

TWO PROPOSITIONS CONCERNING MONETARY POLICY AND THE BUSINESS CYCLE

Talk by the Deputy Governor, I. J. Macfarlane, to the Annual General Meeting of the Tasmanian Branch of the Economic Society, Hobart, 7 April 1993.

INTRODUCTION

It is an honour to be invited to address the Annual General Meeting of the Tasmanian Branch of the Economic Society. Considering its small size, the economics profession in Tasmania has made a remarkable contribution to Australian economics, producing two of the truly distinguished figures in the profession – Professor Giblin and Sir Roland Wilson. They were distinguished both as academic economists and by their contributions to public policy.

In keeping with their example, I will attempt tonight to cover a subject, which may appear to be largely academic, but which is extremely relevant to an understanding of macro-economic policy in the world over the last quarter of a century. It has some relevance for Australia, but is mainly aimed at establishing some general principles that apply to all developed countries. The discussion is based around two widely stated, but opposite propositions. The first could be characterised

as the view of the popular commentator, and the second as the view of the academic (not all academics, but an important group whose influence has been widespread).

Proposition One

Recessions are the result of excessively tight monetary policy, just as booms are the result of monetary policy being too easy. The business cycle is thus due to monetary policy errors.

This proposition underlies a lot of popular economic discussion and financial and economic journalism. Politicians and political journalists also seem to adhere to it, although in a slightly weaker form; they certainly view recessions as being the result of an error in economic policy, and assume that voters will punish the perpetrators of the error.

Proposition Two

Monetary policy only affects nominal variables, whereas the business cycle is caused by real factors, particularly on the supply side. The neutrality of money implies that monetary policy can only determine the rate of inflation, but not the rate of real economic growth, unemployment etc.

This view is totally absent from the popular discussion, but is the dominant one in the current academic literature. I am reliably informed by one of my academic colleagues that a pre-condition for having a journal article accepted by the *Journal of Monetary Economics*

(currently the most prestigious journal in monetary economics) is an acceptance that monetary policy has no real effects.

ASSESSMENT

I propose to analyse each of these propositions in turn. It would be surprising if either were 'correct'; truth in economics rarely lies at the extreme. On the other hand, both propositions contain more than a germ of truth. The aim of the discussion should be to identify the useful insights and discard the dross.

A Closer Examination of Proposition One

In the financial and political press, there is very extensive coverage of what economic policy makers do: the actions and words of Prime Ministers, Treasurers and central bank governors are widely reported. Decisions made at Cabinet meetings, budget deliberations and central bank board meetings are also given a lot of coverage on a daily basis, and often affect financial markets. It is natural, therefore, to see the direction of the economy as resulting primarily from these policy decisions. Thus, unsatisfactory economic outcomes must be the result of faulty decisions.

With fiscal policy having played a relatively minor counter-cyclical role in OECD countries in recent years, it is monetary policy – in particular discretionary monetary policy – that has generally been held responsible for adverse cyclical outcomes. Once an upswing is well under way and signs of overheating are emerging, commentators will look back and say this was due to monetary policy having been too easy. Some time after it has been tightened, there will inevitably be a contraction in economic activity that will be attributed to monetary policy being too tight.

While it is possible that this view is correct, i.e. that the business cycle is solely the result

of a series of alternating monetary policy errors – I think it is rather improbable.

- The main reason that I think it is improbable is that it happens in all countries; no one has escaped the business cycle. Are all these cycles due to incorrect monetary policy decisions? Are the central banks in all of these countries individually going through a series of alternating policy errors?
- The other reason that I think it is improbable is that not only do all countries have business cycles, but that there is a very high correlation between the cycles. Virtually every country had a recession in 1974 (or 75), in 1981 (or 82) and in 1991 (or 92). Are we to believe that the monetary authorities in all 24 OECD countries make alternating policy errors, and that they synchronise them all to follow the same timing? There are some people no doubt who would accept this proposition. We know that businesses and investors go through longish periods of being too optimistic, followed by periods where they are all too pessimistic. Why couldn't central bankers?

