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CHAPTER 8

Aggregate demand should do the job

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1. Introduction

In this chapter, we extend the analysis of Mitchell (2001a) who opened with the statement: "the unemployed cannot find jobs that are not there!". The contrast between the missives of microeconomics, where cost minimisation is a necessary condition for efficiency and profit maximisation, and policy practice conditioned by the NAIRU[2] approach in this regard is stark, given the high costs in terms of unemployment and corresponding waste of resources. At the macroeconomic level, the dominant economic orthodoxy has, since the mid-1970s, cajoled policy makers into following policies that have deliberately and persistently deflated their economies under the false impression that the role of policy is to ensure that the economy is operating at the natural rate of unemployment. The profession seems to have become obsessed with supply side remedies to high unemployment, despite the fact that most economies have failed to generate sufficient jobs over the last 25 years to match the growth in their labour forces. The costs of unemployment have seemingly been ignored (Watts and Mitchell, 2000). There is now considerable evidence that rises in unemployment are highly persistent and cumulative and permanent costs are incurred if active policy does not seek to reduce it quickly (Mitchell, 1993, 2001a). There is also mounting evidence against the dynamics implied by the NAIRU approach (Fair, 2000; Akerlof *et al*, 2000).

Modigliani (2002: 3) has recently argued that[3]

> Unemployment is primarily due to *lack of aggregate demand*. This is mainly the outcome of erroneous macroeconomic policies… [the decisions of Central Banks] … inspired by an obsessive fear of inflation, … coupled with a benign neglect for

unemployment ... have resulted in systematically over tight monetary policy decisions, apparently based on an objectionable use of the so-called NAIRU approach. The contractive effects of these policies have been reinforced by common, very tight fiscal policies [emphasis in original].

In this chapter we examine the evidence needed to support Modigliani's view that demand deficiency is the most important element in explaining the persistence of unemployment in Australia and the Netherlands over the last 30 or so years. While Modigliani emphasises tight monetary policy, our analysis considers demand deficiency more generally. We show that misguided government fiscal and monetary policy has been largely responsible for the persistently high unemployment.

The comparison between Australia and the Netherlands is interesting because they share many features, yet in other ways are quite distinct. Both are relatively small, highly developed open economies with well-developed systems of social security. However, Australia relies to a large degree on exports of primary commodities, whereas the Netherlands, due to the more diverse nature of its exports, enjoys a more stable terms of trade. The feature of the Dutch economy that separates it from others, including Australia, is that it forms a transport hub for major trade in Europe and beyond. Moreover, the Netherlands has experienced robust employment growth of 2.9 percent per annum over the period 1995–2000, whereas the corresponding figure for Australia was 1.6 percent. As a consequence, the rate of unemployment in the Netherlands in 1999 was 3.3 percent, compared to 7.2 percent in Australia. However, the apparent success in combating unemployment in the Netherlands is partly clouded by the huge increase in inactivity since the early 1980s. While there were 267 thousand persons officially unemployed in 2000, the number of disabled workers entitled to benefits was recorded at over 900 thousand! In terms of the labour force, this group (including sickness benefits recipients) has more than doubled. The percentage in terms of the labour force rose from 9 percent in 1970 to 20 percent in 1980. It has remained at that level since, and the OECD (1998) reported that, when defined in a "broad" sense, unemployment in the Netherlands would reach around 25 percent of the labour force (see also Muysken, 2001).

The chapter is laid out as follows. Section 2 challenges the view held by Layard *et al* (1991), among others, that the rise in unemployment can be attributed to diminishing search effectiveness among the unemployed. According to this view, search effectiveness has declined as welfare benefits have risen. We argue that jobs have to exist before search can be effective. Section 3 explores the determinants of employment and concludes that it is aggregate demand that dominates employment generation. Section 4 examines the supply side explanations of unemployment and concludes that they lack credibility. Section 5 shows that deficiencies in policy and business investment explain the deficiency in aggregate demand. The final section challenges the view that suggests that less regulation will allow the private sector to produce enough jobs to restore full employment. We argue that full employment requires a strong job creation role by the public sector. Concluding remarks follow.

## 2. Jobs have to exist before search can be effective

Over the last 25 years, as unemployment has risen and persisted at high levels, orthodox economists have concentrated on the supply side of the labour market, hypothesising that full employment now occurs at much higher unemployment rates than in the past. The unemployment to unfilled vacancies (UV) ratio is plotted in Figure 1, for Australia (using quarterly data) for the period from September 1966 to December 2000 and for the Netherlands (using annual data) from 1966 to 2000. Notwithstanding sectoral variations, at first blush, we are dealing with a heavily demand-constrained economy. Since the mid-seventies the average UV ratios were 11 to 1 in Australia, and 7 to 1 in the Netherlands.[4] It is difficult to mount a search-based explanation for mass unemployment when there are not enough jobs being generated relative to labour supply.

In Figure 2, the unemployment rate is plotted on the left hand scale against the sum of employment and vacancies (as a percentage of the labour force) as a measure of labour demand on the right hand scale (inverted). The correspondence between the two series is striking and a major part of the variation in the unemployment rate appears to be associated with the evolution of demand.

Modigliani (2000) presents similar graphs for France, Germany, and the United Kingdom, which show that as job availability declines, the

unemployment rate rises, with the concomitant outcomes that the search process lengthens and average duration of unemployment rises. Modigliani (2000: 5) concluded, "Everywhere unemployment has risen because of a large shrinkage in the number of positions needed to satisfy existing demand."

