , because of inevitable domestic inflation and rising home demand, they would also develop an increase in import demand of 25 per cent and an increase in export capacity of 25 per cent. Additionally, I am assuming that the distributional pattern of trade cannot be and will not be markedly changed over this decade, so that advanced countries will look to underdeveloped regions as both markets and sources of supply for 35 per cent more goods than at the outset. However, due to the slower rate of growth of the underdeveloped regions these countries will only respond with 25 per cent increase in two-way trade. A potential rise of trade between the advanced and the underdeveloped regions of 10 per cent will then be frustrated. Thus, the growth lag would reflect on the advanced countries by denying them the desired increase in supply of primary produce and by failure to dispose of a satisfactory rise in exports. Inevitably this must cause a repercussion on the growth rate and attained income level of

the more rapidly expanding countries.

In concluding this brief exploration of interdependent growth models let us revert to the contribution of Malthus to the theory of economic growth. He recognized and emphasized the interaction of sectors of the economy.<sup>54</sup> Although directing his attention to sectors of a single economy, in the first instance, he argued that the failure of one main sector to expand acts as a drag on the growth of the rest of the economy. Malthus saw that balanced growth was necessary to have continuous aggregate growth. This is exactly the point that I have attempted to develop for the world economy. Higgins realizes the international implications of this issue, without stressing its importance, in his comments on J. S. Mill's stagnation thesis.<sup>55</sup> He quotes Mill who reasoned that a mature country after an extended period of expansion, high investment and high income, would experience decreasing returns on capital as the stock of capital enlarged until the margin of profit almost disappeared and economic growth would virtually cease. Higgins does not dispute this reasoning but points out that England escaped this result due to the economic growth elsewhere in the world permitting external economies for British industry, increasing demand

---

<sup>54</sup> Higgins, op. cit., pp. 104-105.

<sup>55</sup> Ibid., pp. 98-99.

in foreign markets for the rising output, and investment opportunities abroad whereby profit rates for British capital were maintained and the danger of planned saving exceeding planned investment avoided. Thus England continued to enjoy economic growth, but it was because of the economic growth taking place elsewhere in the world economy.

**PART III**

**THE ECONOMICS OF FRUSTRATION**

## CHAPTER I

### POLITICAL AND SOCIAL IMPLICATIONS OF GROWTH LAGS

It is time to shift the emphasis from the economic aspects of the problems of growth to the social essentials. The perplexities and frustrations created by the admixture of social and economic obstacles to growth demonstrably produce political tensions of explosive proportions that reverberate beyond national boundaries to embroil the major states of the world. For these reasons the problems of growth in all parts of the world economy have become urgent international responsibilities. The peace of the world, the preservation of freedom and the cultures that are the pride of the Western world are all at risk if we fail to accept our international responsibilities toward the underdeveloped areas of the world in their struggle for emergence.

A common fashion of classifying countries to represent their level of progress attained is to designate each as at some stage from infancy to advanced maturity. This approach was used earlier in this text with particular regard to the degree of economic advancement. In the present decade such a descriptive grouping is especially appropriate in a political sense, considering the world-wide collapse of colonialism and the burgeoning of national pride and

ambitions manifest in the prolific crop of new, independent states and the awakening from passive stagnation of many others. Such a manner of classifying countries according to social, economic and political age or maturity should help the peoples in the advanced countries to understand better the problems of these seemingly brash young states and young economies. In modern societies we have become concerned with juvenile delinquency and wayward adolescence as major social problems of our times. In moments of calmer sophistication these problem children are shown some tolerance and understanding, for their ills and the turmoil they create are attributed to the psychological pressures of troubled backgrounds and an underprivileged youth. The problems of these restless underdeveloped countries are the same sort.

The lessons of the irresponsible lengths to which rebelliousness can be carried by immature states in excessive demonstrations of independence cannot escape us after experience of events in Egypt, Indonesia, Cuba, the Congo, Algeria, and other storm centres in Africa. These are troubled states undergoing the emotional upheaval of adolescence, driven by boiling resentment against their elders and foster parents, whom they accuse of having deprived them of their rightful due in earlier years. Wisdom dictates that the mature and prosperous states should understand the psychology of these emerging nations, deal with them sympathetically,

give them guidance with a minimum of interference, and offer them every possible help in the way of cooperation and opportunities that they may fulfill their restless ambitions for a richer existence. If we fail them the system of the world economy, which I hope earlier chapters have established, is the only hope for maximization of the possibilities of peace, prosperity and progress, is gravely threatened by political and economic fragmentation. The disconnected parts would then be parts in constant friction impeding mutual gains and dissipating the energies and production of the member states of the world in warlike, and defensive channels at the cost of economic and cultural progress.

It is quite clear that the problems of economic growth must be dealt with in a vastly wider context than expanding production and income achieved through the magic formula of increasing industrialization and ever rising rates of investment. The newly emerging regions and the advanced countries alike are prone to think in these narrow terms and reduce the question of cooperation for progress to a measure of the scale of financial assistance that may be provided and the rate at which it may be absorbed. Even if the essence of growth could be resolved to this specific single problem, there are deeper roots that must be established before the fertilization of investment can produce its expected higher output. The economic specialist is generally incapable of

the broader vision needed to give proper emphasis to these more fundamental preconditions and continuing conditions for economic progress. I have little doubt that a priest I have met, an educator who has spent several years in industrially blossoming but still underdeveloped Brazil, is looking closer at the roots that must be nourished when he insists that education is the key problem of underdeveloped countries. For him, the main resource of any country, the real determinant of efficiency of production, is the people, the human factor. Without education, widespread and carried to progressively higher levels, there can be no social, political or economic progress or stability. International cooperation for progress might appropriately emphasize education in aid programmes, and in the end achieve more toward ensuring the economic emergence of the underdeveloped countries at much lower money cost than simply paying the bill for stumbling investment directed toward the great goal of industrialization, all too often mis-timed and misguided with inevitably disappointing results.

In the body of this book the main theme of the economic review of the problems of differential growth rates was that a higher rate of world economic progress would be attained if the glaring gap in the rate of regional growth could be narrowed, while progressive widening of the gap would impede the process of secular expansion by multiplying and magnify-

ing the instability elements. Even recognizing the frightening implications of the dictum that instability is the enemy of economic progress, cognizance must now be taken of the even more terrifying manifestations of instability of a non-economic nature that threaten not only to check the course of future progress but to destroy part or all of what has been attained.

