

Barbro Wickman-Parak: Is there a typical business cycle?

Speech by Ms Barbro Wickman-Parak, Deputy Governor of the Sveriges Riksbank, at Nordea, Stockholm, 7 October 2008.

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The expression “economic downturn” is often used in the media and general debate, but there appears to be some confusion as to what the term actually means. Sometimes the term is used to describe generally less prosperous times, on other occasions it is avoided and people talk instead of a recession.

The academic definition focuses instead on deviations from a long-term trend.¹ One imagines that GDP has a natural long-term equilibrium level that shows a growth trend over time and in periods when the economy is below the trend we have a recession and in periods above the trend we have a boom. This sounds simple, but in practice many questions remain. Many of the shocks that affect the economy can for instance be lasting and in this case they affect the long-term equilibrium level. As the long-term equilibrium level is not an observable variable, it is difficult to know in practice what point in the economic cycle the economy is currently at.

There are patterns that often recur in economic cycles and which are therefore studied closely by forecasters. For instance, it is normal to have an over-investment in housing and for commodity prices to rise during an economic boom, just as in the current cycle. However, on each occasion there are also factors that dominate over the common pattern, for instance the current mortgage crisis in the United States and the ensuing contagion effects on the financial markets as a whole. It is partly because of this that the forecasts become uncertain. In addition, it is particularly difficult to predict the turning points in the cycle.

As monetary policy acts with a time lag, it must nevertheless be based on forecasts of how we believe that growth and inflation will develop. As time passes, new information is received which may cause us to reconsider our earlier analyses. This means that the forecasts we make regarding, for instance, the repo rate are not promises, but a forecast that is just as uncertain as the other parts of the forecast.

I shall try to put some perspective onto the current situation by first going over what we know about Swedish cyclical patterns and then discussing the prominent features of this particular recession.

Do we know what governs economic cycles?

At the beginning of the 20th century economic cycles were regarded as natural and unavoidable, often in the light of the variations in agricultural production. Then came Keynes in the 1930s with his classical analysis² where fluctuations in economic activity were regarded as a result of fluctuations in demand. According to Keynesianism, recessions should be combated by an active policy.

At the same time as Keynes' analysis began to be questioned on the basis of economic theory³, the world suffered deep recessions in the wake of the oil price shocks of the 1970s,

¹ The NBER has a “Business cycle dating committee” which has a procedure for dating peaks and troughs in economic cycles in the United States.

² J. M. Keynes., “The General Theory of employment, Interest, and Money”. London: Macmillan. 1936.

³ Lucas' criticism, for instance, R. E. Lucas "Econometric policy evaluation; a critique." *Carnegie-Rochester Conference Series on Public Policy* 1976. 1: 19-46.

which led to a more pessimistic view of the ability of economic policy. People realised that fiscal policy measures often came too late and that attempts at an active economic policy often merely resulted in high inflation. An alternative interpretation began to emerge; fluctuations in economic activity were regarded as the result of changes in production conditions.

The 1980s saw the advent of RBC-models⁴, which stands for Real Business Cycle. The characteristic of these was that they considered fluctuations in the production of goods and services to be natural consequences of externally caused changes in production conditions. This could be changes in technology; IT is one example. It could also be sharp swings in the oil price, terrorist attacks or war, but also more natural examples such as the weather. They assumed that the markets themselves were best suited to adapt to the changed conditions. There was thus no scope for stabilising monetary and fiscal policies.

Since then the pendulum has swung back a little with the neo-Keynesianism, which has re-introduced some of the elements of the classical Keynesian analysis. Due to different reasons it can take time before the economy returns to its long run equilibrium after a shock. Monopolistic competition and sticky wages are a few examples. The participants' expectations can play a major role according to these theories. Monetary and fiscal policy can therefore be used to stabilise the economy.

Macroeconomic analysis is often carried out with the aid of general equilibrium models (DSGE models, Dynamic Stochastic General Equilibrium).⁵ The Riksbank, like a number of other central banks, uses one of these models for forecasts and simulations. The Riksbank's model is called Ramses (Riksbank's aggregate macromodel for studies of the economy in Sweden). In Ramses, goods and labour markets are assumed to be in monopolistic competition and wages and prices are sticky.

