Economic Fluctuations in Australia 1948 to 1964

A. M. C. WATERMAN

In November 1960 the Australian Government brought in emergency economic measures to avert a balance of payments crisis. The stock market collapsed, unemployment rose sharply, and for the two next years there were signs of recession. The episode has been described as Australia's 'first independent slump', and the government was strongly criticised.

Dr Waterman was deeply sceptical of the explanations put forward at the time, some of which have passed into folklore, and began a detailed investigation into the sources and history of the 1961 recession. This work led to an exhaustive statistical and analytical study of economic fluctuations in Australia since World War II, of which this book is the outcome.

The author's findings will upset many widely held opinions regarding the performance of the Australian economy in this period. The 1961 recession, for example, was less serious than that of 1952–3, which passed almost unnoticed, and the effects of the Commonwealth Government's austerity measures in 1951, 1956, and 1960 were much smaller than is commonly supposed; nor does there appear to be any evidence for the view that, since World War II, Australia has developed an 'independent' economy in the sense of obtaining immunity from economic disturbances originating in the outside world.

This book will be essential reading for all students of the Australian economy and for those interested in the role of government in dealing with the interrelated problems of the balance of payments, employment, and inflation.

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Preface

In 1950 Australia entered the most prosperous and progressive era of its history. Even in narrowly economic terms – before allowance is made for climate, leisure, and relative freedom from overcrowding and pollution – the Australian standard of living is among the highest in the world. For the last twenty years there has been almost continuous growth of the economy at an average rate comparable with that enjoyed between 1866 and 1886, the only other period of equally rapid expansion. Unemployment has never become a serious problem and since 1952 there has been reasonable price stability – when measured, at least, against the unexacting standards of the post-war world.

It might be wondered, in view of all this, why anyone should trouble to write a book about economic fluctuations in Australia. Transitory interruptions of the Golden Age have been few and slight. The entire capitalist world has functioned more smoothly since World War II, and Australia seems to have done better than most other countries. By comparison with the United States and Canada, at any rate, departures from steady growth have been small and quickly reversed.

Yet 'business cycles', or their more obvious manifestations, continue to excite the attention of the general public. Parliamentary elections are fought, ostensibly at least, on such issues as 'inflation' and 'unemployment'. Newspapers and other organs of opinion are quick to point out the latest rise in the index of consumer prices or the latest fall in foreign exchange reserves. The Commonwealth government is held responsible for the stability of various published indicators of economic performance, and loudly denounced when small deviations occur.

In part these attitudes are a legacy of less happy days. There are many still living who remember too well the human cost of instability during the three decades following 1910. In part, too, they reflect the 'rising horizon of expectations' which characterises the second half of the twentieth century. We are accustomed, today, to very high standards of performance both from our economy and from our policy-makers. The public is no longer willing to tolerate 'mistakes' which even twenty years ago would scarcely have been noticed.

More important than these, we are aware as never before of the moral implications of macro-economic inefficiency. If unemployment is allowed to rise by two percentage points for one year, and if there is a proportionate decline in the use of other resources, Australians forgo something between two and four hundred million dollars worth of goods and services. For Australia this is a drop in the bucket. It is a small matter to arrange that the cost is equitably spread. Living standards fall negligibly. A society of such affluence can well afford this slight waste for the real or imagined benefits of a little more 'slack' in the economy. But there are many parts of the world, and some not far from Australia, where even three hundred million dollars could be put to good use.

For reasons of this kind, and also for what light it may throw on the theory of fluctuations in a 'dependent' economy, I have thought it worth while to record in some detail the history of those three or four occasions, since 1948, on which there have been noticeable interruptions to the course of progress. In the first chapter I summarise the results of an attempt to measure the post-war Australian business cycle. Chapter 2 contains a simple theoretical model, together with a brief review of the econometric literature relevant to fluctuations in Australia. The first two chapters comprise the statistical and theoretical skeleton around which the narrative chapters, 3, 4, and 5, are composed. Readers who wish to get to the heart of the matter as quickly as possible may choose to skip the first two chapters, but I must warn them that they may sometimes find themselves baffled by reference to points established in chapters 1 and 2. In the final chapter I attempt to summarise my history in a number of conclusions.

My conclusions, whether right or wrong, would never have been formed, nor the research upon which they are based undertaken, but for the vicarious munificence of the Australian taxpayers, to whom this forbidding volume may seem but poor return. At their expense I was brought from Canada, together with my wife and children, and maintained in Canberra for three years with every amenity.

During my tenure of a Research Scholarship at the Australian National University from 1964 to 1967 I worked under the supervision of Professor N.G. Butlin and Professor T.W. Swan. To each, though for quite different reasons, I owe far more than I can adequately acknowledge. Every member of the Economic History and Economics Departments of the Research School of Social Sciences helped me in some important way, as also did many from other departments in the university and elsewhere in Australia. I am especially grateful to Professor J.D. Pitchford, Dr Helen Hughes, Professor H.F. Lydall, then of Adelaide, and Sir Frederick Wheeler, CBE, for critical comments on various portions of early drafts.

Above all, I wish to record my gratitude to the late Mr H.P. Brown, to

Dr A.R. Hall, and to Dr C.A. Blyth, now Deputy Director of the National Institute of Economic and Social Research. Were it not from fear of imputing to them its deficiencies I should admit that this is more their book than mine. Any merit it may possess is largely the result of their unfailing generosity and patience.

St John's College
Winnipeg
25 April 1971

A.M.C.W.

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Figures drawn by Hans Gunther of the Cartographic Office, Department of Human Geography, Australian National University

Abbreviations

ACTU	Australian Council of Trade Unions
ANZAAS	Australian and New Zealand Association for the Advancement of Science
ANZ Bank	Australia and New Zealand Bank Limited
Arbitration Court	Commonwealth Court of Conciliation and Arbitration
BLS	Bureau of Labor Statistics (USA)
CAR	*Commonwealth Arbitration Reports*
CBCS	Commonwealth Bureau of Census and Statistics
CBCS Bank	Commercial Banking Company of Sydney Limited
CPD	*Commonwealth Parliamentary Debates*
CTB	Commonwealth Trading Bank
DBS	Dominion Bureau of Statistics (Canada)
EEC	European Economic Community (Common Market)
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNE	Gross National Expenditure
GNP	Gross National Product
HIRC	Housing Industry Research Committee
HMSO	Her Majesty's Stationery Office (London)
IBRD	International Bank for Reconstruction and Development
ILO	International Labour Office
IMF	International Monetary Fund
LGS	Liquid assets and government securities
MRBS	*Monthly Review of Business Statistics*
NATO	North Atlantic Treaty Organization
NBER	National Bureau of Economic Research (USA)
n.e.i.	Not elsewhere included
NSW	New South Wales
OIS Bulletin	*Bulletin of the Oxford Institute of Statistics*
OPS	Office of Price Stabilization (USA)
PMG	Postmaster General

Radcliffe Report	*Report of the Committee on the Working of the Monetary System*
SA	South Australia
SMH	*Sydney Morning Herald*
SRD	Statutory Reserve Deposit
SVA	Stock valuation adjustment
TIB	*Treasury Information Bulletin*
Vernon Report	*Report of the Committee of Economic Enquiry*

1

Measuring the Australian Business Cycle

It is probably misleading to speak of 'business cycles'. It is highly doubtful whether there is any such thing as the 'Australian' business cycle. And even if there were, it would be impossible to measure it.

For most people, however, convenience comes before logical propriety. It is possible to observe, and in some manner personally to experience, the fluctuation of certain aggregates in the economy. Throughout most of 1951, for example, when the number of vacancies registered with the Commonwealth Employment Service regularly exceeded the number of job applicants by more than 100,000, the prices of most consumer goods and services rose each month by about 4d. in the £1, imports entered the country in unprecedented volume, and – for the first half of the year at least – the stock exchanges boomed. But during 1961, on the other hand, when unemployment in Australia reached its highest point since the 1930s, prices remained stable (or even fell slightly), imports fell off, and most share prices stayed well below peak levels of the previous year. Six or seven such periods of exhilaration and quiescence have succeeded each other in Australia since World War II: their occurrence has been noted and debated; and their causes and effects studied by statisticians, economists, and business analysts. Although there is no ground for believing these phenomena to be cyclical in any but the most superficial sense, it seems reasonable to defer to current usage by occasional reference to a 'business cycle' during the post-war years.

As later chapters of this book will make clear, the source of economic fluctuations in Australia seems generally to have arisen externally. Although faint traces of a domestically generated disturbance may occasionally be discerned, the world trading environment has been crucial in determining whether such were to be damped into insignificance or amplified by 'resonance' with external patterns.

The chief difficulty in speaking of a business cycle, or indeed of giving any account of economic fluctuation in a modern nation-state, lies in the fact that its manifestations are far too nebulous to be observed as a whole. Even a single 'business cycle indicator' such as total civilian employment,

or the value of retail sales, represents a very high degree of aggregation. At certain times, to be sure, the vast majority of components move more or less in unison. But at other times, from the middle of 1956 to the beginning of 1959 for example, there is so much diversity of behaviour among different regions and industries that a time-series of their total appears as a shapeless wobble around a trend-line representing the mean growth-path for the whole post-war period. Occasions on which all forces in the economy are tending simultaneously to expansion or contraction are rare and even exceptional.

But even if this were not the case – even if production, employment, sales, and incomes moved simultaneously in all markets and regions so that it were possible to speak without ambiguity of movement in the 'general level of activity' for Australia as a whole – it would still be impossible in principle to identify (and therefore to measure) the 'cyclical' component of this movement. This is because there are almost certainly other influences at work upon the time-path of economic indicators besides those which seem to determine 'peaks' and 'troughs' every three or four years; and because it is only possible to separate the effects of these influences from one another by the arbitrary exercise of what is usually called 'judgment'.

The assumption upon which rests the removal of putative 'seasonal' and 'random' elements, namely that these arise from causally independent processes in the economy, is not in itself outrageous. It is not too difficult to imagine that the effect upon industrial production of a strike say, or a natural disaster, or of the pre-Christmas shopping spree, should be simply (or logarithmically) additive. But in that case, the elimination of their impact from the observed time-series in order to display the hypothetical 'trend-cycle' component to which they were added is a straightforward operation of widely accepted validity. In the end it is bound to involve 'judgment', but judgment of a kind with which most reasonable men will concur.

The fundamental problem, both for the statistician and for the historian, lies in the further task of distinguishing between 'trend' and 'cyclical' influences upon economic activity. Does economic growth take place for reasons that are analytically distinct from those which explain its apparent interruption two or three times a decade? Or is it rather the case, as Schumpeter believed, that 'the recurring periods of prosperity of the cyclical movement are the form progress takes in a capitalist society'?

If the former be true, if 'cycles' and 'growth' are separable phenomena, then it makes sense to estimate the shape of statistical trends, and to study the oscillation of 'trend-free' residuals. But if Schumpeter be right, then a trend is little more than summary description of the average behaviour of a series, and the 'cyclical' element exposed by its removal a mere artefact.

There is no way of deciding the question in general. Rival theories of the market economy in motion are most often uni-sectoral, almost always concerned with a single, closed system, and rest without exception upon the most primitive behavioural assumptions.

No economist worth the name is likely to be deflected from his task by the thought that it is impossible in principle. Almost all discussion of economic fluctuations in Australia since 1945, up to and including this book, has been conducted in highly aggregative terms. It has proceeded, moreover, upon the assumption that economic growth is largely governed by long-term factors, but that the 'rate of growth' which these determine is liable to occasional 'interruption' from the operation of various short-term factors.

The most explicit justification of the aggregative approach is found, appropriately enough, in the *Report of the Committee of Economic Enquiry* (Vernon Report). For Australia, at least, 'the level of activity in an economy is determined by the level of aggregate spending'. This includes spending from overseas on exports. 'If spending is too low . . . economic activity will be low and unemployment high . . . If spending is greater than productive capacity . . prices will rise' (2.47) to the extent that excess demand is not dissipated in imports. These functions are a matter of common observation. Employment is highly correlated with GNP and the rates of wage and selling price inflation are evidently sensitive to the degree of employment.

No serious history can ignore the course of inter-sectoral movements. It seems reasonable, however, to employ the categories of an aggregative model as a means of organising historical data. Following precedent, therefore, it will be assumed in this book that a single, overall measure of 'economic activity' is not completely without meaning; and that fluctuations in the growth-path of this quantity are of interest to the economic historian.

The crucial assumption of a causal mechanism of fluctuations substantially independent of that of growth is also to be found, by implication at least, in the Vernon Report (1.31 and 1 *passim*). Its basis is the observed constancy, over periods such as that of this history, of proportionate year-to-year increase in population, capital stock, and average labour productivity. None of these is perfectly regular. The first reveals some tendency to decay, and the other two diverge from their statistical trends in a way that suggests some responsiveness to the level of economic activity. But fluctuations in the degree of employment of labour and of installed capacity which also occur in response to economic activity support the view that the factor base grows much more steadily than the output it produces.

As a first approximation, therefore, it will be supposed that, for Australia, in the period from the end of World War II to the present, the circumstances which determined the growth of the work-force, the size and age-

composition of the capital stock, the scale of operations, degree of competition, flow of innovations, and diffusion of best-practice techniques were all more or less unaffected by year-to-year changes in the intensity with which the existing supply of factors was operated.

THE ANATOMY OF THE TREND-CYCLE [1]

It has long been customary for business analysts to identify Peaks and Troughs of economic time series as a preliminary to detailed chronological study of fluctuations. Under the late W.C. Mitchell the method was raised to a fine art in order to establish the turning points of a 'reference cycle' and thus to classify 'leading indicators' for use in prediction (Burns and Mitchell, 1947).

From the standpoint of economic theory, however, there seems no reason to single out the dates of maxima and minima to the exclusion of other possibly interesting points in time. For a series which is oscillating about an increasing or decreasing trend, for example, it may be just as important to know the dates at which the indicator stood furthest above and below trend. The steeper the trend, and the smaller the amplitude of fluctuations, the more these dates will differ from those of Peaks and Troughs. And if economic fluctuations are conceived to be the result of some disturbance to what would otherwise have been a process of steady growth, it will be essential to establish the dates at which the *growth-rate* of the indicator reached maxima and minima: that is to say, the points of inflexion of the trend-cycle.

In figure 1.1 part of an imaginary trend-cycle is shown, together with its imaginary trend and the derived growth-rate curves. Since trend and trend-cycle are represented on a ratio scale the slope of either at any point in time represents the instantaneous, proportionate rate of growth of the respective series. The lower graph represents a time series of these slopes. Its vertical axis measures the first time-derivatives of logarithmic trend and trend-cycle: these should be interpreted as percentage rates of growth per annum. Thus, on the date at which the indicator reaches a Peak, P_n, the proportionate rate of growth becomes zero and the growth-rate curve passes below the horizontal axis in the lower graph. Similarly, the growth-rate curve rises above the horizontal axis on the date T_n, at which the primary series reaches a minimum. The growth-rate curve crosses its own trend-line (representing the growth-rate of the trend) on the dates B_n and S_n, at which the trend-cycle stands respectively furthest above and furthest below its trend.

[1]The material reported in this section of the chapter has already been published in more detailed form in *Australian Economic Papers*, 6, 1967. I am grateful for permission to reprint this material.

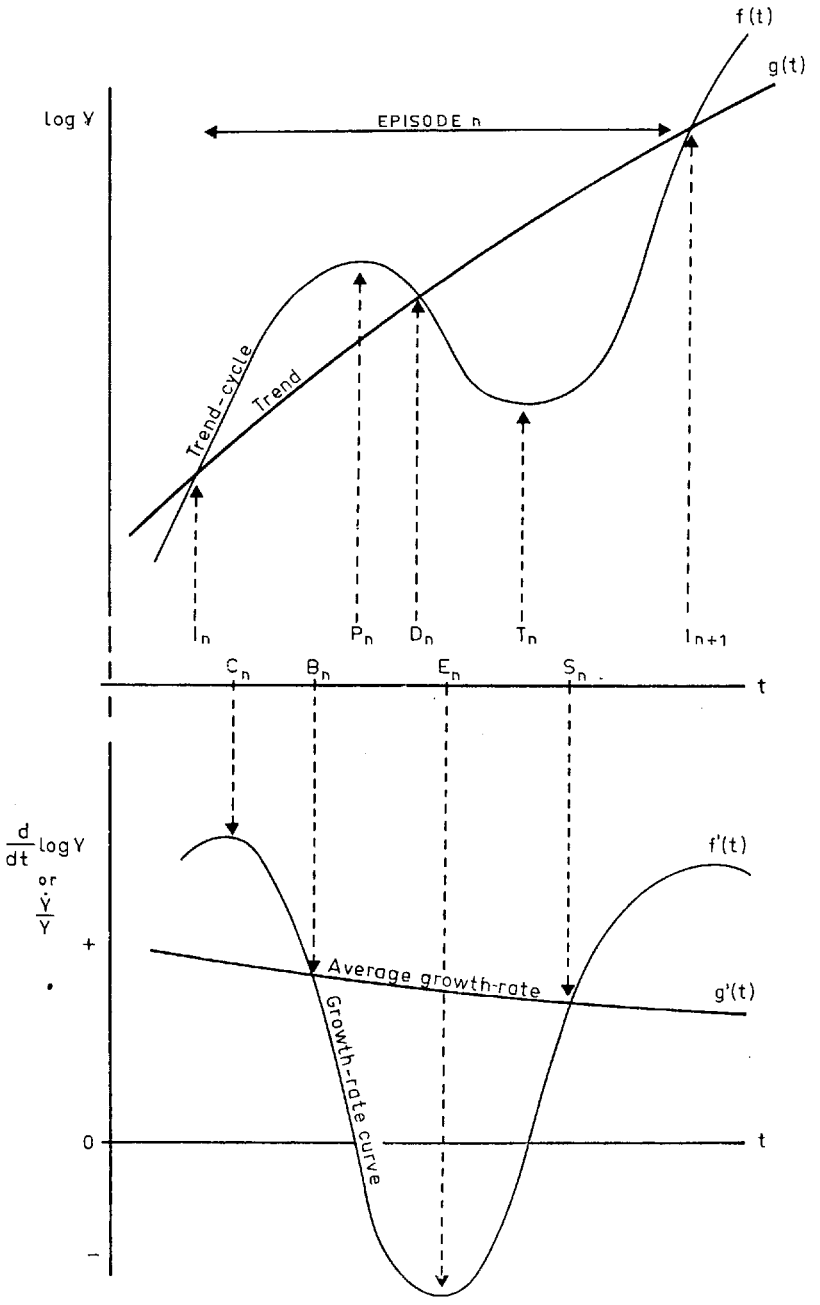

Fig. 1.1 Illustration of the eight reference points

Two other dates are shown in figure 1.1 which may possess significance for a theory of fluctuations. These are I_n and D_n, at which the trend-cycle crosses its trend.

In all, there are eight reference points defined by the relation between trend-cycle and trend, and by their derivatives:

I the point of *Inflation*
C the point of *Contraction*
B the *Boom* point
P the *Peak*
D the point of *Deflation*
E the point of *Expansion*
T the *Trough*, and
S the *Slump* point

These names are assigned for mnemonic purposes only. Usually the points will be referred to by their initial letter. The words 'peak' and 'trough', when capitalised, will refer to the reference points P and T defined above. When spelt without capitals they will refer to maxima and minima of whichever time series is currently under discussion.

Fluctuations in the course of each indicator (and, by assumption, in the level of activity as a whole) may be charted in terms of the history of these eight reference points. Let us replace the word 'cycle' with a more general term, *episode*, borrowed from musical theory in order to bring out an analogy between the quasi-periodic process of economic growth and fugal development.

With a subscript to denote the particular episode we have in mind, the chronology of the nth would be described by the dates corresponding with I_n, C_n, B_n, P_n, D_n, E_n, T_n, S_n, and I_{n+1}. An illustration of this sequence is provided in figure 1.1. Note that the points I and D may occur before, after, or at the same time as the points C and E. The points B and S will precede the points P and T when the trend is positive, follow them when the trend is negative, and coincide when there is no trend.

It is clear that the estimates of I, D, B, and S points will depend upon the shape and position of the trend. Experiments with various fitted trends showed that the dates of specific cycle reference points agreed more closely when a log-curvilinear trend was used. This seems to suggest that the assumption of causal independence is not altogether without foundation. Individual time series which differ markedly in their average or trend behaviour and also in the timing of Peaks and Troughs, yielded cyclical residuals which agreed closely as to the timing of *trend-free* peaks and troughs: points B and S.

METHOD

Since the object was to establish a fine chronology, monthly indicators

only were examined. Almost any monthly series one can think of will reveal cyclical fluctuations to some extent.[2] Some have a more obvious causal connection than others with the macro-economic processes of the economy. Production and internal trade (volume) series will be highly correlated, without much lag, with aggregate output. All employment series, including vacancies, will move closely with aggregate output, some series with small positive, and some with small negative lags. It is reasonable to expect that volume of exports and export prices, which play an obvious initiating role in the Australian economy, will tend to lead the average movement of most other indicators. Other series, such as imports, migration, and (inverted) unemployment, will reflect the business cycle more because of their response to changes in aggregate demand, and will therefore tend to be coincident or slightly lagging. Indices of local prices and costs will reveal the business cycle not in their original shape but in their growth-rate transformation. Peaks and troughs of the *rate of inflation* will correspond in theory (as they do in practice) to peaks and troughs in the degree of excess demand. Monetary series will reflect the business cycle partly as cause, but chiefly as effect, since fluctuations in the Australian money supply are strongly influenced by movements in international reserves.

In the light of these considerations, and with regard to the work of previous investigators in this field (see especially Mallyon, 1966), the indicators set out in table 1.1 were assembled and prepared for examination.

Table 1.1 Monthly time-series from January 1948, used to determine reference points for the post-war Australian business cycle

	Employment and unemployment
1A	Total employment, persons, old series
1B	Total employment, persons, new series*
2	Private employment, males
3	Private employment, females
4	Factory employment, males
5	Factory employment, females
6	Commerce employment, persons
7	Registered unemployment, males
8	Registered unemployment, females
9	Registered vacancies, males
10	Registered vacancies, females
11	Number receiving unemployment benefit, persons
	Output and activity
12	ANZ Bank Index of factory production‡
13	New car registrations
14	Total electricity generated

* From July 1954 only.
‡ From July 1949 only; extrapolated to January 1948.
[2]Schumpeter suggested 'attendance at divine service'.

15 Rail-freight ton-miles
16 Private building activity
17 Rate of inflation of Construction Cost Index
18 Wholesale trade – volume
19 Rate of inflation of Wholesale Price Index
20 Retail trade – volume
21 Rate of inflation of Retail Price Index
22 Postal activity – value
23 Banking activity – volume

Banking and finance

24 Volume of money
25 Current deposits of the public
26 Fixed deposits of the public
27 Banking activity – value
28 Share Price Index

International activity

29 Exports – volume
30 Export Price Index
31 Imports – volume
32 Rate of inflation of Import Price Index
33 International reserves
34 Gross immigration, persons
35 Gross emigration, persons

Other

36 Log (registered vacancies) – log (registered unemployment), persons

Except in the case of the trend parameters, discussed on pp. 23-6, it seemed inappropriate to pretend that this set is a random sample drawn from the parent population of all possible monthly series. No measure is worth while, therefore, of the statistical significance of most of the results reported in this chapter. In all that follows the basic assumptions are four:

(1) The general level of activity during a period may, in principle, be described by a single measure: Gross National Product (or better, Gross Domestic Product) at constant prices being the nearest approximation in practice to this.[3]

(2) For any reference points between I_1 and I_5 inclusive, the arithmetic mean of the distribution of specific cycle dates for the indicators listed in table 1.1 provides an estimate of the date at which a perfect monthly index of the general level of activity would have generated that reference point.

[3]The Commonwealth Bureau of Census and Statistics defines GNP as 'the total value of goods and services produced in Australia within a given period after deduction of the costs of goods and services, other than capital equipment, used in the process of production' (*National Accounts*, 3). In most other countries, however, GNP is taken to mean the value of goods-and-services produced by residents. What Australians call GNP is elsewhere called GDP. Throughout this book the Australian nomenclature will be used.

(3) The reliability of this estimate will be the greater, the larger the number of indications; it will be the smaller, the more widely these indications are dispersed about their mean.
(4) Similar conclusions may be drawn about the relative amplitude of a perfect index of activity from the distribution of specific, standardised, relative amplitudes.

Assumptions of this kind appear to underlie most attempts to construct any 'reference cycle' intended not merely to classify indicators but also to date fluctuations in general level of activity (see Burns and Mitchell, 1947: 71–95). The method is inelegant and fallible, and its results depend for their validity upon consistency with annual series of real GNP and agreement with the judgment of experienced commentators. In the last and most important of these respects, however, it differs only in degree from all other attempts at quantitative analysis in the social sciences.

In all but one case time-series were chosen from those published by some agency of the Commonwealth government and which were available on a monthly basis from January 1948 at the latest. The exception was the Index of factory production, issued by the ANZ Bank from July 1949, and extrapolated to January 1948 by the writer. A certain amount of splicing, interpolation, and deflation was necessary in some cases, and series were arbitrarily 'corrected' for the effects of the black coal general strike in July and August 1949. The resulting indicators are listed under names which will, in most cases, be self-explanatory.

In order to extract from each time-series the information discussed previously in this chapter, a considerable amount of processing was required. Seasonal variation was estimated and removed, and the residual, de-seasonalised series smoothed by application of a once-iterated three-month moving average. The result was taken to be the *trend-cycle*, and a quadratic regression line fitted to its logarithmic transformation by the method of least-squares, the logarithmic *trend*. Proportionate first differences of the putative trend-cycle were regarded as the *growth-rate curve*. Proportionate first differences of the trend afforded the *average growth-rate curve*, which could alternatively have been obtained, of course, by fitting a linear regression line to the growth-rate curve.

A computer program to perform these operations yielded as a by-product information concerning the amplitude of fluctuations.

The data for each indicator were plotted on a set of graphs taking the form illustrated in figure 1.1, one graph for each time-series. An example is shown in figure 1.2. Original observations are shown as unconnected points distributed in a fairly obvious seasonal pattern about the trend-cycle.

In accordance with principles elsewhere described (Waterman, 1967: 85–6), a set of reference points from I_1 (late in 1949) to I_5 (1962 or 1963)

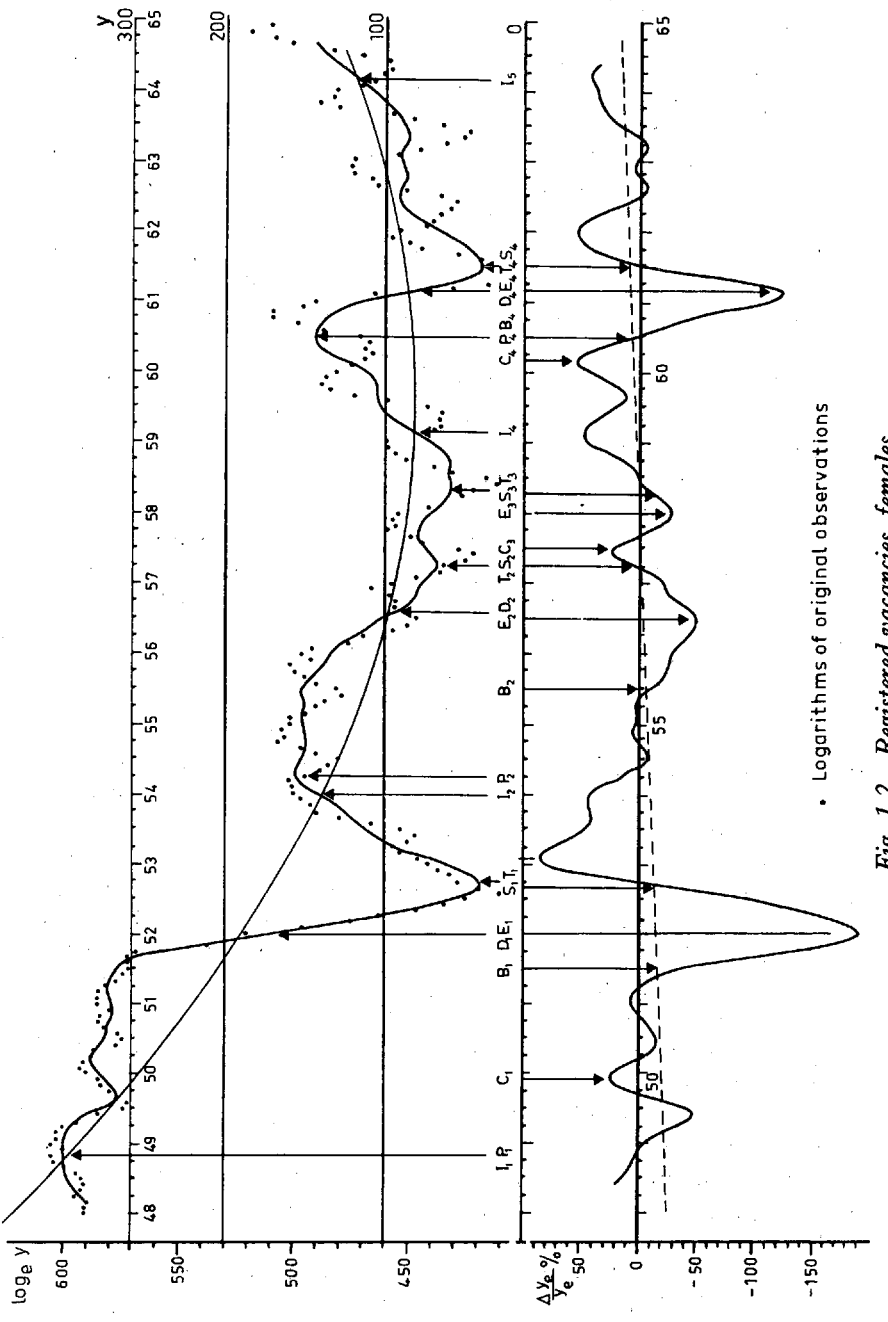

Fig. 1.2 Registered vacancies, females

was determined for each indicator by inspection of the graphs. Months were numbered serially from January 1948, and the dates of each specific cycle reference point converted into a number between one and 204. The distribution of indications for each reference point was then examined.

THE TIMING OF FLUCTUATIONS

In accordance with the third assumption listed in the previous section, two indices were designed to measure *coverage* and *concentration* respectively, each having a range from zero to unity. A reference point revealed by every indicator would be said to have a unitary coverage: one vouched by no indicator a zero coverage. If the distribution of indications for any reference point were entirely concentrated in one particular month, the indications would be said to have unitary concentration; if the standard deviation of the distribution were equal to the difference between the mean value of indications for this episode and the last, the distribution would be perfectly dispersed and the index of concentration zero (Waterman, 1967: section 3).

If it be further assumed that coverage and concentration are of equal weight in appraising the evidence for a reference point, a unidimensional index of *reliability* of evidence is formed by their product. Suppose, for example, that each of the thirty-six indicators reached a maximum value in May 1951. Both coverage and concentration would be unitary, and the evidence for a business cycle peak in that month 'perfectly' reliable. If 50 per cent of the indicators reached maxima during the first half of 1957, and if the ratio of the standard deviation of the distribution about its mean (May 1957) were 50 per cent of the number of months between May 1957 and the previous reference cycle Peak (June 1955), then the index of reliability of evidence would have a value of 0·25.

These statistics were calculated from the distributions of reference points for each of four episodes from I_1 (late in 1949) to I_5 (somewhere in 1962 or 1963–4). The results are summarised in table 1.2, which also shows two other sets of data: the dates finally selected for each of the reference points and those for Peaks and Troughs only, estimated by J.S. Mallyon (1966).

It will be seen from this table that the other six reference points, I, C, B, D, E, and S, are in general as clearly visible as the traditional Peaks and Troughs, if not more so. It also appears that the evidence for fluctuations in the general level of activity is much stronger in the First and Fourth Episodes, and in the first part of the Second Episode, than during the rather vague period from the middle of 1956 to the end of 1959.

Mere arithmetical manipulations do not tell the whole story, however. When the frequency distributions of each cluster of specific cycle reference

points are examined, no less than eight are seen to be bi-modal (Waterman, 1967: Table IV).

The bi-modal shape of several distributions is a matter for some concern. *A priori*, we would expect bi-modality to arise from ambiguity or weakness in the evidence. It might be better to reject these distributions and admit that nothing sensible can be said about the general level of activity in such periods.

Table 1.2 Reference cycle reference points, Australia, 1948–64

	Index of concentration a	Index of coverage b	Index of reliability of evidence a.b	Date of reference point	Date selected by Mallyon
I_1	0.857	0.914	0.783	Nov. 49	
C_1	0.805	0.968	0.779	(Aug. 50)	
B_1	0.864	0.971	0.839	May 51	
P_1	0.803	0.972	0.781	June 51	July 51
D_1	0.881	0.857	0.755	Mar. 52	
E_1	0.877	0.968	0.849	Mar. 52	
T_1	0.843	1.000	0.843	Nov. 52	Oct. 52
S_1	0.834	0.914	0.762	Dec. 52	
I_2	0.860	0.778	0.669	Apr. 54	
C_2	0.765	0.906	0.693	Feb. 54	
B_2	0.793	0.917	0.727	Mar. 55	
P_2	0.777	0.891	0.692	June 55	Sept. 55
D_2	0.856	0.639	0.547	Mar. 56	
E_2	0.822	0.875	0.719	Jan. 56	
T_2	0.791	0.595	0.471	June 56	June 56
S_2	0.857	0.583	0.500	Aug. 56	
I_3	0.800	0.306	0.245	(Feb. 57)	
C_3	0.818	0.781	0.639	May 57	
B_3	0.654	0.389	0.254	(May 57)	
P_3	0.671	0.568	0.381	Oct. 57	
D_3	0.640	0.472	0.302	(Nov. 57)	
E_3	0.648	0.875	0.567	Feb. 58	
T_3	0.712	0.756	0.538	July 58	Dec. 58
S_3	0.779	0.833	0.649	(Aug. 58)	
I_4	0.839	0.833	0.699	Aug. 59	
C_4	0.850	0.938	0.797	Jan. 60	
B_4	0.868	0.917	0.796	June 60	
P_4	0.828	0.946	0.783	July 60	Sept. 60
D_4	0.895	0.889	0.796	Mar. 61	
E_4	0.860	0.906	0.779	Jan. 61	
T_4	0.836	0.891	0.745	July 61	Aug. 61
S_4	0.859	0.944	0.811	Sept. 61	
I_5	0.748	0.750	0.561	(Nov. 62)	

Such is probably the case with C_1, S_3, and I_5. In the first of these, there is a period of eighteen months from late 1949 to early 1951 during which the growth-rates of various series begin to decline, recover, and decline again. S_3 is difficult to identify with any precision as the whole of 1958 is a shallow trough. The estimate of I_5 is likely to be less reliable than others simply because a parabola may represent an economic time series less plausibly at the extremes of its fitted range.

The other five bi-modal distributions, B_2, D_2, E_2, T_2, and S_2, fall within the Second Episode (1954–6), and with the exception of the last show a separation of about ten months between their two humps. Inspection of the graphs for each indicator suggests that the Second Episode may have had two distinct phases: peaks of activity occurring towards the end of 1954 and again in the middle of 1955, with a slight falling-off between the two. This becomes especially clear if the cyclical component is isolated and plotted separately. Figure 1.3 shows graphs of four indicators in which this double-headed shape is well marked. Logarithmic deviations from the log-quadratic trend are expressed in standard deviation units.

Two of the series graphed (ANZ Bank Index of factory production and new car registrations) have slightly higher cyclical values in 1955; the other two (private building activity and imports) have slightly higher cyclical values in 1954. But in each case it can be seen that there is a genuine expansion of activity over the whole period 1954/55 though with two occasions of special intensity: the last quarter of 1954 and the third quarter of 1955. Most of the other series reveal some trace of this pattern, though some show a clearly marked peak only in 1954 (e.g., the financial series) and others only in 1955 (e.g., the employment series).

If one thinks of the Second Episode, therefore, as the result of two successive 'waves' of economic activity separated by nine or ten months, the bi-modal character of its reference point distributions becomes intelligible. Most indicators respond to both waves, some more strongly to the first, and others more strongly to the second. Because the two waves are sufficiently close to form a single compound, however, the average values of the reference points are meaningful summaries of its chronology, even though they fall between peaks of the frequency distributions. Because the trend values of most indicators are rising, incidentally, it follows of course that there will be less ambiguity about P_2 than about B_2. The same would also be true of S_2 were it not for the fact that the episode peters out into a long, low-lying plateau from about the middle of 1956.

In the light of these discoveries, it was decided to accept all the indications in the Second Episode as valid evidence of fluctuations in activity, but to reject C_1, S_3, and I_5. Three other reference points, I_3, B_3, and D_3 were rejected because they are vouched by fewer than 50 per cent of the sample of indicators.

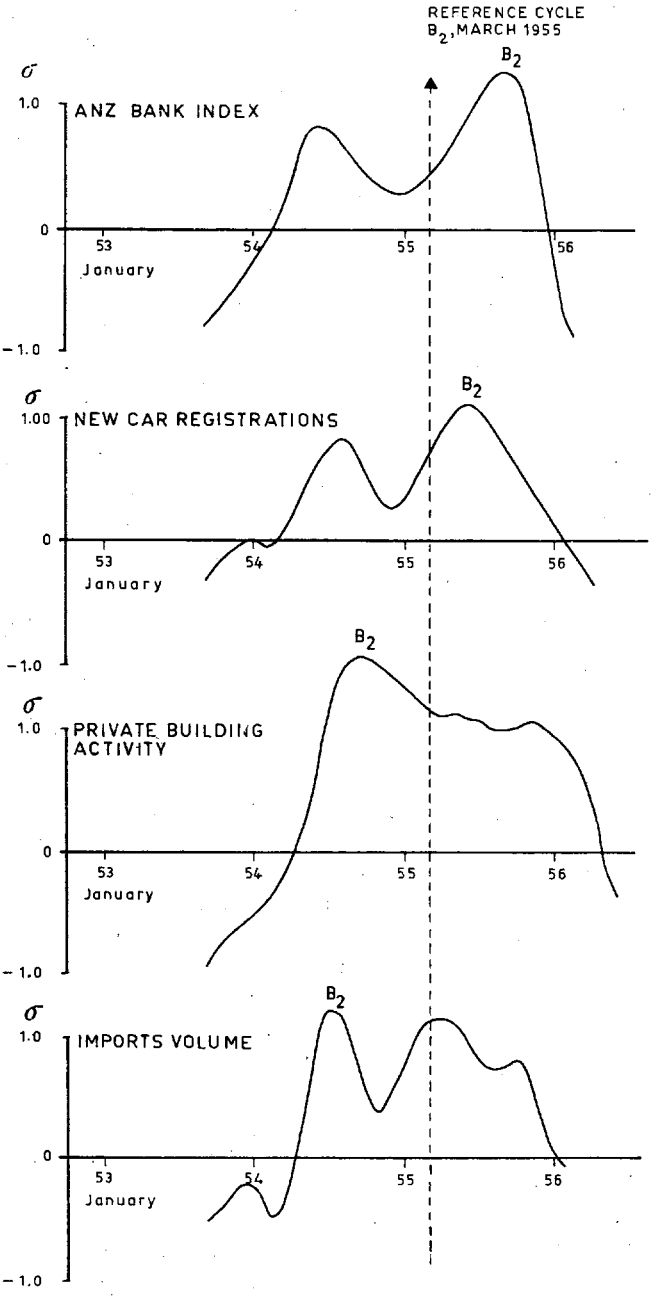

Fig. 1.3 Cyclical component of four indicators at the peak of the Second Episode

The dates of those reference points for which the evidence seems unsatisfactory are enclosed in parentheses in table 1.2. Four out of the six lie in the Third Episode which previous investigators have been content to regard as a long, shallow trough. In chapter 4 it will be seen that the uncertain character of this period may be thought of as the result of a number of superimposed 'waves', many of which cancelled each other in aggregate, though leaving traces in certain indicators, especially those of the foreign trade and financial sectors.

AMPLITUDE AND PERIOD OF FLUCTUATIONS

For purposes of this study, the *relative amplitude* of a disturbance is defined as the logarithm of the proportionate deviation from trend of a smoothed, deseasonalised time-series, observed at the B and S points of each episode, and measured in standard deviation units. The use of standard deviation units makes the data for each series directly comparable and permits the same kind of grouping and averaging as was done for the distributions of chronological reference points.

Means and standard deviations were calculated for the distributions of relative amplitudes at each of the eight appropriate reference points: B_1, S_1, B_2, S_2, B_3, S_3, B_4, and S_4. Standard deviations were related to the mean value of the distribution to obtain the relative dispersion of each distribution. Coverage was calculated, as in the previous section, by expressing the number of indications at each reference point as a percentage of the total number of indicators.

It was evident from inspection of the specific cycle data, and particularly from graphs of the standardised 'cyclical' components yielded by the method, that labour market indicators are much 'better-behaved' as a class than the remainder. Mean relative amplitude was therefore calculated for these series alone and compared with that for all other series in order to discover whether the more homogeneous employment indicators were seriously atypical. As a further experiment means of each distribution were weighted by coverage, on the principle that the stronger a disturbance the more likely its effects to appear in all series.

The results of these manipulations are summarised in table 1.3. The impression formed by an inspection of the graphs which were drawn for each indicator is at once confirmed by this table: the First Episode is the most clearly-marked departure from steady growth. The most widely indicated fluctuations (those which reached their maxima at B_1, S_1, B_2, B_4, and S_4) are also those for which the relative amplitude, by any of the criteria adopted in table 1.3, exceeds one standard deviation. The weakest disturbance is unequivocally that which resulted in B_3: S_2 and S_3 are also dubious, especially the former.

Table 1.3 Summary of amplitude data

	Arithmetic mean	Standard deviation		Coverage	Mean amplitude weighted by coverage	Arithmetic mean of employment and other indicators	
						Employment	Other
	σ units	σ units	% of AM	%	σ units	σ units	σ units
B_1	+2.361	0.680	28.8	100.0	+2.361	+2.016	+2.519
S_1	−2.100	0.839	39.9	94.3	−1.980	−2.576	−1.861
B_2	+1.127	0.455	40.0	94.4	+1.064	+1.124	+1.062
S_2	−0.933	0.545	58.4	63.9	−0.596	−0.651	−0.976
B_3	+0.874	0.663	75.9	47.2	+0.413	—	+0.874
S_3	−0.914	0.574	62.8	86.1	−0.787	−0.800	−0.987
B_4	+1.280	0.624	48.8	94.4	+1.208	+1.359	+1.236
S_4	−1.085	0.490	45.2	94.4	−1.024	−1.222	−1.010

The relative dispersion of the amplitude distributions is below 50 per cent for those reference points about which, on all other grounds, there is no doubt. The relative dispersion of 75·9 per cent for B_3, taken in conjunction with a coverage of 47 per cent and the very dubious chronological evidence reported in the previous section, seems to rule out this reference point from any serious consideration. S_2 is almost equally improbable. Despite the wide dispersion of S_3, however, it is perfectly clear that most indicators did, in fact, reach a definite trough (with or without trend), somewhen between the middle of 1957 and the end of 1959, and that although this is most evident in the employment series, the mean relative amplitude of all others was actually somewhat larger.

The discrepancy between the evidence of employment and all other indicators, aside from the trivial case of B_3, is most serious with respect to S_1 and B_1. The mean amplitude of employment series is 0·5 standard deviations lower than the remainder at B_1, but 0·7 standard deviations greater at S_1. It would seem from this that employment increased proportionately less during the boom, and fell proportionately more during the recession, than the general level of activity; presumably because of extreme tightness in the labour market between the end of the war and the beginning of 1952. Apart from this, the relative amplitudes of other indicators, though more widely dispersed than those of employment series, afford a broadly similar view of the other three episodes.

Given the reference points described above, there are four basic measures of duration possible for each indicator in each episode, together with various others arising out of interesting combinations of these. The measures to be reported are defined with reference to the nth episode for any series, and illustrated in figure 1.4.

(a) Boom phase: I_n to B_n
(b) Down-turn phase: B_n to D_n
(c) Recessionary phase: D_n to S_n
(d) Recovery phase: S_n to I_{n+1}

} Basic measures

(e) Inflationary period:	I_n to D_n	Sum of (a) and (b)
(f) Deflationary period:	D_n to I_{n+1}	Sum of (c) and (d)
(g) Relative decay period:	B_n to S_n	Sum of (b) and (c)
(h) Relative growth period:	S_{n-1} to B_n	Sum of (d) for (n–1)th episode and (a) for nth episode

The total period of any episode, I_n to I_{n+1}, is the sum of (a), (b), (c), and (d).

According to the nomenclature favoured by the NBER, the four phases defined above are described as 'expansion', 'recession', 'contraction', and 'revival' (Burns and Mitchell, 1947, following Mitchell, 1927). Because of the emphasis placed in this history upon the rate of growth, however, the words 'expansion' and 'contraction' have been reserved, respectively, for rising and falling regions of the growth-rate curve. Despite their etymological inferiority, therefore, the terms defined in this chapter (which correspond with current Australian usage) will be used throughout the book.

Specific cycle reference points were used to obtain estimates of these phases and periods for each of the thirty-six indicators. Lengths of the four periods were measured directly rather than by adding the appropriate phases. For any individual indicator this makes no difference, of course, but since not all of the possible reference points are displayed by each, the sum of the means may not equal the mean of the sums. The more closely these two measures agree, the more reliable the evidence for any estimate of period length.

A further cross-check can be made by comparing the means of the intervals between reference points with the number of months between reference cycle dates. If each indicator yielded all thirty-three of the reference points from I_1 to I_5 then the intervals between reference cycle dates would be identical with the means of the corresponding distributions of specific intervals. As this is not the case, a discrepancy between alternative estimates of mean interval may arise, the size of which depends upon the extent to which the mean reference point dates of those series indicating both termini of an interval diverge from the mean dates of all indications at each terminus. The nearer all specific cycle dates to their corresponding reference cycle dates, therefore, the smaller this discrepancy will be. Substantial agreement between the estimates of mean interval will therefore confirm both the dating proposed in the last section, and the phase length proposed in this. The results of these investigations are set out in table 1.4.

With the exception of the relative decay period in the Second Episode, there is agreement within three months or less between the alternative estimates of mean interval. In the First and Fourth Episodes, except for

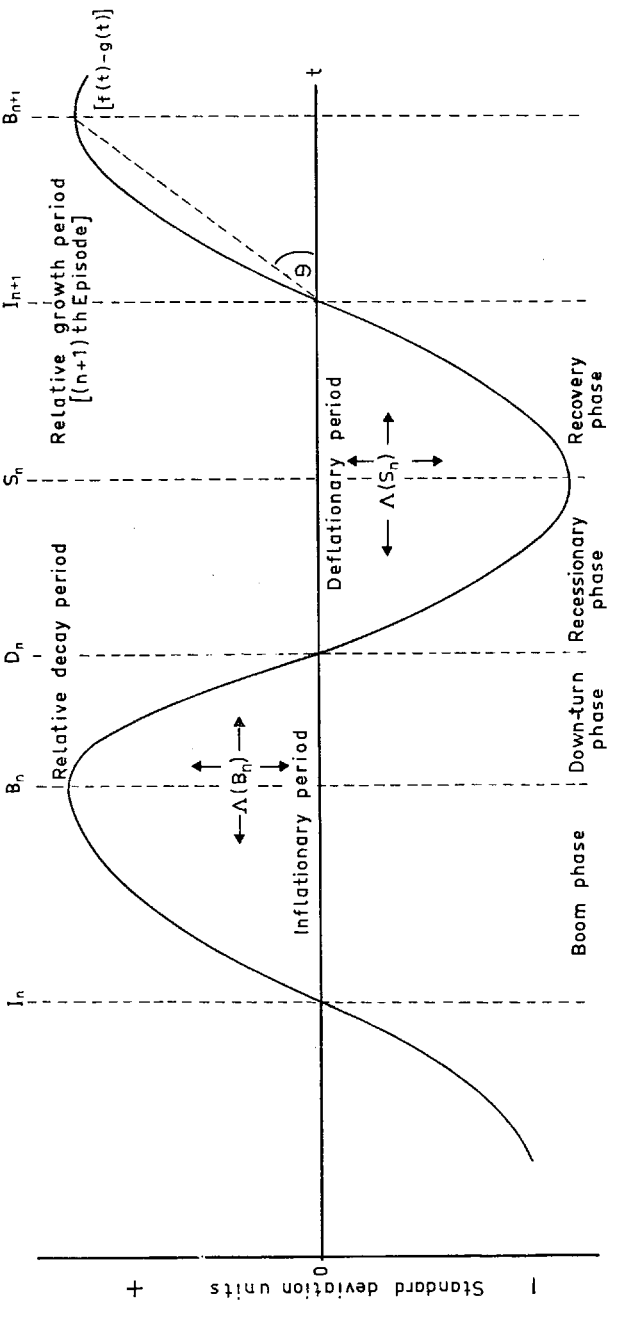

Fig. 1.4 Anatomy of the cyclical component

Table 1.4 Summary of measurements of duration
Months

	I	II	III	IV
Boom phase: I_n to B_n	18 [18]	11[11]	4 [3]	11 [10]
	(5.7)	(5.5)	*(4.4)	(4.1)
Relative growth period: S_{n-1} to B_n	Since	29 [27]	12 [9]	23 [20]
	1948	(8.5)	*(7.4)	(6.0)
Down-turn phase: B_n to D_n	10 [10]	14 [12]	7 [6]	9 [9]
	(4.9)	*(7.5)	*(7.0)	*(5.3)
Inflationary period: I_n to D_n	29 [28]	25 [23]	9 [9]	19 [19]
	(6.4)	(7.7)	*(6.5)	(6.3)
Recessionary phase: D_n to S_n	8 [9]	7 [5]	10 [11]	6 [6]
	*(4.6)	*(4.6)	*(6.9)	(2.8)
Relative decay period: B_n to S_n	19 [19]	21 [17]	15 [17]	15 [15]
	(6.6)	(9.5)	*(8.0)	(5.2)
Recovery phase: S_n to I_{n+1}	17 [16]	8 [6]	12 [10]	15 [14]
	(5.8)	*(5.0)	(5.7)	(7.5)
Deflationary period: D_n to I_{n+1}	25 [25]	13 [11]	21 [21]	21 [20]
	(7.6)	*(8.0)	(9.5)	(7.4)

* Standard deviation exceeds 50 per cent of mean.

Note: Figures enclosed in brackets are numbers of months between corresponding reference cycle points. Figures enclosed in parentheses are standard deviations of mean duration.

the relative growth period in the latter, the agreement is within one month.

Standard deviations exceed 50 per cent of mean in one case both in the First Episode (recessionary phase) and in the Fourth (down-turn phase). Distributions are less well concentrated in the two middle episodes, particularly the Third, in which only the recovery phase and the deflationary period seem at all plausible.

Three conclusions are suggested by these results. First, the agreement between alternative estimates of mean interval is high enough to allay serious doubts about the dating proposed in the previous section. Very little difference to chronology would result if reference cycle reference points were nominated by measuring the appropriate mean interval from some datum point. It may safely be assumed that what applies to I, D, B, and S points applies equally, in this respect, to P, T, C, and E points. Secondly, the evidence for duration in the First and Fourth Episodes is markedly superior to that in the Second and Third. About the latter, it is impossible to say anything at all meaningful except, perhaps, that for about 21 months most indicators were generally below their trend values, and that for the second half of this period there were signs of recovery. Thirdly, it would appear that there is rather less agreement, in all episodes, as to the down-turn and recessionary phase than as to the recovery and boom phases. The thirty-six indicators used in this study, that is, tend to move in unison when increasing relative to their trends, but somewhat less so when relatively decreasing.

The first two of these conclusions permit some further tentative

comparisons to be drawn between the First and Fourth Episodes. In the First Episode, the boom phase and inflationary period were longer, the down-turn phase about the same, the recessionary phase and relative decay period longer, and the recovery phase and deflationary period at least as long, if not longer. By most measurements of duration, therefore, the First Episode was a more serious departure from the trend of growth than the Fourth. Comparisons for the Second Episode boom, for what they may be worth, suggest that its boom phase was similar to that of the Fourth and its inflationary period intermediate between First and Fourth. Its relative growth period seems to have exceeded two years as against various estimates of twenty-three and twenty months for the Fourth Episode. No comparisons between the later stages of the Second and other episodes seem very profitable.

Estimates of phase length and amplitude may be combined for each episode in two different ways.

A measure defined as *mean phase gradient*, the ratio of maximum amplitude to phase length, provides information about the relative 'steepness' of a phase. Analytically, mean phase gradient is an approximation to the average proportionate rate of change of the cyclical component over a phase. Although it could be interpreted as a percentage per annum it is sufficient to measure it as *standard deviations per annum*. Thus the recovery phase of the Fourth Episode, at +0·819 standard deviations per annum, was considerably slower than that of the First Episode, at +1·389 standard deviations per annum. It is possible that the sluggishness of this recovery, rather than the amplitude at S_3, was a large cause of the concern it seems to have occasioned at the time.

A measure of the area enclosed by the standardised cyclical component of an indicator between I and D points and D and I points could be thought of as the total disturbance from steady growth in 'inflationary' or 'deflationary' periods. Estimates of this measure were provided by summing deviations from trend (in standard units) for all I to D and D to I intervals. The specific total disturbance for each episode and each indicator so obtained may be measured in *standard deviation months*. A value of +14 for the inflationary period of the Fourth Episode, for example, indicates that trend-cycle exceeded trend for that indicator by, say, 14 standard deviations for one month, or by 1·4 standard deviations for ten months, or some other combination yielding the same area and suggesting, by assumption, the same total 'inflationary' effects upon the economy. Evidence for each indicator can then be combined and averaged in the usual way, yielding estimates of *mean total disturbance* for the above- and below-trend portions of each episode.

No attempt was made to estimate this measure for the equivocal period from the second half of the Second Episode to the end of the Third.

Specific total disturbances were recorded for the remainder, however, and averaged to produce respective values of mean total disturbance. Standard deviation, coefficient of variation, and coverage were calculated for each distribution, as in the case of the other measures reported above. A final index of the relative seriousness of booms and slumps was calculated by dividing mean total disturbance by the appropriate mean period length to produce an average amplitude of disturbance for the period. The results of these computations are displayed in table 1.5.

Table 1.5 Mean total disturbance and related data

	1 Mean total disturbance	2 Standard deviation of MTD	3 Coefficient of variation 1÷2	4 Coverage	5 Mean period	6 Average amplitude 1÷5
	SDMs	SDMs	%	%.	months	SDs
Inflationary periods						
Episode I	+35.3	15.0	42.5	96.8	29	+1.217
II	+18.6	8.2	44.0	78.1	25	+0.744
III	—	—	—	—	—	—
IV	+14.4	9.2	63.9	87.5	19	+0.758
Deflationary periods						
Episode I	−31.8	12.4	39.0	83.9	25	−1.272
II	—	—	—	—	—	—
III	—	—	—	—	—	—
IV	−13.0	5.8	44.6	78.1	21	−0.619

The general conclusion which emerges from these data has already been suggested by each previous measure; that the First Episode was by far the most serious disturbance to steady growth, both in its positive and negative periods, than any other in post-war Australian history. On the evidence of the thirty-six monthly indicators, the First Episode boom and slump were unquestionably of greater amplitude and longer duration than the Second Episode boom, or the Fourth Episode boom and slump. It appears, moreover, that the seriousness of fluctuations has tended progressively to diminish; in terms both of the period and amplitude the First Episode boom was greater than the Second, which in turn was greater than the Fourth. The weakest of all the clearly marked disturbances was the latest, the Fourth Episode slump, notwithstanding the considerable publicity which attended it.

The chronological relation between trend-cycle and growth-rate was determined by measuring the intervals between I and C points, and between D and E points. As with the measurements of duration reported on pp. 17-19, alternative estimates were available: from the mean of specific intervals, and from the intervals between reference cycle points. Both are shown in table 1.6, together with standard deviations and coverage of the specific interval distributions.

According to this evidence the points of inflexion of the trend-cycle (points C and E) seem generally to occur within about six months of the dates at which it intersects with trend, and in many cases points I and C and points D and E are virtually coincidental. The distributions of specific interval are rather widely dispersed, however, except for the interval D_1 to E_1, and the uninteresting case of I_3 to C_3.

There appears to be some tendency, however, for C points to *lag* I points by a few months; but for E points, on the other hand, to *lead* D points. To put this another way, the average interval between peaks and troughs of the growth-rate curve seem to be somewhat shorter than that of the inflationary period with which they are supposed to correspond. This is especially marked in the two most important episodes: C_1 to E_1 is eight or nine months shorter than I_1 to D_1 and C_4 to E_4 seven months shorter than I_4 to D_4.

This discrepancy can perhaps be explained by supposing that the statistical trend lies somewhat *below* a hypothetical growth-path of 'potential output'. If this were the case, the level of activity could continue to rise for a few months after passing the so-called point of Inflation before labour and capacity shortages began to retard the rate of expansion. During the down-turn phase, on the other hand, resources would become available some months before the so-called point of Deflation. In chapter 5 it will be shown that something of this kind seems actually to have happened during the boom phase of the Fourth Episode at least: reference I_4 occurred in August 1959 while there was still considerable spare capacity in many industries; reference C_4 did not come until January 1960, however, by which time, according to Department of Trade surveys, full capacity operation was widespread. Evidence for the degree of capacity operated is scanty before the late 1950s, but the hypothesis of a parallel growth-path of 'potential output' lying below trend seems not unreasonable. The trend, by definition, is the average growth-path of *actual* output. Over periods such as that of this history, there is unlikely to be consistent divergence of actual from potential output. It is not improbable, however, that the former could run consistently below the latter in an economy in which private investment is undertaken in advance of expected market growth, and in which overtime and multi-shift working are exceptional.

If such has been the case in Australia since 1948, then the results of this must be accepted with even more caution than would in any event have been prudent. Inflationary periods are probably shorter, and amplitude of booms smaller, than the results of the indicator analysis suggest. Deflationary periods are probably longer, on the other hand, and the amplitudes of slumps larger. The relative magnitudes in booms and slumps of the index of total disturbance would be seriously altered, though mean phase gradients would be left much the same. If the only correction

Table 1.6 Relation between chronology of trend-cycle and growth-rate curve
Months

Episode	I to C			D to E		
	Mean interval (standard deviation)	Reference cycle interval	Coverage %	Mean interval (standard deviation)	Reference cycle interval	Coverage %
I	+8 (8.6)	+9	90.3	0 (2.0)	0	83.9
II	0 (7.2)	−2	78.2	−4 (6.6)	−2	62.5
III	−2 (2.4)	+3	31.3	+2 (8.0)	+3	50.0
IV	+5 (4.9)	+5	84.4	−2 (4.6)	−2	87.5

required, however, were the upward displacement of all trends, with no other change in their functions or parameters, then the conclusions of this chapter as to the *comparison between episodes* would continue to stand. The First Episode boom would remain the largest, and the Fourth Episode slump would still appear less serious than that of the First. The apparent tendency for oscillation to diminish in both amplitude and period would be unaffected.

TREND OF ECONOMIC ACTIVITY

Of the thirty-six monthly indicators examined, about one-third had very markedly *concave* log-quadratic trends, in the sense that they exhibited a positive first derivative. Another one-third had strongly *convex* trends; and the remainder, trends that differed only slightly from the log-linear. Trend curvature was measured by computing the annual rate-of-change of trend growth-rate. Table 1.7 sets out a list of those indicators for which such treatment is valid, arranged in descending order of concavity. Average growth-rates for the whole period are also shown.[4]

Central measures of curvature for the sample as a whole are very low. The median is slightly convex at −0·067 percentage points per annum, the mean slightly concave at +0·058. A frequency distribution of specific curvatures confirms an impression suggested by table 1.7. Curvatures are distributed approximately normally about their mean.

Now the fundamental assumption of this study, namely that of the causal independence of trend and cycle, permits us to regard the set of trend parameters as a random sample. For if there is zero correlation

[4]From the median value of the first derivative of the log-quadratic trend, a measure more usually, though less generally, obtained from the slope of the log-linear regression line.

Table 1.7 Average growth-rate and trend curvature of the monthly indicators

	Annual change in trend growth-rate (percentage points p.a.)	Average annual growth-rate (% p.a.)
Strongly concave trends		
Registered vacancies – females	+2.330	−7.88
– males	+2.057	−8.75
International reserves	+1.403	+0.25
Fixed deposits	+1.162	+7.00
Share Price Index	+0.981	+6.28
Banking activity – volume	+0.643	+6.08
Exports – volume	+0.538	+5.60
Rail freight ton-miles	+0.536	+2.05
Gross immigration	+0.368	+1.68
Wholesale trade – volume	+0.341	+4.53
Approximately log-linear trends		
Factory employment – females	+0.086	+1.61
Private employment – females	+0.083	+1.85
Imports – volume	+0.038	+2.70
ANZ Bank Index	−0.011	+5.51
Total employment	−0.054	+1.75
Retail trade – volume	−0.067	+2.64
Commerce employment	−0.071	+1.72
Total electricity generated	−0.075	+8.87
Private building activity	−0.122	+5.83
Factory employment – males	−0.134	+2.07
Private employment – males	−0.135	+1.56
Strongly convex trends		
Gross emigration	−0.365	+8.77
Volume of money	−0.408	+5.77
Banking activity – value	−0.540	+9.85
Postal activity	−0.570	+10.87
Export Price Index	−0.669	−1.28
New car registrations	−0.789	+9.22
Registered unemployment – males	−0.936	+10.95
Unemployment benefit	−1.146	+26.88
Current deposits	−1.260	+4.35
Registered unemployment – females	−1.418	+16.20

between trend and cyclical parameters in the parent population of all possible indicators, then each member of the population of trend parameters has had an equal chance of inclusion in the set associated with a non-random sample of cyclical parameters. It is therefore permissible to apply to the data of table 1.7 certain tests which were ruled out in earlier sections of this chapter.