Figure 1 UV ratio for the Australia and the Netherlands, 1966-2000

(a) Australia 1966-2000   (a) The Netherlands 1966-2000
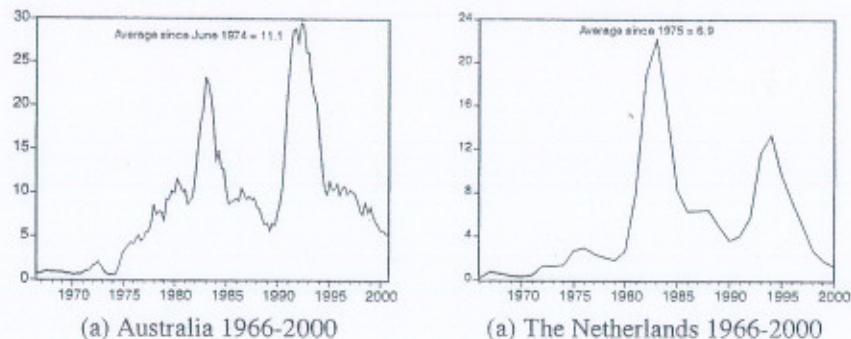
Source: Australia: ABS AUSSTATS, NIF current series data. Netherlands: Central Planningbureau (2001) and Muysken et al. (1994) and Ministry of Social Affairs (2001). The ratio is total unemployed (000s) to unfilled vacancies (000s). Australian data is quarterly, whereas data for the Netherlands is annual.

Figure 2 Labour demand and unemployment, Australia and the Netherlands, 1966-2000

(a) Australia   (b) The Netherlands
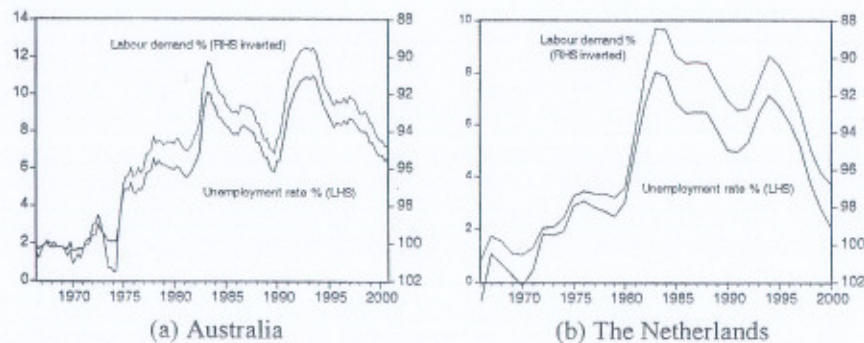
Source: see Figure 1.

Mitchell and Muysken (2001) show that part of this upward movement in unemployment could also be explained by shifts in the UV relationship, the so-called Beveridge curve. In both Australia and the Netherlands, the UV relationship is displaced by the rise in long-term unemployment driven by recessions. All recessions appear to have worsened the trade-off between unfilled vacancies and unemployment. Further, the relationship between long-term unemployment and the unemployment rate is very close for both countries. As unemployment rises (falls), the proportion of long-term unemployed rises (falls) with a lag. So while Layard et al (1991) may claim that search effectiveness declines and this contributes to rising unemployment rates, it is highly probable (as shown in Figure 2) that both are caused by insufficient demand for labour. The policy response then is entirely different.

3. Aggregate demand generates jobs

Modigliani (2000) argues that the level of aggregate demand rather than the labour force (supply) determines the level of employment. As a way of appreciating the correspondence between demand dynamics and employment dynamics, the annual percentage growth in real final demand and employment is plotted in Figure 3 from 1965 to 2000.

The major shifts in employment fortunes are closely related to similar directional shifts in real demand. Real demand growth was subdued in Australia following the 1974 recession, which in relative terms was not as severe as the two later recessions (1982 and 1991). The same holds for the Netherlands after the 1981 recession.

Another way of viewing this relationship is from the unemployment side. The relationship between the growth in real demand (expressed as the 5-year moving average of the annual percentage changes) and unemployment since 1960 is shown in Figure 4. We use the smoothed series to provide a better depiction of the downward trend in real demand over the period that unemployment began to become a problem.

The evidence leaves no doubt that the rise in unemployment was associated with a marked deficiency in aggregate demand. Had aggregate demand not fallen in the mid-1970s and remained well below the 1960s levels for the next decade, the unemployment rate would not have risen significantly in Australia. Further, subsequent growth in employment (given the on-going labour supply growth) would have been able, as in

previous recessions in the 1960s, to absorb those in the unemployment pool. The severity of the demand restraint meant that the unemployed pool rose far beyond what could be absorbed in any normal recovery.

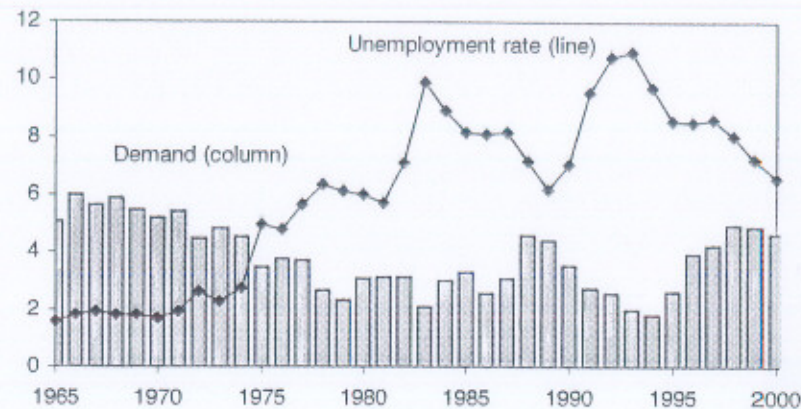Figure 3 Annual percentage growth in demand and employment
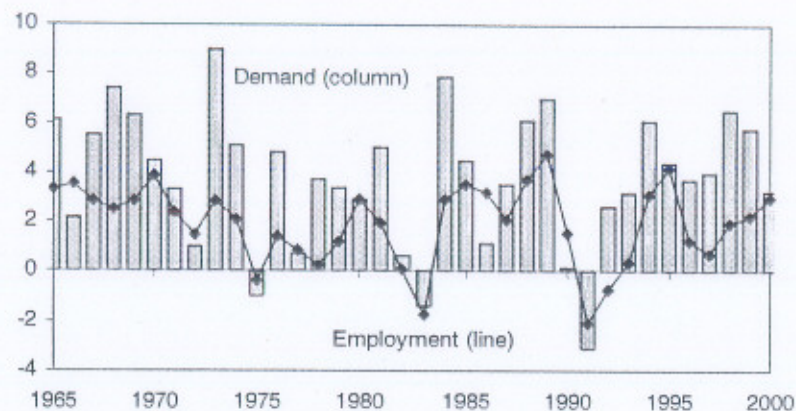

