# Swedish Fiscal Policy

Report of the Swedish Fiscal Policy Council
2010

**The Fiscal Policy Council** is a government agency. Its remit is to conduct an independent evaluation of the Government's fiscal policy. The Council fulfils its tasks primarily through its report **Swedish Fiscal Policy**, which is presented to the Government once a year. The report is used by the Riksdag as a basis for its evaluation of the Government's policy. The Council also arranges public conferences and seminars. In the series **Studier i finanspolitik** (**Studies in fiscal policy**), it publishes in-depth studies of different aspects of fiscal policy.

# Foreword to the English translation

The 2010 report of the Swedish Fiscal Policy Council was published on 17 May 2010. This is the English translation of the report. Barbara Burton helped with the translation. Torben Andersen, Martin Flodén, Laura Hartman, Erik Höglin, Marianne Larsson, Georg Marthin, Pär Nyman, Eva Oscarsson, Charlotte Sandberg and Helena Svaleryd also worked on the English version in co-operation with the Chairman.

31 August 2010
Lars Calmfors
Chairman of the Council

# Foreword

The Fiscal Policy Council has the Government's remit to evaluate fiscal and other economic policy. The Council is also to review the Government's forecasts and their analytical basis as well as the clarity of the proposals in budget bills and their stated justifications.

This is the Council's third report. The Council is composed of the eight members who have signed this foreword. Since the previous report, Ann-Sofie Kolm has left the Council (2009-09-01) and Michael Bergman and Helena Svaleryd have been appointed new members (2009-09-17). All Council members support this report. But to avoid any conflict of interest, Erik Åsbrink, who is also Chairman of the Swedish Social Insurance Agency, has chosen not to take a position on those parts of the report dealing with sickness insurance. Nor has he participated in the Council's work on this part of the report. The Council is assisted by a secretariat consisting of Eva Oscarsson and Erik Höglin (Senior Economists), Pär Nyman (Economist) and Charlotte Sandberg (Head of Administration).

The Council in its work on this year's report held nine recorded meetings. In connection with these meetings, seminars on various topics were arranged both in cooperation with the National Institute of Economic Research (NIER) and by the Council itself. A hearing was held at the Ministry of Finance (2010-02-02). The analytical work was concluded 2010-05-06.

The Council has commissioned seven background papers, all of which are published in the Council's publication series Swedish Fiscal Policy (*Svensk Finanspolitik*):

1. Michael Bergman – How persistent is a change in unemployment? (in Swedish)
2. Michael Bergman –Reverse effects of fiscal policy during major budget consolidations? The Swedish budget consolidation 1994-1997. (in Swedish)
3. Huixin Bi and Eric M. Leeper – Sovereign debt risk premia and fiscal policy in Sweden.
4. David Dreyer Lassen – Fiscal consolidations in advanced industrialized democracies: economics, politics and governance.

5. Pathric Hägglund and Peter Skogman Thoursie – Recent reforms in sickness insurance: a discussion of their expected effects. (in Swedish)
6. Christopher A. Pissarides – Regular education as a tool of counter-cyclical employment policy.
7. Per Skedinger – How does labour market policy work in different cyclical situations? (in Swedish)

Stockholm, 6 May 2010


| Lars Calmfors | Torben Andersen | |
| (Chairman) | (Deputy Chairman) | |
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# Principal Conclusions of the Report

- The global public finance problems pose major risks. The worries have thus far primarily concerned the euro area. There should be even more concern that the growing public debt in the United States, Great Britain and Japan will have adverse effects on the business cycle.

- Uncertainty about the long-term effects of the crisis makes it difficult to assess the room for costly reforms in Sweden. We would strongly advise against further promises of *permanent* reforms that are not financed by expenditure cuts or tax rises in the election campaign.

- But because of the strong public finances in Sweden, there is room for manoeuvre in stabilisation policy. There is a political choice of whether to use it for limited and *temporary* stimulus measures or for rapidly restoring the public finance buffers for the future.

- *If* fiscal policy is to be more expansive in 2011, an extension of the temporary grants to local governments is the most obvious option. But there is a risk that these grants may be regarded as permanent. The Government therefore needs to speed up the work on designing a *framework* for smoothing local government revenue over the cycle.

- We welcome the proposal to make it statutory for the Government to set a surplus target. But we are critical of the continued lack of clarity on how this target is to be interpreted. We recommend judging whether the target has been met with the help of only *two* indicators: a backward-looking indicator and a partially forward-looking one. In the event of deviations of a certain magnitude, the Government should, in a *special communication to the Riksdag* (the parliament), explain how it intends to act.

- High youth unemployment has been much debated. But youth employment relative to employment for the population as a whole has developed about the same as in previous recessions. Relative employment growth for people born outside Europe has now been better than in the 1990s crisis, but it has been worse for the low-skilled.

- The earned income tax credit can be expected to be effective in increasing employment in the long run. From the standpoint of employment, it is wise not to phase it out for higher incomes. But the Government should be criticised for its reluctance to explain how the credit works.

- It may be reasonable to tax earned income and pensions differently if raising employment is a priority. But the earned income tax credit also redistributes income between pensioners, who did not benefit from it when they were working, and younger workers. If this is to be avoided by means of tax reductions for older people, these cuts should be linked to *year of birth* and not given permanently to everyone over 65.

- The economic arguments are stronger for a permanent tax credit for household services than for a permanent Repair, Maintenance and Improvements (RMI) tax credit. The RMI tax credit should be reexamined when the economy picks up.

- Labour market policy has learned from the mistakes of the overexpansion during the 1990s crisis. But the pendulum has swung too far in the other direction. Job search activities and coaching have expanded too much in the economic downturn, while there has been far too little labour market training.

- The Government should be commended for tackling a difficult problem with its reforms to sickness insurance. But it must also be criticised for being overly hasty and remiss in its implementation of the reforms and its treatment of people on long-term sick leave.

- There is general agreement on the value of expanding regular education in an economic downturn. But there is little knowledge of how variations in regular education should be used as a counter-cyclical policy tool. There is a risk that regular education has overexpanded because it has been used as a means of support for the unemployed.

- In the debate on unemployment insurance, the Government has referred to the large volume of supplementary insurance schemes provided by unions or in collective agreements. The survey we conducted indicated a surprisingly low use of this insurance.

# Summary

The ongoing crisis in the world economy is the worst since the 1930s. The crisis started as a financial crisis but then grew into a deep recession. An international recovery has now begun but uncertainty about its strength is unusually high. It is also very difficult to judge what long-term effects the crisis may have on employment and growth.

## The large budget deficits in the world around us pose major risks

The economic crisis has led to a sharp deterioration in the public finances of almost all the most economically developed countries. The total budget deficit this year is expected to be about 8.5 per cent of GDP in the OECD area and about 7 per cent of GDP in the EU. The budget deficit in Greece, Ireland, Great Britain and the United States is around 10 per cent of GDP or even higher.

On account of the large budget deficits, the public debt is increasing very rapidly in many countries. According to the OECD, general government gross debt at the end of 2010 is expected to come to 197 per cent of GDP in Japan, 92 per cent in the United States and 83 per cent in Great Britain. For the EU as a whole, gross debt is expected to be 88 per cent of GDP.

The deficit has risen as a result of the crisis support for the financial markets, the working of automatic stabilisers (i.e., tax revenues have declined and various transfer expenditures have increased as production and employment have fallen) and the active fiscal stimulus measures aimed at counteracting the downturn. At the same time, many countries face severe long run *sustainability problems*. These problems are partly due to the fact that the deterioration in the public finances during the crisis followed from the weak starting position before the crisis. But even more important are the future demographic developments with a gradually ageing population. Most countries have not yet adapted their policies accordingly.

A rapidly growing public debt in a country may cause doubt among lenders about its ability to service the debt. These risks have been more than convincingly illustrated in the case of Greece. The public finances can get into an unsustainable situation in which

*snowball effects* lead to an uncontrolled increase in debt that ultimately forces the country to default on its outstanding debt. Lenders command higher risk premiums on interest rates when the budget deficit rises. This in turn results in the deficit rising even more. The higher interest rates on government borrowing may spread to other interest rates and thus slow down growth. If so, the debt-to-GDP ratio increases even more rapidly and leads to escalating interest rates, resulting in a vicious circle.

The interest rate hikes just described seldom occur gradually. Instead they happen suddenly and rapidly once a *critical debt level* has been passed. This critical debt level may differ sharply between different countries and time periods.

Interest rate reactions in the financial markets have forced fiscal consolidations in Greece, Ireland, Portugal, and Spain. No such interest rate reactions have yet occurred in Japan, Great Britain or the United States. But the risks of such reactions suddenly appearing are very large. They may then have either direct negative effects on economic growth or indirect effects because they force large fiscal consolidations that may delay or, in the worst case, reverse the international economic upturn. The same thing may happen if major fiscal consolidations are implemented as a preventive measure. In both cases, there will be a strong impact on economic growth in the Swedish economy on account of its high export dependency. Consequently, there are substantial risks that the recovery may be considerably weaker than estimated in the main forecasts of both the Ministry of Finance and the National Institute of Economic Research.

Despite the support package for Greece from the euro countries and the IMF, there is still a considerable risk that the country at some stage will be forced to write down its outstanding government debt. If so, this will lead to credit losses for lenders. It is not clear that support measures from other EU countries and the IMF would suffice if Portugal and Spain were to face similar problems as Greece. The consequence could be acute new problems in the financial markets with strong negative effects on the international business cycle. Exchange rate developments are a particularly uncertain factor. If the krona were to strengthen substantially as a result of public finance problems in other countries, it could have large negative effects on Swedish exports.

## Much better situation in Sweden but *room for reform* still uncertain

Swedish fiscal policy also faces a trade-off between long-term sustainability and short-term stabilisation. However, the situation in Sweden differs sharply from that in most other countries. According to current forecasts, Sweden will be one of only three EU countries this year that will have a deficit of less than three per cent of GDP, the threshold in the Stability Pact. Sweden is also one of the few EU countries that is not subject to an *excessive deficit procedure*.

There are two main reasons why public finances in Sweden are relatively good despite the economic crisis. The first is the strong public finances going into the crisis for which both previous governments and the current government should be commended. The second main reason is that the public sector did not need to intervene with crisis support to the financial sector in the same way that happened in many other countries. The sharp fall in the cost of sick leave has also been of importance.

Sweden has had substantial room for manoeuvre in using fiscal policy as a stabilisation policy instrument in the crisis. This has made it possible both to let the automatic stabilisers work and to take discretionary stimulus measures. According to our view, the stimulus measures were too small in 2009. The Government was then, in the opinion of the majority of Council members, overly cautious and underestimated the room for manoeuvre created by the fiscal framework that came into existence at the end of the 1990s. This assessment gets some support in the calculations we commissioned leading up to this year's report, which indicate that Sweden is far from the critical debt threshold where the interest on government debt is at risk of rising sharply. The fiscal policy stimuli in the current year are stronger than in 2009. In our opinion, they are of reasonable volume.

The Government expects public finances to return to surplus in 2012. This is expected to take place without any active decisions on consolidation measures. The forecast for the public finances in the National Institute of Economic Research's March report is even more optimistic. In the Spring Fiscal Policy Bill, when the expected public finance developments are compared with the target of a surplus of one per cent of GDP over a business cycle, the

Government's conclusion is that "taking into account the economic situation, there is limited room for additional unfinanced reforms in 2011." It is also stated that "there is some room for reform looking at the whole (the next, our comment) term of office", but there is so much uncertainty that "it should not be used up in advance".

We want – even more than the Government – to emphasise the great uncertainty. It is primarily due to the difficulty assessing what permanent effects the crisis may have on employment. Earlier sharp downturns in employment in many countries, including Sweden, have had very long-term effects.

The Spring Fiscal Policy Bill contains proposals for permanent reforms amounting to almost SEK 7 billion in 2011. The reforms are of limited size. Hence, despite the great uncertainty about future room for reform, it is difficult to maintain that they would jeopardise the long-term sustainability of fiscal policy. But we strongly advise against further promises of *permanent* reforms that are not financed by expenditure cuts or tax rises in the uncertain situation that now prevails. This uncertainty in all likelihood will not have cleared up by the time of the election in September. To put it plainly, it would be very risky if the Government and/or the opposition in the election campaign were to commit themselves to costly reforms without specifying the financing.

## There is some room for manoeuvre in *stabilisation policy*

Sweden, unlike many other countries, does not have to undertake a rapid consolidation of the public finances. Instead the Government can choose the pace of consolidation. The fiscal policy announced will be slightly contractionary in 2011. It is not obvious, however, that fiscal policy should have this stance when resource utilisation is still low. The question is what trade-off to make between stabilising the economy and restoring the public finance buffers for the future.

We share the Government's opinion that it is essential to return to a surplus in the public finances within a reasonable time in order to maintain fiscal credibility. At the same time, our analysis shows that there is hardly any binding sustainability restriction on limited and *temporary* stabilisation policy measures.

*If* a more expansive fiscal policy is to be chosen in 2011, an extension of the extra grants to local governments for 2010 is the most obvious option. If so, the aim would be to try to achieve some increase in employment in the local government sector in 2011 (after it fell in 2009 and 2010) in a situation where there is still low resource utilisation.

But there is also an argument against extending the extra grants to local governments. One such argument is the risk that an extension of the temporary grants would result in their being perceived as permanent. That could make it difficult to stop paying them when the economic downturn is over. This risk is partly due to the fact that these grant increases are now discretionary decisions taken from year to year.

We have previously argued that a rules system should be introduced in which the grants to local governments routinely vary counter-cyclically. This would mean that grants increase more when the local government aggregate tax base in economic downturns grows more slowly than the long-term trend and increases less in economic upturns when this tax base grows more rapidly. With such a rules system in place, local governments would presumably be allocated extra resources in a year with low growth like 2011. It is important to get such a system in place as rapidly as possible. This issue will now be the subject of an inquiry. Given the importance of this issue, it is surprising that it has taken so long to get the review announced in the 2009 Spring Fiscal Policy Bill started.

Based on the economic forecast that can be made today, we advise against measures that would further stimulate private consumption in 2011. It is expected to increase rapidly all the same and lead to a substantial increase in employment in the private service sector.

How to best design fiscal policy in the next few years is related to the appropriate balance between fiscal and monetary policy. In countries with serious fiscal problems, fiscal policy will probably have to be tightened before resource utilisation has reached a satisfactory level. If so, an expansive monetary policy may be needed to compensate, particularly in countries that are still experiencing problems in the financial sector and where there has been a large fall in property prices. However, the Swedish situation is different. There has been no permanent fall in housing prices. We are concerned that

low interest rates that last too long will lead to excessive borrowing and too high housing prices thus contributing to future imbalances. This may be an argument for the Riksbank to begin raising the repo rate more rapidly than justified by the medium-term inflation forecast alone. Such a policy would, however, have a negative impact on demand, which, in that case, would probably need to be countered by keeping fiscal policy expansive longer than would otherwise have been justified.

There may thus be arguments for another stabilisation policy mix in Sweden, with a tighter monetary policy and a more expansive fiscal policy than in most other countries. At the same time it is not obvious how to get an appropriate balance between monetary and fiscal policy in a system in which – for good reasons – the former is decided by an independent central bank and the latter by the Government.

## Surplus target to be statutory

Since the end of the 1990s, the *surplus target* has been a key element of the fiscal framework. This target states that general government net lending, i.e., the difference between revenue and expenditure, is to be one per cent of GDP over a business cycle.