The median growth-rate was +4·35 per cent per annum, and the arithmetic mean of the sample +4·91 per cent per annum. Frequency distribution of growth-rates suggests that they too are distributed roughly

normally about the mean. Inspection of table 1.7, and of a scatter chart plotted from its two columns, suggests that there may be some relation between curvature and average growth-rate.

A regression of curvature (Y) on growth-rate (X) afforded the following result:

$$Y = 0{\cdot}413 - 0{\cdot}071X$$

with a correlation coefficient of $-0{\cdot}53$, and a standard error of 0·756 percentage points per annum. Subject to the assumption of randomness, 28 per cent of the variation in curvature may be explained by a relation between curvature and average growth-rate in this period.

The regression line of curvature on growth-rate cuts the X-axis at $+5{\cdot}82$ per cent per annum. In terms of the postulated relationship, that is, an average rate of growth of this value is associated with growth-rate stability. An economic quantity growing at a faster average rate from 1948 to 1964 would tend to reveal a declining growth-rate trend, one with a lower average growth-rate a rising growth-rate trend. There is some sign, that is to say, of a convergency of long-term growth-rates to a value of $+5{\cdot}82$ per cent per annum.

The dispersion of points about the regression line is very wide, however. Assuming, once again, that we have a random sample of log-quadratic trends, 95 per cent prediction limits for curvature, when growth-rate is at the mean value of $+4{\cdot}91$ per cent per annum, occur at $+0{\cdot}342$ and $-0{\cdot}214$ percentage points per annum. Alternatively, therefore, there is a 0·95 chance that the value of average growth-rate associated with (virtually) zero curvature lies between $+1{\cdot}00$ and $+8{\cdot}83$ per cent per annum. The value of $+5{\cdot}82$ per cent per annum at which, according to the regression, growth-rate is stable, does not differ significantly from the sample mean.

A preliminary conclusion concerning the trend component of the post-war Australian business cycle may be drawn from these results. It would appear from the sample of indicators first, that the average rate of growth between 1948 and 1964 has been somewhere in the vicinity of 4 or 5 per cent per annum; secondly, that there has been no strong tendency for this growth-rate either to accelerate or to decay.

It was remarked above (see p. 8) that the 'general level of activity' is taken to mean that quantity which could best be represented by a perfect monthly index of constant price GNP. Since no such index exists, a direct comparison cannot be made with the evidence for dating and amplitude afforded by the sample. The trend of such an index, however, would not differ appreciably from that of an *annual* index of GNP if a sufficiently large number of years were considered. To the extent that official annual estimates of constant price GNP may be taken to approach the annual values of a 'perfect' hypothetical index, therefore, a direct measure may be made of the trend of activity. Comparison with the indicators might then

throw some light on the ability of the sample to represent the general level of activity.

Official estimates of GNP in Australia are continually revised, and changes of up to plus or minus 3 per cent of GNP are not uncommon. The data for this study were taken from *Australian National Accounts, National Income and Expenditure, 1948–49 to 1964–65*, issued by the Commonwealth Bureau of Census and Statistics (CBCS) in February 1966. Throughout the book this document, which will be referred to as *National Accounts*, is taken as the authoritative source of national income series. All dollar values have been converted back to pounds Australian, however, since that currency and none other was used throughout the period of this history.

Two sets of constant price accounts are provided: from 1948/49 to 1959/60 at average 1953/54 prices, and from 1953/54 to 1964/65 at average 1959/60 prices. In later chapters of this book, the first set of estimates is used in narrative discussion of the first three episodes, the second set for the Fourth Episode. When, as in the present chapter, it is necessary to make comparisons over the entire period, the two series are linked at 1956/57. Table 1.8 shows the results of joining the two series in this way.

Table 1.8 GNP at constant prices as an index number, 1956/57 = 100.00

	At 1953/54 prices		At 1959/60 prices		Linked index
	£ million	Index no.	£ million	Index no.	
1948/49	3,693.5	71.93	—	—	71.93
1949/50	3,966.5	77.24	—	—	77.24
1950/51	4,175.5	81.31	—	—	81.31
1951/52	4,291.0	83.56	—	—	83.56
1952/53	4,260.5	82.97	—	—	82.97
1953/54	4,519.0	88.00	5,266.0	88.44	88.00
1954/55	4,772.0	92.93	5,576.0	93.65	92.93
1955/56	5,021.0	97.78	5,836.0	98.02	97.78
1956/57	5,135.0	100.00	5,954.0	100.00	100.00
1957/58	5,203.5	101.33	6,064.5	101.86	101.86
1958/59	5,659.0	110.20	6,504.0	109.24	109.24
1959/60	5,876.0	114.43	6,764.5	113.61	113.61
1960/61	—	—	7,062.0	118.61	118.61
1961/62	—	—	7,145.5	120.01	120.01
1962/63	—	—	7,558.0	126.94	126.94
1963/64	—	—	8,012.0	134.56	134.56

Source : National Accounts.

It can be demonstrated that the mid-point of the growth-rate trend is the average growth-rate of the series – that which would be yielded by the slope of a linear regression of logarithmic quantity on time. It follows

that the average growth-rate of a series may be estimated in two alternative ways: from the slope of the log-linear regression line or from the mid-point of the linear regression of growth-rate on time. But the latter is simply the arithmetic mean of the growth-rates. As it is much easier to calculate the mean of a series of growth-rates than to fit a regression line, this latter method has been employed almost exclusively for annual time-series in this book. In the case of deflated GNP, however, both methods were used for comparison and illustration.

The series of annual growth-rates from 1949/50 *v.* 1948/49 to 1963/64 *v.* 1962/63 was calculated by the usual formula:

$$\left(\frac{\Delta Y}{Y}\right)_t = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$$

A linear regression of $\frac{\Delta Y}{Y}$ on time yielded the equation:

$$\frac{\Delta Y}{Y} = 4{\cdot}299710 - 0{\cdot}001464\ t$$

It may be seen from this that the average rate of growth of GNP at constant prices from 1948/49 to 1963/64, as calculated by that method (and also by the 'simple' method of averaging growth-rates) is +4·30 per cent per annum; and that the curvature of the log-quadratic trend of real GNP, at −0·0015 percentage points per annum is virtually zero. The Vernon Committee, and all others who have uncritically fitted log-linear trends to Australian output data since the war, are thereby justified and the experiments reported earlier in this section are confirmed. The average rate of growth of the 'general level of activity' does lie in the near vicinity of the sample mean of +4·91 per cent per annum, and at that rate there is no tendency either to concavity or convexity of trend.

After the validity of fitting a log-linear trend to GNP was proved, that operation was performed. The resulting regression:

$$\text{Log } Y = 1{\cdot}8471 + 0{\cdot}01715\ t$$

with a value of R^2 of 0·992 and a standard error of 0·00746, yielded an average compound rate of growth, $\frac{dY}{dt} \cdot \frac{1}{Y}$, of 4·03 per cent per annum. Ninety-five per cent confidence limits for the coefficient of t imply a 95 per cent confidence interval for the implied growth-rate lying between +4·24 per cent per annum and +3·82 per cent per annum (see Blyth, 1964: 6–9).

The discrepancy between the two estimates arises partly from the fact that $\frac{\Delta Y}{Y}$ is a discrete approximation to $\frac{dY}{dt} \cdot \frac{1}{Y}$, and partly from the inadequacy of the formula used to calculate $\frac{\Delta Y}{Y}$. When Y is a generally increasing function of time, the denominator Y_{t-1} will be smaller than the

more appropriate $\frac{1}{2}(Y_t - Y_{t-1})$, and hence an upward bias will be imparted to estimates of average growth-rate calculated by the simple method. Since the whole object of the simple method was to compute large numbers of average growth-rates for purposes of rough, order-of-magnitude comparisons, however, no refinement of the denominator was introduced. All estimates of growth-rate made in this book (excepting those derived from logarithmic trends, as in the case of the monthly indicators), will be slightly biassed in the direction of their sign. Comparisons between the growth-rates of two series in the same period, or those of the same series in different periods, will not be much affected by this distortion except in the case of very large positive or negative average rates.

THE TIME-SHAPE OF ECONOMIC ACTIVITY IN AUSTRALIA, 1948 TO 1964

The results reported in previous sections may be combined into a 'synthetic reference cycle' for the post-war Australian economy, which summarises the monthly course of the 'cyclical' component of the general level of activity from July 1948 to June 1964.

All reference cycle I and D points are plotted in the upper graph of figure 1.5 on a time-scale divided into months. All reference cycle B and S points are plotted on co-ordinate scales having the monthly time-scale as abscissa and mean relative amplitude, weighted by coverage, as ordinate. Consecutive points are joined by straight lines. It can be seen that the slopes of these lines measure mean phase gradient, and the areas enclosed by them, mean total disturbance. Reference points S_2 and B_3 are bracketed, and the lines connecting them and adjacent D and I points dotted, to remind the reader that the evidence for these fluctuations is poor.

Comparison of the evidence afforded by the sample of indicators with that of constant price GNP may now be made. In so far as it is valid to regard a log-linear regression of the latter on time as a trend-line of growth, the series of deviations from this line, when expressed in standard deviation units, constitutes an annual analogue of the 'cyclical' component extracted from the monthly indicators by removal of the log-quadratic trend. A suitably positioned plot of this series is shown as the solid line in the lower graph of figure 1.5.

Given the monthly subdivision of the time-scale, no exact correspondence between the synthetic cycle and GNP residual can be looked for. Monthly values of the synthetic cycle were therefore obtained by linear interpolation, and average values calculated for each fiscal year. This series is shown as the dotted line in the lower graph of figure 1.5, superimposed on the plot of GNP residual. The agreement between these curves is measured by a coefficient of linear correlation of $+0{\cdot}828$.

Divergence between the indicators and GNP is greatest as concerns the

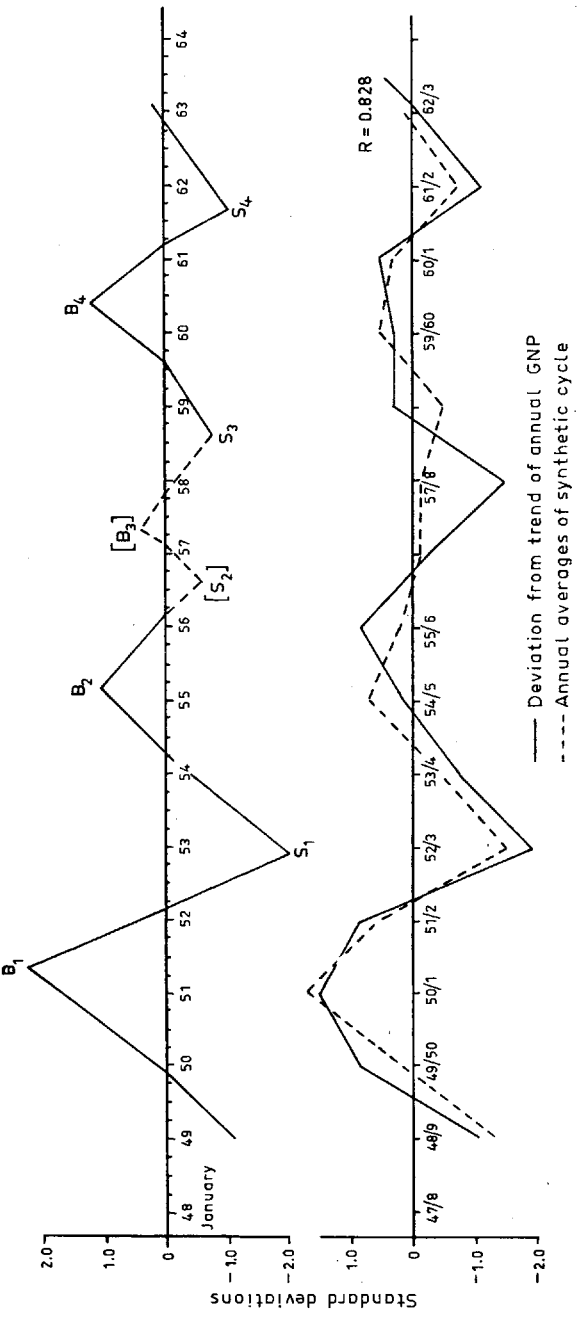

Fig. 1.5 Synthetic cycle compared with GNP

timing of the Second Episode boom, and the amplitude and timing of fluctuations in 1957/58. According to the indicators (though not to civilian employment, considered separately) the peak of cyclical activity in the Second Episode took place in 1954/55 rather than in 1955/56. Either the sample gives too much weight to the preliminary peaks observed in many important series in 1954 and 1955, or the effect of these on the value of goods and services produced in Australia has been recorded in the *National Accounts* for the succeeding fiscal year.

More serious is the contradictory evidence for 1957/58 and 1958/59. Deflated GNP fell to a very definite cyclical trough in 1957/58 and rose strongly above trend in the following year. The indicators suggest slightly below-trend activity in the first year with a small decline to a weak trough in 1958/59. Analysis of GNP reported in chapter 4 (see p. 147), however, reveals that a large part of the reason for fluctuation in these two years was a substantial swing in the balance of trade unaccompanied by a correspondingly large disturbance to the growth of domestic expenditure. In 1957/58, the volume of the trade balance was £(1953/54)186 million below the previous year: but in 1958/59 it was £(1953/54)121 million higher than in 1957/58. The effect on internal activity seems to have been somewhat lagged. Trend-free employment indicators continued to fall during 1958/59, and there were no appreciable increases in industrial production or internal trade. In 1959/60 the previous year's external stimulus began to be evident in the expansion of consumption and fixed investment spending. It would therefore appear that the indicator sample might actually present a more useful account of economic activity in these two years than GNP, though for an adequate history of the Third Episode both sets of information are required. Whether much reliance can be placed on the monthly dating or the amplitude estimates in this episode is extremely doubtful.

If the disparity in 1957/58 and 1958/59 were 'corrected' or ignored, the correlation between the two series would exceed +0·90. In view of the reasonable explanation of this discrepancy, the concurrence appears sufficient to justify the indicator analysis and to excuse the composition of the sample.

For this reason, the evidence of the sample of monthly indicators has been taken, in this book, as a fairly reliable guide to the timing and amplitude of economic fluctuations in Australia from January 1948 to December 1964. In chapters 3, 4, and 5, the reference cycle dates will be used as a chronological skeleton around which to organise a history of economic activity. No important point of interpretation hangs upon the precise value of these dates, however. Their purpose is rather to raise questions and to suggest lines of inquiry to the historian.

The measures of amplitude and associated quantities seem to accord more closely with GNP than do those of chronology. Together with the

latter they will be used, in the narrative chapters, to supplement and correct more general and qualitative evidence for the relative seriousness of fluctuations. It has been shown in the previous section of this chapter that the evidence of the indicators as to the trend of economic activity does not differ significantly from that of GNP.

2

Economic Fluctuations in a Dependent Economy

Official estimates of Gross National Product at constant prices may be taken as index numbers of the volume of output produced by the economy. Subject to all the usual and proper reservations, we may think of 'output-as-a-whole', or the quantity of a single, undifferentiated good called 'goods-and-services'; represent it by the traditional symbol, Y; and interpret it as deflated GNP.

When this figure is divided by some measure of labour inputs, such as man-years, the dividend is described as the 'average productivity of labour', and interpreted as so many (base-year) pounds or dollars worth of goods-and-services per man, per year. Suppose average productivity be a compound of two factors: 'trend' or 'normal' productivity; that which depends upon such long-run factors as the state of technology, the education and skill of the work-force, and the stock of capital; and a residual 'capacity coefficient' the size of which depends upon the intensity with which existing resources are operated when the long-run factors are given. If we represent the former by the symbol p and the latter by k, a number which may be greater or less than one, then average measured productivity in any period is p.k.

Let the total work-force available for employment in any period be represented as L, measured in standardised man-years (or man-hours, man-weeks, etc., as preferred). This total is a conventional figure, determined not only by the basic demographic features – size of population, age and sex distribution and so forth – but also by social morality and tradition. In one society it may be customary for all persons above the age of six to work an eighty-hour week. In another, most males between the ages of fifteen and sixty-five, and a quarter of the females in this range may be expected to work a forty-hour week. Given the size of L, the actual employment at any point in time may be temporarily greater or less than this, depending upon the state of demand. We must therefore multiply L by a variable coefficient, N, which like k can have a value greater or less than one, in order to define labour inputs used as a divisor in the measurement of average productivity.

These relations may be summarised in a simple identity:

$$p.k = \frac{Y}{N.L}, \text{ or}$$

$$\text{average productivity} = \frac{\text{GNP in constant prices}}{\text{labour inputs per annum}}$$

By elementary mathematical manipulation,[1] the foregoing identity can be transformed into a relation between compound annual growth-rates. Let the percentage annual rate of change of each variable be represented by writing the symbol g in front of the variable. The term gY, for example, means percentage annual rate of change of GNP at constant prices, and may be thought of as a figure like +4 per cent per annum (in a typical year), or −1 per cent per annum (in a bad year). We may then write:

$$(gN + gK) = gY - (gL + gp),$$

or,
$$f = y - n$$

Where n stands for the 'natural rate of growth', the percentage annual rate of change of that output which could be obtained from full, but not overfull, employment of the conventional work-force and the existing stock of non-human resources; y stands for the actual rate of growth; and f stands for the net disturbance to the growth-rate, revealing itself as fluctuations in the rate of change of employment and measured productivity.

The natural rate of growth, n, can be thought of as the rate at which the economy's capacity to supply goods-and-services increases through time. The actual rate, y, will differ from n if demand for goods-and-services is growing faster or slower than supply. In chapter 1 it was assumed that the forces determining the trend of economic activity in post-war Australia are independent of those which cause fluctuations about this trend. This implies that n, if it changes at all over periods of a decade or two, does so gradually and without much reference to variations in y.

In order to appraise the reasonableness of this assumption, it is necessary to consider the probable effect of those forces which govern the rates of change of work-force and normal productivity, and the extent to which they are likely to be influenced by short-term changes in demand.

The rate of growth of the work-force gL is determined by the birth-rate, the age distribution of the population, the rate of net immigration together with the demographic features of net population flow, and by the social and moral conventions which determine age and sex participation rates and the length of the working year. Over periods of three or four years, few

[1] Let $p.k = \frac{Y}{N.L}$

Then by logarithmic time differentiation,

$$\frac{d}{dt}\ln p + \frac{d}{dt}\ln k = \frac{d}{dt}\ln Y - \frac{d}{dt}\ln N - \frac{d}{dt}\ln L$$

or, $gp + gk = gY - gN - gL$

or $(gN + gK) = gY - (gL + gp)$.

of these are likely to respond very much to fluctuations in aggregate demand. Net migration and female participation rates will probably be the most sensitive: the larger the proportions of females and recent immigrants in the work-force, the more likely gL to reflect changes in gY. But the other factors, whilst by no means constant, are mainly governed by longer run conditions.

The rate of growth of productivity, gp, will depend upon changes in the availability of capital and other non-human resources per worker, and upon changes in the age-composition of this capital stock, together with the rate of technical progress. Each of these, in turn, is the result of several factors.

The degree of capitalisation of industry will change at a rate which is partly the result of domestic saving invested at home, and partly of foreign saving invested in Australia. The rate of investment will depend upon expectations of profit, but also upon much hazier 'strategic' considerations, such as whether the domestic political climate is likely to remain hospitable to large, international corporations. In Australia, moreover, as in most other advanced economies, much capital formation is controlled by government at various levels. For these reasons, it seems unlikely that the degree of capitalisation will be much affected by year-to-year changes in demand. About one-third of Australian investment is undertaken publicly. Of the remainder, an important part is made by American, British, and other overseas firms. Oil refineries or motor-works, for example, take several years to bring into operation; the decision to invest is based on market forecasts extending over decades; finance is readily available from the parent company abroad; short-run discrepancies between domestic supply and aggregate demand are buffered by fluctuations in the balance of trade. The only important determinant of large-scale manufacturing or process investment in such cases is the long-run prospect of market growth.

The age-composition of the capital stock will affect productivity in times when technical progress is becoming embodied in new plant and equipment. By and large, the smaller the average age of assets, the greater the productivity per labour input, all other things being the same. The effect of age-composition upon productivity growth will be that of a kind of moving, weighted average of past industrial history; the span of which is the age of the oldest asset, and in which the weights of each component are determined by historic rates of technical progress and diffusion of best-practice techniques. As with all moving averages, the impact of short-term fluctuations in the present is cushioned by the continuing influence of past events.

Technical progress, in economic theory, is generally taken to mean the net of all factors capable in principle of explaining inter-temporal productivity differences with identical capital stock per labour input. It is impossible to present an exhaustive list of such factors, still less to assign

weights to their importance. Many of the more obvious things such as the education, diligence, and inventiveness of the work-force are too complex to be measured. Countries like Australia are believed to import much of their technical progress in the form of foreign investment and managerial 'know-how'. About all that can be said with any certainty is that the rate of technical progress, like the other determinants of normal productivity, is likely to be more or less unaffected by year-to-year variations in the rate of growth of economic activity.

By and large, therefore, it is likely that both gL and gp will change, if at all, for reasons only slightly connected with the current rate of growth of output. Any change will probably be quite sluggish. In other words, n can be taken to be fairly stable over periods such as that of this history. Fluctuations in employment and residual productivity, and also in the balance of payments and the rate of inflation, in so far as these are related to f, will therefore be caused more by fluctuations in the rate of change of *demand* than of *supply*. Historical explanation of the Australian 'business cycle' – that is, of the time-path of f and related quantities – becomes largely a matter of separating the endogenous and exogenous determinants of y, displaying the mechanism of the former, and describing the circumstances of the latter.

The growth-rates both of work-force and productivity, of course, will respond to some extent to changes in the rate of growth of demand. In times of prolonged mass unemployment, for example, productivity growth will fall off almost to zero, net immigration will slacken and work-force participation rates decline. Australia, however – unlike Canada, which in other respects she closely resembles – has succeeded since the war in avoiding any lengthy period of deficient demand.[2] Subject to the qualifications noted later in this chapter, therefore, n will usually be taken as constant and given, or at most, as oscillating sluggishly about a constant or regularly changing trend value.

THE SOURCE OF GROWTH-RATE DISTURBANCES

In a closed economy, deviations from a path of steady growth (or decay) may arise either from the effect of 'random shocks', such as droughts, major strikes, the discovery of gold or oil, and the like, or from the working of some 'endogenous' process of circular causation, whereby the delayed effects of decision-makers' reactions to past mistakes interact with present

[2]'The long period of full or nearly full employment and of expanding markets brought with it changes in the attitude of business and labour alike. The planning horizons of most major business organizations seem to have lengthened, and investment decisions now appear to be less influenced by short term fluctuations in economic activity' (Vernon Report: 1.13).

events to produce 'waves' of economic activity. Most academic theory of the business cycle has been of the second kind: the construction of fairly simple mathematical models of endogenous cycles in a closed economy.

But in an open economy, that is to say one in which transactions with non-residents are a significant portion of all economic activity, it is also possible that fluctuations can be imported from abroad. Indeed, if the economy in question is very small by comparison with the rest of the world, so that domestic changes in supply and demand exert no noticeable influence upon world income or prices, then it becomes very probable that this will be so. Disturbances originating from abroad will probably tend to be amplified in their effect upon the 'dependent' economy; disturbances originating from within, whether endogenous or exogenous, will probably be damped by the reaction of the foreign sector.

This can easily be shown by means of a simple diagrammatical apparatus which has long been used to depict the most important relations of Keynesian macro-economics. Its extension to the open economy case was first made by Professor R.A. Mundell (1961). The model is static, hence the reader must imagine that the scale of the horizontal axis is continually *decreasing*, corresponding to an *increase* in the value of Y_E (output obtainable at conventional 'full employment' of the work-force and capital stock) at the natural rate of growth ($gL + gp$).

In figure 2.1, a graph is drawn with the domestic money rate of interest, i, on the vertical axis, and GNP at constant prices, Y, on the horizontal. When $Y = Y_E$ there will be full employment in the currently accepted sense of that word. If Y were greater than Y_E prices might begin to rise and the analysis become complicated. But for levels of output below Y_E it is assumed for the present that money wages and prices remain constant.

The curve labelled $\dot{Y}$ describes the locus of all combinations of real output and the interest rate at which desired aggregate demand is equal to desired aggregate supply, and hence at which there is equilibrium in the market for goods-and-services. At high levels of i, desired investment will be small and vice versa: at low levels of Y, desired saving will be small and vice versa. Hence the $\dot{Y}$-locus will have a negative slope. At all points above and to the right of $\dot{Y}$ desired saving will exceed desired investment, hence there would be excess supply in the market for goods-and-services and actual output would contract until it were equal to equilibrium output at the going rate of interest. The reverse will be true for all points below and to the left of $\dot{Y}$. Given a slope for the $\dot{Y}$-locus of less than zero, there will be a unique rate of interest, i_1, at which equilibrium output at the point A on the $\dot{Y}$-locus is just sufficient to maintain full employment.

The position of the $\dot{Y}$ curve is determined by the 'autonomous' components of aggregate demand – for example, government spending, or,

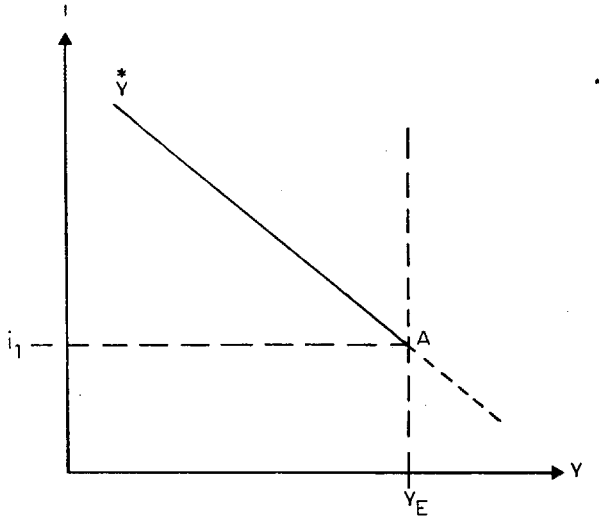

Fig. 2.1 Equilibrium possibilities of a closed economy

in an open economy, the trade surplus. Changes in the parameters of the investment demand function (relating desired investment to the rate of interest) will also shift the $\dot{Y}$-locus to right or left and alter its slope.

The simplest possible theory of growth and fluctuations, proposed by Sir Roy Harrod (1948), takes i to be constant, sets Y_E growing at the natural rate, and investigates the behaviour of entrepreneurs when faced with the possibility of discrepancies between the output actually resulting from current saving and investment decisions, and those capable of production by a fully employed work-force growing exogenously, and by a fully employed capital stock growing as a result of past investment decisions. Unless all three grow at the same rate beginning from an initial period of full employment equilibrium, there will be cumulative departures from the path of steady growth. In terms of figure 2.1, this amounts to saying that when the scale of Y is constant, the $\dot{Y}$-locus must shift to the right at the same speed as the point Y_E provided that the interest rate is fixed at i_1 .

The monetary consequences of a departure from the natural rate of growth can be investigated by superimposing a new curve upon a graph like figure 2.1. In figure 2.2, the curve marked $\dot{i}$ describes the locus of all combinations of actual interest rate and real production at which the supply of money is equal to the demand. It is assumed that the demand for money increases as the level of output and income, and decreases as the rate of interest. Then a given demand will be determined by some combination of

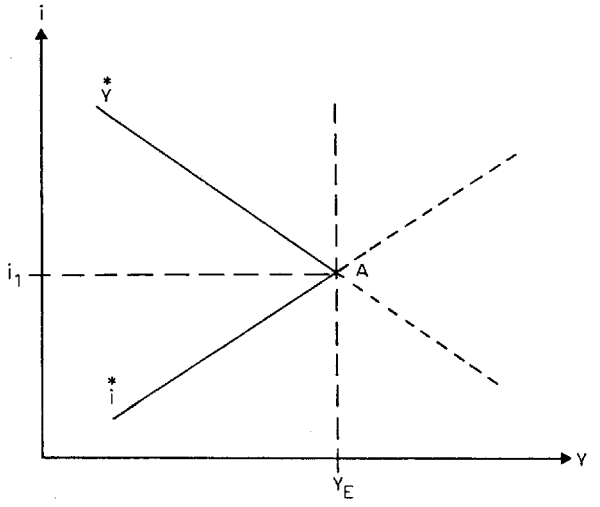

Fig. 2.2 Keynesian equilibrium of a closed economy

low interest and low income, or of high interest and high income. That set of such combinations yielding a demand for money equal to the actual stock (assumed to be controlled by the central bank) is represented by the positively-sloped $\dot{i}$-locus. At all points above and to the left of the $\dot{i}$-curve, there would be excess supply in the money market, and i would fall. The reverse is true of all points below and to the right, hence the $\dot{i}$-curve, like the $\dot{Y}$-curve, is a locus on to which there is self-equilibration.

It follows that the intersection of these curves at A defines a unique position of general equilibrium at which income and the interest rate are mutually determined. For the interest rate to remain constant as Y_E and Y increase through time, it is necessary for the $\dot{i}$-curve to shift to the right at the same rate as the point Y_E and the $\dot{Y}$-curve. If the parameters of the demand for money remain stable, if the demand function shifts through time at the natural rate of growth, and if the money supply is expanded at the same speed, this condition may be satisfied. Any departure of actual from natural rate of growth – represented in figure 2.2 by a shift of the $\dot{Y}$-locus relative to the $\dot{i}$-locus and Y_E – would lead to a change in the equilibrium rate of interest. Whether this would be followed by a cumulative departure from steady growth or an asymptotic return to it depends, among other things, upon the effect that changing interest rates would have upon the desired ratio between output and the capital stock, and hence upon the 'warranted' rate of growth.

The theory of fluctuations in a closed economy consists, essentially, in a logical examination of all possible reasons, first, why the intersection

of $\dot{Y}$ and $\dot{i}$ might oscillate with respect to the Y-axis; and secondly, why the position of actual output, Y, might oscillate with respect to the intersection of $\dot{Y}$ and $\dot{i}$.[3] But in an open economy, the income effect of the trade balance and the monetary effects of the balance of payments must also be considered.

In figure 2.3, a new curve is added to the diagram, labelled $\dot{r}$ and representing the locus of all combinations of i and Y at which there can be 'external balance': *either* in the sense that with a freely floating exchange rate, the market rate, r, would be stable; *or* in the sense that with a fixed exchange rate, there is no net change in the country's official holdings of gold and foreign exchange.

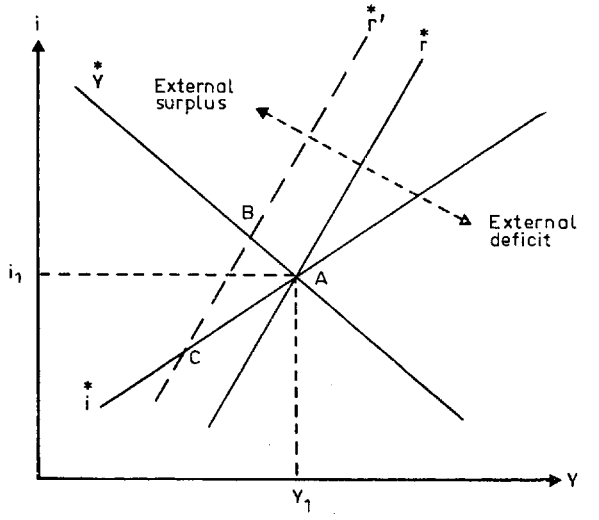

Fig. 2.3 Keynesian equilibrium of an open economy

The assumptions behind the $\dot{r}$-curve are, first, that the value of the trade balance is a decreasing function of Y; secondly, that the capital in-flow is an increasing function of i; thirdly, that world income and interest rates, which would also affect the trade balance and the capital flow, are independent of events in the economy concerned; fourthly, that the relation between world and domestic price levels remains unchanged; and finally, that interest and loan repayments, and all other financial transfers, can be taken as given. The $\dot{r}$-locus will therefore have a positive slope, decreasing as the responsiveness of the capital flow to the interest differen-

[3]Hicks (1949: ch. 77), considers a 'dynamic cobweb' locus of disequilibrium positions around the intersection of *stable* i^* and Y^* curves.

tial, and a position determined by the autonomous components of the capital flow and the parameters of its function of interest rates. At all points to the left and above $\dot{r}$, there will be external surplus with a fixed exchange rate, or exchange appreciation with a floating rate: the reverse for all points to the right and below the $\dot{r}$-curve.

As Mundell (1961) has shown, in a world of fixed exchange rates and interventionist central banks, there is no reason in general why the $\dot{r}$-locus need intersect the other two curves at the point of equilibrium A. Suppose that $\dot{r}'$ represented the actual state of affairs, then at equilibrium in the goods-and-services and money markets, with output Y and interest i_1, there would be a balance of payments deficit, since A lies to the right of the external balance curve. So long as the central bank can sterilise the monetary effects of the deficit, and so long as the credibility of the exchange rate can persist in face of continually falling reserves, this situation can persist indefinitely.

But in so far as external balance is an objective of policy, the authorities will eventually take corrective action. *Either* the money supply will be allowed to contract (or, if the model is conceived to represent a growing economy, the rate of increase in money supply will be allowed to fall relative to that of income) until the $\dot{i}$-curve shifts far enough leftward to cut $\dot{Y}$ in B; *or*, if fiscal policy is preferred, the $\dot{Y}$-locus will be shifted leftward by budgetary contraction until it cuts $\dot{i}$ in C. In either case output and employment will fall. Whether interest rates rise, fall, or remain the same depends upon what combination of fiscal and monetary measures is used.

Two results can now be seen which are very important for the theory of fluctuations in an open economy operating with a fixed exchange rate and in which the capital flow is fairly insensitive to the interest differential: first, an internally generated disturbance will be damped; secondly, an externally transmitted disturbance will be amplified.

Consider figure 2.4. An internally generated boom shifts the $\dot{Y}$-curve to the right. Initially, there is partial equilibrium of Y and i at B, with external deficit. If monetary contraction is allowed to correct the imbalance, the $\dot{i}$-curve shifts leftward until general equilibrium is achieved at C, with lower output, Y_3, and higher interest rates. If fiscal policy is used, the boom will be completely damped and equilibrium will return to A. In so far as some part of the monetary effects of payments imbalances are not fully sterilised by the central bank, the monetary adjustment is partly automatic. In a pure gold standard world there would be fully automatic return to the position C.

If the capital flow is more responsive to interest rates, so that the $\dot{r}$-locus has a slope that is less than that of the $\dot{i}$-locus, then the international monetary consequences of an internally generated expansion will be to amplify the boom.

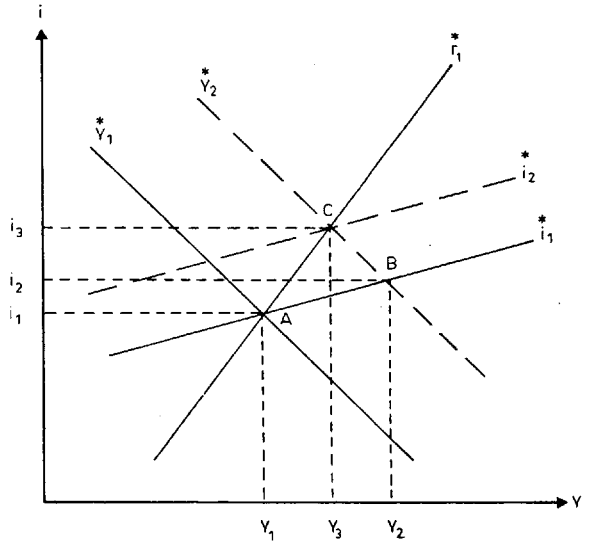

Fig. 2.4 Internally generated boom damped in an open economy

An externally generated expansion appears as an increase in world income (or in the rate of growth of world income for the dynamic model) which increases (decreases) the trade surplus (deficit) of the country under consideration. In figure 2.5 both the $\overset{*}{Y}$ and $\overset{*}{r}$ curves will shift to the right

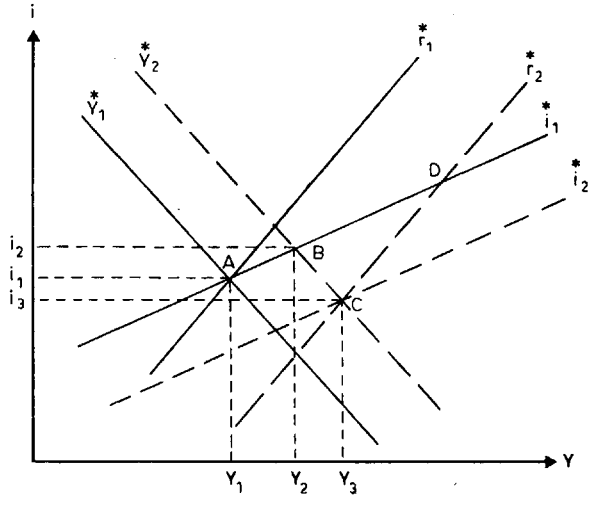

Fig. 2.5 Externally generated boom amplified in an open economy

as a result, the latter by a greater amount than the former. Partial equilibrium will be initially at B with higher output and an external surplus: if monetary expansion is permitted, general equilibrium is possible at C, with still higher output and employment and lower interest rates. If the balance of payments surplus is used to finance fiscal expansion, then general equilibrium is possible at D, with even greater amplification of the initial movement.

A number of comments and qualifications are called for at this point. In the first place, of course, all that is said here about an expansion applies symmetrically to a contraction, whether internally or externally produced. Secondly, in the case of *externally* generated fluctuations, the monetary amplification effect is independent of the relative slopes of the $\dot{r}$ and $\dot{i}$ loci. The reader can discover these conclusions for himself by playing with diagrams like those in figures 2.4 and 5. In the case of an external expansion or contraction, however, there may be concomitant changes in the relative price and interest rate levels. In a boom, for example, the world price level may rise relative to prices in the dependent economy. If this be so, and if the trade balance be elastic with respect to the price relative, then the initial rightward shift of the $\dot{Y}$ and $\dot{r}$ curves will be greater than if there were merely an income effect. But if world interest rates also rise, then some part of the rightward shift of the $\dot{r}$ curve will be offset by a change in the parameters of the capital flow function of the domestic interest rate. It is possible in this case that the final equilibrium interest rate, i_3, would be as high or even higher than i_1. Finally, for the case in which the capital flow is taken as 'given' and independent of what is happening in the economy concerned, it appears that internally generated fluctuations would be completely damped by the reaction to payments imbalance, whereas externally generated fluctuations will still be amplified. This last, 'inelastic capital-flow case', it will be recalled, is the standard assumption of all theoretical discussions of internal and external balance in Australia since Professor T.W. Swan's classic contributions in the early 1950s.[4]

We are now in a position to outline a provisional theory of business fluctuations in an economy like that of Australia in the period since World War II: depending upon foreign trade for a substantial part of her income; too small to exert any noticeable impact upon world income, prices, or interest rates; maintaining an exchange rate pegged to those of the major trading nations, but with fairly limited international reserves; and enjoying an inflow of foreign capital at a rate that was not very sensitive to any differential between the level of interest rates in Australia and those in the rest of the world.

[4]Swan (1960), published in 1960 but privately circulated in 1953, and (1963), published in 1963 but delivered orally in 1955.

1. If $\dot{Y}$, $\dot{i}$, and $\dot{r}$ curves shift to the right at the same rate, then an initial position of equilibrium (the point A in figures 2.3, 4, and 5) can be sustained through time. The interest rate, the degree of work-force and capacity employed (which need not be 'full employment'), and the level of foreign exchange reserves remain constant. GNP in real terms, the demand and supply of exports and imports, the rate of capital inflow, and the demand and supply of money, all grow at the natural rate, $n = gL + gp$. Employment grows at the rate gL and real income per capita at the rate gp. The economy enjoys steady growth.

2. Given steady growth of the world economy and an initial period of equilibrium growth in the dependent economy, an internally generated fluctuation appears as a divergence of the intersection of $\dot{Y}$ and $\dot{i}$ from the moving Y_E-locus of equilibrium. This could come about as a result of monetary factors: a change in the rate of increase in the money supply, or in the parameters of the (moving) demand function. But it is more likely to be caused by a relative shift of $\dot{Y}$, either because of some exogenous disturbance or through the workings of an endogenous oscillatory process.

3. In either case, the effect will be to cause changes in the external balance which will tend to damp the swing – either completely, in the case of perfect interest inelasticity (vertical $\dot{r}$-curve), or partially, provided $\dot{r}$ is steeper than $\dot{i}$. Since the reaction of the monetary system (or the monetary and fiscal authorities) to the payments imbalance will be somewhat lagged, some genuine, 'home-grown' fluctuations are possible in principle. But they will be smaller than would be the case in a closed economy, and less important than those caused by external changes.

4. Given steady growth of the domestic economy, an externally generated fluctuation appears as a relative shift both of the $\dot{Y}$ and of the $\dot{r}$ curves. The initial departure from moving A will be accompanied by external balance effects which will amplify the swing. This will be so regardless of the interest elasticity of the capital flow.

5. Whether disturbances are generated internally or externally, cumulative departures of the Harrod type from moving equilibrium are corrected, in an open economy with fixed exchange rates, by the operation of the external sector. This is more obvious in the case of booms than of slumps. In times of the latter, chronic external surpluses and accumulating exchange reserves may go on for longer than the opposite effects in time of boom. But part of these will eventually be monetised and used to finance expansion. And if domestic activity slows down to a growth-rate less than that of the rest of the world, the relatively strong demand for exports will provide a 'floor' from which recovery may begin.

6. Except in two rare cases, fluctuations in an open economy, whether internally or externally generated, will be accompanied by swings in the balance of payments. The exceptions are: first, where an internally generated disturbance coincides with an autonomous change in the capital flow of the right sign and magnitude; secondly, where an externally generated disturbance coincides with an internally generated one of the right sign and magnitude.

7. Autonomous changes in the (rate of increase of the) capital flow may generate disturbances of the same amplitude.

8. Autonomous changes in the (rate of increase of the) equilibrium conditions of the domestic money market may generate disturbances that will be completely reversed by the balance of payments.

STRUCTURAL INFLATION IN AN OPEN ECONOMY

The argument so far has rested upon an assumption that the exchange rate between domestic currency units and units of the composite commodity, goods-and-services, is independent of the level of output below Y_E. This is a standard assumption of Keynesian macro-economics and may well have been approximately true during the period of permanent underemployment between the two World Wars in which the theory was propounded.

Since 1945, however, most advanced economies have been operated at levels near to full employment for much longer intervals than ever before. There has been more or less continuous inflation in all countries, and an apparent relation has been observed between the rate of change in wages and prices and the percentage of work-force in employment. The phenomenon of 'structural inflation', as it may be called, was first reported by Professor A.W. Phillips (1958), who claimed to have discovered an inverse relation between the rate of change of money wage-rates and the percentage of unemployment, which held good for the United Kingdom between 1861 and 1957. Phillips's original study was immediately followed by numerous attempts to replicate his work for other countries and time-periods, and by an ever-increasing flow of papers and articles on the theory of inflation, some of which endeavour to find theoretical explanations of the 'Phillips Curve' (as the putative relation is generally called), others to show that it cannot possibly exist.[5]

Any attempt to adjudicate would lie beyond the scope of this book and also beyond the powers of its author. Indeed, it seems probable that rival theories of inflation, like rival theories of the business cycle and of many

[5]See, for example, the bibliography to Bronfenbrenner and Holzman (1963), also articles by Samuelson and Solow (1960), Phelps (1967, 1968), and Corry and Laidler (1967).

other economic processes, serve rather to expose the moral sentiments of their proponents than to provide falsifiable hypotheses of social phenomena. It is sufficient for this study to indicate the way in which the model set out in the previous section would have to be modified if a Phillips Curve existed for Australia; and to show that the broad conclusions of that section as to the relative importance of external and internal causes of fluctuations would be unaltered and even strengthened if such were the case.

The term 'Phillips Curve' is loosely used to describe various relations between inflation and the level of activity. In its original sense it refers to a plot of the proportionate rate of change of money wage-rates against the percentage of the work-force not employed, when the effect of all other influences upon wage inflation has been allowed for. Phillips found this curve to be negatively sloped, with a vertical asymptote at some level of unemployment greater than zero. By and large, the findings of other investigators have concurred with Phillips as to the negative slope and positive curvature of this graph, though its parameters have varied as between countries and time-periods.

In this chapter, a simple transformation of the Phillips Curve will be used, a diagram of which is shown in figure 2.6. It is assumed in the usual Keynesian manner that a unique, monotonic and increasing relation obtains between the level of employment and the volume of output. Then the ratio Y/Y_E serves as a proxy for the percentage of the work-force in employment, and the rate of inflation of the money-wage W, gW, will increase with the size of this ratio. Figure 2.6 has been drawn upon the assumption that there is positive wage inflation at conventional full

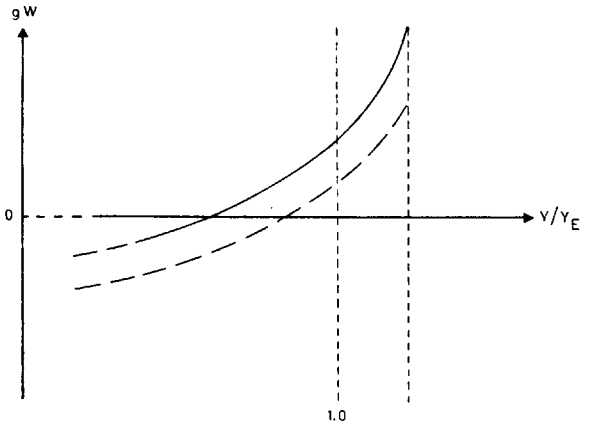

Fig. 2.6 A Phillips Curve relation between the rate of increase of money wages and the level of activity

employment where $Y = Y_E$, but that at some level of 'over-employment', at which labour and other factors are working with greater intensity than the conventional maximum, the curve becomes asymptotic. As with all previous diagrams in this chapter, the reader is invited to imagine that Y and Y_E are changing through time.

The rate at which the selling prices of goods will rise at each value of Y/Y_E depends upon the relation between money wage-rates and prices. The simplest assumption, and one which is commonly made in studies of Australian inflation,[6] is to take selling prices as determined by a fixed percentage mark-up on costs. If labour is the chief component of costs, if all other components of cost move more or less in step with money wages, and if the effect of world prices on the domestic price level may for the moment be ignored, then the rate of increase in prices P, gP, is simply the difference between the rate of wage inflation, gW, and the rate of net productivity increase (gp + gk). In figure 2.6 a dotted line is plotted parallel to and below the wage inflation curve in order to represent the way in which domestic price inflation might respond to changes in the level of activity.

In the first section of this chapter it was suggested that gk would respond to changes in the level of activity: hence a shift in the actual level of Y/Y_E operated might change the relation between the two curves. In order to integrate the inflationary theory of this section with the balance of payments theory of the last, it is necessary to make a further assumption: namely, that entrepreneurs ignore cyclical variations in k when establishing prices. In effect, this is to assume that profit margins vary over the business cycle, rising when gk is positive and falling when it is negative.

Given this further assumption, it is possible to translate the Phillips Curve relation into one between the level of activity and the rate of inflation of the price level. For any given rates of world price inflation, gP_r, and trend productivity growth, gp, there will be a single-valued, increasing relation between gP and the ratio Y/Y_E. For any given Y_E, this may be thought of as a relation between gP and Y. In other words, on graphs like those drawn in figures 2.1 to 5, we may add a supplementary horizontal axis for gP, measuring the rate of inflation of the price level at any level of output.

In figure 2.7 this is done. The axis marked gP shows how price inflation increases as Y for a given Y_E. In a growing economy Y_E shifts to the right and the gP axis 'stretches' to keep pace. (Alternatively, as suggested previously, the reader can imagine the scales of both horizontal axes continually *decreasing*.)

Now let the total money supply, M, expressed as a fraction of GNP measured in *base-year prices*, Y, be written as m. If we assume that the

[6]See, for example, Swan (1950) and Karmel (1959).

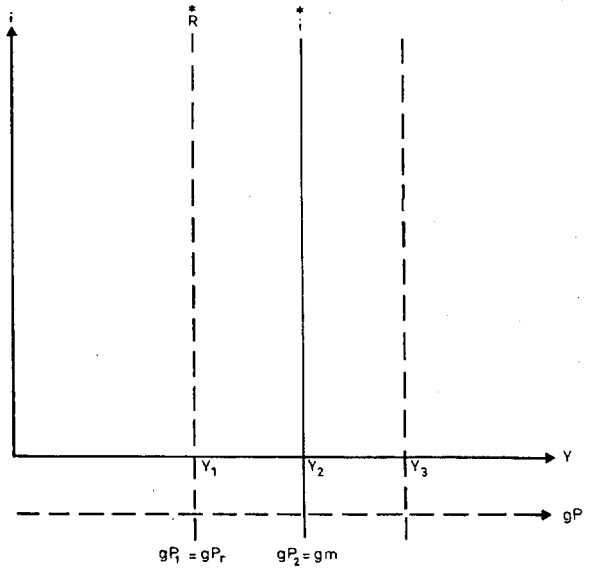

Fig. 2.7 Equilibrium of interest rates and the cost ratio when the rate of price inflation increases as the level of activity

parameters of the demand for money remain stable, then the money supply must be increased at a percentage rate equal to the rate of growth of GNP measured in *current prices* PY (which is gP + gY) in order for market interest rates to remain constant. For example, if GNP in constant prices increased by 4 per cent in one year, and the average price level by 3 per cent, then interest rates would remain unchanged if the money supply were expanded by about 7 per cent. This is the equivalent of saying that the rate of change of the fraction m must equal the rate of price inflation for interest rates to be unaffected.

The $\dot{i}$-locus thus becomes a vertical line intersecting the Y axis at that level of output (Y_2), corresponding with a rate of price inflation (gP_2) equal to the actual rate of change of m, determined by the central bank. At all points to the right of $\dot{i}$, interest rates tend to fall. When gP = gm, any going level of interest rates can persist.

Another locus has been drawn on figure 2.7, marked $\dot{R}$, intersecting the Y-axis at Y_1, at which domestic price inflation, gP_1, would exactly equal the going rate of world price inflation, gP_r. At all points to the right of this line, actual domestic inflation would exceed world price inflation; and the reverse for all points to the left. Let ratio of world to domestic price levels, P_r/P, be written as R. Then the $\dot{R}$-locus shows all points on the (i, Y)-map at which R will remain constant.

It is customary to suppose that the balance of trade of a country like Australia will respond to changes in the ratio between world prices and domestic *wage costs* (Swan, 1960). But if prices are taken to be determined by the latter (as they have been in this section) then the ratio R can stand proxy for the cost ratio, more usually written as $\frac{P_r}{W \div p}$. Then at all points to the right of the $\dot{R}$-locus, the competitive position of the economy is deteriorating on world markets and its balance of trade and payments worsening.[7] At all points to the left, the external balances are improving. At any point on the $\dot{R}$-locus, a given state of trade and payments can remain undisturbed, all other things being equal. The fact that for any given rate of world price inflation there will be a unique scale to the gP axis leaves this conclusion undisturbed. For if Y is other than Y_1, the rate of inflation of the domestic price level, being a weighted average of 'Phillips Curve inflation' and gP_r, will lie to the right or left of the $\dot{R}$-curve.

It is now possible to explore the effect of disturbances to the growth-rate of such an economy. Let us first consider the case of an internally generated boom, starting from an initial position of equilibrium at which the rate of monetary expansion and the rate of domestic price inflation are both equal to the going rate of world price inflation. The situation is represented in figure 2.8, showing that initially the $\dot{i}$ and $\dot{R}$ curves are the same. The $\dot{Y}$ and $\dot{r}$ loci intersect on $\dot{i}$ and $\dot{R}$ at the position A. The rate of interest is i_1, and the level of output Y_1.

An internally generated disturbance originating in the real sector will shift the $\dot{Y}$-curve to the right, let us say to the position $\dot{Y}_2$. If the rate of monetary expansion is held constant at gm_1, there will at first be partial equilibrium at B, with a higher interest rate (i_2), but the same level of output (Y_1) and correlated rate of inflation (gP_1). Since position B lies above the $\dot{r}_1$-curve there will be external surplus, a gain of foreign exchange reserves, and some incentive to the banking system to permit the liquidity of the economy to increase.

Suppose the central bank permits the rate of monetary expansion to rise to the rate gm_2 per cent per annum. The $\dot{i}$-locus shifts to the right and there is partial equilibrium at C; with higher output (Y_2), employment, and domestic inflation (gP_2, a weighted average of the 'pure' Phillips Curve inflation associated with Y_2/Y_E and the rate of world price inflation, gP_r, assumed constant). Since the point C lies on $\dot{r}_1$, there is initially external balance. But since it lies to the right of the $\dot{R}$-locus, the adverse inflationary differential will undermine the country's competitive position on world markets. Exports will fall off, imports rise, thus affecting the

[7]Upon the assumption that there are no compensating changes in the international capital flow.

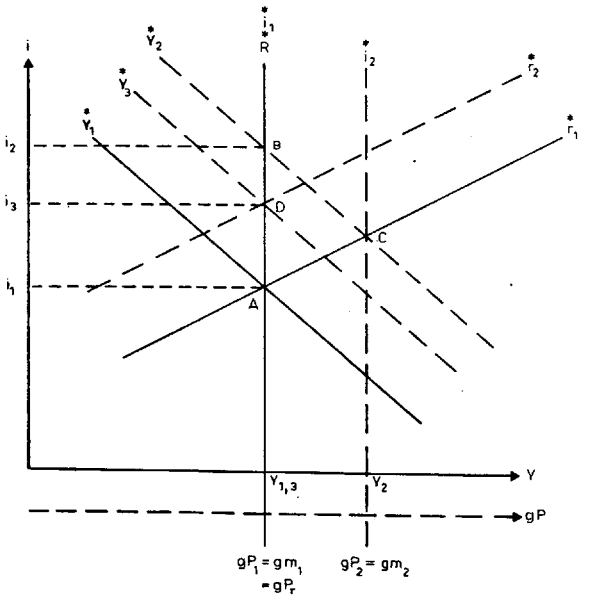

Fig. 2.8 An internally generated expansion in an open economy with structural inflation

parameters of the $\dot{r}$-curve and causing it to shift upward and to the left. Since for an open economy the balance of trade is also one of the parameters of the $\dot{Y}$-curve, this too will shift to the left, causing a temporary decline in interest rates and thus a still further worsening of the balance of payments.

The size of the balance of payments crisis is indicated by the vertical distance on the i_2-curve between the intersection of this with the $\dot{r}$-curve (moving leftward and *rising*) and the $\dot{Y}$-curve (moving leftward and *falling*). Only a relative contraction of the money supply can remedy the situation without recourse to physical controls. The rate of monetary expansion must be reduced to gm_1 again; $\dot{r}$ and $\dot{Y}$ will shift until they intersect on $\dot{i}$ and $\dot{R}$; and a new position of full equilibrium is established at D, with the level of activity and rate of inflation as before, but with a new higher level of interest rates as a legacy of the episode.

The conclusion of the matter is straightforward. A dependent economy with structural inflation cannot permanently sustain a level of activity higher than that at which the correlated rate of domestic inflation exceeds the rate of world price inflation. An internally generated boom will be completely reversed by the effect of the balance of payments. The same conclusion obtains for an internally generated slump, though in this case

the incentives to return to equilibrium will be weaker and the process slower. This conclusion is independent of the slope of $\dot{r}$-curve.

An externally generated disturbance to the growth-rate, as was shown previously in this chapter, will shift both the $\dot{Y}$ and the $\dot{r}$ curves. The case of an expansion is illustrated in figure 2.9. Suppose that the two curves shift rightward to the loci $\dot{Y}_2$ and $\dot{r}_2$ respectively. If there is no change in the rates of monetary expansion and world price inflation an initial position of partial equilibrium may exist at B, with higher interest rates and an external surplus which is caused partly by the effect of this on the capital flow, and partly by the improved trade balance. The extent to which the former of these is effective depends upon the behaviour of world interest rates. If the world boom causes these to rise, the parameters of the $\dot{r}$ curve will be affected and its rightward shift partially or fully offset.

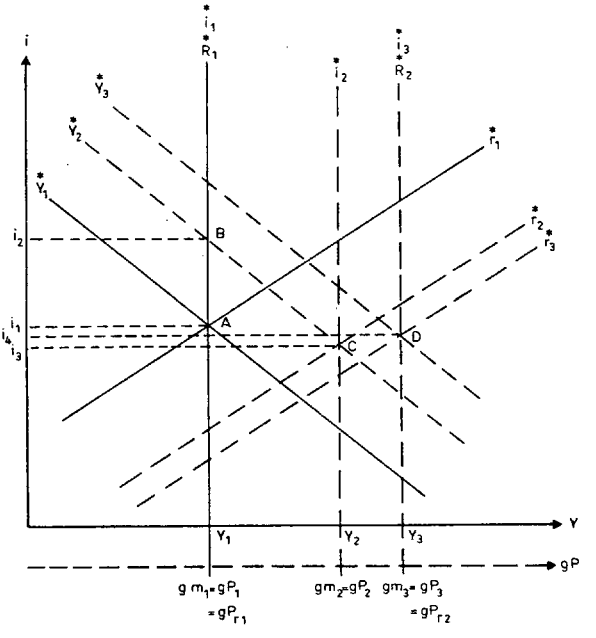

Fig. 2.9 An externally generated expansion in an open economy with structural inflation

Suppose that the central bank permits the appropriate increase in the rate of expansion of the money supply. The $\dot{i}$-locus shifts to i_2, the level of activity rises to Y_2, and external balance is achieved on the new $\dot{r}_2$-curve.

Whether the new equilibrium at C can be sustained depends, of course, upon what happens to the rate of world price inflation. If as a result of the

expansion of world activity the rate of inflation of world prices rises sufficiently to shift the $\dot{R}$-curve to i_2, then C is a position of full equilibrium in the sense that external balance established with an output ratio Y_2/Y_E will neither worsen nor improve. If world price inflation increases by more than gP_2–gP_1 the $\dot{R}$-curve shifts further to the right and equilibrium is only possible at D. This is the case illustrated in figure 2.9, in which the initial induced expansion is further amplified by the effect of a favourable inflationary differential. But if world price inflation is unresponsive to the level of activity (structural inflation relatively more serious in the dependent economy than in the rest of the world), the final expansion induced by the world boom may be smaller than Y_2–Y_1.

The argument is symmetrical for the case of an externally generated contraction. In either event, whether the external disturbance will be transmitted to the dependent economy with larger or smaller relative amplitude depends upon the slopes of the two Phillips Curves concerned. If the world Phillips Curve is *steeper* over the relevant range than that of the dependent economy, the latter will experience a greater change in its Y/Y_E ratio than the rest of the world, and vice versa. These conclusions, of course, require the assumption, implicit throughout, that Phillips Curves are stable with respect to changing expectations of inflation.[8]

It may now be seen that the theory of fluctuations in a dependent economy is not much affected by the introduction of structural inflation into the model. It seems even more probable than before that internally generated disturbances would be reversed by real and monetary changes in the external sector. Only in the unlikely case of a world expansion or contraction unaccompanied by any change in the rate of world price inflation would the initial impact on the dependent economy be eventually reversed by the inflationary differential. When changes in world demand are correlated with changes in gPr, the dependent economy will tend to follow the course of the rest of the world. The speeds with which the monetary system responds to changes in the balance of payments, and the trade balance to changes in the cost ratio will have much to do with the actual time-shape of fluctuations. The equilibrium positions marked out in figures 2.8 and 9 may eventually be attained, but it is quite possible that the route might be slow and even oscillatory. There is no point, however, in analysing the logical possibilities raised by the specification of lags. The purpose of the argument is to show that economic fluctuations in a dependent economy, whether internally or externally caused, will be

[8]Recent work by Phelps (1967) has suggested that for a closed economy at least, there may be no stable Phillips Curve if expectations adjust to actual inflation and if actual inflation is affected by this reaction. This conclusion is less likely to be applicable to an open economy in which both actual and expected rates of domestic inflation are affected by the exogenously given rate of world price inflation.

largely affected by the external environment. In the real world, this is unlikely to remain constant long enough for all effects of the latest change to work themselves through the system.

EMPIRICAL STUDIES OF THE AUSTRALIAN ECONOMY

The theoretical model developed in the previous sections of this chapter is sufficiently realistic – that is to say, it is sufficiently detailed and flexible – to serve as a conceptual framework for the narrative history which forms the remainder of this book. Before going on to use it in that way, however, it is necessary to refer its chief assumptions to the results of such empirical studies as have actually been carried out for the Australian economy since World War II. Four questions are crucial to the theory:

(1) Is there any evidence to support the assumption of a constant, or slowly changing *natural rate of growth*?
(2) Is there any evidence consistent with the suggestion that fluctuations in an economy like Australia's are more the result of *external* than of *internal* causes?
(3) What evidence is there for *structural inflation* in Australia in the post-war period?
(4) Is there evidence of a functional relation between the *balance of trade and the ratio of 'world' to Australian price levels*?