Undoubtedly, to some degree, the course of civilization, the path of social evolution, is in the making in every generation of human history. It may be simply that the problems and events of one's own age seem infinitely more vivid and significant than those recorded in the history of the past, yet the challenge of our times surely is a crescendo in the turbulent symphony of human history. Peace, harmony, progress, and prosperity may prevail; or unrest, conflict, retreat and the jeopardy of human well-being may triumph. Through trade, war, and science, the remote parts of the earth have been welded into a common society within which goods, ideas and ambitions become readily exchanged and shared. History proves that as this process unites remote provinces, towns and hinterland, into national economies or societies, that hierarchies become threatened and progressively dissolved by the evolutionary process of social revolution without violence, or challenged and liquidated by angry, unrestrained uprisings. National economic

growth has invariably been accompanied by an egalitarian movement that would not tolerate excessive differentials in the levels of privilege and reward for one geographical region against another or one social class against others. Where real progress has taken place within national boundaries a levelling process has been inevitable, giving renewed strength and impetus to secular growth for the greater well being of all. Now that a world society has virtually evolved within the framework of a world economy a parallel development is inevitable. This is the real challenge of our times; to move forward in common, harmonious progress, with a levelling-up of the poor and backward territories and peoples for the eventual well-being of all; or in a narrow context of time and consequences, to attempt to live tenuously within the world economy and world society, falsely hoping to exploit positions of national privilege for ever greater comparative prosperity, while soothing the angry passions of the underprivileged to withstand the mounting violence of their claims.

The process of economic development in underdeveloped countries has not been closely studied in all its ramifications in this work, but there is ample supplementary literature discussing the many barriers, implications and consequences in terms of social and sociological forms. It would be too lengthy and complex an undertaking at this point to

review the many-featured impediments and responses to economic growth rooted in social forms and traditions, varied religious contexts, rigid but unstable political settings and institutional frameworks, yet some recognition must be given to the troublesome and unpredictable consequences of sociological inertia disturbed. The peoples of traditional societies have in increasing measure been enticed and forced out of the lethargy of subsistence existence on a local or regional basis without yet achieving significant communication with a broader economic society. Even against their traditional prejudices and resistance, hardened in the cake of custom, they have been stirred to want more and take action to attain it. Their pitiful, or perhaps enviable, contentment is being increasingly taken from them and it can never be regained. Feeling newly insecure and restless, with their desires stirred by alluring, but seemingly unattainable, hopes, they are ready to be guided to new and more fruitful ways of life. If tempted but unsatisfied, deprived but uncompensated, they are ready to rebel against the fates to claim the expected fruits. If economic development can be demonstrated to mean to these unsophisticated peoples a rewarding experience in which the compensations exceed the sacrifices, and in which the pace of achievement does not fall behind the rate of increase of wants, it will probably be embraced by them, gradually but firmly, and they

will build progress for themselves and contribute to it for the world economy. Yet, if the gap between what they have and others have constantly widens, now that their awareness of the wider world has been kindled, their reaction will not be satisfaction in the betterment that they gained but resentment at the comparative worsening of their position. This will breed discontent and revulsion from such an unfair system. Jealousy is the mother of hate, and resentment will grow against the privileged ones who, although they may not have caused, are so unfeeling as to tolerate such gross and growing inequality.

The critical aspect of this problem of disparity in rates of economic growth is not the aspiration that inequality can ever be banished from the earth so that everyone in every nation may be lifted to the fullest enjoyment of God's rich gifts through the ingenuity and justice of man, but that there is a tolerable degree of inequality and when the margin of tolerance is exceeded it is in the nature of man to rebel. The earlier economic analysis of the problem demonstrated that a narrowing of the gap would enhance the prospects for international economic welfare and stimulate continued growth with an increasing harmony of national interests. As the gap grows to the intolerable limit, particularly as awareness of the attainable in living standards is realized by the backward peoples, then a disharmony of interests intrudes creating

instability conditions that threaten not only future progress but the very foundations of what has already been achieved.

It requires no distortion of the interpretation of history to represent, in the Toynbee sense, that this process of national resentment, disharmony and conflict, leading to social and political revolution and then withdrawal from the outward challenge to a position of isolation, to gain independent strength according to revised standards, has taken place frequently enough. In our age there are the striking and threatening instances of Russia and China. The vassal states of these giants of Communism cannot be classed as additional instances because they are captive provinces not acting through genuine social volition. The continued existence, undeniable strength, and apparent achievements of these professants of a new gospel of progress, in sharp conflict with and challenging our own, makes it imperative for the democratic world to solve this problem of unequal rates of growth before the limits of tolerable disparity are exceeded for more countries, driving them in rebellious desperation into this alien camp.

Economics inevitably drifts into the tangled web of politics - power politics and the contest between violently opposed political philosophies - once disillusioned or misguided countries turn away from the Western world to embrace the ever ready mentorship of Russia. Communism is

no friendly rival to democratic capitalism, it is the ultimate challenge, the final destroyer. Co-existence is a fading myth. The fate of the world economy, of the treasures of freedom, are at stake. Let us fail these newly emerging countries in their requests for help and deny their hopes for greater economic equality in the future, and they will one by one turn away from us to accept Communism's eager embrace. Learned Latin Americans, who are no doctrinaire Communists but are the responsible and dedicated leaders of their countries, calmly and soberly warn us that they must have generous financial aid, and if the United States and Europe fail them they will look elsewhere. We have been warned. If we have not a sufficient sense of international purpose to supply the underdeveloped countries with essential financial aid and, no less, the spiritual essential, in the broadest meaning of the word, we shall have failed them and defeated ourselves.

A highlight of this contest, that could be the determining test in casting the form of the future course of the process of social and economic evolution in the world, is the vast experiment in development undertaken by India. This is an outstanding test case in the study of economic development, not only because progress there is so essential, the problems so immense, and the potentialities for success so great, but because it has been undertaken as a conscious

competition with a comparably situated society, China, facing similar problems but seeking to solve them through an opposed philosophy. India is the showcase for the democratic, free economy system in the eyes of all nations of Asia, and probably throughout Africa and the Middle East. If India can plan for a rate of development that equals or betters that achieved in Communist China, command the required effort on the part of its own peoples, muster and appropriately allocate the necessary resources of capital, efficient labour, materials and power, enlist the technical and financial aid of the free-world in recognition of the international political and economic significance of its objectives, it will be a triumph for modern capitalistic society that will fortify our civilization and help keep the paths of the future clear for continued progress in the world economy. Judging by the impressive rate of economic growth achieved by Russia over the past thirty-five years and the indicated success being won by China, to accomplish these results, India must at least close the gap between itself and the advanced countries in terms of the rate of growth of net national income, even if the population dilemma precludes closing the growth gap in terms of comparative per capita income for a time.

Much has already been demanded of the Western World by India to support the great experiment, and even more will be needed in the future. India was conspicuously caught in

the vicious circle of poverty. Low income has meant low savings, in turn this has meant a low investment rate which can only result in low productivity and consequently low income. To breach the circle India has had to look abroad for investment funds and these have been forthcoming from the International Bank for Reconstruction and Development, Colombo Plan assistance, blocked sterling reserves, other substantial credits from Germany, United Kingdom, the United States and also Russia, in addition to supplier credits from numerous other countries selling industrial and transportation equipment to India, and supplemented by short term aid from the International Monetary Fund. India itself had removed the immediate social obstacles to development, so that the need and the will for change and progress do exist. Besides financial assistance, India has relied on foreign technical aid for health and education as well as for industrial production. This sort of technical guidance and assistance in training workers and dealing with problems will become of increasing importance as the momentum of development picks up. Reasonably enlightened self-interest alone dictates that it would be costly folly to refuse help of any reasonable type or scale. Neither this plea, nor the Indian intention, is based on the thought that the world needs India's success so much that India can demand help at will and shift its

problems into the lap of others. Outsiders cannot make the development process succeed without the sincere will and endeavour of these poorer people themselves. Success rests in local effort, but the feasibility of success does depend on adequate, understanding, foreign assistance.