The Ministry of Finance has, under the Government's current term of office, conducted a review of the surplus target leading to a report published earlier this year. On the basis of this report, the Government now proposes to make the formulation of a surplus target statutory. We welcome this proposal which strengthens the target's position.

The surplus target is an *intermediate target* aimed at making it easier to achieve overall, more fundamental goals. The most important of these aims stated by both the current and the previous governments are:

- Long-term sustainable public finances
- Economic efficiency
- Equitable distribution of resources between generations
- Room for manoeuvre in stabilisation policy in economic downturns

These general goals need not be consistent with each other. Instead they may justify different levels of the surplus target. We have therefore previously criticised the Government for not having made sufficiently clear the importance attached to different fundamental goals.

The Government's discussion of the motives for the surplus target has become more transparent in the Spring Fiscal Policy Bill for 2010. The Government makes it clear that sustainability is not actually an objective but a restriction with which it must comply. It also makes it clear that considerable importance should be attached to the stabilisation policy motive, which may be natural, given experience from the crisis.

## Uncertain how the cost of rising life expectancy and higher quality of welfare services will be financed

Another important clarification in the Spring Fiscal Policy Bill is that the budget surplus (*pre-funding* by current generations) will not be used to cover future costs that may arise because later generations will live longer than current generations and may demand welfare services of higher quality than those available today. This clarification is in line with our argument in last year's report. It has not previously been made by the Government.

It is, however, a major shortcoming of the Spring Fiscal Policy Bill that it makes no mention of what *mechanisms* are needed to ensure funding of future expenditure increases as a result of longer life expectancy and/or increased demand for higher quality of welfare services. It is unlikely that the private financial incentives built into the pension system will lead to a sufficiently large rise in the labour market exit age. In our opinion, there need to be regular reviews of the pension rules with a view to ensuring that the actual retirement age does indeed increase in line with average life expectancy. How this is to be done ought to be one of the main topics of discussion, particularly during an election year. It is unfortunate from a legitimacy perspective that there is no broad public debate on the future funding of welfare. Such a debate will not take place if the political parties systematically avoid it.

## Muddled and illogical follow-up of the surplus target

In recent years, the Government has used five different indicators to evaluate whether the surplus target of one per cent of GDP *over a business cycle* has been achieved. Calculations have been made for (i) a backward-looking average for actual net lending since 2000; (ii) a moving and partially forward-looking average for actual net lending (the *seven-year indicator* based on historical values for the three previous years and forecasts for the current year and the coming three years); (iii) structural net lending for the current year; (iv) a cyclically adjusted backward-looking average; and (v) a cyclically adjusted seven-year indicator.

The different indicators reflect fundamentally different targets. If a backward-looking indicator is used, there is in principle a target 'with memory', where previous deviations are to be compensated for. With an indicator for the current year, there is no 'memory' and there does not need to be any compensation for previous deviations. The partially forward-looking seven-year indicator is something in between. It is to be fulfilled *in advance* but does not necessarily have to be fulfilled *afterwards*. The number of indicators with various meanings entails a basic lack of clarity about what the surplus target actually means.

One basic problem with the Government's choice of indicators is that it mixes a backward-looking perspective aimed at *evaluating* whether the surplus target *has* been met with a forward-looking perspective, which amounts to a *planning tool* for meeting the target in the future.

We think that the rolling backward-looking ten-year indicator that has been proposed – and employed for the first time – in the Spring Fiscal Policy Bill should be used as an indicator of how the surplus target has been met. This should be done without any cyclical adjustment. But the previous cyclical situation should of course be a key factor in assessing whether deviating from the surplus target was justified in the previous ten-year period. A forward-looking indicator should be used to assess what will be required of fiscal policy in the future in order to meet the surplus target in the rolling ten-year period, i.e., in order to estimate the room for reform or the need for consolidation measures, just as it is now.

We would thus prefer the use of *two* indicators: a rolling backward-looking indicator and a rolling forward-looking indicator. This would increase clarity in monitoring the surplus target.

We share the Government's opinion that mechanical adjustments to deviations from the target should be avoided. However, the importance of the surplus target could be stressed by stipulating that if deviations from the target occur above a certain magnitude (for example, 0.5 percentage points) in accordance with *one* of the two indicators, then the Government will be obliged in a *special communication to the Riksdag* to account for the causes and what remedy – if any – is intended. In such a communication, the Government should also state if in its opinion the deviation instigates a need to revise the surplus target in order to compensate for the previous development. Such provisions could be introduced in a *code of conduct* for fiscal policy of the type that, according to the Spring Fiscal Policy Bill, the Government plans to draw up.

## Time for the Ministry of Finance to improve reporting

In our earlier reports, we have asked for improvements in the Budget Bill and the Spring Fiscal Policy Bill's reporting of various points. These primarily concern labour market programmes, public sector capital stock and investment, public sector total net worth and generational accounting to shed more light on how the public sector affects income distribution between different generations. In our view the Riksdag has not been provided with a satisfactory basis for decision-making on these points.

Very little has happened in this area thus far. However, we welcome the Government's statement in the Spring Fiscal Policy Bill that work will begin on improving public sector reporting of its real assets and investments. At the same time, we are critical of the long time it has taken to get started on this work.

Furthermore, it is surprising that the Ministry of Finance and the National Institute of Economic Research report very different figures for general government financial net worth. According to the Spring Fiscal Policy Bill, financial net worth amounted to not quite 16 per cent of GDP, whereas the March Report of the National Institute of Economic Research reported a financial net worth of 25.8 per cent. This is a difference of about 10 per cent of GDP, or about

SEK 300 billion. The difference is mainly because the National Institute of Economic Research, unlike the Ministry of Finance, follows the financial accounts and reports accrued, but not yet paid, taxes and charges as assets. It is unsatisfactory that the Government and the National Institute of Economic Research report such different figures without any comment about how the accounting is done.

The Government's budget bills and the National Institute of Economic Research's reports also account for public sector revenue and expenditure in such different ways that it requires considerable work to understand what explains the difference in the forecasts for the development of the public finances. It would be desirable for the Government in its budget bills to explain why the forecasts differ.

## Stronger labour market development than expected

Previous experience of deep economic downturns in both Sweden and other countries indicates that there is a risk that what is originally cyclical unemployment will turn into persistent structural (equilibrium) unemployment. Even at best, it may after major reductions in employment take a long time – a decade or more – before employment regains its previous level. There are some indications that this risk is less now than it was in connection with the crisis in Sweden in the 1990s. In the current crisis, employment has declined less in relation to output than it did in previous downturns. A likely cause is that the decline in output has been concentrated in manufacturing, while the private service sector has fared better. Large reductions in employment in the public sector have also been avoided. The changes in the unemployment insurance and the earned income tax credit may also be expected to counter the rise in the equilibrium rate of unemployment since they strengthen the incentives to work.

The Government's employment policy has targeted groups with a weak foothold in the labour market. There is therefore reason to scrutinise developments for these groups more closely. This is done in the Spring Fiscal Policy Bill, but the scrutiny is quite superficial as there are no comparisons with previous economic downturns. The principal conclusions from such an extended analysis are:

- Compared to the population as a whole, young people have fared about as poorly in the current crisis as in previous economic downturns.

- Relative employment growth for people born outside Europe has, however, been considerably better than it was in previous downturns.

- The older age group has fared somewhat better compared to the population as a whole in this crisis than in the 1990s crisis, but somewhat worse than in the downturn in the early 2000s.

- Relative employment growth for people without an upper secondary education has been considerably worse than in the 1990s crisis.

It is thus a mixed picture. The improvement for immigrants born outside Europe in relation to developments for the population as a whole reduces the risk of unemployment persistence. The same is true of developments for older workers, since when they experience unemployment, they tend to disappear from the labour force to a greater extent than younger workers. Developments for low-skilled people, are, however, a cause for concern. It is also worth noting that there has been a significant drop in employment among young people during this economic downturn even though one of the Government's major initiatives has been the reduction of social contributions for young people. It seems to be easier for young people than for others, however, to re-enter the labour market after an unemployment spell. From this perspective, it may thus be worse if older workers become unemployed than if younger workers do.

A key objective of the Government's employment policy is to avoid long spells of unemployment for those who lose their jobs. In these circumstances, the absence of easily accessible statistics on the distribution between short- and long-term unemployment is remarkable. The Swedish Public Employment Service no longer reports current statistics on long-term registrations at the Employment Service. Statistics Sweden cannot supply statistics on long-term unemployment that are comparable over time. This makes in-depth analyses of long-term registrations at the Public Employment Service and of long-term unemployment impossible. This is unacceptable. It is not clear to us how the responsibility for the lack of statistics should be apportioned among the Government,

the Public Employment Service and Statistics Sweden. But it must be possible for the Government to direct its authorities to see that there are basic statistics that can be used to make a satisfactory analysis of how well one of its most important targets is met.

## Earned income tax credit probably effective but the Government does not explain why

The earned income tax credit is in the Government's opinion "the single most important reform" to "get more people working and reduce exclusion". The total gross cost in the form of reduced tax revenue (without taking into account the likely positive effects on employment and thus on the tax base) is about SEK 70 billion.

The debate on the earned income tax credit is usually conducted as an isolated Swedish debate without any international perspective. This tax credit is, however, very common internationally, even though the cost of the credit is higher in Sweden than in other countries. There is an earned income tax credit in the majority of OECD countries: 17 out of 30 countries. The Swedish earned income tax credit differs, however, from corresponding credits in most other countries in so far as it is paid to everyone who works regardless of how high their earned income is (even though it gives a larger percentage increase in income to low-wage earners than to high-wage earners). Only two other countries, Denmark and the Netherlands, have the same design.

In other countries, the credit is phased out from a specified earned income threshold to eventually end altogether. Such a construction would, however, hardly be defensible in Sweden. The reason is that a decrease in the credit would increase the already high marginal taxes even more for those in the phase-out interval and thus provide strong incentives for them to reduce the number of hours worked.

A rational political discussion of the earned income tax credit presupposes clarity on how it is intended to work. Here there is reason to be critical of the Government's failure to explain the mechanisms. It points out that the credit increases the return to work and can therefore be expected to lead to higher labour force participation. However, the Government has failed to explain why the higher supply of labour will correspond to a higher demand for

labour so that those who want to have a job will also get one. The obvious mechanism is that a larger labour supply in the long run acts to restrain wages *before tax*, and thus firms' wage costs, hence making it more profitable for firms to hire. At the same time, *after-tax* wages may be expected to rise more than would otherwise have been the case. With the combination of lower wage increases before tax and higher wage increases after tax, both employers and wage earners gain from the reform. This is possible because the resources available increase if more people work.

Extensive empirical research from other countries indicates that the earned income tax credit has significant positive effects on employment. Many of these studies have compared employment growth for groups that have received earned income tax credits with that for groups who have not. Such comparisons cannot be made in Sweden since everyone with earned income gets the earned income tax credit. Therefore, one is instead obliged to base one's calculations on statistically estimated relationships between hours worked and after-tax wages. On the basis of such calculations, the Ministry of Finance has estimated the long-term effect on the number of people in work at about 80 000 people.

The Ministry of Finance estimates are well in line with the 'best practice' identified in the research in this area. At the same time, it is obvious that no consideration has been given to a number of effects that would be expected to be important, but which are difficult to estimate. It is difficult to say whether this leads to over or under estimation of the effects. But it would be desirable for the Government to be more explicit about the large uncertainty in the estimates.

Employment growth in recent years says very little about the long-term effects of the earned income tax credit. The credit would mainly be expected to affect equilibrium employment, that is, average employment over the business cycle. In the short run, employment developments are mainly determined by cyclical swings in aggregate demand. Possible effects of the earned income tax credit in the last two years have most likely been overwhelmed by recent years' dramatic cyclical developments.

## Taxing earned income and pensions differently is justified if the aim is to increase employment

There has been an intensive debate on whether it is 'unjust' that, as a result of the earned income tax credit, the gainfully employed and pensioners are taxed differently. What income distribution considerations should be taken into account in tax policy is a matter of values.

The chief aim of the earned income tax credit stated by the Government is employment policy, not income distribution policy. On this basis, it is logical to have lower taxes on earned income than on pensions. In principle, an earned income tax credit that also covers that part of pension income accrued from earned income would maintain the incentives to work that the credit now engenders. In practice, designing such a credit, however, appears very difficult.

In discussions of income distribution, it is important to distinguish between, on one hand, redistributions of life incomes between *persons* and, on the other hand, redistribution of a person's life income between different *parts of the life cycle*. Distribution concerns are likely to be mainly tied to the first type of redistribution. The earned income tax credit gives rise to such interpersonal redistributions because today's pensioners did not receive any earned income tax credit when they were working. These redistribution effects will gradually diminish if the current earned income tax credit becomes permanent: ultimately everyone who retires will have benefited from the credit while they worked.

One way of avoiding interpersonal income redistributions is to compensate the retired generations who have not received – or only receive in part – the earned income tax credit by targeted tax cuts. The tax cuts for people over 65 introduced by the Government this year (about SEK 3.5 billion) and announced for next year (about SEK 5 billion) – could be viewed as such compensation. But in this case, the tax cuts should not be designed so that everyone over a certain age gets permanently lower taxes. Instead, the cuts should be linked to year of birth. The cuts should be made smaller the later the people who are retiring were born, since later generations will to an increasing extent benefit from the earned income tax credit while they work. This would involve an automatic phase-out of the tax reduction over time. There would be some rational basis for a tax

reform like this. But in practice it would hardly do to have different tax rules for each age cohort. Instead, it would be reasonable to differentiate between quite broad age classes, which would probably instigate new arguments about fairness.

## Stronger arguments for household services tax credit than for RMI tax credit

During its term of office, the Government has introduced tax reductions for household-related services, which include cleaning, maintenance and laundry (household services) and for repairs, maintenance and improvements (RMI work). The explicit aim of the reductions is to reduce the distortions that the tax system may give rise to. High taxes on services that households can perform themselves or services that relatively easily move to the unregistered sector can create substantial social efficiency losses. In earlier reports, we have expressed the opinion that tax reductions for services that are close substitutes for doing the work oneself lead to social efficiency gains. This points to stronger arguments for tax relief for household-related services than for repairs, maintenance and improvements work, since the latter requires professional skills to a greater extent.

The timing of the introduction of the RMI tax credit was cyclically motivated. A permanent credit is, however, a less effective stabilisation policy than a temporary credit, since it does not create incentives to have the work done earlier. The gross cost of the RMI tax credit has also been much higher than what the Government forecast. In our opinion, there are grounds for re-examining whether the RMI tax credit should be retained when the business cycle turns upwards.

## Too much coaching and too little labour market training

To prevent unemployment from persisting even after the business cycle has turned upwards, the Government has revised its labour market policy. More resources are now being directed at people with short unemployment spells. The focus is on coaching measures and various types of work practice. One change in 2010 is a new

activation measure primarily in the public sector, *Lyft* (an initiative for work experience for the unemployed), which can be offered to both the short-term and long-term unemployed.

The number of participants in various labour market programmes has increased in 2009. Programme participation has, however, not increased at the same pace as unemployment. If one assumes that some job search activities do not in practice have very much content, the number of participants in active programmes is substantially lower today than earlier. Programme volumes should be considerably less than they were during the 1990s crisis for efficiency reasons, but there is nevertheless reason to question whether labour market programmes (apart from job search activities) have become too small.