However, the Ramses model analysis is only part of the forecasting process, which is also based on other statistical analyses and of course assessments. In the short term, that is to say the current quarter and one quarter ahead – what is usually called “now-casting” – we use different statistical models and indicators to make an assessment of the current situation. This analysis strives for the best possible accuracy in the forecasts and is often only vaguely anchored in economic theory. However, this type of forecast has a relatively good accuracy in the short term (up to one year ahead).⁶

The forecast produced by the now-casting is then entered into the large DSGE model and forms a basis for the model's longer-term forecasts. The international forecast for all quarters is then also made outside of Ramses and entered as input into the model. As all models are simplifications of reality, however, the final analysis must always contain elements of assessment that correct the results from the model. In addition, some markets, for instance, the financial markets, are not entirely reflected in these models.⁷ The latter play an important role in the current stage, which is affected substantially by the financial turbulence.

General equilibrium models are an important analysis tool as they provide a consistent picture of the economy. They can therefore also be used for policy analysis and to analyse alternative scenarios.

⁴ F. E. Kydland and E. C. Prescott “Time to build and aggregate fluctuations”, *Econometrica* 50, 1982, 1345-1370.

⁵ O. J. Blanchard, “The state of macro”, NBER working paper series, August 2008.

⁶ See M. K. Andersson and M. Löf. *Sveriges Riksbank Economic Review* 2007:1.

⁷ C. E. Tovar. “DSGE models and central banks”. BIS Working Papers No 258. 2008.

Some facts about economic cycles

According to economic theory, fluctuations in growth thus arise as a result of various external shocks affecting the economy. The size of the fluctuations is in turn affected by the functioning of the economy. I now intend to describe briefly what we know about how economic cycles manifest themselves and what consequences they have.

1. *International developments*

International studies show that fluctuations in economic activity have become somewhat less dramatic over the past 20 years, a phenomenon usually known as "the Great Moderation".⁸ In Sweden the situation is slightly different because of the unusually profound crisis we suffered in the early 1990s. However, since then the fluctuations appear to have also declined here, although the period of time has been too short to draw any definite conclusions. If one studies the volatility in world growth since 1970 and onwards, one can see that it has declined since the mid-1980s.

There are many possible reasons as to why economies have become more stable. One reason that is usually put forward is that the world economy has quite simply suffered smaller shocks in recent decades. Often the significance of modern economies having larger service sectors is put forward as a reason, because these are not as affected by international developments as the industrial sector. Improved stocks management can also have had a positive effect. Deregulated financial markets have made it easier to obtain credit and thereby smooth consumption over time. Finally, it is often pointed out that the changeover in fiscal and monetary policy, with budget targets and greater focus on price stability, is a contributory factor. To summarise, probably all of these factors have had some significance in stabilising the world economy. However, one must remember that 20 years is a short period when analysing economic cycles. Perhaps the current downturn will give us reason to reconsider the conclusion that the fluctuations have declined?

In this context one usually mentions the importance of the extended period of high growth in some emerging economies. First and foremost China, but also India, has had an increasing significance for the world economy over the past decade. If domestic demand can be sustained in these countries, despite declining economic activity in the United States, Japan and Europe, it may lessen the downturn for the world as a whole. However, their growth opportunities should slow down as the economies enter a more mature phase. In the long term, they cannot support world growth.

2. *Sweden*

As each economic cycle is to some extent unique, one can never say exactly what will happen in any phase of a cycle. There is quite simply no such thing as a typical economic cycle. But it may nevertheless be interesting to look at how different variables can vary in the economic cycle in Sweden. As Sweden is a small, open economy with a large export sector, we are very much affected by what happens abroad. It is therefore often claimed that Swedish economic cycles are "imported". However, looking at studies of Swedish data covering the period from the end of the 19th century up to the mid-1990s, it is difficult to find evidence of this.⁹

⁸ See, for instance, Chapter 5 "The changing dynamic of the global business cycle", in World Economic Outlook 2007, IMF. See also T. Dalsgaard, J. Elmeskov and C-Y. Park. "Ongoing changes in the business cycle, evidence and causes." OECD Working Paper ECO/WKP(2002)1.