(a) Australia 1965-2000
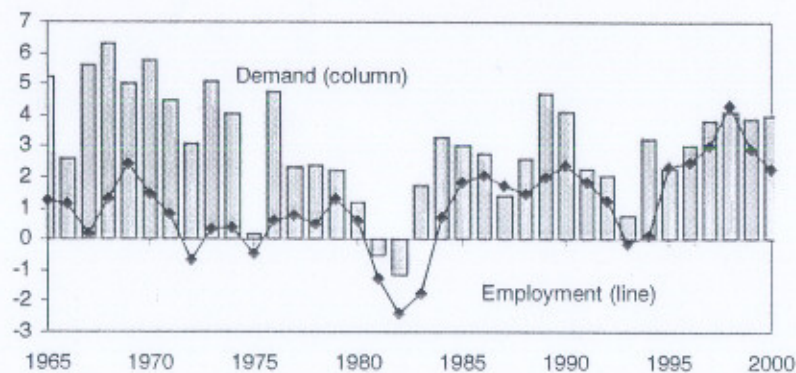
(b) The Netherlands 1965-2000

Source: see Figure 1. Employment is annual percentage growth in total farm and non-farm employment, demand is the annual percentage growth in real final demand (Gross National Expenditure at 1998/99 prices for Australia; GDP at 1980 prices for the Netherlands). This was the latest available base for the Netherlands at the time of preparation.

Figure 4 Real demand growth and the unemployment rate, Australia and the Netherlands

(a) Australia 1965-2000
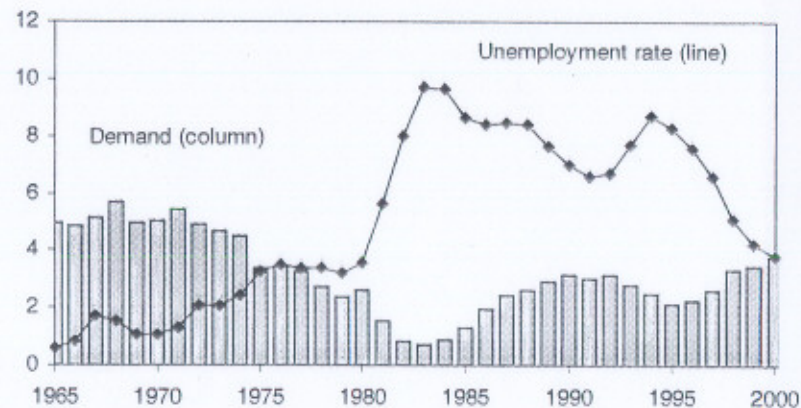
(b) The Netherlands 1965-2000

Source: see Figure 1. The unemployment rate is the aggregate unemployment rate and demand growth is the 5-year moving average of the annual percentage changes in real final demand (Gross National Expenditure at 1998/99 prices for Australia; GDP at 1980 prices for the Netherlands).

A similar case applies for the Netherlands, where aggregate demand fell sharply in the early 1980s. However, the recovery of unemployment was much better relative to the Australian experience. To a certain extent this apparent recovery is biased due to the enormous amount of inactivity in the Netherlands, noted in the introduction. Whatever account is made for these differential supply effects, there is still solid support in both countries that unemployment can be associated with a marked deficiency in aggregate demand.

4. A digression: supply side explanations of unemployment

The orthodox response may argue that we are ignoring the role of labour costs in this analysis. In this respect, Mitchell and Muysken (2001) analyse the so-called NAIRU-approach, derived from the Layard *et al* (1991) framework, since this has been the dominant force in debates on policy measures to combat unemployment. They show that in the Layard *et al* (1991) approach, the NAIRU is affected by institutional factors such as benefit ratios, minimum wages, bargaining coordination by unions, employment protection and labour taxes. Additionally, commodity prices and skill mismatch can play a role. However, as a result of the assumed production structure – a Cobb-Douglas production function is used – and the assumption of a constant benefit rate, neither labour augmenting technological change, nor changes in the capital stock or costs of capital can impact on the NAIRU in this model. That is a serious shortcoming and maintains the earlier conceptions of the natural rate hypothesis where the steady-state unemployment rate is not affected by fiscal or monetary policy. No scope is given for aggregate demand, technological change or capital costs to impact on unemployment.

It is not surprising that the NAIRU-approach has been contested on precisely these grounds. Blanchard (1997) and Phelps (1994) argue for various reasons that the NAIRU will increase with the real interest rate. This induced Phelps and Blanchard to argue that the high unemployment in Europe in the 1980s was caused by the high real interest rates.

Ball (1999) develops a notion of hysteresis by assuming that the last fired are the first rehired. As a consequence the long-term unemployed do not put pressure on wages, although they can be reemployed if demand is sufficiently strong (Mitchell, 1987, Mitchell and Muysken, 2002). This implies that the bargained real wage will increase if the share

of long-term unemployment in total unemployment increases. And since this share tends to be positively related to total unemployment, the NAIRU will increase when unemployment increases.

In terms of the evolution of the NAIRU literature examined, Modigliani (2000) takes the most extreme position on the NAIRU-approach. His analysis of the causes of European unemployment in the 1980s is rather similar to those of Blanchard and Ball presented above. An important difference, however, is in the role of monetary policy in generating higher unemployment. While Blanchard stresses the indirect route through the relative price of labour with respect to capital, which leads to substitution of labour for capital and an inward shift in demand for labour because of a decrease in the capital stock, Ball points to the adverse effect on aggregate demand and in particular on its impact on the NAIRU through hysteresis. Modigliani emphasises the direct impact of aggregate demand, triggered by a decline in investment. The overcautious monetary policy induced a fall in investment below its 'full employment investment ratio'. Through the multiplier mechanism, aggregate demand declined and unemployment increased. Moreover, the shortfall in investment has persisted because monetary policy has remained too tight, combined with a tight fiscal policy motivated by the Maastricht-criteria. The reason for this overcautious monetary policy is an "obsessive fear of inflation" coupled with a "benign neglect policy for unemployment" (Modigliani, 2000: 3), which has induced the Bundesbank and later the European Central Bank to systematically overestimate the NAIRU.