Job search activities accounted for more than half of the programme initiatives in 2009. There are good reasons for focusing more on job search activities. But coaching initiatives have probably been too large in an economic situation with few job vacancies. High search intensity has in all likelihood a small effect on the chance of getting a job in a deep economic downturn.

When unemployment is largely due to low demand, the policy should to a greater extent focus on recruitment incentives for the long-term unemployed. The doubling of subsidies for new start jobs introduced in 2009 has led to more such jobs than we expected. We also take a positive view of the Spring Fiscal Policy Bill's proposal for a temporarily reduced qualification period for new start jobs for older workers since there are fewer job opportunities for unemployed older workers than for younger ones.

It is also useful in the prevailing economic situation to expand work experience places and labour market training since there are smaller locking-in effects than there would be otherwise. We therefore take a positive view of the initiatives for work experience places but we think that the budgeted volumes are completely unrealistic. We are critical of the Government's attempt to instruct the public authorities to supply as many as 20 000 places in *Lyft*. With so many work experience places, they will be of dubious quality.

There is good reason for continuing to criticise the low level of labour market training. The volumes were altogether too high during the 1990s crisis, but they seem to be unreasonably low now. Experience over the past decade shows that labour market training

can be run effectively. We take a positive view of the initiatives for adult vocational training in the regular education system but it should be seen as a supplement, not as a substitute, for labour market training.

The number of participants in the job and development guarantee is growing rapidly. The Public Employment Service has had continued difficulty finding work experience places. The Public Employment Service has many participants per officer, insufficient time for contacts with employers and difficulty offering full-time activities. These problems will probably increase when the number of participants grows in the next few years. It will be difficult to maintain a good quality.

To sum up, in our opinion the labour market policy pursued during the current crisis has been substantially better designed than the policy during the 1990s crisis. The policy has benefited from lessons learned from previous experience. At the same time, we think that the Government has let the pendulum swing too far in the opposite direction in a number of areas: there has been too much emphasis on job search activities and coaching while other programmes, labour market training in particular, have been too small.

## Good to have private providers in labour market policy but better evaluation needed

We take a positive view of the ambitions to make more use of *private providers* as a way to increase effectiveness in labour market policy. However, experience from other countries is mixed. When the services procured are complex, there is a need for well-thought-out regulation, expert procurement and proper evaluations.

The Government's target is for a third of the participants in the job guarantee for young people and in Phases 1-2 of the job and development guarantee to be offered services from private providers. With the rapid expansion now underway in both of these guarantee programmes, we doubt that the market will be able to grow as rapidly and maintain good quality services.

The cooperation with private providers must be evaluated on an ongoing basis. However, with the limited information currently being collected, this would appear to be difficult. The lack of well-thought-

out procedures for evaluating individual providers is a serious shortcoming. This goes both for the Public Employment Service's ability in future procurements to choose good suppliers and for jobseekers' choice of personal coach. It is not enough to compare the Public Employment Service with the private providers on average. Instead there need to be qualified evaluations of individual private providers' results. It is hard to escape the impression that the Government was in such a hurry to privatise parts of labour market policy that it was not possible to find the time to develop the necessary evaluation systems.

## Bouquets – but also brickbats – for the sickness insurance reforms

The Government should be commended for tackling a difficult problem by reforming sickness insurance. The reforms have most likely been an important reason for the continuation of the trend begun in 2003 showing a decline in sickness absence. There is research to support that the reforms both strengthen the incentives to work and increase the opportunities to work. The rehabilitation chain appears to have been put into practice as intended. The transition to the Public Employment Service appears to be working relatively smoothly.

It goes without saying that the large problems that existed in the sickness insurance cannot be addressed without making mistakes. But in our opinion there have been too many mistakes. The Government should be criticised for implementing the reforms too hastily and in some respects carelessly and for its treatment of people on long-term sick leave whose benefits have expired.

It presumably would have been wise to distinguish between *stock* and *flow* in sickness absence. An amnesty could have been granted to those who were already on sickness absence or early retirement on 1 July 2008 (the stock) when the new rules were introduced and let them only apply to the new inflow. Proceeding in this way would have made it possible to try out the rules on a smaller scale.

The Government has had to back away from many reform proposals. In other cases, the content has been changed or exceptions introduced at a late stage. It is obviously particularly important that reform proposals on such sensitive issues as

restrictions in the social security systems on which many people are dependent are well prepared.

The Government's sickness insurance reforms can be criticised for inferior transparency. Because the rules system is complicated and there are many exceptions in the rehabilitation chain, the different actors in the sickness absence process, including the Swedish Social Insurance Administration, have had difficulty interpreting the rules. This situation has gradually worsened after the latest changes in winter 2009/2010.

The increase in early retirement among young people is alarming and there need to be thorough analyses of the reasons behind it. Possible links to earlier school reforms that made it more difficult to complete a school-leaving certificate and increased the theoretical element in education need to be examined. From this perspective, the Government's reforms in the direction of more practical upper secondary programmes are probably valuable.

For older people, the opposite problem may apply: namely that early retirement is too seldom granted. We would like to caution that the criteria for early retirement may have become too strict. The requirement for *permanently* impaired work capacity is quite severe. It is unreasonable to think that everyone who does not meet the criteria can get a job in the regular labour market.

## Risk of overexpansion in regular education in an economic downturn

Increasing the number of places in regular education is one of the ways the Government has chosen to tackle the economic downturn. For this year and the next, the 2010 Budget Bill includes increased appropriations for universities and colleges equivalent to 10 000 places a year, 3 000 more places a year at vocational colleges and initiatives in adult vocational training corresponding to 10 000 places each year. There are some other initiatives in the Spring Fiscal Policy Bill.

In a difficult labour market situation, it becomes more attractive to get an education. The expected income that the individual has to forgo while studying is smaller and the risk that long-term unemployment will have a negative impact on the individual's human capital in future is particularly high in such a situation.

Private demand for education can deviate from what is desirable from a social efficiency point of view for several reasons. This is true also in normal times. Given that the volume of education is socially efficient then, it is appropriate to increase the number of places in an economic downturn when the return to education increases. There is thus a theoretical basis for varying education volumes over the business cycle.

But there are also reasons for not satisfying the whole increase in demand for education in a downturn by providing more places. One reason is that a rapid expansion in education volumes may lead to lower quality education, for example, because of difficulties hiring enough qualified staff. It is also possible that individuals *overreact* to the risk of unemployment and – from a social efficiency perspective – demand too much education because it provides a livelihood when they cannot get one from unemployment insurance benefits. Removing the study condition in the unemployment insurance in 2007 is a reform that may have caused students to extend their studies in order to get student aid to support themselves.

There are some indications that higher education has expanded more during this economic downturn than according to previous patterns. It is difficult on the basis of current knowledge to form an opinion on whether the size of the expansion has been appropriate. It has taken place without any satisfactory knowledge basis. We would like to caution against the risk of excessive expansion of regular education in economic downturns. There is a great need for research on the effectiveness of using regular education as a cyclical policy instrument.

## Role of supplementary unemployment insurance is unclear

The current Government's most important goal is to increase employment in the long run. To achieve this, the Government has carried out reforms that make it more worthwhile to work compared to being unemployed.

On one hand, there is ample evidence indicating that reduced benefit levels in the unemployment insurance tend to reduce unemployment. On the other hand, the result is less income protection in the event of unemployment. What the trade-off should

be between employment and insurance is a matter of political value judgements. But a rational trade-off presumes a good knowledge of how different reforms affect income protection in the event of unemployment.

There has been a great deal of uncertainty about what income protection in the event of unemployment is offered by the various supplementary insurance schemes provided in collective agreements and by trade unions. We have had a survey conducted which included questions about the use of this supplementary insurance. According to the survey, surprisingly few of the unemployed receive compensation from supplementary insurance.

In the survey, we also asked questions about the unemployed's reservation wage, i.e., the lowest wage for which one is prepared to work. Our analysis indicates that the benefit levels after tax affect reservation wages even though the effects are relatively modest. The benefit level has a greater effect on the reservation wage for the long-term unemployed than for the short-term unemployed. This finding is an argument that decreasing unemployment benefits as the unemployment spell lengthens, as in the current system, may provide an effective balance between income protection and incentives to work.

# 1 The economic crisis and fiscal policy

The financial crisis of recent years and the subsequent economic downturn have presented economic policy with serious challenges. One of the first problems to be handled were those in financial markets where the crisis had originated. Subsequently, both monetary and fiscal policy have had to tackle the spread of the financial crisis to the real economy. At the same time, both the crisis and the stabilisation policy pursued have given rise to concern about negative consequences in the long run.

The Fiscal Policy Council has the remit to follow up the consistency of fiscal policy with both long-term fiscal sustainability and short-term cyclical developments. In earlier reports, we have commented on how Swedish fiscal policy has responded to the financial crisis.[1] Our comments then can be summarised as follows:

- Fiscal policy was not expansive enough in 2009, when further stimulus measures, particularly increases in local government grants, would have been justified.

- The scale of the stimulus measures for 2010 is reasonable but the measures were announced unnecessarily late.

- The stimulus measures have to too high an extent consisted of permanent reforms rather than temporary crisis measures.

This section contains an in-depth analysis of how fiscal policy has been conducted during the crisis. To begin with, Swedish and international economic developments are summarised in Section 1.1. Section 1.2 compares current developments with the Swedish economic downturn in the early 1990s. Section 1.3 describes and analyses the fiscal policy conducted thus far during the crisis.

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[1] Fiscal Policy Council (2009a,b).

**Figure 1.1 Change in real GDP per person of working age 2008-2009, per cent**
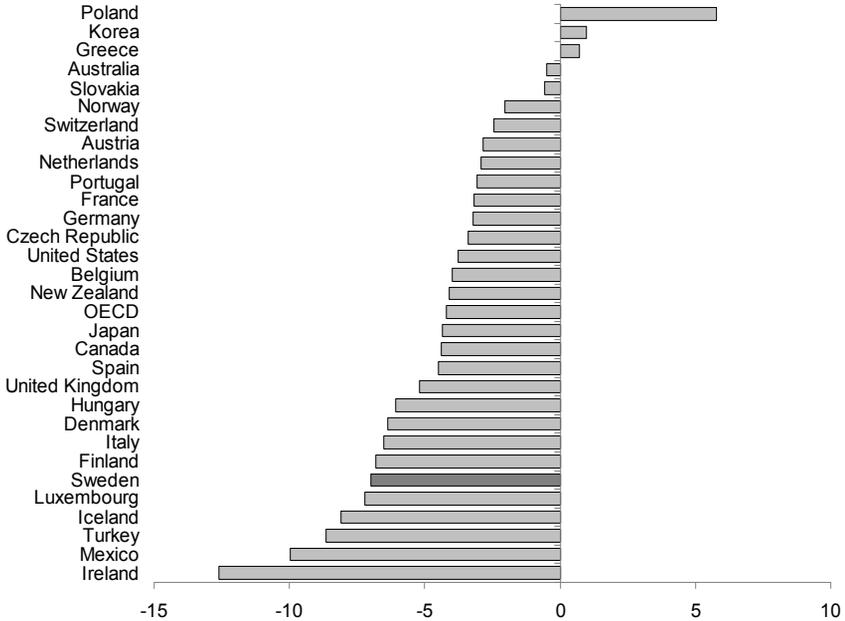


*Note*: The figure for the OECD is an unweighted average for OECD countries.
*Source*: OECD Economic Outlook November 2009 and Fiscal Policy Council calculations.

# 1.1 The economic crisis

Figures 1.1-1.3 show how growth and unemployment have developed in the OECD countries during the crisis years 2008 and 2009. From these figures, it is clear that during these two years, the financial crisis had greater negative effects on the real economy in Sweden than in the average OECD country. This was particularly the case for GDP growth, which in Sweden was almost three percentage points below the OECD average (see Figure 1.1). Figure 1.2 compares growth in the same years, but in relation to OECD forecasts before the crisis. The figure thus gives a more direct picture of how the crisis has affected growth. According to this figure, like Figure 1.3 which shows how unemployment has changed, the crisis has only had a marginally harder impact in Sweden than in the OECD on average.

## Figure 1.2 Change in GDP growth forecast 2008-2009, percentage points
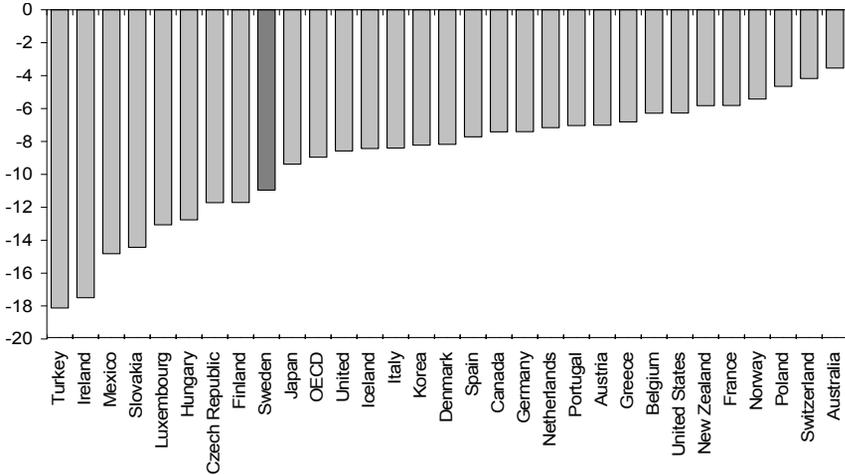


*Note*: Figure 1.2 shows how the forecast for real GDP growth in the two year period 2008-2009 changed between December 2007 and November 2009. The figure for the OECD is an unweighted average for OECD countries.
*Source*: OECD Economic Outlook December 2007 and November 2009.

## Figure 1.3 Change in unemployment 2008-2009
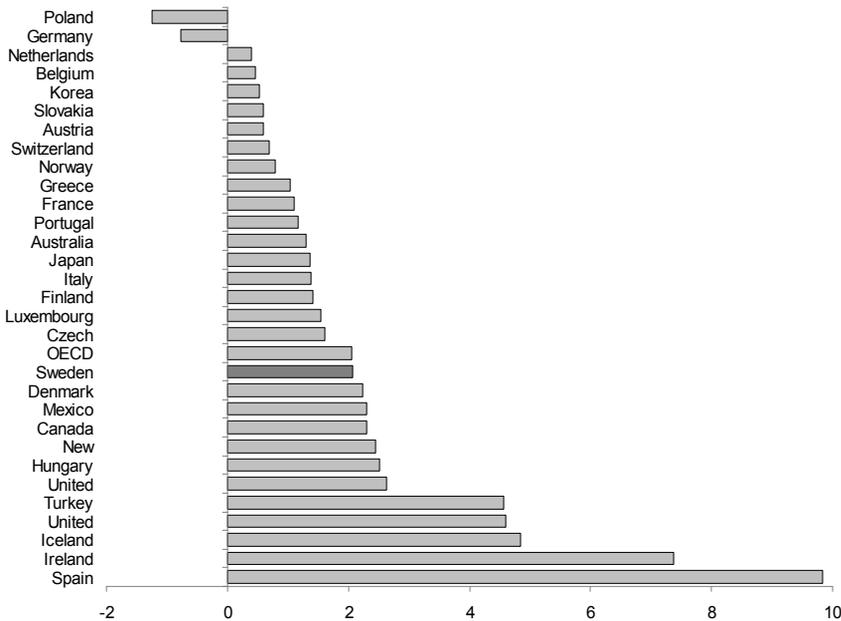


*Note*: The change in unemployment in the two-year period 2008-2009 is stated in percentage points. The figure for the OECD is an unweighted average for OECD countries.
*Source*: OECD Economic Outlook November 2009.