These questions will be answered in turn. This portion of the book is largely dependent upon the work of other authors, whose principal findings are here summarised.

The Rate of Growth of the Factor Base

Primary evidence of a steady growth in capacity to supply is afforded by time-series of the work-force and capital stock. Secondary evidence comes from the time-shape of fluctuations in residual productivity, k, and in the degree of employment, N. Tertiary evidence is found in econometric studies of aggregate investment behaviour, according to which it appears that most domestic investment expenditure in Australia since the war has been 'autonomous' in the Hicksian sense.

Between census dates in 1947 and 1961, the work-force increased from 3,916,000 to 4,225,000, an average annual increase of 2·01 per cent. Between 1947 and 1954 the average rate was 2·10 per cent; between 1954 and 1961 it was slightly less, at 1·95 per cent (Vernon Report: C. 72). Annual estimates have been made by B.D. Cameron (1967) and M. Keating (1967). Cameron's series is derived from population estimates by applying interpolated participation rates to population five-year age groups. Keating supplies alternative estimates: series 'A' constructed in the same way as Cameron's but corrected for the effect of fluctuations in migration; series 'B' compiled by adding separate estimates of the average

number of persons at work in each industry in each fiscal year and combining these totals with estimates of unemployment, absentees, and other persons not at work.

Cameron's series and Keating's 'A' series move closely together. Although both show a definite acceleration during the period 1948/49 to 1951/52, followed by a slowing down in the next two years, these changes are not so marked as to raise any serious doubt as to the expediency of assuming a roughly constant value of gL. Keating's 'B' series, however, shows clearly marked fluctuations in 1950-3 and again in 1955-7 which conform closely to the business cycle.

It appears that these changes are more the result of variations in the female participation rate than in net migration or male participation rates. Table 2.1 shows that in each year the male work-force changed positively, whereas in 1952/53 the female work-force actually *declined* by 1·92 per cent. The average rate of growth of the males series is lower than that of the females, and the standard deviation of growth-rates 0·90 percentage points as against 1·63 percentage points for females. Much of the fluctuation in series 'B', especially the decline in 1951-3, may therefore be interpreted as the consequence of demand-induced variations in the size of a reserve pool of disguised female unemployment.

Table 2.1 Average annual growth-rate of males and females series, Keating's series 'B', 1948/49 to 1960/61

Change on previous year	Percentage annual rate of change	
	Males	Females
1949/50	+3.09	+3.43
1950/51	+3.07	+4.08
1951/52	+2.73	+2.08
1952/53	+0.39	−1.92
1953/54	+0.56	+2.57
1954/55	+1.71	+3.46
1955/56	+2.14	+4.15
1956/57	+0.74	+2.99
1957/58	+1.17	+2.80
1958/59	+1.15	+2.51
1959/60	+1.44	+3.78
1960/61	+1.90	+4.52
Average growth rate	+1.67	+2.87
Standard deviation of growth rates	0.90	1.63

Source: Keating (1967).

Estimates of the capital stock are notoriously difficult both to make and to interpret. The only published estimate for Australia is an annual time-series from 1948/49, constructed by H.R. Edwards and N.T. Drane (1963) as part of an attempt to calculate Solow's index of residual 'technical

progress' for Australia. According to these authors, the capital stock of the manufacturing sector has grown almost constantly at 6·0 per cent per annum. Further light may possibly be thrown upon the rate of accumulation of productive equipment by the behaviour of one of the monthly series used in chapter 1 for chronological purposes. Indicator number 14, total electricity generated, was found to have grown steadily at an annual rate of about 9 per cent per annum.[9] In so far as the demand for electricity can be taken as an index of the extent to which modern machinery and equipment are in use, the regular growth of this series confirms the impression produced by the figures of Edwards and Drane.

It is much easier to measure fluctuations in the residuals, k and N, than to make direct estimates of the time-shape of the 'normal' or 'potential' quantities, p and L. If the former are seen to vary with the general level of activity then this is secondary evidence in support of the assumption of constant gL and gp.

There is, of course, no question at all about L and N. Employment and unemployment are highly correlated with output. Even if no estimates existed for L it would be possible to infer its roughly constant growth from the behaviour of N.

Measurement of the capacity coefficient of productivity is rather less reliable, and requires, at the least, some attempt to separate the 'farm' and 'non-farm' sectors of the economy.

Total civilian employment, reported monthly by the CBCS, 'excludes wage earners in rural industry and private female domestics' (CBCS *Monthly Bulletins; Employment and Unemployment*). Assuming the latter to be relatively unimportant and ignoring the possibility of any trend in number of 'working proprietors', we may take the series to represent employment in the non-farm sector. As a first approximation, the output of the farm sector can be regarded as exportable,[10] and the volume of exports as originating in the farm sector.[11] The series (GNP minus exports), available in constant prices, may therefore be related to total civilian employment to obtain annual estimates of average 'domestic' productivity. Table 2.2 shows the result, together with annual values of k obtained as proportionate deviations of measured productivity from a log-linear trend fitted by least-squares regression. The average growth-rate of domestic productivity implied by the trend is 1·81 per cent per annum, somewhat

[9]Although for total electricity generated the amplitude of fluctuation of trend-cycle about trend was very small, yet the shape of these fluctuations was sufficiently clear to permit the use of this series as a business cycle indicator.

[10]Agriculture is 'heavily dependent on exports for its own welfare'. Ninety-five per cent of wool, 65–75 per cent of wheat, 40 per cent of butter and cheese, 40 per cent of beef, 70 per cent of sugar are exported (Vernon Report: 8.35).

[11]Between 1948/49 and 1963/64, between 77 per cent and 91 per cent of the value of merchandise exports were from the farm sector (Vernon Report: table 8.6).

lower than that for the whole economy estimated in the Vernon Report for much the same period.

Table 2.2 Average annual productivity in the non-farm sector and an index of residual productivity after removal of an exponential trend

	GNP minus exports at constant prices (1948/49 = 1612) Y	Total civilian employment (thousands) (N.L)	Domestic productivity (1948/49 = 100) (p.k)	Residual productivity k
1948/49	1612	2423	100.0	0.9628
1949/50	1737	2522	103.5	0.9790
1950/51	1879	2627	107.5	0.9987
1951/52	1984	2669	111.8	1.0194
1952/53	1883	2589	109.3	0.9795
1953/54	2021	2661	114.2	1.0045
1954/55	2169	2758	118.2	1.0217
1955/56	2244	2836	118.9	1.0096
1956/57	2246	2861	118.0	0.9839
1957/58	2339	2880	122.1	0.9996
1958/59	2481	2917	127.8	1.0282
1959/60	2566	3000	128.6	1.0157
1960/61	2659	3063	130.5	1.0123
1961/62	2601	3052	128.1	0.9762
1962/63	2771	3130	133.1	0.9962
1963/64	2877	3233	133.8	0.9834

Average growth-rate of domestic productivity, 1. 81 per cent per annum.

Source: National Accounts and *Monthly Bulletin of Employment Statistics.*

It can be seen that there is broad correspondence between the peaks and troughs of the series k and those of the Australian business cycle. This is somewhat more apparent in the troughs than in the peaks. Maximum values of k tend to anticipate peaks in the general level of activity after the First Episode. It is natural to expect, however, that temporary increases in measured productivity would be observed during periods of recovery.

Tertiary evidence of the relative steadiness in the growth-rate of productive potential is supplied by a series of econometric studies published between 1958 and 1967 by J.W. Nevile (1958, 1962), D.J. Smyth (1960, 1962), J. Kmenta (1966), and B.D. Cameron (1967).

The first three of these authors constructed fairly simple, constant price, annual models of the Australian economy from 1947/48. In the absence of official estimates of national income at constant prices, they were obliged to resort to rough-and-ready methods of deflation and stock

valuation adjustment. Their data were taken, moreover, from annual White Papers on National Income and Expenditure issued before the publication in 1963 of revised national accounts from 1948-9. For these reasons, their findings should be treated with even more caution than ought always to be used with econometric explanations of the business cycle.

The annual models all suggest that fixed capital investment has been largely determined by long-run, 'trend' factors: the chief short-run determinant has been the availability of finance rather than an accelerator-type relation between output and capital.

Cameron's model is based on the official series of quarterly, current price data which begins in 1958-9. His equations refer to a period of six years, which is too short to throw light on the relative importance of long- and short-term factors in the determination of fixed investment.

Internal and External Source of Fluctuation

In an economy like that of Australia, fluctuations can arise as a result of any one, or combination of, external disturbances, endogenous internal processes, and internal but exogenous changes. In the theoretical sections of this chapter it was suggested that the first of these would probably have the largest effect. The only evidence bearing directly on the relative importance of the three is contained in the econometric studies alluded to above, and is therefore suspect. For what they may be worth, however, the models all suggest that the endogenous cyclical mechanism, if any, is weak, and that the principal cause of fluctuations lies in the balance of trade.

The original studies of Nevile (1958) and Smyth (1960) led to the following conclusions:

(1) Most Australian investment is autonomous (Nevile, 1958).
(2) The accelerator coefficient is small, substantially less than unity (Nevile, 1958).
(3) Autonomous investment increases through time (Smyth, 1960).
(4) The fixed capital accelerator coefficient is so small as to be of very little use in explaining fixed investment decisions in Australia (Smyth, 1960).
(5) What trace of the accelerator mechanism there may be for Australia operates largely through investment in non-farm inventories (Smyth, (1960).

Smyth (1962) constructed a three-equation model which suggested that fluctuations in the Australian economy to 1959/60 were largely the result of variations in the balance of trade and government expenditure. In the same year, Nevile published an account of a nine-equation annual model, 1947/48 to 1959/60, with completely new investment functions. A rather elaborate inventory hypothesis, based on L. Metzler's (1947) expectational

model, eventually reduced to an accelerator equation very similar to that of Smyth. Fixed investment was found to be responsive to levels and changes in company incomes. The completed model suggests even more strongly than Smyth's that disturbances in the Australian economy have been the result of exogenous factors, essentially the balance of trade and government policy. Fluctuations in inventory investment, though an important element of changes in aggregate demand, and though related to income changes by a simple accelerator mechanism, have not in themselves generated periodic oscillations during the post-war period.

Kmenta's 18-equation model resembles Nevile's in several important respects. It makes use of the same annual national income data, and follows the deflating procedure of Smyth and Nevile. The inventory equation, though different in form, reduces to very much the same as its predecessors.[12] The most important differences, aside from the method of estimation,[13] result from the fact that immigration is included as an explanatory variable in all the structural equations[14] and that imports are treated as endogenous. The greater complexity of the model, and the different treatment of lags in some equations, cause it to reduce to a fourth-order difference equation, the roots of which – given appropriate 'normal' values of the exogenous variables – predict a strongly damped, 13-year cycle for Y. 'It appears then', its author observes, 'that the system is

[12]Kmenta postulates:

$$Ki_t - Ki_{t-1} = a + bZ_{t-1} + c(Y_{t-1} - Y_{t-z}) + d.h_t$$

Where Ki is the level of inventory investment, Z is the ratio of non-farm stocks to GNP and h net annual immigration. The coefficients of c and d are statistically insignificant, however, and b has a negative sign. His equation therefore becomes:

$$I_t = a - bZ_{t-1}$$

Let $I_t = Z_{t-1} - Z_{t-1}$, then at equilibrium,

$I_t = 0$, and

$Z = a/b = v^i$, the old, familiar inventory accelerator. Hence the ratio of Kmenta's 'a' to his 'b' should yield a result similar to the estimates of v^i obtained by Smyth and Nevile – which it does.

Smyth (1960) 0.34	Nevile (1962) 0.31
Smyth (1962) 0.33	Kmenta (1963) 0.31 (ratio of a to b)

The reader ought not to be misled by the consistency of these results into supposing that the 'inventory accelerator' is an immutable behavioural parameter for Australia. All three authors apply what is at the bottom the same method to what are, with small variations, the same (inadequate) data.

[13]For those relations in which the explanatory factors do not include current endogenous variables, simple least-squares method is used. All others are estimated by the two-stage least-squares method.

[14]The primary purpose of the model was 'to serve as a means of analyzing the cyclical effects of immigration on the Australian post-war economy'. The coefficients attached to the immigration variable were statistically significant in very few of the equations, however.

basically stable and that the sources of instability, inasmuch as they exist, have to be sought in the stimuli from the exogenous shocks . . . ' (Kmenta, 1966).

Cameron's quarterly model contains an inventory equation of the form used by Smyth and Nevile. The results of the regression were less than satisfactory, however, perhaps because of the author's failure to remove a clearly-marked seasonal cycle from the quarterly estimates of non-farm inventories.[15]

Structural Inflation

There is a considerable literature on the process of wage determination in Australia,[16] much of it sceptical of any connection at all between demand for labour and the inflation of earnings. The chief reason for this scepticism lies in the far-reaching effect upon labour prices produced by decisions of the Commonwealth Commission of Conciliation and Arbitration.[17] As against this it has been argued that although the Commission does, in fact, set the basic wage and the schedule of margins erected upon it:

(1) The Commission may, in general, be more willing to raise award wages in times of general prosperity, and vice versa.
(2) Even when this is not the case, perverse decisions of the Commission will be offset by a countervailing change in the margin between actual earnings and nominal rates.

The relevance of the Phillips Curve analysis to the Australian economy therefore depends upon the reactions of the Commission to the economic climate, and the behaviour of 'wage drift' in response to changes in demand. All empirical study of wage adjustment since the war has turned on these two questions.

The first attempt to quantify these relations was made in 1959 by Phillips (1959). He used quarterly data from 1947 to 1958, smoothed by a four-quarter moving average 'to reduce seasonal and random fluctuations'. The dependent variable chosen was the index of nominal wage rates rather than that of average earnings. Explanatory variables considered were the rate of change of consumer prices (since these have been influential in deciding award rates), export and import prices, and the excess demand for labour. Since the first of these is deemed to be a function of the rates of

[15]Cameron (1967: 17.7), claims that 'the physical accumulation of non-farm stocks showed no seasonal pattern'. In my own examination of the quarterly national accounts I employed an *additive* hypothesis of seasonality in non-farm inventories with good results.

[16]Russell (1965), lists a selection of more recent references.

[17]A concise summary of Australian wage determination is given by Isaac (1960), reprinted by Arndt and Corden (1963: ch. 15). For a strong opinion on the importance of the Commission, see Karmel (1960), reprinted in Arndt and Corden (1963: ch. 16). 'The General Level of Money Wages is largely determined by the Commonwealth Arbitration Commission.'

change of wages and foreign trade prices it was eliminated from the analysis. Two slightly different hypotheses were tested, each of which made the proportionate quarterly rate of change of wage-rates a hyperbolic function of the ratio of registered unemployment to total civilian employment. When the rates of change of export and import prices in these equations are treated as parameters, the familiar Phillips Curve is obtained for Australia in two slightly differing versions. During the period 1947 to 1958, it would seem, an unemployment rate of less than about 0·5 per cent sent wages inflating at 20 per cent per annum or more. The horizontal asymptotes of either version were positive, about 3 per cent and 2·5 per cent per annum respectively. Even if registered unemployment were allowed to rise to 3 per cent of total employment, that is, nominal wage rates could still be expected to increase at more than 2 per cent per annum.

The following points should be noted in connection with this study:

(1) The results were never printed. The only record of the research is a mimeographed 'Economic Monograph', from which details of the regressions – apart from the parameters – are omitted.

(2) The period covered terminated in 1958. An inspection of the data from 1959 suggests that neither hypothesis may have fitted the facts so well during the past seven years.

(3) A simple moving average was applied to the raw data before regressions were calculated. The effect of this, especially in 1951, seems to have been to blur the fact that the down-turn in wage inflation (both of rates and earnings) *preceded* the down-turn in excess demand.

(4) In that *wage rates* and not *earnings* were treated as dependent, the object of the investigation, in effect, was to examine the behaviour of the Arbitration Court in relation to the market for labour. No attempt was made to see whether the wages drift residual or the sum of rates and drift were equally or perhaps more responsive to market forces.

(5) The index of excess demand suffers from a defect, to be discussed later, common to all post-war studies of the Australian labour market.

The fourth of these considerations, the problem of 'wages drift' has received much attention from Australian economists in the last decade. As used by most authors, the concept may be defined as the difference between the rate of change of average earnings and the rate of change of nominal wage rates. The most complete study was made by K. Sloane (1960), using annual data from 1945-6 to 1958-9. The research was undertaken in the belief that,

> Particularly at times of full employment significant relationships may exist between the 'economic situation' and money wage movements and moreover, that wage-drift may have unique characteristics relevant to both wage developments and inflation. (p. iv)

It is evident that the gap between earnings change and rates change may

be in part the result of overtime payments, and that even were it possible to abstract from this,[18] the resulting series of correlated drift might be a function of productivity change and profit variation as well as of excess demand.[19] Judgments of the Arbitration Court, moreover, might be influenced by the gap between earnings and rates.[20] If a large divergence led to an increased award and vice versa, then the wages drift would show some inversity or lagging with respect to wages and earnings, and this would be the more noticeable with quarterly data. After making due allowance for all these factors, Sloane (1960: 229) concludes that although the evidence is far from satisfactory, 'It is difficult to dispute the claim that demand has been a major source of pressure for changes in both official minimum rates and wage drift'. In effect, a theory which makes the rate of change of *earnings* dependent upon an appropriate index of tightness in the labour market is upheld rather than upset by such information as there is. In the remaining chapters of this book, however, each important decision of the Commission will have to be examined in its historical context and its possibly 'autonomous' character assessed.

The econometric models of Smyth and Nevile abstract from price changes. That of Kmenta, however, includes two equations for price determination: the first makes the price level a linear function of nominal wage rates, immigration, and the difference between registered vacancies and registered unemployment; the second makes average earnings depend linearly upon nominal wage rates, average productivity, and immigration. Standard errors of the immigration coefficients are too high to warrant serious consideration of this variable. The first equation thus implies that the price level is determined by the state of the labour market, abstracting from changes in wage rates. In other words, if the Commission held nominal rates constant, a unique level of the Consumer Price Index would be associated with each value of registered vacancies minus registered unemployment. This conclusion is at variance with all other research into post-war Australian inflation.

A recent study of Australian wage changes by E.A. Russell (1965) includes an attempt to estimate the parameters of a more meaningful

[18]Phillips (1959) and Russell (1965) attempt to correct for overtime: Phillips by assuming that overtime is a function of the degree of employment, Russell by a method described below.

[19]As proposed (for the UK) by Lydall (1959). Sloane (1960: 192–5) considers this but judges that the relative unimportance of piece-work in Australia – upon which a postulated relation between productivity and drift largely depends – makes it unnecessary to consider productivity seriously. Kmenta, however, uses productivity to explain the gap between average earnings and nominal rates. For reasons considered below, however, the price equation in his model must be regarded with suspicion.

[20]Sloane (1960: 158–63), uses quarterly data to show that the index of drift usually *declines* after any substantial increases in award rates.

equation. Deseasonalised quarterly data for the period 1953 to 1964 were used to test the hypothesis that the *rate of change* of earnings (*net of overtime*) depends upon excess demand and the *rate of change* of nominal rates. The overtime adjustment was made by applying to the data before 1960 the results of a regression of overtime on registered vacancies made for 1960-4 when reliable information on average overtime had become available. Russell used the ratio of registered vacancies to civilian employment plus registered unemployment as an index of excess demand for labour, and discovered a very weak relation between this and the inflation of average earnings. The poor result is in part a consequence of using quarterly rather than annual data, and also reflects the smaller apparent connection between excess demand and wage inflation in the period since the mid-1950s. It is possible, too, that the introduction of lags would have improved the relation somewhat. Russell himself, however, interprets this result to mean that 'The evidence calls for the greatest hesitation in making the claim that the rate of increase of earnings is controllable by operating simply on awards and the level of demand'.

In Cameron's quarterly, current price model money wage rates are treated as exogenous and there is no equation for average earnings.

Before attempting to draw any conclusion from the somewhat conflicting results of these various studies, a word must be said about the concept of 'excess demand for labour' in Australia. Each of the three indices mentioned in this section, those of Phillips, Kmenta, and Russell, depends upon either or both of the series registered vacancies and registered unemployment. Justification for their use rests partly upon the absence (at the time) of any reliable intercensal estimates of the work-force with which to compare total employment, partly for theoretical reasons first considered by Bent Hansen (1958: 348; Hansen and Rehm, 1956: 106). The objection lies in the possible unreliability of the Australian data. It has already been seen (see table 1.7) that whereas vacancies have been *declining* rapidly since 1948 (8·5 per cent per annum for males and females together), unemployment has been *rising* at an even greater rate (11·0 per cent per annum for males, 16·2 per cent per annum for females; 12·5 per cent for total persons). The series $\frac{\text{registered vacancies}}{\text{registered unemployment}}$ therefore, has been diminishing over most of the post-war period at an average compound rate of 21 per cent per annum. It is widely believed (though impossible to establish)[21] that some, at least, of this decline is spurious. On the one hand, the attitude of employers towards reporting vacancies is said to have changed: whereas formerly vacancies were registered in excess of needs

[21] Sloane (1960: 147). This opinion is confirmed by 'off-the-record' conversations I have had with officials of the Commonwealth Employment Service.

in anticipation of future shortages, this tendency has continuously declined.[22] On the other hand, it is sometimes suggested that employees have become more willing to register as unemployed for short periods. If such is the case, it would seem that attempts to relate 'excess demand' to wage inflation in Australia should include a trend term to allow for continuous structural change.

Even with this modification, however, it seems clear that the relation would be poorer in the second half of the period than in the first, and poorer with quarterly than with annual data. Despite these qualifications, there does seem to have been enough evidence from the post-war Australian economy for *some* connection between wage inflation and the degree of employment to be assumed. How far this may have been modified or obscured by other institutional factors will be considered in the ensuing narrative chapters.

Balance of Trade and the Cost Ratio

At first glance there may seem to have been little connection between the rate of change of the cost ratio and movements in the balance of trade.

From March 1952 until March 1960 between 79 and 98 per cent of all imports were subject to restrictive licensing intended to keep the total value of imports below a variable ceiling determined by the government at three, four, or six monthly intervals (Moffatt, 1962).

The volume of exports was affected by highly erratic conditions of supply throughout the period, and both volume and value by an unprecedented rise and fall of world demand between about January 1950 and March 1952. The devaluation of the Australian currency unit in September 1949 maintained the exchange rate of £A1.25 on the pound sterling which had been in effect since 1931. Since approximately 56 per cent of imports and 65 per cent of exports at that time were transacted with the rest of the sterling area, the effect on external balance was small (McColl, 1965: 118, table 6.1).

Partly for these reasons, in particular the prevalence of import controls, and partly because of the omission of a price sector from their models, both Smyth and Nevile chose to treat the balance of trade as exogenous in their econometric studies of the economy.

Kmenta, as previously noted, makes imports endogenous. Although his

[22]This view is supported by a dramatic change in the seasonal pattern of registered vacancies over the period from 1945–6. In the early post-war years, seasonality in this series was very slight: the amplitude of seasonal fluctuations has increased continuously to the present time. This suggests that employers have become more careful in their notification of vacancies; formerly they left notice of vacancies almost automatically; increasingly they have tended to report only those vacancies they actually wish to fill in the current month.

model includes equations for average earnings and the price level, however, neither is used as an explanatory variable in the import function.

However, Cameron's (1966, 1967) two published studies of the quarterly, current price national income estimates include the ratio of 'world' to domestic prices as an explanatory variable in the equations for imports and non-farm output. The Import Price Index is used as a proxy for the world price level. Statistically significant coefficients of the price relative were achieved in each equation, suggesting that from 1958/59 at least, the balance of trade has been responsive to changes in the competitiveness of the Australian economy.

If the cost ratio mechanism were genuinely operative from the late 1950s, it seems reasonable to assume that it had similar effect before that time but that the evidence for this has been largely obscured by the import controls and abnormal changes in world prices.

For example, the period from the first quarter of 1951 to the first quarter of 1954 was one in which the competitive position of Australia was being steadily eroded by the combined operation of falling world prices and prolonged after-effects of the great wage inflation of 1950/51. The import cuts of March 1952 provided a temporary cure (already begun naturally in August 1951 with the recession-induced decline in import demand), but from the first quarter of 1952/53 the rate of change of external balance fell continuously until the restoration of 'inflationary equilibrium' (equality between the rate of world price inflation and the rate of increase in average earnings minus the long-run productivity growth) in the middle of 1953/54.

Although the precise impact of changes in the cost ratio upon external balance up to 1959 or 1960 must remain somewhat conjectural, therefore, there seems to be some justification for the prominent part it has played in post-war discussion of the Australian economy.

3

The Korean War Episode, 1949 to 1953

Although in some ways the whole of the period between the end of World War II and the beginning of the Korean War can be regarded as a 'boom', there are good reasons for beginning the story of the First Episode in 1949. In the first place, as figure 3.1 reveals very clearly, there is a difference in kind between the inflation of 1950 and that of the years which precede it. Secondly, it is broadly true to say that the period between 1945 and 1949 was free from serious economic fluctuations. There were, to be sure, slight recessions in 1945/46 and in 1948/49, the earlier of which was caused by the transition from war production, and the later by the American inventory recession which began in the last quarter of 1948. In 1949, moreover, the performance of the economy was seriously affected by the black coal general strike in New South Wales. But these were minor ripples by comparison with the episodes which are described in this history. They occurred,

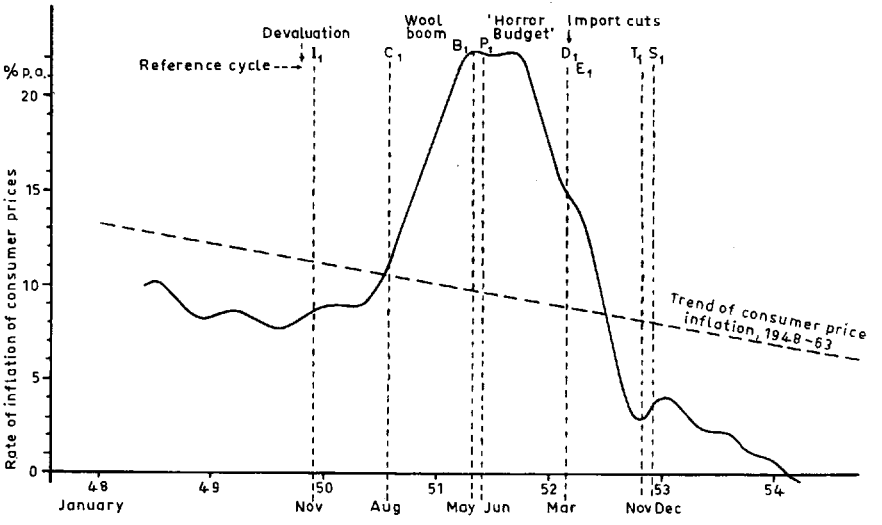

Fig. 3.1 Consumer price inflation during the First Episode

moreover, in an economy in which the change to 'normal' peacetime conditions was not yet completed. By the end of 1949, however, recovery from the second minor cycle was under way; many transitory features of the early post-war years were gone or disappearing; a new government was about to take office pledged to end inflation and free the economy from controls; and the disturbing influence of the Korean War wool boom was less than a year in the future.

Without ascribing any great significance to the date, therefore, the narrative of the first important post-war 'interruption' to the rate of growth will begin in November 1949 (reference I_1). In this chapter, as in two chapters to follow, the actual chronicle of events will be preceded by a brief review of the state of the economy at the outset of the episode; and followed by a summary of the economic processes at work during the period.

THE AUSTRALIAN ECONOMY ON THE EVE OF THE KOREAN WAR

The most conspicuous features of the Australian economy in 1949 were first, an interrelated set of constraints upon the growth of domestic production, aggravated by the needs of large-scale immigration and development programs; secondly, a state of general fiscal and monetary ease resulting in part from government policy and in part from the conditions of international trade; and thirdly, a rapid inflation of domestic costs and prices arising out of the interaction of the first two.

Production for Domestic Consumption

During the first post-war year there were large increases in output of most commodities as servicemen returned to peacetime work and pre-war patterns of production were resumed (see Vernon Report: 1.38). Total civilian employment rose by 11·2 per cent and manufacturing production, on average, by 11·0 per cent (Stevens, 1954). Very large gains were achieved in steel (24·3 per cent), bricks (63·0 per cent), and new houses (112·1 per cent). Very soon, however, bottlenecks began to appear, especially in basic materials and services, and growth-rates declined seriously.

Despite the slowing down in the rate of growth of basic supplies (excepting electricity) in the first four post-war years, there was considerable expansion in secondary and tertiary industry. Taking the fiscal year 1938/39 as a base and comparing the 1948/49 levels, Sir Douglas Copland (1949) showed that employment increased by 53 per cent in manufacturing, 73 per cent in road transport, 89 per cent in communication, 161 per cent in public authority activity, 64 per cent in health services, and 55 per cent in personal services. Production of various processed foodstuffs increased by amounts ranging from 58 per cent (breakfast cereals) to canned meat

(244 per cent); and of domestic refrigerators, soap products, and sporting goods by similarly large amounts (Copland, 1949).

It was generally agreed, by 1949, that the post-war development of the economy had become unbalanced.[1] Employment was believed to have been diverted from 'essential' to 'inessential' production, as a result of which 'nearly all the industries supplying capital goods [were] working considerably below capacity' (Copland, 1949: 3) and industry as a whole was becoming subjected to stoppage and interruption due to shortage of power and materials.

Copland proposed an explanation in terms of the relative profitability of secondary and tertiary industry in an inflationary period. The more rapid the inflation, the more attractive becomes investment in 'milk-bar' type enterprise: but this reduces the flow of factors to basic industry, thereby aggravating the inflation which gave rise to the situation. The 'initial conditions', in the Australian case, were the factors causing

> the excessive demand which has existed since the war. Demand has been so strong that practically any production has been profitable and the result has been keen competition for the available labour force. In this competition the basic industries have inevitably suffered because, generally speaking, the working conditions they offer are much less attractive than those offered by non-basic industries. (Copland, 1949: 5)

Whether or not the term 'milk-bar economy' was a suitable epithet to apply to Australia in 1949 is now held to be a matter of some doubt. Not all basic industries were seriously affected: the production of electricity and new housing increased at high rates up to 1949/50, notwithstanding the decelerating growth-rate of the latter. Certain structural changes were taking place, moreover, to make the economy less dependent upon the supply of black coal. Table 3.1 reveals that the consumption of black coal and coke by manufacturing industry increased at less than 5 per cent per annum in the first six post-war years, whereas that of brown coal increased at 10 per cent per annum and of (imported) fuel oil at 20 per cent. In addition, it has been shown by S.P. Stevens (1954) that several classes of manufactures not normally regarded as 'non-basic', such as mine and quarry products, chemicals, industrial metals and machinery and rubber, grew at average rates in excess of 10 per cent per annum until 1948/49. It would appear more probable that constraints upon the growth of

[1] 'In our basic industries . . . we are undermanned. Yet there has been an enormous expansion . . . in what an economist has described as "tertiary industries" . . . but that has not also occurred in the basic industries, upon whose production and prosperity all the consequential activities of the community depend. We have only to think of the recurring problem of the grave shortage of coal . . . to realize that it means delays and interruptions of production which result in further shortages in other industries, and those interruptions inevitably increase the cost of commodities and tend to raise the general level of prices' (Menzies, *CPD*, vol. 201, p. 527).

production came more from other causes such as difficulty in obtaining imported capital goods from Britain and Europe (together with restriction upon the use of dollars to obtain these from North America), and that the problem of the basic industries lay not so much in actual shortage of labour as in discontent and inefficiency arising from 'the working conditions' and from more deep-seated social causes.

Table 3.1 Consumption of power, fuel, and light by manufacturing industry (classes I to XV), 1944/45 to 1950/51
Percentage change on previous year

	Black coal	Coke	Brown coal	Fuel oil
1945/46	−8.22	−14.10	−15.86	−2.86
1946/47	+11.45	+24.68	+26.91	+47.00
1947/48	+4.74	+7.20	+25.78	+16.29
1948/49	+0.71	−13.27	+17.56	+19.10
1949/50	+3.90	+3.97	+16.22	+27.11
1950/51	+12.56	+19.25	−6.44	+15.70
Average	+4.19	+4.62	+10.70	+20.39

Source: Secondary Industries Bulletin.

It is certainly clear that the early post-war period was one of unusual labour unrest. Table 3.2 shows that the incidence of industrial disputes, measured in working days lost per man-year, was more than twice as serious in the period 1946–50 as in the succeeding decade.

Table 3.2 Industrial disputes in the post-war years

	Number of working days lost (000)	Male work-force as at June (000)	Days lost per male worker per annum	Days lost per cap. p.a. as index number (average 1951-60=100)
1946	1,948	2,471	0.788	276
1947	1,339	2,479	0.540	189
1948	1,663	2,531	0.657	230
1949	1,334	2,592	0.515	180
1950	2,062	2,677	0.770	270
Average 1946–50			0.654	229
Average 1951–60			0.285	100

Source: Labour Reports and Keating 'A', 1967.

In part this was a result of abnormally high demand for labour (Oxnam, 1953), but it is evident from the post-war figures as a whole that there has been a steady downward trend in the seriousness of disputes. It was widely believed at the time that industrial unrest, though arising in many cases

from unredressed grievances of long standing (Gollan, 1963: ch. 11 and *passim*) and brought to a head by frustrated expectations of post-war amelioration, was deliberately aggravated by the Communist Party for strategical purposes. This seems certainly to have been the case in 1949, when the crippling black coal general strike in New South Wales coincided roughly with major Communist-led strikes in Canada, Britain, and Western Europe. In Australia,

> Communists within the Federation saw their political task as one of pricking the illusions of 'reformism' amongst the miners arising from the easily won improvements of the immediate post-war years, and at the same time providing an example to the rest of the labour movement. The government had failed to nationalize coal, and the Coal Board was providing the sinews to make the privately-owned coal industry work by mechanizing it. Mechanization would be at the expense of the miners so it was the responsibility of the communists in the Federation to precipitate a struggle, under the best tactical conditions, to win industrial gains and to press for the nationalization of coal . . . The broader political objective was stated quite explicity: 'our policy provides a sound basis for winning a united front among the mine workers and at the same time differentiating ourselves as a Party from the policy being followed by the current Labor Government'. (Gollan, 1963: 232–3)

The 1949 coal strike was the culmination of a long series of at least semi-political stoppages, the worst effects of which are concealed by the data of table 3.2. Seventy per cent of all strikes between 1946 and 1950 took place in the strategic industries: coal mining, rail transport, and dockyards (Oxnam, 1953: table III). The indirect consequences were therefore much more serious than the number of working days lost would suggest. During the coal strike, for example, total civilian employment fell by 120,000 on average during the months of July and August; average registered unemployment ran at 139,800 (Commonwealth Employment Service, unpublished, undated memo S. 11919); and it was unofficially estimated that more than half a million were out of work at the peak, with a loss of national income per week of the order of 50 per cent.[2]

Not only in the basic industries, but in all sectors of the economy during the early post-war years, many other factors combined to retard the growth of productivity. Excess demand for labour, the difficulties experienced by ex-servicemen in settling down to civilian life, together with the absence of payment by results, were causes of high labour turnover, excessive absenteeism and slackness on the job (Oxnam, 1953; Walker, 1951; Copland and Barback, 1957: 166). Rapid inflation of the selling price level combined with restraints on competition and general shortage of imported goods was a cause of poor quality, service, and delivery, and of a generally euphoric and unrealistic appraisal of the

[2]*SMH*, 12 August 1949. This is probably an exaggeration.

possibilities of profit.[3] Unions were averse to incentive payments and mechanisation.[4] Managements were slow to innovate, reluctant to compete, and strongly protectionist.[5] By contrast with other English-speaking countries, the Australian preference has been for increased leisure rather than increased consumption,[6] and in December 1947 the 40-hour week became general. The long-run effects both of this and of the coal strike seem to have been beneficent, however,[7] though not appearing until much before the close of the pre-Korean War period.

The restricted supply of imports up to 1951 was a factor of the greatest importance, not so much in creating the situation as in allowing it to continue uncorrected for so long. During the early post-war period, Australia sought more than 60 per cent of her imports from Britain and continental Europe (McColl, 1965: 118–19, table 6.1). The urgent domestic needs of European industry, together with frequent interruptions of production, especially in Britain, resulted in long deliveries, inadequate service, and high prices. Australia's membership in the dollar-scarce Sterling Area involved restriction of imports from North America to 'essential' goods not elsewhere available. The government, however, was reluctant either to raise dollar loans or to encourage direct investment by American enterprise.

[3]'For the first time in many years, businessmen began to count the cash in hand as well as the customers in the queue.' (Swan, 1952: 205.)

[4]In 1947 it was found that 'soundly devised and properly operated incentive plans have in practice increased production rates... from 20 to 50 percent' (Oxnam, 1958: 'Problems of Payment by Results, Economic Aspects'). In Australia, however, an ILO survey found that only 11 per cent of workers in the private sector were so paid, very much less than in other industrial countries (p. 95). In 1949 the biennial conference of the ACTU 'reaffirms the rejection of incentive payment schemes which, as the 1947 Congress declared, have a weakening and disruptive influence in the trade union movement, and result in an intensification of labour' (p. 33).

[5]'There appears to be something fundamentally wrong with Australian management: and this seems to be a very much more important point than what might also be true in this respect – that there is probably also something wrong with Australian unionism. Productivity is something which is in managements' hands much more than the unions.' (Rawson, in Australian Institute of Political Science, 1959, in discussion of his paper, 'The Economic and Social Impact of Trade Unions in Australia'. See also Karmel and Brunt, 1962: 94–102 on the uncompetitive nature of the Australian economy. 'Just about every restrictive practice known to man is used in Australia.')

[6]'In our climate more leisure can bring the happiness which we all seek but which in other places is primarily a matter of money.' (Mrs Phyllis Burke in discussion of Ross, L., 'Australian Trade Unionism in the Twentieth Century', Australian Institute of Political Science, 1959: 36).

[7]See Stevens, 1949. Stevens found from a survey that 'within one year of its introduction increased managerial efficiency has practically balanced the loss of 9.1 percent in standard weekly working hours over the whole of industry', thereby suggesting that a considerable margin for improvement lay waiting from stimulus in the early post-war years. According to an informal survey conducted by the *Sydney Morning Herald* (23 September 1949), the coal strike had a similarly bracing effect on labour. Employers reported lower absenteeism and better discipline after the strike, and also permanent reduction of labour inputs by improved methods.

Shortages of manufactured goods, which continued into 1949, were the result less of production failures or import scarcity than of abnormal demand. Supplies of many civilian goods were severely restricted in Australia during the war. The needs of ex-servicemen, and the abolition or easing of rationing, gave rise to large increases in requirements of clothing, furniture, household appliances, and motor vehicles. In addition, there were urgent demands for plant and equipment in manufacturing and primary production, for housing, and for trading stocks.

Almost before the backlog of civilian needs had been satisfied, the immigration and development programs began to exert an increasing pressure on productive resources. From 1945 it was the avowed policy of successive Australian governments to increase the population by immigration. The target was set initially at 70,000 per annum, and later raised to 200,000 per annum.[8] The first heavy influx began in 1948, continued at a high level for two more years, then fell gradually to a trough in 1953. Whatever the ultimate consequences may have been, it is generally supposed that the beneficent effect upon production was at first more than outweighed by additional demands for housing, personal effects, and social overhead capital.[9] A similar line of argument applies to many of the public and private projects which comprised the post-war development program.[10] In the long run the provision of new airfields, hydroelectric power stations, and blast furnaces, modernised railroads and public educational and cultural amenities have probably been anti-inflationary through their effect upon productivity. But in the three years preceding the Korean War their progress placed heavy demands on an overstrained economy.

Monetary and Fiscal Conditions

In 1945/46, average money supply as defined by the Commonwealth Bank was approximately the same as the current value of GNP.[11] During the next four years the ratio of money supply to GNP declined steadily, but was still in excess of 75 per cent by 1949/50. Since the mid-1950s,

[8]H.E. Holt (Minister for Immigration) to Australian Citizenship Convention, Canberra, 24 January 1950 (Copland and Barback, 1957: 96).

[9]For an example of contemporary opinion see Copland (1951: 46–55). For a recent confirmation, see Vernon Report, 1.45. Kmenta (1966) appears to disagree, but his conclusion is based upon an attempt to correlate migration with the price *level*.

[10]It is difficult to say with any precision what exactly was included in the 'development program'. In the 1945 *White Paper*, 'Some Problems of Development and Inflation' (Copland and Barback, 1957: 144–53), Copland appears to restrict the term to public investment. By 1950, however, the term seems to include private investment projects as well.

[11]'Notes and coins in the hands of the public'; 'Deposits of the public with all cheque-paying banks'; 'Savings bank deposits' (*Statistical Bulletins*).

by contrast, the ratio has remained fairly constant at about 53 per cent. It is instructive to compare these data with the corresponding Canadian figures, especially when it is remembered that the Australian money supply ought to include unused overdraft limits. In the early post-war years, when Canada was following a policy of easy money, the ratio ran around 50 per cent: it is now something under 40 per cent.

The abnormally high liquidity of the immediate post-war period was a direct result of war finance by central bank credit and the relative expansion of savings deposits in a period of restricted consumption (Arndt and Harris, 1965: 39–40).

Table 3.3 Average liquidity in Australia and Canada compared, 1946 to 1950
Money supply as percentage of GNP

Australia		Canada	
1945/46	99.4	1946	56.8
1946/47	97.0	1947	53.3
1947/48	81.3	1948	50.5
1948/49	79.3	1949	49.2
1949/50	76.2	1950	47.2

Source: Reserve Bank, CBCS, Bank of Canada, DBS.

It was sustained until 1952 by an unprecedented increase in London funds arising from large export surpluses and in inflow of overseas capital. From 1946/47 to 1952/53 the balance of payments contributed more than 30 per cent of the increase in the money supply (Arndt and Harris, 1965: 42).

To a considerable extent the positive current balance was the result not so much of any great expansion in the volume of exports as of exceptionally favourable trading conditions for primary producers. The terms of trade rose rapidly during the first six post-war years, doubling the ratio of export to import prices by 1950. Moreover, the average world price levels both of imports and exportables rose appreciably faster than the domestic prices. During the decade before World War II the relation between world and domestic prices changed very little. By 1949/50, however, the ratio of internal prices to import prices had fallen to about 67 per cent of the pre-war average and to export prices much further still (Swan, 1950: 38). The effect of this drastic appreciation of the cost ratio was to divert demand from such imports as were physically available towards home production, to encourage investment in import competition, and to favour the export rather than the domestic consumption of exportables.

The effect of international conditions upon the liquidity of the Australian economy was augmented by deliberate policy of the authorities. During the 1930s the Commonwealth government adopted a policy of cheap money which was continued into the post-war period, ostensibly to minimise the

burden of public debt servicing (*CPD*, vol. 193, p. 313). The bond rate was pegged at 3·125 per cent until 1951, and the short (two-year bond) rate fluctuated between about 1·93 and 2·34 per cent. Until 1952 the rate of interest on overdrafts was officially controlled. For most of the period it remained at 4·5 per cent compared with the range of 6 to 7 per cent which has been customary since 1956 (Arndt and Harris, 1965: 53, table IX).

Monetary ease was supplemented by budgetary policy. Both in 1948/49 and in 1949/50, cash deficits were proposed as the result of lower rates of taxation and social services contributions, higher rates of social service benefits and increased spending on capital works and services. D.A.L. Auld (1967) has analysed the effect of Commonwealth budgets in the years from 1948/49 to 1963/64 in terms of the 'weighted budget result'. This quantity is the sum of all income-creating and income-destroying components of the federal budget when each component is weighted by a 'respending coefficient' (proportion of a given change in the variable that would be channelled into or removed from the spending stream). The relation between the year-to-year change of the weighted budget result and the corresponding change in GNP (when both are suitably deflated) provides an index of the degree of expansionary or contractionary impact associated with fiscal operations between those years. According to Auld's calculations, the actual effect of the 1949/50 Commonwealth budget was unequivocally more inflationary than that of any other post-war budget. The budgets in 1954/55, 1957/58, 1958/59, and 1961/62 exerted a stimulating effect upon the economy. But whereas the increase in the weighted budget result represented 48 per cent of that in GNP between 1948/49 and 1949/50, the proportions associated with the other four budgets are of the order of 20 per cent.

It would appear that some part of the government's willingness to risk inflation with its expansionary public works and monetary policies stemmed from a lingering fear of recession, especially found in the Labor Party and its supporters. This attitude derived to some extent from a mistrust of the general efficacy of 'Keynesian' stabilisation policies, but chiefly from an acute consciousness of the dependence of the Australian economy upon the level of activity in Britain and the USA. When the expected post-war recession failed to materialise, 'Canberra seemed almost as disappointed as Moscow' (Clark, 1950).

Inflation Before the Wool Boom

The combination of inadequate supply and pent-up demand created a highly inflationary situation during the second half of the 1940s in all countries affected by the war. Attempts were made in Australia to suppress open inflation by a system of wage and price controls operated by the

Commonwealth government under authority of the National Security Act (1939). This act expired in December 1946, however, and the Defence (Transitional Provisions) Act was passed to run until the end of 1947. Because of its dubious constitutionality the State governments were asked to provide complementary legislation to enable the Commonwealth government to continue price control. State legislatures acceded to this request: the Commonwealth was given power over prices until 30 June 1947 in Victoria, 31 October 1947 in Western Australia and 31 December 1947 in the other States. Although the Defence (Transitional Provisions) Act was renewed for a further two years in 1947, State parliaments, except that of Queensland, refused to extend their supporting legislation for so long, and a referendum to amend the constitution giving power over rents and prices to the Federal government was held in May 1948. The proposal was defeated, and State governments were left with the responsibility for price control.

Much of this legal manoeuvring was made irrelevant by the decision of the Commonwealth government to abandon wage-pegging in December 1946. An increase of 7s. a week (7 per cent) in the basic wage was granted at that time. A few months later the 'C' series index of retail prices began to inflate at a steady 9·5 per cent per annum, a rate which was maintained until the wool boom in mid-1950.

Table 3.4 sets out a comparison of annual rates of selling price inflation between Australia and certain other countries. Until the effect of the wage increases began to work its way into prices in early 1947, Australia was more successful than the North Atlantic economies in restraining price increases. The contrast with Canada and the USA is particularly instructive.

Table 3.4 Retail Price Indices: Australia compared with certain other countries, 1945 to 1950
June 1945 = 100
Percentage change between dates

June	Australia	New Zealand	Britain	USA	Canada
1945	100	100	100	100	100
	+2.0	+1.0	+1.0	+3.0	+3.0
1946	102	101	101	103	103
	+2.0	+0.8	+7.2	+18.2	+9.7
1947	104	102	109	122	113
	+9.1	+11.0	+9.8	+9.0	+15.0
1948	113	113	119	133	130
	+9.7	+0.7	+1.1	−1.5	+3.9
1949	124	114	121	131	135
	+9.6	+4.9	+1.7	+0.6	+3.0
1950	136	119	123	132	139

Source: Commonwealth Bank.

By the outbreak of the Korean War, the price level had risen in total by about the same amount in all three countries, but the timing of this increase was completely different. In North America controls were quickly removed and prices allowed to move to equilibrium levels. By 1948, the post-war inflation was over, and the effect of the 1948/49 recession was actually to reduce both retail and wholesale prices in the USA. As a result of the influence of North American activity upon the course of world prices, Australia got the worst of both worlds. In the first two post-war years the policy of price restraint was subjected to severe strain by the rising import component of domestic prices and by appreciation of the cost ratio. From 1948, when prices levelled out in Britain and North America, Australia was obliged to undergo the inevitable post-war price adjustment alone; and thus to enter the Korean War period with inflationary pressures not fully worked out and a cost ratio still high by pre-war standards.

The policy of the Australian authorities may not have seemed so perverse at the time as it now appears with the aid of hindsight. A system of automatic wage adjustments was instituted at the end of World War I, the scope of which had been progressively widened. By the late 1940s virtually all wages in Australia were changed each quarter in proportion as the previous quarter's variation in the 'C' series index of consumer prices. If selling prices could be restrained and if over-award wage payments could be discouraged, it might be feasible to suppress inflation almost indefinitely – provided the necessary rationing procedures (formal or informal) could be operated without an insupportable level of public discontent.

In terms of the theoretical discussion in chapter 2, the Australian Phillips Curve would thus be regarded as a horizontal line, capable of temporary displacement from the x-axis by fiat of the Arbitration Court. If no such displacement occurred, and if the influence of external prices upon domestic costs were offset by productivity gains, then Australian wages and prices could remain stable.

According to this analysis, prices would begin to move if any change in the initial conditions occurred: some tendency for wages to respond to the demand for labour (the Phillips Curve diverging from the horizontal axis as a result of over-award payments); a displacement of the curve by the Arbitration Court; world price inflation too great to be offset by productivity growth; or a combination of these. If such a once-for-all change took place, the wage-price link would then carry the rate of selling price inflation to an equilibrium rate determined by the size of the initial disturbance and the parameters of the relevant difference equation. So long as the new conditions obtained, inflation would continue. In the case of a single wage increase by the Arbitration Court, however, there

would be eventual return to price stability *provided that the Phillips Curve remained horizontal.*

But in 1947 this was not to be. World prices began to rise strongly during the previous year and part of this was inevitably transmitted to Australia via imports. The Arbitration Court granted the 7s. increase in December, and during the first few months of 1947 the effect of this began to appear in the selling price of commodities represented in the 'C' series index. Import price inflation began to slow down at the end of 1947 and was virtually zero by the middle of 1948. There was no further arbitrated wage increase until October 1950. These circumstances alone would have reversed the shift in initial conditions which took place in 1946/47, so bringing open inflation to an end. But once wages and prices started to go up in 1947 and it became clear that official policy was going to fail, the Phillips Curve could no longer be regarded as a horizontal line subject to manipulation by the Arbitration Court. From 1947 employers began to make over-award payments and average earnings rose faster than nominal rates.

Excess demand was thus allowed to determine part, at least, of the inflation in costs and prices. Since no action was taken by the authorities to reduce excess demand (but rather the reverse) the rate of structural inflation at levels of unemployment obtaining in the late 1940s was consistently greater than zero and hence there was no net tendency for the initial conditions to shift against the inflation. The function of automatic quarterly adjustments was therefore to amplify the 'pure' Phillips Curve rate of inflation. From June 1945 until the abolition of cost-of-living adjustments in 1953, the males' basic wage increased by approximately 113s. (121 per cent) as a result of automatic adjustments. The rise due to arbitrated increases during this period was only 27s. (Vernon Report: 7.58). As a result of all these factors, an equilibrium rate of selling price inflation of about 9·5 per cent per annum was reached in the middle of 1947, which continued without change for fourteen successive quarters until the Korean War wool boom supervened in the second half of 1950.

Table 3.5 Average male earnings and nominal rates, 1945/46 to 1949/50
1945/46 = 100

	Nominal weekly rates	Average weekly earnings (manufacturing)
1945/46	100	100
1946/47	106	106
1947/48	115	121
1948/49	130	137
1949/50	141	151

Source: Labour Report.

THE GREAT BOOM: NOVEMBER 1949 TO MAY 1951

In December 1949 the Labor Party was defeated in the Commonwealth general election. A Liberal-Country Party coalition took office on a program which included an undertaking to 'put value back into the pound'.[12] But in an open economy, as T.W. Swan pointed out at the time, 'the halting of an inflation means an attack on real wages, except to the extent that it takes the form of measures which increase productivity *or lower external prices*' (Swan, 1950: 13. My italics). Swan argued that Australian prices are (or were, at that time) largely 'administered': and that the domestic price level, P, is a weighted average of efficiency wages and external prices:

$$P = a.\frac{W}{p} + b.\ P_r$$

to use the notation of chapter 2.

If real wages, V, are defined as W/P, it follows that

$$V = \frac{1}{a\frac{}{p} + b.\frac{P_r}{W}}$$

Real wages are related inversely to the ratio of the external price level to the money wage level. Given P_r and b we can only reduce P by reducing W more than proportionately, hence V falls.

Partly for political reasons, partly because of the shift in real income distribution away from wage earners which had already occurred as a result of improvement in the terms of trade, 'an attack on real wages' was out of the question in 1950. 'Measures which increase productivity' (including, in particular, the suppression of Communism) (*CPD*, vol. 206: 706–7), were dear to the Prime Minister's heart, but could not be expected to bring quick results. Only a policy to 'lower external prices' was left: by appreciation of the Australian pound an important component of the rise in the price level would be at once eliminated. More important, a deflationary program could then be put into effect to halt price increases without an 'attack on real wages'. The resulting appreciation of the cost ratio would in itself bring some relief from inflationary pressure.[13]

[12]Menzies fought the election on the single issue of 'socialism' (*SMH*, 18 December 1949) but the promise to put value back in the pound, first made in the budget debate, September 1949, was included in the policy speech and made much of immediately after the election. It would appear, however, that the *Sydney Morning Herald* made more of this particular plank of the Liberal-Country Party platform than its chief spokesmen.

[13]It is important to distinguish three separate ways in which the inflation of world prices affects the domestic selling price level of a dependent economy: (a) indirectly, through changes in the terms of trade; (b) indirectly, through changes in the cost ratio; (c) directly, by raising the prices of imported goods and exportables entering directly into final consumption. The first two help to determine the degree of inflationary pressure (excess of *ex ante* demand over supply); the last will affect domestic prices quite independently of inflationary pressure.

A golden opportunity to appreciate had been lost by the previous government when sterling was devalued in September 1949. Throughout the first half of 1950, as the cabinet considered the advice of its economic staff, the effects of the 1949/50 budget continued to sustain the degree of inflationary pressure, and consumer prices went on rising at exactly the same rate as they had under the Labor Party. A vigorous public debate centered upon whether, at this late stage, a revaluation to sterling parity would be desirable. Meanwhile, hot money was attracted to Australia by the 'simmering pot of rumour' (*The Economist*, 4 February 1950: 282) at the rate of some £70–80 million per annum.[14]

In the event, no decision on appreciation was taken, but the government began to encourage the import of essential commodities and prepared to raise a large dollar loan to finance the expected trade deficit. On 24 June 1950 the Korean War began. When the Sydney wool auctions opened eight weeks later, prices rose nearly 50 per cent on the closing levels of the previous season. The effect upon the economy, in the homely metaphor of one Australian economist, was 'like a bee stinging a runaway horse'.

Strong post-war demand by the textile industries of all world wool-users had doubled merino prices between 1946/47 and 1948/49. A peak was reached in February 1949, at which date prices fell sharply in response to the American recession. A recovery began in September 1949, and prices were already moving upwards strongly when the Korean War began. Stocks of raw wool held in exporting countries, government agencies, and strategic reserves fell from 2,273 million lb in 1945/46 to 598 million lb in 1949/50.

The normal seasonal lull in June and July 1950 makes it difficult to determine the point at which the political situation began to affect the wool market. American buyers became interested in all types of spot sales after the London sales in late July.

> Even more significant, however, was the situation confronting the wool textile industries during the third quarter of 1950. Existing . . . stocks were low; total supplies of wool would be lower than in any of the post-war years, and demand seemed certain to intensify; stockpiling threatened machine activity; and supplies might be disrupted by shipping difficulties, suspension of auctions (as in the two World Wars) and the refusal of South American republics to grant export permits. Unofficial reports of large American requirements increased the panic of manufacturers in other countries. The case for buying wool quickly was strong for many importers and imperative for those who had sold short in the expectation of lower prices in 1950–51. (Little, 1966) [15]

[14]Arndt, 1957; McColl, 1965: 43, 95, table 5.2. No one knows exactly how much hot money entered Australia at this time, but it is thought that most of the 'unidentified capital movements' reflect this item.

[15]This is the source of all details concerning the wool market related in this section.

For most of 1950, there was no abnormal activity in the wool market by the United States authorities. In December, however, the Munitions Board, under pressure from the Senate Preparedness Sub-committee, accorded top priority to the stockpiling program. It had by then become clear that the Dominions would not concede pre-emptive rights to the United States, and the sense of urgency was heightened by rumours of probable intervention by the Office of Price Stabilization, and also of an appreciation of sterling. For most of January, American buying was very heavy. On 26 January the Office of Price Stabilization issued regulations which included a ceiling price for wool and wool manufactures, but this interruption to wool trading was only temporary. On 7 February the ordinance was amended to exempt wool purchases for military contracts until 1 April 1951.

As a result of these events, the average price of wool exported by Australia rose by two and a half times between July 1950 and March 1951. Table 3.6 shows the course of wool prices (and of non-ferrous metals, also affected by the war) and the effect of these upon the Export Price Index.

Table 3.6 Export Price Indices, Australia, July 1950 to June 1952
Average, 1936/37 to 1938/39 = 100

		Wool	Metals	All groups except wool	All groups
1950	J	592	496	333	451
	A	864	547	340	579
	S	890	675	355	599
	O	890	681	360	602
	N	965	704	366	639
	D	973	700	366	643
1951	J	1252	713	368	771
	F	1339	714	369	811
	M	1437	739	377	860
	A	1094	774	384	708
	M	973	771	385	653
	J	717	751	383	535
	J	717	842	400	544
	A	551	842	400	468
	S	498	862	400	445
	O	686	869	403	532
	N	603	835	398	492
	D	581	860	403	484
1952	J	566	825	402	477
	F	520	827	402	456
	M	460	817	400	427
	A	475	799	397	432
	M	543	711	385	457
	J	566	641	376	463

Note: Peak month underlined.
Source: MRBS.

£636 million was paid for Australian wool sold during the 1950/51 season, compared with £287 million for the previous (and record) season. The whole of this increase was the result of higher prices: the total quantity of 3·547 million bales was actually slightly below the 3·594 million bales sold in 1949–50. An extra £349 million, 38 per cent of the increase in GNP between the two years, was thus placed in the hands of the wool-growers by an accident of circumstances. One grazier alone is said to have received more than £500,000, 'and others earned nearly as much' (Davies, 1951).

The precise inflationary impact of this windfall is highly debatable. Early attempts to estimate a wool multiplier for Australia yielded values between about two and three,[16] and these results were broadly confirmed by Stevens (1950) for a period which included the first of four post-war years. It is doubtful whether figures of this kind can be regarded as behavioural parameters. More probably, they are long-term averages of values which change continually, perhaps in response to the business cycle. However that may be, it is certain that various factors operated to mitigate the direct effect of increased wool incomes in 1950/51. The income tax liability of primary producers as a class rose from £54 million to £165 million: all of this increase fell upon the wool-growers. The savings of farmers are estimated to have risen from about £150 million to about £270 million, and it is doubtful whether these savings were used to finance investment which would not otherwise have been possible (Badger, 1955). In retrospect, it seems that the wool boom made its most serious contribution to inflation not so much by an increase in the direct expenditure of graziers as by its effect upon liquidity and the state of business confidence (see Brown, 1953).

At the time, however, the prodigious rise in the wool cheque gave rise to considerable alarm.[17]

> Two courses were open to the Government, namely to appreciate the currency or to impose some sort of levy and stabilization fund upon the exports that had benefited most from the increase in prices. Theoretically no doubt it would have been possible to blend the two, but as it happened these two courses were regarded as alternatives and a very vigorous and at times bitter controversy ensued in the discussion over which course should be followed. (Copland, 1954: 429)

The advocates of appreciation based their argument upon the analysis of the inflationary process set out by Swan and outlined at the beginning

[16]Badger (1955: 69–72) reviews the work of Giblin, Clark and Crawford, Dyason, Horner and Garland.

[17]'The present paper prosperity is the greatest peacetime threat to our economy, and challenge to our ingenuity, since the depression' (*Daily Telegraph* (Sydney), 6 September 1950; Copland and Barback, 1957: 387).

of this section. The Korean War boom, by raising import as well as export prices, and by raising the former less rapidly than the latter, gave still greater cogency to a case which was already strong when the Menzies government first took office. Those economists who were sceptical of the efficacy of a 25 per cent appreciation at this point gave support to a plan for a stabilisation levy first proposed by Copland. Under this plan wool-growers would have paid an export tax of 33·3 per cent, and most of the proceeds placed to their credit under the control of trustees. By this means wool-growers would have avoided income tax on the last third of their current earnings and accumulated resources against future adversity of seasons or markets (Copland, 1951). Appreciation was opposed by the Country Party, however, on the grounds that it would cause injury to producers of all agricultural products except wool, and the plan for a stabilisation levy was held by the graziers to be a 'class-tax'.[18]

Overseas investors continued to pin their faith on the rationality of the Australian government, nevertheless, and speculative funds continued to arrive in expectation of the long-awaited revaluation. It was evident by the end of September that unless it were stated publicly that revaluation was out of the question, before long it would, in fact, be out of the question. The Prime Minister accordingly made a public statement on 6 October, declaring that no change would be made in the exchange rate. Although there was some scepticism at the time, no appreciation ever took place, and by the following year the Commonwealth Bank was able to report that the influx of hot money had at last subsided (Reserve Bank *Annual Report*, 1950–1: 18).

The proposal for a stabilisation levy was likewise shelved, though two other measures were introduced which partially filled its place. From 26 August 1950 a levy of 7·5 per cent was imposed on all sales of wool in order to accumulate funds for a reserve price plan to take the place of the operations of the United Kingdom-Dominion Wool Disposals Ltd. The levy was continued until 30 June 1951, by which time some £45 million had been collected. And in the Commonwealth 1950/51 budget brought down in October it was announced that wool-growers would be required to pay income tax in advance by a charge of 20 per cent of the value of sales. The total deduction was expected to be about £103 million (Budget Speech in Copland and Barback, 1957: 268).