Modigliani proposes a more expansionary monetary policy, "programmed in collaboration with the unions and the employers" (Modigliani, 2000: 14). Moreover, "rigidities in the labour market and poor work incentive designs" should also be combated, since these compound the effect of insufficient demand (Modigliani, 2000: 15).

It is obvious that our approach is highly sympathetic to Modigliani's analysis although we would emphasise that the pursuit of budget surpluses (tight fiscal policy) is ultimately the cause of mass unemployment when private spending is deficient (see Mitchell and Muysken, 2000 for further discussion). To provide a rough impression of the impact of labour costs on employment, the relationship between employment and real unit labour costs in Australia and the Netherlands is examined in Figure 5. We approximate real unit labour costs by the

share of labour income in GDP. The data suggest that there is no unique relationship between the variables. It is interesting to note that for Australia in the period 1970-1980 the negative relationship is suggested, whereas in the Netherlands there is no relationship between the two variables indicated in the 1970s. During the 1980s, the relationship flattens for Australia as it does for the Netherlands, but the latter remains steeper than for Australia. In the growth decade of the 1990s, the relation is virtually horizontal for both countries.

An examination of the relationship between unemployment and the wage share, further suggests that factors other than unit labour costs have caused the large rise in unemployment. Figure 6 clearly shows for both countries that the initial increase in the wage share was only associated with a relatively small rise in unemployment. Subsequently, the recessions of 1974 and 1982 in Australia were associated with enormous increases in unemployment and hardly any change in the wage share. The same holds for the recession of 1981 in the Netherlands. When the wage share started to decrease in the mid-1980s in both countries unemployment was hardly affected. Finally the wage share has hardly changed in both countries since the early 1990s but unemployment declined consistently in the Netherlands and fluctuated in Australia. All this illustrates that wage cost factors do not provide a consistently plausible explanation of the persistently high unemployment. We maintain our contention that demand factors largely explain the fluctuations in unemployment.

## 5. Policy and investment deficiencies in aggregate demand

To help account for the rise in unemployment in both countries, it is useful to compute the evolution of the GDP gap, which indicates the deficiency of aggregate demand. For the unemployment rate to remain constant, real GDP growth has to be equal to the sum of labour force and labour productivity growth, *other things equal*. In the midst of on-going debates about labour market deregulation, minimum wages and taxation reform, the most salient, empirically robust fact that has pervaded the last two decades is that the actual GDP growth rate has rarely reached this required rate. Figure 7 is derived from annual analysis of GDP gap components.

Figure 5 Employment growth versus wage share, Australia and The Netherlands
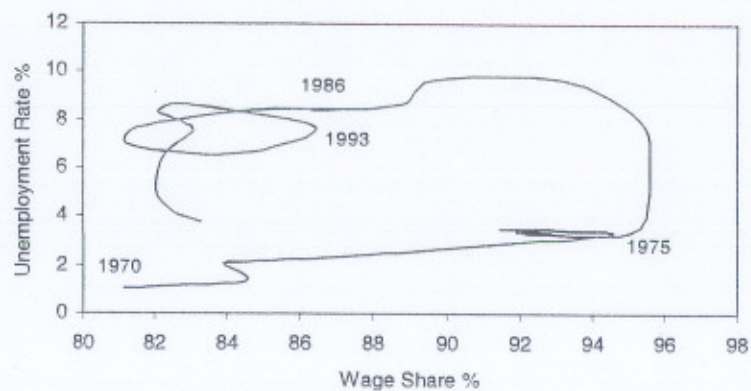

(a) Australia

(b) The Netherlands
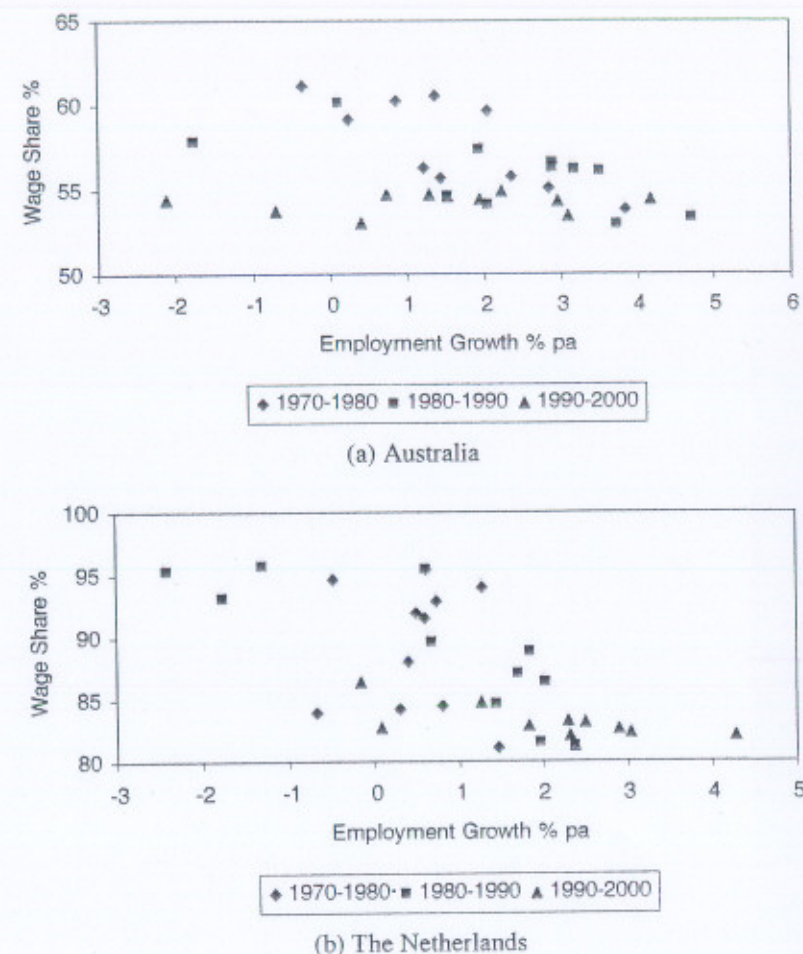
Source: see Figure 1 although annual data is used for both countries. Employment growth is the (four-quarter) percentage change in total employment and wage share is the percentage share of wages in GDP. The wage share was computed as the wage share of gross domestic product at factor cost.