This line of reasoning is normally advanced by people who hold a very dim view of discretionary monetary policy. They feel that if you allow central banks discretion, then they are bound to make mistakes, and they might even be able to make them in an internationally co-ordinated fashion. On this view it would be much better if discretion was replaced with a rule. The problem here is that in the days before central banks had discretion we still had business cycles and, in fact, they were even more pronounced than now. I am referring to the gold standard period in particular (the hundred years up to the 1930s), but the same observation applies to the late 1970s and early 1980s when virtually all major countries were adhering to a money supply rule.

The alternative view is that there are a number of powerful forces which produce cyclical behaviour and that monetary policy

cannot overcome them. Monetary policy has some influence on the cycle, which it may help to dampen, leave unaffected or make worse. (The last of these alternatives is often called ‘pro-cyclical’ monetary policy.) I do not wish to give the impression that monetary policy never makes mistakes, or that these mistakes would not have adverse consequences for output and employment. What I would maintain, however, is that from casual observation it is not possible to say whether monetary policy is making the cycle more or less pronounced. It would require intensive study of particular episodes to have any chance of reaching an empirically sound conclusion.

Even then, there is also a major methodological problem to overcome. For example, if we felt that monetary policy had made the cycle worse, we would have to ask, ‘worse compared with what?’ Are we saying the outcome is worse compared with the situation where monetary policy had followed some monetary rule, or are we saying it is worse than the perfect application of discretionary monetary policy. I think the first question is a reasonable one to ask, even if difficult to answer; but the second question is unanswerable. In attempting to answer it, it is difficult not to fall into the trap of assuming that perfectly applied discretionary monetary policy would eliminate the business cycle. Compared with this exacting standard, therefore, any actual monetary policy will always fail and leave the monetary authorities open to the charge of being ‘pro-cyclical’ or having done too much too late.

The important intellectual support often cited for the proposition that cycles are caused by monetary policy was Friedman and Schwartz’s *Monetary History of the United States*. They gave monetary policy a large role in explaining the depression of the 1930s, and later monetarists emphasised the role of monetary policy in the post-war business cycles. While they did not doubt the centrality of the link between monetary policy and inflation, they also emphasised the effects of changes in monetary policy on real variables. For example, they accepted the

fact that a significant application of anti-inflationary monetary policy would lead to a decline in output and a rise in unemployment. They were strong opponents of discretionary monetary policy and held it responsible for many unintended consequences such as booms and recessions. Thus, they helped add weight to the view that the business cycle was due to monetary policy errors.

It is somewhat ironic, therefore, that the strongest proponents of the modern academic view that monetary policy does not cause the business cycle come from Friedman’s Alma Mater – the University of Chicago.

A Closer Examination of Proposition Two

At first the proposition that monetary policy does not affect real variables was just a restatement of the *long-run neutrality of money*. This holds that in the long run, policies that speed up the growth of the money supply will only increase inflation and not the real rate of growth. Instead, a country’s trend rate of real growth is determined by its growth of labour, capital and technological advancement.

As a statement of long-run tendency, this is a very reasonable generalisation, as I will show later. However, by focussing on the long run, it still leaves open the possibility of monetary policy having short-run effects on output, employment and hence the business cycle as accepted by Friedman and some of his followers. The short run here could mean anything between a few months and a few years.