## CHAPTER 2

### ECONOMIC FRUSTRATION IN THE WORLD ECONOMY

The urgent need is upon us to solve the riddle of economic growth. Soon we must acquire the perception to penetrate to the vital core of its nature and cease merely toying with its overt characteristics. This book, like all others to date, cannot pretend to have done more than explore and reflect upon some of those characteristics. One feels that the barrier to truth and full understanding is only a filmy veil of mystery, but it is enough to confuse our thinking, to frustrate our earnest attempts to manage economic growth for the maximum social good, and to prevent clear sighted policies for the fulfilment of our aims. Unless we do formulate that comprehensive theory of economic growth which fully explains the dynamics of the economic process of production and of the process of distribution in the broadest sense of consumption, savings and investment, we cannot hope to control our economic destiny. Failure, or prolonged postponement of success, in this task means the inability to translate our economic ambitions and bright expectations into tangible and manageable reality. The frustrated economist in moments of honest, human despair is tempted to complain that "it is all so complicated". Such a despairing bleat

must be rejected with contempt, as must also the posturing pretensions of the half-knowing pundit, for the challenging problem can neither be evaded nor dissipated by mesmerism. The goal of understanding must be attained even if it requires desecrating the venerable doctrines of traditional economics, against which Galbraith has recently lifted his rebellious voice.<sup>1</sup>

The first major truth that must be faced is that economic growth is not automatic. It is not something that the clever peoples of the world enjoy by divine right of superior endowment. Axiomatically, backwardness is not the inescapable curse of inferior peoples from which there is no redemption. In the emerging countries the policy makers and planners have become obsessed with the magic curative powers of industrialization as the formula for progress and prosperity. Deplorably, they turn a blind eye to the dangers of inflation and balance of payments crises in their sublime faith that instability is a minor ailment of childhood which will disappear with advancing maturity. This unsophisticated faith in the automatic, self-adjusting process of economic development or growth regrettably is not something that is outgrown. Prevailing doctrine in the advanced

---

<sup>1</sup> John Kenneth Galbraith, The Affluent Society, Boston, 1958, Houghton Mifflin Co.; another semi-iconoclast is Gunnar Myrdal, An International Economy, New York, 1956, Harper & Brothers.

countries is that a high level of investment is sufficient guarantee of continuing growth. Increasingly, a certain awareness is spreading that the rate of investment is not sufficient in itself. Considerable attention is being given to the fact that there must be within the required high total rate of investment a fair percentage of autonomous investment to act as a stimulating force. Without this dynamic impulse serious problems of economic stagnation, excess productive capacity, lagging consumption and underutilized savings can occur. If the dynamic force of progress is lost, the whole process of economic growth must falter.

In the year 1960, the North American economies of the United States and Canada revealed worrisome signs of economic lethargy that could reasonably be attributed to a sort of fatty complaisance resulting from a false sense of confidence in the process of automatic growth. It is somehow generally accepted that without any special effort or conscious design we can expect to enjoy the blessings of ever increasing material well-being. The new art of 'growthmanship' has become popularized by politicians and many serious economists. This seems to be a strange sort numbers cult devoted to the selection of large, conveniently rounded percentages, bid to higher and higher scales by the competing factions. The most popular figure is then enshrined as the chosen rate of economic growth that may

confidently be expected to perpetuate itself in endless projection. No serious attention is paid by anyone to how these attractive numbers may be translated into effective growth rates.

Part of the inspiration for this game is the happy delusion that anything the Russians can do we can do better. We have actually come to believe that faith in our economic momentum is the mainspring of future progress. Equally astonishing is the conviction that it is terribly important that America must maintain a growth rate that cannot be matched by Russia. This notion has its foundations in the persuasion that economic strength is the main line of defence in war. No one seems willing to tolerate the intriguing possibility that greater economic equality between the great powers could do much to ease competitive jealousy and resulting tensions and thereby lessen the dangers of war. A truly prosperous Russia would inevitably become a more contended country where some of America's disease of fatty complaisance would make its appearance and soften the harsh edges of communism. For it cannot be denied that communism is a creed of malcontents.

Along with this sublime faith in automatic growth is a comforting belief in the progressive disappearance of instability in the economic system. We have contrived to delude ourselves that ingenious build-in stabilizers coupled

with an increasing capacity to manage the economy efficiently, yet without recourse to the despised device of economic planning, will ensure that the economy will move relatively smoothly on an upward sloping trend line with only mild disturbances. The major business cycle is dead, it is said, and the minor cycle is dying down. Little heed is now paid to the dangers of deflation, because of this deep faith in continuous growth and in our ability to prevent serious depressions. Considerable attention is still given to the problem of inflation, because rising expectations may at intervals cause too rapid expansion and the scramble for higher wages and higher profits may generate an explosive price effect. Inflation is held in awesome respect and more or less contained with inadequate instruments of control, while remarkably little regard is paid the fact that monetary management which arrests inflation also very effectively arrests economic growth. The philosophy of economic management is based on the notion that the only unconquered elements of instability in the system are the mild disturbances of periodic adjustment to excessive forward spurts of growth which breed some temporary inventory excesses and scattered excess capacity.

An economy so organized and run, on an economic philosophy founded on complacency instead of conscious understanding of the operation of the system, can too easily

become prey to the economics of frustration. If the dynamics of growth and the destabilizing influences are regarded as automatic and self-adjusting, and faith is placed in tools of control that are inadequate, no positive economic policy will ever be formulated. Then, too easily, temporary dislocations and periodic adverse trends can become secular in nature. This need not result in the ultimate break-down of the system, to fulfil the dire judgements of the opponents of the system, but it could lead to a prolonged period of limping stagnation, such as most of Europe experienced in the inter-war period. Such a distressing and disillusioning lesson would be a painful way to learn that growth projections based only on faith in the self-perpetuating nature of prosperity can be blithe self deceit. I am not intending to don the mantle of Cassandra, only to warn against the dangers of the economics of frustration. To forecast continuing economic growth and balance of the economy with no certain knowledge of how these ends may be achieved, and no plan of action to materialize the goals, is a delusion we cannot afford. The only escape is to gain a complete understanding of the processes of economic growth and, based on this understanding, arrive at positive policies to sustain the dynamics of the system.