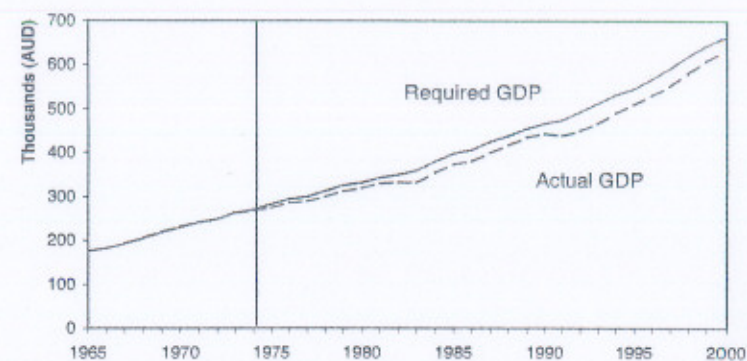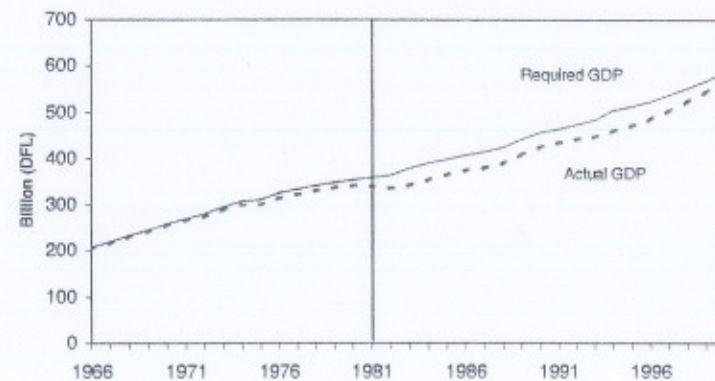Figure 6 Unemployment and wage share, Australia and The Netherlands

Figure 7 GDP and Required GDP, Australia and the Netherlands
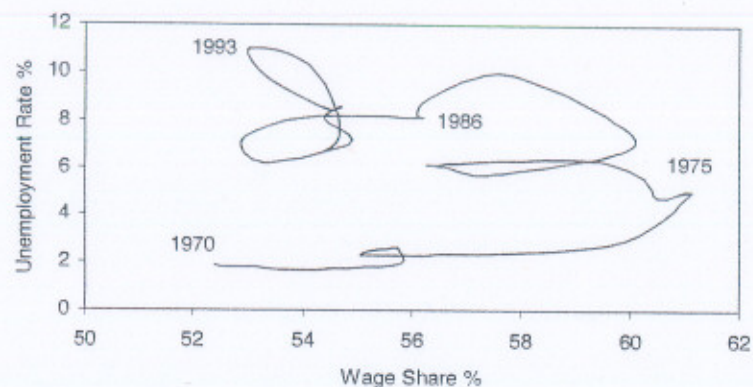
(a) Australia 1970-2000

(b) The Netherlands 1970-2000

Source: see Figures 1 and 5. Annual data was used for both Australia and The Netherlands.

(a) Australia 1965-2000

(b) The Netherlands 1966-2000

Source: see Figure 1 but note that that annual data was used for both countries.

The results are clear. Prior to 1974, the growth rate of GDP was sufficient to match the required growth rate set by the growth of the labour force and labour productivity in Australia. After that point, GDP growth was never sufficient and rises and falls in unemployment reflected the history of that deficiency. The same holds for the

Netherlands after 1981, although the gap closed in the late 1990s which was reflected in the sharp decline in unemployment.

An interesting question then is: what determines the GDP gap? In our view there are three obvious candidates: first, investment, since fluctuations in investment typically drive the business cycle; second, monetary policy through its impact on aggregate expenditures; and last but not least, fiscal policy. We will concentrate here on the impact of the first two on aggregate demand (see Mitchell, 2001a; and Mitchell and Mosler, 2002 for a discussion of fiscal policy).

5.1 Investment driven demand deficiencies

Investment expenditure adds to productive capacity and is a key component of aggregate demand. Fluctuations in the level of investment drive the business cycle. We should expect a close relationship between changes in the investment ratio (investment to GDP) and demand aggregates in the labour market, given the analysis presented above. Mitchell (2001a) argued that the major determining factor accounting for the changes in the level of unemployment in the OECD has been movements in the investment ratio. Ball (1999) has also presented evidence supportive of this claim.

The evolution of the smoothed private, public and aggregate investment ratios (investment to GDP) in Australia and the Netherlands are shown in Figure 8. In both countries the aggregate ratio started declining in the early 1970s and, despite rising in the recovery from the each recession since, it has failed to return to the levels associated with full employment in the 1960s. Of particular note is the continued decline in public capital expenditure since the early seventies. In Australia this fall continued for the whole period, whereas in the Netherlands the public investment share stabilised around the all-time low of 2.5 percent. The transfer of resources to the private sector in several budgets as taxes and government spending fell has not seen the investment ratio for the private sector meet the gap left by the public decline. The decline in public capital expenditure as a share of GDP is symptomatic of the regime shift that occurred as the NAIRU-era began. We will examine this issue further below.

Figure 8 Public, Private and Aggregate investment ratios, Australia and the Netherlands.