Certain other events of this period lent fuel to the flames of inflation. In October the males' basic wage was raised by £1 per week, and the females' basic wage from 54 per cent of the males' rate to 75 per cent. Immigration attained its all-time peak during 1950: permanent and long-term arrivals exceeded 174,000 in that year, a level which was not to

[18] 'Graziers Denounce Prof. Copland', *SMH*, 4 October 1950.

be approached again until 1964. Net immigration (excess of arrivals over departures) was 162,000 in 1949/50 and 133,000 in 1950/51, compared with an average rate of about 100,000 during the mid-1960s. The development program was pursued with vigour and defence expenditure rose from £55 million in 1949/50 (26 per cent of public current expenditure and 2 per cent of GNP) to £100 million in 1950/51 (36 per cent of public current expenditure and 3 per cent of GNP).[19] In March 1951, one month before wool prices reached their peak, Commonwealth war gratuities amounting to £52·8 million were paid out to ex-servicemen.[20] The money supply rose between 1950 and 1951 by £303 million, of which £193 million was caused by the increase in international reserves and £104 million by an expansion in the advances of cheque-paying banks (Lane and Price, 1952). Bank advances to the manufacturing and commerce sectors of the economy rose by 23 per cent, despite an official policy of restraint; and a large expansion of trade credit provided some part of the amount needed to finance a build-up of inventories (M. Schneider in Hirst and Wallace, 1964).

As a result of all these factors, the rate of inflation of selling prices began to accelerate steadily from the third quarter of 1950 (see figure 3.1). Total civilian employment climbed to a trend-free peak (specific B_1) in June 1951, 2·33 standard deviations above trend. By the middle of 1951 there were sixteen job vacancies registered for every person out of work.

In addition to the levy and tax prepayment on wool sales, various other measures were executed by the government during 1950/51 in the hope of restraining inflation. A loan of $US100 million was secured from the International Bank for Reconstruction and Development in August. By the middle of 1952, 65 per cent of this had been expended on essential imports from the USA and Canada, chiefly of tractors and bulldozers, railway equipment and generating plant (A.W. Fadden in Copland and Barback, 1957: 483). The policy of encouraging imports of all kinds was continued, and the Commonwealth budget for 1950/51 provided for a small surplus; existing rates of tax were maintained, a sales tax introduced, and higher post office charges fixed. A complete range of legislative proposals for dealing with the inflation had been put forward in October,[21] but apart

[19]Public capital expenditure was increased from £288 million in 1950/51, rather more than keeping its share of GNP.

[20]According to the Commonwealth Bank (*Annual Report*, 1951: 25) about £33 million of this payment was made to savings accounts, of which about one half, or more, seems to have remained unspent for a while, at least.

[21]In his broadcast of 16 October 1950 the Prime Minister proposed a 14-point program to combat inflation: 1. prepayment of wool-growers' income tax; 2. excess profits tax; 3. selective credit controls; 4. capital issues controls; 5. control over basic materials; 6. National Security Resources Board (to advise on priorities); 7. sales tax on luxury goods; 8. 20 per cent cut in public works; 9. further 20 per cent cut in manpower and materials

from the wool tax prepayment and sales tax, only the reintroduction of capital issues control (which took place in February 1951) survived the hostility of conflicting sectional interests (Davies, 1951: 169).[22] In November 1950, the Commonwealth Bank issued a directive to the trading banks on the selective control of credit.[23]

The effect of these measures upon the course of consumer prices was negligible, nor does it seem that any other result was seriously expected at the time. Auld's calculations reveal that the net impact of the 1950/51 Commonwealth budget, notwithstanding the tax increases and nominal surplus, was actually slightly expansionary because of large increases in expenditure (Auld, 1967: table VII). 'No evidence was shown by the share market [in October 1950] that the Budget proposals were accepted as anti-inflationary' (*SMH*, 14 October 1950). For six months the rate of inflation continued to climb, only levelling out at a plateau of 22 per cent per annum after wool prices turned down in April 1951. Copland (1951) proposed 'A Comprehensive Plan for the Control of Inflation' which included, amongst other things, a floating exchange rate along Canadian lines. The government, however, preferred to divert attention from economic to political issues. A Labor majority in the Senate had obstructed government legislation. A double dissolution was sought and granted, and the remainder of the fiscal year given over to electioneering and its aftermath.

THE DOWN-TURN: JUNE 1951 TO MARCH 1952

During a short but acrimonious election campaign, the Opposition assumed an unfamiliar role as champions of price stability. 'The one and only problem,' declared J.B. Chifley in his policy speech, 'is to correct the runaway Menzies pound'. In order to achieve this, the Australian Labor Party would maintain the exchange rate, raise child endowments, 'review' the sales tax, abolish tax prepayment on wool sales, and introduce general control over prices but not wages (*SMH*, 29 March 1951). The government parties preferred to avoid embarrassing questions about putting value back in the pound, and concentrated instead on communism and the obstructive

on existing projects; 10. national savings campaign; 11. anti-Communist legislation; 12. productivity drive; 13. reorganisation of Commonwealth public service; 14. investigation of overlapping of Federal and State public services (*SMH*, 7 October 1950).

[22]The proposed excess profits tax aroused the greatest hostility (*SMH*, 8 October 1950; 11 October 1950) and was quietly dropped.

[23]Additional calls on special account were also made during this period, the ratio of special accounts to deposits rising from about 40 per cent in 1949/50 to a peak of 46 per cent in June 1951 ('Changes in Australian Banking', *Australian Financial Review*, October 1952).

tactics of the Senate.[24] The electorate proved to be more interested in politics than in economics, and in May the Liberal-Country Party coalition won control of the Senate, holding the Lower House with a reduced but still adequate majority. Meanwhile, though import prices and wages continued to rise, export prices had begun to fall and many indicators of internal activity reached their first post-war peak and began to turn down.

The amendment to the (American) General Ceiling Price Regulation, exempting wool for military contracts from ceiling prices in the USA, expired on 1 April 1951.

> Between April 1 and April 5 American buyers on both military and commercial accounts were unable to operate because prices were above the limits authorized by the O.P.S. There were more general reasons, however, for believing that American support would be weaker than in the first quarter of 1951. Immediately before the Easter recess, the Commodity Credit Corporation announced the indefinite suspension of its wool acquisition program. Early in April, the Defence Department authorized a large reduction in service requirements of imported wool . . . designed to reduce American forces' wool orders by 15 percent. Also in April, the Quartermaster General cancelled contracts for 20 million yards of wool cloth, and a considerable volume of defence contracts was postponed. (Little, 1966: 173)

As a result, the world wool market collapsed. Prices were halved between April and June, and the Australian (all groups) Export Price Index fell from 860 in March to 445 in September (table 3.6). Australian international reserves ceased to grow in March and began a steep descent in June: the rate of increase of the volume of money turned down sharply in April (specific C_1) and current deposits began to fall absolutely from April (specific P_1, B_1). The tide of the First Episode had begun to turn and changing prospects were reflected in the Share Price Index (specific B_1, May 1951).

At the same time, an altogether separate source of deflation was being prepared. The (deseasonalised) monthly rate of physical importation rose by 50 per cent between September 1950 and December 1951, partly as a result of the official encouragement of imports, partly because of improved supply 'as Australia became one of the few sellers' markets remaining in international trade' (Swan, 1952: 210). Merchandise imports were £205·8 million higher in 1950/51 than in the previous year, and £308·8 million higher in 1951/52 than in 1950/51. Table 3.7 shows that about one-third of the increase in each year was due to the metals and engineering group – most of which was 'essential' equipment and supplies encouraged by the government – but that increases of 30 to 40 per cent occurred for all groups in both years.

[24]By this time, however, the Senate had lifted its blockade of government legislation, and the High Court had ruled that the Communist Party Dissolution Act (1950) was *ultra vires*.

Table 3.7 Analysis of annual change in value of imports, 1949/50 to 1952/53
£ million

	1949/50	Change	1950/51	Change	1951/52	Change	1952/53
Metals and engineering							
Iron and steel	29.6	+18.8	48.4	+25.0	73.4	−42.3	31.9
Motor vehicles and components	73.8	0.0	73.8	+11.1	84.9	−54.6	30.3
Other metals, machines and plant	124.1	+43.8	167.9	+67.2	235.1	−70.5	164.6
	227.5	+62.6	290.1	+103.3	393.4	−167.4	226.0
Chemicals, oil, etc.	66.2	+24.5	90.7	+29.3	120.0	−31.8	88.2
Textiles, clothing	99.8	+38.9	138.7	+64.9	203.6	−155.4	48.2
Food, drink, and tobacco	38.0	+9.7	47.7	+5.2	52.9	−14.6	38.3
All other imports, net	106.7	+70.1	176.8	+106.1	282.9	−169.5	113.4
Total merchandise imports	538.2	+205.8	744.0	+308.8	1,052.8	−538.7	514.4

Source: Oversea Trade.

The huge influx of imports took Australian merchants by surprise. Importers had become accustomed to order in advance and excess of needs.

> Many of the orders for these goods had been awaiting fulfilment for twelve months or more, but owing to lack of shipping space, deliveries had been long delayed. With the contraction of other markets, overseas suppliers, with the assistance of costly chartered tonnage, despatched these accumulated orders, and goods reached Australia in unprecedented volume. . . . (Commonwealth Bank, *Annual Report*, 1951–2: 7)

The result was a 50 per cent increase in the book value of manufacturers' and traders' inventories between March 1951 and March 1952 (Brown, 1953: 9.4). This involuntary stock investment was quickly reflected in reduced orders, an easing of demand for labour, and a decline in business confidence. Both wholesale and retail trade turned down decisively in May, as did also the ANZ Bank Index of factory production. Registered vacancies for females reached the peak in July, and for males in August. (See figure 3.2 for the pure 'cyclical' components of these indicators.) The growth-rate of most indicators had been in decline since 1950: by May 1951 (reference B_1) growth-rates for each indicator, on average, were no higher than their long-term trend values.

The decline in export prices in April had been accompanied by a sharp falling off in the volume of exportation from May. The combination of these events with the import boom in the second half of 1951 led to a dramatic reversal of the balance of trade. International reserves reached an all-time peak of more than £A800 million in May 1951 and immediately began to fall steeply. In the following six months reserves dropped by

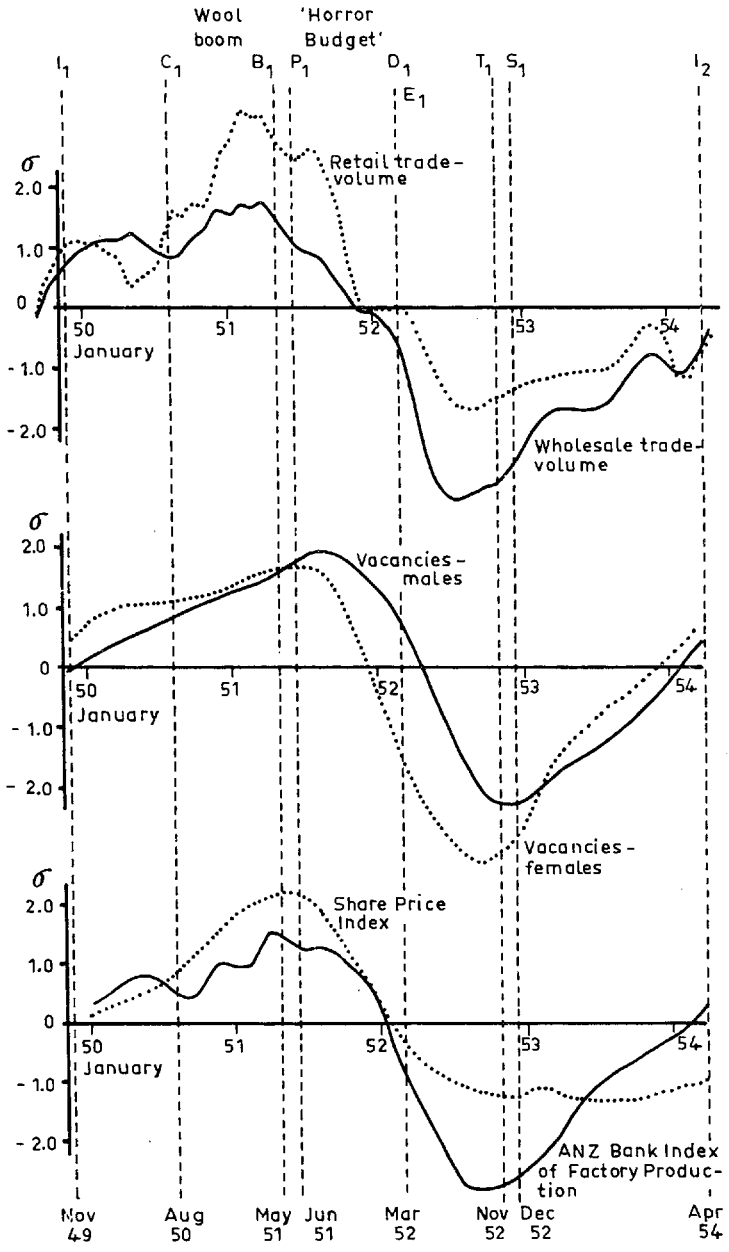

Fig. 3.2 Cyclical component of selected monthly indicators in the First Episode

£A300 million and thereafter continued to fall until July 1952 (Commonwealth Bank, *Annual Report*, 1951–2:8).

While all this was going on, the new government was slowly gathering courage for its long-delayed attack on the monster of inflation. At the end of July the Prime Minister called a two-day conference in Sydney, attended by State premiers and representatives of business, graziers, labour, the churches, and 'women's interests'. The three Labor premiers (Cosgrove, Tasmania; McGirr, N.S.W.; Gair, Queensland) urged the Federal government to reintroduce price controls,[25] but the purpose of the conference was not so much to receive advice as to prepare the public for a series of nasty shocks. On 9 August there was a meeting with bankers and the following day another with insurance companies. On 2 August further, more stringent control of capital issues was announced. On 16 August the Loan Council decided on a 25 per cent cut in the loan programs of Commonwealth and State governments, and approved a rise in the bond rate.[26] The following week, plans for a 5 per cent reduction in the staff of Commonwealth departments were made public, and on 11 September the interest on loans to local governments was raised to $4\frac{1}{8}$ per cent. Six days later it was found that the thirteenth security loan of £40 million was undersubscribed by £7·7 million and the bond rate was allowed to rise from $3\frac{1}{8}$ to 3·75 per cent. Finally, on 26 September, the 'Horror Budget' was brought down.[27]

The most important feature of this document was its explicit recognition, for the first time in Australian history, that the budget can and should be used for anti-cyclical purposes.

> Modern thought on the relation of public finance to economic stability is quite clear on the point that in times of depressed trade and unemployment, governments may justifiably run into deficit and even finance some part of their needs with central bank credit, so raising the level of community spending power. It is a vital corollary of this view, however, that, in times of excessive demand and scarcity of labour, governments should draw away from the public in taxation and loans more than they spend for current purposes. (Budget Speech, 1951/52: 4–5)

The government proposed to 'draw away' a surplus of £114·5 million by means of higher income tax, profits tax, and sales tax, and the reduction

[25]See *SMH*, 31 July, 1 August, for details.

[26]It had been evident for more than a year that there was mounting market pressure for higher interest rates. The conversion operations of 1950/51 were seriously undersubscribed, and the twelfth security loan ($3\frac{1}{8}$ per cent) was issued at a discount: the first time since 1946 that long-term government securities had been issued with a yield of more than $3\frac{1}{8}$ per cent (Commonwealth Bank, *Annual Report*, 1950–51: 19–20).

[27]A.A. Calwell (Deputy Leader of the Opposition) reminded the House that the Prime Minister had told the people a month before that this was going to be a 'horror' budget (*SMH*, 4 October 1951). The name stuck.

of forecast increases in public works. The surplus was to be paid into the National Debt Sinking Fund.

This belated lesson in Keynesian economics was not to the taste of the Australian public. The budget was greeted with a frenzy of rage and execration, and all classes of society were at last united in denouncing the government. In the first of two front-page editorials, the *Sydney Morning Herald* spoke of the budget as 'A Staggering Blow to the Nation'; and in the second described it as 'an unholy alliance between an improvident Government and a set of self-opinionated bureaucratic planners' (*SMH*, 27, 28 September 1951). The director of the Associated Chamber of Manufactures said that the budget was more inflationary than deflationary, and there was a tendency in business circles to stigmatise it as 'academic' and blame it all on Sir Douglas Copland (*SMH*, 28 September 1951. Sir Douglas, however, had nothing to do with it). The new Leader of the Opposition, H.V. Evatt, called it a 'blueprint for depression' and feared that Australia's policy of full employment would be threatened. His deputy, A.A. Calwell, declared 'This is an extraordinary, gruesome and fantastic budget. It has shocked, bewildered and amazed the people of Australia. It is not merely unpopular; it is unsound. It will destroy the standards of life that it is supposed to be defending. It will encourage and stimulate . . . inflation' (*CPD*, vol. 214, p. 285). The budget, he predicted, 'will certainly seal the fate of anti-Labor parties for many generations to come' (*SMH*, 4 October 1951).

Table 3.8 Deflationary impact, in 1951/52, of the Horror Budget
£ (1948/49) million

	1950/51	Change	1951/52
Commonwealth government expenditure on goods and services	+139	+15	+154
Interest payments of Commonwealth government	+17	−3	+14
Transfer to business	+34	−13	+21
Transfer to persons	+168	−51	+117
Advances to State and public enterprises	+144	+28	+172
Payments to States	+94	+8	+102
Total Commonwealth spending	+596	−16	+580
Import content of government spending	−54	−14	−68
Total Commonwealth spending in Australia	+543	−30	+513
Company tax receipts	−33	−13	−46
Other tax receipts	−346	−1	−347
Multiplicand at constant 1948/49 prices	+164	−44	+120

Source: Auld (1968), p.359.

This time, however, the government was not to be deterred, and the measures were enacted. Whether the effect upon the economy was as powerful as either their sponsors or their opponents expected is now a matter of doubt. The work of Auld, to which reference has already been made in this chapter, reveals that the 'multiplicand' (weighted budget result) changed by only £(1948/49) 44 million between 1950/51 and 1951/52. This result suggests that the Horror Budget was actually the least deflationary of all post-war budgets specifically intended to reduce aggregate demand. Table 3.8, based on Auld's unpublished results, shows why this should be.

There was an appreciable net increase in government expenditure on goods-and-services in 1951/52, chiefly for Defence Services and Capital Works and Services, budgetted gross increases in which amounted to £60·7 million (Budget Speech, 1951/52). In addition, an increase of £(1948/49) 36 million was budgetted and paid out to State governments and public enterprises. Reduced transfers and interest payments offset these increases by a net of only £(1948/49) 16 million. The net tax yield was a mere £(1948/49) 14 million greater in 1951/52. Allowance for the import content of Commonwealth spending accounts for the remaining £(1948/49) 14 million.

Largely as a result of the processes described at the beginning of this section, though possibly with some assistance from the economic and psychological effects of the budget, a very definite decline in the level of activity set in during the last quarter of 1951. Despite an increase in the basic wage in October the rate of price inflation began to fall steeply, together with most other indicators. Even the rate of physical importation reached its (deseasonalised, trend-free) peak in November and began to decline. One relatively small event occurred to check the down-turn. A referendum of wool-growers had rejected the trial Reserve Price Plan, and £45 million collected as a 7·5 per cent levy on the last season's sales was returned on 30 November. Apart from this, however, most other factors operated to intensify the contraction begun in May 1951. The Commonwealth Bank restricted credit for car purchases, and private hire purchase firms followed suit. In December the Loan Council refused a further grant to State governments, in January 1952 wage increases were refused in the metal trades and in April the wages of pastoral workers were reduced. On 1 August 1952 the Commonwealth Bank raised interest rates on all bank credit and revoked the regulations fixing maximum rates for the commercial banks. In June 1952 employers' associations announced that they would apply for reductions in the basic wage and an increase in the working week.

Long before the benefits of this deflation could be felt, a serious balance of payments crisis had begun to develop. The *rate of growth* of the rate of

physical importation had begun to decline in July 1951, as unplanned inventories accumulated, and the rate itself turned down before the end of the year. Import *prices* did not fall until the beginning of 1952, however, whereas export prices fell steeply between March 1951 and April 1952 (table 3.6). Physical exports, moreover, fell during 1951. As a result of this sequence the value of imports rose until January 1952; the value of exports fell from April 1951 and remained at relatively low levels until October 1952; and the balance of visible trade changed sign in July 1951,

Table 3.9 The balance of visible trade and international reserves, July 1950 to December 1952
£ A million

		Exports	Imports	Balance of trade	International reserves	Monthly change in reserves
1950	J	49.2	51.1	−1.9	593.4	
	A	38.5	64.6	−26.1	577.7	−15.7
	S	46.4	56.9	−10.5	580.8	+3.1
	O	86.7	54.8	+31.9	614.3	+33.5
	N	95.8	57.9	+37.9	634.7	+20.4
	D	72.2	49.5	+22.7	644.9	+10.2
1951	J	98.8	62.4	+36.4	661.9	+17.0
	F	85.1	67.5	+17.6	707.9	+46.0
	M	94.6	58.4	+36.2	760.7	+52.8
	A	136.1	68.3	+67.8	792.6	+31.9
	M	98.7	76.0	+22.7	810.4	+17.9
	J	79.8	76.1	+3.7	803.7	−6.8
	J	58.3	80.8	−22.5	780.6	−23.1
	A	45.9	80.3	−34.4	708.8	−71.8
	S	39.1	94.7	−55.6	650.6	−58.2
	O	57.0	111.3	−54.3	590.4	−60.2
	N	66.8	97.7	−30.9	557.6	−32.8
	D	49.7	68.4	−18.7	506.3	−51.3
1952	J	65.9	114.4	−48.5	463.3	−43.0
	F	56.8	106.8	−49.8	431.9	−31.4
Import	M	67.7	85.5	−17.8	418.6	−13.3
cuts	A	59.1	81.7	−22.6	399.6	−19.0
March	M	51.9	76.4	−24.5	381.9	−17.7
1952	J	56.8	55.7	+1.1	372.5	−9.4
	J	58.3	49.9	+8.4	358.7	−13.8
	A	43.5	40.2	+3.3	369.5	+10.8
	S	54.7	42.5	+12.2	363.4	−6.1
	O	86.2	45.3	+40.9	389.6	+26.2
	N	86.7	35.9	+50.8	423.9	+34.3
	D	84.4	38.7	+45.7	460.8	+36.9

Figures underlined: Peaks.
Source: *Oversea Trade* and *Statistical Bulletin* of Commonwealth Bank.

remaining negative for ten more months, during which time international reserves declined to 45 per cent of their peak value in May 1951 (table 3.9).

In March 1952 the government reluctantly decided that the natural decline in importation would not take place quickly enough to avert an insupportable loss of reserves.[28] Import licensing was applied to all goods passing into Australia with effect from midnight, 7 March. Ninety-eight per cent of goods from all sources were subject to a quota calculated as a percentage of 1950/51 totals (Moffatt, 1962): quotas were set initially with the object of reducing the value of imports to £500 million in 1952/53, about half the total of the previous year. After a lag of four or five months the full effect of these restrictions began to be felt: by August reserves had begun to rise again, assisted by a purchase of $US300 million from the International Monetary Fund. In April, moreover, export prices and volume began a strong recovery which lasted until the end of the year.

The restrictions, which had been imposed 'to hold the position for a few months' (Copland and Barback, 1957: 467) were relaxed somewhat in April 1953. They were not finally removed until February 1960.

There was some fear at the time that so drastic a fall in imports would slow down or even reverse the process of deflation begun the previous winter.[29] 'If stern measures have just begun to achieve an internal balance with an external deficit of the order of £A600 million', it was asked, 'how can domestic equilibrium be maintained when the weight of the import surplus is removed?' (Swan, 1952: 209.) In fact, however, the tremendous build-up of inventories, some of it indeed in anticipation of the import cuts, obviated the need of any further restriction of expenditure to offset the decline in imports. Employment moved steadily to its first, true post-war trough in January 1953, accompanied by every other important indicator of internal activity.

RECESSION AND RECOVERY: APRIL 1952 TO MARCH 1954

The relative magnitude of post-war disturbances to the growth-rate has

[28] 'By the middle of February, however, there was sufficient information to indicate that a major fall in the rate of imports could not be expected before April at the earliest . . . It was clear that by the 30th June, our international reserves . . . would be well below £300 million. Thereafter . . . we could expect to go on losing London funds at a relatively rapid rate. When such a point is reached there is a grave risk that capital movements may begin through a loss of confidence in the situation . . . The Government was reluctant to curtail imports till it became absolutely necessary.' (A.W. Fadden, *CPD*, vol. 217, pp. 35 *et seq.*)

[29] 'Whilst the import boom has led us into great balance of payments difficulties, it has, at the same time, provided a most useful supplement to our other anti-inflationary measures . . . However . . . some time before the end of 1952 . . . imports and exports should be more or less in balance . . . In this situation, some very dangerous inflationary tendencies could arise.' (A.W. Fadden, *CPD*, vol. 217, pp. 35 *et seq.*)

been discussed in chapter 1. It was there seen that the evidence of the monthly indicators and also of GNP at constant prices suggests that the First Episode, both in amplitude and duration, was the most serious of the four. Most informed opinion both then and later, however, has tended to underestimate the extent of the recession. D.G. Badger's comment is typical: 'Although some unemployment appeared, the situation at its worst could not have been described as more than a minor recession' (Badger, 1955: 78). According to Copland (1954: 432) the events of 1951 'produced a situation threatening unemployment'. The Vernon Report based its judgment of the length and depth of recessions upon a comparison of absolute levels of registered vacancies and registered unemployment, according to which standard the trough of 1952 was as nothing compared with the effects of the 1960 'credit squeeze' (Vernon Report, 1.56, 1.82, chart 1.2).

In his evidence in the 1952–3 Basic Wage Case, however, H.P. Brown estimated that males unemployed, at the trough of the recession,comprised 4·2 per cent of the available work-force, and that 'generally speaking, the decline in female employment has been relatively greater than in male employment'.[30] Total civilian employment remained below its long-term trend value from June 1952 until October 1954 (29 months); males' registered vacancies were below trend from May 1952 until February 1954 (21 months); and males' registered unemployment was above trend from March 1952 until December 1954 (22 months). At the end of July the Leader of the Opposition declared that 'the plain fact is that full employment no longer exists,' (statement by Dr H.V. Evatt in Copland and Barback, 1957) and despite the reassurances of the acting Minister for Labour and National Service in August,[31] the annual congress of the ACTU called for a total ban on employable immigrants.

Actually, the inflow of migrants had already been reduced substantially in 1951 (from 174,000 in 1950 to 133,000) as part of the plan to control inflation. At that time the Minister for Immigration appeared to believe that the positive correlation between immigration and vacancies notified was evidence of causal relation, and objected that his critics could not claim at 'one and the same time that migration adds to inflationary pressures and deprives Australians of jobs'.[32] In July 1952, however, the government

[30]Brown (1953: table V), provides an estimate of males unemployed calculated by a method described in 2.7, v. His estimates of the 'Available Male Work Force' only go as far as June 1952, but later estimates by the same author (1959) allow an interpolation of June 1952 and June 1953. The resulting 'January' figure, when used as a divisor of unemployment, yields 4.3 per cent.

[31]' . . . by any standard, and by the standards of the prosperous countries I have mentioned already, we have full employment in this country . . . ' (P. McBride, *CPD*, vol. 218: p. 130).

[32]H.E. Holt (Minister for Immigration) to Australian Citizenship Convention, Canberra, 29 January 1952 (Copland and Barback, 1957: 104).

decided to reduce the immigration target for 1953 to 80,000 (from 150,000), and in August to curtail the intake for the remaining months of 1952. It is clear that these restrictions were imposed in response to the growing volume of unemployment (Vernon Report: 4.16). The fact that unemployment in 1952 seems to have had its chief impact on recent immigrants and unskilled workers, together with a large exodus from the work-force of 'married women and elderly or incapacitated people' (Commonwealth Bank, *Annual Report*, 1951–2: 16), may account for the comparative equanimity with which the recessionary phase of the First Episode has generally been regarded. There may also be some connection between these and the inexplicable failure of trade union unemployment to increase in the last quarter of 1952.

Although the demand for labour remained below trend throughout 1953, the situation had begun to change before the end of 1952. More important than the restraints upon immigration were the effects of the import cuts and the resumption of normal trade as unplanned inventories were liquidated.

> By mid-1952 stocks appear to have reached a peak. In the second half of 1952 stocks declined so rapidly that, by the end of the year, they were back to 'normal' [ratio of stocks to sales]. In the early months of 1953, stocks in retail stores appear to have dropped below 'normal'. Orders to local manufacturers seem to have picked up by about October 1952. (Brown, 1953: 9.6)

Specific cycle S-points actually occurred in July for wholesale trade volume and August for retail trade volume. S_1 for the ANZ Bank Index came in September, but there was no decisive increase until November. The recovery in trade and manufacturing was followed after two or three months by up-turns in vacancies (females in October, males in December). Employment began to recover first in the manufacturing sector.

These 'natural' processes were assisted by a series of cautiously expansionary measures from about the middle of 1952. In May, the Commonwealth Bank's advance policy was made more flexible. In July, hire purchase restrictions were relaxed for farm equipment. The 1952/53 Commonwealth budget was brought down in August and although the Treasurer was careful to point out the persistence of 'cost inflation' he acknowledged that there was 'not the same compelling reason now that we had a year ago for seeking a large Budget surplus' (Budget Speech, 1952/53: 3). In consequence there were tax concessions of £49·6 million and the budget was nominally balanced. In October, the Commonwealth Bank, which had released more than £331 million of special deposits during the year, and which had also 'purchased government securities on the market on a much heavier scale than in recent years', relaxed virtually all selective controls over trading bank advance policy.

As a result of all these factors most indicators rose strongly throughout

1953. Reference cycle I_2 occurred in April 1954, but by the end of 1953 the level of activity was not far below trend and the government felt able to congratulate itself upon its achievement.

> We have now [September 1953] practically attained that stability we set out to achieve in the strenuous days of 1950 and 1951. It has not been easy either for the Government or for the community and yet, if we look back to earlier periods, it is remarkable that the transition from violent boom to comparative stability has been accomplished with relatively so little unemployment, dislocation and loss. It used to be axiomatic that every boom had to be followed by a slump and, usually, the worse the boom the worse the slump. Yet the recent boom, one of the sharpest in our history, was brought under control without incurring anything that, by any stretch of imagination, could be called a slump. (Budget Speech, 1953/54: 3)

On the one hand it was possible to reduce taxes by another £81·6 million in the 1953/54 budget, and on the other to afford some relaxation of the import controls. Quotas were raised in April, July, and October as international reserves climbed back to the level at which they had stood before the Korean War.

Notwithstanding the general recovery in 1953, there was no sign of excess demand. Registered Vacancies did not begin to exceed Registered Unemployment until November. More significantly, Registered Vacancies remained below, and Registered Unemployment above, long-term trend values for the whole year. Bottlenecks disappeared. Before the end of 1952 the production of black coal in New South Wales was adequate to meet demand for the first time since the war; output increased by more than 20 per cent on the previous year and stocks in the hands of all consumers except gasworks rose substantially.[33] And 'on the primary production side, it was one of the most remarkable years on record' (Budget Speech, 1953/54: 3).

Despite the rising level of activity, therefore, wholesale prices actually began to fall during 1953, and retail prices rose only 2 per cent, the rate of inflation fading away to zero by the end of the year (figure 3.1). During 1952/53 and 1953/54 the rate of inflation of average earnings fell below 4 per cent per annum. In January 1953 it was found that the 'C' series index had varied so little in the previous quarter that for the first time since 1945 there would be no automatic increase in the basic wage. On 27 September, the Arbitration Court rejected the employers' application for a reduction in the basic wage and an increase in standard hours; rejected the unions' application for an increase in the basic wage; and abolished the automatic quarterly adjustments. For the brief space of a few months – thanks to stable or declining world prices, the import cuts, major productivity

[33] *Facts and Figures*, 35: 61–3, prints a report on the black coal position at the end of 1952.

gains, and defence expenditure – the Australian economy achieved simultaneously the four objectives of external balance, price stability, reasonably full employment, and rising real wages.

ECONOMIC PROCESSES IN THE FIRST EPISODE

On average, during the First Episode, real GNP grew at 4·03 per cent per annum, almost exactly the rate for the post-war period as a whole. Table 3.10, however, reveals that the growth-rate declined steadily from 1949/50, becoming negative in 1952, then rising strongly again in the following year.

Table. 3.10 Analysis of year-to-year changes in aggregate final demand, the First Episode: 1948/49 to 1953/54
£(1953/54) million

	1949/50 *v.* 1948/49	1950/51 *v.* 1949/50	1951/52 *v.* 1950/51	1952/53 *v.* 1951/52	1953/54 *v.* 1952/53	
Annual change in:						
Consumption	+153.0	+181.5	−30.0	−70.5	+192.0	
Private fixed investment	+73.5	+104.0	+19.0	−44.5	+73.5	
Net inventory formation	+1.0	+53.0	+116.5	−347.5	+163.5	
Public expenditure	+100.5	+126.5	+127.0	−35.5	−39.0	
Statistical error	+39.0	−55.0	+75.5	−156.5	+62.0	
Domestic expenditure	+367.0	+410.0	+308.0	+654.5	+452.0	
Exports	+49.0	−48.0	−66.0	+169.5	−5.0	
Imports	−143.0	−153.0	−126.5	+454.5	−188.5	
Balance of trade	−94.0	−201.0	−192.5	+624.0	−193.5	
Gross National Expenditure	+273.0	+209.0	+115.5	−30.5	+258.5	Average growth-rate
Annual growth-rate % p.a.	+7.13	+5.13	+2.73	−0.71	+5.89	+4.03

Source: Australian National Accounts.

According to the reference point analysis of chapter 1, the decline in growth-rate began in August 1950, but it will be remembered that C_1 is poorly authenticated. Inflationary pressure was evident long before I_1 (November 1949) and growth-rates in some important sectors had been declining for two years before C_1. It is more certain that E_1 (March 1952) represents the approximate date at which the growth-rate began to recover.

Enough has already been said in this chapter about immigration and productivity to make it clear that the simplifying assumption of a constant

n, made in chapters 1 and 2, must be relaxed in order to understand the First Episode. It is only formally correct, moreover, to say that the net disturbance to the growth-rate, f, resulted from the difference between a variable rate of growth of aggregate final demand, y, and a relatively constant rate of growth of the factor base, n. Until the ending of the boom (reference $\dot{B}_1$, May 1951) it was increasing constriction of supply rather than any decline in *ex ante* demand which led to the contraction in growth-rate. Up to that point the falling curve of gY represents a production ceiling growing at a diminishing rate.

A growth-rate of domestic expenditure well in excess of that of supply resulted in large negative values of the annual change in the balance of trade, despite the high and rising cost ratio. The rapidly falling *real* export surplus, however (from +£(1953/54)150 million in 1948/49 to −£(1953/54)145 million in 1950/51), was converted into a rapidly rising *money* export surplus (from +£81 million in 1948/49 to +£180 million in 1950/51) by improvement in the terms of trade, and the balance of payments was further strengthened by an inflow of speculative and investment capital. The resulting increase in liquidity helped to support the rate of growth of domestic expenditure, and the inflation of world prices more than matched the rate of increase in domestic costs and prices. All circumstances were combining to push the economy towards a position of overfull employment, abnormal dependence upon imported supplies, and extreme price inflation.

There was little or nothing the government could do to correct the situation until after the 1951 elections. The Country Party in the coalition effectively prevented any reduction in the cost ratio (and continued to do so until after the opportunity was lost). The Labor Party was strongly opposed to deflation and, with simple faith in the efficacy of legislation, proposed to exorcise the demon with price controls. Although the Prime Minister had a majority in the Lower House, the strength of Labor in the Senate and the State legislatures made it difficult to do much about domestic expenditure. Sooner or later an election would have to be fought to give the government a clear mandate. It would be unthinkable to do so in the immediate aftermath of severe deflationary measures: hence the Horror Budget had to wait until after the double dissolution, by which time the import surplus was beginning to do its work.

The falling off of gY until B_1 was the result of successive changes in each of gL, gp, and gk. As immigration rose to its peak in 1950 and began to decline, gL (males) rose to more than 3·0 per cent, nearly twice the post-war average, before dwindling to 0·4 per cent in 1952. The separation of p and k is dubious in this period since capacity was alternately over-strained and underemployed as bottlenecks were removed and reappeared. It was commonly believed that there was little or no overall productivity

gain until 1952,[34] and it seems reasonable to suppose that p.k actually diminished as the boom progressed, k reaching a maximum then passing into a declining phase, and p growing ever more slowly and eventually negatively in consequence of the milk-bar effect.[35]

The high growth-rate of domestic expenditure until the second half of 1951 conceals a number of significant changes in its components. The rate of increase in real consumption began to fall off earlier and more sharply than that of the other elements of expenditure: consumption was actually lower in 1951/52 than in the previous year. Private fixed investment also began to grow at a slower rate in 1951 but in real terms was still £(1953/54)19 million higher in 1951/52 than in 1950/51. Rough quarterly estimates of consumption seem to suggest that the down-turn occurred in the second quarter of 1951.[36] Private investment plans were subject to a longer lag, and real public expenditure in aggregate was increased in 1951/52 at the same rate as the previous year because the Commonwealth government allowed the surplus yielded by the Horror Budget to be used to underwrite States' works programs.[37] Physical inventories, which had increased by £(1953/54)53 million between 1949/50 and 1950/51 rose by another £(1953/54)116·5 million the following year (table 3.10) as the import surplus continued to rise in conjunction with falling consumer demand.

From about reference P_1 (June 1951), behaviour of the growth-rate curve is explicable more directly in terms of demand factors than of supply. Despite the sustained growth-rate of public expenditure and an increase in the rate of inventory formation, the annual increase in domestic demand was £(1953/54)102 million lower between 1950/51 and 1951/52 than between 1949/50 and 1950/51. The real import surplus was of the same magnitude in the two years, hence the combined result of the Horror

[34]Brown (1953: 16.3–6), appears to disagree with the prevailing view, however; he suggests that 25 per cent of the increase in available supplies per head since 1945/46 may have been contributed by internal productivity. This implies average gp of 1.3 per cent per annum between 1945/46 and 1953/54.

[35]There seems to be more evidence for the inverse relation between gP and gp (Copland's 'milk-bar' effect) *after* 1949 than *before*.

[36]Prorating annual consumption expenditure over quarterly retail sales deflating with the C series index, and deseasonalising by the simple method and smoothing with a three-term moving average, we obtain the following series of quarterly change in consumption (on an annual basis, £(1953/54) million):

1950				1951				1952			
1	2	3	4	1	2	3	4	1	2	3	4
+178	+136	+198	+149	+283	−126	−134	−374	−227	−83	+96	

[37]'. . . the State works programmes, which we had underwritten to ensure the continued progress of essential projects, actually cost us, out of Commonwealth resources, substantially the equivalent of our increased tax revenue' (Budget Speech, 1952/53: 4).

Budget, the monetary measures, and the encouragement of imports – together with the effect upon liquidity of the dramatic reversal of the terms of trade in April 1951 – was to reduce the annual rate of growth of real GNP from £(1953/54)209 million (5·13 percent per annum) to £(1953/54)—115·5 million (2·73 per cent per annum).

Despite the difficulty of saying anything about the long-run rate of growth of potential output in this period, it is certain that whereas the growth-rate between 1949/50 and 1950/51 represented a straining to the utmost of available resources, that between 1950/51 and 1951/52 was sufficiently below n to allow an appreciable reduction in excess demand. Employment fell, and so, accordingly, did the rate of wage inflation, though neither so fast nor as soon as world price inflation; hence the cost ratio began to depreciate towards a more 'normal', pre-war level. Before the beneficent effects of disinflation were evident on the supply side, however, the growth-rate of domestic expenditure fell below zero and between 1951/52 and 1952/53 was strongly negative. Real domestic expenditure was £(1953/54)654·5 million lower in the latter year: £347·5 million (53 per cent) was caused by a running down of inventories to levels more consistent with normal trade, but there were also significant declines in consumption, which fell for the second consecutive year, and in fixed investment and public expenditure (table 3.10).

But for the huge increase in the trade balance between 1951/52 and 1952/53, the rate of growth of GNP would have fallen by about 16 percentage points to −13 per cent per annum in 1952. Partly as a result of the decline in domestic demand, however, and partly because of the import cuts, the volume of imports fell by £(1953/54)454·5 million between 1951/52 and 1952/53. Even this would have been insufficient to avert a 5 per cent drop in real product had it not occurred in conjunction with an increase in the volume of exports of £(1953/54)169·5 million as world markets recovered from the 1951 slump and domestic deflation, together with the depreciated cost ratio, disciplined home market demand for exportables. In the outcome, gY fell only by −0·7 per cent per annum on average in 1952 and immediately began to recover.

The chief reason for the recovery was an increase in consumption expenditure of £(1953/54)192 million between 1952/53 and 1953/54, and a £(1953/54)163·5 million build-up of inventories. Tax cuts in the 1952/53 and 1953/54 budgets, relaxation of hire purchase controls, the easing of bank credit, improved liquidity as the level of London funds was restored, and an increase in the rate of immigration from a trough in mid-1953 brought about the former. Inventory investment was a response to improved prospects engendered to some extent by the import cuts and a reaction from excessive liquidation the previous year. Private fixed investment also began to grow again, but government expenditure

continued to fall in real terms as the 'rigorous pruning' announced in the budgets for 1952/53 and 1953/54 began to take effect.[38]

As demand again began to press against the limits of supply the export surplus changed its sign once more: volume of imports increased by £(1953/54)188·5 million and exports fell off slightly. This large decline in the trade balance, facilitated by relaxation of import controls, offset what would otherwise have been an inflationary increase in aggregate and Y rose by £(1953/54)258·5 million, a rate of growth of 5·89 per cent per annum.

At the end of the First Episode, therefore, the economy was growing at slightly more than the average long-run rate; not inappropriately after the lost ground of the year before. The level of employment had recovered to a point at which average earnings were increasing by about 5 per cent per annum and the cost ratio was continuing to depreciate slightly after the major readjustment of the two previous years. Despite the increase in money wages, there was little or no inflation in selling prices, partly because productivity was beginning to increase rapidly, partly because of the absence of any encouragement from import prices. What might otherwise have been a larger real external deficit was held in check by continuing import controls and in money terms appeared as a small surplus, thanks to a rally in export prices from early 1952. Despite a subsequent down-turn a year later, average export prices were higher in 1953/54 than in the previous year, whereas import prices were lower.

It is not strictly accurate to describe this situation as one of 'balance'. But for the import controls, the improving terms of trade, the abnormal post-recession productivity gains, and a certain quiescence of labour after the unusual experiences of 1952,[39] there would have been either or both of domestic inflation and a large external deficit at this level of activity, notwithstanding the government's economy program. For a few months, however, Australia was able to enjoy the best of all possible economic worlds.

[38]'In order that the maximum possible amount should be available in the Budget for tax reductions, the Government has *rigorously pruned back* the estimates of expenditure for which Parliament will be asked to provide' (Budget Speech, 1953/54: 4). The same phrase occurs in the Budget Speech for the previous year.

[39]In terms of numbers directly involved, working days lost and estimated loss in wages, the March quarter of 1954 was the most peaceful since the war, with the sole exception of the December quarter of 1949, immediately after the coal strike (*Labour Report*).

4

Cross-currents in the Economy, 1954 to 1959

In many respects, the years from 1953 until 1959 were the most prosperous and stable in the history of Australia. Growth-rate of GNP at constant (1953/54) prices varied from 1·3 per cent between 1956/57 and 1957/58 to 8·8 per cent between 1957/58 and 1958/59. Average growth-rate between 1953/54 and 1959/60 was about 4·5 per cent per annum. Table 4.1 reveals that this somewhat faster growth took place in a period in which population and work-force were increasing more slowly than in the First Episode. Real income per head of population rose at 2·3 per cent per annum as against 1·4 per cent in the First Episode. Measured productivity per head of the work-force rose at 2·6 per cent per annum, as against 1·9 per cent per annum in the previous period. There was, however, a distinctly downward trend to the terms of trade from 1951. When allowance is made for this the growth-rates of productivity and real income per head appear somewhat lower after 1953/54 than during the First Episode. In effect, the faster growth of *internal* productivity during the Second and Third Episodes served to mitigate what would otherwise have been a far more serious slowing down in the advance of living standards. The whole economy seems to have changed gear some time around 1953. The structural and institutional setting of the Second and Third Episodes is appreciably different from that of the First.

Australia was not immune from fluctuations in this period. During 1954 and 1955 a boom developed which was comparable in magnitude with that of the First and Fourth Episodes, though shallower than the First, longer than the Fourth and with a somewhat double-headed shape. The recession which followed in 1956 was far less severe than those of 1952 or 1961, however, and the long, shallow trough (or plateau) which continued into the middle of 1959 contained another complete episode which reflected the North American boom and slump of 1957 and 1958. Figure 4.1 shows the cyclical component of two monthly indicators which display the Third Episode in approximate conformity with the reference cycle dates.

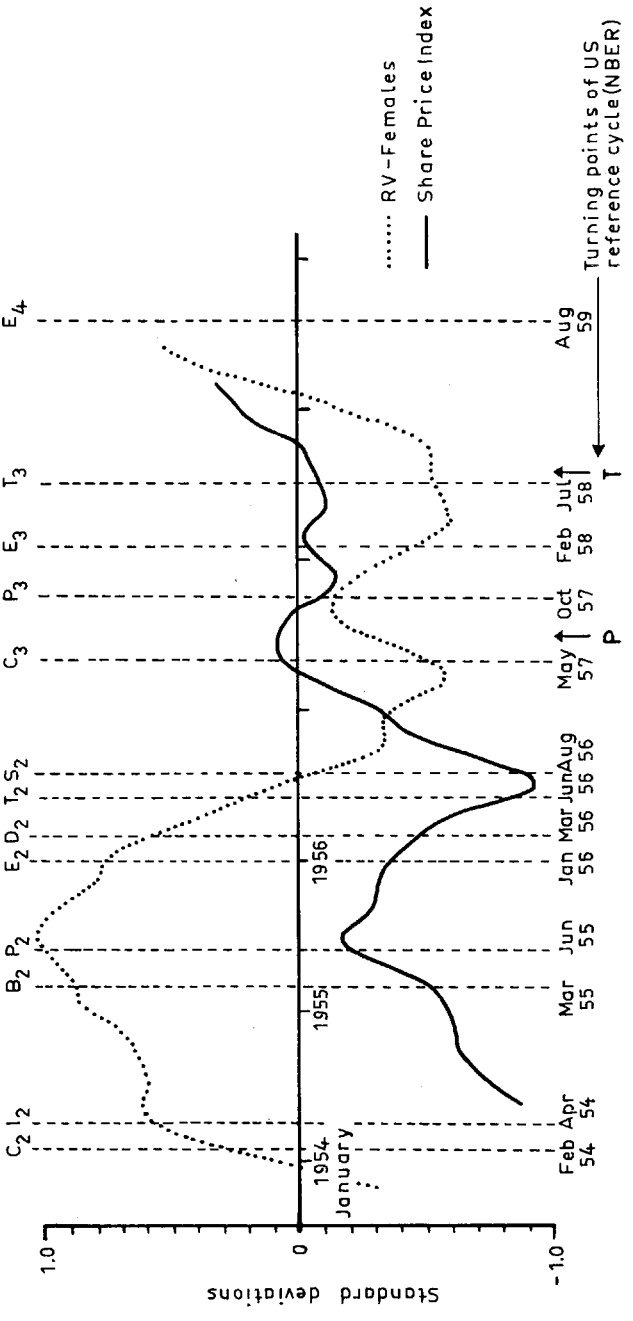

Fig. 4.1 Cyclical component of two indicators in the Second and Third Episodes

Table 4.1 Average growth-rates of productivity and real income per capita 1948/49 to 1953/54 and 1953/54 to 1959/60
Per cent per annum

	Unadjusted		Adjusted for the terms of trade	
	Average 1948/49 to 1953/54	Average 1953/54 to 1959/60	Average 1948/49 to 1953/54	Average 1953/54 to 1959/60
1 Rate of growth of GNP in constant 1953/54 prices	4.03	4.50	4.62	3.77
2 Rate of growth of work-force	2.13	1.91	2.13	1.91
3 Rate of growth of average productivity (1 minus 2)	1.90	2.59	2.49	1.86
4 Rate of growth of population	2.68	2.24	2.68	2.24
5 Rate of growth of real income per capita (1 minus 4)	1.35	2.26	1.94	1.53

Source: *National Accounts, Demography*, and Keating (1967).

STRUCTURAL AND INSTITUTIONAL CHANGES

The most important distinguishing features of the period which began in 1954 are the relative stability of domestic and import prices; a noticeably higher rate of productivity increase; institutional changes in banking and finance; changing world and domestic social and political environment and a different attitude of the Federal government towards the development and control of the economy.

Price Movements

During the Second and Third Episodes the rate of increase of consumer prices rose above 5 per cent per annum for about twelve months in 1955/56. For the rest of the period the rate of inflation was generally less than 2 per cent per annum, resulting in an average of about 2·5 per cent from 1953/54 to 1959/60, compared with an average of 11·4 per cent per annum during the First Episode. Table 4.2 sets out some other comparisons of this kind.

Table 4.2 Average annual rate of change of prices and wages 1948/49 to 1953/54 and 1953/54 to 1959/60
Per cent per annum

	Average 1948/49 to 1953/54	Average 1953/54 to 1959/60
Import prices (all groups)	+ 5.9	+ 1.8
Wholesale prices (all groups)	+ 12.2	+ 0.9
Consumer prices	+ 11.4	+ 2.5
Average earnings (all industries)	+ 13.4	+ 4.8
Real wages (earnings minus consumer prices)	+ 2.0	+ 2.3
Productivity (from table 4.1)	+ 1.9	+ 2.6

Source: Commonwealth (Reserve) Bank, CBCS, *Labour Reports*, table 4.1.

Wholesale prices in 1959/60 were only 6 per cent higher than 1953/54, though the average conceals a steady rise from the middle of 1954 to the beginning of 1957 followed by a decline for the next two years. Import prices, which rose at nearly 6 per cent per annum during the First Episode, increased at less than 2 per cent after 1953/54. Average earnings rose faster than consumer prices in both periods, and the estimated rate of increase of real wages is about the same at around 2 per cent per annum – of the same order of magnitude as the annual average improvement in productivity. Real wages fell by something over 1 per cent in each of the two recession years, 1952 and 1956, when the rate of increase in average earnings began to slow down several months ahead of price inflation.

The difficulty of interpreting Australian labour market statistics has been remarked in previous chapters. It does seem, however, that 1952 saw the disappearance of chronic, abnormal demand for labour. Labour shortages began to reappear during 1954 and continued throughout 1955 and into 1956, but the rate of wage inflation did not rise much above 10 per cent per annum at its peak and subsided, in the second half of 1956, to a rate of 4 per cent per annum or less. The difference between registered vacancies and registered unemployment, for what it is worth, shows that the excess was far smaller in 1955 than in the years before 1952; registered unemployment varied about a strong upward trend throughout the entire post-war period; the gap between total civilian employment and annual estimates of the work-force, which widened considerably in 1952, reveals no secular tendency to narrow thereafter; and the work-force itself no longer contained so many of the married women and retired men who were drawn back into employment in the First Episode.

The inflationary effects upon the economy of the net migration flow in the First Episode would have been mitigated by the much slower rate after 1952. For four successive years, from 1948/49 to 1951/52, the excess of arrivals over departures ran at more than 100,000. Thereafter it fell sharply, never again recovering before the end of the Fourth Episode (Vernon Report: table 4.2). Average net migration was 101,700 per annum during the First Episode, 78,900 per annum from 1953/54 to 1959/60. During the mid-1950s, moreover, it is likely that the long-run effects of the great post-war immigration upon productivity were beginning to outweight the short-run effects upon demand.

Higher Rate of Productivity Increase

The contrast between the years before and after 1953/54 noted in table 4.1 is even more marked if the middle and late 1950s are compared with the entire post-war period up to 1953. It was seen in the previous chapter that H.P. Brown estimated internal productivity growth of about 1·3 per cent per annum in his evidence in the 1953 basic wage case; and

that even this was more generous than the prevailing view, expressed by Sir Douglas Copland, Colin Clark, and others, that productivity gains had been negligible. In the 1959 basic wage case, by contrast, W.E.G. Salter advised that 'the factors which contributed to greater internal productivity have been operating strongly in Australia during the past five years' (Salter, n.d.) and estimated a rate of increase since 1952/53 of the order of magnitude 2·5 per cent per annum, with 1·7 per cent and 3·3 per cent as lower and upper limits.

One of the most important sources of this change was the improved supply of goods-and-services from the basic industries: utilities, transport, and resource exploitation and development (*Economic Survey*, 1956: 15). This in turn was the result of a high and rising level of investment in this sector. When private fixed investment in electricity, gas and water, transport and communications, and primary industry is added to public fixed investment in utilities, transport, and resources, total investment in these classes averages 11 per cent of GNP at current prices in each of the first three Episodes. In the First Episode, however, the proportion rose from 8 per cent at the beginning to 13 per cent in 1951/52, whereas it remained steady from 1953/54 at the overall average. Basic investment, therefore, was rising very quickly up to 1952: since much of it is typically of long gestation, its benefits would not have become very evident until after that year.[1]

Although basic investment (including primary production) held its share of GNP throughout, its share of total fixed investment at current prices fell from 52 per cent in 1951/52 to 42 per cent in 1959/60, as the relative importance of private, non-basic investment increased. Figures 4.2, 3, and 4 display the shares in GNP at *constant* prices of the major components of expenditure. Private fixed investment is relatively higher after 1953 (figure 4.2), and this is entirely due to gains in its 'non-dwelling' component (figure 4.3). The share of fixed investment rises to a peak in the First Episode, thereafter levelling out at about 8 per cent of GNP, and the share of total fixed investment, which was rising sharply up to 1952, remained steady at just over 23 per cent in the Second and Third Episodes. This is comparable with Canada and West Germany, and considerably higher than Britain (15 per cent) or the USA (16 per cent) (Vernon Report: table 9.3).

During the First Episode, this increasing expenditure on investment was achieved without impairing the rate of growth of consumption, as the

[1]This was especially the case with power projects: the first electricity from the Snowy Mountains scheme was not generated until February 1955; the first major addition from that source did not come until March 1959 (*Official Year Book*). Salter (n.d.: 2.1) notes in 1959 that a large number of major investment projects commenced in the immediate post-war years have now come to fruition.

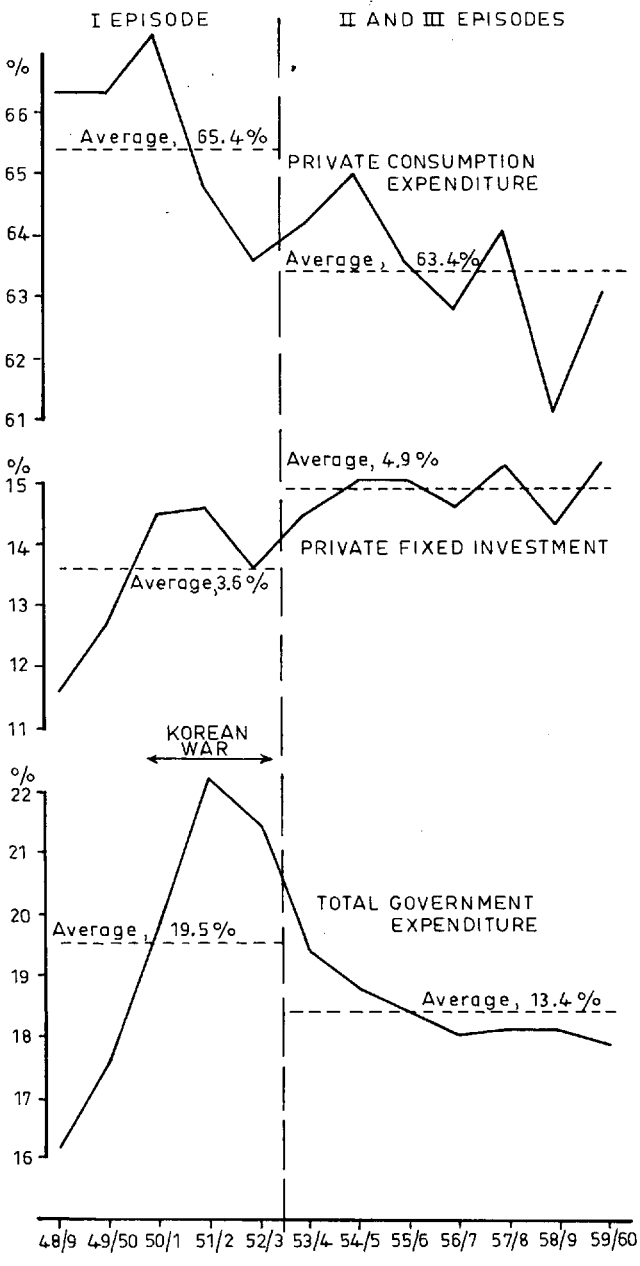

Fig. 4.2 Major categories of expenditure as percentages of GNP in constant 1953/54 prices: First, Second, and Third Episodes. Source: National Accounts

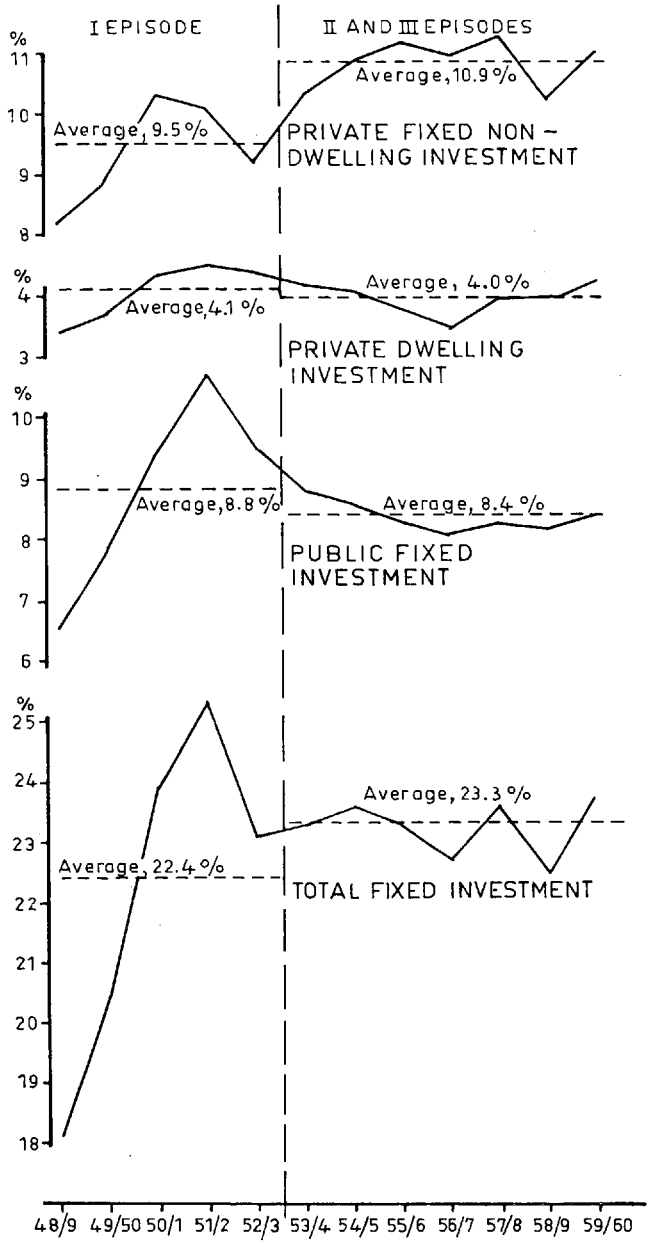

Fig. 4.3 Total fixed investment and major components as percentages of GNP in constant 1953/54 prices: First, Second, and Third Episodes. Source: National Accounts

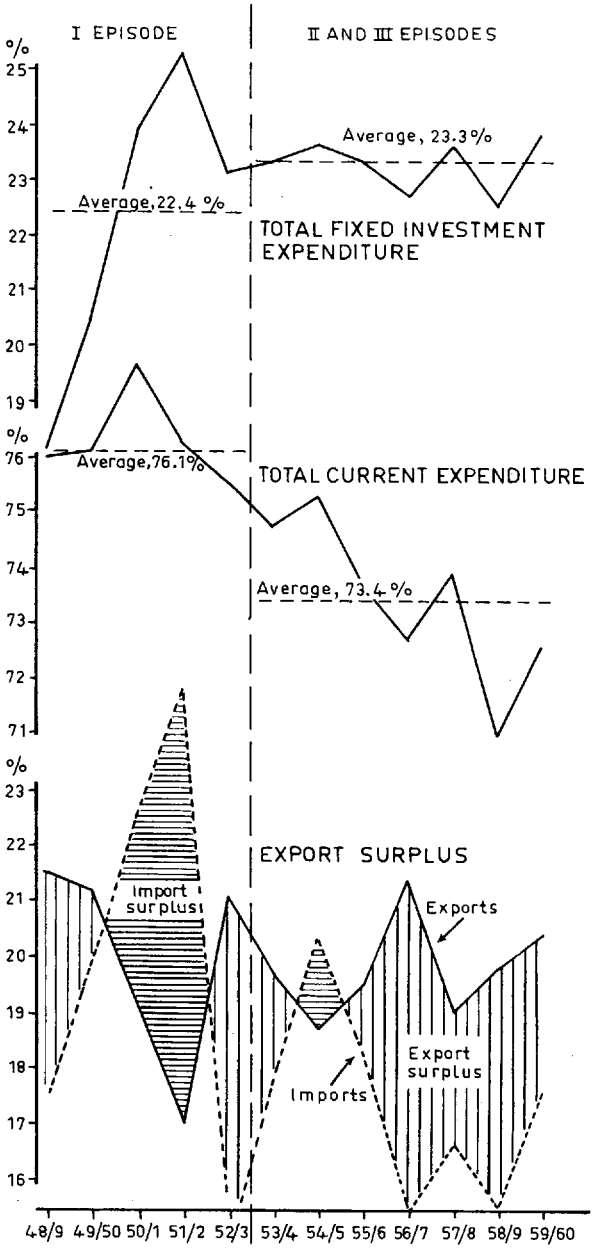

Fig. 4.4 Total fixed investment, current expenditure, and import surplus as percentages of GNP in constant 1953/54 prices: First, Second, and Third Episodes

improving terms of trade permitted a growing real import surplus without strain on the balance of payments. After 1951, however, when the terms of trade moved against Australia and import controls were instituted, the increase in the share of investment had come to an end, and its continued maintenance to depend upon a falling share of current expenditure, both public and private. Figure 4.4 reveals this sequence clearly. During the Second and Third Episodes the falling terms of trade made balance of payments stability conditional upon an increasing real export surplus achieved by import controls; the declining share of current expenditure may help to explain why this very prosperous period has sometimes been thought of as one of 'stagnation'.

