# Barbro Wickman-Parak: The economy and the labour market

Speech by Ms Barbro Wickman-Parak, Deputy Governor of the Sveriges Riksbank, at Skandinaviska Enskilda Banken (SEB), Stockholm, 29 April 2010.

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Sweden's GDP fell by almost five per cent in 2009, compared with the previous year. We need to go back as far as the 1940s to find an individual year with a correspondingly large fall in growth. The large demand shock that followed in the wake of the financial crisis had an unavoidable and drastic impact on production and employment. It has been possible to alleviate these effects, but not to prevent them, despite forceful monetary policy measures and expansionary fiscal policy.

Normally, changes in employment and unemployment occur two quarters after changes in production. This time, however, it appears as though the upturn in employment has already begun and unemployment has stopped rising, which is surprisingly early given the large fall in GDP. But unemployment is still high, and we are expecting a slow recovery in employment in the coming period. During the past three months unemployment has been around 9 per cent as a share of the labour force.

Today I intend to talk about developments in the labour market in Sweden. I will begin by describing how employment usually varies over the business cycle and then discuss what is different this time. I shall conclude by discussing how we Executive Board members viewed developments in the labour market at our monetary policy meeting last week.

## The relationship between economic activity and the labour market

Each economic cycle is unique, which became particularly clear during the most recent economic downturn. However, there are some patterns that often recur in economic cycles and forecasters have therefore often used them as a base in their forecasting work.

For example, it is normal that changes in activity in the labour market occur with some time lag compared with changes in production. This is mainly because it is expensive for companies to adjust production to a new demand situation and to employ and give notice to staff. Firms may therefore initially choose to wait and see whether the change in demand is temporary. This means that the first thing to happen in an economic downturn is that productivity growth falls. Firms gradually adapt to the new situation by reducing the number of hours worked without reducing the number of employees. However, if the downturn is long-lived, the personnel force is also downsized over time. The time lag between GDP and the number of hours worked is usually one quarter in Sweden, while the time lag between GDP and employment is usually twice as long, that is, six months.

A well-known relationship between economic activity and activity in the labour market was formulated by Arthur Okun in the early 1960s.[1] This describes a negative relationship between GDP growth and changes in unemployment, which has become known as "Okun's law". He found, for instance, that the US economy needed to grow by at least 3 per cent to avoid an increase in unemployment. Okun's law can thus be interpreted as a short-term relationship that expresses the link between changes in economic activity and changes in activity in the labour market. As the relationship between growth and employment is dependent on factors such as labour market policy, productivity, social norms and demography, the relationship varies between different countries and different periods in time.

[1] Okun, A. M. (1962), "Potential GNP: its measurement and significance", American Statistical Association, Proceedings of the Business and Economics Statistics Section, pp. 98–104.

A recently-published Economic Commentary on the Riksbank's website[2] estimates this relationship using Swedish data.[3] The study shows that there is a relatively strong link between GDP growth and unemployment, a link that has also varied over time. The connection has increased over time and between 2004 and 2008 it was relatively high, which indicates that unemployment was more sensitive to changes in GDP during this time. However the relationship has weakened over the past year, when GDP fell heavily without unemployment rising as much as one would have expected, given the historical relationship. According to the study, a GDP growth of more than 2.8 per cent is now needed for unemployment to decline, which can be compared with the historical average of 2.3 per cent. At present a higher level of economic growth is thus required to change the level of unemployment compared to the average historical relationship since 1980. The time lag between GDP and unemployment also appears to have increased during the 2000s. Thus, it now takes longer before the full impact of a change in growth has an effect on unemployment in Sweden.

**What is different this time?**

Part of the explanation for unemployment not having risen as much as one might have expected given the historical relationship could be that not all of the economy has suffered. The main fall in employment has been in the manufacturing industry, while the services sector, which is more labour intensive, has fared better. Last year exports fell by a good 13 per cent, while retail sales, for instance, only slowed down slightly. This is probably because the Swedish export industry was hard hit by the large fall in world trade, while the large economic policy stimulation helped hold up consumption.