(a) Australia (smoothed series used)   (b) The Netherlands
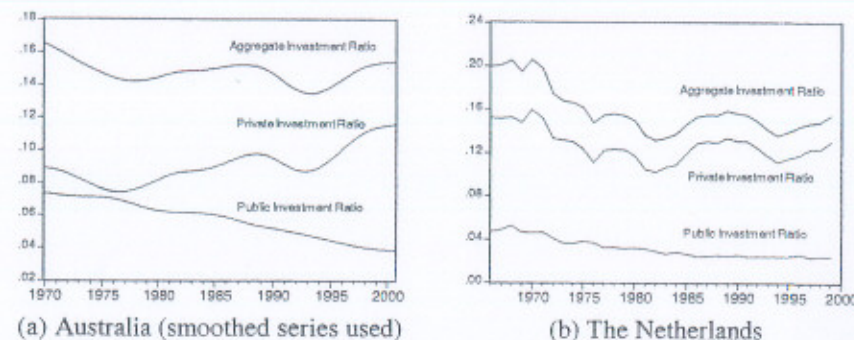
Source: see Figure 1. Australian data was quarterly and all series were smoothed using a Hodrick-Prescott filter. For the Netherlands, non-smoothed annual data was used. Private investment excludes dwellings and inventory movements. There is also a major difference in the way the two countries classify public investment, which makes the relativities difficult to compare. To interpret the left hand axis in percent multiply by 100.

To examine the role of capital expenditure in influencing unemployment, we computed the full employment investment ratio as a benchmark for both Australia and the Netherlands.[5] We then computed a full capacity income (GDP^*) level based on a Harrodian natural rate of growth concept (see Davenport, 1982; Mitchell, 2001a). We used this to derive a time series for the ratio of actual total investment to full capacity income (I/GDP^*). Finally, we subtracted this ratio (I/GDP^*) from the full employment investment ratio to compute the investment shortfall series. This measures for each period (in terms of percent of potential GDP) the extent to which I/GDP^* falls short of the full employment investment ratio and is a measure of demand deficiency.

The relationship between the investment shortfall and the unemployment rate shown in Figure 9 is striking. The crucial rise in unemployment Australia in 1974 was preceded by a large jump in the investment shortfall, and the same holds for the rise in unemployment in the Netherlands beginning in 1981.

Figure 9 Investment shortfall and unemployment rate, Australia and the Netherlands
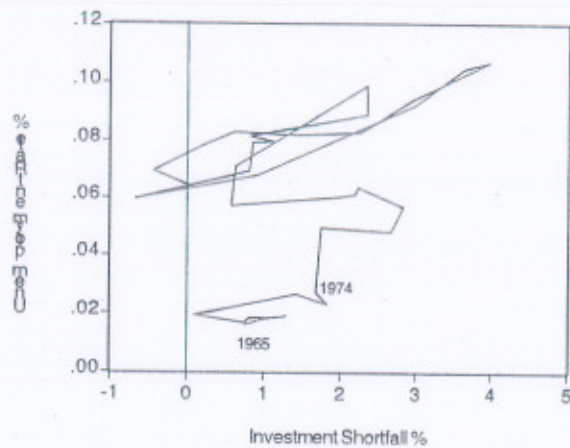
(a) Australia 1965-2000
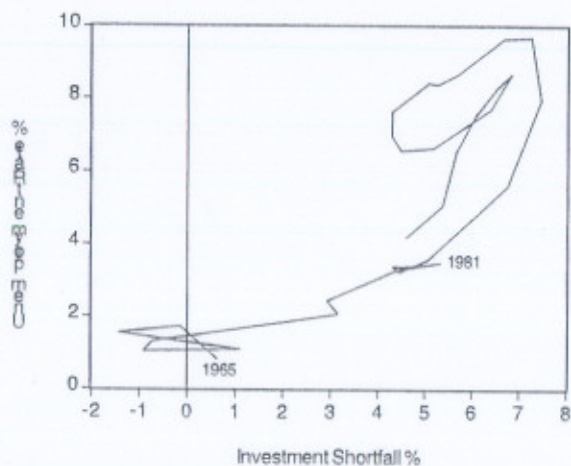
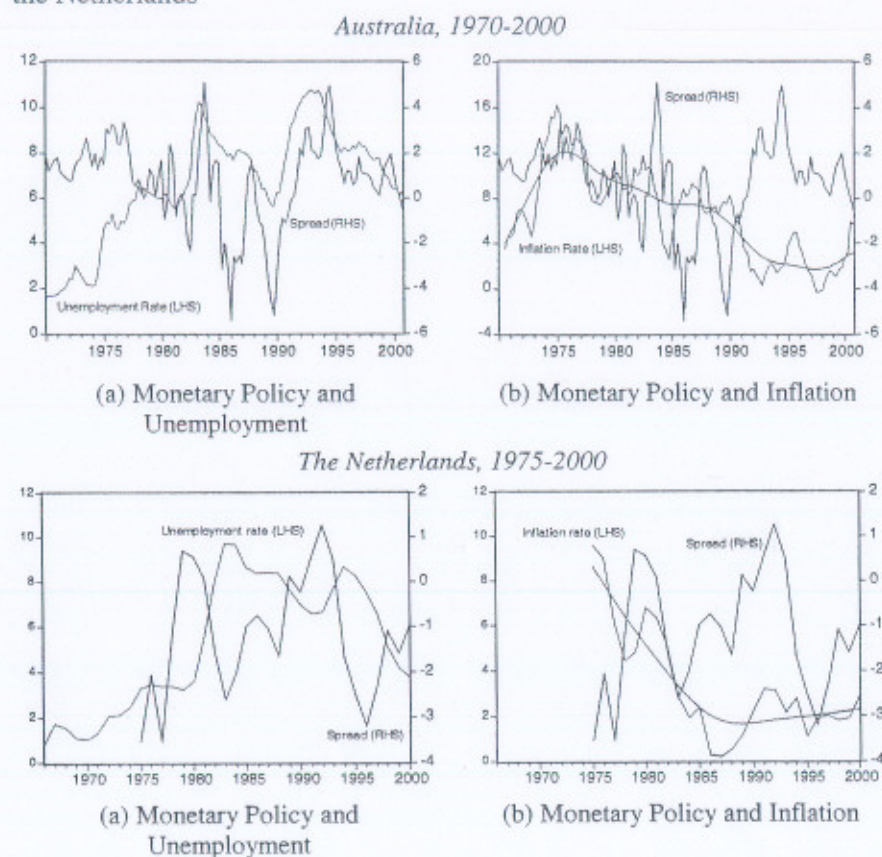

(b) The Netherlands 1965-2000

Source: see text for description of derivation of investment shortfall.