Nowhere is the changing character of economic activity after 1952 more clearly seen than in the manufacturing sector. A splice of S.P. Stevens's annual index of manufacturing production with that of the CBCS suggests that production (or output, on average over the period) rose at 7·2 per cent per annum from 1945/46 to 1951/52 and at 7·9 per cent per annum from 1952/53 to 1959/60.[2] Whereas factory employment rose at an average rate of 4·6 per cent in the first period, it grew at only 2·9 per cent per annum after 1952/53. The rate of productivity increase at 5·0 per cent per annum from 1952/53 was therefore nearly twice the rate of 2·6 per cent per annum in the immediate post-war years.

When these data are combined with the annual estimates of capital stock in manufacturing compiled by Edwards and Drane, it appears that capital per head increased at a yearly rate of more than 4 per cent from 1952/53 to 1959/60; as against a mere 0·3 per cent in the period up to 1952. Solow's index of residual 'technical progress' remained virtually stationary from 1945/46 to 1951/52, but thereafter advanced at an average rate of 5 per cent per annum (Edwards and Drane, 1963). Even if the capital stock estimates were sound and the method appropriate this would probably exaggerate the difference between the two periods (Nevile, 1964). Nevertheless, the general inference of a rapid improvement in scale and technique is consistent with other, less specific evidence (Salter, n.d.: 2, 3, 4, and 5).

To the extent that the acceleration of productivity growth was caused by technical progress as distinct from increased capital intensity, it is probable that the growing importance of American enterprise was a major factor.

> There is no need to dwell [wrote H.W. Arndt in 1957] on the very great advantages which Australian manufacturing industries have derived in post-war years from the introduction of overseas, and especially American,

[2]Stevens, 1954. Stevens's index is comparable, in concept and classification, with those of the CBCS. His all-groups index was therefore spliced with the first of the two CBCS indices at 1949/50, and the two official indices spliced at 1959/60.

> enterprise, managerial skills, techniques, methods and new products. Through the stimulus and example they give to domestic firms, through training of local labour at all levels in new skills, and through the pressure of powerful competition, the benefits of technological advance spread beyond the firms in which the overseas investment is made; they accrue as external economies to residents of the borrowing country and represent an additional net benefit which, though quite incapable of measurement, may be very substantial. (Arndt, 1957a. See also Hocking, 1955:8).

In a detailed study of US investment in the Australian economy, D.T. Brash concluded that productivity in US affiliated firms was about 36 per cent higher in 1961/62 than in Australian industry generally. American firms were larger, employed significantly more machinery per worker, and made use of superior management and production techniques. The entry of US enterprise brought appreciably greater competition to many industries in the 1950s, leading, for example, to lower prices for food, chemicals, and coal, modernisation of the coal industry under pressure of competition from oil, and improved technical service over a wide range of products. The demands made by US firms upon local supplies of parts and equipment had an appreciable effect upon standards of quality and service. The impact of much of this seems to have occurred after 1950. Between 1950 and 1962 employment in American affiliated manufacturing firms exactly doubled, whereas that for Australian manufacturing as a whole increased by only 22 per cent.[3]

A marked acceleration in the rate of productivity growth was likewise apparent in other sectors of the economy. According to the quantum index of rural production, average productivity per head of the rural work-force increased at about 2 per cent per annum between the 1947 and 1954 censuses, but at about twice that rate between the 1954 and 1961 censuses.[4] The undoubted increase in farm output in the 1950s was ascribed by the Vernon Committee to a 'technological revolution' in agriculture after 1951/52. Estimated net investment in rural industries was negative during the first five post-war years. During the next five years, however, £290 million was invested in farming, mostly in land improvements, and a similar rate was maintained from 1956 to 1960. Myxomatosis and rabbit poison were introduced in the summer of 1950/51, and pasture improvement undertaken with fertilisers, irrigation, and improved grasses.

> The areas fertilized for cropping and pasture improvement has almost doubled since 1950, as has the quality of fertilizer used. Farms have twice as much agricultural equipment. The increase in the number of tractors has been

[3]Brash (1965), subsequently published as Brash (1966). References in this book are to the original unpublished work, which contains more detail.

[4]These figures are based on the Vernon Report, table 8.5; production in the fiscal years 1948/49, 1953/54, and 1960/61 assigned to the work-force in the three other years. Nothing but the roughest 'order-of-magnitude' calculation is intended.

> especially marked, and significant use is being made of aircraft for fertilizer distribution and crop spraying. (Vernon Report: 8.49)

The stimulus for some of this development came from a major reappraisal of agricultural policy by the Commonwealth government in 1952.

In the building industry, average productivity of dwelling construction rose by 6·6 per cent per annum over the decade 1950–60, and of other building by 8·2 per cent per annum according to the estimates of A.R. Hall. The average construction time of a contract-built house fell from about six months in 1953 to about four months in 1959/60 and the lower real cost of building was reflected in housing prices. Some of this improvement resulted from economies of site preparation and in factory prefabrication. The calculated increase in productivity takes no account of improvements in quality which have been considerable since the early 1950s. These changes in the industry were accompanied by an increase in the relative importance of flats in dwelling construction, a decrease in the relative importance of dwellings in total construction, and a relative decline in owner-building (Hall, 1961a and b. See also Vernon Report: 9.14).

Greatly improved industrial relations affected the efficiency of all sectors of the economy directly and indirectly. The contrast between the two periods has been noted in the last chapter.

Developments in Banking and Finance

By comparison with the First Episode, the time from 1953 to 1959 was a period in which, on average, a greater degree of restraint was attempted by the monetary authorities. The lower average ratio of money supply to national income and the higher average level of interest rates from 1952 has been noted in the previous chapter. The rate of growth of the money supply declined from the beginning of 1953 to the beginning of 1956 (by which time it was negative), rising only to about 6 per cent per annum for a few months in 1956 and 1957. In 1953, the central bank (legally separated from the Commonwealth Trading Bank in that year), experimented with a conventional liquidity ratio for the trading banks. The new policy failed during the 1954/55 boom and was replaced in 1956 with an arrangement whereby trading banks agreed to maintain their liquid assets and government securities at 14 per cent of deposits or more; the relative uniformity of trading bank liquidity thus achieved improved the effectiveness of Special Accounts policy. The use of directives to and consultation with the General Managers of the trading banks increased the control exercised by the central bank from the mid-1950s, and the abandonment of perpetual cheap money in 1952 paved the way for a more flexible interest rate policy and the beginning of deliberate open market operations before the end of the 1950s (Coombs, 1958, reprinted in Arndt and Corden, 1963: 155–77. See also Arndt and Harris, 1965: 196–206).

Partly as a result of this relative monetary stringency, partly because of the ending of post-war controls, and partly for more fundamental, structural reasons, the decade from 1950, particularly its second half, saw a rapid development of the Australian capital market. The most dramatic growth occurred in hire purchase finance. Outstanding instalment credit debt rose from £70 million in 1950 to £424 million in 1959. Deflation by the Consumer Price Index yields 'real' growth-rate of approximately 14·5 per cent per annum. £370 million (87 per cent) of outstanding debt at balance sheet date in 1959 were assets of the instalment credit companies, which grew even more rapidly than total hire purchase finance (*Flow-of-Funds* . . . ; table 7.2. See also Hirst and Wallace, 1964: 131).

Along with the expansion of instalment credit, there was significant growth in all parts of the financial sector. Between the end of 1953 and the end of 1959, principal earning assets rose by 61 per cent to £4,633 million (75 per cent of GNP). Deflation by the implicit price index suggests that this sector grew at more than 6 per cent per annum during the period, thereby increasing its relative importance considerably. Apart from instalment credit, most sub-sectors except banking grew at about the average rate for the sector: the increase in assets of cheque-paying and savings banks was relatively slower, and the share of these in the total of financial sector earning assets fell from 65 per cent to 56 per cent. There was also some diversification in asset holding over the period: the share of bank advances and Commonwealth government securities fell from 71 per cent to 59 per cent as a result of the faster expansion of hire purchase finance and the increasing tendency of insurance companies, pension funds and other finance companies to substitute local and semi-governmental securities, shares and debentures for Commonwealth securities. To some extent, the greater range of securities available to investors in the mid- and late-1950s resulted from a considerable expansion of public borrowing by the instalment credit companies in 1949–50 and again in 1956–7, as bank advances became less easily available (*Flow-of-Funds* . . . and Hirst and Wallace, 1964: 152–60).

Changing Social and Political Environment

Both internationally and domestically, the social and political setting of economic activity in the Second and Third Episodes was markedly different from that in the First. The change was all-pervasive, and therefore extremely difficult to document adequately. It is impossible, moreover, to say how far even such movements as can be identified were influential upon the workings of the Australian economy as abstracted from the real world and set out in this book. All that can be attempted here is to remind the reader of the possibility of such influence by a summary recitation of some of the more obvious and memorable changes.

In March 1953 Stalin died, and in July 1953 the Korean War came to an end. These events, whether causative or merely symbolic, inaugurated a period of relative quiescence in world affairs not seriously threatened again until the U2 and Berlin crises of 1960–1. The policy of peaceful coexistence was announced by Bulganin and Kruschev in 1955, and Soviet defence expenditure, which had risen strongly from 1952 to a peak in 1958, fell fairly steadily until 1960.[5]

The decade of the 1950s was, in general, a time of return to freer, multilateral international trade and payments. The European Payments Union began operations in 1950, and by 1958 was able to disband as most of its members went back to full, external convertibility. In February 1955, meanwhile, Britain restored *de facto* convertibility of non-resident sterling balances. Increasing reliance upon market forces in international payments was associated with a widespread though gradual rehabilitation of monetary policy in North America, Britain, and Western Europe.

This period of world stability saw a significant diversification of Australia's trade. There was marked decline in the relative importance of Britain, partly to the advantage of the Common Market countries, but chiefly through a great expansion of exports to Japan, South-east Asia, and New Zealand. This increase in 'intra-regional' trade was less marked in the case of imports, though here too the share of Britain declined in favour of Western Europe and Japan.

Decreasing dependence upon trade with Britain was matched by a decline in the relative importance of British investment in Australia, though in this case, to the advantage of the North American region. The British share of identified investment flows fell from 78 per cent in 1947/50 to 59 per cent in 1954/58, whereas the North American share rose from 14 per cent to 29 per cent (McColl, 1965: 95, table 5.2). In many other, less obvious ways, the British connection was weakened during the 1950s. In 1952, for example, Australia entered into a Pacific defence pact with the USA and New Zealand (ANZUS). In 1956, a cash loan was raised in New York for the first time since 1928, and loans were also raised in Switzerland and Canada in 1953 and 1955. No new money was raised in London during the 1950s. The Australia-UK Trade Agreement in 1957, which replaced the Ottawa Agreement of 1931, resulted in a 50 per cent reduction in

[5]Soviet defence spending in pre-1961 roubles (milliards):

1948	66.3	1955	107.4
1949	72.2	1956	97.3
1950	82.9	1957	91.2
1951	93.4	1958	93.6
1952	108.6	1959	93.7
1953	107.8	1960	93.0
1954	?	1961	116.0

(From unpublished figures collected by R. Hutchings from annual budgetary reports.)

Australian preferential margins (W.M. Corden in Hunter, 1963: 188). The large post-war influx of non-British migrants began to be assimilated in this decade, with far-reaching effects upon the culture and consumption patterns of Australia.

Domestic political events in Australia after 1953 tended to reproduce the broad tendencies evident throughout the rest of the European world. The swing towards parties congenial to private enterprise actually began in Australia and New Zealand at the end of the 1940s. The schism in the Australian Labor Party which took place in 1955 ensured the permanent hegemony of the Liberal-Country Party coalition in defiance of a world-wide trend towards the moderate Left beginning in the next decade. From the early 1950s Communist parties were in retreat in all Western countries, and Australia shared in the benefits of this process. In 1956, television came to Australia.

Changing Economic Role of the Commonwealth Government

It might have been supposed, from the emphasis placed upon 'socialism' in the 1949 general election campaign, that the accession to office of a Liberal-Country Party coalition would have resulted in a pronounced reduction in the emphasis, and change in the direction, of governmental intervention in the economy. The first three years of the new ministry, however, saw a substantial increase in the share of all government spending (figure 4.2) reflecting the military requirements of the Korean War. From 1954/55, the share of public expenditure in GNP (at constant prices) stabilised at between 18 per cent and 19 per cent, only slightly lower than the average for the First Episode (figure 4.2) which included the Korean War. The relative shares of Capital and Current, and Commonwealth and Other, in total public expenditure have not changed appreciably. On the supply side, in aggregate, there has been correspondingly little change. A slight upward trend in government employment, from 23·5 per cent of the work-force in 1939 to 26·5 per cent in 1952, came to an end in that year, but there has been no noticeable reduction since then. Writing in 1962, P.H. Karmel and M. Brunt concluded that 'The relative importance of government activity as a whole has increased somewhat [and] the relative importance of governments in business activity has not changed since the end of World War II' (Karmel and Brunt, 1962: 104–6).

Certain changes in the direction of public spending have occurred since the early 1950s, however, though these changes have not been considerable. The share of education in all public investment rose from around 3 per cent to 6 per cent by 1958/59; that of power, fuel, and light rose to a peak of 27 per cent in 1952/53 since when it has declined steadily; public expenditure on housing was more than 11 per cent of public investment in the First Episode but has since fallen to about 4 per cent (Vernon Report:

table 9.5). With the possible exception of the last, these changes reflect the needs of the economy rather than the political philosophy of the government.

The last found its chief outlet for expression in the discouragement of Crown Corporations. After the defeat of Labor in 1949, certain enterprises were either returned to private ownership (Amalgamated Wireless, Commonwealth Engineering, Commonwealth Oil Refinery, Australian Whaling Commission) or restricted in order to prevent government monopoly (Trans-Australia Airlines, National Line). The effect of all this, however, has been small (Karmel and Brunt, 1962: 109–12).

The key to an understanding of such changes in government policy as have occurred is to be found in connection with stabilisation rather than development. If public participation in the growth of the economy has been less whole-hearted, since 1953/54, than some might have thought appropriate, this stems not so much from ideological inhibitions as from a fear that increased government expenditure might threaten the precarious balance of full employment, tolerable inflation, and manageable trade deficits. A clear statement of this position is found in the 1955/56 Budget Speech.

> It would be generally agreed that the Government should so conduct its own business and shape its policies as to point the right course for the rest of the economy. Some, however, would go much further and say that the Government should intervene directly to control the economy and its workings both directly and indirectly, through whatever powers and devices it may possess. My colleagues and I do not share this view. We do not propose to get back into the business of controls, as some State governments are doing. We believe that, on all past experience, controls are, at the best largely futile and, at the worst, extremely harmful and unjust . . . There is, however, another course the Government can take. Its operations are, in the aggregate, very large, and they pervade every section of the economy . . . *For several years past the steady policy of the Government has been to keep a firm hand on the public sector of the economy. It has endeavoured to prevent public expenditure from rising unduly* – such expenditure has, in fact, been kept relatively stable for the last four years. It has sought in particular to maintain a stable, though adequate, rate of spending on public works . . . By this policy the Government has kept to a minimum the additional calls made by the public sector upon the available resources of the economy. *It has done this with the conscious object of providing a counter-balance in times when rapid expansion was going on elsewhere* (my italics).

If the economy could only sustain a certain amount of development investment without forced saving, inflation, or import surpluses, then – since 'controls' were to be firmly rejected – it was better that as much as possible should be done in the private sector.[6]

[6]Budget Speech, 1953/54: 2, 4; and 1956/57: 7 seems to imply this doctrine.

It is interesting to note that whereas 'controls' of all kinds were repudiated in principle in the speech quoted above, import controls were explicitly absolved from the general condemnation. Although these were described as 'expedients to be dropped at the earliest opportunity', their operation is almost exactly coextensive with the Second and Third Episodes, and imparts much of the distinctive character of this period. For the first four years the administration of the controls was left in the hands of the Department of Trade and Customs, which had been responsible for such licensing as existed before 1952. In 1956, when it became clear that the temporary expedient was becoming a permanent feature of the economy, a re-organisation placed controls under the jurisdiction of the newly created Department of Trade. Ceilings were set at three-, four- or six-monthly intervals, in the light of current balance of payments considerations and longer-term prospects. It is clear that the exercise of these controls placed considerable power in the hands of the government to influence the quarter-by-quarter behaviour of the economy. During the two periods in which they were generally intensified (February 1952 to March 1953 and April 1955 to July 1959) the tendency to recession beginning in March 1952 (D_1) and March 1956 (D_2) was thereby counteracted; and during the periods in which they were relaxed (April 1953 to March 1955 and August 1959 to February 1960) the tendency to inflation culminating in B_2 (March 1955) and B_4 (June 1960) was correspondingly restrained (Harris, 1963).

In addition to its control over the import surplus, the government was not inactive, during the mid- and late-1950s, in the use of monetary and fiscal policy to stabilise the economy. The apparent success of the 1951/52 budget in terminating the post-war inflation seems to have inaugurated a period in which discretionary fiscal policy was used more freely than formerly to curb excess demand. Auld's study has suggested that each post-war recession was preceded by, and partly caused by, deflationary budgetary measures applied too harshly and somewhat too late. The relative stringency of monetary policy from 1953 has already been remarked. Taken together, these changes account for complaints of a 'stop-go' approach to economic policy which began to be heard during this time.

THE SECOND EPISODE: APRIL 1954 TO DECEMBER 1956

Because there is no clearly marked 'cycle' in the Second Episode, still less in the Third, a history of fluctuations from the middle of 1954 to the end of 1959 must be more complex and also more conjectural than that of either the First or the Fourth Episodes. So far as the Second Episode is concerned, it seems appropriate to limit the inquiry to six of the more obvious questions raised by the statistical operations reported in chapter 1.

(1) Which factors caused the general expansion from early 1953?
(2) What possible reasons may there be for an apparent levelling out of the boom in mid-1954?
(3) Why was this temporary pause followed by a phase of further expansion from the end of 1954 to the middle of 1955?
(4) Why did a down-turn begin in the second half of 1955?
(5) How important were the Economic Measures of March 1956?
(6) Why was the 1954/55 boom followed by no slump in 1956, even when a 'slump' is taken to signify nothing more drastic than what occurred in 1952 or 1961?

The 'Relative Growth Period' of the Second Episode

The volume of exports, which reached a trough in September 1951, expanded strongly throughout the next two years to reach what was then an all-time peak in June 1953. Export prices had recovered in 1952, and although the downward trend began again in 1953, the average level by the middle of 1954 was still about that of the 1952 trough (see figure 4.5). In consequence, the value of exports in 1952/53, at £923 million, was £185 million (25 per cent) above that of the previous year and second only to the record £1,042 million of 1950/51. Export proceeds fell only slightly, to £892 million, in 1953/54.

The value of imports, though rising rapidly on a monthly basis, was well below that of exports in 1952/53 and 1953/54, partly as a result of unplanned inventory accumulation in 1952/53, partly because of the import quotas. Private foreign investment in Australia recovered from −£38 million in 1952/53 to +£18 million in 1953/54 and +£83 million in 1954/55. As a result of these trends, international reserves rose by £A228 million between June 1952 and January 1954.

Gross immigration, which had been falling steadily on a deseasonalised, monthly basis from the middle of 1952, began to rise from the third quarter of 1953. The calendar year 1953 saw the post-war nadir both of gross immigration (permanent and long-term arrivals) and of net immigration (excess of all arrivals over all departures). The former rose from 43,000 to 68,000 (58 per cent increase) in 1954, and the latter from 75,000 to 104,000 (39 per cent increase) (Vernon Report: table C.7).

Partly as a result of the higher rate of immigration, partly because of a redistribution of income after 1950/51 away from farmers, 'mostly at the expense of their savings, to people who spend most of their income' (Downing, 1956), and partly because of easier credit as the economy became more liquid with the recovery of international reserves, personal consumption expenditure rose by £(1953/54) 192 million between 1952/53 and 1953/54 and another £(1954/55)200 million in the following year, its share of real GNP rising from 63·6 per cent to 65 per cent over that

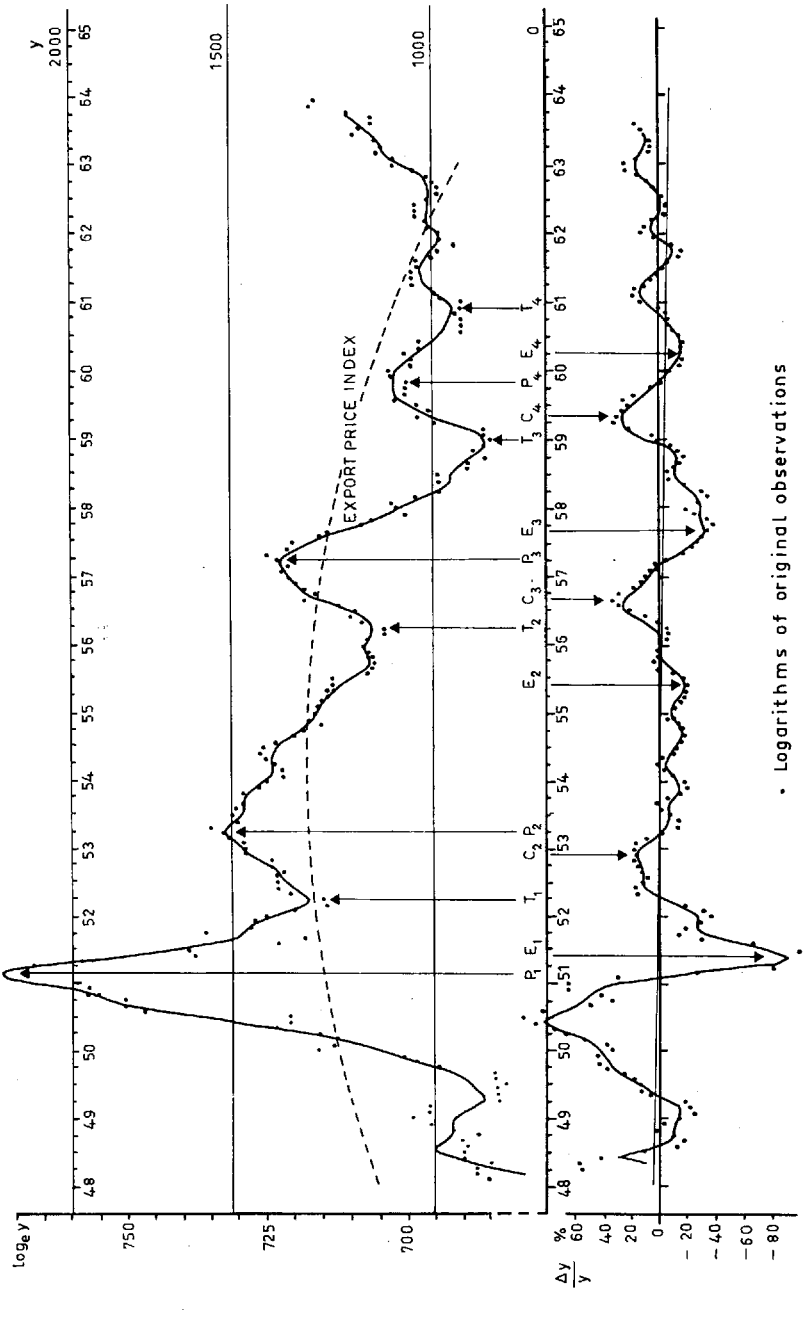

Fig. 4.5 Export Price Index

period (figure 4.2). Tax cuts in the 1952/53 and 1953/54 Commonwealth budget gave further stimulus to consumption spending. Demand was also high for private investment, both in fixed and inventory capital. Merchants increased expenditure on stocks by £112 million between 1952/53 and 1953/54 to make good excessive disinvestment in the 1952 recession year; and manufacturers sustained a high rate of inventory investment until 1954/55, consistent with a 22 per cent increase in industrial production over that period. After allowance for price changes, total inventory investment is seen to have expanded considerably between 1952/53 and 1954/55, but especially in the first year. The annual rate of private fixed investment rose by £(1953/54)163 million between 1952/53 and 1953/54 and by a further £(1953/54)61 million in the following year, partly because of a boom in private commercial building in 1953 and 1954 as materials and labour became more abundant, partly because of relaxation of physical controls at the end of 1952, and also because of major plant expansion such as the Kwinana oil refinery (£40 million, start-up January 1955) and the new Port Kembla steel mill (£30 million, start-up August 1955). These increases in private expenditure far more than outweighed the effects of relatively stable (real) government expenditure between 1952/53 and 1954/55.

The expansion of private expenditure in 1953 and 1954 was financed by large increases in trading bank advances and by a three-fold growth of new capital raising. Chiefly as a result of the gain in international reserves, current deposits of the public with cheque-paying banks rose by £201 million between June 1952 and June 1954. Trading bank advances were therefore allowed to expand by £157 million during the calendar year 1954, having already increased by £85 million during the previous eight months. During 1953, the chief beneficiaries of this extra liquidity were the agricultural and building sectors, advances to which rose by £20 million and £12 million respectively between December 1952 and December 1953. In 1954, advances to the manufacturing sector increased by £20 million while those to agriculture and building grew at about the same rate as in the previous year.[7] Complete official quarterly statistics of new capital raising do not begin until 1954, but the quarterly series of New Stock Exchange Listings published by the ANZ Bank may be taken as a rough, order-of-magnitude indicator before that year. According to those figures, new issues by private, non-mining companies rose from £48 million in 1953, to £68 million the next year and £132 million in 1955.

The upward course of activity caused, and was caused by, a general expansion of employment and a recovery of business confidence. Total civilian employment (old series) grew at more than 3·5 per cent per annum

[7]Banking data in this section are from the *Financial Supplement, 1966*.

between February 1953 and September 1955, a rate of growth nearly double the average for 1948 to 1964. The index of ordinary share prices began to move upwards again in the last quarter of 1953, and a genuine, though minor, stock exchange boom developed during the following eighteen months. In April 1954 (reference I_2) monthly indicators, on average, passed through their long-term trends and another 'inflationary period' was begun. In the view of a contemporary observer, however, 'Business conditions in Australia are now stable at a satisfactory level, which shows a reasonable measure of recovery from the low point reached in 1952' (*ANZ Bank Quarterly Survey*, April 1954: 3).

The Preliminary Peak in 1954

It must be admitted from the outset that the double-headed shape of the second boom is somewhat questionable. It is remarked by no other investigator and seems to have been ignored at the time.[8] When annual series are used to study the Episode, 1954/55 appears unambiguously as the peak – except in the case of private building, for which 1953/54 is almost exactly as high – and in those of GNP and employment, which show a trend-free peak in 1955/56. Even with quarterly data, few series reveal any real peak in 1954 when a centered four-term moving average is used to smooth and deseasonalise. A majority of the monthly indicators listed in chapter 1, however, shows some sign of a decline or a levelling out in the second half of the calendar year 1954, followed by a recovery to a new and usually higher peak in the middle of 1955. This is particularly noticeable in the growth-rate curves, virtually all of which display an M-shape; declining from a peak early in 1954 to a trough (sometimes, but not always with negative values) in the latter part of the year, rising once more in 1955 only to fall off again before the beginning of 1956. The growth-rate curve for new car registration (figure 4.6) may serve as paradigm.

There is, of course, a possibility that the phenomenon is purely a statistical illusion, resulting, perhaps, from defects in the deseasonalising procedures with the monthly series. If this were the case, we should expect to see similar preliminary peaks before P_1 and P_4, and in fact there are signs of this with some indicators, though nowhere so marked as in the Second Episode. As against that, however, there are genuine and unmistak-

[8]Some trade and commercial publications note an easing of activity in 1954, however: e.g. 'The volume of retail sales is usually a fairly sensitive indicator of economic activity . . . estimates of the volume of turnover [1954] indicate that retail activity may have been less buoyant than was generally supposed . . . During the second half of 1954 and the opening months of 1955, a definite levelling off of sales was evident, particularly in piece-goods, furniture and books, which normally react quickly to changes in economic conditions. Such a steadying in retail sales was in keeping with the general tone of the economy during those months.' (*Bank of New South Wales Review*, May 1955: 19.)

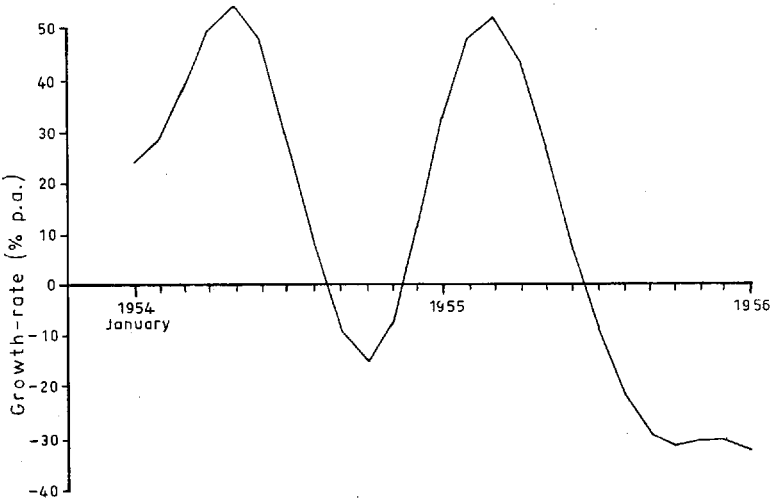

Fig. 4.6 New car registrations. Seasonally adjusted monthly growth-rate, January 1954 to January 1956.

able peaks in most of the monetary series during 1954, a very marked peak in the June quarter of 1954 for (quarterly) housing starts and a distinct levelling out in registered vacancies (females) from the beginning of 1954. Before dismissing the evidence of the other series, therefore, it would seem prudent to inquire whether there might not have been some real causes at work to produce these effects.

The starting point of the process of contraction, in the Second Episode, occurred nearly two years before the peak of activity. 'As early as November, 1953', wrote H.C. Coombs five years after the event, 'the central bank had reached the conclusion that the economy was passing through the range of full employment into conditions where some restraint was called for' (Coombs, 1958). It is probable that this opinion was influenced by the levelling off in London funds at the end of the year as the balance of trade became negative. 'A feature of world markets in recent months [had] been the deterioration in prospects of one primary product after another, depressing the outlook for many Australian exports' (*ANZ Bank Quarterly Survey*, July 1954: 2). The deseasonalised value of exports fell continuously from the September quarter of 1953 to the June quarter of 1954, while the value of imports moved steadily upwards until the September quarter of 1954 as quotas were raised in January, April, July, and October 1953 and April 1954 (figure 4.7). The balance of visible trade changed sign in the first quarter of 1954 and international reserves fell £37 million between January and June.

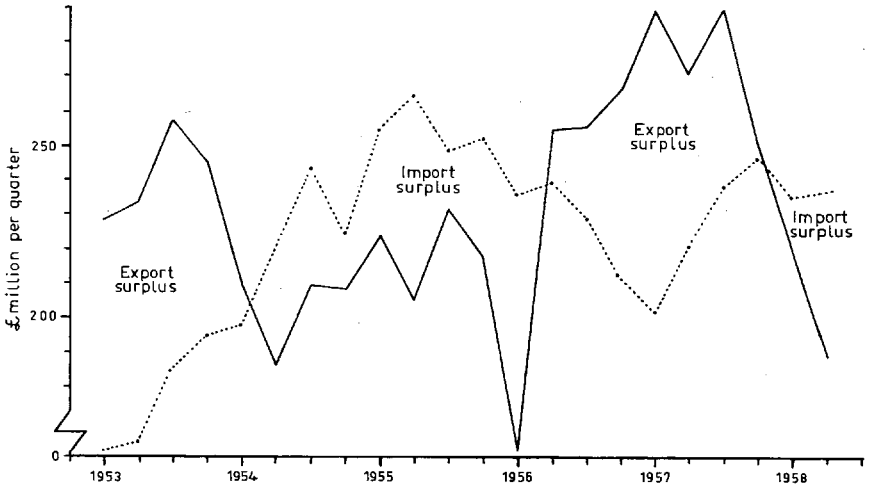

Fig. 4.7 Value of exports and imports of goods-and-services, quarterly, deseasonalised, 1953–8. Source: Annual values from National Accounts prorated over monthly values of merchandise trade from Oversea Trade, quarterly totals deseasonalised.

The central bank made calls to Special Accounts in each of the first three months of 1954 totalling £89 million for the quarter, but supposing the trading banks to be observing the 25 per cent LGS ratio released £22 million again in the following quarter. The combined effects of loss of reserves and the net Special Account increase was to bring current deposits to a deseasonalised peak in June 1954, and the total money supply to (specific) B_2 in April. The trading banks allowed their LGS ratios to fall, however, and continued to expand advances by £75 million in the first six months of the year.

> By June 1954 it was apparent that more forceful action could no longer be delayed if the rise in advances was to be halted. Consequently the Central Bank was obliged to conclude that the urgency of the current problem did not permit it to delay forceful action until the problems of establishing a uniform liquidity convention were resolved. Accordingly, it proceeded to administer Special Accounts so as to withdraw from the banks some parts of the assets previously held by them. (Coombs, 1958: 168)

The trading banks continued to expand advances, partly because the central bank was reluctant to expose them to the full effect of the loss of reserves for fear that this would be 'unjust to those banks which were effectively co-operating and anxious to resolve this issue amicably'. There was marked falling off, however, in the *rate of expansion* of credit for building, retail

trade, and finance companies. As a further sign of a more restrictive monetary policy, the short-term bond rate was allowed to rise from 3 per cent to 3·5 per cent in the first six months of 1954, and interest on certain classes of savings deposits raised slightly in June.

The first sector to feel the impact of these measures was house-building. The quarterly rate of housing starts turned down decisively after the third quarter of 1954, or after the second quarter when deseasonalised with a centered four-term moving average (figure 4.8). The down-turn does not appear in the quarterly series of value of houses and flats commenced, possibly because of changes in the relative importance of houses and flats and of rises in costs, but the 1954 peak is clearly marked in the monthly series building activity. Figure 4.8 also shows that for two years after the June quarter of 1954 the rate of housing completions was well above the rate of commencements, indicating a reduction in the number of homes in progress and, possibly, some release of productive resources from the industry.

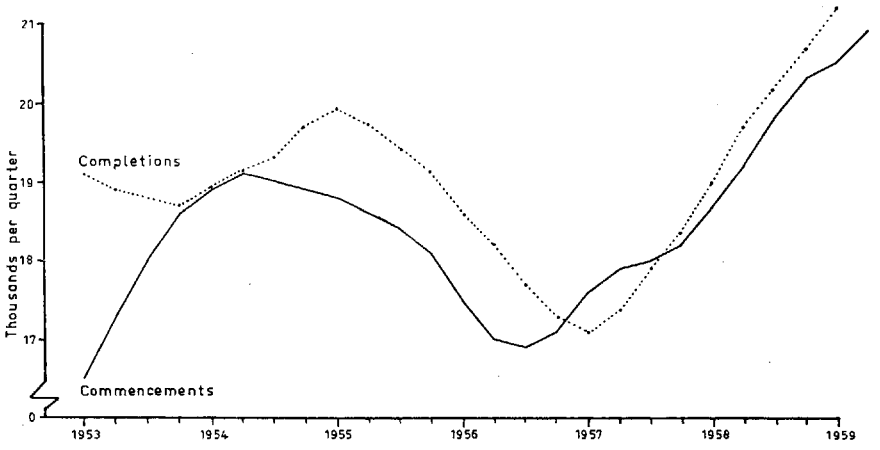

Fig. 4.8 Quarterly housing starts and completions, deseasonalised, 1953–8. Source: MRBS.

In retail trade a very marked reduction in the rate of growth of volume began in June 1954 (specific cycle C_2) as activity began to rise above its current value. The growth-rate fell from 15 per cent per annum in June to 7 per cent per annum in October when a recovery began again. Accompanying this decline, the rate of increase of inventory formation in retail trade fell sharply during the last three quarters of 1954. As a direct consequence, the rate of growth of volume of wholesale trade declined from over 25 per cent per annum in the first quarter of 1954 (during which the

build-up of retail stocks was increasing at 12 per cent per annum) to 3 per cent per annum in the third quarter.

A decline in the rate of increase of advances to 'Financial Companies' reflected the increasing stringency of bank credit for hire purchase firms, partially in obedience to a series of central bank directives,[9] and to some extent because the banks found these the easiest of their customers to squeeze as their own liquidity became seriously low.[10] The finance companies responded by slowing the rate of increase of total instalment credit from 48 per cent per annum in the first quarter of 1954 to 23 per cent per annum by the third quarter. The rate of increase of credit for motor vehicle purchases fell somewhat faster to 16 per cent per annum, slightly below average for the Second and Third Episodes as a whole. Quarterly series of new motor vehicle registrations are too coarse to reveal the effects of this contraction, though the registration of commercial vehicles levels out noticeably in 1954. When the monthly series is suitably deseasonalised and smoothed with an iterated three-term moving average, however, only a part of the actual decline (from 16,000 cars in August 1954 to 8,000 in January 1955) appears to be seasonal, leaving part as a genuine cyclical contraction in the second half of the year. According to that view, the rate of growth of new car sales fell from +50 per cent per annum in April to −15 per cent per annum in October (figure 4.6).

If this interpretation of events be correct, then the M-shaped growth-rate curves of many other monthly indicators can be accounted for in terms of actual historical sequences, especially those of the employment series, in which the seasonal and erratic elements are so small that slight changes in the apparent rate must be taken more seriously. The drop in growth-rate of male factory employment from 4 per cent per annum in May to 2 per cent in December may be related to the motor car industry. (That of female factory employment is more probably connected with the return to trend levels in the middle of 1954.) The decline in the growth of commerce employment from 5 per cent per annum in June to 3 per cent per annum in December consorts with the slowing down in retail trade

[9]In December 1950 the Central Bank forbade 'new or additional accommodation' for hire purchase finance. The relaxations of advances in May and July 1954 explicitly exclude hire purchase business. The general relaxation of policy in October 1952 included hire purchase companies, but from this time there was decreasing dependence of finance companies on bank overdraft. This seems to have resulted from a certain coolness of the trading banks towards hire purchase firms, possibly because the latter were competing successfully for fixed deposits. (Details for advances policy, from copies of press releases supplied by A.S. Holmes, Reserve Bank of Australia.)

[10]'The central bank in July [1955] requested the trading banks not to extend further overdraft accommodation for hire purchase. But already and for some time past the general tightening of bank credit had curtailed the dependence of the finance houses on the banks.' (*Bank of New South Wales Review*, August 1955: 18.)

noted above, and likewise that of the ANZ Bank Index of factory production.

Finally, the possible effects of two other 'autonomous' factors must be noted, both of which would have operated to reinforce any slowing down during 1954. First, the relaxation of import controls continued until April 1954 would have had an anti-inflationary impact, by increasing supplies, quite distinct from its further effect through reserves and liquidity discussed earlier. Secondly, the (deseasonalised) monthly rate of gross immigration levelled out for six months from September 1954.

In the light of these considerations it seems likely that there was, in fact, some genuine slowing down in 1954, and that the preliminary peak which appears in many monthly indicators is meaningful. The start of the process was the fall in liquidity as London funds began to decline at the beginning of the year, with a time lag of about six months as trading banks continued to expand advances despite the intentions of the central bank. The impact was first felt by the housing industry and in retail trade, followed by the motor-car industry as hire purchase credit for new car sales was restricted. The incipient disinflation was reinforced by an increasing flow of imported supplies and a falling off in the rate of increase of gross immigration. As evidence of this condition, there was very little increase in selling prices during 1954, despite the fears of the central bank at the high level of activity already attained by the beginning of the year.

The Secondary Boom, January to June 1955

Any tendency for the rate of growth to decline in the second half of 1954 was more than offset by a fresh wave of expansion having its origins in the last quarter of the year and its chief effect in the first half of 1955. The main ingredients were a recovery of exports and of immigration, a great surge of private investment financed by public capital raising, the complete breakdown of central bank control over advances, and an inflationary Commonwealth budget for the fiscal year 1954/55.

The average price of wool, which had been falling unsteadily since May 1953, levelled out in November 1954 and remained fairly stable until June 1955. Meanwhile, there was a strong expansion of export volume between July 1954 and October 1955, thanks to favourable seasonal conditions for wool and meat production. Deseasonalised quarterly export sales recovered somewhat, therefore, between the third quarter of 1954 and the third quarter of 1955 (figure 4.7). It is possible that this movement reflected a general strengthening of world trade following the up-turn of the United States economy in the third quarter of 1954 (Commonwealth Bank *Annual Report*, 1954–5: 12). The trough of the US reference cycle was located by the NBER in August 1954.

The seasonally adjusted monthly rate of Gross Immigration, which had levelled out in the second half of 1954, began to rise again sharply from February 1955. The peak occurred in September at a level not again to be reached until 1964; it cannot be doubted that the large increase of arrivals in the first half of 1955 would have had an immediately stimulating effect on the economy.

Internal factors, however, were probably of greater relative importance during the 1955 boom phase of the Second Episode; in particular, the ability of the capital market to mobilise finance for the private sector. New listings of private (non-mining) securities more than tripled between the fourth quarter of 1954 and the fourth quarter of 1955. Official quarterly statistics of new capital raising began in 1954/55. The estimate for the fourth quarter of 1955, at £43 million, compared with a figure of £47 million for new listings, suggests that the course of the latter may serve as a rough guide to the former. The increase in 1955 was especially marked in the 'finance property' sector, confirming the view often expressed in trading bank periodicals that hire purchase finance companies were more than compensating for the restriction of bank credit by recourse to the market.[11] The rate of increase of hire-purchase credit for retail sales, though continuing to decline, remained positive until the end of 1955, and in the case of motor vehicle sales rallied temporarily in the first half of the year.

In the Budget Speech for 1955/56, the Federal Treasurer declared that 'By the end of the financial year [1954/55] we had around us the unmistake-

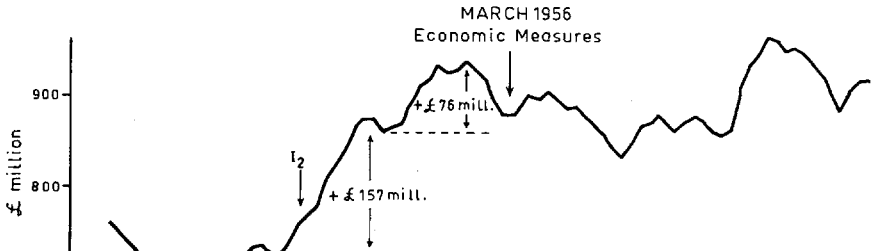

Fig. 4.9 Trading bank advances, monthly, 1953–8. Source: Reserve Bank.

[11]See, for example, *Bank of New South Wales Review*, May 1955: 19.

able signs of active inflation', and laid much of the blame for this on 'A far too generous expansion of credit on the part of the banking system'. The rate of increase of advances declined in some sectors during 1954, with significant effect upon the level of activity. Despite the increasing concern by the trading banks about their falling liquidity, however, total advances increased by £157 million throughout 1954 and a further £76 million between January and October 1955 (figure 4.9).

Whether the responsibility for this should be assigned to the central bank or to the trading banks is a matter of dispute. The 1954–5 *Annual Report* of the Commonwealth Bank seemed to imply that 'certain banks' deliberately flouted the 25 per cent LGS ratio agreed upon in 1953.

> Last year's Report suggested that provision of funds to the banking system by the central bank was related to the liquidity standards observed by the banks and that the Central Bank considered it desirable, as a general objective, for banks to observe a ratio of liquid assets plus government securities to total deposits of about one quarter, subject to seasonal and other short-term variations. During 1954–55 certain banks allowed their advances to increase at a rate which seriously encroached on this standard. (P. 22)

The trading banks appear to have misunderstood the nature of the agreement, however. 'In recent months', admitted the Bank of New South Wales in November 1954 'it has proved impossible to maintain the liquidity ratio suggested by the central bank, because of the overdraft requirements of established customers' (*Bank of New South Wales Review*, November 1954: 6). The ANZ Bank acknowledged, in the same vein, that 'The banking system has extended credit liberally during the past financial year (although not enough to meet more than a proportion of sound demands)' (*ANZ Bank Quarterly Survey*, October 1955: 2). In the absence of explicit central bank instructions on advances the trading banks believed themselves justified in accomodating all credit-worthy customers, and seem to have been hardened in this resolve by the behaviour of the trading department of the Commonwealth Bank itself. This latter, re-established as the Commonwealth Trading Bank of Australia by the Act of 1953, found itself conspicuously more liquid than its private competitors during 1954/55, and was able to expand advances by £21 million during the year; considerably faster than the rate achieved by private banks, and £7 million more than the increase in deposits. The CTB was thus able to make 'A strong bid for being the most liberal and rewarding bank to do business with' (*SMH*, 22 September 1955. 'Who Set the Pace for Bank Expansion?'). When it became generally known that Hire Purchase Securities Ltd, which had been refused a larger overdraft by a private bank because of central bank credit policy, had transferred its account to the CTB and was promptly accommodated, the trading banks no longer felt any obligation to respect the wishes of the Governor. The expansion of credit continued

with fresh vigour from March 1955, assisted by releases of £108 million from Special Accounts between May 1954 and July 1955.

The initial impetus to a 'recovery' of activity between the end of 1954 and the middle of 1955 came neither from external nor from monetary factors, however. In May 1954, the Commonwealth government fought and won a general election, the first since the Horror Budget of September 1951. The memory of that outrage, it would seem, was not yet erased from the public mind. After it was over, the *Sydney Morning Herald* (31 May 1954) – no doubt recalling A.A. Calwell's gloomy prophecies – concluded that 'on the whole, the Administration has done remarkably well to preserve a majority of any kind'. Among the reasons for this success were large but rather vague promises of further tax cuts in the Prime Minister's Policy Speech. The next Commonwealth budget, brought down on 18 August 1954, implemented these promises most handsomely, at least so far as consumers were concerned. Income tax was reduced by £31·5 million per annum, and sales tax was lowered or abolished on furniture and household equipment, toys, musical instruments, and amusements, confectionary and ice cream, hand tools, certain classes of industrial machinery, aircraft and aircraft parts, and various paper and miscellaneous products. There was also an increase in payroll tax exemption, and a reduction in the excise on brandy 'to assist the grape-growing industry'. Income tax deductions took effect from 1 October and the new scale of sales tax from 19 August.

The total cost to revenue of these concessions was estimated at £46·6 million on an annual basis. The government flattered itself, despite this, that its policy on the expenditure side was 'one of firm control' and planned a nominal surplus Auld (1967: tables VI and VII) has demonstrated, however, that the net effect of all automatic and discretionary features of the 1954/55 budget was distinctly expansionary. Both retail and wholesale trade moved strongly upward from October, accompanied by the rate of growth of commerce employment. The policy of gradual relaxation of import quotas was reversed in October, and the effect of this, combined with the boom in commerce and the continued expansion of capital funds and bank credit, produced a marked recovery in the rate of growth of industrial production and factory employment.

The rate of increase of average money earnings, assisted by a margins increase in November 1954, began to rise towards a peak of 12·5 per cent per annum in the second quarter of 1955, carrying the rate of inflation of retail prices with it after a lag of some months. Reference cycle B_2 was reached in March 1955 and P_2 in June. Meanwhile, the value of international reserves, which had been falling continuously since the beginning of 1954, reached the 1952 trough level in September 1955 and continued to fall for six more months.

The Down-turn Phase, June 1955 to March 1956

Ever since the previous peak of the US reference cycle in July 1953, world prices for primary products had been falling (*International Trade*, 1954: 43). The downward trend in the price of wool was intensified by growing competition from synthetics, and by 'the struggle of producers of soft goods to catch a consumer's eye now tempted towards the glittering attraction of durable goods' (*The Economist*, 177: 141). Within the raw wool market, producers of merino (most favoured by Australian growers) fared relatively less well than producers of crossbred (New Zealand's speciality) as a result of a world-wide shift of women's fashions away from worsteds, which require merino, in favour of woollens, which use crossbred. Since movements in the Australian Export Price Index are dominated by the world price of merino wool, all circumstances were conspiring to depress Australian export earnings from 1953 to 1955 (see figure 4.5).

It has been seen in previous sections of this chapter that the downward course of wool prices was uneven, and that occasional reversals may have played some causal role in the minor fluctuations which preceded August 1955. Wool prices rose between January and May 1954 as a result of heavy Russian purchases in Australia until the Petrov affair. They fell in the second half of the year partly because of deepening US recession, partly because of withdrawal of Russian support, but stabilised again between November 1954 and July 1955 as the US recovery began and Russia again entered the market (this time in South Africa) (*The Economist*, 176: 63 and *International Trade*, 1954: 43).

In the third quarter of 1955, however, three things happened to offset the favourable effects of the US recovery, and to force Australia's export prices down to the lowest point since January 1950. Balance of payments difficulties in Britain obliged its government to exert severe monetary restraint in July and special fiscal measures in October. The resulting weakness in demand from Bradford was blamed, in Australia, for the 15 per cent drop in prices at the start of the 1955/56 season.[12] The situation was aggravated, moreover, by a marked reduction in demand from Japan (also experiencing foreign exchange difficulties) and by the ending of Soviet activity in the South African market (*International Trade*, 1955: 45).

As a result of the price fall, export earnings declined in the last quarter of the year (figure 4.7) and London funds fell below the 1952 trough level. A further depressing factor from outside the system was a falling off in gross immigration from the peak in September.

Even before the effect of these external events could be felt, however,

[12]'Bradford's Defection Main Cause of Wool Market's Decline', *Australian Financial Review*, 1 September 1955.

several internal elements combined to restrain activity during the winter of 1955.

Bank credit had become tighter in the first half of the year as liquidity fell, and interest rates were raised on deposit accounts in January. In March, insurance companies increased rates for building loans, and the central bank allowed the long-term bond rate to rise from 3·5 per cent to 4 per cent between January and July. In June the Prime Minister refused requests from States for increased loans for public works programs.[13]

There were no releases from Special Accounts after July, and in July, September, and November the central bank issued directives restricting trading bank advances.[14] By now the latter were so illiquid that they needed no urging. Advances levelled out in July and fell strongly from October (figure 4.9). Between June and December there were absolute reductions in advances to agriculture, manufacturing, building, and finance sectors. Current deposits, virtually stationary since June 1954, fell slightly but steadily from June 1955 to August 1956. As the market became tighter, new capital raising levelled out in the second quarter of 1955 and began to fall from the third quarter.

During the second half of September the Prime Minister, alarmed at the sudden fall in wool prices and piqued, perhaps, by the criticism that he was 'Leaving it to Dr Coombs'[15] planned and announced certain measures to restrain demand and protect reserves. Import quotas were lowered again to £650 million per annum, Commonwealth works projects costing £10 million were postponed, the limit on imports by Commonwealth departments was cut to £40 million, increases in Parliamentary salaries were deferred, and a voluntary restraint of credit by hire purchase companies was arranged. Economists called for 'Substantial tax increases, biased against consumer spending and also against spending with a high import content' (*SMH*, 30 August 1955, letter of T.W. Swan), but political circumstances had made an early general election desirable for the government, and nothing more was done for the time being. The Leader of the Opposition, also with an eye on the forthcoming election, thought that the 'logical policy to follow under present circumstances, was to increase wages as a check to inflationary pressure' (*SMH*, 31 August 1955).

[13]Mr Cahill (Premier, NSW) said, 'I am bitterly disappointed . . . it will mean a complete revision of the works programme to see what economies can be made'. This is exactly what the government intended, of course (*SMH*, 23 June 1955).

[14]Press release of Commonwealth Bank, 5 July 1955, requesting no further advances for hire purchase business; 13 September 1955, calling for general restraint, especially for capital expenditure and imports; 4 November 1955, instructing Industrial Finance department to end the finance of retail sales of passenger cars.

[15]Editorial, *SMH*, 14 September 1955. 'Is the Government going to rely entirely on credit restraint or has it any other measures in mind? And if so, what are they?'

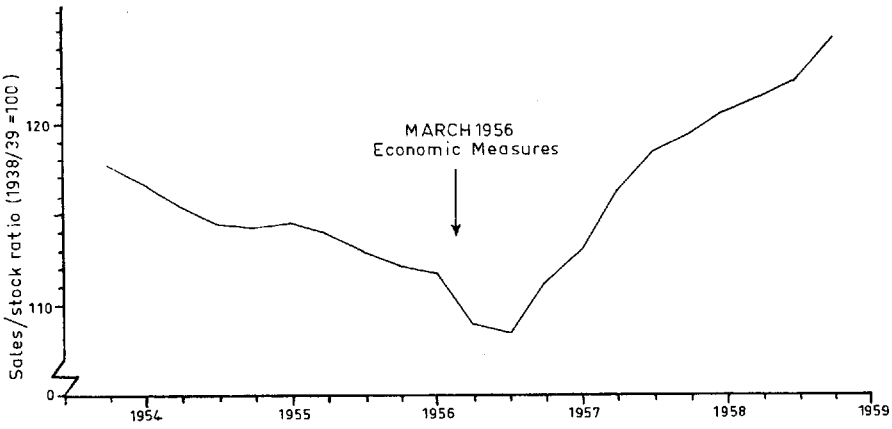

Fig. 4.10 Inventory turnover, Sydney and Melbourne retail trade, quarterly, deseasonalised, 1954–8. Source: MRBS.

The first sector to decline was retail trade (specific B_2, May 1955) as the rate of expansion of hire purchase finance fell to zero over the year. Wholesale trade and new car sales followed in the next month (specific B_2, June 1955), the former reflecting restricted bank credit and the falling sales/stock ratio in retail trade (figure 4.10), the latter to some extent a

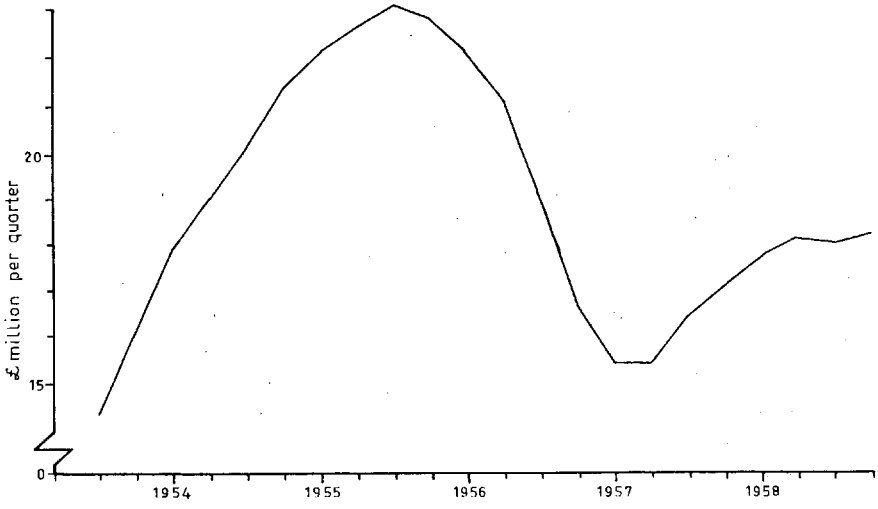

Fig. 4.11 Imports of motor vehicles and parts, quarterly, deseasonalised, 1953–8. Source: MRBS.

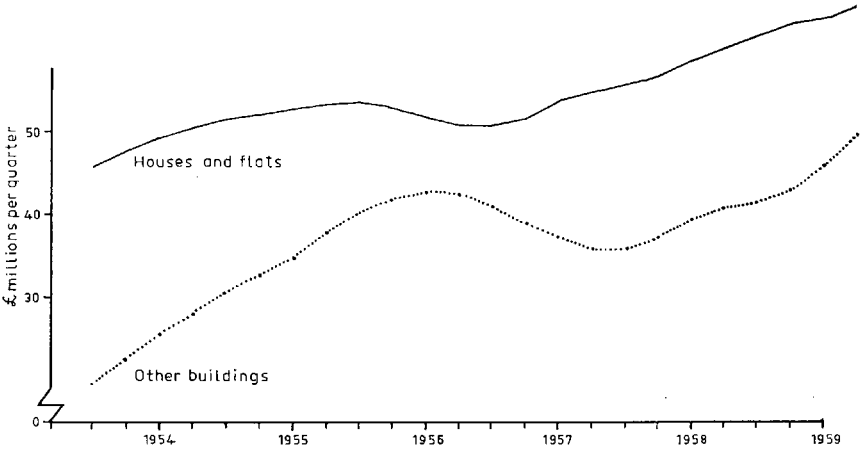

Fig. 4.12 Value of new building commenced, quarterly, deseasonalised, 1953–8. Source: MRBS.

belated response to the import cuts of October 1954 (figure 4.11). Hire purchase finance of new cars levelled out in the third quarter. Although new housing starts fell continuously between the second quarter of 1954 and the third quarter of 1956 (figure 4.8), the building industry as a whole remained on a high plateau throughout 1955 thanks to the continuing boom in commercial building and flats (figure 4.12). Factory production and total electricity generated responded quickly to the conditions in the commercial sector (specific B_2, September and June 1955 respectively) and so, accordingly, did employment.

The rate of growth of total employment began to fall in June (specific C_2), reaching a trend-free peak in October (specific B_2). Registered vacancies for both males and females passed their trend-free peak in July (specific B_2) and began to decline. By the end of 1955 all indicators of labour demand were falling, though all were still considerably above trend and unemployment was still abnormally low. Because excess demand for labour, though falling, remained high throughout 1955, the rate of inflation of average earnings did not fall much from the peak rate of 12·5 per cent per annum in the second quarter, and any tendency there might have been for a decline was partially offset by the restoration of quarterly basic wage adjustments in New South Wales from November. Partly because of rising costs, therefore, partly because of the effects of the import cuts in restricting supplies, the rate of inflation of consumer prices continued to rise throughout 1955, though the rate of increase levelled out noticeably in the last quarter at about 6 per cent per annum.

In December, with the Labor Party in disarray over Communism and with employment indicators still about one standard deviation above trend, the government fought and won the general election. The Christmas recess was devoted to preparing the New Economic Measures which it was now politically safe to unleash.

The New Economic Measures

The year 1956 began badly with a sharp sag in the volume of exports as a result of a major water-front strike in January and February. Export prices had stabilised, but the effect of the loss in shipments reduced the (deseasonalised) value of exports by £56 million between the last quarter of 1955 and the first quarter of 1956 (figure 4.7). Imports into Australia were not as severely affected by the water-front dispute as exports, hence the level of international reserves, which had shown signs of an up-turn in November in response to domestic conditions, plunged to a post-war low of £A329 million in April 1956.

The 1955/56 Commonwealth budget had been brought down on 24 August 1955, and described by the *Sydney Morning Herald* (with time-honoured hyperbole) as 'The most inert presented to Parliament in living memory'. It was generally recognised, however, that a pre-election budget could not attempt the task required by purely economic considerations, and further action in the new year was expected. By the middle of the first quarter it was clear that drastic action to protect reserves could wait no longer, and on 14 March 1956 the Prime Minister introduced the Economic Measures in the House of Representatives.

Two separate considerations informed this supplementary budget. In the first place, it was necessary to restrain consumption spending, especially of goods with a high import content. Secondly, the cash surplus of £49 million expected to result from the 1955/56 budget was now seen to be quite inadequate to meet the capital needs of the Commonwealth. £253 million of public debt was expected to mature during 1956/57, and 'it would . . . be sheer folly to fail to recognise that borrowing conditions in 1956–57 may be more than usually difficult' (*Economic Measures*: 9). In the poor state of the loan market, moreover, the central government would be compelled to find more than £67 million for the State governments. Together with other commitments the Commonwealth could expect a cash deficit of about £30 million in the current year. To avoid the inflationary consequences, therefore, new revenue had to be raised.

