Chapter 3

Productive potential and unemployment

by

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1.   Changes in employment and unemployment in recent years have attracted
considerable comment and remain quite a puzzle. During the winter of 1971/72,
unemployment rose to nearly 1 million but since then has been falling rapidly, and
is now under $\frac{1}{2}$ million. Employment changed very little between mid-71 and mid-72
but the quarterly figures available so far suggest an enormous increase of
500,000 between mid-72 and mid-73. These changes conceal a large sectoral shift
in the labour force; between mid-71 and 72, manufacturing employment fell by
270,000 and non-manufacturing employment rose by 275,000; the indications for
1973 are that non-manufacturing employment has risen even more than in the previous
year.

2.   Our method is to adjust total employment and unemployment for lagged responses
to equilibrium levels and then to correct output for changes in the pressure of demand.
This provides estimates of par productivity growth or productive potential. The success
of the adjustment process is evaluated in terms of its ability to smooth the series
of annual changes for total par productivity. We have always estimated particularly
fast par growth between 1965 and 1969 and also noted that the change in 1963-64
was very much out of line (3.74%). Last year, we found that it was difficult to
forecast the actual fall in unemployment to the first quarter of 1973. The
employment estimates now available and the continued rapid fall in unemployment,
together with the fact that many indicators of the labour market have moved this
year in a way very similar to their movements in 1963-64, have led us to consider
a number of alternative adjustment processes which might resolve this problem.[1]
The one which gives most improvement in terms of smoothing annual changes,
particularly since 1969, is a variable adjustment process, similar in spirit to the
Godley/Shepherd formulation (NIESR August 1964).

3.   As described in the appendix, we now assume that the lag in the response of
actual employment and unemployment to equilibrium levels is longer when the rate
of growth of output is higher. This implies that equilibrium unemployment in 1964
and 1973 were both lower than we would previously have estimated and that actual

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[1]   We agree with the National Institutes' view that the behaviour of unemployment
as an indicator of changes in the labour market is not substantially
different from behaviour in previous cycles (see NIESR November 73 and
Cripps and Tarling, New Society November 73); there may be some short run
effects of the raising of the school leaving age incorporated into the
fast rate of decline of unemployment because the fall in the number of
unemployed youths aged under 18 has been about 10,000 greater than would
have been expected.

unemployment continues to fall even when the rate of growth of output slows down considerably because of changes in the length of the lag. The estimated growth of par productivity is now as follows:

1961-65	2.78
1965-69	3.36
1969-73	2.26

4.   The variable adjustment process in fact has little effect on longer-period trends 1961-65 and 1965-69, so that we still estimate an acceleration in trend between 1961-65 and 1965-69. However we now find a lower and much smoother trend of par productivity in the period since 1969; this conflicts with views expressed, for instance, by Paish (Lloyds Bank Review for 1973) and in the November 1973 review of the National Institute.

5.   We can obtain some insight into these changes by disaggregating between manufacturing and non-manufacturing sectors; there was a sectoral shift in employment away from non-manufacturing in 1965-69 compared with 1961-65, and back to non-manufacturing in the recent period. Adopting the same approach as in aggregate, we considered variable, but different, adjustment processes for manufacturing and non-manufacturing. The best interpretation, consistent with the overall picture, is a longer lag in manufacturing, lengthening when the rate of growth is faster; this implies a shorter lag in non-manufacturing which is rather insensitive to the rate of growth. Estimates of par productivity growth in the two sectors are:

	Manufacturing	Non-Manufacturing	Total
1961-65	3.7	2.3	2.8
1965-69	4.1	2.9	3.4
1969-72	3.5	1.6	2.3

6.   Rates of growth of par productivity in non-manufacturing were over 3% in 1966/7, 67/8 and 69/70, but only about 0.5% in 1971/2 and zero in 1972/73. Thus not only is most of the variation in par productivity to be found in non-manufacturing but also erratic movements in non-manufacturing productivity correspond roughly with changes in S.E.T., which was introduced in 1966, raised by 50% in 1968, raised to twice the initial level in 1969 and then halved in 1971 and completely removed in 1972.

7.   Our projection of future par productivity is based on this disaggregated analysis. We take a slightly optimistic view of manufacturing productivity and assume that it will grow at 4% p.a. For non-manufacturing, we assume that there will be no further response to the removal of S.E.T. and that the only relevant factor is the supply

of labour. In the long run, the forecasts of labour supply[1] (at a constant
pressure of demand) show a fairly substantial rise in the number of married females
available for employment and also in the number of males aged 25-60. This is a
supply position fairly similar to that in the early 1960's and hence we project a
rate of productivity growth in non-manufacturing of 2.3% p.a., similar to that in
the period 1961-65. Together with the projection for manufacturing, this yields a
trend growth of 2.85% p.a. for total productivity.

8. The implications of this estimate of par productivity growth and the forecasts
of labour supply for the future levels of employment and unemployment are as
follows:

		Annual Rate of Growth of G.D.P., 1973-77		
		1%	2%	3%	3½%
Employment (thousands)					
1st quarter 1974		24787	24787	24787	24787
	1976	24202	24438	24817	25004
	1978	23672	24137	24909	25297
Unemployment (thousands)					
1st quarter 1974		446	446	446	446
	1976	769	627	446	362
	1978	1098	827	488	327

9. A 3% growth in demand would be sufficient to hold employment near its end-1973
level. However, the growth at only 1% p.a. implies a terminal level of unemployment
in the first quarter of 1978 of 1,100,000. The slower rate of growth which may be
necessary to meet other targets could fail to meet any acceptable unemployment
target.

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[1] See Department of Employment Gazette, August 1971. The changes shown by
these projections are not much affected by revisions to the population estimates
following the 1971 Census of Population, except that the trend increase in
married female participation will probably be slightly larger than was assumed
in 1971.