Industrial production fell by around 25 per cent between the peak in November 2007 and the trough in May 2009. However, the fall in the production of services was just over 10 per cent between the peak in December 2007 and the trough in June 2009. In recent months production in both sectors has stabilised. This has also had an effect on employment, which fell much more in the manufacturing industry than in the services sector. The Riksbank's calculations show that employment in the manufacturing industry has been slightly stronger than the historical pattern implies during this economic downturn, given the large fall in production, while employment in the services sector has been much stronger than one might have expected given historical relationships.

As mentioned earlier, it appears as though the Okun coefficient has declined during 2009. I mentioned earlier that GDP fell by almost 5 per cent last year. According to the estimated Okun's law, unemployment in the economy as a whole should have risen by around 3 per cent, but the increase was only around 2 per cent. Although cuts in staff have been made, companies have not adjusted their workforce to the falling demand to the same extent as they would have if the historical pattern had applied. Many companies have instead chosen to retain existing personnel to a much greater extent than during earlier downturns. In some cases, they have instead introduced measures such as freezing wages or shortening the working week. One explanation might be that companies expect demand to be restored quickly and that they want to be prepared to quickly increase their production again. Another explanation as to why production has fallen more than employment, which is mentioned in the IMF's latest World Economic Outlook[4], could be that production has fallen most in those sectors of the economy with the highest productivity level.

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[2] Aranki, Friberg and Sjödin, 2010, "The relationship between the business cycle and the labour market in Sweden", www.riksbank.se.

[3] The relationship estimated is: Change in unemployment$_t$ = a + $b_0$*(GDP growth)$_t$ + $b_1$*(GDP growth)$_{t-1}$ + $b_2$*(GDP growth)$_{t-2}$+ q*(Change in unemployment)$_{t-1}$. $\varepsilon_t$ .

[4] IMF World Economic Outlook, April 2010.

Studies have shown that unemployment may suffer long-lasting effects from a deep recession. This is partly because a person who has been unemployed for a long time loses part of his or her human capital and therefore becomes less attractive in the labour market, and partly because some people, after job-seeking for a long time, quite simply give up and leave the labour force. What is usually referred to as structural or "natural" unemployment may thus increase during periods of high and protracted unemployment. Labour market policy can counteract these effects to some extent, by for instance, offering further education and retraining to the unemployed.

The situation today is in contrast to what we saw during the crisis in the 1990s. Then, GDP fell for three years and the fall in employment was greater than the fall in GDP. That crisis was domestically-generated and it was generally known that tough times lay ahead, as public finances were to be consolidated. This time, the crisis has come from outside and there has been scope for forceful fiscal policy and monetary policy measures.

It is always difficult to make forecasts. Moreover, I believe it is more difficult than normal in the current situation. A crisis of the depth we have now passed through leaves behind feelings of uncertainty regarding the future. Previously-observed relationships have not been able to provide us with the same guidance as before, and moreover it is difficult to know what these deviations from historical patterns will lead to further ahead.

The way this situation develops in the future will depend on many different things. If the world economy returns after the recovery to a situation similar to that before the crisis, then countries which have conducted a policy that has helped companies to retain their labour force through the recession will be in a very good position. Companies in these countries will then easily be able to increase production. However, if it turns out that the world demand is for other goods and services than those prior to the crisis, these countries may instead find themselves in a situation where they need to undergo a necessary structural transformation. This could lead to a more protracted period of high unemployment and lower production. In the future, countries like China may account for an increasingly large share of world consumption. If consumption patterns differ in different countries, this could mean that different types of product will be in demand in the future. A deep recession may also affect the internal demand picture within a country permanently, for instance, by individuals changing to more energy-saving and cheaper alternatives.

## Monetary policy has a limited capacity to affect the real economy

When the Riksbank decides on the repo rate, we assume that it will take one to two years before the decision has its full impact. Our monetary policy is therefore based on forecasts of inflation and economic developments over the coming three years. However, as I have said, it is particularly difficult to make forecasts right now as a result of the prevailing uncertainty. When we make our decisions we take into account both the inflation outlook and the prospects for the real economy. Depending on what type of shock the economy is exposed to, we can allow it to take time for inflation to return to the target and in this way avoid overly large fluctuations in employment and production.