**Figure 1.4 Change in general government net lending 2007-2009, per cent of GDP**



*Source*: OECD Economic Outlook November 2009.
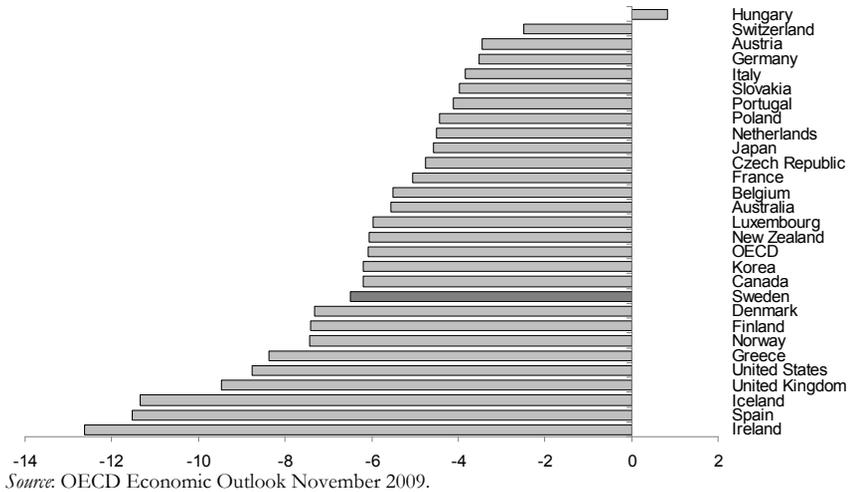
In response to the acute outbreak of the financial crisis in September 2009, the world's central banks began lowering their key interest rates. Moreover, central banks, governments and other authorities had to intervene to counteract various problems in the financial markets. Fiscal policy also responded rapidly to the crisis. In the United States, the economic downturn had already begun in 2007. Fiscal stimulus measures were introduced in spring 2008. After the crisis escalated in autumn 2008, several EU countries launched fiscal stimulus packages in late autumn.

Public finances in almost all countries have deteriorated sharply during the economic crisis as a result of the cumulative effect of fiscal stimulus packages, support for the financial markets and the working of the automatic stabilisers in fiscal policy.[2] Figures 1.4 and 1.5 show how general government primary net lending and net financial debt have changed in OECD countries in the past two years.[3] The impact on public finances in Sweden during these two years has been close to the OECD average. Public finances were, however, in considerably better shape in Sweden than in most other countries at the outbreak of the crisis. Figure 1.6 shows that the government debt ratio is still low by international standards.

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[2] Automatic stabilisers are the automatic budget weakening that arises in an economic downturn when tax revenue falls and some transfer expenditures increase.

[3] See Box 1.1 for an explanation of these concepts.

**Box 1.1 Concepts used in public sector reporting**

- The *general government sector* includes the central government, the old-age pension system and the local government sector.
- General government *gross financial debt* consists of the sector's total financial liabilities.
- *Consolidated general government gross debt* (Maastricht debt) is the debt concept used in EU fiscal rules. It is defined as the general government total debt after internal claims and liabilities in the sector have been netted out.
- General government *net financial debt* consists of the sector's gross financial debt minus the sum of its financial assets. If the financial assets are larger than the financial liabilities, the sector has a positive *net financial worth.*
- General government *net lending* is the difference between the sector's revenue and expenditure as they are defined in the national accounts. The national accounts use accrual accounting, i.e. income and expenditure are booked when the underlying transactions take place. Net lending shows (with reversed signs) the change in general government net financial worth excluding valuation changes.
- General government *primary net lending* is the difference between the sector's revenue and expenditure excluding net interest payments.
- General government *structural (primary) balance* is the (primary) net lending adjusted for cyclical and certain one-off effects.
- General government *underlying (primary) balance* is the structural (primary) balance adjusted for further one-off effects.[4] The OECD has been reporting estimates for the underlying balance since 2008, but these series do not go back as far as the series for the structural balance.

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[4] Examples of one-off effects are waived claims and licences sold. See Joumard et al. (2008).

**Figure 1.5 Change in general government net debt 2007-2009, per cent of GDP**
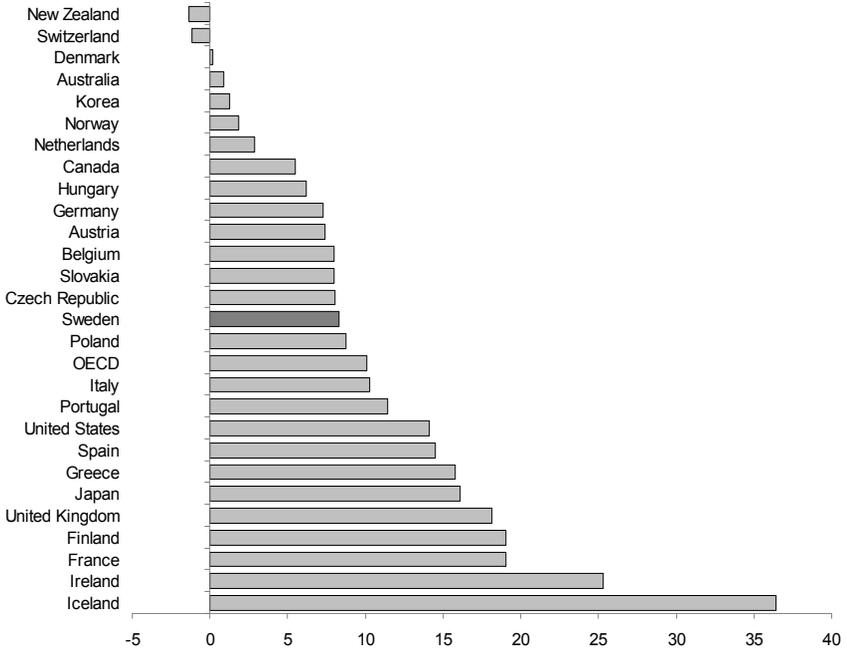


*Source*: OECD Economic Outlook November 2009.

**Figure 1.6 General government debt, per cent of GDP**
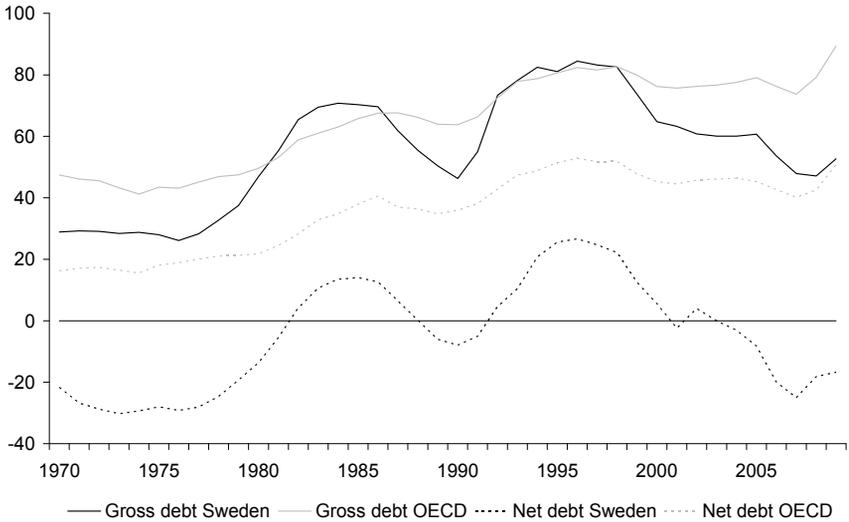


*Note*: The figures for the OECD are the unweighted average for the nine OECD countries for which (except for Sweden) there are data for the entire period.
*Source*: OECD Economic Outlook November 2009.

**Figure 1.7 Change in general government underlying primary balance 2007-2009, per cent of GDP**
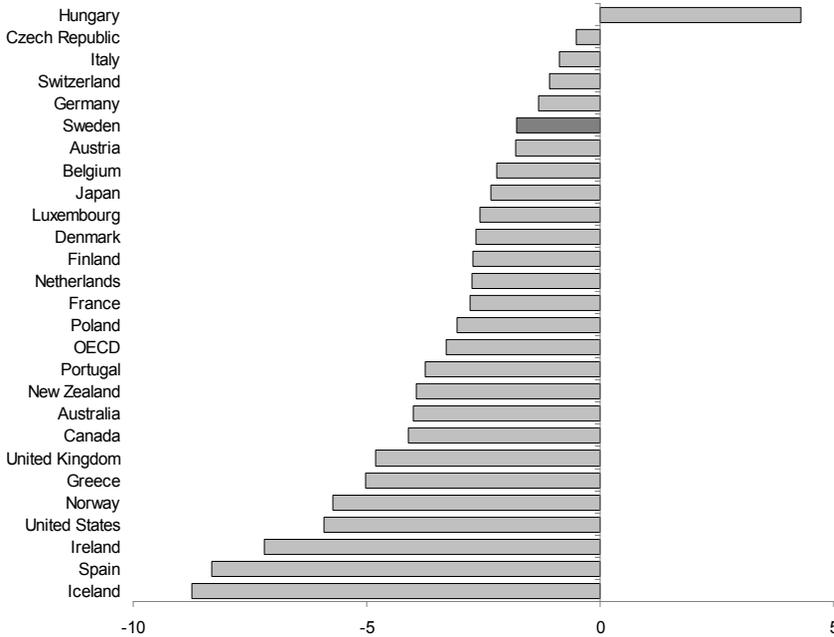


*Source*: OECD Economic Outlook November 2009.

The general government underlying primary balance is adjusted for the automatic stabilisers and certain one-off effects. The underlying balance therefore provides an indication of how fiscal policy has changed as a result of new fiscal policy decisions. Figure 1.7 shows that there has been considerably less change in the underlying balance in Sweden than in most other countries. The relatively sharp deterioration in Swedish net lending shown in Figure 1.4 is thus not primarily explained by new fiscal policy decisions but by the automatic stabilisers.

The Swedish economy was thus hit relatively hard in the early part of the international economic downturn although the crisis was initiated abroad. But according to most current forecasts, the Swedish recovery will be relatively early and rapid, particularly compared with developments in other European countries.

Table 1.1 summarises various organisations' economic forecasts for Sweden. It shows that GDP is expected to grow by more than two per cent this year and by between three and four per cent next year. Unemployment is expected to reach its highest level during the current year and then slowly fall back. The budget deficit varies considerably between forecasters, particularly for 2010 when both the National Institute of Economic Research (NIER) and the Riksbank forecast smaller deficits than the Ministry of Finance. Moreover, the actual difference in the forecasts is greater than the table shows, as the National Institute of Economic Research has anticipated a more expansionary fiscal policy in 2010 and 2011 than the Ministry of Finance has. Without this more expansionary policy, the deficit would decrease by approximately a quarter of a per cent of GDP in 2010 and one per cent of GDP in 2011.[5] According to all the forecasters, the deficit is nevertheless expected to peak in the current year.

## 1.2 Developments compared with the crisis in the 1990s

For the greater part of the post-war period, Sweden has been spared from recessions, i.e. from economic downturns with drops in GDP. But as can be seen from Figure 1.8, GDP fell in 1977, in 1981 and in particular during the economic crisis in the early 1990s. Since the crisis in the 1990s is the only previous major economic downturn in modern times, it is relevant comparing that crisis with the current developments.

### 1.2.1 Demand

The Swedish economy was doing well until the financial crisis reached its acute stages. Average GDP growth was 3.1 per cent between 2002 and 2007. Employment did grow weakly during 2002-2006, particularly considering the strong GDP growth, but then rose by 5.2 per cent from 2006 through 2008.[6]

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[5] In the Riksbank's forecast, fiscal policy is assumed to follow "what can be regarded, in historical terms, as the normal development of fiscal policy over an economic cycle" (the Riksbank 2010a, p. 13).

[6] We analyse employment growth in relation to GDP growth in Section 1.2.2.

## Table 1.1 Macroeconomic indicators, spring 2010

| | MoF Apr | NIER Mar | RB Apr | OECD Nov | EU May | IMF Apr |
|---|---|---|---|---|---|---|
| **GDP growth[a]** | | | | | | |
| 2004-2008 | 2.8 | | | | | |
| 2009 | -4.9 | -4.9 | -4.9 | -4.7 | -4.9 | -4.4 |
| 2010 | 2.5 | 2.4 | 2.2 | 2.0 | 1.8 | 1.2 |
| 2011 | 3.9 | 3.8 | 3.7 | 3.0 | 2.5 | 2.5 |
| **Inflation[b]** | | | | | | |
| 2004-2008 | 1.4 | | | 1.6 | | 1.7 |
| 2009 | 0.9 | 0.9 | 0.9 | -0.3 | 1.9 | 3.1 |
| 2010 | 1.7 | 1.1 | 1.4 | 1.4 | 1.7 | 2.2 |
| 2011 | 1.5 | 2.0 | 2.5 | 3.2 | 1.6 | 2.0 |
| **Unemployment[c]** | | | | | | |
| 2004-2008 | 7.0 | | | | | 6.7 |
| 2009 | 8.3 | 8.4 | 8.4 | 8.2 | 8.3 | 8.5 |
| 2010 | 9.2 | 9.1 | 9.0 | 10.3 | 9.2 | 8.2 |
| 2011 | 8.8 | 9.1 | 8.8 | 10.1 | 8.8 | 7.7 |
| **Net lending[d]** | | | | | | |
| 2004-2008 | 2.3 | | | | | |
| 2009 | -0.8 | -0.8 | -0.8 | -2.0 | -0.5 | -2.2 |
| 2010 | -2.1 | -1.2 | -1.2 | -3.0 | -2.1 | -3.3 |
| 2011 | -1.0 | -1.1 | 0.0 | -2.0 | -1.6 | -2.1 |
| **GDP gap[e]** | | | | | | |
| 2004-2008 | 1.3 | 0.2 | 1.9 | 1.8 | 2.6 | 0.6 |
| 2009 | -5.6 | -7.8 | -4.0 | -7.0 | -4.3 | -5.5 |
| 2010 | -4.6 | -7.1 | -3.7 | -6.3 | -3.3 | -5.5 |
| 2011 | -3.0 | -4.7 | -1.9 | -4.6 | -1.8 | -4.5 |
| **Labour market gap[f]** | | | | | | |
| 2004-2008 | | -1.1 | 0.1 | | | |
| 2009 | | -3.9 | -0.5 | | | |
| 2010 | | -4.9 | -0.9 | | | |
| 2011 | | -4.6 | -0.8 | | | |
| **Structural balance** | | | | | | |
| 2004-2008[g] | 1.4 | 2.4 | | 1.5 | 0.9 | 0.6 |
| 2009 | 2.4 | 3.2 | | 1.4 | 1.9 | -0.6 |
| 2010 | 0.5 | 2.5 | | 0.2 | -0.2 | -0.8 |
| 2011 | 0.7 | 2.0 | | 0.4 | -0.5 | -0.7 |

*Note*: a) Percentage volume change from previous year. b) Percentage change in the CPI, December-December (Ministry of Finance, National Institute of Economic Research, the Riksbank and the IMF), annual average (OECD); percentage change in the harmonised consumer price index (EU). c) Per cent of the labour force aged 15-74. d) General government net lending as a percentage of GDP. e) Percentage difference between actual and potential GDP. f) Percentage difference between actual and potential number of hours worked in the economy. g) 2005-2008 for the Ministry of Finance.
*Sources*: Ministry of Finance, 2010 Spring Fiscal Policy Bill; National Institute of Economic Research, The Swedish Economy March 2010; Riksbank, Monetary Policy Update April 2010; OECD, Economic Outlook November 2009; European Commission, European Economy Spring 2010; IMF, World Economic Outlook, April 2010.