This is where the second leg of the argument comes in *via the rational expectations school*. This maintains that even in the short run, if goods and labour markets cleared and monetary policy was credible (i.e. everyone believed that the authorities would stick to their guns), there would be little or no real effects of a monetary tightening. In the limiting case contained in their models, proponents of this view were able to show a world where tighter money could produce lower inflation at no cost in terms of output

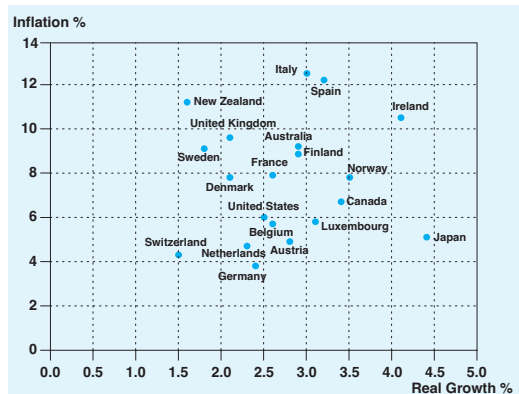
or employment foregone.¹ In pronouncing on policy, however, they might not go quite that far, but they certainly claimed that the costs would be small, and that they would get smaller as the credibility of monetary policy increased.

The third leg of the argument is supplied by the *real business cycle school*. They provide an explanation of the business cycle which – as can be seen from its name – relies entirely on real variables. Monetary variables or monetary policy play no role at all. In a sense there is nothing all that new in this – I remember from my student days studying business cycle models by Schumpeter, Frisch, Samuelson and Hicks that relied essentially on real variables. What is different about the new school of real business cycles is that it comes from an impeccable neo-classical University of Chicago background. (What is also new is that cycles are regarded as the socially optimal outcome, and hence governments should not try to smooth them out.)

To the practical mind, most of the three legs of the argument mentioned above seem rather far-fetched, but I think it would be a great mistake to dismiss them lightly. For a start, the first on the long-run neutrality of money is almost certainly correct, or it may even be an understatement. The usual way of demonstrating its basic correctness is to look at the performance of a number of countries over a reasonably long period. Graph 1 shows some results for 20 OECD countries over 20 years. The vertical axis shows the rate of inflation and the horizontal axis shows the average real growth rate of output. The result is a pretty random scatter. If high inflation helped to achieve faster economic growth (as was implied in some of the earlier versions of the Phillips curve), the scatter would be clustered around a positively sloped line. Clearly it is not. Japan has had the highest average real growth rate, but one of the lowest

Graph 1

INFLATION AND REAL GDP GROWTH: 1972 to 1991



rates of inflation. Similarly, New Zealand and Switzerland have had the lowest real growth rates, the former having one of the highest inflation rates and the latter having one of the lowest.

There can be no doubt that over reasonably long periods expansionary policies that produce high inflation are of no help in lifting real growth rates. In fact, there is some evidence, although less than I would like, to suggest that it probably retards growth.

Similarly, I think it would be unwise to dismiss all of the implications of the real business cycle literature. Some of their insights are very sensible. For example, they are probably right to say that it is unrealistic to expect a dynamic system like a modern economy to expand in a smooth line. Like many physical and biological phenomena, the natural progression may well be characterised by cycles. A tendency to cyclical movement may be intrinsic to the system, rather than a sign of malfunctioning. This would be even more pronounced in the case of a single economy, subject to exogenous shocks from abroad. I would not like to take this as far as the real business cycle school does and assume that all cycles are generated by supply shocks. I accept that demand shocks also have a role;

1. Begg describes the conclusions of the rational expectations school as follows. 'Lucas (1972), Sargent (1973), Sargent and Wallace (1975) and Barro (1976) develop rational expectations models with striking conclusions. Systematic, and therefore anticipatable, monetary policy would have no real effects, *even in the short run*'. See David K. Begg *The Rational Expectations Revolution in Macroeconomics: Theories and Evidence*, Johns Hopkins University Press, Baltimore 1985.

monetary policy can have a destabilising effect, as well as a stabilising one. Where the real business cycle theory is useful is in reminding us that there is no reason to expect that 'neutral' monetary policy will result in the elimination of cycles.

Having come to the defence of the first and the third legs of the argument, I am afraid that I still choke on the second one. This is the one that says monetary policy can reduce inflation in a relatively costless way if it is credible and well-understood. As a student of the economic history of the last quarter of a century, I have noticed exactly the opposite. While credible, well-understood monetary policy is a worthy goal, we should not be led to expect too much from it. In virtually all the cases with which I am familiar, it has not proved possible to reduce inflation without incurring significant costs in terms of falling output and employment.