The acceptance of traditional half-wisdoms that impede the search for complete truth, and the willingness

to bow to superficially convincing but basically false doctrines, have long plagued practitioners of economics and their disciples. It is teachings of these types and the unfortunate but intransigent policies based on them that I label the economics of frustration. There are many long honoured doctrines of this sort that have in the past rooted themselves in popular economic theory and checked the progress of deeper knowledge and the advance to a richer economic life. Striking instances of the economics of frustration are such misbegotten doctrines as mercantilism, the wage-fund theory, Marx on distributive shares, traditional contractionist fiscal policies, beggar-my-neighbour foreign trade practices, the over-production variation of the stagnation thesis, and most trade labour union philosophies. The common principle behind all these doctrines is a philosophy of limitation that predicates that the sum total of economic gains and welfare is limited, so that any individual, social group, or national economy, can only increase its share at the expense of others. This limitation thesis translated into subjective terms warns that if others make gains these can only be at the expense of me, or my class, or my country.

It is unthinkable that such notions can prevail in the teeth of the ample evidence that through economic progress the rich get richer but the poor do not get poorer

because of it. Economic progress means rising productivity and increasing total income, which allows a larger share for all. Effective full employment policies in the post-war period have at least temporarily destroyed the false foundations of the over-production stagnation thesis and the limited employment opportunity fiction, although this latter fear still lingers in doubts and protests against automation.

The danger for world progress is that a sort of prosperity fund theory is more or less accepted by many, even though not expressly so defined. The general nature of these prosperity fund fears is that if the underdeveloped countries do succeed in accelerating the rate of their economic growth that it must be at the expense of the advanced countries. Partly through pride, many will not concede that the poorer countries can advance faster, because this would mean that the richer countries would be progressing more slowly, which in turn is taken to mean slower than would otherwise have been possible, indicating that the accelerated growth of the poorer must surely be at the expense of the richer. To prove the validity of such a proposition it is pointed out that industrialization in the backward countries destroys export markets for the advanced industrial countries. Perhaps even worse is the demonstrated possibility that with their rising production of a

wide variety of goods based on cheap labour these goods may enter as our imports to steal domestic markets, leading to what is claimed to be obvious damage to domestic industry. Similarly, it is argued that capital exported to these underdeveloped countries can only be at the expense of both investment and consumption in the advanced country. This is popularly called taxing oneself for the foreigner, sacrificing present living standards by foregoing possible consumption and future by the reduction in possible capital stock. These are the teachings of the economics of frustration.

The message of this book is exactly the obverse of these teachings. It is the central contention of this text that the failure of the lagging sectors of the world economy to experience a rapid acceleration in growth rates, which will ultimately lead to some closing of the gap between them and the advanced countries, will inevitably have a lag repercussion on the entire world economy. Thus, by frustrating the growth of these emerging economies the potential future growth of the industrialized world will equally be frustrated in some measure.

The prosperity fund theory itself deserves closer examination. That it is so prevalent in public and political circles is hardly to be wondered at when we reflect how slowly the idea of splendid isolation in its rather diffe-

rent forms in England and in the United States began to sicken and enter a lingering death struggle. In the United Kingdom the age old faith in the advantages of eschewing involvement with continental Europe has persisted unto this day when only now the realization is dawning that the United Kingdom needs the continent more than the continent needs the United Kingdom. The creed of non-commitment was preserved, in face of the repeated compromise of the principle by post-war association in NATO, in OEEC, in EPU, and other lesser ways, when the rear guard action of rejecting the Steel and Coal Community was taken. The strength of the European Economic Community is too obvious to deny and at last the old faith is shattered and isolation is being recognized as a false idol, the creature of the economics of frustration.

Across the Atlantic the grand delusion of isolation was based on the conviction that the United States of America was unity enough and strength enough for here was the proximate reality of ample self-sufficiency. To consort with poor relations in the world could only lead to a charitable support of the aging and faltering economies of Europe and the younger but perennially dependent countries elsewhere in the world. The isolation of the United States was mercantilistic in its way, for loathesome was the thought that a strong creditor nation had any obligation to export capital.

Only the shocking lessons of two wars finally forced the political leaders to understand the principles of enlightened self-interest, to realize that a continuing surplus in the balance of payments and an ever growing hoard of sterilized gold would strangle the rest of the world's trade and prosperity, which in turn would frustrate the trade and employment opportunities in the United States itself. The lessons of mutual dependence have been learned these past two years in an even more alarming way, for the United States has developed its own balance of payments problems which have given rise to a determined export drive. The vital importance of the external sector is gaining recognition in the United States in many ways. The Paley Report, reinforced by later studies, drove home the lesson that declining self-sufficiency would make isolation increasingly impossible. The increasing vigour of the Russian economic strength added a new dimension to the political threat of this rival for world leadership. The dramatic vitality of the European states, now welded together in the Common Market, or European Economic Community, which have flourished while North America languished, has stripped away the self satisfaction of the conviction that the United States is the dynamic centre of the world economy. These events have profited the American economy even if they have hurt national pride, for no longer does it follow that when the United States economy sneezes

the world economy collapses with a high fever. Fortunately, the stimulated growth rate elsewhere in the world economy, based on a dynamic that is more than a pale reflection of American prosperity, has built into the world economic system greater stability, which helps the United States itself to contain the duration and severity of its own recessions.

The greatest possible deterrent to economic instability is widespread economic strength. In the world economy, surely the policy prescription must be that all nations, rich and poor, embrace with increasing loyalty the ideal of a harmonious world economy and work towards it without vacillating at every prick of national pride, suspected infringement of national sovereignty, or apparent chance for narrow, selfish gains. Long range policy objectives must not be contravened for short run motives which spring from the philosophy of the economics of frustration. In pursuit of the larger aims of internationalism the members of the world community of nations must enter frankly and cooperatively into the forums of the United Nations and associated international organizations, that the objective of stability and growing prosperity on a broadening and deepening base may be realized.

Just as such concepts as the iron law of wages gave way, and later the marginal productivity theory of wage determination was modified by the twin forces of countervailing

power and the logical claims of social justice, which broke down the inevitability of great and growing individual income inequality to make room for new welfare concepts and a new balance of distributive shares, so are new sets of international standards of welfare and justice promising to break down the world acquiescence in extreme national economic inequality. In extension of this parallel, it is known that lessening personal income inequality led to a more vigorous, ambitious and productive labour force, stimulated by increasing opportunity to improve skills and education and make an increasingly dynamic contribution to society and economic growth. So, too, may the underprivileged nations contribute increasingly to the advance of the world economy and world society once they have shed the restraint to their initiative of perpetual poverty. The restlessness of discontent, the groping but insistent struggle for improvement, the gambling conviction that there is so much to gain and so little to lose, are priceless, compulsive assets of the newly developing economies. The dynamic, driving sense of purpose is strong in such societies and this spirit of sometimes reckless ambition can potentially produce achievements at a more rapid rate even than in more mature countries where the attainments of the past are in themselves ample and satisfying, making the status quo something to be treasured and protected.