**Figure 1.8 GDP growth 1951-2009, per cent**
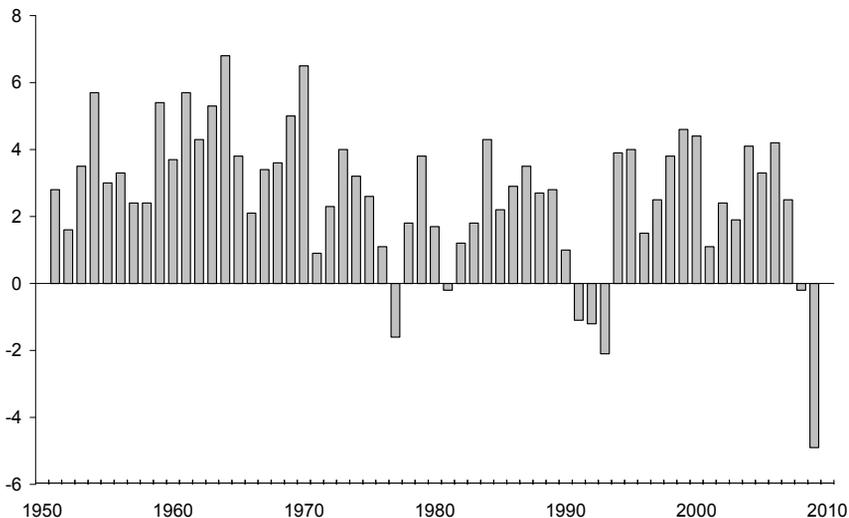


*Source*: Statistics Sweden.

The decline in GDP over the past year has been uniquely large. As can be seen in Figure 1.9, GDP fell by six per cent from the first quarter of 2008 to the last quarter of 2009. The current economic downturn has unfolded more dramatically than the crisis in the 1990s. Then it took three years from the cyclical peak before GDP had fallen by five per cent. The GDP gap has according to OECD estimates (see Figure 1.10) also fallen more rapidly and to lower levels than in the 1990s.

But according to the forecasts in Table 1.1, the downturn will be briefer than in the 1990s. The latest forecast by the NIER indicates, for example, that GDP has already reached its trough during the current crisis, while GDP fell for three consecutive years during the crisis in the 1990s. Even after GDP has begun to grow, it will probably take a long time before output reaches its potential level.

## Figure 1.9 GDP developments compared with the 1990s crisis
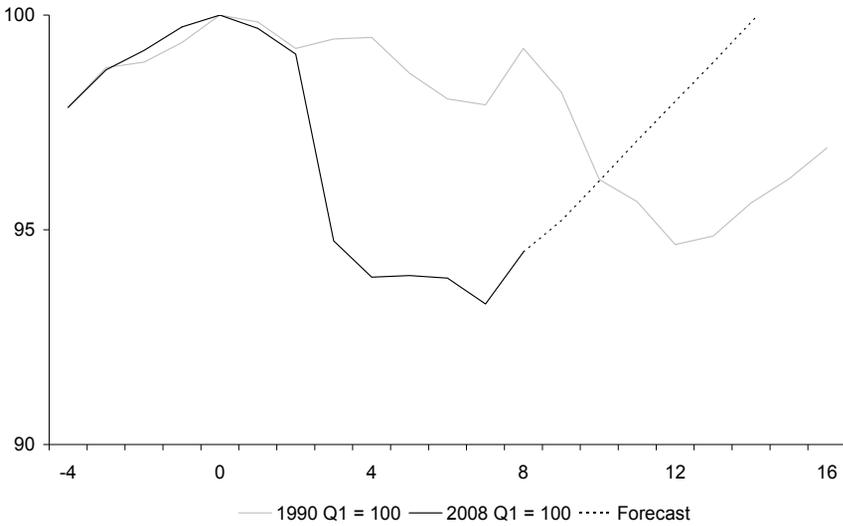


*Note*: The dashed line shows the National Institute of Economic Research forecasts. Index = 100 the last quarter before GDP began to decline.
*Source*: National Institute of Economic Research, The Swedish Economy March 2010.

## Figure 1.10 GDP gap, 1980-2011
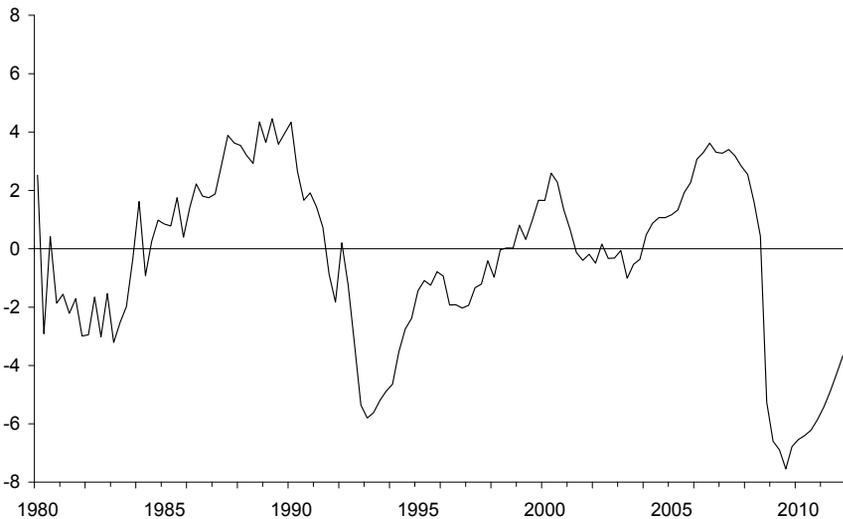


*Source*: OECD Economic Outlook November 2009.

**Table 1.2 Decomposition of the fall in GDP during the two crises**

|  | 2007 Q4-2009 Q4 | 1990 Q4-1992 Q4 |
| --- | --- | --- |
| **Real GDP growth, per cent** | -5.8 | -5.1 |
| **Growth contribution from** | | |
| Private consumption | -0.4 | 0.3 |
| Investment | -4.3 | -7.9 |
| Public consumption | 0.6 | 0.9 |
| Net exports | -1.6 | 1.7 |
|     Exports | -7.3 | -3.4 |
|     Imports | 5.7 | 5.0 |

*Note*: The growth contribution from the respective components of aggregate demand are calculated according to the identity GDP change = change in private consumption + change in investment + change in public consumption + change in exports - change in imports, where all the changes are measured relative to GDP. For GDP, constant prices (reference year 2000) are used, while the changes in other variables refer to the variables in current prices deflated with the GDP deflator.
*Source*: Statistics Sweden and Fiscal Policy Council calculations.

Table 1.2 compares how different demand components contributed to the fall in GDP during each of the two crises. It is clear that GDP in the current crisis has fallen primarily because of the weak developments for exports and investment. The developments for exports and investment are also the main explanation of why the course of the business cycle has been so dramatic. Investment also fell sharply during the crisis in the 1990s, but exports then developed more favourably since that crisis was mainly domestic.[7]

## 1.2.2 Labour market developments

The labour market has deteriorated sharply in the wake of the exceptionally strong slowdown in output and demand. From the last quarter of 2007 to the last quarter of 2009, unemployment rose by almost three percentage points, which is about the same as in the first two years of the crisis in the 1990s. During the first year of the current crisis, the employment rate also fell at approximately the same pace as in the previous crisis. But despite the similarities in the early part of the crisis, future labour market developments according to the latest NIER-forecasts will be much less dramatic than in the 1990s.

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[7] In the table, the variables have been deflated with the GDP deflator so that the growth contribution from the various components adds up to GDP growth, even though other price indices presumably are more relevant for some components. The choice of deflator plays a particularly important role for the growth contribution from private consumption. If the CPI is used instead of the GDP deflator, the estimates show a positive contribution (0.4) from private consumption during the current crisis.

The Ministry of Finance predicts in the 2010 Spring Fiscal Policy Bill that *unemployment* will peak, at 9.2 per cent, already this year. As shown in Figure 1.11, unemployment increased more during the previous crisis.[8] Unemployment then rose by ten percentage points from 1990 to 1994. Figure 1.12 shows that *employment* has begun to increase in recent quarters and that this growth is expected to continue according to forecasts by the NIER. Also the Ministry of Finance predicts that the employment rate will reach its lowest level already in 2010. According to the Ministry's forecasts, employment will be 2.8 percentage points lower in 2010 than before the crisis. The fall in employment was both greater and more persistent in the 1990s. The employment rate fell twelve percentage points from 1991 to 1994, and never returned to the levels prevailing prior to that crisis. *Labour force participation* has now fallen considerably less than it had during the corresponding time in the previous crisis (see Figure 1.12). While labour force participation fell by close to five percentage points during 1990-1993, the NIER expects that participation will fall by only 0.4 percentage points in the present crisis.

## 1.2.3 How long and how deep will the economic downturn be?

A key question in deciding how economic policy should be designed in the future is how persistent the downturn is expected to be. By studying historical data, we can identify systematic patterns in business cycle developments. These patterns can both provide indications of future developments and shed light on what is unique in the current crisis. Interesting questions are, for example, whether downturns and upturns in the business cycle differ in length, if developments have historically been more rapid in downturns than in upturns and how the labour market develops in relation to GDP.

We noted above that the current downturn in the labour market is expected to be smaller than in the 1990s. A closer examination indicates that the relation between GDP and employment growth appears to deviate from the normal pattern during both these economic downturns, but in different ways. This is developed below.

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[8] In Section 6, we compare employment growth for various groups and in different sectors during the current economic downturn with the downturn in the early 1990s.

**Figure 1.11 Unemployment compared with the last quarter before GDP began to fall, difference in percentage points**
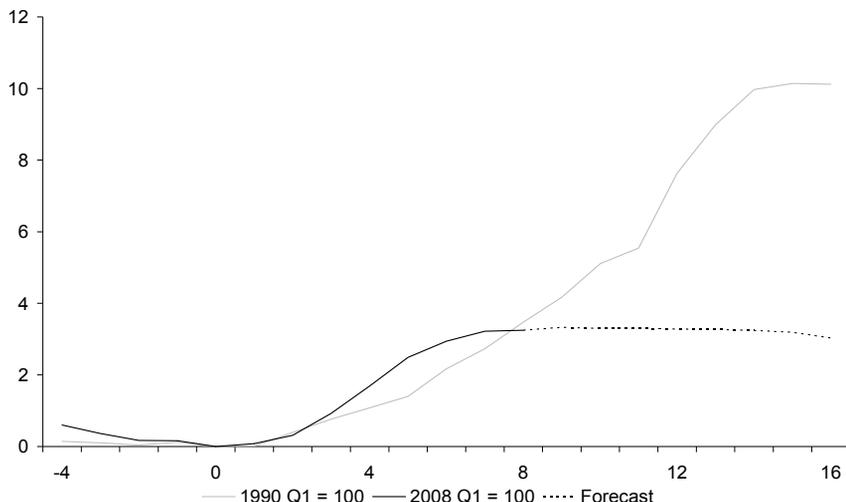


*Note:* Unemployment relative to the labour force. The dashed curve is the March 2010 forecast by the National Institute of Economic Research.
*Sources*: National Institute of Economic Research, The Swedish Economy March 2010 and Fiscal Policy Council calculations.

**Figure 1.12 Employment rate and labour force participation compared with the last quarter before GDP began to fall, difference in percentage points**
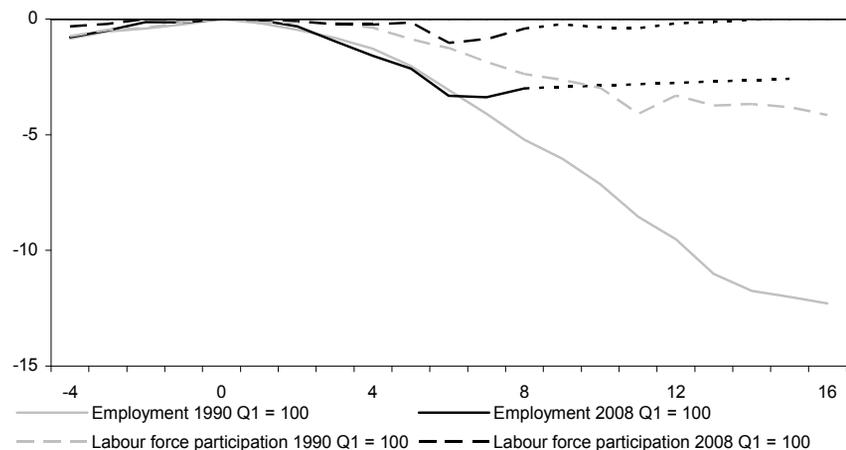


*Note:* Employment shows the number of people employed as a percentage of the population aged 16-64. Labour force participation shows the labour force as a percentage of the population aged 16-64.
*Sources*: National Institute of Economic Research and Fiscal Policy Council calculations.

*Relation between output and employment*

There is a clear relation between changes in GDP and employment in recent decades in Sweden. This relation was studied in the 1960s by the American economist Arthur Okun and is often referred to as *Okun's law*. To determine whether current employment developments relative to GDP growth deviate from the historical pattern, we have estimated how employment and GDP have historically covaried. As the employment cycle normally follows the GDP cycle with some lag, we use GDP growth in the four preceding quarters to explain employment in a particular quarter.

As can be seen in Figure 1.13, employment growth is well explained by an Okun's law relation for most of the period 1982-2009. But during the recessions in the 1990s and recent years, employment growth deviates from the normal pattern. In the early part of the 1990s crisis, employment fell considerably more than it would have done according to the historical pattern. From the first quarter of 1991 to the second quarter of 1993, the drop in employment (compared with the corresponding quarter one year earlier) was more than one percentage point greater than what it would have been under the estimated pattern.

In the current crisis, the reverse is true. GDP has fallen sharply from the fourth quarter of 2008 through the last quarter of 2009. But in this period, employment has fallen considerably less than it would have according to the historical pattern.[9] This is most notable for the two last quarters of 2009, when the deviation is 1.4 and 3.2 percentage points respectively.

One explanation for this difference between the two downturns may be that the mechanisms behind the crises were fundamentally different. For example, during the current economic downturn domestic demand has remained strong while exports have fallen sharply. The relatively strong domestic demand may explain why employment in the service industry, which is labour intensive, has *increased* during the crisis, while the high capital intensity in the export sector may explain why the large drop in output there has not been accompanied by a sharp drop in employment.[10]

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[9] The Riksbank (2010b) and the 2010 Spring Fiscal Policy Bill also noted this difference.
[10] The analysis in the 2010 Spring Fiscal Policy Bill, pp. 37-38 supports this interpretation. See also Section 6 in this report for an in-depth analysis of how employment in various sectors has developed during the two economic downturns.

**Figure 1.13 Actual employment growth and employment growth according to the historical relationship with GDP growth**



*Note*: 'Employment according to the historical relationship' shows the change in employment (in percentage points) as predicted by an estimated relationship between GDP growth and the employment rate.
*Source*: Statistics Sweden, National Institute of Economic Research and Fiscal Policy Council calculations.