Experience of OECD Countries Over the Last Two Decades

It is possible to test this using the same set of data that underlay Graph 1. These are from the regular tables at the back of the OECD *Economic Outlook*, and they show annual changes in selected economic variables for OECD countries over the past 20 years. Looking at the table for inflation, it is possible to identify periods where countries have achieved a significant fall in inflation as a result of tighter policies; in most cases, the fall has gone on for two, three or four years (see Appendix, Table 1, available on request). In 18 of the 20 countries, there are two clear episodes – the first in the mid 1970s and the second in the early 1980s.² The two exceptions are Spain and Sweden, which only managed one significant fall in inflation. We can thus look at 38 episodes of policy-induced reductions in inflation (18 countries that had two episodes and two countries that had one)

and see whether the reduction in inflation was accompanied by annual falls in output and/or employment, i.e. a recession.

Table 1 presents the results. In 26 of the 38 cases, both employment and output fell during the period of falling inflation. In 8 cases, either employment or output fell. There were four occasions where significant reductions in inflation occurred without a fall in either the level of employment or output, i.e. without a recession. This is quite an interesting finding, and one that needs to be examined more closely to see whether these instances provide us with a better way of conducting anti-inflationary monetary policy.

Norway, which accounted for two of the four episodes, owes its remarkable performance to the fact that it is the OECD area's pre-eminent net energy exporter. It should be remembered that the rises in inflation during this period followed the OPEC I and OPEC II oil price shocks. So, at the time Norway was squeezing down on inflation, it was enjoying big terms of trade gains from rises in the price of its oil and gas exports. This expansionary effect cushioned output and employment in the mid 1970s and early 1980s. However, in recent years, with weak energy prices, Norway has not fared so well – output fell in 1988 and employment fell in each year from 1988 to 1991.

Canada, in the mid 1970s, was the third example where neither output nor employment fell. It had a lot of similarity with Norway because at the time it was a large net exporter of oil and gas. This, together with the fact that its fall in inflation was short-lived, helped it to avoid a contraction in economic activity at the time. However, the special circumstances of the mid 1970s did not provide a model that could be used in later episodes. In the early 1980s, both output and employment fell, and output fell again in 1990 and 1991.

2. There are two other occasions where inflation fell significantly in some countries, but which are not considered in the present exercise. First, in 1986, there was a 60 per cent fall in the price of oil which allowed a number of oil-importing countries to experience a once-off fall in inflation. As this fall in inflation resulted from an external supply shock, rather than anti-inflationary domestic policy, it is excluded. Second, a number of countries, including Australia, have experienced significant falls in inflation over the past three years, and a number of others are part way through this phase. Since the episode has not yet been completed, and we do not know how many countries will ultimately record falls in output and employment, it has not been included.

TABLE 1: BEHAVIOUR OF OUTPUT AND EMPLOYMENT DURING PERIODS OF SIGNIFICANT FALLS IN INFLATION* IN OECD COUNTRIES

	Occasions where output and employment both fell		Occasions where either output or employment fell		Occasions where neither output nor employment fell	
	1970s	1980s	1970s	1980s	1970s	1980s
US	√	√				
Japan	√					√
Germany	√	√				
France	√			√		
Italy			√	√		
UK	√	√				
Canada		√			√	
Austria	√	√				
Belgium	√	√				
Denmark	√	√				
Finland			√	√		
Ireland		√	√			
Spain		√				
Netherlands	√	√				
Norway					√	√
Sweden		√				
Luxembourg	√	√				
Switzerland	√	√				
Australia		√	√			
New Zealand	√			√		

The data on which this table is based is available on request.

* See footnote 2 on page 12.