The first of these objectives was secured by higher sales tax on motor vehicles, petrol, and 'goods of a less essential character, ranging from jewelry to gramophone records'. The second by higher sales tax on beer, spirits, and tobacco, and an increase in company tax of an extra 1s. in the

pound. Total increased revenue expected from these measures was £111 million on an annual basis. At the same time as the fiscal changes, trading banks were allowed to raise overdraft rates from 5 per cent to an average of 5·5 per cent, with a maximum of 6 per cent; deposits rates were allowed to rise by one percentage point, and central bank support of the bond market was temporarily withdrawn, leaving the short rate to rise from 4 per cent to 5 per cent and the long rate from 4·5 per cent to 5·3 per cent.

When the Economic Measures were announced, they were widely criticised, though if the *Sydney Morning Herald* can be taken as a guide, the hostility aroused was noticeably less than in the case of the Horror Budget.[16] The immediate purpose was served, however. Imports fell below exports in the second quarter, and London funds began to recover from April (specific S_2).

How far such contraction and deflation as actually occurred in 1956 can be ascribed to the Measures is a matter of doubt. Reference cycle D_2 came in March, suggesting that average activity was already down to trend level by the time of the supplementary budget. Most employment indicators did not decline strongly until after the first quarter. Total civilian employment, indeed, remained above trend for the whole of the year.

The first impact, as may be expected, fell on internal trade. The retail sales/stock ratio, which had been falling throughout 1955 due to slackening sales but continuing orders, slumped sharply in the second quarter, steadied in the third, and then recovered strongly (figure 4.10) as retailers liquidated inventories between the third quarter of 1956 and the third quarter of 1957. The disinvestment in retail stocks was accompanied by a decline in the rate of accumulation of all non-farm inventories, according to B.D. Haig's unpublished half-yearly estimates. A slight recovery in retail activity in the first half of the year was nipped in the bud: the volume of trade returned to trend in the third quarter and thereafter continued to expand at almost exactly the trend growth-rate of 2·6 per cent per annum for the next nine quarters. The rate of inflation of retail prices turned down decisively in June and there was price stability throughout 1957. Little apparent effect was seen in wholesale trade activity, though here too the volume of trade grew at about trend rate until the end of 1957, and the rate of inflation of wholesale prices came to an end by the last quarter of the year. Commerce employment actually declined in 1956 (specific P_2, May 1956), whereas total employment merely levelled out for a month or two in 1957 before resuming its upward course.

[16]Downing, 1956: 16. Downing continues: 'though it seems to have been accepted more calmly by the public as a whole than it has been by the press and the sections of opinion whose views it publishes'. Compare with *SMH*, 15 March 1956 (editorial): 'Punishment for All – Except Governments'.

The apparent effect of the Measures on the other sectors was surprisingly small in aggregate statistical terms. Tighter credit brought the commercial building boom to an end (figure 4.12), but resources thus released were diverted to new housebuilding, which had been in decline since early 1954 and now began to recover (figure 4.8); and employment in building and construction actually rose faster in 1956 than it had in 1955.[17] The rate of inflation of construction costs fell from +10 per cent per annum in March 1956 to +1 per cent per annum by March of the following year, however. The ANZ Bank Index began to *recover* from the date of the measures, but the movement of its components was diverse. Individual series show that production of cars and motor parts, household durables, radios, etc. building materials, and beer was lower in the second half of 1956 than in the corresponding period the year before, whereas that of iron and steel and other basic products was considerably greater. 'To some extent this represent[ed] the kind of switch envisaged in the Economic Measures' (Karmel, 1957: 8, table VII and 9). Although the production (and importation) of motor parts and vehicles was reduced below 1955 levels, the chief effect of the increased sales tax seems to have been to restrain the average rate of growth of this sector to a mere 10 per cent per annum in 1956 and 1957 against an average rate around 30 per cent per annum from 1953 to 1955. New car registrations remained below trend until 1959, however, although hire purchase finance for new car sales renewed its upward course from the third quarter of 1956, largely because of further import cuts in June, directed especially against motor vehicles.

In view of this evidence, the substantial recovery in London funds which actually occurred can only in part be attributed to the Measures. The relative decline in volume of imports (1·4 standard deviations between April 1956 and January 1957), only partially induced by disinflation, was far less impressive than the relative expansion of export volume (5·1 standard deviations between February and May 1956) caused by quite different factors. Other forces were at work in the second half of 1956 to sustain the general level of activity without impairing the balance of payments.

Why There Was No Recession in 1956/57

When the Treasurer introduced the 1956/57 Commonwealth budget in August 1956, he noted that although 'some relief' had been obtained from inflationary pressure,

[17]Karmel, 1957: 3, table II. Karmel's treatment of quarterly housing starts, however, brings him to the misleading conclusion that 'in 1956, the fall in new house commencements accelerated'. (Compare his table VIII with my figure 4.8 which employs the same data). His 'percentage change on corresponding quarter of preceding year' gives an average growth-rate applicable, not to the current quarter but to a period two quarters before.

> The general level of industrial activity, construction and business turnover remains very high. Major industrial projects are going ahead, apparently without much hesitation. There is a great deal of factory, office and hotel building in progress . . . Very little unemployment has appeared anywhere and the demand for many types of labour continues strong.

This is a description of affairs at a time indicated by the reference point analysis as S_2, the low point of the Second Episode. The deflationary impact of the Economic Measures was of the same order of magnitude as that of the Horror Budget, and was experienced, moreover, after a period of far less violent inflation. Yet the year which followed the latter saw the most conspicuous decline in post-war history, whereas the twelve months following March 1956 were marked by continuing, if unspectacular, prosperity.

The reasons for this stability are numerous, but first in importance is the behaviour of exports (figure 4.7). From the second quarter of 1956 to the third quarter of 1957, deseasonalised export earnings ran at their highest rate since the Korean War wool boom. As on that occasion, the principal cause – wars and rumours of war – was entirely fortuitous. In 1956/57, however, there were other important factors operating, and the expansion was more broadly based. Table 4.3 in conjunction with figure 4.7, suggests that the surge of exports in early 1956 was part of a longer trend, temporarily interrupted by the water-front strike in the first quarter. The exportable volume of wool and wheat had been increasing since 1954 as a result of good seasons and technological advance in agriculture: there were also significant gains in barley and beef for similar reasons, and a great enlargement of the metal-mining industry.

Table 4.3 Volume of exports, selected commodities, 1954/55 to 1956/57

	1954/55	% change	1955/56	% change	1956/57
Wool (mil. lb greasy)	1,145	+10.4	1,264	+11.4	1,408
Wheat (mil. tons)	1.69	+12.4	1.90	+28.4	2.44
Flour (mil. tons)	.61	+10.0	.67	+11.9	.75
Barley (mil. tons)	.42	+12.0	.47	+25.5	.59
Beef and veal (mil. tons)	.12	+15.4	.14	+ 7.3	.15
Ores and concentrates (mil. tons)	.38	+31.5	.50	+28.0	.64

Source: Oversea Trade.

Even more than the growth in production, however, a dramatic recovery in export prices during 1956 ensured that the balance of payments in 1956/57 could be healthier than at any time since 1952/53.

> The events which began with the nationalization of the Suez canal in July 1956 left the export price of manufacturing essentially unchanged, but they

had a wide, though temporary, repercussion on the world market prices of primary products. (*International Trade*, 1956: 46)

Long before the Suez canal crisis began, however, the price of Australian wool began to recover, partly as a reaction of consumers to lower world prices, partly as the trend of women's fashions reverted once again to merino-using worsted. Assisted by a recovery in world wheat prices following poor harvests in Eastern Europe, the Middle East, and the USSR, the Australian Export Price Index began to move up from April 1956 (specific T_2). By the start of the 1956/57 wool season the fear of war over Suez had begun to grow, and opening prices moved sharply upwards for the first time in five years. Russia and Eastern Europe began to compete as the crisis deepened, and also the USA, which had little wool left from the domestic clip. Prices of most grades of merino rose by about 10 per cent between October and December and the Australian Export Price Index was carried to a peak in April 1957 (specific P_3). World prices of other primary products began to fall as soon as the Suez dispute was peacefully resolved, but that of wool remained buoyant because of the factors already in operation before Suez, and there was a large increase in world wool consumption. The USA was a large customer as internal activity moved towards reference cycle peak in July 1957, and there were also substantial purchases by Japan, West Germany, and Communist bloc countries.[18]

As a result of all these favourable circumstances, Australia's total export earnings of £1,087 million in 1956/57 were £224 million (26 per cent) greater than in the previous year.

Imports, meanwhile, declined throughout 1956, partly through deflation and the savage import quotas, but partly for more fundamental reasons. Table 4.4 shows the effect upon the pattern of Australian trade of the developments in heavy industry during the mid-1950s.

Table 4.4 Volume of imports, selected commodities, 1954/55 to 1956/57

	1954/55	% change	1955/56	% change	1956/57
Iron and steel plate and sheet (mil. cwt.)	6.67	−33.0	4.47	−27.8	3.23
Crude oil (mil. gal.)	927	+71.5	1,588	+32.3	2,103
Refined petroleum products (mil. gal.)	604	−24.5	456	−57.6	193

Source: Oversea Trade.

[18]Sources for the explanation of the recovery of wool prices in 1956 are: *International Trade*, 1956: 48; *The Economist*, 178:237; 180:1069; 181:909; and 182:758.

From August 1955 a rapid expansion of steel capacity greatly reduced the dependence of Australia on imports and made possible a return to iron and steel exporting for the first time since the 1930s (N.R. Wills, in Hunter, 1963: 231). Between 1954 and 1956 five new oil refineries came on stream, raising total crude distillation capacity from 17,000 to 289,500 barrels per day (J. McB. Grant in Hunter, 1963: 257–60). Imports of crude oil more than doubled between 1954/55 and 1956/57 (table 4.4), but imports of refined products fell to one-third of the 1954/55 total. The foreign exchange cost of the extra crude was actually slightly higher than the saving on refined (partly because of the effect of Suez on the price of Middle East crude) but this conceals a great expansion in the consumption of petroleum products in Australia in the mid-1950s, which was thus able to take place with a negligible effect on the balance of payments.

The large current account surplus in 1956/57 was offset by no appreciable changes in capital account, and the value of international reserves climbed above trend by the end of 1956 (specific I_3, January 1957). Twelve months later reserves had risen to the 1954 peak level. The rate of growth of current deposits rose from negative values in the second quarter of 1956 to trend rate of about 4 per cent per annum during the next four quarters and the total money supply expanded at about 6 per cent per annum during the same period. This time, however, there was no inflationary expansion of advances (figure 4.9) as the central bank called £85 million to Special Account between October 1956 and March 1957 and the trading banks began to observe the LGS liquidity convention.

Although bank credit remained tight throughout 1956 and new capital raising levelled out, hire purchase finance of retail sales continued to expand, relatively slowly, at 9 to 10 per cent per annum, as the rising volume of repayments made internal funds available for relending (*ANZ Bank Quarterly Survey,* April 1957: 13–15). Since trading bank advances to retailers had not increased since the beginning of 1955, inventories had been brought into line with sales by 1956. With no excess stocks, therefore, with some growth in hire purchase finance, and with the stimulating effect of the favourable external balance, internal trade was able to expand modestly at trend growth-rate through 1956, 1957, and most of 1958 and the rate of growth of commerce employment turned up in the middle of 1956 (specific E_2, September 1956).

This steadiness of internal trade was accompanied by a strong expansion of factory production (specific E_2, December 1955; S_2, March 1956; I_3, October 1956) during which the growth-rate reached a post-war peak of more than 20 per cent per annum (specific C_3, October 1956). The ANZ Bank (all groups) Index was 3·5 per cent higher in 1956/57 than in 1955/56, with the largest increase in the clothing and textile group (+9 per cent)

as import quotas stimulated the domestic textile industry. The annual CBCS Index confirms the twelve-month averages of its unofficial competitor. Aggregate production rose by 3·0 per cent over the year, with larger gains in Groups IV (Industrial Metals, + 13 per cent), VI (Textiles, + 11 per cent), XII (Paper Products, + 8 per cent), III (Chemicals etc., + 5 per cent) and XV (Miscellaneous Products, + 9 per cent). Most of the gain in Group IV resulted from the introduction of television in September 1956: value of production rose by £18·4 million on account of receivers and accessories. The increase in Group III appeared chiefly in 'Oils, mineral', with an £18·6 million increase in petrol production from the new refineries; and much of the expansion of Miscellaneous Products was technologically related, resulting from an increased supply of plastic materials as the polymerisation unit came on stream at Kurnell. The boom in textiles and television helps to explain why female factory employment continued to grow in 1956 and 1957, and, perhaps, why female employment in general suffered less than male during the Second and Third Episodes.[19]

Developments in the petrochemical industry, of course, would have had a depressing effect on male employment, as construction came to an end and refineries began to operate with normal technical and maintenance staff.

The effect of the Economic Measures on the building industry, and its response, have already been considered. Other factors tending to ameliorate any recessionary tendencies in 1956 include a 10s. increase in the basic wage in May, and the continuing momentum of the late 1955 import and retail price inflation, transmitted by automatic wage adjustment in several states.[20] As a result of all these circumstances, the rate of inflation of retail prices rose to a peak in 1956, remaining above 5 per cent for most of the year. It was pointed out that the Measures, by raising sales tax, would increase prices by about 2·5 per cent in 1956 and thus contribute to the inflationary process in that year (Downing, 1956: 19).

THE THIRD EPISODE, JANUARY 1957 TO AUGUST 1959

As the Second Episode is largely a boom, followed by no recognisable slump, so the Third is largely a recession, preceded by no recognisable boom. The early phases of the Third overlap with the later stages of the Second, giving the impression of a single long, shallow episode, with a peak in 1955/56 and a trough in 1958/59.

It has been seen in chapter 1 that the evidence for reference points in

[19]For sources of industrial production data, see *ANZ Quarterly Survey*, October 1957: 11–12; *Indexes of Factory Production*, and *Secondary Industries*, 1956–57, table 82.

[20]The Commonwealth Treasurer estimated that automatic adjustments to State basic wages were adding £30 million per annum to the wage bill (Budget Speech, 1956/57: 6).

the Third Episode is markedly weaker than in the other three; only C_3 (May 1957), E_3 (February 1958), and T_3 (July 1958) being at all well vouched. The dating of this period, in particular the boundary between Second and Third Episodes, is therefore more than usually arbitrary. As the existence of I_3 (February 1957) is highly dubious, a division has been made at December 1956/ January 1957, midway between S_2 (August 1956) and C_3 (May 1957).

Three things only will be attempted in this account of the episode: a consideration of its anatomy; some remarks on its possible source in the external environment; and a summary of the domestic response.

Anatomy of the Third Episode

A general contraction in the rate of growth around C_3 (May 1957) and a general expansion beginning about a year later (E_3, February 1958) are the most reliable indications of the reference point analysis in this period. If this analysis were valid, we should expect to find that the fiscal year 1957/58 was one of appreciably slower growth than those preceding and following it. Such is in fact the case. Real GNP in 1957/58 was only 1·3 per cent higher than in 1956/57, whereas that year was 2·3 per cent higher than the one before, and 1958/59 8·8 per cent higher than 1957/58 (table 4.6). There was a genuine kink in the growth-rate in 1957/58, with a very strong recovery the following year. Figure 4.13 displays the growth-rate curves of five monthly indicators which record the sequence fairly clearly.

Because this disturbance to the growth-rate, though unmistakable, is relatively weak, the Peak in 1957 and the Trough in 1958 are less well marked. The ANZ Bank Index (specific P_3, B_3, January 1957), electricity generated (specific B_3, March 1957), and the volume of imports (specific P_3, November 1957) are the only monthly indicators of internal activity which show any clear Peak in 1957, though there are also definite signs in the monetary series, and in postal activity, banking activity, the Share Price Index and registered vacancies. As against this, however, several important indicators moved downwards in 1957, at least in their pure cyclical form. New car registrations reached a cyclical trough (specific S_2, August 1957) in this year, possibly because of import restrictions (figure 4.11); and private building activity was kept below trend by a long decline in non-dwelling construction between the first quarter of 1956 and the third quarter of 1957 (figure 4. 12). Rail freight ton-miles declined throughout 1957 because of the effect of drought on grain movements, and wholesale trade fell off to a quasi-S point (minimum cyclical value between B_2 and B_3, though still slightly above trend) in June.

The somewhat equivocal nature of the 1957 prosperity was acknowledged at the time. The Governor of the Commonwealth Bank, presenting his

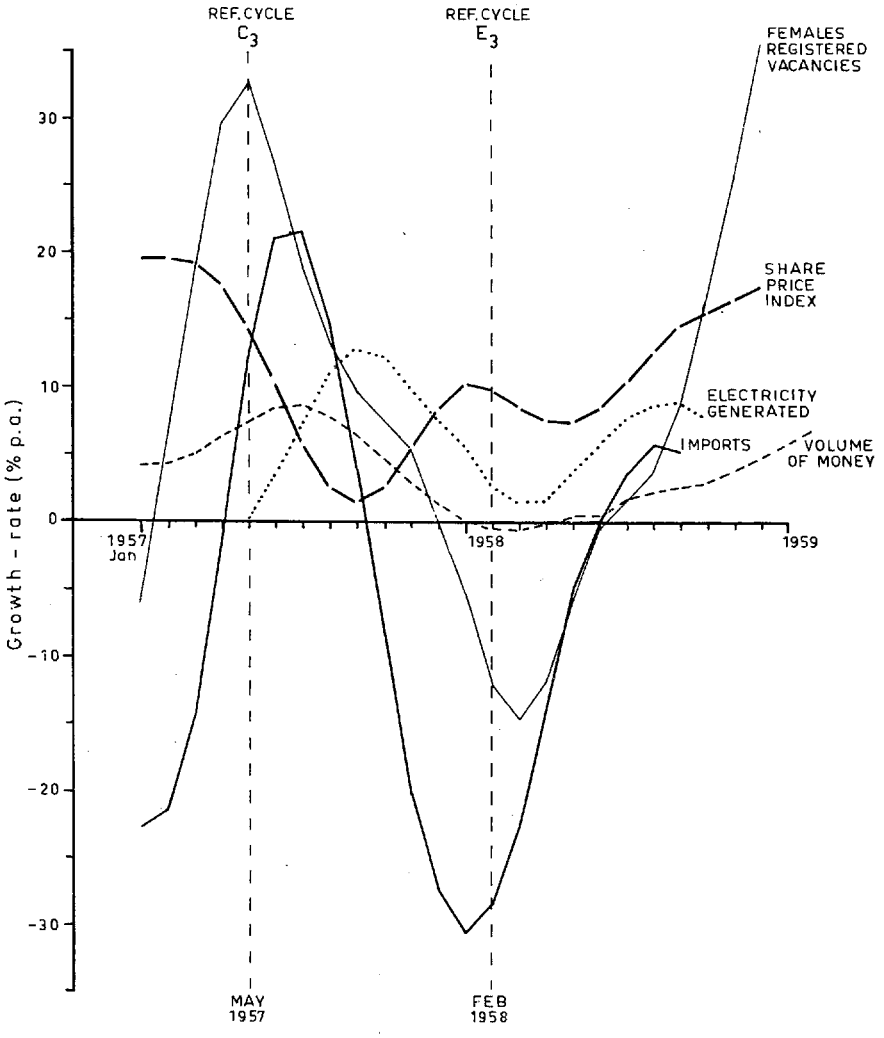

Fig. 4.13 Growth-rate curves of some monthly indicators in the Third Episode

annual report at the end of August, observed that:

> There has been more evidence than in recent years of variation in the profit experience of individual businesses. Some enterprises have passed through periods of difficulty. In some cases . . . the difficulties seem to be . . . fundamental and to reflect the fact that, in a reasonably balanced economy the capacity of businesses to adjust themselves to changing conditions of demand and to competitive costs is of first importance. (Commonwealth Bank *Annual Report*, 1956–7: 4)

In the official view of the Treasury,

> It thus appears that, something under four years from the time the 1953–5 boom began, the economy has again moved into balance. On the face of things, we do not appear to have lost anything in prosperity through the interlude. (*Economic Survey*, 1957: 17)

This was dutifully repeated in the Budget Speech at the beginning of September, though the Treasurer found that:

> Despite our sound present situation and the encouraging tendencies that it shows, I hear it said that enterprise is hesitant about the future and needs stimulus. This, frankly, is something I find it difficult to understand. On a broad view, the outlook is very favourable to enterprise. (Budget Speech, 1957/58: 2)

In October, the ANZ Bank, under no obligation to take the 'broad view', reported that

> For some months there has been an undercurrent of business uncertainty, based largely on the unemployment figures which, though small by comparison with many other countries, are higher than Australia has experienced for some years. (*ANZ Bank Quarterly Review*, October 1957: 2)

In the latter part of 1957 there was a distinct break in the otherwise undisturbed upward course of share prices from June 1956 to June 1960.

If there was some doubt as to whether 1957 were a good year, there was almost as much as to whether 1958 were a poor one. Employment and (inverted) unemployment series reached cyclical trough values in this year, but these were relatively and absolutely less serious than in 1952. Registered vacancies began to rise in the second half of 1958, and by the beginning of 1959 the growth-rates of all employment series had moved above trend (specific S_3). The ANZ Bank Index made a recovery in 1958, and likewise private building activity (specific P_3, July 1958) as non-dwelling construction moved upwards again. New car registrations, though remaining below trend until the middle of 1959, made a quasi-B point in April as the rate of growth recovered strongly in 1957/58 in defiance of the general tendency in other sectors. The cyclical component of total electricity generated moved to a subsidiary peak in 1958 in sympathy with factory production, and the volume of wholesale trade reached specific B_3 in June, one standard deviation above trend.

> While some concern must be felt at the presence of unemployment in the community [observed the ANZ Bank in July in its *Quarterly Review*], all the evidence points to the fact that the general level of business activity in Australia has, on the whole, remained satisfactorily high.

The annual *Economic Survey* released in July took an equally optimistic view, and although the Commonwealth Treasurer paid deference in his

budget speech to the employment situation and promised a large deficit to stimulate demand, it was observed at the time that

> It is difficult to avoid the impression that the Treasury continues to be more concerned about the risks of a revival of inflationary pressures than about any dangers of recession and that, with rather more cunning than candour, it has played up the £110 million deficit as a sop to public clamour for an expansionary budget. (Arndt, 1957: 660)

But the optimism proved justified, and business activity expanded at a high rate in 1958/59, all indicators rising strongly to reference I_4 in August 1959.

Possible Causes of the Third Episode

'When the United States is depressed she buys less of Australia's wool; nothing that the non-dollar world can do can avoid this'. This bald assertion by L.G. Melville presents the theory of an externally caused Australian cycle in its most reduced form. Notwithstanding the attempt of Arndt (1957) to demonstrate the 'Emerging Independence of the Australian Economy', it would be tempting to ascribe such fluctuation as occurred from 1956/57 to 1958/59 to the American recession of 1957/58. If overseas cycles are contagious, then the most potent carrier, so far as Australia is concerned, is the price of wool. Between the middle of 1956 and the middle of 1959 wool prices performed a complete and clearly marked episode, the peaks and troughs of which conform very closely to the US reference cycle (see figure 4.5). It is a fairly straightforward task to relate internal movements of the economy to this violent disturbance of the Export Price Index. The question is whether the course of wool and other export prices was solely determined by the American economy, or whether other causes played an important part.

It has already been seen that the recessionary phase of the Second Episode merged into the relative growth period of the Third in the latter part of 1956 as the course of world wool prices moved sharply upward. It has also been remarked that the reasons for this recovery were complex: the Suez crisis played a part, but so also did the recovery of business activity in the USA, Japan, and West Germany. The reversion of taste to merino was important for Australia, moreover. Specific P_3 of the Australian Export Price Index came in April 1957, one month before reference B_3 and six months before the better vouched reference P_3. It seems clear that the high level of activity in 1957 was directly related to the recovery of reserves, liquidity, and business confidence following the export price rise.

It seems equally clear, however, that the correspondence between reference P_3 (October) and the Peak of the US reference cycle (July) is something of a coincidence. Activity in America had been increasing since

the end of 1954 (reference Trough, August 1954), but this had not prevented a declining tendency in wool prices and the Australian economy in 1955 and 1956.[21]

Wool prices remained high until the end of the 1956/57 season, but when the new season opened they began a long decline for the next eighteen months. Prices fell from an average of about 80d. per lb in 1956/57 to 63d. per lb in 1957/58, finally reaching bottom at 43d. per lb in January 1959 (specific T_3).

Once again, the influence of the US economy, though important, was by no means the only factor. There was a general contraction in world trade in 1958. The communist bloc external deficit was very small in 1957 and 1958. The 'semi-industrialised' countries in total (Argentine, Brazil, Mexico, Australia, India and Pakistan, South Africa, Finland, Spain, and Yugoslavia) suffered a deficit of about $US1,900 million in the later year. The influence of disinflationary policy in Britain, a temporary pause in the expansion of the Japanese economy, and a similar hesitation in Western Europe coincided with the American recession to depress the aggregate wool consumption of these countries in the first half of 1958 by 17 per cent below that in the same period of 1957. The Bradford wool industry, still Australia's most important customer, was deeply depressed in 1958; partly, to be sure, as export prospects to North America deteriorated, but also from domestic deflation, competition from Italy, and yet another swing of women's fashions away from worsted. The recession in wool was accompanied by 'a vigorous expansion in the use of synthetic fibres'.[22]

Quite apart from the general decline in world *prices* for primary products, the *volume* of Australian exports was sharply reduced in 1957/58 because of drought. Between March 1957 (specific P_3) and March 1958 (specific T_3), the deseasonalised monthly rate of exportation fell by 22 per cent. The total volume of primary production in 1957/58 was about 10 per cent below the 1956/57 level: wheat production fell from 195 million bushels in 1956 to 98 million bushels in 1958, and in the latter year 1·5 million bushels were imported from Canada; the wool clip was also affected, being 8 per cent lower in 1957/58 than in the previous year.

As a result of these adverse price and volume effects, Australian exports of goods-and-services fell by £172 million (15·8 per cent) in 1957/58. Since imports increased by £94 million over the same period in con-

[21] *Economic Survey*, 1956: 42. 'The last two years have shown that rapid economic expansion in the United States and Europe can nevertheless be combined with a fall in the prices of some of the primary products Australia exports.'

[22] Sources for the contraction of world trade and its effect on Australia: *Economic Survey*, 1959; *International Trade*, 1957–58; *ANZ Bank Quarterly Survey*, January 1958 and January 1959; *The Economist* vols. 183, 186, and 188.

sequence of relaxed quotas in April and August 1957, and since net foreign lending was virtually the same in the two years, international reserves began to decline from December 1957, falling by £A109 million over the next nine months. Current deposits fell seriously in the first half of 1958, but releases of £75 million from Special Accounts between February and July gave substance to the central bank policy of easy credit, and advances began to rise again in April after a pause of nearly a year (figure 4.9).

Australian Response to World Recession

On two previous occasions since World War II, in 1948/49 and 1953/54, business recessions in the USA caused the unemployed percentage of the American work-force to rise above 5 per cent. In terms of GNP, the 1957/58 recession seems to have been of the same order as its predecessors; in terms of industrial production and unemployment it was rather more serious. In all three periods the Australian Export Price Index responded to the American decline, but in 1948/49 the effect was largely obscured by the great post-war boom, and in 1953/54 it was mitigated by Soviet support of the wool market and by a rising level of activity in Great Britain.

In 1958, however, there had been no appreciable boom in Australia for three years, many factors conspired to depress the price of Australian exports, and significant recessions in Britain, Western Europe, and Japan followed closely on the heels of those in the USA and Canada. In December 1958, unemployment in Britain, at over half a million, was nearly twice as high as the previous December. Unemployment in North America had begun to fall somewhat, but was still higher than twelve months before and in excess of 6 per cent of the work-force both in Canada and the USA. The effect upon Australian export prices and prospects was therefore the most serious of any of the post-war checks to world trade which had so far occurred. The price fall which followed the Korean War boom was actually greater, but it was reversed while prices were still at very high levels.

It might have been expected that the Australian economy would go into serious decline as a result of these circumstances, but in fact the downward tendency in 1957/58 was powerfully reversed in the following year. The principal reasons for this improvement in growth-rate were an expansionary fiscal policy in 1957/58 and 1958/59, relative monetary ease from the middle of 1958, and a strong recovery in export volume from March 1958 (specific T_3) to March 1959.

A measure of the impact of Commonwealth budgetary policy upon GNP has been calculated by D.A.L. Auld (1967), making use of the concept of 'fiscal leverage'. The weighted budget result, described on p. 72, is multiplied by the disposable income multiplier. The result is the leverage

exerted by total Commonwealth fiscal action in one budgetary period, the net impact of income-creating and income-destroying components of the federal government's budget. Any change in leverage from year to year implies some disturbance to the growth-rate originating in the budget. Discretionary and automatic elements of this change can be separated, and their relative importance assessed. A break-down for the years 1957/58 and 1958/59 (calculated in constant 1952/53 pounds on a 1948/49 base) is set out in table 4.5.

Table 4.5 Components of fiscal leverage, 1957/58 and 1958/59
£(1948/49) million

	1957/58	1958/59
Leverage change due to:		
Government spending	+81	+226
Discretionary tax policy	+44	+ 23
Built-in tax response	−98	− 12
	+27	+237

Source: Auld (1967), table III.

The 1957/58 budget is seen to have been notable for the fact that substantial increases in government spending (mainly on welfare, grants to States, and public works) and reductions in the incidence of taxation (income tax concessions of £50 million per annum plus reductions in sales tax, payroll tax and estate duty) were largely offset by a great increase in tax collections in that year. Personal income actually fell in 1957/58 due to a 34 per cent decline in farm income, but an appreciable fraction of personal income tax paid was levied on 1956/57 incomes, in which year all components of personal income were high.

Auld's calculations also show that contemporary scepticism as to the expansionary impact of the much-vaunted £110 million surplus in the following year was not justified. The effect of discretionary tax policy was small, the only significant concession being a change in depreciation allowances; but the continued enlargement of Commonwealth expenditure in welfare services, grants to States, defence, public works, and public enterprise, financed by a deficit, was genuinely expansionary. In 1958/59, moreover, the built-in tax response provided only a small offset to discretionary expansion, thanks to depressed farm incomes in the 1957/58 season.

Fiscal stimulation was abetted by gradual relaxation of monetary policy during the Third Episode. On 7 May 1957, when London funds had been rising above trend level for four successive months, the Commonwealth Bank decided that 'It was no longer necessary for total advances of the banking system to fall, apart from normal seasonal variations'. Apart from

hire purchase firms, banks were to be free to determine the allocation of loans for other purposes, and a 'moderate increase' in advances for housing was encouraged. Calls to Special Account were discontinued in March, and releases made in the first half of 1958. In December, the central bank advised that 'It was considered appropriate to continue a rate of lending which would result in some increase in advances during the current financial year'. There were no further increases in interest rates, and the yield on short bonds fell from 5·1 per cent in June 1956 to 3·9 per cent in August 1959. The rate of increase of the money supply climbed back from zero to trend (5·8 per cent per annum) during 1958 and for all of 1959 was faster than 6 per cent per annum. Money supply as a proportion of GNP rose from 53·6 per cent in 1956/57 to 55·3 per cent in the following year, but fell back again in 1958/59 because of a 7 per cent growth of GNP at current prices. In February 1959 it was stated to be 'Central Bank policy that there should be some expansion of bank lending during 1958–59'. The net effect of these factors on the availability of bank credit was a relative stability of advances throughout 1957 (by contrast with the downward trend of the previous two years) and a £72 million increase between January and December 1958 (figure 4.9). Something of the same trends were evident in other sources of finance excepting hire purchase finance for retail sales, the growth-rate of which tended to decline somewhat in 1958.

A general impression is left, in the Third Episode, of skilful and intelligent use by government and central bank of a somewhat limited range of monetary and fiscal stabilisation techniques. For nearly four years the economy remained poised on a growth path which steered comfortably between the Scylla of inflation and the Charybdis of recession. It was said at the time that

> This evidence of Australia's capacity to maintain internal activity in the face of a business recession in major overseas countries, particularly the USA, reveals the resiliency of the Australian economy, brought about by population growth and development. (*ANZ Bank Quarterly Survey*, July 1958: 2)

This is less than generous to the government, however. In Canada, for example, conditions of population growth and development were very similar to those of Australia, with the added advantage of a floating exchange rate in this period. Yet during the same four years (1956 to 1959) the Canadian growth-rate stagnated, unemployment averaged more than 6 per cent of the work-force and productivity gains fell away to zero. Much of the blame for this can be laid at 'Perverse economic policies ineptly pursued by the Canadian economic policy makers' (H.G. Johnson, quoted in Waterman, 1965). When it is remembered that the dependence of Australia upon a single staple was far greater than Canada's at this time,

the performance of the Australian policy makers seems all the more impressive by contrast.

This is not to say, of course, that the entire credit for stability belonged to the government, nor that there was no element of good fortune in the Australian case. 'We would do well to reflect', the Treasury acknowledged in May 1959, 'how different things might have been if drought had continued, if capital inflow had fallen instead of rising, and if world recovery had been longer delayed' (*Economic Survey*, 1959: 24). The volume of exports in 1958/59 was actually 13 per cent higher than the previous year, more than recovering the pre-drought level, and the Export Price Index began to move upwards from January 1959. Capital inflow, at £200 million, was 75 per cent above the 1957/58 rate. And gross immigration, which had fallen to a trough in February 1958 (specific T_3) moved steadily upward until the third quarter of 1960. Nevertheless, a sense of definite achievement remained, agreeably confirmed by an overwhelming victory for the government in the December 1958 general elections.

ECONOMIC PROCESSES IN THE SECOND AND THIRD EPISODES

The rate of change of aggregate final demand, y, remained fairly steady between 1953/54 and 1955/56, falling slightly over the three-year period from +5·89 per cent per annum to +5·21 per cent per annum (table 4·6). In the first two years, however, domestic expenditure was rising very much more rapidly than the ability of the economy to supply. Assuming the latter, n, to have varied slightly about 4 or 4·5 per cent per annum during this period, an annual increase of about £(1953/54) 200 million in domestic expenditure would have maintained steady growth at full employment during the Second and Third Episodes, in the absence of any change in the real export surplus. Table 4.6 reveals, however, that the average increase in consumer demand alone was sufficient to sustain activity in 1953/54 and 1954/55, but that investment demand, especially for inventories, increased by as much again. Demand from the public sector decreased in 1953/54 because of the time lag in fiscal policies addressed to the First Episode boom, but increased in the following year to meet the needs of defence, welfare, and capital works. There was little change in the volume of exports in either year, hence the volume of imports had to rise by the full amount of the excess demand.

In 1953/54 there was excess capacity, and it also seems that the rate of growth of supply potential was somewhat faster than usual as a result of post-recession productivity gains. GNP was thus able to grow at 5·9 per cent without inflation. I_2 occurred in April 1954, suggesting that by the fiscal year 1954/55 demand was beginning to press against the limits of capacity. The rate of change of earnings began to rise from the first

Table 4.6 Analysis of year-to-year changes in aggregate final demand, the Second and Third Episodes 1953/54 to 1959/60
£ (1953/54) million

	1953/54 *v.* 1952/53	1954/55 *v.* 1953/54	1955/56 *v.* 1954/55	1956/57 *v.* 1955/56	1957/58 *v.* 1956/57	1958/59 *v.* 1957/58	1959/60 *v.* 1958/59	
Annual change in.								
Consumption	+192.0	+199.5	+90.0	+31.5	+113.5	+119.0	+248.5	
Private fixed investment	+73.5	+60.5	+37.0	−4.5	+47.0	+14.5	+93.5	
Net inventory formation	+163.5	+58.5	+10.5	+124.5	+22.0	+156.0	−177.0	
Public expenditure	−39.0	+21.5	+22.5	+3.5	+15.0	+84.0	+30.0	
Statistical error	+62.0	+84.5	−53.0	−39.0	+57.0	−39.0	+94.5	
Domestic expenditure	+452.0	+424.5	+107.0	−133.0	+254.5	+334.5	+389.5	
Exports	−5.0	−0.5	+87.0	+121.0	−109.5	+132.0	+76.5	
Imports	−188.5	−171.0	+55.0	+126.0	−76.5	−11.0	−149.0	
Balance of trade	−193.5	−171.5	+142.0	+247.0	−186.0	+121.0	−72.5	
Gross National Expenditure	+258.5	+253.0	+249.0	+114.0	+68.5	+455.5	+217.0	
								Average growth-rate
Annual growth-rate % p.a.	+5.89	+5.60	+5.21	+2.27	+1.33	+8.75	+3.83	+4.50

Source: Australian National Accounts.

quarter but inflation was relatively mild, possibly because the rates of growth of work-force and productivity were faster than average both in 1954/55 and 1955/56. The cost ratio deteriorated slightly in 1954/55 as import prices failed to rise appreciably, but any effect there might have been on the external balance was swamped by the huge increase in imports in response to excessive growth in domestic expenditure. Throughout the Second and Third Episodes, moreover, market forces were distorted by the import quotas.

The rate of growth of real domestic expenditure was sharply reduced in 1955/56, all components except public expenditure growing at a much slower rate. The decline in the rate of increase in fixed investment demand was largely due to the end of the housing boom. When investment is separated into 'dwelling' and other private capital expenditure, the former is found to have declined by £(1953/54)8 million in 1955/56 and in 1956/57, whereas non-dwelling investment continued to increase in 1955/56 at almost the same rate as the previous year. The decline in inventory formation from 1953/54 to 1956/57 is connected with increasing stringency of bank credit, though in the later stages of the Second Episode it also reflects a downward adjustment in sales expectations following the Economic Measures of March 1956. The drastic fall in the rate of increase of consumer spending is also partly explained by the Measures, partly by a slowing down in the expansion of hire purchase, and partly by the import cuts in late 1954 and in the following two years. Lower import quotas also explain part of the change in the balance of trade in 1955/56, as well as some of the contraction in investment spending.

Despite import controls, the growth-rate would have fallen below trend in 1955/56 had it not been for a £(1953/54)87 million expansion of export volume. Because of this factor, however, the rate of growth remained at slightly 'inflationary' levels until March 1956 (reference D_2). The rate of inflation of construction costs began to decline in that month, but that of retail prices did not turn down for another quarter, possibly because of the price-enhancing effect of the Measures.

In 1956/57, there was a serious reduction in domestic expenditure due to heavy liquidation of inventories, and very little increase in the other components of demand. Information about stocks in this period is scanty and unreliable, but from the annual estimates by component (before stock valuation adjustment) it would seem that non-farm inventories continued to increase but at a declining rate, whereas farm stocks declined absolutely. This view is consistent with Haig's half-yearly estimates of non-farm stocks and with published data of the Sydney and Melbourne retail trade. The rate of increase of fixed investment also became negative as the commercial building boom came to an end (figure 4.12) and sales of commercial vehicles began to decline.

Growth-rate in 1956/57 would have declined to −2 per cent or worse, had not the sag in domestic demand been offset by a £(1953/54)247 million increase in the export surplus. Half of this was due to a reduction in imports as demand contracted and the 1956 import cuts took effect, and half to the continuing expansion of export volume for reasons considered above. In the event, an average growth-rate of +2·2 per cent per annum was achieved in 1956/57. Since there was no net productivity gain in that year, and since the rate of growth of the work-force was somewhat below average, the lower value of y was matched by a reduction in n and there was little easing of the pressure on productive resources. The rate of inflation of earnings averaged 3·8 per cent per annum, and most employment indicators were at above trend value, though both tended to fall during the year. The effect of a further slight deterioration in the cost ratio was overwhelmed by the world boom in primary products and the Australian import quotas.

The annual data set out in table 4.6 show clearly that the fiscal year 1956/57 was one of overlap between the Second and Third Episodes. But for the export boom (supposing the import change to have been the same), growth-rate would have been slightly negative, yielding a recession of the same order as that of 1952/53. The two years are not otherwise comparable, as the earlier recession was marked by a record decline in domestic expenditure very largely offset by a record expansion of the balance of trade; but it is highly probable that there would have been a noticeable decline in activity in 1956/57. In that case, the Second Episode would have displayed a clearly marked trough. In the event, however, the relative growth period of the Third Episode was superimposed upon the relative decay period of the Second; there was no real slump as a consequence of the 1956 Measures, and the ending of the 1955 boom; and there was no real boom in connection with the bumper 1956/57 export season.

According to the evidence of the monthly indicators, the Third Episode growth-rate contraction occurred between May 1957 (C_3) and February 1958 (E_3). It is clear from table 4.6 that this decline in 1957/58 was entirely caused by a drastic reduction of the export surplus more than sufficient to outweigh a strong recovery in domestic expenditure. Import controls were relaxed in April and August 1957 in response to climbing reserves resulting from the successful 1956/57 season, and the profits of that year were available for import purchases in the next. The volume of imports rose by £(1953/54)76·5 million at the same time as the 1957 drought and the 1958 world recession hit the export trade, and the real export surplus fell by £(1953/54)186 million.

Aided by the 1956/57 season and the 1957/58 tax cuts, annual growth in domestic expenditure returned to +£(1953/54)254·5 million, implying an equilibrium growth-rate of domestic demand if no change in the balance

of trade were taking place. Because of the strongly negative change in external balance, however, the growth-rate which would otherwise have been about +5·0 per cent, fell to +1·3 per cent, the lowest value in the Second and Third Episodes. Productivity and work-force gains were about normal in this year, hence there was a definite slackening in the demand for productive resources for the first time since 1952/53. Employment indicators moved to (cyclical) trough values at the end of 1957/58, the rate of inflation of earnings averaged +2·4 per cent, no more than productivity gains in this year, and the Construction Cost Index (labour and materials weighted 60:40) absolutely declined between July 1957 and June 1958. Coinciding with stable or declining domestic costs there was an appreciable increase in import prices, hence the ratio of import prices to domestic costs moved in Australia's favour for the first time since 1950/51. Whether this can be taken to represent movements of Swan's cost ratio is more than usually doubtful in this year, however, because of a violent disturbance to the terms of trade caused by the slump in world primary product prices. It is true that an apparent appreciation of the cost ratio was followed soon after by an increase in the rate of change in the balance of trade (represented by quarterly differences in the current price export surplus) but the effect of changes in relative costs is impossible to isolate in this period.

According to the Vernon Report (1.67), 'The year 1958–59 superficially resembled 1957–58'. This judgment was based upon numbers registered as unemployed, the rate of inflation of retail prices, immigration, and estimated trade at current prices. When the unemployment figures are amended for their strong upward trend, however, when foreign trade is expressed in volume terms, and when the rate of change of expenditure is considered in each year, several fundamental differences emerge, the outcome of which is a growth-rate of 8·8 per cent in 1958/59 as against 1·3 per cent in the previous year.

For the first time since 1955/56, both domestic and external components of aggregate final demand increased together. Consumption expenditure increased at about equilibrium rate, but fixed investment demand grew slowly, despite a 9 per cent gain in dwelling construction, because of a small decilne in business investment possibly connected with the wavering of confidence remarked by the Commonwealth Treasurer a year before. Increased investment in inventories far more than outweighed the slow growth of fixed capital, however; stocks rose by £(1953/54)153 million in 1958/59 compared with a small decline in the previous year, an increase in the annual rate of £(1953/54)156 million. Largest gains appear to have been in farm stocks as the rural sector recovered from the drought, but there were also increases in most other categories.

In addition to this large expansion of private expenditure, the rate of

public-sector spending rose by £(1953/54)84 million, the first substantial increase since 1951/52. In total, domestic expenditure was £(1953/54) 334·5 million higher than in 1957/58, sufficient to produce a growth-rate of 6·6 per cent in the absence of any change in external balance. In the event, however, the volume of exports recovered strongly from drought-year levels with no corresponding increase in imports, hence another £(1953/54)121 million was added to the year's increase in demand. The total gain of £(1953/54)455·5 million was the largest since the beginning of constant price national accounts (from the year 1948/49), and probably the greatest in Australian history to that time.

The view that the slow growth in the previous year left the economy with unused capacity is confirmed by the fact that this very rapid expansion in 1958/59 could take place without generating any appreciable inflationary pressure. The average rate of increase in earnings rose from 2·4 per cent in 1957/58 to 3·7 per cent per annum, but since average domestic productivity improved by 4·5 per cent in this year, this is no evidence of excess demand for labour. Most employment indicators, indeed, though beginning to rise from the middle of 1958, remained below trend for the whole of the fiscal year. Wholesale prices began to rise again in 1959, but the average rate of increase in 1958/59 was negligible. That of retail prices remained at about 2 per cent per annum.

The evidence of the import volume change is equivocal. S.F. Harris observes that by the beginning of the fiscal year the rate of importation had climbed back to the £800 million per annum ceiling fixed in August 1957 and left unchanged until August 1959 (Harris, 1963: 242–59). The existence of this constraint is sufficient to explain why imports changed very little over the year, assuming aggregate demand to have been rising. But if the pressure had been very strong there would have been some sign of this in shortages, or rising prices, or both. Harris reports that 'it was becoming increasingly difficult to hold the level of licensing down to £800 million in the second part of 1958–59', and shows that the value of licenses actually issued rose to £830 million during the year but his opinion that the early part of 1959 was a period of 'significant inflationary pressure' seems to be contradicted by the behaviour of employment, prices, and productivity.

Whether by luck or good judgment, therefore, the impact of the 1958/59 budget appears to have been exactly sufficient to restore the economy to a state of full employment without inflation by the end of the fiscal year. With the help of a good season, increased capital inflow and – perhaps – the import controls, internal balance was reconciled with a tolerable external position. Some time around August 1959 (reference I_4), however, demand once again caught up with capacity, and the Third Episode came to an end.

5

Australia's First Home-made Cycle? 1960 to 1964

Gross National Product at constant prices grew at 4·3 per cent per annum on average during the Fourth Episode, a rate that scarcely differed from the average of 4·5 per cent during the Second and Third Episodes, or 4·0 per cent during the First. An interruption to steady growth occurred in 1961/62, but this was less severe than that of 1952/53, and of shorter duration than that of 1956/57 to 1957/58. Most indicators perform a clearly marked cycle from the middle of 1959 (I_4, August 1959) to the end of 1962 (I_5, November 1962); though many do not pass above trend again until 1963 or even 1964, and there is little sign of the re-emergence of boom conditions until 1964/65. The statistical 'shape' of the Fourth Episode closely resembles that of the First, though both in relative amplitude and in period it is a smaller fluctuation than the earlier one. This morphological similarity conceals a number of profound differences of structure and process which will become apparent in the course of this chapter.

STRUCTURAL AND INSTITUTIONAL CHANGES

There were no major conjunctural changes, in the years immediately before 1960, comparable in magnitude with those which took place between 1950 and 1953. The events of the decade, nevertheless, had left the Australian economy in a very different position, on the eve of the Fourth Episode, from that which it occupied at the outset of the Second. The most notable developments were the growth of the manufacturing sector and the interrelation of this with balance of payments changes; the education of Australian society to North American notions of affluence; and a further refinement of monetary institutions. Each will be considered in turn.

The Manufacturing Sector and the Balance of Payments

In an important article published in 1960, B.D. Cameron suggested that for the post-war period as a whole, 'the maintenance of high employment had depended upon the expansion of demand for manufactures' (Cameron,

1960: 542). A transactions table for 1955/56 revealed that 'rather more than one half of employment in the services sector is in fact engaged in the handling of manufactured goods or in facilitating the operation of factories'. Since 85 per cent of the increase in work-force between 1950 and 1958 was absorbed by manufacturing and services, and since the majority of the gain in manufacturing occurred in class IV (Engineering), the progress of the economy during the 1950s was heavily dependent (internally) upon the development of a single 'leading sector'.

Class IV is a somewhat heterogeneous collection of industries including iron and steel, heavy engineering, electrical plant, motor vehicles and several other consumer durables such as radio and television. When it is considered together with class III (Chemicals and Oil Refining) and class XII (Paper and Printing), the three comprise a 'heavy industry' sector which accounted for 93 per cent of the increase in manufacturing employment between 1950 and 1958.

Table 5.1 shows that output from the manufacturing sector as a whole (as measured by the official index of factory production) grew nearly twice as fast as GNP from 1952/53; and that the expansion of heavy industry was even more rapid. Only in 1958/59 did aggregate output grow more quickly than manufactures for reasons considered in the previous chapter.

Table 5.1 Annual growth-rate of output: 'heavy industry', manufacturing, and GNP; 1952/53 to 1959/60
Percentage growth on previous year

	Heavy industry				
	Class IV Engineering	Class III Petroleum and chemicals	Class XII Paper	All groups, manufacturing	GNP at 1953/54 prices
1953/54	+10.6	+19.0	+23.5	+13.2	+6.1
1954/55	+12.1	+23.2	+13.9	+9.3	+5.6
1955/56	+7.5	+17.7	+11.1	+6.4	+5.2
1956/57	+2.0	+11.0	+8.0	+3.0	+2.3
1957/58	+11.7	+10.8	+2.8	+6.9	+1.3
1958/59	+7.1	+7.3	+11.7	+6.4	+8.8
1959/60	+12.3	+10.6	+6.4	+11.1	+3.8
Av. annual growth-rate 1952/53 to 1959/60	+9.0	+14.2	+11.1	+8.0	+4.7

Source: CBCS.

Fifty-four per cent of the output of class IV was absorbed by final consumption in 1958/59, and a further 9 per cent went to exports of finished goods or inventories. Seventy-seven per cent of all requirements per unit of net output, however, came either from within the sector itself or from

imports (Haig, 1965). These data suggest that much of the output of the Industrial Metals and Engineering sub-classes was used in those sub-classes producing finished consumer goods, of which Construction and Repair of Vehicles (chiefly cars) is one of the most important. The strategic position of the motor industry is reinforced by the fact that a significant share of the output of class III is directly related to the operation and maintenance of motor vehicles, and that the rapid growth of class XIII (Rubber Goods, having an average increase of 12·6 per cent per annum since 1952/53) was almost entirely due to the production of tyres. It has been seriously argued that 'as wool was the staple of the nineteenth century the automobile seems to have become the staple of the twentieth' (Robinson, 1963). It is not necessary to accept the full implications of this view to be persuaded of the crucial importance of the motor industry from 1953: between 1952/53 and 1959/60 the production of car bodies grew at an average rate of 17·7 per cent per annum, of chassis at 15·9 per cent, and of pneumatic tyres at 16·0 per cent.

It is evident that these growth-rates of the domestic motor industry are far in excess of the rate of growth of the Australian new car market. New car registrations grew at an average rate of 9·9 per cent per annum from 1948 to 1964, and from 1955 to 1959 at somewhat less than the long-run average. The import replacement signified by this disparity is actually understated, as the Australian content of chassis assembled rose from 33 per cent in 1950/51 to 58 per cent in 1963/64. By 1959/60 imports of fully built-up vehicles were no more than 2 per cent of total sales, and four of the seven major firms 'produced a substantially Australian-made motor vehicle', one of which, GM-Holden, enjoyed approximately 50 per cent of the entire market (*Survey of Manufacturing* . . . , 1960: 27).

To a large extent this import replacement represents the reactions of overseas suppliers frustrated by the import quotas of the 1950s and the tariff increases of 1958 (G. Maxcy in Hunter, 1963: 506). Of the eight largest firms which together account for 95 per cent of the market, five (GM-Holden, Ford, BMC, International Harvester, Volkswagen) are fully owned abroad, and two others (Chrysler and Rootes) have a majority of overseas capital. There appears to be no inherent superiority of Australian-made motor vehicles sufficient to commend them in the absence of restraints on trade. In 1959/60, when the industry was operating at about 80 per cent of capacity, fewer than 3,000 complete passenger cars were exported, and 'manufacturers stated that they found it difficult to compete in overseas markets for a variety of reasons' (high relative production costs, as well as import restrictions and tariffs). The development of the export market since that date has been slight (*Survey of Manufacturing* . . . , 1960: 27).

Although the contribution of the motor industry to exports was small,

the saving in imports and the attraction of foreign capital has been of the greatest importance since the middle 1950s. Maxcy estimated the average import saving at £500 per vehicle: assuming that the 218,000 new cars registered in 1959/60 would have been purchased whatever their import content, the total import bill would have been £109 million (10·6 per cent) higher in that year but for the industrial developments of the previous decade. It would also appear that the balance of payments effect of the industry has been no less significant on capital account. Although only 12 per cent of all private capital inflow between 1956/57 and 1959/60 was directly attributable to vehicles, parts and accessories, the linkage effects previously discussed imply that a considerable portion of all investment in manufacturing was indirectly caused by the growth of the motor industry. In such manner the adverse external balance of the 1950s, by way of the short-term expedients it evoked, brought about some part at least of its own corrective. Hirschman's provocative suggestion[1] was nicely illustrated by Australian experience of the 1950s.

The effect upon the balance of payments of developments in oil refining and the iron and steel industry has been mentioned in the previous chapter. The establishment of the former was only indirectly related to the current state of external balance:

> The dollar shortage and the consequent restrictions on purchasing from the dollar area restricted the possibility of drawing refined products from the USA, hence the choice of sites for an extension of refining capacity to cater for the Australian market was restricted to either crude oil sources in under-developed countries or to market areas. (J. McB. Grant in Hunter, 1963:260)

Largely for political and strategical reasons, the oil companies decided to locate in Australia rather than in Indonesia or the Middle East. The choice was assisted by the offer of certain inducements from State governments, and by tariff protection until 1961.

The large expansion of iron and steel production in the later 1950s was more directly stimulated by considerations of external balance, though not in the same way as the consumer durables industries. Imports of iron and steel in the early 1950s were of the order of magnitude of £50 million per annum, not because of any inability to meet foreign competition but rather because of the unwillingness of Broken Hill Proprietary Ltd to take any risk in expanding capacity. This apparent conservatism attracted criticism from the public and exhortation from the government.

> The Department of Trade was particularly concerned to increase the output of import replacement industries, regarding iron and steel as the most important of them, and it contributed in no little measure to The Broken

[1] 'Fluctautions in foreign exchange earnings may, up to a point, accelerate economic development.' (Hirschsman, 1958: 173.)

> Hill Proprietary's decision to speed up its rate of development in the mid-1950s. The importance of stimulating the exports of manufactured goods as a final solution to the balance of payments problem was coming into vogue, and the iron and steel industry with its eminently favourable raw-material resources and pre-war export experience was the most obvious industry to take the lead. (Hughes, 1962: 179)

Added to this direct, strategic connection with the balance of payments, there was, of course, a further indirect stimulus through backward linkage from the automobile industry.

Imports of iron and steel fell from £51·0 million in 1954/55 (the last year before the large addition to capacity in the late 1950s) to £22·1 million in 1958/59, whereas exports rose from £6·5 million to £25·2 million over the same period. The company was still not really confident of a permanently growing export market, however, and expansion was inadequate to meet the needs of the 1960 boom. As a later section of this chapter will show, the policy of BHP contributed in no small measure to the balance of payments crisis of 1960/61, and was therefore a significant cause of the 1961 recession.

The publication of input-output studies for 1955/56 and 1958/59 enables a rough assessment to be made of the increased contribution of engineering to exports in the second half of the decade. Haig's study for the later year, however, is based upon the official tables published by the CBCS and is not strictly comparable with B.D. Cameron's (1960). According to Cameron, 4·2 per cent of the final content of exports in 1955/56 was contributed by engineering: in 1958/59, before the distribution of indirect taxes to industrial groups, the contribution of engineering had risen to 7 per cent. The import content of all exports rose from 6 per cent to 9 per cent between the two years, chiefly because of the increasing weight in exports of the high import-using chemicals and oil group.

Affluence, Household Durables, and Social Change

Chapter Six and Appendix E of the Vernon Report assemble the available information on living standards in Australia and their progress in recent years. None of the various measures used to estimate the average improvement between 1953/54 and 1962/63 shows an annual increase as rapid as the 2 per cent per annum gain in national productivity, chiefly because of the deterioration in the terms of trade since 1951. Although the unfavourable comparisons drawn with other countries are partly vitiated by diversity in the method of trend-fitting (Isaac, 1966), it seems certain that the advance of Australian living standards in the 1950s, though genuine, was unspectacular.

Notwithstanding the modest growth of real income, however, there was a striking expansion of the visible signs of wealth. Home ownership

(including instalment purchase) rose from 53 per cent of all households in 1947 to 70 per cent in 1961. By January 1960, the ratio of population to motor vehicles in Australia had fallen to 3·9, compared with 2·5 for the USA, 3·4 for New Zealand, and 3·4 for Canada, the only more motorised countries (*Survey of Manufacturing . . .* , 1960: 25).[2]

Information on ownership of household durables in Australia is hard to come by. The Vernon Report summarises the results of two private surveys in 1962/63 and compares them with unofficial data for Britain and the USA (Vernon Report: table E.44). The only available estimates for an earlier date were compiled by the Council for Advertising Research in Australia and reported by Helen Hughes and M.E. Joseph (1956) in a paper circulated by the ANZ Bank. An estimate of telephone rentals by household was made by the author for 1961 on the basis of information supplied by the Postmaster-General's Department, Canberra. These results are set out in table 5.2.

Table 5.2 Market saturation of household durables, 1955 and 1962
Percentage of households with appliance

	Australia			
	Sydney, Melbourne, Brisbane 1955	1962/63 (ANZ Bank)	1962 (Australian *Women's Weekly*)	USA (1963)
Radio	97	139	95	95
Refrigerator	76	93	96	97
Television*	0	79	70	89
Washing machine	39	78	71	94
Vacuum cleaner	71	75	—	74
Sewing machine	81	—	—	—
Floor polisher	18	—	—	—
Telephone	42		56† (1 per 4 persons)	— (1 per 2 persons(

*Australian data for metropolitan areas only.
‡Estimated from information supplied by PMG Department, Canberra (1961 data).
Source: ANZ Bank, Vernon Report and PMG Department.

If the figures are at all reliable, it would appear that in the second half of the 1950s Australia approached American standards in the ownership of refrigerators and television, that by the middle of the 1950s, effective market saturation had been achieved for radios and vacuum cleaners;[3] that a large increase in the ownership of washing machines was achieved,

[2]These figures are similar to those quoted by Maxcy, but *lower* than those quoted in Vernon Report: table E. 43, from a British source.

[3]Vacuum cleaners, the classic pre-war household durable, would presumably have reached market saturation in the USA by 1963. If so, then 75 per cent of all households would seem to be the effective ceiling.

though with considerable remaining scope for improvement; and that the domestic use of telephones was still far below the North American level.

These conclusions are consistent with the general impression of a household durables boom in the 1950s. The growth of television, plastics, and electrical goods during the Third Episode has been remarked in the previous chapter. It will now be argued that for structural reasons some levelling out was inevitable in the 1960s, and that the relatively stagnant condition of household durables during the Fourth Episode was more cause than effect of the 1961 recession.

The television market forecast by Helen Hughes and M.E. Joseph assumed a Gompertz curve on the basis of overseas experience. According to their estimates, 80 per cent saturation would be achieved in Sydney and Melbourne in 1961, after five years of production. Table 5.2 suggests that this forecast was substantially accurate.[4] It is generally supposed that a sigmoid curve is a good description of the market penetration of any household durable (until such time as replacement demand predominates in new sales), provided either that population remains static or that it grows at a constant rate. On this hypothesis it would appear from table 5.2 that the 'natural' rate of growth of Australian demand for refrigerators, television, and washing machines would have begun to decline in the early 1960s. On the theoretical Gompertz curve used by Hughes and Joseph for television the point of inflexion occurred four years after the beginning of service (that is, in 1959), but this was obscured in practice by the opening of new markets in that year. For radios and vacuum cleaners, on the other hand, market saturation at an earlier date would have resulted in steadier growth based upon population increase and replacement demand.

A rough attempt has been made to illustrate these trends in figure 5.1. Production of four household durables has been accumulated annually from 1953/54 and the result expressed as an index number, 1959/60 = 100. Had there been no scrappage during the period, the curves would represent the growth of ownership. Inspection of the figures for radios and vacuum cleaners confirmed the hypothesis that their growth was non-sigmoid and these were not graphed. The same was true for washing machines, suggesting that replacement demand had become important in Australia long before the achievement of American levels of penetration.

Of the four graphs plotted, air-conditioners (for which the effective Australian market proved extremely small) reveals the most clearly sigmoid character. The S-shape is visible in the other graphs though the early

[4]The ANZ Bank estimate of 79 per cent for 1962/63 (by which time Sydney and Melbourne should have reached about 85 per cent, according to Hughes and Joseph), was made for all metropolitan areas. Sales in Adelaide, Perth, and Brisbane did not begin until 1959.