Other possible explanations are that structural reforms have mitigated inefficiencies in the labour market since the previous crisis or that more effective labour market policies have been implemented in the current crisis. To shed more light on this issue, we have also studied historical relationship for the OECD countries.[11] Our analysis indicates that it is primarily the *historical* development of the Swedish labour market that deviates from the normal pattern in OECD countries. Current labour market developments in Sweden, employment in particular, follow historical relations with output if these relations are based on data from the OECD countries instead of data from Sweden alone. By international standards, Swedish labour market developments during the current economic downturn are not particularly favourable in relation to GDP developments.

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[11] This analysis is available on the Council's website: www.finanspolitiskaradet.se.

*Length of economic downturns and upturns*

There is some research analysing the length of economic downturns compared with economic upturns for the United States. McKay and Reis (2008) find that downturns in the American employment cycle are shorter and more rapid than upturns. This pattern does not appear to hold for American GDP, where the asymmetry between upturns and the downturns seems to be relatively insignificant. Cyclical peaks in employment also come later than in GDP, while the troughs coincide.

We have used the McKay and Reis method to study the same issues for Sweden.[12] Figures 1.14 and 1.15 show upturn and downturn phases for GDP and employment respectively. Some tendency can be seen for employment downturns to be shorter than the corresponding upturns while the reverse is true of GDP. Falls in both employment and GDP last an average of ten quarters in Sweden, while upturns last 12 quarters. The small differences in length between downturns and upturns indicate that the cycle is relatively symmetric in Sweden. But as Figures 1.14 and 1.15 show, the length of the various up and down phases varies sharply.

The speed also differs considerably between different business cycles. The most rapid economic downturns in the time period studied occurred at the beginning of the current crisis and about a year into the 1990s crisis, while the pace of the downturn in the early 2000s was slower. Deep and protracted economic downturns have thus been associated with rapid falls in demand. The time period we studied is, however, too short to decide if there is a stable relation. There are several additional factors that indicate that the current crisis will be persistent. The IMF (2009a) shows that economic downturns that are associated with financial crises tend to be both deeper and more persistent than other crises, and this is particularly so if these crises affect a large part of the world economy simultaneously. Furthermore, many countries now have very weak public finances. The need for fiscal consolidations will presumably limit the possibilities of a rapid recovery in the world economy.[13]

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[12] The method seeks to find the turning-points in a logarithmic trend adjusted time series. The turning-points are calculated with a method developed by Bry and Boschan (1971).
[13] See our discussion of this in Section 3.

**Figure 1.14 Cyclical swings in GDP**
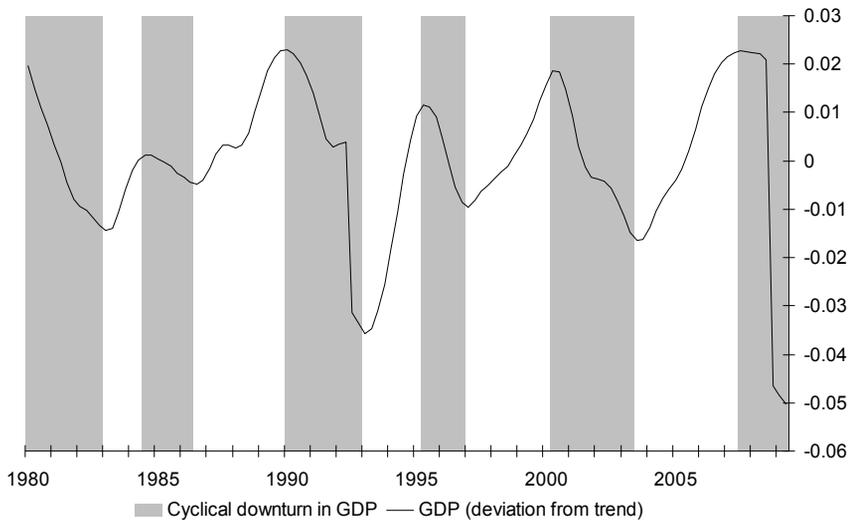


*Note*: The economic downturns have been identified using a method developed by Bry and Boschan (1971). The method has been applied on the deviation of the logarithm of GDP from a trend estimated with a Hodrick-Prescott-filter.
*Source*: Statistics Sweden and Fiscal Policy Council calculations.

**Figure 1.15 Cyclical swings in employment**
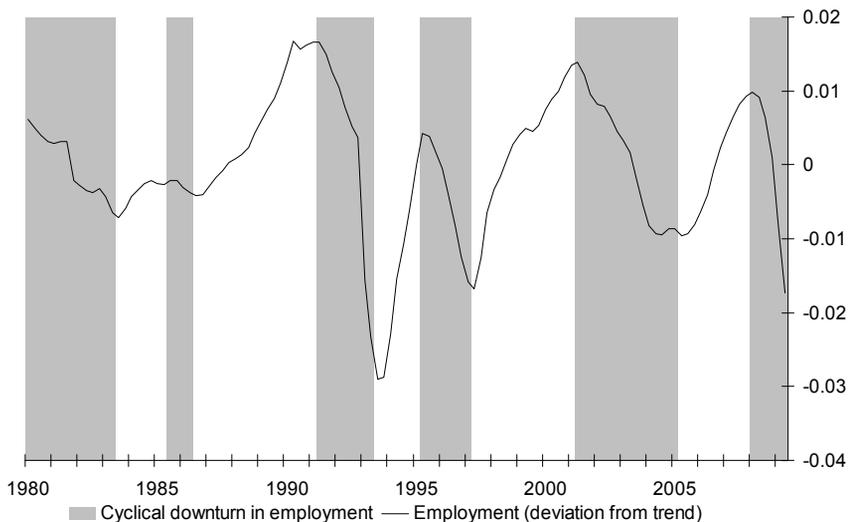


*Note*: See Figure 1.14.
*Source*: National Institute of Economic Research and Fiscal Policy Council calculations.

**Figure 1.16 Overlap in GDP and employment cycles**
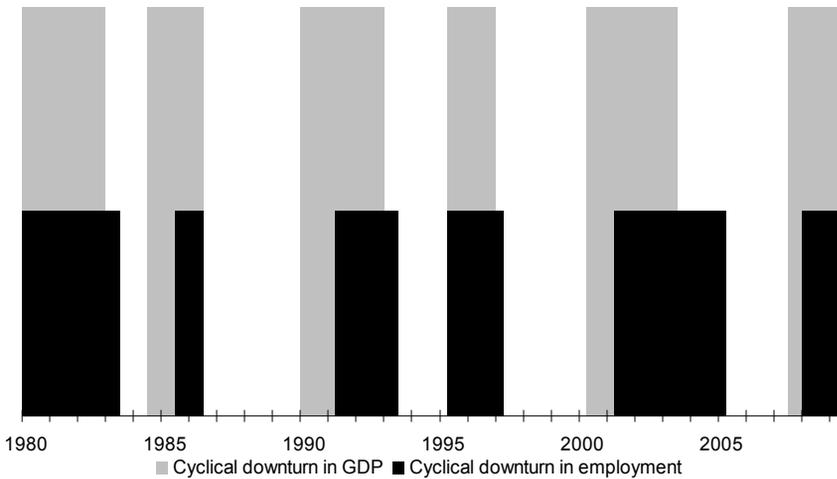


*Note*: The figure shows the same economic downturns as in Figures 1.14 and 1.15.
*Source*: Statistics Sweden, National Institute of Economic Research and Fiscal Policy Council calculations.

Figure 1.16 shows that employment often follows GDP with some lag. This is true both when the cycle turns up and when it turns down. The employment cycle on average changes direction approximately three quarters after the turn in GDP. When GDP turns up, the lag is barely one quarter longer on average compared with when GDP turns down after an upward phase. The lag was particularly long after the IT crash in the early 2000s, when *jobless growth* was much discussed.

If the current cycle follows the historical pattern, the employment cycle would turn one year after a cyclical upturn in GDP has begun, which according to the latest assessments may have happened in the first quarter of 2010. According to the historical patterns, employment should thus turn up at the beginning of 2011 at the earliest. But the latest forecasts indicate that employment will begin to rise already this year, even though GDP has fallen throughout 2009.

It is difficult to determine if this assessment is reasonable. One significant factor is *how* the upward turn in GDP will come about. Many manufacturing jobs have disappeared in the current downturn. Employment may turn up fairly rapidly if demand in that sector begins to rise. But such a development does not seem very likely

since a significant part of demand in the sector comes from abroad.[14] Instead, it is most likely that the economic upturn will be driven primarily by increased private consumption demand, which will largely focus on sectors other than manufacturing. Employment growth will therefore depend on the ability of those who have lost their jobs during the crisis to adjust. If they are able to adjust easily, an upturn may be driven by high consumption demand that generates rapid growth in the service sector compared with industrial output.

## 1.3 Fiscal policy during the crisis

In addition to intervening directly in the financial markets after the crisis erupted, the Government has used expansionary fiscal policy to mitigate the effects of the financial crisis on the real economy.[15]

About the turn of the year 2008/2009, the Government announced labour market measures, the RMI tax credit, possible tax deferrals for business, and some further stimulus measures. Further resources for labour market policy and increased grants to the local government sector in 2010 were added in the 2009 Spring Fiscal Policy Bill and the 2010 Budget Bill. The total cost of these stimulus measures amounted to a few tenths of a percentage point of GDP in 2009 and about half a percentage point in 2010.

The direct fiscal policy reactions to the economic downturn thus explain only a small part of the fall of over three percentage points in general government net lending between 2008 and 2009. The more expansionary fiscal policy is instead largely due to the reforms in the 2009 Budget Bill, including an expanded earned income tax credit equivalent to about one per cent of GDP, and to the automatic stabilisers in fiscal policy.[16]

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[14] See, for example, the National Institute of Economic Research (2009e) and our discussion in Section 3.

[15] See Fiscal Policy Council (2009a), pp. 34-44, for a more detailed review of the Government's measures in autumn 2008 and spring 2009.

[16] It could also be argued that the increased grant to local governments should not be regarded as active fiscal policy, since these local government grants do not have any direct effect on general government net lending. Central government net lending is weakened while the local government sector is strengthened. Whether the local government grants lead to a more expansionary fiscal policy depends on whether local governments choose to pursue such a policy or more likely whether local governments' automatic stabilisers have been allowed to work more freely when the balanced budget requirement for local governments is less binding as a result of the higher grant from the central government.

**Table 1.3 Contributions to changes in general government net lending**

| | Level (per cent of GDP) | | | Contribution to change in net lending (per cent of initial GDP) | |
|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2008-2009 | 2009-2010 |
| General government net lending | 2.5 | -0.8 | -1.2 | -3.2 | -0.4 |
| | | | | | |
| Central government | 1.4 | -0.9 | -1.8 | -2.3 | -0.9 |
| Taxes and charges | 24.9 | 24.0 | 24.2 | -1.6 | 0.9 |
| Transfers to households | -8.7 | -9.4 | -9.4 | -0.4 | -0.3 |
| Transfers to local government | -4.8 | -5.1 | -5.7 | -0.2 | -0.7 |
| Consumption | -7.0 | -7.3 | -7.2 | -0.1 | -0.2 |
| Investment | 1.5 | 1.7 | 1.6 | -0.1 | 0.0 |
| Interest | 1.4 | 1.0 | 1.3 | 0.4 | -0.3 |
| Other | | | | | |
| | | | | | |
| Local governments | 0.1 | -0.1 | 0.3 | -0.1 | 0.4 |
| Taxes | 16.4 | 17.2 | 17.0 | 0.4 | 0.1 |
| Transfers from central govt. | 4.8 | 5.1 | 5.7 | 0.2 | 0.7 |
| Transfers to households | -0.9 | -1.0 | -1.0 | -0.1 | 0.0 |
| Consumption | -19.5 | -20.5 | -20.1 | -0.4 | -0.3 |
| Investment | 1.6 | 1.9 | 1.9 | -0.2 | -0.1 |
| Other | | | | | |
| | | | | | |
| Old-age pension system | 1.0 | 0.2 | 0.3 | -0.8 | 0.1 |
| Revenue | 7.4 | 7.4 | 7.3 | -0.2 | 0.1 |
| Old-age pensions disbursed | 6.3 | 7.1 | 7.0 | -0.6 | 0.0 |
| Other | | | | | |

*Note*: The sub-components in the last two columns show the change (in percentage points) in real revenues and expenditures in relation to initial GDP. Taxes, charges, transfers and pensions have been adjusted for CPI inflation while consumption and investments have been adjusted with their respective deflator. See Appendix 1 for a more detailed description of the estimates.
*Sources*: National Institute of Economic Research, The Swedish Economy March 2010 and Fiscal Policy Council calculations.

Table 1.3 shows how various items in the public-sector budgets contributed to a reduction in net lending. The primary contribution to the lower net lending in 2009 came from lower central government taxes (1.6 per cent of GDP). This reduction is due partly to various active reforms, but also to automatic effects as revenue from both investment income taxation and the progressive state income tax is cyclically sensitive.

Other contributions to the lower net lending come from government consumption and investment (0.8 per cent of GDP) and lower revenue in the old age pension system combined with higher pensions (0.8 per cent of GDP), while local government taxes

increased somewhat and thus had a contractionary effect. Further expansionary measures for 2010 and 2011 were introduced in the Budget Bill for 2010. A fourth step in the earned income tax credit and the increase in the basic allowance for people over 65 were implemented as permanent reforms at a cost of about SEK 10 billion and SEK 3.5 billion a year respectively. Moreover, local government grants were increased temporarily by SEK 12 billion for 2010 and permanently by SEK 5 billion for 2011. Some labour market measures were also announced.

Even with the expansion of the earned income tax credit and the increase in the basic allowance for pensioners, the decomposition in Table 1.3 indicates that the total tax take will have a contractionary effect in 2010.[17] It is instead mostly increased public consumption that according to current forecasts will contribute to a further reduction in net lending in 2010.[18]

## 1.3.1 Fiscal policy in relation to the fiscal framework

Under the fiscal framework, public finances are to be compatible with the *surplus target* and the previously approved *expenditure ceilings*. The surplus target requires general government net lending to average one per cent of GDP over a business cycle. Our discussion in Sections 3.3 and 4.1.4 shows that it is not clear how this formulation of the target should be interpreted in practice. Table 1.1 shows that net lending before the crisis has exceeded the target, but that in 2010 it is expected to be negative.

In Section 4, we argue that an evaluation of whether earlier fiscal policy has been in line with the surplus target should be based on an average of net lending over the last ten years. In the ten-year period 2000-2009, average net lending was 1.3 per cent of GDP. According to the Ministry of Finance forecast of net lending for this year, the average for 2001-2010 will be 0.8 per cent of GDP, i.e., somewhat lower than the target. Considering that the economy has been in an exceptional economic downturn since autumn 2008, the fiscal policy

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[17] The explanation for this is that the automatic stabilisers become restrictive when GDP grows.

[18] It should be noted that the decomposition in Table 1.3 does not relate taxes and revenues to GDP in the current year but to GDP in the preceding year. If, for example, the tax and expenditure shares are held constant in relation to GDP, the taxes according to the decomposition will contribute positively to net lending when real GDP grows (as in 2010, according to the forecasts), while expenditure will contribute negatively. The opposite effects ensue when real GDP falls (as in 2009).

conducted thus far has in our opinion been compatible with the surplus target, even with net lending slightly on the low side.

The expenditure ceiling includes central government and pension system expenditures (excluding interest). The ceilings for 2009 and 2010 were presented in the Budget Bill for 2008 after proposals in the 2007 Budget Bill and the Spring Fiscal Policy Bill for 2007 respectively. The budget margin, i.e., the difference between the ceiling and the expenditures subject to the ceiling planned at that time, was SEK 40 billion for 2009 and SEK 34 billion for 2010.