Even as the momentum of economic, social, political, nay even cultural progress has been carried forward in the past century by the impetuous strivings of the self-confident, eager peoples of the United States, so in the future may the rescue from smug complacency and virtual stagnation of the world economy rest in the hands of the dynamic young states now writing for themselves and the world an exciting new history.

## BIBLIOGRAPHY

## BOOKS AND PAMPHLETS

- Agarwala, A. N. and Singh, S. P., The Economics of Under-Development, A Series of Articles and Papers selected and edited by, Oxford, 1958, viii - 510 p.
- Bauer, P. T., Economic Analysis and Policy in Under-Developed Countries, Durham, N.C., Duke University, 1957, ix - 145 p.
- Bauer, P. T., Yamey, B. S., The Economics of Under-Developed Countries, London, Nisbet, 1957, xiii - 271 p.
- Buchanan, Norman S., and Ellis, Howard S., Approaches to Economic Development, New York, Twentieth Century Fund, 1955, xiv - 494 p.
- Clark, Colin, Conditions of Economic Progress, London, MacMillan, 1951, v - 584 p.
- Coale, A. J., and Hoover, E. M., Population Growth and Economic Development in Low Income Countries; A Case Study of India's Prospects Princeton University Press, 1958.
- Coln, Gerhard and Geiger, Theodore, The Economy of the American People: Progress, Problems, Prospects, Washington, National Planning Association, 1958, viii - 165 p.
- Committee for Economic Development, Economic Growth in the United States; Its Past and Future, New York, February, 1958, 61 p.
- Growther, Geoffrey, Balances and Imbalances of Payments, Boston, Harvard University, 1957, vii - 70 p.
- Daniel, James, (ed.) Private Investment: The Key to International Industrial Development, New York, McGraw-Hill, 1958, xi - 282 p.
- Dobb, Maurice, Soviet Planning and Labour in Peace and War, New York, International Publishers, 1943, 124 p.
- Domar, Evsey D., Essays in the Theory of Economic Growth, London, Oxford University Press, 1957, viii - 272 p.
- Dupriez Leon A., (ed.) Economic Progress, Louvain, Institut de Recherches Economiques et Sociales, 1955, 574 p.
- Duesenberry, James S., Income, Saving, and the Theory of Consumer Behaviour, Cambridge, Harvard University Press, 1949, 128 p.

- Duesenberry, James S., Business Cycles and Economic Growth, New York, McGraw-Hill, 1958, x - 341 p.
- Firestone, O. J., Canada's Economic Development 1867 - 1953, Income and Wealth, Series VII, London, Bowes and Bowes, 1958, xxvi - 384 p.
- Frankel, S. Herbert, Some Conceptual Aspects of International Economic Developments of Under-Developed Territories, Princeton, Essays in International Finance, May, 1952, 25 p.
- Galbraith, John Kenneth, The Affluent Society, Boston, Houghton Mifflin Co., 1958, 368 p.
- Gibson, J. Douglas, (ed.) Canada's Economy in a Changing World, Toronto, MacMillan, 1948, xiii - 380 p.
- Havelmo, T., A Study of the Theory of Economic Evolution, Amsterdam, North Holland, 1954, 114 p.
- Haberler, Gottfried, International Trade and Economic Development, Cairo, National Bank of Egypt, 1959, 36 p.
- Hague, Douglas, (ed.) Stability and Progress in the World Economy, London MacMillan, 1958, xv - 267 p.
- Hansberg, D., Economic Growth and Instability: A Study in the Problem of Capital Accumulation, Employment, and The Business Cycle, New York, Norton, 1956, xii - 340 p.
- Harris, Seymour E., Economic Planning, The Plans of Fourteen Countries with Analyses of the Plans, New York, Knopf, 1949, xviii - 577 p.
- Harris, C. Lowell, (ed.) Selected Readings in Economics, Englewood Cliffs, Prentice-Hall, 1958, xi - 546 p.
- Harrod, Roy F., Toward a Dynamic Economics, London, MacMillan, 1948, v - 169 p.
- Hicks, J. R., A Contribution to the Theory of the Trade Cycle, Oxford, Clarendon Press, 1950, viii - 201 p.
- Essays in World Economics, Oxford, Clarendon Press, 1959, xviii - 274 p.

- Higgins, Benjamin, Economic Development, Problems, Principles and Policies, New York, Norton, 1959, xviii - 803 p.
- Hirschman, Albert O., The Strategy of Economic Development, Yale Studies in Economics; 10, New Haven, Yale University Press 1958, xiii - 217 p.
- Hood, William C., Some Aspects of International Trade in the Theory of Employment, Unpublished Phd. thesis submitted to the University of Toronto, 1948.
- Huntington, Ellsworth, Mainsprings of Civilization, New York, Mentor, 1945, xii - 669 p.
- Innis, Harold A., Problems of Staple Production in Canada, Toronto, Ryerson, 1933, vii - 124 p.
- The Fur Trade in Canada, University of Toronto Press, 1930, 463 p.
- Innis, Mary Quayle, An Economic History of Canada, Toronto, Ryerson, 1943, v - 302 p.
- Institute of Bankers, The Struggle Against Inflation, An International Comparison of Problems and Policies, London, 1958, 76 p.
- Johnson, Harry G., International Trade and Economic Growth, Studies in Pure Theory, London, Allen and Unwin, 1958, 204 p.
- Kalecki, M., Studies in Economic Dynamics, London, Farrar & Rhinehard Inc., 1943.
- Keynes, John Maynard, The General Theory of Employment Interest and Money, London, MacMillan, 1936, xii - 403 p.
- Kindleberger, Charles P., Economic Development, New York, McGraw-Hill, 1958, xiii - 325 p.
- International Economics, Homewood, Irwin, 1953  
xx - 543 p.
- Kuznets, Simon, Economic Change, New York, Norton, 1953, 333 p.
- Six Lectures on Economic Growth, Free Press of Glencoe, 1959, 122 p.
- Kuznets, S., More W. E., and Spengler J. J. (Eds.) Economic Growth: Brazil, India, Japan, Durham, N. C., 1955, xi - 613 p.