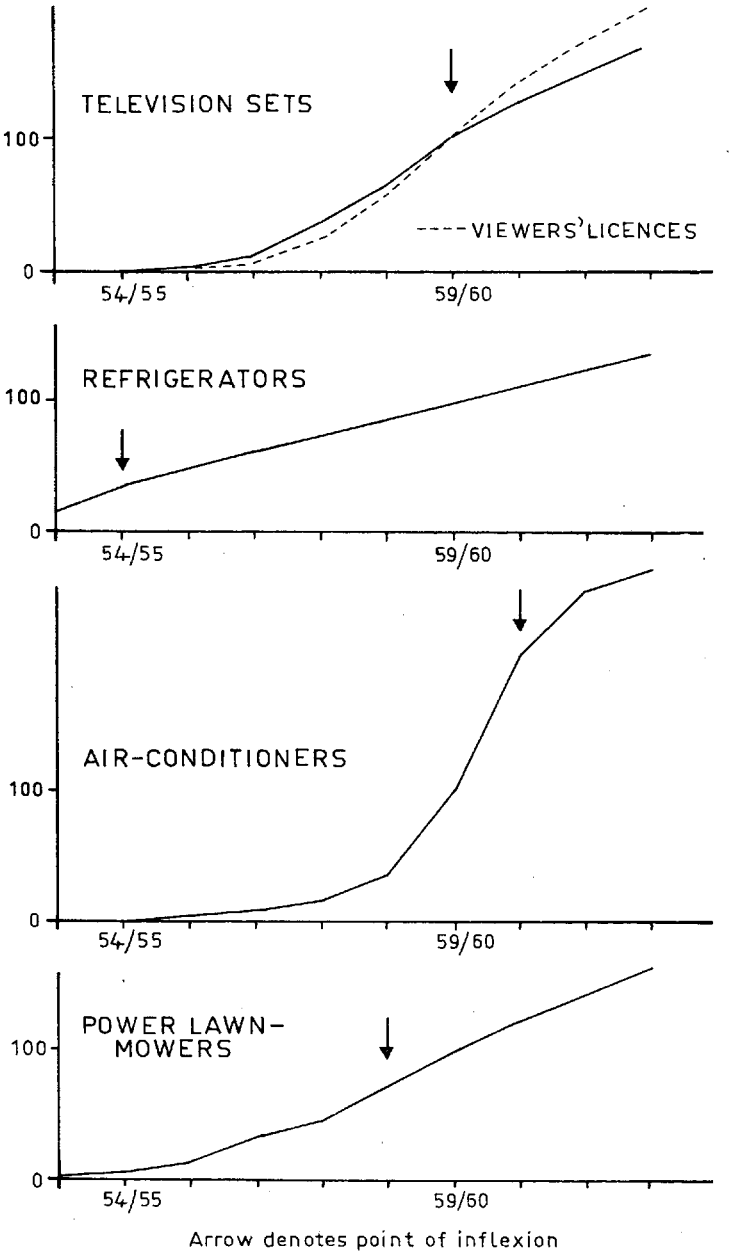

Fig. 5.1 Cumulative production of certain household durables (1959/60 = 100). Source: MRBS. Arrows denote point of inflexion.

portion of the curve for refrigerators must be taken on trust. Points of inflexion for refrigerators, power-mowers, and television sets occur before the 1961/62 recession. The curve of viewers' licences has been superimposed upon that of cumulative television production and shows a point of inflexion in the same year.

These statistical manipulations are confirmed by reports from the industries concerned. In November 1961, near the trough of the Fourth Episode (S_4, September 1961), manufacturers ascribed their sales difficulties not so much to declining activity as to market saturation (*Survey of Manufacturing* . . . , November 1961: 22–30).

It was observed above that the acquisition of consumer durables and private houses proceeded far more rapidly, during the 1950s, than the capacity of the economy to enrich its constituents. In part this signifies a marginal switch of current income from food, drink, tobacco, and clothing, and in part an appreciable increase in the amount of debt outstanding on houses and durables. Much of the increase in home ownership has been the result of mortgage loans: in 1961, 22 per cent of all householders were purchasing by instalments as against 15 per cent in 1954 and 8 per cent in 1947. In 1960/61, instalment credit outstanding for household durables in Australia represented 4·9 per cent of personal disposable income compared with 2·6 per cent in 1956/57 and 3·3 per cent in the USA in 1961/62. Instalment credit outstanding on cars was equivalent to a further 4·8 per cent of disposable income.[5]

This substantial exchange of assets between consumers and credit institutions was a reflection both of the expansion of the capital market discussed in chapter 4 and of a change in social attitudes and conventions. After more than two decades of full or over-full employment, a generation had grown up which knew nothing of the inter-war depression. The combination of job security and continually rising money earnings made instalment credit a sound and attractive method of increasing living standards – a poor man's hedge against inflation. Added to this, trends in employment and in education during the 1950s accelerated the transformation of Australia into a 'white-collar', property-owning society.

Between census dates in 1947 and 1961, the total work-force grew at 2·0 per cent per annum on average: but the average growth-rate in the Commerce and Finance and Public Authority (n.e.i.) and Clerical classes was 3·5 per cent or more. More detailed comparisons between 1954 and 1961 reveal that the principal increases occurred in 'retail trade', 'finance and property', 'health', 'education', and 'other community and business services'. The occupational classification for 1961 is summarised in table 5.3, from which it appears that by the beginning of the 1960s

[5]For sources of data in this paragraph, see Vernon Report: tables E. 28, 42, and 45.

Australia, like other advanced nations of the capitalist world, was fast becoming a country in which the traditional, or Marxian, 'working-class' comprised only a minority of the population.

Table 5.3 Occupational classification of Australian work-force, census 1961

	Males %	Females %	Persons %
Professional, technical, etc.	6.6	14.1	8.5
Administrative, executive, etc.	8.2	4.2	7.1
Clerical workers	7.7	29.6	13.2
Sales workers	6.0	13.0	7.8
Total 'white-collar' workers	28.5	60.9	36.6
Craftsmen, process workers, labourers	43.3	16.9	36.7
Miners, quarrymen, etc.	1.0	—	0.8
Total 'blue-collar' workers	44.3	16.9	37.5
Primary	13.8	3.6	11.3
Other	13.4	18.8	14.6
	100.0	100.0	100.0

Source: Vernon Report, table C. 51.

Part of the trend towards the 'deproletarianisation' of Australia is explicable, no doubt, by the operation of Parkinson's law. Some part, however, reflects a genuine up-grading of education and skills. In 1960, there were 856 persons enrolled for tertiary education per 100,000 of the population, compared with 441 in 1950, and (in 1960) with 645 for Canada and 484 for the UK. Thirteen per cent of the appropriate age-groups entered courses of higher education in Australia in 1958/59, which, though inferior to the ratios for North America, compares well with those of all other advanced nations. University graduates represented 3·4 per cent of the population aged 23 in 1961/63, compared with 2·5 per cent only six years previously. It is difficult to obtain direct information about vocational skills in Australia. The Vernon Report surmised that the American trends towards decreasing relative demand for semi-skilled and unskilled workers were 'likely to be repeated in Australia', and remarked a chronic shortage of skilled workers since the war.

These interacting changes of social and economic status, taken together, amount to a radical transformation of Australian society between the end of the war and the eve of the Fourth Episode. The process was hastened by European immigrants, who between 1947 and 1961 contributed 73 per cent of the growth in work-force and whose culture and social attitudes, in many cases, were completely alien to traditional Australian folkways. In general, Australia was adapting to the style of the Affluent Society. The

process was described as 'Americanisation' by those to whom the transition was distasteful.

Further Developments in Banking and Finance

Under the Banking Act of 1953, the central banking activities of the Commonwealth Bank were separated from its ordinary banking business. The Reserve Bank Act and the Commonwealth Banks Act of 1959 completed the process. The central bank was re-established as the Reserve Bank of Australia, and the other banking departments constituted as the Commonwealth Banking Corporation, comprising the Commonwealth Trading Bank of Australia, the Commonwealth Savings Bank of Australia, and the Commonwealth Development Bank of Australia, formerly the Industrial Finance Department of the Commonwealth Bank. The Banking Act of 1959 introduced certain changes in the statutory techniques of central bank control. The Special Accounts procedure was replaced by a requirement that the trading banks maintain reserve deposits (SRDs) at a proportion of their current level of Australian deposits determined from time to time by the Reserve Bank. Notice of variation in SRD ratio was to be supplied and trading banks informed in confidence at least once a quarter of likely policy changes. The Commonwealth Trading Bank was required to pay income tax and the Commonwealth Savings Bank subjected to the same control as the commercial savings banks. None of these reforms was more than a process of tidying up. They conferred the form of internationally approved central banking practices which had existed in substance since 1953 at least, if not 1945. The legislation was preceded by a public debate of purely ritualistic significance (Arndt and Harris, 1965: ch. VII; Perkins, 1957; Arndt, 1958).

More important changes in the banking sector were introduced by the appearance of major private savings banks from the mid-1950s. In 1956, savings bank subsidiaries were created by the ANZ Bank, the CBCS, and the Bank of New South Wales. Four other trading banks entered savings banking in 1961 and 1962. The expansion of savings banking 'made savings deposits a more attractive investment for savers relative to other securities, including short term loans to finance companies, and this has attracted more of the overall funds into a sector subject to central bank control' (R.H. Wallace in Hirst and Wallace, 1964: 299). Private savings banks and the Commonwealth Savings Bank were required to hold at least 70 per cent of depositor's funds in cash or prescribed government securities. Advances to the private sector were restricted to loans for housing or other purposes on the security of land. As a result of these provisions, savings banks assumed a dominant position in the bond market and also became an important source of funds for housing. A further effect of the growth of savings banks stemmed from the close substitutability of savings

deposits and fixed (time) deposits. Switching between the two became very sensitive to changes in interest rate differentials: since savings deposits may be withdrawn on demand, a new technique for manipulating the overall liquidity of the public was placed in the hands of the authorities (R.H. Wallace in Hirst and Wallace, 1964: 262).

The comparatively stringent monetary conditions of the 1950s encouraged a more efficient use of funds by semi-governmental bodies and large business corporations. Many of these became accustomed to the use of sale and repurchase agreements with certain stockbrokers in order to employ seasonal or temporary accumulations of cash.

> The increasing significance of this unofficial market was a major factor underlying the decision [of the monetary authorities] to establish a close and formal relationship with the dealer companies designed to ensure that the further development of the market would be soundly based. (Commonwealth Bank, *Annual Report*, 1958–9: 18–19)

In February 1959, the central bank granted certain privileges to four dealers, specified the assets in which they could deal, and undertook to act as lender of last resort subject to a penal (but unpublished) re-discount rate (Looker, 1960 and R.R. Hirst in Hirst and Wallace, 1964). The number of approved dealers soon increased to nine, many of which attracted capital from outside the original sharebroking concerns. By June 1960, total liabilities to clients, at £80 million, had more than doubled since the opening of operations; one-quarter of this sum represented call money of the trading banks. The Commonwealth Treasury provided assistance by the issue of seasonal treasury notes from November 1959 and by spreading the maturity dates of government bonds, both of which enabled dealers to accumulate more satisfactory portfolios. The chief effects of these developments were to widen the market for government securities, to increase the flow of funds to the public sector, and to improve the facilities for economising cash balances. The first of these, by increasing the proportion of public debt in non-bank hands, exposed the financial system to a degree of control by the Reserve Bank without the necessity of manipulating the SRD ratio. The development of very extensive open market operations was inhibited, however, by the small size of the Australian market; and that of a 'more flexible interest policy' (much desired by economists in the 1960s) by traditional prejudice against the 'money power'.

THE 1959/60 BOOM AND ITS DOWN-TURN

Sources of the Boom

The average world price of merino wool rose by 25 per cent between January and April 1959. 'Higher prices for wool helped give Australia

a surplus on visible trade of over £6 million in March, and the deficit in the first nine months of the financial year was wiped out'. The recovery in wool prices continued into the first half of the next season as world wool consumption increased. Demand came initially from Britain and the USA in order to replenish manufacturers' stocks, later from Italy, Germany, and France as a result of economic recovery, finally, and most strongly, from Japan (*The Economist*, vol. 191: 261, 965; vol. 192: 568, 668; vol. 195: 1014).

Under stimulus of rising world demand for wool and wheat, aided by a satisfactory season, the volume of exports rose from March 1958 (specific T_3) until March 1959 (specific P_4), falling slightly until June and growing thereafter at trend rate (5·6 per cent per annum) for another eighteen months. Exports of wool in 1959/60, at 1,430 million lb, were 9 per cent higher than in 1958/59. Exports of wheat were 67 per cent greater.

Import licensing was considerably relaxed in August. The ceiling was raised from £800 million to £850 million per annum, restrictions on source of supply were removed for most imports, and 250 items were added to the 'import replacement' category. Because of the time-lag previously considered, the volume of imports did not begin to rise strongly until the last quarter of the year. In consequence, the current account balance continued to improve until the end of 1959 (figure 5.2).

In addition to the favourable movement in the balance of trade, there were large increases in private capital investment in 1958/59 and 1959/60: net inflow of £A201 million in the latter year was almost twice the annual average from 1955 to 1958. The combined effect carried the level of London funds to a peak of £A541 million in February 1960 (specific P_4). Liquidity of the economy was further enhanced by budgetary deficits of the Commonwealth government in 1958/59 and 1959/60, and by central bank support of the bond market until November 1960.

As a result of these factors the trading banks found themselves in a highly liquid state throughout 1959/60. 'Excess liquidity' may be defined as 'the surplus of LGS assets (net of borrowing from the Reserve Bank) together with loans to the money market over and above that amount necessary to satisfy the existing LGS convention'. By that criterion, the banks are seen to have enjoyed (seasonally adjusted) excess liquidity ratios in January 1960 ranging from 16·7 per cent (Commonwealth Trading Bank) to 5·8 per cent (Commercial Bank of Australia). Despite calls of £35 million to Special Account in November and December 1959, an increase in the new SRD ratio (and also in the LGS convention) in February 1960, and a series of exhortations from authority, the trading banks were therefore able to expand advances by £85 million between January and July 1960 without violating the letter of the liquidity agreement (see Davis and Wallace, 1963).

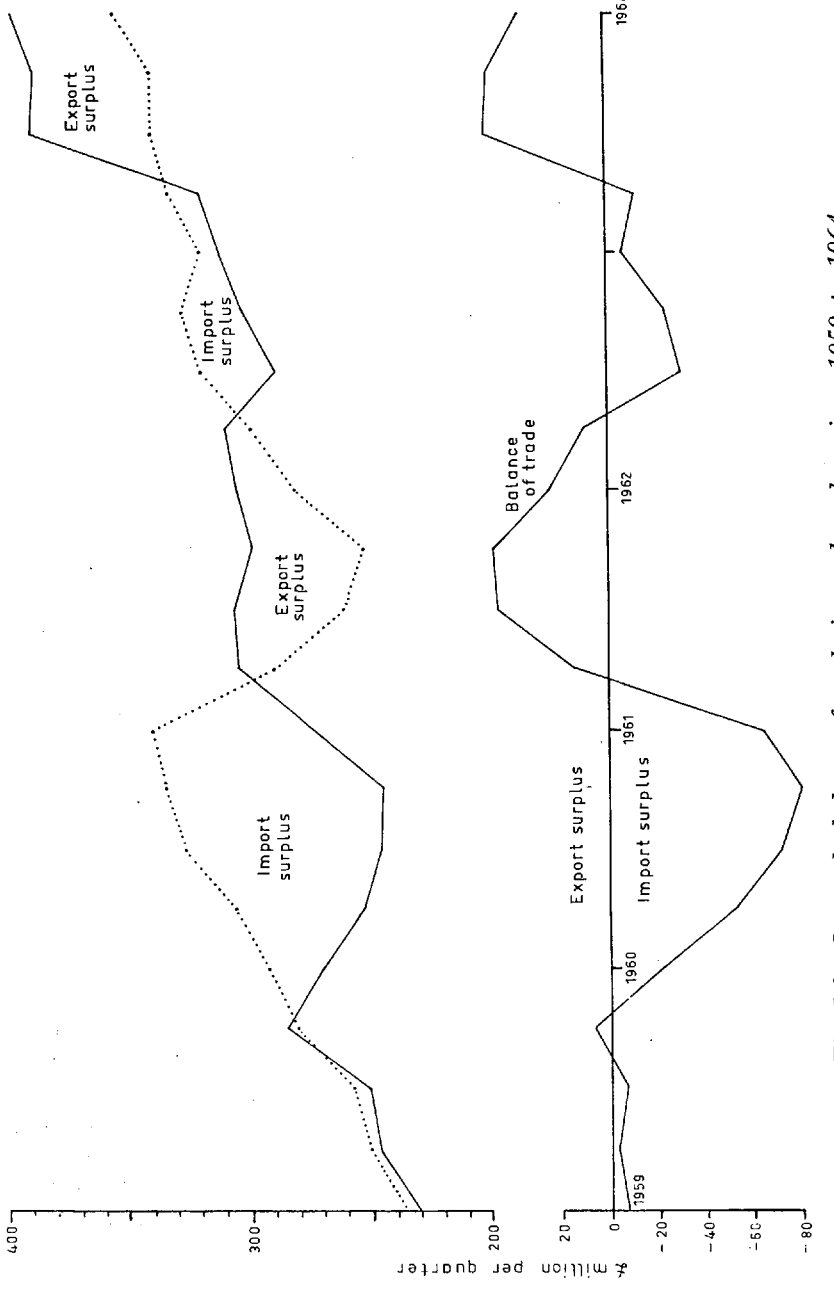

Fig. 5.2 Quarterly balance of trade in goods-and-services, 1959 to 1964, seasonally adjusted. Source: Quarterly National Accounts.

Table 5.4 reveals that the chief beneficiaries of bank credit expansion in the first half of 1960 were manufacturing and retail trade. Bank advances were used to finance a large build-up of inventories. Manufacturers' stocks rose by £20 million in the March quarter and £45 million in the June quarter. Retail and wholesale stocks increased by £11 million and £30 million in the same period. The inventory boom was partly a genuine response to an increase in final demand in 1959–60, partly a result of the virtual abandonment of import controls in February 1960, and partly a speculative operation inspired by scepticism as to the government's ability to keep its promise not to reintroduce them.

Table 5.4 Semi-annual change in major trading bank advances classified by industry, December 1958 to July 1961
£ million

	1st half of 1959	2nd half of 1959	1st half of 1960	2nd half of 1960	1st half of 1961
Agriculture	−1.9	−1.9	+9.1	−8.4	−3.1
Manufacturing	+6.3	−7.9	+40.6	+11.1	+3.7
Finance	−3.9	+6.0	+9.1	+17.4	−10.2
Retail trade	+5.9	−2.9	+19.3	−5.6	+4.1
Wholesale trade	−11.8	+8.0	+6.4	+4.7	−2.5
Building	+2.9	+0.3	+8.0	−8.2	−8.8
All other, net	+11.4	+5.2	+21.3	−0.2	−8.7
	+8.9	+6.8	+113.8	+10.8	−25.5

Source: Financial Supplement, 1966.

The 1966 revision of the Quarterly National Accounts (*Quarterly Estimates* . . . , supp. to no. 22, 25 February 1966), when seasonally adjusted, shows that a very great expansion of demand took place between the June quarter of 1959 and the September quarter of 1960. The quarterly change of personal consumption between the second quarter of 1959 and the second quarter of 1960 can be represented in annual percentage growth rates as +8·5 per cent, +13·9 per cent, +13·8 per cent, +13·2 per cent, and +9·3 per cent per annum. In the third quarter the increase slowed down to a 'normal' or equilibrium rate of +4·2 per cent per annum. The boom in motor vehicles lasted until the second quarter, as did that of 'living expenses' (personal consumption excluding spending on motor vehicles and household durables), but expenditure on household durables ceased to grow much after the first quarter and soon began to decline. The expansion in consumption spending was the result of a 5 per cent reduction of personal income tax in the 1959/60 budget (which took effect from 1 October 1959) and of two substantial increases in wage rates. On 5 June 1959 the Arbitration Court announced an increase of 15s. per week in the basic wage for males and 11s. 3d. per week for females. These increases, believed to have 'effects greater than the national budget', were estimated

to add £65 million per annum to total wages and salaries. In November there was a small increase in the females' basic wage in New South Wales (where, for the first time in twenty years, State awards had fallen behind those of the Commonwealth), and a 28 per cent increase in margins for metal workers estimated to add a further amount to the wage bill 'not far short of £100 million'.[6]

Lagging the consumer boom by about one-quarter there was a corresponding, though shorter-lived, expansion in private fixed capital spending. During four successive quarters from the September quarter of 1959 private investment grew at +18 per cent, +34 per cent, +21 per cent, and +23 per cent per annum, thereafter immediately starting to fall. All categories of capital expenditure grew rapidly, but the acceleration in housing and other construction began at least one quarter before that in plant and equipment.

Increases in spending on dwellings were associated with the expansion of bank credit in housing until the middle of 1960 (table 5.4) and an increase of £22 million in the mortgage investment of building societies during 1959/60. The growth of commercial investment was facilitated by very heavy new capital raising in 1959 and 1960. A total of £528·5 million new money was raised in those two years, of which two-thirds was by the issue of debentures, notes, and other interest-bearing paper. About three-quarters of the latter, however, represented borrowing by financial institutions. But the most important source of funds for private capital formation in 1959–60 was undistributed company income, which reached a post-war peak in that year as a result of the great increase in degree of capacity operated during 1958/59.

It is evident from table 5.5 that the private investment boom in the Fourth Episode was broadly based. Manufacturing and commerce recorded the largest increase in 1959–60, but there were appreciable gains in primary and finance and property, as well as in dwellings. It is accordingly difficult to attribute the boom to any single cause.

> It can only be supposed that, over the months January to June 1959, the business world came to take a more sanguine view of the outlook generally. It had shown steady confidence through the period of overseas recession and could now see that this was justified. World conditions were improving, exports were likely to rise, capital was still flowing in. With more labour in sight, expanding plant capacity and better access to materials and equipment from abroad, it seemed feasible that we could move to a higher tempo of expansion without greatly endangering stability. (*Economic Survey*, 1960:4)

A further circumstance, not remarked by the Treasury, which must have exerted some stimulating effect both on consumption and investment

[6]Statement by the Prime Minister on inflation, *SMH*, 22 February 1960. See also *SMH*, 6 June 1959 (editorial).

demand was a steady increase in the (deseasonalised) rate of gross immigration from February 1958 (specific T_3) to September 1960 (specific P_4).

Table 5.5 Analysis of private fixed capital investment by sector, 1958/59 to 1960/61 £ million

	1958/59	Change	1959/60	Change	1960/61
Manufacturing					
Engineering and vehicles	79	+13	92	+14	106
Pulp and paper	16	+8	24	−2	22
Chemicals and oil	30	+2	32	+12	44
All other manufacturing	100	+7	107	+27	134
Total manufacturing	225	+30	225	+51	306
Primary	158	+11	169	+11	180
Commerce	130	+20	150	+1	151
Finance and property	32	+13	45	+1	46
All other non-dwelling investment	138	+22	160	+24	184
Total non-dwelling investment	683	+96	779	+88	867
Ownership of dwellings	267	+36	303	+25	328
Total private fixed investment	950	+132	1,082	+113	1,195

Source: National Accounts and *Developments in Australian Manufacturing Industry.*

On top of the expansion in consumption, fixed investment, and inventory demand, there was a notable increase in the rate of public expenditure between the fourth quarter of 1959 and the second quarter of 1960. As a result of all these factors, total domestic demand grew with great rapidity throughout most of the fiscal year 1959/60. On the evidence of monthly indicators, the general level of activity rose above trend in August 1959 (reference I_4). Employment indicators tended to lag those of output by a few months, but total civilian employment passed above trend in December 1959 and it was officially noted that by the end of January 'labour had already become scarce in a good many occupations and areas'. There was, of course, the usual undercurrent of pessimism and discontent. The *Sydney Morning Herald* observed in February 1960 that 'there is still a fair amount of unemployment'. Representatives of the manufacturers, scandalised by the ending of import controls, predicted large-scale dislocation of Australian industry. To the eye of at least one knowledgeable visitor, however, 'Australia's economy was growing so fast it was almost exploding'.[7]

[7]Mr John S. Bugas, a vice-president of the Ford Motor Corporation International Group, *SMH*, 23 February 1960. See also *SMH*, 22 February 1960 (editorial); and 23 February 1960 ('Manufacturers Staggered').

The Down-turn of Mid-1960

In August 1959, it was observed that 'the recovery in British and US industry, which led the advance, is now tending to slacken pace'. The effect upon demand for Australian wool was immediate. A 10 per cent increase in merino prices at the August auctions attributed to Japanese activity soon petered out in the following month, and from October 1959 (specific P_4) the Australian Export Price Index fell by 11 per cent to December 1960 (specific T_4). The peak of the US reference cycle occurred in May 1960 and the trough in February 1961. The daily rate of world raw wool consumption fell by 5 per cent in the third quarter of 1960 and in November the USA raised the tariff on imported woollens with adverse effects upon the British industry. Export volume expanded at trend rate during 1959/60, but the price fall resulted in a decline of £42 million in seasonally adjusted exports from the fourth quarter of 1959 to the fourth quarter of 1960 (figure 5.2) (*Business Cycle Developments*; see also *The Economist*, vol. 192: 568, 959; vol. 197: 710, 920).

The quarterly rate of importation, meanwhile, had been rising strongly since the beginning of 1959. To some slight extent this was a natural reaction to the progressive relaxation of import controls. For nearly eight years Australians had been deprived of many luxury goods – at the very moment in history when rapidly growing prosperity was putting their acquisition within the reach of all classes. Table 5.6 reveals, however, that half of all the changes in importation between 1958/59 and 1960/62 occurred in category XII, Metals, Metal Manufactures and Machinery, and that within this class the behaviour of iron and steel imports was dominant in the two latter years. Category XII includes fully-built-up

Table 5.6 Analysis of annual change in value of imports, 1958/59 to 1961/62
£ million

	1958/59	Change	1959/60	Change	1960/61	Change	1961/62
Metals and engineering							
Iron and steel	21.7	+2.3	24.0	+34.4	58.4	−38.0	20.4
Motor vehicles and components	61.4	+15.1	76.5	+5.7	82.2	−34.5	47.7
Other metals, machines, and plant	209.8	+44.9	254.7	+40.6	295.3	−48.1	247.2
	292.9	+62.3	355.2	+80.7	435.9	−120.6	315.3
Chemicals, oil, etc.	151.3	+10.0	161.3	+13.9	175.2	−1.7	173.5
Textiles, clothing	97.0	+14.1	111.1	+21.4	132.5	−28.3	104.2
Food, drink, tobacco	52.0	+2.9	54.9	+5.7	60.6	−7.0	53.6
All other imports, net	203.5	+40.9	244.4	+38.8	283.2	−45.2	238.0
	796.7	+130.3	927.0	+160.4	1,087.4	−202.8	884.6

Source: Oversea Trade.

motor vehicles and most household durables, but a finer analysis shows that changes in these items were slight (table 5.7). Luxury goods were concentrated chiefly in Food, Drink and Tobacco and Clothing and

Table 5.7 Analysis of the increase of imports, 1959/60 to 1960/61, by degree of competition with domestic industry
£ million

	1959/60	Change	1960/61
Products competing with domestic industry operating at or near capacity levels			
Iron and steel	28.7	+35.9	64.6
Other metals	13.9	+2.9	16.8
Electrical plant	37.2	+2.5	39.7
Earth moving machinery	4.4	+2.6	7.0
Petroleum products, etc.	99.9	+4.6	104.5
Chemicals	47.9	+8.9	56.8
Yarn and fibres	21.5	+10.2	31.7
Pulp and paper products	54.8	+15.3	70.1
Farm machinery	3.5	0.0	3.5
Total	311.8	+82.9	394.7
Non-competitive imports			
Motor vehicle components	71.6	+3.5	75.1
Food, drink, and tobacco	54.9	+5.7	60.6
Office machinery	9.6	+3.8	13.4
Printing machinery	4.1	+1.3	5.4
Paper making and processing machinery	4.3	+0.7	5.0
Other	32.0	+4.9	36.9
Total	176.5	+19.9	196.4
Products competing with domestic industry operating with reported spare capacity			
Motor vehicles	4.9	+2.2	7.1
Other vehicles	11.1	+3.9	15.0
Household durables	9.1	+2.1	11.2
Metal working machinery	14.9	+2.2	17.1
Textile machinery	5.3	+1.6	6.9
Food process machinery	1.2	+0.9	2.1
Household machinery	1.6	+1.3	2.9
Miscellaneous machinery	31.7	+10.9	42.6
Textile fabrics	81.1	+8.6	89.7
Clothing	8.5	+2.6	11.1
Total	169.4	+36.3	205.7
All other imports	269.3	+21.3	290.6
Total imports	927.0	+160.4	1087.4

Source: Oversea Trade, Survey and Manufacturing Industry in Australia, and *Secondary Industries*.

Textiles, but even here their monetary weight was small. The chief reasons for the great surge in importation during the first two years of the Fourth Episode are: first, the inability of domestic heavy industry to expand capacity fast enough to meet the needs of boom demand; secondly, a speculative accumulation of inventory against possible reintroduction of import controls; and thirdly, the cost disadvantage of many Australian import substitutes (*SMH*, 23 February 1960; see also *Survey of Manufacturing* . . . , May and September 1960).

As the first of these points traverses the best informed opinion of that time,[8] it requires some emphasis. The Commonwealth Department of Trade conducted two surveys of manufacturing activity in 1960: of basic materials and engineering for March and of consumer goods for August. Estimates of the degree of capacity operated during 1959–60 were reported or implied for most industries surveyed. Iron and steel, pulp and paper, textile yarns and fibres were all reported to be at virtually full capacity, the first two having so operated 'for some years'. In electrical plant, earthmoving equipment, and farm machinery, full capacity operation was reported for large firms, and high levels for others. For petroleum and chemicals no estimates were made, but it would appear from expansion plans in 1960 that production was generally pressing against capacity limits. Certain other imports such as office machinery, printing machinery, and paper-making plant can hardly be regarded as competitive with domestic industry in 1959–60, to judge from data on Australian production supplied in the *Secondary Industries Bulletin* for that year. Excepting canned meat, most food, drink, and tobacco was non-competing, and also about half of category XX (Miscellaneous Products). When those imports directly competing with Australian industries which reported surplus capacity in 1959/60 are totalled, their share of the increase in 1960/61, at £36·3 million, comprises less than 23 per cent of the whole (table 5.7). Even if all the unidentified residue were similarly competitive, the share would only rise to 45·9 per cent of the increase in that year.

The rate of inventory investment increased with the flow of imports. Seasonally adjusted value of non-farm stocks rose by £104 million in the first half of 1960, of which £47 million represented the gain in wholesale and retail stocks. Although commerce inventories continued to grow until the middle of 1961 the rate of accumulation fell off sharply from the second quarter of 1960. Taken in conjunction with the slower growth of consumer spending from the beginning of the year and a decline in instalment credit for retail sales from the first quarter (figure 5.3), this suggests that in 1960, as in 1955 and 1951, the levelling out in activity

[8]Karmel, 1961: 14. The increase in imports was greatest, 'generally speaking and with the exception of iron and steel, in the products of those industries which are not short of capacity'. For a more cautious view, however, see Hall, 1961.

began with internal trade. Specific B_4 for wholesale trade actually came in August 1959, but a decisive (and more realistic) down-turn can be seen in May 1960. Retail trade activity declined unequivocally from the same month (specific B_4, P_4, May 1960). Partly for structural reasons already considered, partly because of import competition, expenditure on household durables was especially weak. There was no increase in the (seasonally adjusted) rate after the second quarter, and no recovery of that rate until the second quarter of 1963, two years later.

A further consequence of the great influx of imports (and of the failure of export earnings to offset it) was a drastic decline in international reserves from February 1960. During the next eleven months reserves fell by £170 million (31 per cent). The rate of change of the money supply moved in unison, and by the end of the year had become negative. As the liquidity of the trading banks began to be affected by this process, the rate of advances to some industries began to slow down. Figure 5.4 shows that seasonally adjusted quarterly advances increased most rapidly between the second and third quarters. Advances for agriculture, retail trade, and housing declined absolutely in the second half of 1960.

The latter was the other main sector to show a clear down-turn before the middle of 1960. The monthly series, Private Building Activity (deflated building approvals) reached its peak in May (specific P_4 and B_4). The seasonally adjusted series, New Houses and Flats Commenced (figure 5.5) declined from the second quarter, and expenditure on dwellings from the third quarter. The *rate of increase* in total construction investment had been falling since the beginning of the year, however. To some extent the levelling out in private building activity may reflect more stringent credit, but there also seems to have been a fair degree of market saturation by the middle of the year.[9]

The rate of inflation, about which there was much concern throughout 1960, actually began to fall off well before the indicators of output and employment. The rate of increase of average earnings reached a (smoothed) peak of +11·3 per cent per annum in the last quarter of 1959. Inflation of the Construction Cost Index turned down in December 1959, of the Wholesale Price Index in March 1960, and of the Retail Price Index in May 1960. These data suggest two features of the 1959/60 boom in which it differs from its predecessors in 1950/51 and 1954/55. First, the increase in earnings in the Fourth Episode boom came six months to a year earlier than would have been the case had it followed market trends in demand for labour. In this respect the decisions of the Arbitration Court were doubly destabilising: too much purchasing power was unleashed in the early stages

[9]Hall and Hill, 1960: 565–6. 'A substantial falling off in house building activity is to be expected before 1964.'

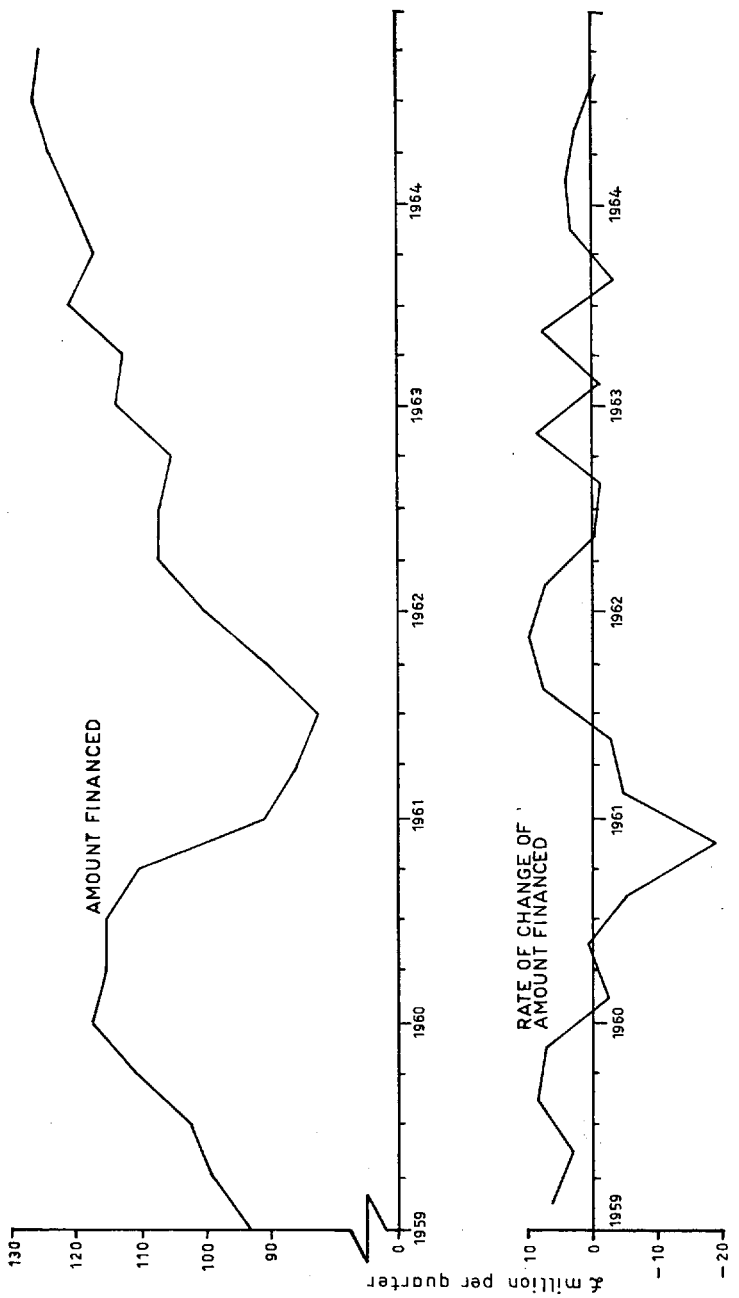

Fig. 5.3 Instalment credit for retail sales, 1959 to 1964, quarterly, seasonally adjusted. Source: Instalment Credit for Retail Sales and MRBS.

Fig. 5.4 Average quarterly advances of the major trading banks and quarterly rate of change of advances. 1959 to 1964, seasonally adjusted. Source: MRBS.

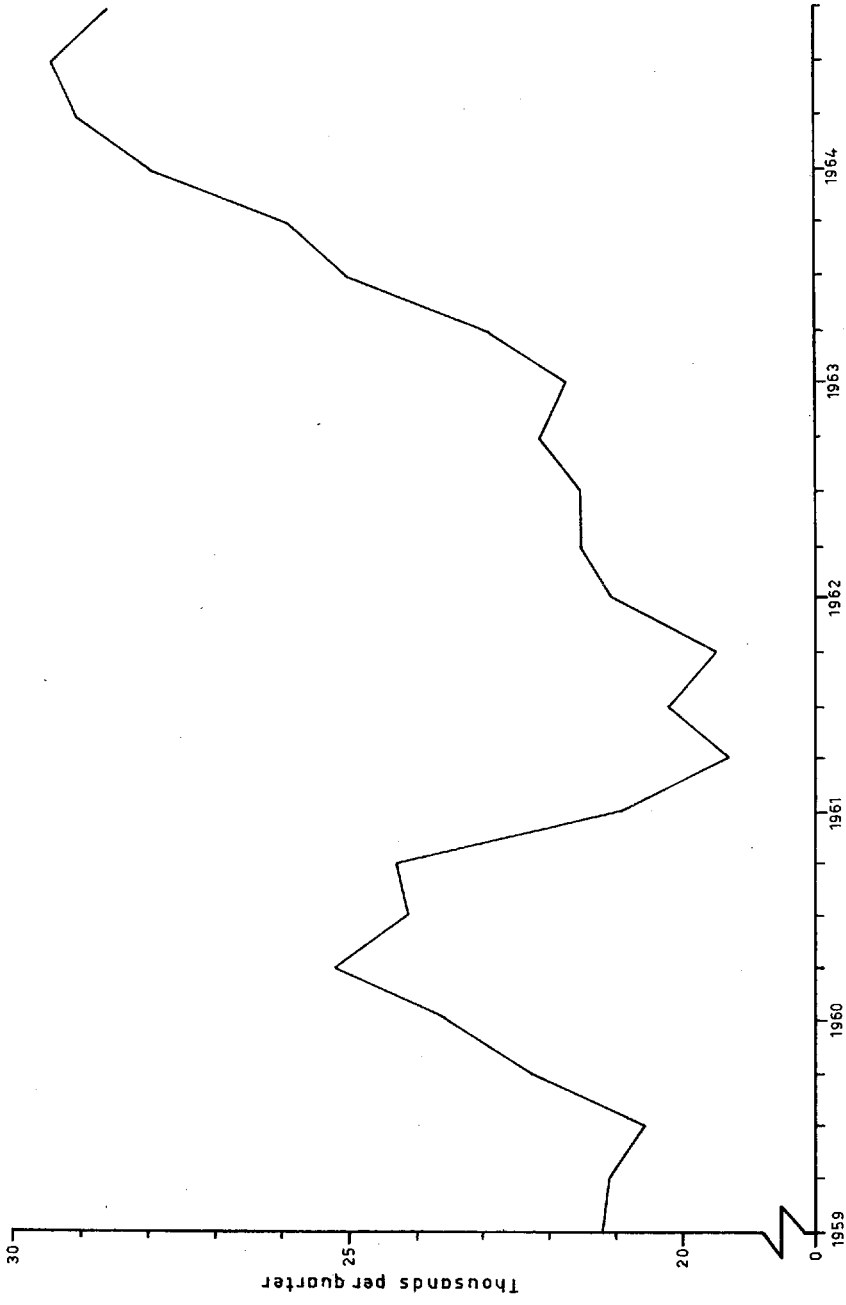

Fig. 5.5 New houses and flats commenced, 1959 to 1964, quarterly, seasonally adjusted. Source: MRBS.

of the boom; and the normal lag in wage increases was absent from the recessionary phase. Secondly, it appears that the free flow of imports in 1960 was, in fact, efficacious in restraining price increases. Wholesale price inflation came to a dramatic end within a month of the ending of import controls and by August the index was beginning to decline absolutely.

With the exception of female factory employment and female registered vacancies (specific B_4, July 1960) all monthly employment indicators reached trend-free peaks between August and December 1960. Because many others of the sample were leaders in the Fourth Episode, however, reference B_4 occurs in June 1960 and reference P_4 in July. This result is consistent with the *Quarterly National Accounts*. When the components of GNP are deseasonalised separately and recombined, a definite peak is seen in the second quarter of 1960 and a definite trough in the second quarter of 1961 (reference S_4, September 1961). An apparent recovery in the fourth quarter of 1960 and the first quarter of 1961 is largely spurious, being chiefly the result of movements in farm stocks and variation in the 'statistical error' term (figure 5.6).

It is evident from figure 5.6, but still more from table 5.8, that the crucial moment in the Fourth Episode boom came between the third and fourth quarters of 1960. The rate of expansion of consumer spending fell below 4 per cent per annum between these quarters, construction expenditure made no gain, and expenditure on plant and equipment fell by £6 million. Several factors combined to produce this wavering somewhen in September or October. The rapid outflow of foreign reserves, together with various warning signs from the authorities, created an expectation of dis-inflationary action by the government. The rate of increase of new equity capital raising declined between the second and third quarter and new loan capital raising had been falling absolutely since the first quarter. The availability of imports does not seem to have resulted in serious competition in 1960 except for isolated cases, but by the second half of the year some manufacturers were beginning to fear that it might shortly do so. (See *Survey of Manufacturing* . . . , May and September 1960.) Falling wholesale and retail sales from May were reflected in factory production (specific B_4, October 1960), but although the rate of inventory investment declined (table 5.8), the absolute level of stocks continued to rise.[10] Manufacturers' stocks increased by £120 million during 1960 and commerce stocks by £112 million. The demand for finance created by this inventory build-up led to a £54 million expansion of bank advances between the second and

[10]Note that the rate of inventory investment is the *first difference* of the level of stocks: the rate-of-change of inventory investment (as recorded in table 5.8) the *second difference*. If stocks were growing absolutely, but at a rate that began to decrease after a certain point, the rate of investment, though still positive, would decline from that point; and the rate-of-change of investment become negative.

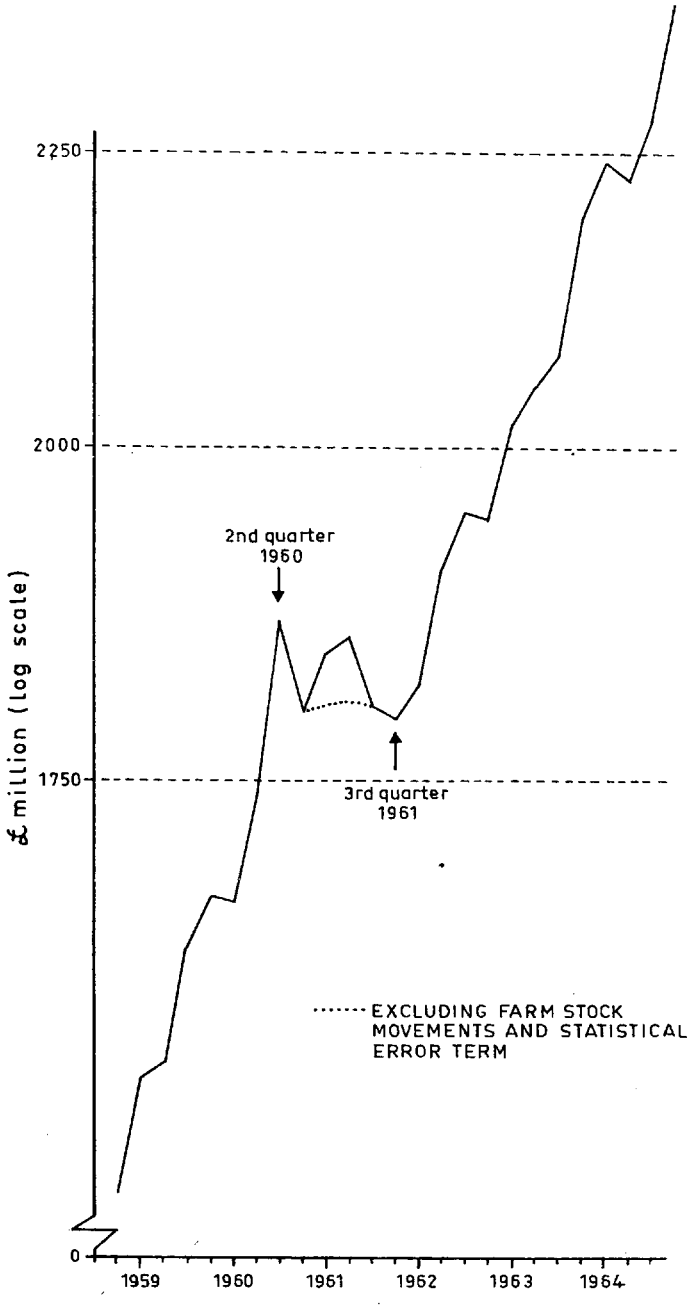

Fig. 5.6 Quarterly GNP at current prices, seasonally adjusted by component. Source: Quarterly National Accounts.

third quarter (figure 5.4), but this was the trading banks' last fling. By August the ANZ Bank, the Bank of Adelaide, the Commercial Bank and the National Bank had exhausted their excess liquidity and monetary restraint was beginning to bite (Davis and Wallace, 1963: table I). In September, finally, the speculative boom in shares and real estate which had accompanied the boom in activity, met a decisive check. The Share Price Index fell sharply in October, and four and a half years of almost continuously rising values came to an end.

Table 5.8 Quarterly rate of change in the components of GNE, fourth quarter 1959 to first quarter 1961
£ million
Seasonally adjusted

Quarter	Personal consumption	Fixed investment	Non-farm stocks	Public expenditure	Balance of trade
1959 IV					
	+36	+22	+14	+16	−27
1960 I					
	+26	+15	+64	+16	−32
II					
	+12	+18	−4	−11	−27
III					
	+9	−6	−9	+16	−8
IV					
	−1	−18	−14	+5	+35
1961 I					

Source: Quarterly National Accounts.

It has been remarked in chapter 1 that the evidence for a decline of growth-rates in January 1960 is at least as strong as that for a peak of activity in July. This opinion is confirmed by the seasonally adjusted quarterly data set out in table 5.8. The peak rate of expansion of both consumer spending and of private fixed investment came between the last quarter of 1959 and the first of 1960. Government expenditure was also growing at a high rate during the first quarter. The improvement in the balance of trade was greatest in the preceding quarter (figure 5.2) and the rate of inventory accumulation fastest in the second quarter of 1960. The down-turn in the growth-rate in the first quarter of 1960 is associated with a decline in the rate of increase of capital raising and hire purchase finance already noted, but seems more likely to have resulted from the income and liquidity effects of the adverse external balance, the working out of the 'once-for-all' effects of the 1959 wage increases and the approach to capacity limits in some sectors. The latter has already been remarked: it remains to observe that even among those industries reporting surplus capacity in March 1960, there were numerous complaints of shortages of

skilled and professional labour, and a few cases in which further expansion was limited by the labour supply (*Survey of Manufacturing* . . . , May 1960).

'AUSTRALIA'S FIRST INDEPENDENT SLUMP'[11]

The recession which began in March 1961 (reference D4) and ended some time in 1963 has received more literary attention than any other comparable event in Australian economic history. Three things only will be attempted in this section, chiefly with the object of supplementing or differing from the sources extant: first, a summary of events, with special emphasis on government policy and on a 'relapse' which seems to have occurred in 1962; secondly, a consideration of employment and unemployment during the Fourth Episode; and thirdly, some suggestions as to why its deflationary period was believed at the time to be so serious.

The Recessionary Phase of the Fourth Episode

In a general survey of the economy made shortly after the 1959–60 Christmas vacation, the Federal Cabinet decided that whereas 'until a few months ago it was possible to say that overall supply and demand were more or less in balance' (reference I4 came in August 1959), demand had by now 'started to race ahead' (*SMH*, 22 February 1960). The government determined to address the situation in four ways: by the abandonment of import controls, by intervention in the 1960 basic wage inquiry, by the avoidance of deficit finance in 1960/61 and by moral support for the Central Bank's policy of credit restraint.

The first of these was made possible by an increase in Australia's IMF quota to $US300 million in June 1959 and by the growing rate of private capital inflow. The second was dismissed at the time as 'little more than a gesture' (*SMH*, 22 February 1960: editorial), but the Arbitration Court relied heavily on the evidence of the Commonwealth representative in its reasons for refusing basic wage increases and a restoration of quarterly adjustments in 1960.[12] The last was largely frustrated by excess liquidity of the trading banks and still more, of course, by the non-bank financial intermediaries.

The third policy, avoidance of deficit financing, was implemented in the 1960/61 budget. According to D.A.L. Auld, both the 1959/60 and 1960/61 budgets were distinctly disinflationary in their final effects, notwithstanding a cash deficit and income tax reduction in the former

[11]The phrase, from Lydall, 1962:1, is typical of the rather extravagant language used at the time.

[12]'. . . a clear statement of the Commonwealth Government's attitude, supported as it is by submissions and economic material, is a matter which the Commission must seriously take into account.' (*Commonwealth Arbitration Reports*, vol. 94: 314–21 *passim*.)

(Auld, 1967: tables VI and VII).[13] In the second year the previous year's tax-cut was reversed, there were increases in company taxes and a small cash surplus of £15·5 million, which augmented the built-in tax response and outweighed the effect of increased public expenditure.

'What the government proposes to do', the Treasurer has said, 'should in no way be taken to mean that we believe some major interruption of growth to be necessary'. The October trade figures, however, put the Cabinet in a state of fear and alarm, and further measures were introduced in November with precisely that effect.[14] The object of freeing imports, it was announced, had been to reduce liquidity, but this had been frustrated by bank lending and other credit expansion. Higher fixed deposits and overdraft rates were therefore to be approved, and tax exemption on interest payments by companies to be restricted to the amount actually deducted in 1959/60.[15] As a further device for getting at the finance companies, sales tax on cars was to be raised from 30 per cent to 40 per cent, and on motor cycles and scooters from 16·7 per cent to 25 per cent. To assist the bond market, moreover, life assurance companies were to be required to hold at least 70 per cent of their investments in public authority securities.[16]

The Reserve Bank, meanwhile, which in August had 'asked banks to achieve an immediate and significant reduction in the rate of new lending', issued a further directive on advances policy, discontinued its support of the bond market, and permitted interest on savings deposits and overdrafts to rise in December. Subject to the need to assist export production, the banks were 'requested to achieve a considerable reduction in advances outstanding by the end of March 1961'. A reduction in the SRD in December was purely temporary, and intended to provide for the seasonal demand for increased liquidity.

As may be imagined, the November measures brought 'almost universal condemnation from industrial and financial authorities'. Private bankers justly resented the implication that their advances policy was to blame for the debacle. Manufacturers, already smarting under the liberalisation

[13]The decline in fiscal leverage in each year was chiefly the result of the built-in tax response.

[14]'The release of the October trade figures appears to have shocked and disturbed the government's economic advisers. It seems to have converted their previous confidence that the hump in imports would in due course be turned into the fear that the trade figures could bring on a run on imports and the Australian pound.' (*SMH*, 17 November 1960 – financial editor).

[15]'It was [i.e. increased purchase tax] a way of getting at the hire purchase business. If this measure were extended to television sets, then the job of controlling hire-purchase expenditure might be left to monetary policy.' (Blakey, 1961:15–17.)

[16]See the statement by H.E. Holt, in *CPD*, vol. 29 (NS): 2852–7. The proposals to restrict tax exemptions and to control the portfolios of life assurance companies were never implemented.

of imports, accused the government of making a scapegoat of the motor industry. The Leader of the Federal Opposition thought that Australia's foreign reserves were being drawn down to provide frogs' legs in aspic for 'gourmets, gluttons and epicures'. Institutional support came only from the Woolgrowers' and Graziers' Council. Professional economists, of course, were more temperate in their reaction and tended even to welcome the measures. But as the *Sydney Morning Herald* bitterly observed: 'Mr. Menzies is closer to the academic administrators with a distinct ideology, who speak the language he understands, than he is to the rank and file of his own party'. On this occasion, however, the Prime Minister and the economists were wrong.[17]

The chief effect of the measures, both immediately and in the longer run, was psychological. The sale of motor vehicles, of course, was directly affected by the tax increase, and new car registrations fell dramatically from November 1960 to July 1961. Private expenditure on motor vehicles fell by £13 million in the first quarter of 1961 and by a further £7 million in the following two quarters (figure 5.7). By June 1961, more than 6,000 motor and other vehicle workers were unemployed, 4·5 per cent of the work-force in that industry (table 5·11). The effect of higher interest rates, in addition, intensified the credit squeeze begun in August. Although the proposal to abolish tax deductivity for interest charges was never implemented,

> The expectation that it would be introduced was one factor leading many finance companies to reduce the scale of their business (especially by withdrawing from the field of real estate into which they had expanded during 1960 and earlier). (Perkins, 1965: 10)

and the rate of loan capital raising fell off still further, never again to recover the 1959–60 levels during the Fourth Episode. The fall in bond prices, moreover, had an adverse effect on confidence, and the plan for compelling insurance companies to increase their investment in government bonds enraged and alienated the financial community more than all the other measures together.

Coming at exactly the right juncture to resonate with every other movement in the economy, the November measures gave activity a decisive downward push. The stock market collapsed; private fixed investment fell by £18 million (24 per cent per annum) in the next quarter (table 5.8), non-farm inventory investment by £14 million and a further £39 million

[17]For public reaction to the measures see *SMH*, 17 and 25 November 1960. Professor P.H. Karmel's support appears in *Financial and Commercial Supplement*, *SMH*, 28 November 1960. Mr Calwell's preposterous remarks are recorded for posterity in *CPD*, vol. 29 (NS): 2863.

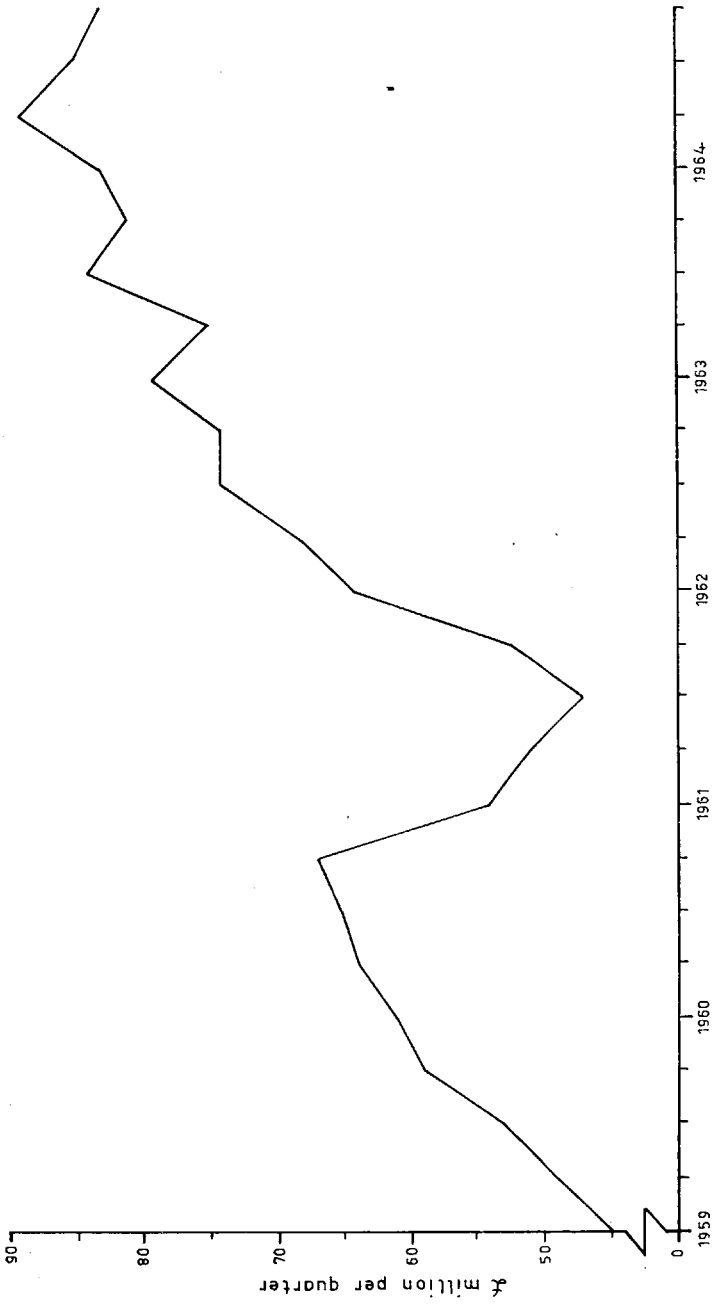

Fig. 5.7 Personal consumption expenditure, motor vehicles, 1959 to 1964 quarterly, seasonally adjusted. Source: Quarterly National, Accounts.

in the next quarter; and after one quarter's lag the rate of importation – to correct which the whole operation had been launched – declined by £89 million during the remainder of 1961 (figure 5.2).

The two sectors hardest hit were housing and motor vehicles, but both of these affected large areas of the economy through the linkage effects previously considered. The Index of factory production fell steeply to a trough in June 1961: between 1960/61 and 1961/62 there was virtually no increase in the Index and four groups (building materials, sawmill products, industrial metals, and rubber products) showed absolute declines (*Indexes of Factory Production*). Total electricity generated fell off proportionately with factory production, and all indicators of labour demand plunged to troughs in the middle or third quarter of 1961. The decline was reflected in consumer spending which fell absolutely, in total, during the first half of the year. The 'living expenses' component grew by only £18 million (equivalent to 2·4 per cent per annum growth) during the first three quarters. Retail and wholesale trade activity remained below trend for the whole of 1961.

The decline in imports, together with a withdrawal of £A78 million from the IMF in April, loan raising in Switzerland, Canada, and the USA, and a sustained inflow of private capital until the end of the fiscal year, resulted in a recovery of London funds from January 1961. The immediate object of the measures was achieved by June 1961, when first-line international reserves climbed back above trend. A general election was due at the end of the calendar year and the government took hasty steps to amend the internal situation.

In February 1961, the additional sales tax on motor vehicles was removed, and in the following month there were tax concessions to stimulate exports. Between April and July the SRD was lowered from 17·5 per cent to 12·5 per cent and in June the banks were encouraged to increase new lending for housing and primary production. The Commonwealth's 1961/62 budget was mildly expansionary, with reductions in sales tax of £11 million per annum and other minor concessions, resulting in a cash deficit of £16·5 million. Auld's (1967: 342 and table VIII) calculations show that although it was inadequate to achieve full employment, 'the impact of the budget prevented an absolute decline in GNP during 1961–62'.

In December 1961, the election was fought (and very nearly lost) and immediately after the summer recess a series of expansionary measures were introduced in Parliament. Small grants were made to State governments and authorisation for State and local government borrowing increased. Unemployment benefit, which had been raised by 10s. a week in the 1961/62 budget, was increased by a further 10 per cent from the beginning of March, and a 5 per cent rebate of personal income tax was made effective from the same day. Sales tax on motor vehicles was further reduced

(from 30 per cent to 22·5 per cent on passenger cars) and extra credit for housing was made available.

Partly as a result of these measures, partly from natural causes as the value of stocks and the rate of importation fell to more suitable levels, there were definite signs of recovery in the second half of 1961. Registered vacancies for males (specific T_4, August 1961) and females (specific T_4, July 1961) began to rise, as did the cyclical components of other labour series. Private building activity turned up in April, factory production in July and new car registration in August. Thus far, the economy appeared to behave very much as it had done during the 1952/53 recession. Towards the end of 1961, however, many indicators levelled out below trend values, and recovery stagnated for roughly another year. Other factors were at work on this occasion which it is necessary to examine.

Two sets of influences, external and internal, converged in 1962 to depress real activity and protract the convalescence of animal spirits.

Exports of goods-and-services declined in real terms between 1961/62 and 1962/63 (table 5.9), the only year during the Fourth Episode in which the rate of growth of export volume was not strongly positive. Table 5.9 shows that the decline of merchandise exports was greatest in wheat and flour (where shipments in the previous year had been abnormally high as accumulated stocks were drawn down), wool, and iron and steel. The decline in wool was associated with a temporary weakening in world demand which also affected prices, and that of iron and steel with 'increasing home demand for steel and strong competition abroad' (*Economic Survey*, 1963: 15).

Table 5.9 Analysis of the change in volume* of merchandise exports, 1961/62 to 1962/63
£A (1959/60) million

	1961/62	Change		1962/63
		Volume	%	
Wool	384.0	−19.0	−4.9	365.0
Wheat and flour	151.5	−35.4	−23.4	116.1
Meat	89.7	+22.1		111.8
Iron and steel	47.5	−18.5	−38.9	29.0
Rocks, minerals, etc.	44.4	−4.7	−10.5	39.7
Sugar and syrup	37.2	+5.3		42.5
Hides and skin	38.2	+13.1		51.3
All other	319.9	−16.9		303.0
Total merchandise exports	1,112.4	−54.0	−4.9	1,058.4

*Exports in constant 1959/60 pounds by deflating values from *Oversea Trade* by appropriate groups of Export Price Index (1959/60 = 100) from recent *MRBS*.
Source: Oversea Trade and *MRBS*.

A strong recovery in import volume coincided with the sag in exports. During most of the Fourth Episode, in fact, import and export volumes

vary reciprocally. Merchants and manufacturers had liquidated inventories until the beginning of 1962 but now began to restock: the cost ratio was generally adverse and now, for the first time since the war, had full scope for operation. On top of the weakening current balance (figure 5.2, fourth quarter of 1961 to third quarter of 1962) there was a disastrous fall in private capital inflow from £336 million in 1960/61 to £84 million in 1961/62. The recovery of international reserves levelled out in October 1961, therefore, and there was a slight relapse during the next twelve months. There were the usual income and liquidity effects of these circumstances.