The expenditures subject to the ceiling in 2009 were SEK 24 billion lower than the expenditure ceiling, even though the expenditures included SEK 13 billion in local government grants intended for 2010. According to the forecast in the 2010 Spring Fiscal Policy Bill, the expenditures subject to the ceiling will be SEK 29 billion lower than the ceiling. Adjusted for the expenditures of SEK 13 billion included in the 2009 budget but referring to 2010, the margin to the ceiling is thus expected to be SEK 16 billion. The forecast for the public finances in 2010 is uncertain in the current economic environment, but in our opinion, the fiscal policy now pursued is compatible with previously approved expenditure ceilings.

## 1.3.2 Fiscal policy in relation to the cyclical situation

In last year's report, we argued that the Government's handling of the financial markets during the crisis was generally adequate. Developments in the financial markets in the past year have been considerably less dramatic. Nor have any significant new public support measures been considered justified.[19] Even though the turmoil in the financial markets has decreased, Figure 1.17 shows that credit for businesses has declined in the last year. It cannot, however, be determined from the graph whether the lower borrowing is due to a credit crunch (i.e. something that the authorities could possibly have counteracted with the help of financial market measures) or to a fall in businesses' demand for credit as a result of the lower economic activity.

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[19] Some of the earlier measures have, however, been *extended*. In January 2009, business was given the opportunity of temporarily deferring payments of preliminary tax and social contributions for one year. The deferral was extended for one year in January 2010. In July 2009 and January 2010, the programme of capital injections for commercial banks introduced on a temporary basis in February 2009 was extended. Under the latest decision, the programme is active until August 2010.

**Figure 1.17 Swedish banks and housing credit institutions' lending to households and non-financial corporations**
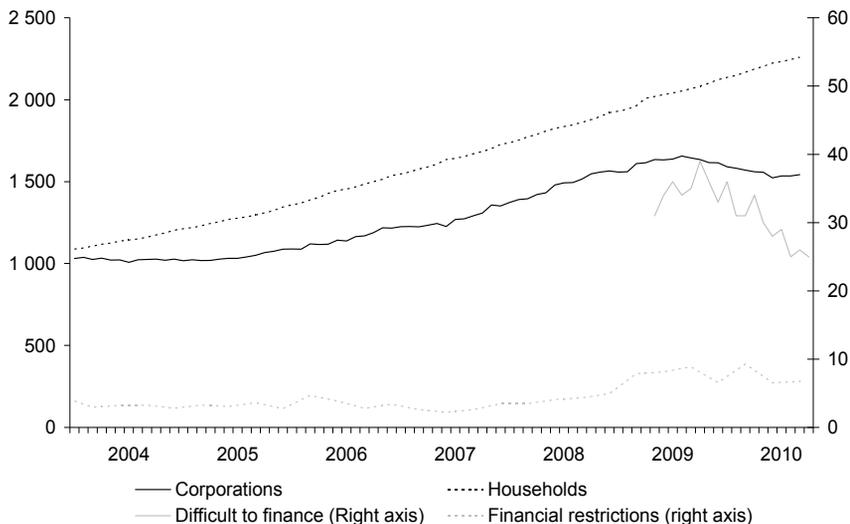


*Note*: Credit to households and business, SEK billion. The percentage of companies giving financial restrictions as the main hurdle to their production and the percentage of companies stating that it is more difficult or substantially more difficult to finance the company's operations are expressed in per cent.

*Sources*: Statistics Sweden, National Institute of Economic Research, Economic Tendency Survey, December 2009 and March 2010 and Fiscal Policy Council calculations.

Several factors indicate that there has not been a general credit crunch. First, the percentage of companies that reported financing problems was stable or falling in the period when credit to businesses decreased. Second, credit to households continued to increase in the same period.[20] The reduction in credit to businesses therefore appears to be a result of less *demand* for credit in the downturn. We thus do not find any reason for reconsidering our conclusion from last year.

In last year's report we moreover argued that the Government's fiscal policy reactions in 2009 were too cautious. In comments on the 2010 Budget Bill, we considered the extent of the stimulus measures announced there for 2010 to be reasonable.[21] The downturn has been so sharp that there has been a clear need of discretionary fiscal policy measures to stimulate the economy, and public finances in Sweden

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[20] See Ekici et al. (2009) for a more detailed analysis of the flow of credit to business and households.
[21] Fiscal Policy Council (2009a,b).

have according to our assessment been so strong that there has also been room for such policies.

In our opinion, some of the stimulus measures announced in the Budget Bill in autumn 2009 should have been announced already in connection with the stimulus package in January 2009, or at least in the Spring Fiscal Policy Bill the same year. This is particularly true of the extra grants to local government in 2010 as awareness of them presumably would have affected demand as early as 2009.

We have also criticised the Government's stimulus measures for often having been permanent rather than temporary.[22] One risk posed by fiscal stimulus measures in a downturn is that they permanently weaken the budget. Furthermore, if the measures remain in effect too long after an economic upturn has begun, they may intensify a later overheating. These are strong arguments for stimulus measures to be mostly *temporary*.

Some of the Government's stimulus measures have indeed been temporary, for example much of labour market policy, tax deferrals for business, and the increase in the grants to local government. We share the Government's opinion that these may be expected to be effective measures for sustaining demand and employment. We also welcome the general form of the extra grants to local governments, without any attempt to steer more resources to municipalities with bigger financial problems than others: any such selective support policy – over and above the redistributions that occur automatically in the local government equalisation system – would in the long run risk weakening local government accountability for their own finances.

Most of the Government's initiatives in the Budget Bill for 2010 have entailed permanent budget weakenings (about SEK 20 billion of SEK 32 billion for 2010). The most important measures of this kind are an expanded earned income tax credit (SEK 10 billion), a higher non-taxable allowance for people over 65 (SEK 3.5 billion) and increased resources for the judicial system (SEK 2.6 billion). In connection with the stimulus package in January 2009, a permanent tax credit was also introduced for the repair and improvement of private dwellings (the RMI tax credit). The annual budget weakening of the credit was estimated at SEK 3.5 billion, but as early as the first

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[22] Fiscal Policy Council (2009b).

quarter of 2010, the tax reductions have amounted to SEK 3.4 billion.[23] Even if the long-term net cost for the expanded earned income tax credit and the RMI tax credit turns out to be lower because they increase employment and reduce undeclared labour in the long run, this permanent budget weakening poses a risk. This is primarily due to the usually large uncertainty about the general government structural balance in the current situation with low resource utilisation. The reason is the difficulties in judging the extent to which the current recession may have permanent effects on potential GDP as a consequence of investments that failed to materialise and permanently lower employment.

The Government has on several occasions argued strongly against temporary fiscal stimulus measures on the grounds that they easily become permanent.[24] Against this background, it is not entirely easy to understand the sizeable permanent, unfinanced reforms in the Budget Bill. The risk that measures announced as permanent will actually become permanent must in all likelihood be considerably higher than for measures announced as temporary.

The question now facing fiscal policy is how long the need for stimulus measures will remain and at what pace the public finances should return to surplus. This is analysed in detail in Section 3.

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[23] See Section 7.2 in this report.
[24] The 2010 Budget Bill states that "the Government's premise is therefore that large expenditure increases, which are intended to be temporary, but which have historically proven difficult to revoke, should be avoided".

# 2 Fiscal sustainability

The rapid increase in government borrowing has led to a gradual shift in focus from the financial crisis to the fiscal policy crisis that several countries are mired in. Those countries that face significant demographic changes and that have not consolidated public finances are particularly vulnerable.

This section analyses fiscal sustainability problems. Section 2.1 reviews principal considerations. Section 2.2 discusses the effect of the current economic crisis on fiscal sustainability, both internationally and in Sweden. Section 2.3 analyses previous fiscal crises and how they have been handled. Last, we evaluate the sustainability calculations that the Ministry of Finance makes.

## 2.1 Arguments of principle

In the long run, all countries must – exactly like businesses and households – satisfy an *intertemporal budget constraint* (see Box 2.1). A country must manage either to amortise its debt or to pay interest on it. For this to be possible, the future primary budget surpluses – the difference between public sector revenue and expenditure excluding interest – must at least be equivalent to the outstanding debt.

In the short run, both primary budget deficits and interest payments could be financed by borrowing. But the risks involved in doing so are substantial. The change in the general government net debt ratio (debt as a percentage of GDP) is determined by the following relation:[25]

> Change in net debt as a percentage of GDP = (Primary fiscal deficit as a percentage of GDP) + (Interest rate on debt – Growth rate) × (Previous net debt as a percentage of GDP) + Residual.

The residual reflects valuation changes in government financial assets and liabilities. The equation clearly illustrates the risks of financing budget deficits with increased borrowing. If the debt level or its rate of increase becomes so high that lenders begin to question whether a

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[25] See also Appendix 2.

country will be able to meet its amortisation and interest payments, they will require higher risk premiums, which increase interest rates and thus the debt level still more (the second term in the equation). This may in turn lead to lower growth, which also increases the second term in the equation, so that the debt ratio rises even more. The higher debt ratio then results in even higher interest rates, which may lead to even lower growth and so on. These *snowball effects* may lead to unsustainable debt developments and to a Government's inability to meet its payment obligations. To prevent such a development, there must be a budget consolidation.

It is naturally desirable to consolidate the public finances in good time before an acute crisis with snowball effects breaks out. Indicators have therefore been developed for fiscal sustainability. The EU Commission has developed the *S2 indicator* (see Box 2.1) which every EU Member State now calculates annually as part of its stability or convergence programme.[26] The S2 indicator states how large a permanent annual budget improvement (as a percentage of GDP) is required for future budget surpluses to exactly suffice to either amortise the outstanding public debt or pay the interest on it.

Figure 2.1 shows the EU Commission's estimates of the S2 indicator for various EU countries. Most countries need a budget consolidation of over five per cent of GDP. For some countries, the budget improvement required is estimated at over ten per cent of GDP. Sweden belongs to a small group of countries with only small sustainability problems according to this calculation.

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[26] EU countries provide an account of their public finances to the EU Commission annually in a stability programme (euro countries) or a convergence programme (other countries).

**Figure 2.1 The S2 indicator**
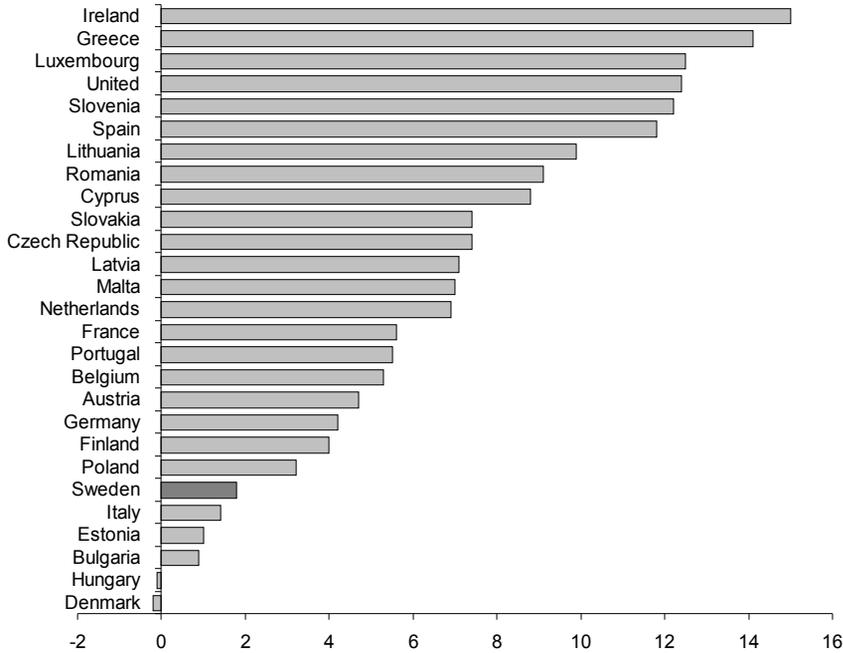


*Note:* See Box 2.1 for a definition of the S2 indicator.
*Source:* European Commission (2009).

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**Box 2.1 The intertemporal budget constraint and the S2 indicator**

The public sector is solvent at a certain point in time if the present value of future fiscal surpluses is at least as large as the net debt. This is usually termed the intertemporal budget constraint, which means, to put it simply, that it is not possible to borrow to finance future interest payments. If the public sector instead – as in Sweden – has a financial net worth, it must be at least as large as the present value of future fiscal deficits.

The S2 indicator is defined as the permanent annual budget improvement as a per cent of GDP that is needed for the intertemporal budget constraint to be satisfied exactly. [27]

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[27] Exact mathematical formulas for the intertemporal budget constraint and the S2 indicator can be found in Appendix 1 in the English version of our 2009 report (Swedish Fiscal Policy Council 2009).

The basis for estimating the S2 indicator is a country's public net-debt and forward projections of tax revenue and public expenditure (assuming unchanged rules for taxes and transfers) in the very long run. Developments are determined largely by the demographic changes. Estimates of the S2 indicator constitute an instrument for identifying the need for fiscal policy changes. But the indicator should not be construed as a forecast of future policy as no one expects that rules for taxes and transfers will remain unchanged for several decades. Nor does a positive value for the S2 indicator indicate that the country has acute solvency problems but only that sooner or later fiscal policy will need to be adjusted to achieve sustainability. It goes without saying that that the estimates of the S2 indicator are associated with a very high level of uncertainty. These sustainability calculations can therefore not be used as the basis for fine tuning policy.

The S2 indicator summarises extensive information in one single intelligible number. But there is a risk that this conceals relevant underlying information. Very different developments for primary net lending in the future can give the same value for the S2 indicator. For example, the latest Swedish sustainability calculations entail large surpluses and increasing financial net assets for a very long time to cover the deficits that according to the calculations will begin in 80-90 years.[28] Such a development should presumably be interpreted differently than a situation in which large deficits are followed by surpluses far into the future. In an in-depth sustainability analysis, it is therefore important to analyse the entire future time profile for net lending and debt developments.

A positive S2 indicator signifies that budget improvements are needed to restore fiscal sustainability. How a fiscal consolidation should be implemented depends largely on what the fundamental objectives with respect to allocation (efficiency) and intergenerational equity are.[29]

There are a number of reasons why a consolidation should take place through a permanent improvement in net lending. There is an efficiency argument for holding tax rates as constant as possible over time, i.e. *tax smoothing*. The reason is that the taxes' negative effects

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[28] See Section 2.4.
[29] See Section 1.1 in Fiscal Policy Council (2008) and Section 2.1 in Fiscal Policy Council (2009a) respectively.

on economic efficiency normally increase more than proportionally with the tax rates, thus arguing in favour of trying to smooth these over time. This is an argument against using sharp increases in taxes for a shorter period to achieve sustainability.

Another argument is *risk diversification*. If a budget consolidation is spread out far into the future, every generation has to help pay the costs of unexpected macroeconomic shocks. However, it is not fair for future generations to share the costs of macroeconomic problems caused by current generations through negligence, for example, through large budget deficits on account of undisciplined fiscal policy or inadequate regulation of the financial markets. In such cases, it is only fair that the generations that contributed to such adverse developments pay the consequences. This speaks for a more rapid budget consolidation.