- Leibenstein, Harvey, Economic Backwardness and Economic Growth, Studies in the Theory of Economic Development, New York, Wiley, 1957, xiv - 295 p.
- Lekachnan, R. (ed.), National Policy for Economic Welfare at Home and Abroad, New York, Doubleday, 1955, vii - 366 p.
- Letiche, John M., Balance of Payments and Economic Growth, New York, Harper, 1959, xiii - 378 p.
- Lewis, W. Arthur, The Theory of Economic Growth, London, Allen & Unwin, 1955, 453 p.
- Machlup, Fritz., International Trade and the National Income Multiplier, Philadelphia, Blakiston, 1943, 237 p.
- Meier, Gerald M., Baldwin, Robert E., Economic Development: Theory, History Policy, New York, Wiley, 1957, xix - 588 p.
- Mills, F. C., Productivity and Economic Progress, Occasional Papers, 38, New York, National Bureau of Economic Research Inc., 1952, 36 p.
- Myrdal, Gunnar, An International Economy, London, Routledge & Kegan Paul, 1956, ix - 381 p.
- Development and Under-Development; A Note on the Mechanism of National and International Income Inequality, Cairo, National Bank, 1956, 88 p.
- Economic Theory and Under-Developed Regions, London, Duckworth, 1957, xii - 168 p.
- National Bureau  
 Committee for  
 Economic Research, Capital Formation and Economic Growth, Princeton University Press, 1955, 677 p.
- National Planning  
 Association, Long-Range Projections for Economic Growth, The American Economy in 1970, Washington, 1959, viii - 96 p.
- Murkse, Ragnar, Problems of Capital Formation in Under-Developed Countries, Oxford, Blackwell, 1953, 163 p.
- Ohkawa, K., The Growth Rate of the Japanese Economy Since 1878, Tokyo, Kinokuniya, 1957, 250 p.
- Polak, J. J., An International Economic System, London, Allen & Unwin, 1959, vii - 179 p.

- Rockefeller Fund  
Special Studies, Foreign Economic Policy for the Twentieth Century,  
New York, Doubleday, 1958, x - 82 p.
- Rostow, W. W., The Process of Economic Growth, New York, Norton,  
1952, vii - 285 p.
- The Stages of Economic Growth, A Non-Communist  
Manifesto, Cambridge, 1960, xi - 179 p.
- Schumpeter,  
Joseph A., The Theory of Economic Development, Cambridge,  
Harvard University Press, 1934, x - 255 p.
- Stovel, John A., Canada in the World Economy, Cambridge, Harvard  
University Press, 1959, xiii - 364 p.
- Tinbergen, Jan, The Design of Development, Baltimore, Hopkins, 1958  
viii - 99 p.
- Toynbee, Arnold J., A Study of History, Abridgement by D. C. Somervell,  
Oxford University Press, 1946, xiii - 617 p.
- Van Der Valk,  
H.M.H.A., The Economic Future of Canada, Toronto, McGraw-  
Hill, 1954, xiv - 203 p.
- Viner, Jacob, International Trade and Economic Development,  
Oxford University Press, 1953, 120 p.
- Wolf, C. and  
Sufria, S. C., Capital Formation and Foreign Investment in Under-  
Developed Areas, Syracuse University Press, 1955,  
211 p.
- Woytinsky, W. S. &  
Woytinsky, E. S., World Population and Production, Trends and Outlook  
New York, Twentieth Century Fund, 1953, v - 1268 p.
- Youngson, A. S., Possibilities of Economic Progress, Cambridge, 1959  
x - 325 p.
- Zinkin, Maurice, Development for Free Asia, London, Chatto and  
Windus, 1956, viii - 263 p.

## OFFICIAL PUBLICATIONS

- Food and Agricultural Organization of the United Nations Functions of a World Food Reserve - Scope and Limitations, Rome, 1956.
- Millions Still Go Hungry, Rome, 1957, x - 102 p.
- GATT International Trade 1957-58, Geneva, 1959, 318 p.
- Trends in International Trade, Report by a Panel of Experts, Geneva, October, 1958, 138 p.
- Government of India Planning Commission Appraisal and Prospects of the Second Five-Year Plan, New Delhi, 1958, 11 - 978 p.
- The New India: Progress Through Democracy, London, MacMillan, 1958, x - 412 p.
- International Bank for Reconstruction and Development Current Economic Position and Prospects of Brazil, Confidential Report, January 31, 1958, 49 p.
- Current Economic Position and Prospects of India: Report of Bank Mission to India, Confidential Report, August, 1956, ix - 160 p.
- Debt Servicing Capacity and Postwar Growth in International Public Indebtedness, Confidential Report, August 27, 1957, 158 p.
- Statistical Tables on Economic Growth, unpublished document by the Economic Staff, March 8, 1956, 111 - 47 p.
- World Economic Growth - A Forward Look, unpublished paper presented by L. B. Rist to the Professional Staff, February 1956, 20 p.
- World Economic Growth 1955-1962, Estimates Based on Existing Projections, unpublished report by the Economic Staff, December 11, 1958, 11 - 43 p.
- International Monetary Fund The World Payments Situation, A Series of Charts with commentary, Washington, 1952, 54 p.
- Character and Role of Economic Planning in Japan unpublished paper, Washington, 1957, 32 p.

- Joint Brazil - U. S. Economic Development Commission      The Development of Brazil, Washington, 1954, xiv - 324 p.
- League of Nations      Economic Stability in the Post-War World, Geneva, 1945, 341 p.
- Industrialization and Foreign Trade, United States, 1945, 171 p.
- O.E.E.C.      An International Comparison of National Products and the Purchasing Power of Currencies by Gilbert and Kravis, Paris, 1953, 209 p.
- Policies for Sound Economic Growth, 10th Annual Economic Review, 1959, 133 p.
- Royal Commission on Canada's Economic Prospects      Preliminary Report, Ottawa, December, 1956, 142 p.
- Final Report, Ottawa, 1957, 509 p.
- The Future of Canada's Export Trade, Ottawa, 1957, by Roger V. Anderson, 338 p.
- Output, Labour and Capital in the Canadian Economy, Ottawa, 1957, by Wm. C. Hood, and Anthony Scott, 513 p.
- UNESCO      Cultural Patterns and Technical Change by Margaret Mead, New York, Mentor, 1952, 352 p.
- United Nations      Analyses and Projections of Economic Development
- I) An Introduction to the Technique of Programming, New York, 1955, iv - 52 p.
- II) The Economic Development of Brazil, New York, 1956, ix - 165 p.
- III) The Economic Development of Colombia, Geneva, 1957, xii - 454 p.
- Commodity Trade and Economic Development, New York, 1953, vii - 102 p.
- The Determinants and Consequences of Population Trends, Population Studies No. 17, New York, 1953, xii - 404 p.

## United Nations

The Economic Development of Latin America and Its Principal Problems, New York, 1950, v - 59p.

Economic Development in Selected Countries: Plans, Programmes and Agencies, Department of Economic Affairs, New York, Vol. 1, October, 1947, xvi - 286 p., Vol. 2, February, 1950, xiii - 271 p.

The Future Growth of World Population, Population Studies No. 28, New York, 1958, viii - 75 p.

Instability in Export Markets in Under-Developed Countries, New York, 1952, vii - 94 p.

Measures for the Economic Development of Under-Developed Countries, Report by a group of Experts, New York, 1951, ix - 108 p.

Measures for International Economic Stability, New York, 1951, vii - 48 p.

Methods of Financing Economic Development in Under-Developed Countries, New York, 1949, vii - 163 p.

National and International Measures for Full Employment, New York, 1949, vii - 104 p.

National and Per Capita Incomes in Seventy Countries, Statistical Papers, Series No. 1, New York, 1949, 23 p.