The fourth case of a country achieving a policy-induced reduction in inflation without a recession is Japan in the early 1980s. It is hard to find any special factors to explain this away. Japan was a net energy importer, yet it achieved a significant reduction in inflation; it fell from 7.5 per cent in 1980 to 2.0 per cent in 1983, and did not rise significantly above this for the remainder of the decade. Output growth averaged over 3 per cent per annum between 1980 and 1983, while employment growth averaged about 1 per cent per annum.

Japan, in the early 1980s, is the one case out of the 38 examined here where inflation was sustainably lowered without inducing a recession, and without receiving the fortuitous benefit of a favourable terms of trade shift. It was the exception that 'proves' the rule.³

In another year or so, when the figures for 1992 and 1993 are complete, we will be able to augment our sample of observations by about one-third. The way things are shaping up, it is not going to change the result. Those countries that have had a significant reduction

3. It would be pleasing to say that the Japanese had shown the world how to run monetary policy by their success during the 1980s. However, by the time the new decade began, it was apparent that Japan had experienced the largest asset price boom and bust of all OECD countries, and that it was not having anywhere near as much success in handling the problems of the early 1990s as it had with the problems of the early 1980s.

in inflation, such as Australia, New Zealand, Canada, the United Kingdom, the United States and the Scandinavian countries, have all experienced recessions. For most countries, inflation did not rise very much in the late 1980s, so there is not a lot of room for it to fall. This is true especially for Japan, and to a lesser extent Germany, but even in these cases, output has been falling for the past three quarters. That means that even relatively modest falls in inflation have been accompanied by recessions this time. From this I conclude that there does not seem to be a systematic tendency for the output costs of reducing inflation to diminish over time.

The other observation that comes from this sample concerns the concept of 'credible and well-understood monetary policy'. The countries in this sample cover the full gamut of monetary policy regimes and institutions. Those whose monetary policy most closely fits the description of being credible and well-understood would include Germany, Switzerland and the United States, where the central banks have a high degree of independence. All three countries have better-than-average inflation performances, particularly the first two. However, there is no evidence that they have been able to achieve a better 'trade-off' – that is, to reduce inflation at lower cost in terms of output and employment foregone. All three countries experienced relatively deep recessions during the mid 1970s and early 1980s; two of them have done so again in the early 1990s (Switzerland and the United States) and Germany is in the process of doing so.

CONCLUSIONS

There was a time when economists thought that the business cycle would become extinct.

In the early 1970s, there were studies undertaken with a view to widening the definition of a recession to include periods where growth, although positive, fell below trend. This wider definition was proposed because it was thought that actual falls in output would become a rarity.⁴

In the event, the business cycle re-asserted itself over the next twenty years, and we have had three periods where output has fallen

in most of the developed economies. Furthermore, although each of these recessions has been unique in its own way, their absolute size has not varied by much.

A lot of factors lie behind the business cycle – various types of supply shocks as emphasised by the real business cycle school, but also demand shocks such as changes in international demand, changes in monetary policy and changes in fiscal policy. All these have an influence, and it would be facile to single out one as the only cause.

Besides, we are dealing with a situation which is more than just a business cycle. In the episodes discussed in this talk, the policy issue was not just a matter of attempting to cushion the recession, it was equally a matter of trying to bring down the rate of inflation in a sustainable way. What the history of the last twenty years tells us is that there is no easy way. Significant reductions in inflation have nearly always involved major costs in terms of output and employment losses, and there does not seem to be any indication that these losses are getting smaller (although the rate of inflation itself has declined in successive episodes over the period).

It may seem rather gloomy to spend so much time looking back at the cost incurred in reducing inflation, when there are other new challenges facing us. On the other hand, it can be a useful reminder that we should not again let inflation get away from us, because that cost of getting it back down again would almost certainly be high.

4. See Victor Zarnowitz (ed), *The Business Cycle Today*, NBER, N.Y. 1972 and M. Bronfenbrenner (ed), *Is the Business Cycle Obsolete?*, N.Y. Wiley, 1969.