However, it is now generally accepted that monetary policy cannot be used to attain a *permanently* lower level of unemployment. Many people believed this was possible a while ago when A. W. Phillips found a negative correlation between unemployment and inflation at the end of the 1950s,[5] a relationship usually called the Phillips curve. This shows that higher

[5] Phillips actually studied the relationship between wages and unemployment, but later studies indicated a similar relationship between inflation and unemployment, Phillips, A. W, (1958) "The relationship between unemployment and the rate of change of money wages in the United Kingdom, 1861–1957", *Economica*, 25, pp. 283–299.

employment can be achieved at the cost of higher inflation. It was thus long believed that one could "buy" lasting lower unemployment by allowing inflation to rise. However, this relationship was empirically proved not to hold in the long run. In the 1970s, for instance, there were periods with both high unemployment and high inflation, what is known as stagflation. Instead we now base our discussions on the assumption that there is in the long run a "natural" unemployment level that depends on the functioning of the labour market. This way of functioning can in turn improve or deteriorate as a result of economic policy measures in a broader sense. The problems cannot be tackled with monetary policy. If monetary policy tries to push down unemployment below this "natural" level, it will only result in higher inflation.

This is because inflation expectations have great significance. Although there is a relationship in the *short* run between unemployment and inflation, the central bank cannot make use of this in the *long* run, as companies and individuals will realise what policy is being conducted and adapt their behaviour accordingly. For instance, wage-earners may demand higher wages as compensation for expected inflation, which will have a negative effect on employment, as the scope for new recruitment will decline. Monetary policy is thus unable to lastingly affect real variables such as long-term lower unemployment. But it can have a stabilising effect in the short run, particularly if inflation expectations are well-anchored so that temporary changes in inflation are not perceived as permanent. If a central bank succeeds in attaining credibility so that inflation expectations are stable, there is some scope for also taking into account developments in the real economy.

**The labour market: an important variable for monetary policy**

We thus try to conduct our monetary policy so that the inflation target is attained within a reasonable time horizon, at the same time as we emphasize that resource utilisation should approach a "normal" level. However, there is no generally-accepted measure for resource utilisation as there is for inflation. It is therefore necessary to use questionnaires or to try to estimate it using some statistical method. At the Riksbank we use, for instance, "gap analyses", where we try to relate the current situation and the forecasts for different measures of resource utilisation to the trend for the respective variable. The gap shows how far the variable is from its "normal" level. For instance, we use the deviation in GDP from its trend to study the GDP gap. We have two ways of measuring the gap for the labour market; employment measured as the number of hours worked and measured as the number of persons employed. Developments in the labour market thus have considerable significance for the analysis that precedes the monetary policy decision. However, all of the measures of resource utilisation we present are very uncertain, and this is why we use several different measures.[6]

Monetary policy decisions often concern complex deliberations. But now that the economy has undergone a period of deep crisis and it is difficult to assess what structural changes the crisis may lead to, the process becomes even more complex. One illustration of this is how one should assess future developments in the labour market. So far employment has not fallen as much as might be justified given the historical relationship between unemployment and GDP, and the large fall in GDP. This has come as a surprise to us and to other forecasters. But what conclusions should one draw with regard to the effects in the slightly longer term when the economy recovers? Employment and the number of hours worked are now beginning to increase. Normally, one might have expected a greater adjustment in the number of hours worked than we have seen in this economic downturn. The fact that the

[6] For further information on resource utilisation, see Jonsson, M., Nilsson, C. and Palmqvist, S., 2008, "Should monetary policy stabilise resource utilisation?" Economic Commentary, www.riksbank.se or Öberg, S. "Monetary policy and the elusive resource utilisation", speech published on 25 May 2009, www.riksbank.se.

adjustment has not corresponded to the fall in production means that productivity has been very weak. But as we observe in our most recent Monetary Policy Update, which was published last week, we expect productivity to improve in the future, which also means that the number of hours worked and the number of employed will grow slowly. Periods of low productivity are normally followed by periods when productivity recovers quickly.