A further external factor contributing to the general depression of activity in 1961/62 was the decline in the monthly rate of immigration from September 1960 to May or June 1962. The immigration target was lowered in 1961 but the chief reasons for the decline seem to have been full employment and rising levels of consumption in West Germany, Holland, and Britain, and adverse publicity, in continental Europe, of the Australian recession (Appleyard, 1963).

The internal factors were numerous and interrelated. The expansion of public employment, which had cushioned the fall of private employment in 1961/62, slowed down in the following year (table 5.12). The proposals for compulsory gilt-edged purchases by insurance companies and pension funds, though substantially modified in the form of tax incentives to invest in bonds, tended to reduce bank liquidity and that of the public generally. Moreover, 'their main impact was actually delayed until about the worst part of the recession' (Perkins, 1965: 11). The long-term sluggishness of household durables was aggravated by import competition and many other industries were beginning to realise their worst fears of February 1960. There was a tendency, indeed, to blame the whole recession on unrestricted importation. The *Sydney Morning Herald*, for example, which at the time had welcomed the move as 'moderate and sensible', decided by the end of 1961 that the government's 'greatest blunder was the decision to free imports in February 1960, which led to the disastrous November measures'.[18] Whether this be just, there can be no doubt that the chief difference between 1953 and 1962 is that whereas in the former year the import restrictions afforded a powerful stimulus to domestic industry, an abundance of cost-competitive imports during the latter exerted a strongly dampening effect (*Survey of Manufacturing* . . . , 1962).[19]

[18]Compare the leading article of 22 February 1960 with that of 8 December 1961.

[19]*Survey of Manufacturing*, 1962: 10, 27, 28, 29, 31, 37, 38, 40, 42, 46, 47, 49, 51, 52, 58, 59, 69, 71, 76, 77, 83, 85, 87, and 88. The survey was made for April-May 1962 and covered building and construction materials, basic materials, engineering products, durable consumer goods, and non-durable consumer goods. An overwhelming majority of all industries reported moderate to serious difficulty through import competition.

Import competition was seriously aggravated by a large increase in the basic wage in July 1961, perhaps the most important single factor on the domestic side. The 1961 wage judgment is considered more fully in the final section of this chapter.

Each of the foregoing factors, external and internal, contributed to a decline in business confidence begun by the November 1960 measures. The very awareness that recovery was being delayed, of which fact the 1961 election result was dramatic evidence, tended still further to postpone it. The stock market was bearish, new capital raising ran at little more than half the peak 1960 rate for three years, and private fixed investment failed to recover previous levels until the fourth quarter of 1962. The last was aggravated by the secular retardation of dwelling investment predicted by Hall and Hill (1960), and also by a long delay in the restoration of more liberal credit for housebuilding.[20]

The underlying health of the economy was sound, however, and the growth of real product continued at high rates notwithstanding two and a half years of less than full capacity operation (table 5.19 on p. 199). After two quarter's hesitation in 1961, consumer spending on living expenses continued to grow as though nothing had happened. The February 1962 measures provided further stimulus to consumption, exports and foreign investment recovered in 1962/63, and the 1962/63 budget continued the expansionary effect of its predecessor. By the beginning of the fiscal year 1963/64 it was safe to say that the recession was over (*Economic Survey*, 1963: 7–8, 'Clearing Skies').

Employment and Unemployment During the Fourth Episode

In August 1961 (four months before the general election) the Commonwealth Treasurer declared that 'the immediate problem is to secure a reduction in the number of unemployed people' (Budget Speech, 1961/62: 3). Six months later, however, the Prime Minister admitted to

> the existence of a level of unemployment which represents a serious human problem for thousands of people and a material economic waste through the existence of unused resources of men, materials and installed industrial capacity. (Press release P. M. No. 21/1962)

Concern at the degree of unemployment continued to be expressed until the middle of 1963.

The evidence of monthly indicators of employment and unemployment

[20]Interest on credit foncier and mortgage housing loans at savings banks did not fall until April 1963. The maximum housing loan at the Commonwealth Savings Bank remained at £2,500 until February 1962, when it was raised by £250, followed by a further £250 increase in July 1962 and a £500 increase in March 1963. Real estate values, inflated by the 1958–60 boom, never fell, however, hence there was a serious 'deposit-gap' problem until the middle of 1963.

has been considered in chapter 1, in which it was concluded that the deflationary period of the Fourth Episode, statistically speaking, was actually less serious than that of the First. Yet the volume of complaint was vastly greater in 1961 and 1962 than it was in 1952 or 1953. Further analysis and explanation is evidently called for.

By a happy chance, the Commonwealth 1961 census was taken at almost exactly the reference cycle Trough of the Fourth Episode (July 1961). Specific T_4 for total civilian employment occurred in July; in August and September for private employment; in July and August for registered vacancies; and in September for persons receiving unemployment benefit. Numbers reported 'not at work' as at 30 June 1961, therefore, enable us to investigate the unemployment effect of the recession with unusual precision.

Data presented in *Census Bulletin No. 34* have been further summarised, rearranged, and adjusted in tables 5.10 and 11. The adjustment was necessary to deal with the large number of unemployed whose industry was not stated or inadequately described: these totals were prorated over industry classes on the basis of reported unemployment. No distribution was made of the corresponding work-force figure, as the unemployment percentage would have been unaffected.

Table 5.10 Census estimate of unemployment by industry, as at 30 June 1961
Thousands

	'Not at work'			Work-force	Percent of work-force 'not at work'
	Males	Females	Persons		
Primary	18.3	0.5	18.8	458.9	4.1
Mining and quarrying	2.3	0.0	2.3	54.4	4.2
Manufacturing	41.9	18.1	60.0	1,140.3	5.3
Electricity, gas, water	1.0	0.0	1.0	94.3	1.1
Building and construction	30.5	0.1	30.6	372.3	8.2
Transport and storage	8.9	0.0	8.9	269.5	3.3
Communication	0.7	0.5	1.2	93.8	1.3
Finance and property	1.0	0.7	1.7	141.2	1.2
Commerce	15.1	8.8	23.9	686.8	3.5
Public authority n.e.i. (includes defence)	0.9	0.3	1.2	169.8	0.7
Community, professional, and business services	2.1	5.9	8.0	410.1	2.0
Amusements, hotels, etc.	5.9	9.0	14.9	248.1	6.0
Other industries and doubtful	—	—	—	85.6	
Total 'not at work'	128.6	44.0	172.6	4,225.1	4.1
Total in work-force	3,165.9	1,059.2	4,225.1		
Percent 'not at work'	4.1	4.2	4.1		

Source: Census Bulletin No. 34, 14 February 1964.

Table 5.11 Census estimates of manufacturing unemployment by sub-class, as at 30 June 1961
Thousands

	'Not at work'			Work-force	Percent of work-force 'not at work'
	Males	Females	Persons		
Founding, engineering, metal working	13.0	2.1	15.1	331.9	4.5
Manufacturing, assembly and repair of vehicles, parts and accessories	5.9	0.5	6.4	140.7	4.5
Yarns, textiles, and clothing	4.2	10.6	14.8	168.5	8.8
Building materials	5.7	0.0	5.7	100.7	5.7
Food, drink, tobacco	5.7	1.8	7.5	153.9	4.9
Pulp and paper	1.5	0.8	2.3	90.4	2.5
All other manufacturing	5.9	2.3	8.2	154.2	5.3
Total 'not at work'	41.9	18.1	60.0	1,140.3	5.3
Total in work-force	887.1	253.2	1,140.3		
Percent 'not at work'	4.7	7.1	5.3		

Source: Census Bulletin No. 34, 14 February 1964.

The first conclusion to be drawn from table 5.10 is that the incidence of unemployment at the trough of the Fourth Episode was almost exactly the same, in aggregate, as that at the trough of the First. The evidence of H.P. Brown in the 1952/53 basic wage case has been referred to in chapter 3. According to his estimates prepared for the occasion, total male unemployment in January 1953 was 118,400 (Brown, 1953: table V). The same author estimated the available male work-force to be 2,794,200 as at 30 June 1952, and 2,827,900 for the following year (1959: 97). By linear interpolation a total of 2,811,000 is obtained for January 1953. These figures imply that 4·2 per cent of the male work-force were unemployed in January 1953 (one month after reference S_1). Even if all of those not at work in June 1961 were unemployed in the sense used by Brown, therefore, the degree of male unemployment at the later date was fractionally less serious than in 1953, though the greater seasonal unemployment in January probably offsets this. Brown made no estimate of female unemployment, but gave his opinion that 'generally speaking, the decline in female employment has been relatively greater than in male employment'. On both occasions, therefore, the demand for labour declined to a point at which slightly more than 4 per cent of the work-force was unemployed, and thereafter began to recover.

It further appears from table 5.10 that in seven out of the twelve industry classes, representing 67 per cent of the total work-force, the degree of unemployment was greater than 3 per cent. The Federal Treasurer was clearly wrong in claiming, two months later, that the decline in activity

was merely 'sectional'. It was incorrect, moreover, to say that the industries chiefly affected were those which had 'expanded too fast in the boom period' (Budget Speech). Table 5.12 shows that the construction industry, in which the incidence of unemployment was most severe, grew rapidly only in the later stages of the boom. Community, professional, and business services, however, without question the fastest growing sector, suffered relatively slightly in 1961.

Table 5.12 Changes in average annual employment by industry in the Fourth Episode Change on previous year in thousands

	1959/60	1960/61	1961/62	1962/63	1963/64
Manufacturing	+45.4	+15.4	−22.4	+48.0	+43.6
Building and construction	+2.3	+11.9	−3.9	+4.7	+12.2
Commerce	+14.7	+25.3	−4.0	+17.4	+23.9
Community and business service	+18.3	+18.4	+17.5	+18.7	+19.1
Finance and property	+8.2	+10.2	+4.8	+3.9	+7.6
All other	+3.7	+14.1	+6.8	+10.0	+21.8
Total civilian employment	+92.6	+95.3	−1.2	+102.7	+128.2
Of which:					
Private employment	+81.1	+84.3	−26.7	+87.0	+102.7
Public employment	+11.5	+11.0	+25.5	+15.7	+25.5
	+92.6	+95.3	−1.2	+102.7	+128.2
Total work-force	+82.0	+86.0	+69.0	+80.0	+109.0
Marginal unemployment	−10.6	−9.3	+67.8	−22.7	−19.2
Marginal unemployment accumulated in IV Episode	−10.6	−19.9	+47.9	+25.2	+6.0

Source: *Wage and Salary Earners in Employment*, June 1954 to June 1962, and July 1962 to June 1964, and Cameron (1967).

Male unemployment was absolutely greatest in primary, manufacturing, construction and commerce; female unemployment in manufacturing, amusements, hotels, etc., and commerce. A further break-down in table 5.11 shows that aggregate unemployment was serious in all classes of manufacturing, but worst in yarns, textiles, and clothing, where one quarter of all female unemployment was concentrated.

The overall picture which emerges from tables 5.10 and 11 is of a general and widespread decline in activity of about the same magnitude, in aggregate, as that of 1952. Only utilities, other public authorities, and finance and property were relatively unaffected. As in the earlier recession, most monthly employment and unemployment indicators reached bottom about six months after passing below trend. A further resemblance to 1952 lies in the relatively greater seriousness of unemployment among females, especially in the clothing and textile industries. The employment situation at the trough of the Fourth Episode, therefore, was remarkably similar to that at the trough of the First.

Tables 5.12 and 13 attempt a summary of changes in the labour market throughout the Episode. The yearly change in annual averages of wage and salary earners in employment was broken down by industry and compared with the annual change in Cameron's work-force estimates. The employment data exclude working proprietors, employees in rural industry, and private domestics: substantial changes in any of these categories could therefore distort the estimates of marginal unemployment yielded by the comparison. Subject to this qualification, it appears that employment grew faster than work-force until 1960/61; that average unemployment in 1961/62 was 68,000 higher than the previous year and 48,000 higher than at the beginning of the Episode as a result of the recession; and that by 1963/64 total unemployment was only 6,000 higher than it had been, on average, in 1958/59, 1·4 per cent of the cumulative increment to the work-force during the Fourth Episode.

Table 5.13 Changes in average annual manufacturing employment in the Fourth Episode
Change on previous year in thousands

	1959/60	1960/61	1961/62	1962/63	1963/64
Founding, engineering, metal working	+23.5	+7.0	−6.3	+16.6	+21.7
Manufacturing, etc., of vehicles, parts and accessories	+5.6	+5.1	−6.7	+11.1	+5.8
Yarns, textiles, clothing	+5.6	−0.8	−5.7	+7.3	+2.1
Building materials	+3.5	+1.0	−4.2	+1.6	+1.9
Food, drink, tobacco	+0.8	+0.2	+2.2	+2.7	+3.2
Pulp and paper	+3.4	+2.8	−0.7	+2.5	+3.0
All other manufacturing	+3.0	+0.1	−1.0	+6.2	+5.9
	+45.5	+15.4	−22.4	+48.0	+43.6

Source: Secondary Industries Bulletins.

The boom began in manufacturing, especially in metals and engineering (table 5.13), but in the second year there were large expansions in commerce and construction, both of which shared with manufacturing in a strong down-turn the following year. Employment in community and business services was virtually unaffected by the recession; a slight slowing down in 1961/62 accounts for the 2·0 per cent unemployment recorded at 30 June 1961, but also implies that it would have been very short-lived. A large expansion of public employment in 1961/62 was almost sufficient to prevent an absolute decline in total civilian employment: a similar expansion in the following year would have made a significant different to average unemployment in the later stages of the recession.

The behaviour of average employment changes from 1961 to 1964 enables us to make a guess at the relative seriousness of unemployment during the later stages of the recession. Employment in manufacturing, construction, and commerce was lower in 1961/62, on average, than the

previous year. This implies either that unemployment continued to grow in these industries after June 1961, or that a recovery beginning at that time was much shallower than the decline had been. In either case, the incidence of unemployment would have been generally high in these sectors for at least a year after the trough was reached. The gains recorded in manufacturing and commerce in 1962/63 compared with the unemployment levels at 30 June 1961 suggest that high levels of unemployment were recovered during the course of this year. The gains in construction in 1962/63 and 1963/64, on the other hand, would have been inadequate to wipe out unemployment by 1964. Unemployment in all other industries (chiefly primary, utilities, and services) totalled 58,000 in June 1961 (table 5.10). Gains of 29,000 in 1961/62 (table 5.12) would have halved this by the end of the year and further large gains in 1962/63 would probably have led to labour shortages.

Within the manufacturing sector (tables 5.11 and 13) unemployment seems to have been slight and short-lived in pulp and paper. Food, drink, and tobacco show no annual decline, suggesting that the 4·9 per cent unemployment in June 1961 was short-lived. In view of the slow growth of employment in this sector throughout the Episode, however (approximately 1·1 per cent per annum), an alternative explanation is possible. The 1960 survey of the processed foodstuffs industry reported that most employees were unskilled and that there was no shortage of labour, even in rural areas (*Survey of Manufacturing* . . . , Consumer Goods Industries, 1960: 59–64). It would seem from this that some of the unemployment in this industry was structural and long-run, relatively unaffected by business fluctuations. Some would also be seasonal.[21] Engineering and vehicles seem to have suffered about one year of heavy unemployment, followed by a strong recovery in 1962/63. Gains in yarns, textiles, and clothing, however, would have been inadequate to eliminate unemployment by 1963/64. Unemployment in building materials (mine and quarry products; bricks, pottery, glass; sawmills, joinery, etc.) appears to have remained at high levels throughout the episode.

In summary, therefore, it seems that whereas the behaviour of employment and unemployment in the down-swing was similar in all respects to that in 1952, the mid-1961 trough was followed by another year or so at high unemployment in many important industries, by contrast with a rapid overall recovery during 1953. The return to high employment was delayed for about one year in engineering and vehicles and commerce, and for considerably longer in construction, textiles, and building materials.

[21]There is also a very high turnover in this industry because of seasonal demand. In September 1961, the engagement rates were 6.2 per cent of average employment for males and 11.9 per cent for females; the separation rates were 6.1 per cent for males and 11.0 per cent for females (*Labour Turnover*, September 1965, tables 2 and 3).

Employment in most service industries except commerce suffered relatively little during the recession.

The anatomy of the Fourth Episode suggested by the employment data confirms the judgment previously made: namely, that its recovery phase differed from that of the First Episode chiefly as a result of import competition and market saturation in the household durables sector. The behaviour of construction and of building materials was the result of longer-run factors, however, and the state of business confidence was evidently less buoyant in 1962 than in 1953. It was through this latter that expected, as distinct from realised, import competition exerted an influence upon the economy in the Fourth Episode.

Attitude of the Public Towards the 1961/62 Recession

It has been seen that except among the official spokesmen of labour there was general complacency, in 1952/53, about the interruption to economic growth. During the 1960s, however, a disturbance of smaller magnitude evoked a far greater quantity of discontent.

An essay in group psychology lies beyond the scope of this book. Some consideration of the public reaction cannot be avoided, however. Statistical evidence may be thoroughly misleading and the state of popular sentiment a better guide to economic processes. Even if this were not the case, moreover, an opinion formed by the public about economic events, whether right or wrong, is bound to influence their subsequent course. In this section, therefore, some suggestions are offered to account for attitudes of the public during the two and a half years after November 1960.

The collapse of the speculative boom in September 1960 came at the end of four years or more of continually rising share prices and real estate values. The course of the former is shown in figure 5.8: some indication of the latter may be gathered from a survey of Melbourne land prices conducted by the Housing Industry Research Committee (HIRC), the results of which are summarised in table 5.14.

On the evidence of Melbourne prices, land values doubled between 1957 and 1961; thereafter, however, the increase was far more moderate. Although the decline in share prices was absolutely and relatively greater in 1951, it came after a much shorter boom and was more quickly reversed. To investors and speculators in the Fourth Episode the sluggish market until the end of 1963 must have appeared in very painful contrast to the period between 1953 and 1960.

The behaviour of share and real estate prices reflects not only the more or less inevitable collapse of the speculative boom, but also the generally depressed state of business confidence from 1961 to 1963. As late as January 1963 it was said that 'the major problem today appears to be restoration of confidence': its lack was ascribed to the effect of the long-

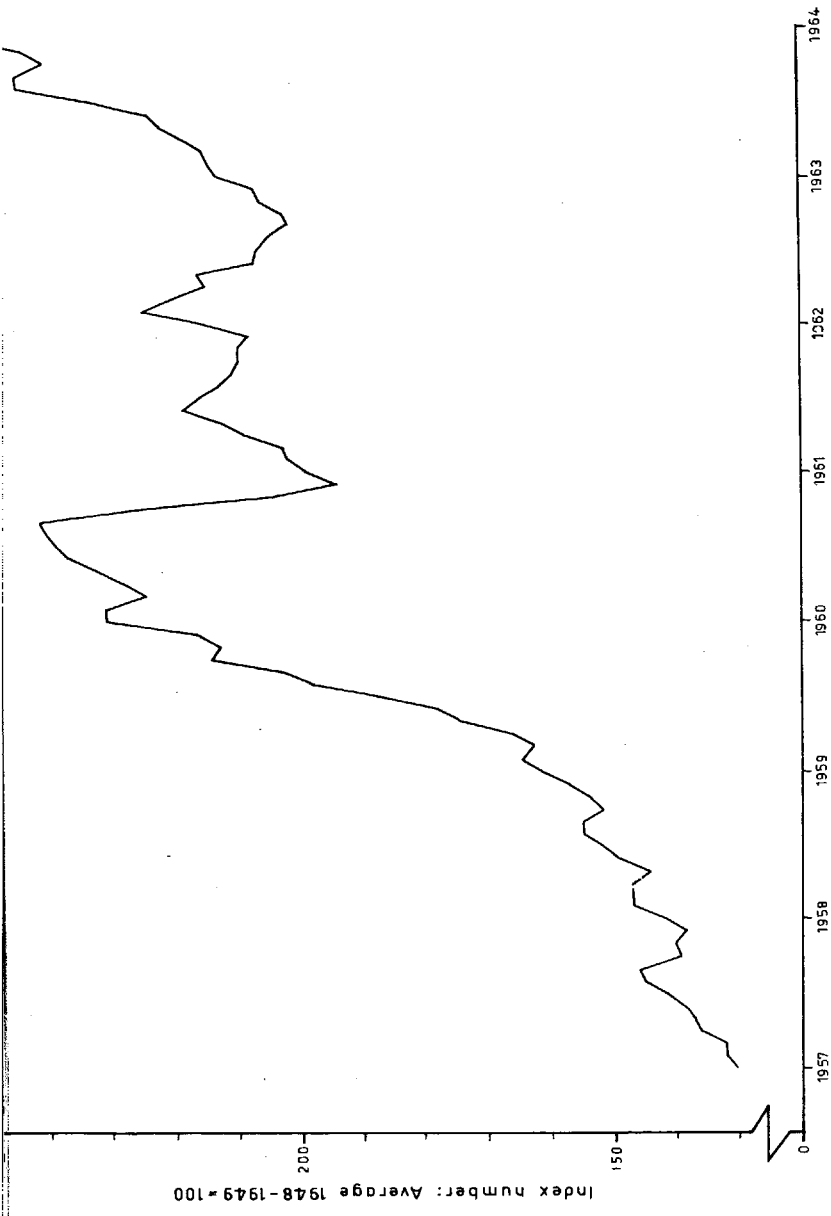

Fig. 5.8 Index of ordinary share prices, Sydney Stock Exchange, 1957 to 1963 monthly, unadjusted. Source: Commonwealth Bank.

Table 5.14 Index of low cost fringe area land prices, Melbourne, 1954–1964

	Price per lot	Annual change	
	£	£	%
1954	328		
		+60	+18.3
1955	388		
		+84	+21.6
1956	472		
		+88	+18.6
1957	560		
		+149	+26.6
1958	709		
		+219	+30.9
1959	928		
		+117	+12.6
1960	1,045		
		+139	+13.3
1961	1,184		
		+91	+7.7
1962	1,275		
		+89	+7.0
1963	1,364		
		+80	+5.9
1964	1,444		

Source: HIRC Newsletter, October 1964.

reversed November 1960 measures, the free flow of imports, and the high level of unemployment (*ANZ Bank Quarterly Survey*, January 1963: 2).

The last was possibly the most significant factor in the minds of those relatively unaffected by the behaviour of the stock market or an infringement of the rights of insurance companies. Most judgments of the matter, however, were based on the highly misleading statistics of the Commonwealth Department of Labour and National Service. According to these, the Fourth Episode boom, 'statistically, appears to have hardly got under way' (Karmel, 1961: 1), and the level of unemployment at the end of 1962 to have been as high as it had been at the trough of the 1952/53 recession. The higher level of registered unemployment in the late 1950s and 1960s, however, reflects in part an increased propensity to use the facilities of the Commonwealth Employment Service, especially among women. Table 5.15 attempts an extremely rough measure of this change. Taking census 'not at work' to represent unemployment in June 1961, Brown's estimate of male unemployment for January 1953, and a guess at female unemployment for that date derived from Brown,[22] it appears that registered unemployment forms a significantly larger proportion of actual unemploy-

[22]Taking Brown's estimate of female work force in June 1952 (his latest, probably not much different from that *available* six months later) and applying the male unemployment rate of 4.2 per cent.

ment in 1961 than in 1953. It should be added that since actual unemployment in 1961 is certainly overstated, and female unemployment in 1953 almost certainly understated, the true change in the propensity to report is greater than table 5.15 suggests.

Table 5.15 Registered unemployment in relation to actual unemployment, January 1953 compared with June 1961
Thousands

	January 1953	June 1961
Males		
Registered unemployment	65.0	79.9
Actual unemployment	118.4	128.6
Proportion registered	54.9%	62.1%
Females		
Registered unemployment	24.9	31.7
Actual unemployment	33.0	44.0
Proportion registered	45.2%	72.0%

Source: Department of Labour and National Service, Brown (1959), and *Census Bulletin No. 34*, 1964.

Assuming that the reporting rates in 1953 and 1961 applied – approximately – to the following two years in each case, interpolating Brown's work-force estimates for the early period, and using Cameron's for the later, an order-of-magnitude comparison of the two recovery periods can be made. The result is shown in table 5.16, in juxtaposition with official quarterly work-force surveys of the six capital cities.

Table 5.16 Degree of male unemployment following the recessions of 1952 and 1961
% of work-force unemployed

First Episode		Fourth Episode			
				Six capital cities	
				Nov. 60	0.7
				Feb. 61	1.4
				May 61	2.4
Jan. 53	4.2	June 61	4.1		
				Aug. 61	3.1
				Nov. 61	2.2
				Feb. 62	2.3
				May 62	1.8
Jan. 54	1.8	June 62	3.0		
				Aug. 62	1.5
				Nov. 62	1.4
				Feb. 63	1.6
				May 63	1.6
Jan. 55	1.0	June 63	2.4		
				Aug. 63	1.3
				Nov. 63	1.0

Source: *Census Bulletin No. 34*, 1964; Cameron (1967), Brown (1959), Department of Labour and National Service, and *Employment and Unemployment.*

These data, taken in conjunction with the analysis of employment changes in the previous section, make it clear that recovery was genuinely slower in the Fourth Episode and that there was – by Australian standards – an appreciable degree of unemployment two full years after the trough of activity. Female unemployment, moreover, remained constant for two years after 1961 in marked contrast to 1953/54. On the other hand it also appears (even when allowance is made for greater seasonal unemployment in January than in June) that the incidence of unemployment was less severe in the 1960s than was supposed at the time.

There are several possible reasons to account for the disproportionate attention received by unemployment in the Fourth Episode. In the first place, the 1952 down-turn came at the end of an unprecedented boom during which labour of all kinds had been acutely scarce for two years or more. There was a general feeling that the recession was a breathing space, long overdue, and that the economy could operate more efficiently with a somewhat lower degree of employment. During the 1950s there was steady economic growth with a level of registered unemployment nearly four times as high as it had been from 1948/49 to 1950/51. When every allowance is made for change in reporting habits, it is certain that there was considerably more slack in the labour market on the eve of the Fourth Episode than there had been ten years before. There was no corresponding feeling of relief, therefore, when the degree of unemployment passed above 4 per cent on the second occasion.[23]

In the second place, reaction to the First Episode recession was conditioned by the fact that for seven years Australian economists and policy-makers had been awaiting, with the utmost trepidation, a post-war slump of substantial proportions. When the recession at last appeared it was so much milder than expected that observers tended to underestimate its seriousness. By 1961, on the other hand, a much higher standard of performance was expected. The relative success of the authorities in coping with contractionary tendencies in 1957/58 rendered the public more willing to find fault with economic control during the Fourth Episode.

The growth of prosperity, moreover, had rendered Australians less prepared than in 1952 for a serious recession. The attack on durable purchases in November 1960 affected a far larger number of people than would have similar measures a decade before; commitment to hire-purchase instalments left consumers more vulnerable to loss of overtime or regular earnings; and in general the expectation of high and rising living standards caused more dissatisfaction by its frustration.

In 1960/61, furthermore, there was no obvious external cause to blame

[23]Especially not in Queensland or Tasmania, where unemployment remained appreciably higher than the Australian average as a result of regional stagnation, and which were correspondingly harder hit during the deflationary period. See Gough, Hughes *et al.*, 1964.

for the collapse as there had been in 1951. The government had been in power for a long time, during which its failure to advance the sectional interests of its more influential supporters had built up a large volume of potential disaffection.[24] The November 1960 measures were the last straw: the business community lost patience and its chief organ advised the electorate to remove the government. Even when one heavily discounts the influence of the daily press on the ordinary wage-earner, consumer, and voter, it seems probable that there were some, at least, who were thereby persuaded to take a darker view of the recession than an objective appraisal would have justified.

Part of the trouble, of course, lay in the fact that no one was in a position, at the time, to make such an appraisal. This is clearly to be seen in the twice-yearly reviews which appeared in the *Economic Record* from 1956. With no particular axe to grind, with the best techniques and the latest information, almost every author from 1961 to 1964 exaggerates the seriousness of the recession. This is partly because the first version of the national accounts published by the CBCS, both in quarterly and in annual form, overstated the decline in 1961 and understated the recovery in the next two years, and partly because adequately deflated series did not become available until 1964.

Table 5.17 sets out a comparison of the estimates of growth-rates used by various contributors to the *Economic Record*, together with revised estimates used in the unpublished thesis of 1967 upon which this book is based. P.H. Karmel's (1961: 3) opinion that 'expansion during the past two years has not quite matched that of the previous booms' rested partly on an assumed decline in the growth-rate in 1959/60 significantly more serious than now appears to be the case, and partly on overestimates of the growth-rate in 1950/51 and 1954/55. H.F. Lydall's view of the 1961 'slump' was coloured by early versions of the *Quarterly National Accounts* which both overstated and antedated the 1960 down-turn;[25] E.A. Boehm's (1964: 2) judgment of 1962/63 as the 'weakest of the three post-war recoveries' depended on a serious exaggeration of the growth-rate in 1953/54 and an underestimate in 1962/63; and the general opinion that 1961/62

[24]According to the *Sydney Morning Herald* (which, during the 1950s, continually exhorted the government to live up to its principles), the executive had 'lent too willing an ear to the influential group of "planners" who, moving from the springboard of the Department of Post-War Reconstruction, now sit in the key posts of power. Skilled in the arts of war-time propaganda, they have created a "climate of opinion" that has been serviceable to Ministers but has weaned them from their liberalism and prepared the entire nation for undue reliance on bureaucracy. There are some who glibly state that liberalism has failed in Australia. This is no more true than it is of Christianity' (*SMH*, 25 November 1960 – 'Our economist').

[25]Haig, 1963. Further revision since Haig's paper shows a faster rate of recovery in 1961/62.

was a markedly more depressed year than 1957/58, say, was undoubtedly influenced by the low estimates of growth in 1961/62.

Table 5.17 Estimates of annual change in constant price GNP used by various authors, 1961 to 1967
% change on previous year

	Karmel* 1961	Lydall† 1962	Perkins† 1962	Hancock† 1963	Edwards and Drane 1963	Boehm‡ 1964	Johns† 1964	Waterman§ 1967
1949/50	+8.0					+7.5		+7.1
1950/51	+7.4					+5.3		+5.1
1951/52	−2.6					+2.9		+2.7
1952/53	−1.8					−1.1		−0.7
1953/54	+5.4					+8.1		+5.9
1954/55	+9.3					+6.2		+5.6
1955/56	+6.3					+4.5		+5.2
1956/57	+2.2					+1.8		+2.3
1957/58	+2.1					+1.8		+1.3
1958/59	+9.2					+7.1		+8.8
1959/60	+3.2	+5.6				+4.1		+4.0
1960/61		+2.3				+4.2		+4.4
1961/62			+0.5	+0.8		0.0	+0.6	+1.2
1962/63					+7.5	+5.1	+6.1	+5.8
1963/64							+5.4	+6.1

*Exports, imports, and expenditure deflated by Export, Import, and Consumer Price Indices.
†From variously deflated quarterly data.
‡*Australian National Accounts, 1948–49 to 1961–62*, at constant 1959–60 prices.
§*Australian National Accounts, 1948–49 to 1964–65* (February 1966), at constant 1953/54 and 1959/60 prices.
Source: Economic Record.

ECONOMIC PROCESSES IN THE FOURTH EPISODE

Private fixed investment expanded by 11·4 per cent in real terms in 1959/60: the rates of increase of commercial and dwelling investment were about the same. Private consumption expenditure grew at 7 per cent on average during the year, government current spending was unchanged in real terms, and public investment increased by 6 per cent. These gains were partly offset by a fall of £(1959/60)177 million in the rate of inventory investment, but most of this was due to an unseasonable depletion of farm stocks in the March quarter of 1960, associated with a large increase in sales of wool and wheat to Japan and China.

£(1959/60)163 million of rising demand was dissipated in increased imports during 1959/60. Table 5.18 shows that the cost ratio deteriorated by 6 per cent during this year as a result of increased earnings.[26] On the

[26]Assuming as a first approximation that the Import Price Index alone can be taken as a proxy for 'world prices'.

evidence of Cameron's quarterly model, some of the increase in imports would have resulted from this factor. Whether the rise in average earnings

Table 5.18 The cost ratio during the Fourth Episode

	1 Index of import prices	2 Index of average earnings	3 Index of domestic productivity	4 Index of earnings corrected for productivity (2÷3)	5 Cost ratio R (1÷4)	6 Annual change gR % p.a.
1958/59	100.0	100.0	100.0	100.0	100.0	
						−6.2
1959/60	100.6	107.9	100.6	107.3	93.8	
						−1.7
1960/61	102.1	113.0	102.1	110.7	92.2	
						−5.9
1961/62	102.3	118.0	100.2	117.8	86.8	
						+3.6
1962/63	102.9	119.1	104.1	114.4	89.9	
						−3.0
1963/64	104.2	125.1	104.7	119.5	87.2	

Source: Oversea Trade, Wage Rates and Earnings, National Accounts, and *Monthly Bulletin of Employment Statistics.*

Table 5.19 Analysis of year-to year changes in aggregate final demand, the Fourth Episode 1958/59 to 1963/64
£ (1959/60) million

	1959/60 *v.* 1958/59	1960/61 *v.* 1959/60	1961/62 *v.* 1960/61	1962/63 *v.* 1961/62	1963/64 *v.* 1962/63	
Annual change in:						
Consumption	+275.0	+77.5	+107.0	+293.5	+231.0	
Private fixed investment	+111.5	+78.0	−58.0	+103.5	+118.0	
Net inventory formation	−177.0	+291.5	−346.0	+194.5	−117.0	
Public expenditure	+32.0	+17.5	+88.0	+57.0	+75.5	
Statistical error	+113.5	−46.0	−56.0	+24.5	+67.5	
Domestic expenditure	+355.0	+418.5	−265.0	+673.0	+375.0	
Exports	+68.5	+69.0	+144.5	−20.5	+208.5	
Imports	+163.0	−190.0	+204.0	−240.0	−129.5	
Balance of trade	−94.5	−121.0	+348.5	−260.5	+79.0	
Gross National Expenditure	+260.5	+297.5	+83.5	+412.5	+454.0	
						Average growth-rate
Annual growth-rate % p.a.	+4.00	+3.30	+1.18	+5.77	+6.01	+4.27

Source: Australian National Accounts.

reflected the state of demand for labour (according to the mechanism postulated in chapter 2) or whether it should rather be regarded as an autonomous effect of the Arbitration Court, is a matter of some doubt. The peak of wage inflation preceded that of labour demand by two quarters as a direct result of the court's decisions in 1959 and 1960. It could be argued; however, that average earnings, in the absence of any court, would have increased by about as much between the beginning of 1959 and the end of 1960 as they did in fact; and that the sole consequence of the decisions to raise wages in 1959 and freeze them in 1960 was to redistribute the humps of the wage-inflation curve. This in itself was significant in the Fourth Episode: a formidable deterioration in the competitive position of Australian industry, coming at the psychological moment when imports were finally freed, produced an effect upon consumer behaviour and business attitudes which lasted throughout the Episode.

Despite an increase of £(1959/60)68·5 million (7 per cent) in the volume of exports, therefore, GNP rose by only 4 per cent in 1959/60. Excluding the inventory change and (partly offsetting) statistical error, aggregate demand at constant prices grew at 5 per cent in 1959/60, a figure which is more consistent with the evidence for rising levels of capacity operation and mild inflation in this year.

The picture presented by the annual national accounts is again somewhat distorted in 1960/61 by the behaviour of inventory investment. In this year, the major change came from an accumulation of non-farm stocks until the third quarter of 1961. The rate of investment fell off from the middle of 1960 as demand slackened, but remained positive – though involuntary – until the trough of the recession when demand ceased to fall. The growth-rate of all other elements of domestic demand, including the public sector, fell off markedly. But for inventory change and statistical error the rate of growth of domestic demand would have fallen to +2·5 per cent in 1960/61, barely sufficient to offset the further decline in the balance of trade. The latter resulted from another large increase in the volume of imports. The monthly rate of importation began to turn down in February 1961 (specific P_4, B_4), but the falling off in the remaining months of the fiscal year was insufficient to outweigh the high levels of the first eight months. Because of an increase in world prices and a more moderate advance of wage costs there was little further depreciation of the cost ratio in 1960/61. The effect of falling domestic demand was therefore adequate to bring about the down-turn in importation – after a six months' lag – without the necessity of reintroducing physical controls.

In 1961/62, the rate of change of domestic expenditure became negative for the first time since 1956/57. The rate of change in consumer demand, though positive at +2·4 per cent, was yet below trend: private investment demand absolutely fell by £(1959/60)58 million (-5 per cent), and the

rate of inventory investment dropped by £(1959/60)346 million, partly because of disinvestment in non-farm inventories from the third quarter of 1961 to the first quarter of 1962, partly because of large shipments of wheat to China out of accumulated stocks (Commonwealth Bank *Annual Report*, 1963: 8). The effect of the latter should be set against the large increase in export volume in 1961/62. Even supposing that all of the increase in exports represented a running down of farm stocks, however, most of the aggregate inventory disinvestment in 1961/62 reflected the response of merchants and manufacturers to recession levels and expectations of demand.

Despite, therefore, a 6·5 per cent increase in real public spending and a dramatic improvement in the balance of trade, the rate of change of aggregate demand (y) fell considerably below the rate of growth of supply (n) in 1961/62, although the latter may have been smaller than usual because of a decline in domestic productivity. The consequent rise in the degree of unemployment brought the rate of inflation in average earnings down to zero between the second and third quarters of 1961. At this juncture, however, there occurred what was perhaps the only truly 'autonomous, aggressive' wage increase in post-war Australian history. At the trough of the recession the Arbitration Court decided to revert, in part at least, to the principle that wage rates should reflect changes in some index of retail prices. The Consumer Price Index had risen appreciably between the last quarter of 1959 and the middle of 1961 (although by that time the rate of selling price inflation had slowed down to zero and was about to change sign) partly as a lagged response to the 1959 wage increases. Fortified by a 2·1 per cent productivity increase since the beginning of the Episode (table 5.19) the Court determined to raise the basic wage for adult males by 12s. per week from the beginning of July 1961.[27] The index of average earnings rose by 4·4 per cent over the next year, but there was no further gain in average productivity and only very slight change in world prices. By the beginning of 1962, therefore, with more than 3 per cent of the work-force unemployed, with widespread concern at the seriousness of import competition, and with increasing reports of the difficulty of exporting Australian manufactures, the competitive position of the economy had deteriorated by about 13 per cent since the beginning of the boom.

In terms of the theoretical model of chapter 2, this increase in wages ought to be thought of rather as the equivalent of a 5 per cent drop in relative world prices: as some exogenous depreciation of R, that is, having no causal connection with the state of internal activity. It has been shown

[27]For detailed discussion of this decision (which omits, however, any serious consideration of the external balance effect) see Downing and Isaac, 1961; Hancock, 1962; and Edwards and Laffer, 1963.

that the effect of such a change would be to depress the level of domestic activity to a point at which no further inflation of wage costs occurs,[28] and something of this kind seems actually to have taken place in 1962/63.

The volume of imports increased by £(1959/60)240 million, but exports actually declined for the first time since the drought of 1957/58. The record deterioration in the trade balance which resulted was almost certainly more than merely a response to the recovery in domestic demand: on the evidence both of Cameron's econometrics and the Department of Trade surveys, there was significant switching to imports in response to the fall in the cost ratio. More than one-third of the increase in domestic expenditure during the year was therefore dissipated in imports (or 'lost' exports), but very little in rising prices because of much surplus plant and labour capacity. The net result was a 5·8 per cent increase in output, but since domestic productivity grew by 3·9 per cent in that year (table 5.19) and the total work-force by 1·9 per cent, the gain was inadequate to take up more than about half the slack in the labour market (table 5.13). The unemployment which thus remained was sufficient, in the absence of any further arbitrated wage increase during 1962, to hold the rate of earnings inflation to a mere +0·9 per cent. Because of the productivity gain, therefore, wage costs fell by 2·9 per cent and the cost ratio appreciated by 3·6 per cent.

In 1963/64 the increase in the volume of imports, at £(1959/60)129·5 million, was little more than half that of the previous year. Exports recovered strongly, however, and the balance of trade improved by £(1959/60)79 million. The recovery in all categories of private expenditure was continued in this year, though consumption spending rose somewhat more slowly than in 1962/63 in the absence of any extraordinary stimulants from government policy. At 4·8 per cent, however, the increase was still above the long-term equilibrium rate; private fixed investment, meanwhile, grew at 9·8 per cent, £(1959/60)42·5 million of the £(1959/60)118 million increase coming from the long-awaited recovery in private building activity (specific I_5, August 1963). The rate of increase in government spending, which had slowed down in 1962/63 with effects upon employment analysed in table 5.13, recovered again in this year due to large increases in spending on defence, education, and roads. Investment in inventories fell by £(1959/60)117 million. About half of this was due to fluctuations in farm inventories; the remainder reflected lower, though still positive, rates of investment by manufacturers and traders as the rate of increase in sales began to catch up with the rate of growth of production.

The net growth in volume of output, at +6 per cent in 1963/64, was

[28]See Waterman, 1966, for a fuller treatment of the cost ratio than that contained in chapter 2. If there were a once-for-all rise in domestic wages (or fall in world prices) when the rate of inflation of world prices was constant, the induced decline in the level of domestic activity would be temporary, of course.

partly the result of a further small increase in domestic productivity. The work-force grew by 2·5 per cent during the year, and there were large gains in civilian employment, especially in such relatively low-productivity sectors as finance and property, commerce and public employment (table 5.12). The productivity gains, which would appear much larger in this year were the volume of exports included in the numerator, offset part of the 5 per cent inflation in earnings: as there was a noticeable increase in world prices in 1963/64, the cost ratio depreciated only moderately as recovery proceeded. By the end of 1963/64 there was reasonably full employment, rising productivity, stable relative costs, improving external balance and virtually constant prices.

6

Economic Fluctuations in Australia Since World War II

The conclusions suggested by this history of economic fluctuations in Australia may be résuméd in the following five propositions, arranged in descending order of certainty. The first is so far beyond dispute as to appear truistic. The last is highly conjectural.

(1) Each episode is unique.
(2) The behaviour of the world economy was highly influential upon that of Australia throughout the whole of this period.
(3) Government policy of a disinflationary nature was nearly always directed not to the internal situation but to the balance of payments; and was therefore put into effect at times when the forces of contraction had already begun their work.
(4) Government policy directed to expansion was generally successful and well timed.
(5) The average rate of growth would not have been faster, but possibly slower, had fluctuations not occurred.

The Uniqueness of Each Episode

Each episode differs from its fellows in its origins, the causes of its downturn, and the course of its subsequent development.

When the First Episode began, the economy was already fully extended, partly because of improving terms of trade and appreciating cost ratio, partly because of restrictions upon the availability of imports, and partly because of expansionary monetary and fiscal policy. The effect of the Korean War on Australian export earnings was to superimpose a second boom upon one already in progress. The nine months from August 1950 to April 1951 might be described as 'super-boom', qualitatively different from any other expansionary period in Australian history, at least since the 1880s. According to the estimates reported in chapter 1, the First Episode boom, both in amplitude and in total disturbance, was about twice the order of magnitude of those of the Second and Fourth Episodes. Detailed history of these periods in chapters 3, 4, and 5 lends credibility to the

measurements. The inflation of prices during this period, moreover, was very much greater than in any subsequent boom.

The Second Episode boom is peculiar in its double-headed shape. The expansion in 1953/54, initiated by a strong recovery of export earnings in 1952/53 and sustained by the import quotas introduced in March 1952, was checked in 1954 by a decline in international reserves as the new export boom subsided, and by restrictive monetary policy of the central bank. Fresh stimulation appeared in the last quarter of 1954, however, in the form of a recovery of exports, a surge of private investment financed by public capital raising, and an expansionary budget for the year 1954/55.

There was no real boom in the Third Episode since what would ordinarily have been its source – a substantial rise in wool prices in response to changing world conditions – occurred at least one year too soon to be effective, while the recessionary phase of the Second Episode was still in process.

The Fourth Episode boom, like that of the Second, was initiated by export price and volume increases, but differed in three respects. First, the effect of favourable movements in the balance of trade was supplemented by a substantial increase in the rate of capital inflow in 1958/59 and 1959/60. Secondly, the 'real' boom was paralleled by a speculative boom in shares and real estate. Thirdly, and tending to offset the first, the relaxation and subsequent abolition of import licensing during the boom phase created a very different economic climate within which the remainder of the episode worked itself out. In particular, the decline in price inflation from the second quarter of 1960 was in marked contrast to the behaviour of prices during the Second Episode, more closely resembling the course of price changes in the First Episode inflationary period (though on a much smaller scale) at which time imports were freely available for a few months.

The down-turn in all four episodes was associated with a decline in export prices, though the effects of this were most noticeable in 1951 (First Episode) and 1957/58 (Third Episode). In the First Episode, the withdrawal of US support from the wool market in April 1951 was clearly crucial. During the following six months the (value) rate of exportation fell from £136 million per month to £40 million per month: the coincidence of a great influx of imports in delayed response to the boom combined to produce a loss of £200 million in reserves during the second and third quarters of 1951. Internal activity responded decisively and the Horror Budget gave an extra push in the same direction. Although the Third Episode price fall was similar in magnitude to that of the First, its impact was felt in very different circumstances. On the one hand, there had been no real boom to begin with and the effect on foreign earnings of falling demand was aggravated by drought; on the other hand, the effect of import

quotas and expansionary fiscal and monetary policy in 1957/58 and 1958/59 played a large part in cushioning the blow.

In the Second Episode, both down-turns seem to have been started by the effect of restrictive credit policy on building and internal trade, though the reason for such policy, of course, lay in a worsening external position throughout the whole of 1954 and 1955. A large cause of the Fourth Episode down-turn was the ending of import quotas in February 1960 coming at a time when the cost ratio was depreciating as a result of large, arbitrated wage increases.

The inflationary periods of the First, Second, and Fourth Episodes bear some slight resemblance to one another: the deflationary periods of all four episodes are so disparate that it is hardly necessary to argue their uniqueness.

The First Episode recession, though steep and of greater amplitude than any other, was soon reversed, thanks to import quotas and a strong recovery of wool prices from March 1952. There was no real recession in the Second Episode. The deflationary period of the Third Episode is well marked in employment but non-existent in factory production and internal trade. It will be remembered that the evidence of GNP is at variance with that of the monthly indicators in 1957/58 and 1958/59. Fiscal expansion and import quotas were pulling in one direction, a world slump in the other. In the Fourth Episode, the recessionary phase is very similar to that of the First (the effect of unplanned inventory investment and a strongly adverse external balance, with a sharp downward push from the government) but the recovery phase entirely different. Initial recovery, in the later period, proceeded as in the earlier after the liquidation of unwanted inventories. But the (relatively) free availability of imports, further depreciation of the cost ratio, market saturation in household durables, a slowing down in the secular demand for housing, and the shattered state of business confidence combined to delay full recovery for a further year or more.

Quite apart from these obvious differences of process between the four episodes, there are equally important differences of conjuncture less easy to specify. Australia, and the whole world, had changed profoundly between 1950 and 1960.

'Emerging Independence?'

It has sometimes been supposed, in recent years, that the Australian economy has somehow become less sensitive to the effect of changes in the level of world economic activity. Opinions of this kind rely, for the most part, upon superficial comparisons of the behaviour of Australian and overseas annual economic time series, and upon the assumption that the

Fourth (and possibly the Second) Episodes were generated by internal forces.

Putative independence is explained in terms of import replacement, export diversification, and decreasing relative importance of the foreign trade sector. Nothing to support such a view has come to light during the research reported in this book. Chapter 4 suggests that most of the movement in the Second and Third Episodes originated in the factors which determine the price and volume of Australian exports. The comparative insulation of Australia from the world recession of 1957 to 1959 was the result, not of any new-found immunity, but of the lagged effect of the 1956/57 export boom together with the conscious and deliberate application of import controls and fiscal expansion. Similar stability could have been achieved in the First Episode had the Menzies government instituted measures to offset the last Chifley budget immediately on coming to power in 1950, and followed these by appreciation of the Australian pound, a substantial levy on wool-growers, and – when wool prices turned down – by cautious relaxation.

There is a sense, to be sure, in which it is true to say that the Fourth Episode, both in expansion and in contraction, was largely generated within the Australian economy. But even on this occasion, an important source of the boom was a strong recovery of export prices from January to November 1959; and a contributing cause of down-turn the reversal of this movement during the whole of 1960, together with a levelling out in export volume until the third quarter. The recovery phase of this episode, moreover, demonstrated that in the absence of import quotas, the Australian economy was still unable to sustain an inflation of efficiency earnings greater than that of world prices without adverse effects on employment through the balance of trade. Quite apart from this, of course, the ability of an economy to produce fluctuations without the assistance of the rest of the world is no evidence of its independence of changes in the level of external activity, should such occur. In such a case, however, one would expect the home-made episode to be somewhat damped as a result of the processes suggested in chapter 2. The measurements of chapter 1, for what they may be worth, suggest that total disturbance in the Fourth Episode was smaller than that in either the First or the Second.

The illusion of increasing independence appears to be the result of two circumstances: improvements in the performance of stabilisation policy from the mid-1950s; and decreasing amplitude of fluctuations in the Export Price Index over the period 1948 to 1964.

The theoretical analysis of chapter 2 suggests that expansionary policies in a dependent economy during world recession may be defeated by depreciation of the cost ratio. The world recession which occurred during the Third Episode, however, though depressing export prices violently,

had a negligible effect upon import prices. Upon the assumption that the weight of the latter is dominant in the 'world price' component of the cost ratio, it was open to Australia, between 1957 and 1959, to expand domestic expenditure so as to offset the domestic effect of the adverse external balance, and sustain employment at least up to the level at which wage inflation just balanced productivity gains. The existence of import quotas during the period gave the authorities still more freedom.

Three major disturbances to export prices have occurred since the war: between April 1949 and March 1951 prices rose about two and a half times; from April 1951 to April 1952 they halved; and from April 1957 to January 1959 there was a price fall comparable to that in 1951/52. Each of these exerted a powerful influence in the Australian economy, but that of the third, for reasons already considered, was partly offset by deliberate policy. Fluctuations in export prices from April 1952 to March 1957, and from January 1959 to the end of the Fourth Episode, though large enough to have a significant effect on the state of activity, have been much smaller by comparison. It seems probable, in the light of this history, that any swing in export prices comparable in magnitude with that of the First Episode (if met with similar policy measures) would achieve as large a result in the mid-1960s as it did in the early 1950s.

Policy in Prosperity

The Vernon Report, with proper caution, observed that

> The attempt to cope with the interdependent problems of inflation and balance-of-payments difficulties has led the Commonwealth Government to take action from time to time, which seems to have interrupted the steady expansion of the economy. (1.34)

If the allusion is confined to the Horror Budget, the Economic Measures of March 1956, and the Emergency Measures of November 1960, it is clear that the contractionary effect of government policy has been more apparent than real. In chapter 3 it is shown that the Horror Budget was brought down at least one year too late to have any effect on the First Episode inflation, and approximately six months after the causes of the down-turn began their work. In the opinion of Auld, moreover, the disinflationary impact of the 1951/52 budget was actually rather slight. The Economic Measures of 1956, considered in chapter 4, were instituted twelve months after growth-rate fell below trend rate (reference B_2, March 1955), nine months after many indicators of internal activity had begun to decline absolutely (reference P_2, June 1955), and six months after most labour market indicators turned down (third quarter, 1955). The objectives of the measures were to provide additional revenue for Commonwealth and State governments not expected to be readily available on the

loan market; and to restrain consumption spending in the hope of reducing imports below the current quota ceilings. Both were achieved with little apparent disturbance to the level of internal activity. Internal stability and improving external balance were secured, however, by the export boom of 1956/57. Chapter 5 shows that the quantitative impact of the November 1960 measures was both small and quickly reversed: and that, like the Horror Budget and the 1956 measures, they were applied at a time when the down-swing was already well under way. Both the 1956 and the 1960 measures were put into effect at times when first-line international reserves had fallen more than 1·5 standard deviations below trend, as were the import cuts of March 1952. The Horror Budget was brought down at the end of a four-month period during which reserves had fallen by 0·75 standard deviations from trend. With the possible exception of this last – which, for all its tardiness was believed to be an attack on inflation – the major interventions of the Commonwealth government have been concerned to redress a dangerous, or potentially dangerous, external position. Reduction of demand has been viewed as an alternative to physical control of imports. It would appear that the government has generally preferred to allow the effect of unrestricted importation to remedy imbalance between *(ex ante)* demand and supply; but has been obliged, at times when reserves have fallen too far before the completion of the process, *either* to restrict imports *or* to reduce demand. Which alternative has been selected has depended on a complex of economic and political factors among which the timing of Commonwealth general elections should probably be included.

It might be supposed that a government content to wait until the level of reserves had fallen far enough could always allow an inflation to cure itself by an import surplus. But in this situation the operations of speculators are destabilising. Importers, fearing that falling reserves may evoke import controls, attempt to import as much as possible before the expected restrictions. Holders of short-term capital, expecting exchange depreciation, blocking of balances, or other forms of discrimination, attempt to withdraw their funds; or, expecting a rise in interest rates, postpone new inflows until they occur. If reserves fall far enough, the regular inflow of long-term capital may be interrupted, with still more serious consequences for the economy. For considerations of this kind the Australian government felt itself compelled to act in March 1952, March 1956, and November 1960. There is evidence to suggest that it did so reluctantly, and as a last resort.

In that contractionary policy has generally been addressed to a balance of payments problem, rather than to inflation itself, it has taken effect during the down-turn, or even the recessionary, phase of the post-war episodes. The existence of a balance of payments problem, given the terms of trade and the rate of capital inflow, is itself the sign that an internal

inflation has begun to call forth its own remedy. By the time a serious decline in reserves has been recognised and acted on, a substantial import surplus has begun to check price inflation, build up inventories to unwanted levels, and threaten the position of domestic import competitors whose production costs have risen faster than those of the outside world during the preceding boom. A further dynamic element is added by the five-month average lag between import orders and delivery in Australia. Disinflationary policy at such a juncture (September 1951, November 1960) gives activity the decisive downward push. Its net effect may well be slight, but it incurs for the government the odium of inaugurating a recession that was already well under way.

All this is not to deny that in each of the three major post-war booms the *central bank* has been quick to identify tendencies and conscientious in applying such remedies as lay within its power. The Commonwealth budgets of 1959/60 and 1960/61, moreover, by holding expansionary elements sufficiently in check to allow the built-in tax response to reduce income, played some part in moderating the Fourth Episode boom. But the effect of these policies seems to have been relatively slight, except in the case of the Second Episode boom – where the liquidity effect of falling reserves and the income effect of the adverse trade balance were also at work. The only action of the Commonwealth government concerned with 'the interdependent problems of inflation and balance-of-payments difficulties' which by itself achieved any significant interruption to 'the steady expansion of the economy' was the decision to end import licensing in February 1960. And this, it will be argued below, was to the advantage of long-run growth.

Policy in Adversity

Expansionary policy measures effected by the Australian government since the war fall into two classes: those intended to reverse a down-turn, and those intended to produce a recovery. By and large, it would seem that action of both kinds has been prompt and reasonably successful.

Sharp down-turns in activity occurred in 1951/52 (reference P_1, June 1951, to reference T_1, November 1952), and in 1960/61 (reference P_4, July 1960, to reference T_4, July 1961). On both occasions corrective action was taken within six months of the seasonally adjusted peak in total civilian employment, beginning at about the same time as activity passed below trend (reference D_1, June 1952: D_4, March 1961). In 1952, bank advances policy was made more flexible in May and in October; there was relaxation of some hire-purchase restrictions in July and a moderately expansionary budget in August. By November, reference T_1 was reached and recovery began. In 1961, additional sales tax on cars (one of the chief ingredients of the November 1960 measures) was removed in February; there were

tax concessions to stimulate exports in March, relaxation of banking policy between April and July, and a mildly expansionary budget in September (reference S_4), in which month activity began to recover.

The relative promptitude with which the government has acted to correct a down-turn reflects in part the high political cost, in Australia, of permitting the least trace of unemployment to emerge. It is also connected with the fact that it is much easier to detect and remedy a falling-off in employment than to decide the scale and timing of measures to restrain a boom. The down-turn of an indicator – when allowance is made for seasonal and random variation – is unambiguous and dramatic. The height of an indicator above its trend is vague and its meaning controversial. The rate of price inflation can be used as an index of the seriousness of a boom, but for much of this period such information was only available quarterly and its interpretation subject to dispute. The political power of those whose interests plainly suffer in a boom, moreover, is far weaker than that of those who are adversely affected in a down-turn. In these circumstances, the contrast between government policy in booms and in down-turns is the most natural thing in the world. And in all times of the former, few would deny the political wisdom of 'leaving it to Dr Coombs'.

The recovery from the First Episode recession was so rapid (strongly positive phase gradient) that no special measures were called for to hasten the process. During the Third and Fourth Episodes, however, there was need not simply of action to reverse a down-turn but also to produce expansion of an economy depressed by external or long-run factors. In 1957/58 and 1958/59 Australia was faced with a world slump. Through most of 1961/62 and 1962/63 the combination of unwanted import competition, deteriorating cost ratio, and market saturation in some important sectors temporarily deprived the economy of its usual buoyancy.

The Commonwealth budgets of 1957/58 and 1958/59 were expansionary, the latter strongly so, because of large increases in government spending. From May 1957 until August 1959 there was gradual easing of monetary policy. The net effect of these measures was successfully to insulate Australia from the worst effects of the world-wide recession, thanks in part to the existence of import quotas, and the failure of import prices to fall. During the Fourth Episode, the expansionary effect of the 1961/62 budget, though not large enough to prevent the rate of growth from falling, was yet sufficient to avert an absolute decline in GNP. The budget of 1962/63, together with additional fiscal measures which had been introduced in February 1962, was instrumental in restoring full employment by the end of the fiscal year.

Growth and Stability

Both boom and slump of the First Episode were clearly to the advantage

of the Australian economy. During the inflation, Australian costs finally returned to a pre-war relation with those of other major trading nations and the upward pressure on prices from the cost ratio was at last relieved. Windfall profits in the farm sector were an important source of agricultural improvements in the 1950s. During the recession excess demand was banished, bottlenecks opened, redeployment of resources achieved, and labour discipline and industrial relations improved. From 1952/53 there was a noticeable acceleration in the rate of growth of productivity, much of which can be traced to the events of the previous two years.

The Second and Third Episodes, it has been seen, were times of rapid internal productivity growth apparently little affected by the boom of 1954/55 or the shallow recession from 1956/57 to 1958/59. Australia was deprived of some of the fruits of this progress by the generally downward drift of the terms of trade during the 1950s; and it was this, rather than the results of 'stop-go' or externally induced fluctuations, which made it appear at times that the Australian economy was in danger of 'stagnating'. Much of the improvement in productivity, in the manufacturing sector at least, appears to have been connected with American investment. Although this is usually directed to long-term objectives and is therefore relatively immune from the effects of year-to-year disturbances, it is possible that the expansionary aspect of the economy between 1953 and 1956, and again in 1959 and 1960, helped to sustain the long-run hopes of foreign investors in the face of contrary indications in the late 1950s.

The recession of 1961/62 and 1962/63 is generally held up as convincing proof of the claim that disturbances to the steady course of activity are detrimental to economic growth. It has been seen, however, that GNP continued to grow in 1961/62, and that in the two following years it expanded at about 6 per cent per annum. More fundamentally, the Fourth Episode can be thought of as the social cost of a structural adjustment which had been long postponed, and without which the future growth of the economy was in some jeopardy. Sooner or later Australia had to learn to live without import controls in a world from which demand inflation, for the time being at least, had been largely banished. It is true that the level of tariff protection has tended to rise somewhat in compensation for the abolition of quotas. Despite this, the Australian economy is appreciably more competitive than it was in 1960, some sectors, such as retailing, markedly more so; and there seems to be some link between this and the freer entry of imported goods. For four years, from 1960/61 to 1963/64, retail prices were virtually stable; price increases in the two following years were chiefly caused by the effect of drought on food prices. In that retail prices are influential upon basic wage judgments of the Arbitration Court, and through these upon the cost structure of the entire economy, the freeing of imports was decisive and beneficial.

Various other arguments of a more general kind have been put forward in support of the view that moderate fluctuations are to the advantage of the economy. A.O. Hirschman's remarks on the stimulating effect of foreign exchange difficulties have already been remarked in the Australian context. Karmel has pointed out that the post-war recessions have provided the government with opportunities to catch up on overdue social investment. The alternation of expansion and contraction has probably afforded more opportunity to enterprise than would a long period of steady growth. New ventures have been attracted in booms and inefficient firms weeded out in slumps. The recurrent possibility of bankruptcy is essential to the health of a free-enterprise economy. In addition to this, the occasional collapse of artificially inflated values has probably been to the long-run advantage of the economy. The measures of November 1960, in particular, had their chief effect in bursting a speculative bubble in shares and real estate, exposing unsound financial practices, and encouraging sobriety in the business community.

How much weight should be attached to these considerations is a matter of individual judgment. So, in the end, is the question whether elimination of peaks and troughs would have affected the slope of the trend. It is impossible to quantify what might have been. The utmost that can be said is this: that if any connection is postulated, in post-war Australia, between fluctuations and growth, there are even stronger reasons to be sceptical of a negative than of a positive correlation.

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