Processes and Problems of Industrialization in Under-Developed Countries, New York, 1955, vii - 152 p.

Relative Prices of Exports and Imports of Under-Developed Countries, New York, 1949, viii - 156 p.

U. S. Commission on  
Foreign Economic  
Policy

Report to the President, Washington, Government Printing Office, 1954, 94 p.

U. S. Department of  
Commerce

The United States in the World Economy, The International Transactions of the United States During the Interwar Period, by Hal B. Lary and Associates, Washington, Government Printing Office, 1943, viii - 216 p.

U. S. Joint Economic  
Committee

Federal Expenditure Policy for Economic Growth  
and Stability, Papers Submitted by Panelists  
Appearing, Washington, Government Printing  
Office, 1957, xv - 1203 p.

The Relationship of Prices to Economic  
Stability and Growth, Papers Submitted by  
Panelists Appearing, Washington, Government  
Printing Office, 1957, xv - 1203 p.

U. S. Materials Policy  
Commission

Resources for Freedom, Report to the President,  
Washington, Government Printing Office, 1952,  
101 p.

## PERIODICAL ARTICLES

- Abramson, A. G., "Permanent Optimistic Bias - A New Problem for Forecasters", Commercial and Financial Chronicle, February 20, 1958, page 12.
- Adler, J. H., "The Fiscal & Monetary Implementation of Development Programmes", American Economic Review, Papers and Proceedings, Vol. 42, No. 2, May, 1952, pp. 584-600.
- "World Economic Growth - Retrospect and Prospects", Review of Economics and Statistics, Vol. 38, No. 3, August 1956, pp. 273-285.
- Belshaw, H., "Population Growth and Levels of Consumption in New Zealand", Economic Record, Vol. 31, No. 60, May 1955, pp. 1-17.
- Bernstein, E. M., and Patel, I. G., "Inflation in Relation to Economic Development", DMF Staff Papers, Vol. 2, No. 3, November, 1952, pp. 363-398.
- Boulding, K. E., "Toward a General Theory of Growth", Canadian Journal of Economics and Political Science, Vol. 19, No. 3, August, 1953, pp. 326-340.
- Bruton, Henry J., "Growth Models and Underdeveloped Economies", Journal of Political Economy, Vol. 63, No. 4, August, 1955, pp. 322-336.
- Caine, Sir Sydney, "Stabilizing Commodity Prices", Foreign Affairs, Vol. 37, No. 1, October, 1958, pp. 131-143.
- Chase Manhattan Bank, "Inflation in Latin America", Latin American Business Highlights, Fourth Quarter, 1957, pp. 1-7.
- de Chazeau, M. G., "Can We Avoid Depression in a Dynamic Society?", Harvard Business Review, Vol. 32, No. 4, August, 1954, pp. 37-44.
- Corden W. N., "The Economic Limits to Population Increase", The Economic Record, Vol. 31, No. 61, November, 1955, pp. 242-260.
- Despres, E., and Friedman, M. et al., "The Problem of Economic Instability", American Economic Review, Vol. 40, No. 4, September 1950, pp. 501-538.

- Domar, E. D., "Capital Expansion Rate of Growth and Employment", Econometrica, April, 1946.
- "Economic Growth: An Econometric Approach", American Economic Review, Papers and Proceedings, Vol. 42, No. 2, May, 1952, pp. 479-495.
- "Expansion and Employment", American Economic Review, Vol. 37, No. 1, March, 1947, pp. 34-55.
- Eckaus, R. S., "The Factor Proportions Problem in Underdeveloped Areas", American Economic Review, Vol. 45, No. 4, September, 1955, pp. 539-565.
- Economic Commission for Latin America, "The Input-Output Model", Economic Bulletin for Latin America, Vol. 1, No. 2, September, 1956, pp. 16-28.
- Eisner, R., "On Growth Models and the Neo-Classical Resurgence", The Economic Journal, Vol. 68, No. 272, December, 1958, pp. 707-721.
- Ellis, H. S., "Conditions and Rates of Economic Growth", Journal of Farm Economics, Vol. 37, No. 5, December, 1955, pp. 807-820.
- Galenson, W., and Leibenstein H., "Investment Criteria, Productivity and Economic Development", Quarterly Journal of Economics, Vol. 69, No. 3, August, 1955, pp. 343-370.
- Galbraith, J. K., "The Causes of Economic Growth - The Canadian Case", The Queens Quarterly, Vol. 65, No. 2, Summer 1958, pp. 169-182.
- Gardner, Walter R., "The Role of the International Monetary Fund in Promoting Price Stability", IMF Staff Papers, Vol. 7, No. 3, April 1960, pp. 319-326.
- Haberler, G., "Monetary and Real Factors Affecting Economic Stability", Banco Nazionale del Lavoro, Quarterly Review, Vol. 9, No. 38, September, 1956, pp. 85-99.
- Hansen, A. H., "Growth or Stagnation in the American Economy", Review of Economics and Statistics, Vol. 36, No. 4, November 1954, pp. 409-414.
- "Toward a Dynamic Theory of the Cycle", American Economic Review, Papers and Proceedings, Vol. 42, No. 2, May 1952, pp. 74-84.

- Hasson, J. A., "Economic Stabilization in a Primary Producing Country", Journal of Political Economy, Vol. 64, No. 3, June, 1956, pp. 226-241.
- Hicks, J. R., "National Economic Development in the International Setting", Central Bank of Ceylon Bulletin, Vol. 7, No. 3., March, 1957, pp. 8-11.
- "The Long Run Dollar Problem", Inaugural Lecture, Oxford Economic Papers, Vol. 5, No. 2, June, 1953, pp. 117-135.
- Hoselitz, Bert F., "Patterns of Economic Growth", Canadian Journal of Economics and Political Science, Vol. 21, No. 4, November, 1955, pp. 416-431.
- IMF Mission, "Economic Development with Stability", IMF Staff Papers, Vol. 3, No. 3, February, 1954, pp. 313-386.
- Johnson Harry G., "Equilibrium Growth in an International Economy," Canadian Journal of Economics and Political Science, Vol. 19, No. 4, August, 1955, pp. 478-500.
- de Jouvenal Bertrand, "From Political Economy to Political Ecology", Eastern Economist Supplement on Problems of Economic Growth, Vol. 28, No. 17, April 26, 1957, pp. ii-iv.
- Kaldor, N., "A Model of Economic Growth", Economic Journal, Vol. 67, No. 268, December, 1957, pp. 591-624.
- Kanesthasan, S., "Export Instability and Contracyclical Fiscal Policy in Underdeveloped Export Economies: A Case Study of Ceylon Since 1948", IMF Staff Papers, Vol. 7, No. 1, April, 1959, pp. 46-74.
- Kindleberger, C. P., "The Terms of Trade and Economic Development", Review of Economics and Statistics, Vol. 40, No. 1, Part 2, February, 1958, pp. 72-90.
- Knorr, K., "Market Instability and United States Policy", Journal of Political Economy, Vol. 62, No. 5, October, 1954, pp. 375-289.
- Lewis, W. Arthur, "Sponsored Growth: A Challenge of Democracy", Eastern Economist Supplement on Problems of Economic Growth, Vol. 28, No. 17, April 26, 1957, pp. vii-x.