⁹ Jesper Lindé, "Swedish postwar business cycles: Generated at home?" *Scandinavian Journal of Economics*, 2004:4, 623-45. and V. Bergström and A. Vredin, "Measuring and Interpreting Business cycles", Clarendon Press Oxford, 1994.

If one looks at the period from 1980 to 2008, however, the turning points in the economic cycle appear to systematically occur a few quarters earlier in the United States than in Sweden.¹⁰ This could imply that international developments have also gained increased significance in recent years as capital markets have been deregulated and the exchange rate has been allowed to float. One can also see that exports often show a turnaround a quarter or so before GDP. However, there have been few cycles since 1980 and it is therefore difficult to reach any conclusions.

Let me illustrate how the components of GDP in Sweden move in the example of a “normal” economic downturn. Export growth often turns around a few quarters before the turnaround for GDP. To begin with, companies adapt to the change in demand by adjusting production using their existing resources. For instance, they cut down on overtime and stand-ins rather than making staff redundant. At the same time, they invest less. Productivity falls and unit labour costs rise, as wages are sticky in the short term. In the end companies have to adjust their costs to the lower demand and after a few quarters employment begins to fall. Now consumption is also beginning to be affected; the leaner times are making people hold more firmly onto their money.

When unemployment rises, wage demands are subdued, which slows down the increase in unit labour costs. This in turn leads to companies’ profit margins gradually increasing. When the effects of the negative shock that caused the downturn fade away, growth gradually returns to the normal trend level. Companies respond to the rising demand by increasing production and investment, which in turn leads to unemployment falling and to consumption accelerating again.

However, I would like to repeat that an economic cycle does not always follow this average example. It is often the case that one of the components does not show its usual pattern and sometimes the economy “settles” for an unusually long time in one phase of the cycle. A few years ago, for instance, there was much talk of “jobless growth” when employment failed to accelerate despite a high growth rate. In addition, the length of an economic cycle varies considerably. It can be anything from three to ten years¹¹, and the turning points therefore become difficult to predict. Economic downturns, that is, the period when the economy moves from a peak to a trough, are usually shorter. The normal condition for the economy is thus a growth phase.¹²

The current economic cycle

After this review of common cyclical patterns I shall take up some specific features that characterise the current downturn. Following the recent turbulence in the financial markets it can easily be forgotten that there are also elements of a “normal” slowdown in economic activity on this occasion, too. Even before the financial crisis took a serious hold in summer 2007 it was possible to see in the Riksbank’s and other analysts’ forecasts that a slowdown in economic activity was expected both in Sweden and abroad. Since then the world economy has been exposed to major shocks that have led the Riksbank, like other forecasters, to revise down the growth forecasts for the coming years.

The financial crisis has proved to be more profound, more prolonged and to have more ramifications than one might initially have expected. In the most recent phase of the crisis the

¹⁰ The Riksbank’s own calculations. See also the box “Future labour market developments – experiences in other countries and the significance of growth composition” in Inflation Report 2005:2.

¹¹ The longest expansion phase the NBER has noted for the United States was 10 years, between March 1991 and March 2001.

¹² NBER.

unease has also more tangibly spread to European banks and government agencies in several countries have felt obliged to intervene.

We have tried to take into account the effects of the financial crisis in our forecasts. But it is of course difficult to know to what extent we could have captured all the effects the crisis may have had so far on the real economy. Moreover, we cannot know how the financial crisis will develop in future and how long it will last.

Falling house prices have affected not just the United States, but many other countries. We have not been affected by this, although there appears to be a cooling in the housing market here, too.