5.2 Monetary policy puzzles

Taking us through the Keynesian reasoning that investment affects aggregate demand, which in turn determines employment and unemployment, Modigliani (2000: 9) concludes, "We know from elementary economics that investments are affected by monetary policy (interest rates and credit availability). In fact as it is well known, this is the channel par excellence through which a Central Bank controls output and inflation. ... Indeed, there is no economics fundamental that can lead anybody to hold the view that money can directly affect inflation up or down except through raising or curbing aggregate demand and thus the demand for labor, wages and prices."

A version of the history of monetary policy over the last 30 years in relation to the evolution of inflation and the unemployment rate is shown in Figure 10. The measure of monetary policy shown is the spread between the Official 90-day bill rate and the 10-year Treasury bond rate. A high spread indicates a tight monetary policy (see Mitchell, 2001a). The inflation measure is the annual inflation rate (CPI) and we have also plotted a smoothed inflation series using a Hodrick-Prescott filter to measure trend inflation. The left-hand panel in Figure 10 shows that in Australia the sharp rises in the unemployment rate corresponding to the last 3 recessions were preceded by sharp tightening in the monetary policy measure. It is puzzling why the spread was so high during the period following the 1974 crisis when the stock of unemployment was building. From the right-hand panel the 1980s and late 1990s stand out as worrying examples of mistaken monetary policy. With trend inflation falling throughout the decade and the unemployment rate still above acceptable levels, why did the RBA hold the spread at such high levels for so long in the 1980s? Further, with inflation well under control in the late 1990s, why did the RBA successively push short rates higher? The manifestation of this behaviour has been the persistence of GDP growth below that required to make substantial inroads into the unemployment rate.

Figure 10 Monetary policy, inflation and unemployment, Australia and the Netherlands

Australia, 1970-2000

(a) Monetary Policy and Unemployment

(b) Monetary Policy and Inflation

The Netherlands, 1975-2000

(a) Monetary Policy and Unemployment

(b) Monetary Policy and Inflation

Source: see Figure 1 and text.

A similar story holds for the Netherlands, where its central bank strictly followed the German Bundesbank's monetary policy. From the lower panels of Figure 10, we might ask why the spread was so high around the second oil crisis with unemployment increasing rapidly and inflation on a downward trend. Further, after the fall of the Berlin Wall the spread rose to an unprecedented height, creating a recession all over Europe, while unemployment was high and inflation was clearly under control. In conclusion, the past 25 years in Australia and the Netherlands

provide plenty of evidence that the Central Banks have acted in accordance with Modigliani's assessment noted above.

6. What if the private sector can't provide enough jobs?

Mitchell (2001b) argues that in the fifty years since the end of World War II, most OECD economies have gone from a situation where the respective governments ensured there were enough jobs to maintain full employment to a state where the same governments use unemployment to control inflation. The USA stands as an exception and has never achieved full employment apart from the period coinciding with the peak of the Vietnam War. A major aspect of this move has been the changes that have occurred in public sector employment. Many economies have undergone substantial restructuring of their public sectors with significant employment losses being endured. In Table 1, we compare the growth rates of private and public employment and the labour force for Australia and the Netherlands. The Australian labour force has grown at an average compound rate of 1.87 percent per annum since 1970. Over the same period, private employment has averaged 1.91 percent per annum, whereas public employment has averaged a rate of growth of 0.64 percent per annum (driven heavily by the growth in the 1970-75 period). Since 1990, the public sector has declined in absolute employment every year with a rapid −2.03 percent per annum average decline since 1995.

Over the 30-year period from 1970, private employment growth in the Netherlands was 1.08 percent per annum. Like Australia, it kept up with labour force growth of 1.13 percent. Public sector growth in the Netherlands lagged behind with a growth rate of 0.85 percent per annum. After an upsurge in growth until the mid-1980s, employment growth in the Dutch public sector was virtually flat over the 1990s. As a consequence, the share of public employment rose in the Netherlands from 11.1 percent of total employment to 14.7 percent in 1985. Following this, it fell back to just below its initial level, 10.7 percent in 1999. So the pattern is similar to Australia except that the public sector deficiency is less damaging because the Dutch labour force growth is substantially below that of Australia.

With private sector employment growing more or less commensurately with the labour force, the withdrawal of public sector employment has

contributed significantly to the persistently high unemployment that Australia has experienced. As we have already indicated above, the Netherlands has partially eliminated this problem by shifting a large number of workers into the disabled category. That is, they do not show up in the official unemployment figures. If the governments expected the private sector to provide commensurately more jobs as public sector employment was cut, then they were wrong – in particular for Australia. The magnitude of private employment growth necessary to compensate for the public sector losses has been historically unattainable on any sustained basis.

Table 1 Growth rates in labour market aggregates, Australia and the Netherlands, 1970-1999

	Employment Growth			Labour Force Growth
	Public	Private	Total	
Australia	0.64	1.91	1.67	1.87
The Netherlands	0.85	1.08	1.05	1.13

Notes: Growth rates are annual average compound rates for the periods shown. UGAP is unemployment minus 2 percent of the Labour Force to capture frictional unemployment. For a full account of this data and OECD comparisons see Mitchell (2001b).