- Malenbaum, W., "India and China: Contrasts in Development"
- "The Asian Economic Potential", The Annals of the American Academy of Political and Social Science, Vol. 318, July, 1958, pp. 18-26.
- Maier, G. M., "International Trade and International Inequality", Oxford Economic Papers, Vol. 10, No. 3, October, 1958, pp. 277-289.
- Moses, L. N., "The Stability of Interregional Trading Patterns and Input-Output Analysis", American Economic Review, Vol. 45, No. 5, December, 1955, pp. 803-832.
- North, D. C., "Location Theory and Regional Economic Growth", Journal of Political Economy, Vol. 63, No. 3, 1955, pp. 243-258.
- Nurkse, R., "Some International Aspects of the Problem of Economic Development", American Economic Review, Papers and Proceedings, Vol. 42, No. 2, May, 1952, pp. 571-583.
- "Trade Fluctuations and Buffer Policies of Low Income Countries", Kyklos, Vol. 11, No. 2, 1958, pp. 141-154.
- Oelbaum, J., "Use of Foreign Parts Growing", The Journal of Commerce, New York, February 24, 1960, page 1.
- Pazos, Felipe, "Economic Development and Financial Stability", IMF Staff Papers, Vol. 3, No. 2, October, 1953, pp. 228-253.
- Peacock and Dosser, "Input-Output Analysis in an Underdeveloped Country: A Case Study", Review of Economic Studies, Vol. 25(1), No. 66, October, 1957, pp. 21-24.
- Polak, J. J., "Monetary Analysis of Income Formation and Payments Problems", IMF Staff Papers, Vol. 6, No. 1, November, 1957, pp. 1-50.
- Ranis, G., "The Capital Output Ratio in Japanese Development", Review of Economic Studies, Vol. 26(1), No. 69, October, 1958, pp. 23-32.

- Rostow, W. W., "Rostow on Growth", The Economist, London, August 15, 1959, pp. 409-416.
- "The Take-Off into Self-Sustained Growth", Economic Journal, Vol. 66, No. 261, March, 1956, pp. 25-48.
- Singer, H. W., "The Distribution of Gains Between Investing and Borrowing Countries", American Economic Review, Vol. 40, No. 2, May, 1950, pp. 473-685.
- Slichter, S. H., "Break-Up of the Business Cycle", Harvard Business Review, Vol. 33, No. 1, page 19, January-February, 1955.
- Smithies, A., "Economic Fluctuations and Growth", Econometrica, Vol. 25, No. 1, January, 1957, pp. 1-52.
- Spengler, J. J., "The Population Problem: Dimensions, Potentialities, Limitations", American Economic Review, Papers and Proceedings, Vol. 46, No. 2, May 1956, pp. 337-351.
- Tagliacarne, C., "Monetary and Consumption Indices in International Comparisons", Review of Economic Conditions in Italy, Banco de Roma, Vol. 8, No. 6, November, 1954 pp. 516-522.
- Triffin, R., "Improving World Liquidity", The Banker, Vol. 110, No. 407, January, 1960, pp. 13-22.
- Villard, H. H., "Some Notes on Population and Living Levels", Review of Economics and Statistics, Vol. 37, No. 2, May, 1955, pp. 189-195.
- Wai, Utun, "The Relation Between Inflation and Economic Development, A Statistical Inductive Study", IMF Staff Papers, Vol. 7, No. 2, October, 1959, pp. 302-317.
- Wrong, Dennis H., "Trends in Class Fertility in Western Nations", The Canadian Journal of Economics and Political Science, Vol. 24, No. 2, May 1958, pp. 216-229.

APPENDIX I

ABSTRACT OF

Unequal Growth in the World Economy:  
Its Repercussions on Growth and Stability in an  
Interdependent World Economy<sup>1</sup>

In an interdependent world economy the rate of economic growth of the parts is dependent on the rate of growth of the entire world economy. The rate of growth of the world economy may be paced by the growth rate of the advanced centre, being the mature, industrialized economies, but in the longer run the dynamic growth impulse rests in the under-developed periphery. The reason for this ultimate dependence on the newly developing economies is found in the retardation effects communicated through the international repercussion factor, which becomes operative as a result of unequal growth in the world economy.

To study this problem effectively it was necessary to utilize all the available techniques of analysis so far applied to the question of economic growth. These include the incomplete and imperfect theory of economic growth that has gradually evolved, the tools of model building, the historic approach, and the empirical method. The inadequacy of the general theory becomes increasingly apparent as growth problems are analysed.

Before any satisfactory theory can be developed the economist must broaden his horizons to encompass the many disciplines of the

---

<sup>1</sup> Ph.D. Thesis presented by Donald Clarke Taylor, in 1961, to the Faculty of Social, Economic and Political Sciences of the University of Ottawa, ix - 368 pages.

social sciences, and then formulate a comprehensive philosophy of social evolution. The perspective required has been labelled humanitics, by which is meant the nature of social science in its entirety and the affairs of humanity.

Preparatory to dealing with the problem of unequal growth it was necessary to review the state of economic development achieved and the comparative growth rates of member states of the world economy. Growth rates demand understanding of growth forces, and to this end a survey of the now extensive literature was undertaken. Separate attention was given to the population problem. To complete this background exploration, forecasts and projections of growth rates were analysed.

An empirical approach was first adopted to study the central problem of international retardation effects. The economic history of several representative countries was surveyed in a condensed account. Next, the theoretical concept of international retardation effects was developed, first in relation to the transmission of income effects in the interdependent world economy, and subsequently in terms of balance of payments interrelationships, when the approach used was a study of the stages of economic progress.

These explorations demonstrated the importance of stability as a fundamental determinant, in many ramifications, of the real rate of economic growth. Attention was given specifically to the impact of instability, as well as to the true meaning of instability, in the world economy. The initial approach used was the traditional fiction of the closed economy, then consideration of the broader reality of the international economy, and finally the world economy.

In order not to neglect any tools of analysis, the nature of mathematical growth models and their lessons were studied. Once again, it was necessary to proceed by stages of diminishing simplicity to arrive at the best available in fully internationalized, dynamic models, which alone would aid in dealing with the problem. A final, simple, non-mathematical model demonstrates the central theme of the thesis.

In Part III, the conclusions of the study were examined in the context of the world economy, in the full sense of an integrated social and political complex. The folly of the economics of frustration, which is the path of introverted economic dogma that inevitably becomes self-defeating, is exposed to the harsh glare of good sense in terms of economic growth.

In all, it is clearly seen that a large and growing income gap between the developed and the underdeveloped areas presages economic as well as political trouble for the industrialized countries.