Another shock that has occurred during this downturn is that energy and commodity prices have risen substantially. Last summer the oil price reached new top levels and inflation rose around the world. However, since then prices have fallen. Seen in a longer-term perspective, rising commodity prices are not an uncommon feature prior to a turnaround in the economic cycle. This was the case, for instance, in the 1970s. As a consequence of the rising inflation, central banks around the world have been faced with a difficult situation, where the risk of contagion effects on other prices and wages must be assessed in an uncertain economic situation with receding growth.

Another common cyclical pattern that is now repeating itself is that labour productivity is low, which is significant for cost pressures. Productivity growth usually slows down when economic activity slows down, but in recent years productivity growth has been unusually low. It is also unusual that productivity growth falls as long as eight quarters in a row, as it has now.

It is difficult to find a simple explanation for the low productivity growth in recent years. The National Institute of Economic Research has studied the composition effects, to put it simply, if the composition of industries with different rates of productivity has changed, and it finds no great effect on productivity.¹³ Another possible explanation could be that the recent increase in employment has meant that new groups with a lower productivity than others have entered the labour market. For instance, it can take time to train new employees. It may also be the case that companies have prepared for coming retirements by employing additional staff so there are currently two to a job in some cases.

When productivity slows down, unit labour costs increase, and this puts further pressure on companies to raise prices. There is thus risk of higher inflation. We are currently facing a situation where it is difficult to predict how companies will adjust to high unit labour costs. It is always difficult to dismiss staff, but indicators such as job vacancies, redundancies, companies' employment plans, etc. point towards an adjustment having begun. At the same time, a general decline in demand makes it difficult for companies to pass on cost increases to consumers.

Commodity prices have also begun to fall, which reduces inflationary pressures not just in Sweden but also abroad. If this development does not reverse, it will make things easier for the central banks, as they will have greater scope to meet the slowdown in economic activity with monetary policy actions.

I would like to take the opportunity here to talk about what we can and can't achieve with monetary policy. No one wants the economy to fall into a deep decline or a lengthy recession like the one we experienced in the 1990s. However, Sweden has dearly-bought experiences from the 1970s and 1980s when we tried to use fiscal and monetary policy to stabilise fluctuations in economic activity. These experiences were part of the reason why the Riksbank became independent and the inflation target was established.

¹³ Special analysis "Negative Productivity Growth: Causes and Implications for the Period Ahead", The Swedish Economy, August 2008, National Institute of Economic Research.

The problem with rising commodity prices is a result of high demand that has arisen after the long growth period the world has just undergone. Perhaps this problem has been aggravated by the fact that many countries subsidise food and energy. Now we are in a situation where some adjustment is probably needed. A stimulative monetary policy that allows inflation expectations to soar would possibly help the economy out of the current growth slump in the short term. However, this could be at the cost of an even larger adjustment further ahead to bring down inflation expectations again. This was what happened in Sweden in the 1970s and 1980s.

Although economic downturns cannot be avoided, fiscal and monetary policy can be conducted in such a way that the consequences for the economy are as small as possible. The impact of monetary policy is long-term and it is therefore important that confidence in the Riksbank's ability to stabilise inflation is maintained. This does not prevent us from taking into account developments in the real economy when we make our decisions on the repo rate. The Riksbank conducts what is known as "flexible" inflation targeting. Our aim is that inflation, when it deviates from the target, will normally return to the target level within a couple of years. If the shocks affecting the economy entail large deviations, it may take longer before the target is achieved in order to attain a smoother sequence of events for production and employment.

When we were to make a decision on the interest rate in September, we faced a situation where the declining economic activity in Sweden and abroad needed to be placed in a context where many factors could conceivably affect inflation. The slowdown in economic activity has probably had a subduing effect on inflation. However, we have seen that economic cycles are not sufficiently regular to enable us to forecast how profound or prolonged a downturn will be. The relationship between economic activity and inflation is not particularly stable either. In the difficult deliberations we had to make in September we Executive Board members reached different conclusions, with a majority voting to raise the repo rate while the minority to which I myself belonged voted to hold the interest rate unchanged. On this occasion I shall not go into the various reasons for my stance in depth; they were clear from the separate minutes of the monetary policy meeting and I discussed them in a speech I held a couple of weeks ago.