To motivate this statement we use the framework developed in Mitchell (2001b). Full employment is taken to mean the provision of enough public and private jobs to match labour supply[6] minus some constant proportion α of frictional unemployment[7] – the remaining unemployment is considered to be demand-deficient. We define the private employment gap, *PGAP* as the level of public employment required to achieve full employment once private employment is determined. If public employment is below *PGAP*, then demand-deficient unemployment will be positive and the economy departs from full employment. Accordingly, we define the unemployment gap (*UGAP*) as the difference between *PGAP* and actual public employment. [8] So the greater the increase in the private employment gap, the greater must be the rate of growth in public employment for demand-deficient unemployment to remain constant. With reasonable assumptions made about labour force growth (conditioned by the magnitudes common since

the mid-1970s) and the cyclical nature of private employment growth, it becomes manifestly obvious that sustained full employment requires a robust and counter-cyclical public employment growth rate.

Figure 11 PGAP, Public Employment and UGAP in Australia and the Netherlands
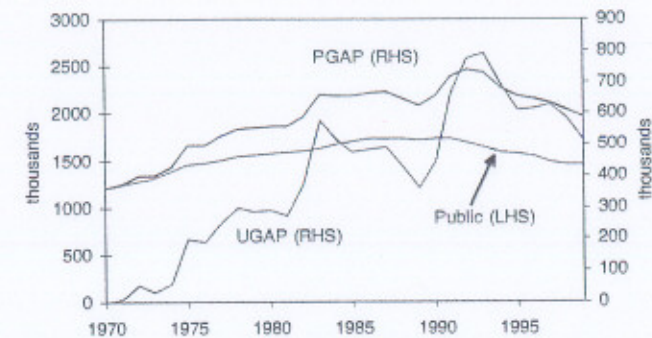
(a) Australia 1970-2000
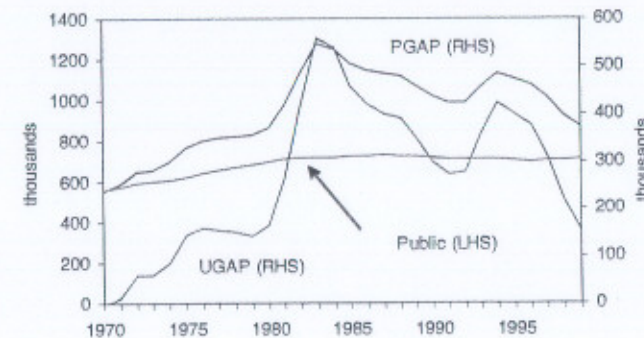
(b) The Netherlands 1970-2000

Source: OECD Economic Outlook Database, 1960-2000.

Applying this framework to the Australia and the Netherlands yields the results shown in Figure 11. By failing to expand public employment, at least in line with labour force growth, governments have allowed unemployment to persist at high levels. In this context, we say that at any point in time the government chooses the level of unemployment. Mitchell (2001b) simulated the evolution of unemployment in Australia assuming that public sector employment grew in proportion with the labour force over the 1970-2000 period. The results were striking with simulated unemployment in 2000 below frictional levels.

7. Conclusion

We have demonstrated that employment in both Australia and the Netherlands is predominantly driven by aggregate demand. There is strong evidence to support this contention. The robustness of the results is strengthened by the fact that the two countries exhibit considerable diversity in economic structure. Despite all the labour market and related supply-side reforms that have been introduced in Australia over the last 15 years, the unemployment rate persists at high levels due to demand deficiency. In the same way, demand deficiencies can explain to a large extent the fluctuations in the Dutch unemployment rate. Moreover, the apparent Dutch success in combating unemployment is partly clouded by the huge increase in inactivity since the early 1980s.

The demand deficiency reflects notably: (a) declines in the investment ratio; and (b) declines in public sector employment. Both have been exacerbated by deflationary macroeconomic policy since 1975, which has ensured that the persistently high unemployment was inevitable. We have illustrated for Australia and the Netherlands that these factors indeed have played an important role in the determination of aggregate demand. We have also argued that the conventional NAIRU approach neglects the role of aggregate demand and is thus an inadequate framework for addressing unemployment.

The policy implications of the chapter are clear. First, an inflation-first monetary policy tends to set interest rates too high due to an excessive fear of inflation. Second, the public sector should take a much more active role in employment creation. Mitchell (1998) has proposed that a Job Guarantee be introduced by the public sector as a permanent solution to unemployment.

While our empirical evidence is convincing, there is a need for further more rigorous research into the demand side determinants of unemployment. We hope that we will succeed in focussing the interest of the profession more in that direction.

Endnotes

[1] The authors thank the participants of the Third Path to Full Employment Conference, at the University of Newcastle and anonymous referees for their comments and suggestions. All remaining errors are our own.

[2] The NAIRU refers to the Non-Accelerating Inflation Rate of Unemployment.

[3] It is interesting to note that Modigliani was the co-founder of the NAIRU (Modigliani and Papademos, 1975).

[4] The lower number for the Netherlands when compared to Australia is due to both the lower rate of unemployment in the Netherlands and the possible underreporting of vacancies in Australia: the Dutch vacancy figures are not based on voluntary reporting by firms, but on survey data.

[5] For Australia we took the average of the investment ratio (total capital investment to GDP) for March 1970 to December 1971 (16.4 percent). For the Netherlands we took the investment ratio for 1970 (20.6 percent).

[6] Labour supply in this context is equal to the current labour force, although we clearly recognise the importance of marginal workers not in the labour force.

[7] Frictional embraces structural factors. These factors are sometimes differentiated by spatial and skill-mismatch factors. The latter is somewhat contentious because in a tight labour market firms usually offer jobs with appropriate training implicit. A coherent regional policy with an active public sector labour market will also reduce the spatial imbalances significantly.

[8] We begin with $L = P + P_g + U$ where L is the labour force and P is total private employment, P_g is total public employment, and U is total unemployment. U is the sum of frictional unemployment (U_f) and demand-deficient unemployment (U_d). Then $PGAP = [L(1 - \alpha) - P] = P_g + U_d$ and $UGAP = U_d = PGAP - P_g$.

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