**The labour market and current monetary policy**

Last week the Executive Board of the Riksbank decided to hold the repo rate unchanged at 0.25 per cent. But at the same time we made it clear that the time for a repo rate increase was not too far off. This could come in the summer or the early autumn. But even with the increases in the repo rate included in our repo rate path, monetary policy will be expansionary for a long period of time. The real repo rate is negative throughout the whole year, and will be below one per cent for the whole of 2011.

The underlying CPIF inflation rate, that is, the CPI excluding the effect of changes in mortgage rates, is now relatively high at 2.5 per cent. But our assessment is that inflation will begin to fall, partly as a result of a stronger krona. In addition, slowly rising wages and increasing productivity growth will together mean that companies can produce goods at low cost. As economic activity strengthens the inflation rate will be pushed up and when we look ahead to the end of the forecast period it is close to 2 per cent. The forecast for the CPIF is therefore only marginally changed, compared with the assessment in the February Monetary Policy Report.

Resource utilisation is an important variable for monetary policy as it is, for instance, an important indicator of future inflationary pressures. When we made our most recent decision on the repo rate we had received the GDP figures for the fourth quarter, which were much lower than we and other analysts had expected. As I have already mentioned, this would indicate lower resource utilisation. But when we take into account the stronger labour market development, our conclusion in our most recent Monetary Policy Update is that resource utilisation is slightly higher than it was in February. But it is still low and will remain so for a large part of the forecast period.

When we cut the repo rate to its current extremely low level in July last year, the situation on the financial markets was still critical, the economic cycle was in a much gloomier phase than now and the forecasts were much more pessimistic. During the autumn the positive signs increased and the forecasts were gradually revised up after numerous downward adjustments. The Riksbank had offered loans at fixed-interest rates with a one-year maturity in July, September and October. The purpose of these loans was to bring down general interest rates in a situation where the repo rate was assessed as having come down to what was in practice its lowest possible level. The fact that new loans were not offered in December was a first sign that economic activity was beginning to stabilise and that this type of unconventional measure was no longer necessary.

We are assuming in our most recent forecast that GDP in Sweden will increase by 2.2 per cent this year and by 3.7 per cent next year. These are upward revisions of around one percentage point and half a percentage point respectively, compared with July last year. They are not very large changes in growth, but they are changes in the right direction and a sign that economic activity is on firmer ground.

The largest change in our forecasts concerns the labour market, as I mentioned earlier. In July we were assuming that employment would fall by just over 3 per cent a year and would not begin to rise until 2011. Now we have already seen an upturn in employment and we are instead forecasting a marginal increase in the number of persons employed. In July we were assuming that unemployment would peak at 11 per cent in 2011. Following the large fall in production this appeared to be a reasonable forecast in line with historical patterns, and it was also shared by most other analysts. However, developments are now rather different

and our current forecast is that the current unemployment level of 9 per cent is a peak and that unemployment will be 8 per cent at the end of our forecast period.

How has the stronger labour market affected the interest rate decisions? Firstly, it should be said that it is not possible to point to any individual variable that will alone be a determining factor in an interest rate decision. Prior to each interest rate decision we weigh together all of the new information received since the previous decision. But employment is of course an important element; when, for example, we said in February that economic activity was now on firmer ground one of the things we were referring to was the stronger labour market. It was a contributing factor to the marginal adjustment in the repo rate path we made then; with a first repo rate increase coming slightly sooner than implied in the repo rate path from December.

Our most recent repo rate decision entails both the repo rate and the repo rate path being held unchanged. A weaker GDP outcome for the fourth quarter could on its own have been a negative signal and made us more doubtful about the timing of the coming interest rate increase. But we also had surprisingly positive information on the labour market, which provided support for the assumption that the economy is moving in the right direction.

Our forecasts are based on employment only increasing at a slow rate in the future and on resource utilisation being lower than normal for the greater part of the forecast period. But the situation is that the crisis has hit the export industry particularly hard, while the services sector has escaped relatively lightly. We have a “division” in the Swedish economy, which complicates the situation for monetary policy. We are unable to distinguish between the different sectors; our interest rate changes affect all sectors in the same direction. When we deliberate on monetary policy in the coming period we must of course be observant of the driving forces behind the different sectors and how these can affect inflationary pressures in the economy.