Future trends are critically important to fiscal sustainability. In coming decades, the greatest strains on public finances will come from demographic developments. In our last report, there is an in-depth analysis of how fiscal policy should react to an ageing population. There we argued that sustainability problems attributable to an increasing life expectancy should be handled by an increase in the retirement age rather than increased pre-funding, which was previously the stance in Sweden.[30]

The demographic developments are not fiscal policy's only challenge in the years ahead. Public expenditure as a percentage of GDP will rise if the demand for public welfare services increases more rapidly than the demand for other consumption when incomes rise (Wagner's Law). The fiscal sustainability calculations being done in almost all countries – including Sweden – commonly ignore these demand effects and instead assume that public consumption expenditure follows demography. If a sustainability problem arises primarily because future generations will have a higher living standard, there are no obvious reasons why this should be handled by pre-funding by current generations.[31]

There is a great need for a careful analysis of how intergenerational distribution is affected by demographic developments and cost growth in the public sector. We have previously expressed the wish to see regularly recurring *generational*

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[30] See Section 2 in Fiscal Policy Council (2009a).
[31] The Government draws the same conclusions in the 2010 Spring Fiscal Policy Bill (p. 88).

*calculations* by the Ministry of Finance to shed some light on this issue.[32] We are critical that no such work appears to have been started yet.[33] In our opinion, it is of the utmost importance to allocate resources as soon as possible to do these calculations on a regular basis.

## 2.2 The economic crisis and fiscal sustainability

Many countries have not begun any adjustment of fiscal policy for the demographic challenges. Thus their public finances were vulnerable when the economic crisis broke out. The consolidation efforts in the euro area, for example, were relatively modest before the crisis. This can be seen in Figure 2.2. The Nordic countries, however, have distinguished themselves. In the years before the crisis, these countries reduced the government debt ratio and had thus created room for manoeuvre to confront the crisis. This room for manoeuvre is particularly important in countries with a large government sector and strong automatic stabilisers, as these may lead to a rapid increase in the government debt ratio in a downturn.

The fiscal impact of the economic crisis will depend on both the length and the depth of the crisis. The sustainability calculations shown above assume that the crisis will be relatively short lived. But even more important than the length of the crisis are its long-term repercussions in the labour market. These repercussions are illustrated by the Ministry of Finance's sustainability calculations in the convergence programme for 2009, which are shown Table 2.1.[34] In the base scenario, the equilibrium rate of unemployment is assumed to be 5.8 per cent and labour force participation 81.9 per cent, giving an S2 indicator of 0.6. In this scenario, the crisis is expected to last until 2017. If the crisis goes on to 2020, the S2 indicator is affected only marginally. This reflects the little importance temporary budget weakenings have for sustainability.

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[32] Fiscal Policy Council (2008), pp. 80-81. The working group in the Ministry of Finance that reviewed the surplus target shares this view. See Ministry of Finance (2010a), pp. 94-95.
[33] See also Fiscal Policy Council (2010), pp. 14-15.
[34] Ministry of Finance (2010c).

**Figure 2.2 Government debt ratio**
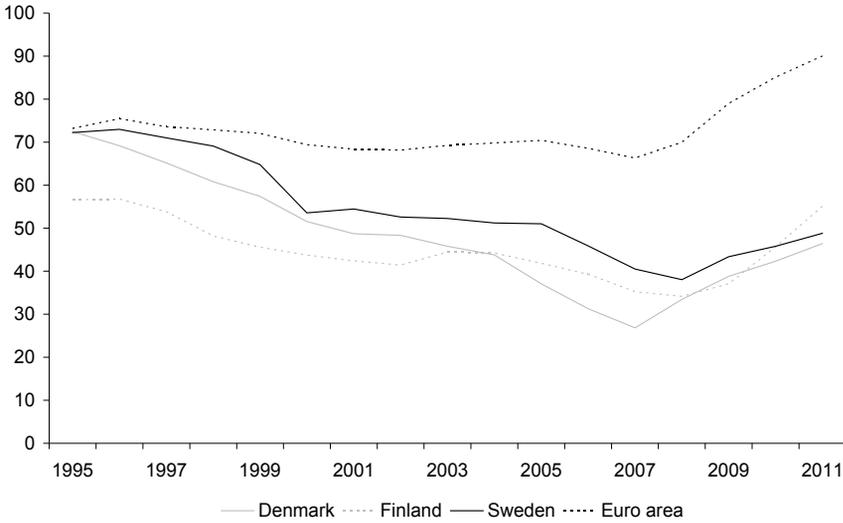


*Note*: The figure shows the consolidated gross debt as a percentage of GDP.
*Source*: OECD Economic Outlook November 2009.

Long-term negative consequences for unemployment and labour force participation have, however, considerable impact on fiscal sustainability. As can be seen in Table 2.1, the S2 indicator increases by 0.4 percentage points in a scenario with an equilibrium rate of unemployment that is one percentage point higher and by 0.9 percentage points if labour force participation is one percentage point lower compared with the base scenario.

There is reason to fear that the crisis will be more drawn out than what current sustainability calculations assume. A sluggish recovery in the financial markets may prolong the downturn. The fiscal problems confronting many countries may themselves dampen the economic upturn as they both cause uncertainty about future taxes and transfers and may lead to higher interest rates. This is discussed in more detail in Section 3.

**Table 2.1 Fiscal sustainability in Sweden in different scenarios**

|  | S2 | Difference from base scenario | Net debt 2090 per cent of GDP |
|---|---|---|---|
| Base scenario | 0.6 | 0.0 | -65 |
| Drawn-out crisis | 0.6 | 0.0 | -54 |
| Higher unemployment | 1.0 | 0.4 | -28 |
| Lower labour force participation | 0.9 | 0.3 | -32 |

*Source*: Ministry of Finance (2010c), Table 22, p. 65.

The extent to which the crisis has lasting negative repercussions is thus a critical issue for fiscal sustainability. In the 1970s and 1980s, unemployment in many European countries increased sharply in connection with economic downturns. When the economic situation stabilised, unemployment remained high. Figure 2.3 shows that after the sharp downturns in the Nordic countries in the late 1980s and early 1990s, it has taken a very long time for employment to recover. In Norway and Denmark, it has taken more than ten years, while the employment rate has still not regained earlier levels in Sweden and Finland.

The stabilisation policy discussion normally assumes that there is a trade-off between fiscal sustainability and countercyclical measures in economic downturns. But if the negative consequences of an economic crisis risk becoming persistent even after the economic situation has improved, there is a countervailing effect. Theoretically it is even conceivable that a budget deficit in the short run, which counteracts a protracted fall in employment, *improves* fiscal sustainability.

**Figure 2.3 Permanent falls in the employment rate after previous severe economic crises in Nordic countries**
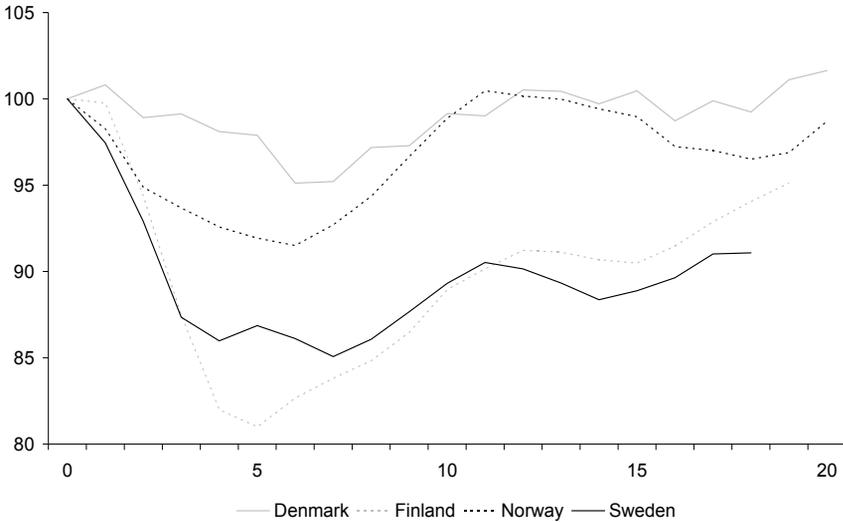


*Note*: The figure shows how employment has changed from its highest level during the period 1980-1990 in each country. The starting year given an index value of 100 is 1987 for Denmark and Norway, 1989 for Finland and1990 for Sweden.
*Source*: OECD Economic Outlook November 2009 and Fiscal Policy Council calculations.

Table 2.2 shows the calculations of the fiscal multiplier required in order for a fiscal stimulus to improve sustainability. In our opinion, it is unlikely that a temporary stimulus will improve sustainability because it would require both very large persistence effects and high fiscal multipliers. On the basis of existing studies, there is reason to believe that the correlation for the GDP gap between two consecutive years (persistence in the table) is lower than 0.65.[35] The budget elasticity in Sweden is usually estimated at about 0.55.[36] In that case, it would require a multiplier of about one in order for a temporary stimulus to improve sustainability. A multiplier as high as this is unlikely. The Ministry of Finance, for example, usually uses a lower multiplier in its calculations.

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[35] Andersen(2010a).
[36] See Fiscal Policy Council (2009a), Box 1.1, and Flodén (2009) respectively.

**Table 2.2 Fiscal multipliers required to enable a temporary fiscal stimulus to improve fiscal sustainability**

| | | Budget elasticity | | |
|---|---|---|---|---|
| | | 0.25 | 0.50 | 0.75 |
| | 0.25 | 3.0 | 2.0 | 1.8 |
| Persistence | 0.50 | 1.5 | 1.0 | 0.9 |
| | 0.75 | 1.0 | 0.7 | 0.6 |

*Note*: The fiscal multiplier in the table indicates how many kronor GDP will increase for a one krona increase in government consumption. The table is based on estimates in Andersen (2010a). The budget elasticity measures the strength of the automatic stabilisers, i.e. how many per cent of GDP general government net lending falls if GDP falls by one per cent. 'Persistence refers to the GDP gap's correlation between two consecutive years.
*Source*: Andersen (2010a).

# 2.3 Budget consolidations

In the 1970s and 1980s, large budget deficits in many countries led to a sizeable accumulation of public debt. These countries faced – exactly as many do now – a need for substantial budget consolidations. There may therefore be reasons for discussing the lessons learned from these earlier consolidations.

It is not obvious how a (successful) budget consolidation should be defined. One problem is that the budget outcome is highly dependent on cyclical developments. If the debt level is to decline in the long run, there needs to be an improvement in net lending *over the business cycle*. It is therefore customary to define a fiscal consolidation based on the change in general government *structural* (cyclically adjusted) budget balance as a percentage of GDP. One generally also looks at the *primary* budget balance. The reason for choosing primary budget balance is that a government has more control over it than over total budget balance because the latter depends on both the interest rate (which is decided in the financial market) and previously accumulated debt.

One disadvantage with the structural budget balance is that it is difficult to measure and cannot be determined with certainty even afterwards. There are often major revisions in assessments of structural net lending.[37] Changes in the structural budget balance may also be due to factors other than economic policy decisions. Despite these objections, a commonly used definition of a budget consolidation is that the structural budget balance as a percentage of

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[37] See Ministry of Finance (2010a), Appendix 2.

GDP should increase by at least a couple of percentage points within a few years.[38]

And what should be considered a *successful* budget consolidation is also not self-evident. An often used definition is that the debt ratio should be five percentage points lower three years after the fiscal consolidation has been completed compared with the situation before consolidation.

One way of analysing budget consolidations is to examine whether there is any covariation between how successful they have been and their composition, i.e. what combination of tax increases and expenditure reductions have been used.

Table 2.3 compares the change in a number of key fiscal variables in successful and unsuccessful budget consolidations in various countries. Successful budget consolidations are notable for cuts in government expenditure (not least transfer expenditures and wage costs for public employees). In successful cases, primary public expenditure declined an average of 3.5 per cent of GDP, while the corresponding figure for the unsuccessful consolidations was 1.2 per cent of GDP. The difference in the change in revenue is considerably less. Total public sector revenue rose an average of 1.3 per cent of GDP over the course of the successful consolidations and 1.1 per cent of GDP in those that were unsuccessful.

The pattern in Table 2.3 is the same as in a number of studies in the area.[39] These studies also show a correlation between successful budget consolidations and favourable macroeconomic developments. Employment and output have grown more vigorously when consolidations succeed than when they do not. The causality is, however, unclear: it may be the favourable macroeconomic developments that make the consolidation successful. Another interpretation is that successful consolidations include structural reforms. With their inclusion, the consolidation has a 'double' effect on the debt ratio as the deficit declines at the same time that the GDP level increases.[40]

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[38] See David Dreyer Lassen's background report to the Fiscal Policy Council (Dreyer Lassen 2010) for a summary of the definitions used in the literature.

[39] See David Dreyer Lassen's background paper for the Council (Dreyer Lassen 2010).

[40] There is some support indicating that structural reforms are an important factor behind successful budget consolidations. See Hauptmeier et al. (2007) and Tagkalakis (2009).

## Table 2.3 Fiscal policy during budget consolidations

| | Successful consolidation | | | Unsuccessful consolidation | | |
|---|---|---|---|---|---|---|
| | Before | After | Change | Before | After | Change |
| Debt ratio | 72.0 | 65.5 | -6.5 | 57.7 | 65.7 | 7.9 |
| Primary expenditure | 47.2 | 43.7 | -3.5 | 46.6 | 45.4 | -1.2 |
|     Transfers | 19.6 | 18.9 | -0.7 | 19.3 | 19.4 | 0.1 |
|     Wages | 14.1 | 13.2 | -0.9 | 13.4 | 12.7 | 0.6 |
|     Investment | 2.1 | 0.8 | -1.3 | 2.7 | 2.2 | -0.5 |
| Total revenue | 45.1 | 46.4 | 1.3 | 43.2 | 44.3 | 1.1 |
|     Income tax | 14.1 | 14.6 | 0.5 | 12.7 | 12.7 | 0.0 |
|     Corporate tax | 2.8 | 3.6 | 0.8 | 2.8 | 3.2 | 0.4 |
|     Indirect taxes | 14.2 | 14.7 | 0.5 | 12.9 | 13.0 | 0.1 |
| Structural deficit | 2.1 | -2.5 | -4.6 | 3.2 | 1.1 | -2.0 |

*Note*: All the variables are annual averages as a percentage of GDP. The column 'before' gives the value for two years prior to the consolidation. 'After' shows the values two years after the consolidation. 'Change' shows the change between the period before and the period after the consolidation.
*Source*: Ardagna (2007), Table 3.

Another factor behind successful fiscal consolidations is the existence of a strict fiscal framework. Budget consolidations in countries with strict budget rules and a high degree of transparency in fiscal policy are generally more successful.[41] But it is not obvious whether the framework per se facilitates a consolidation or whether the framework has been strengthened as a consequence of the Government's resolve to consolidate public finances. In the short run, the latter may be crucial. In the long run, a strict fiscal framework increases the *political* costs of inadequate fiscal discipline. In a background paper for the Council, David Dreyer Lassen (2010) analyses the importance of a transparent fiscal policy. He measures the degree of fiscal transparency with an index that reflects transparency in the budget process, how fiscal decisions are communicated to the public and the extent to which independent bodies evaluate the policy. He finds some support indicating that more transparency coincides with lower budget deficits and debt ratios.

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[41] See European Commission (2006), OECD (2007) and Dreyer Lassen (2010).

## 2.4 Sustainability calculations in the Spring Fiscal Policy Bill

According to the calculations in the 2010 Spring Fiscal Policy Bill, the S2 indicator is zero, i.e. Swedish public finances are exactly sustainable. Figure 2.4 shows the development of primary net lending and net lending in the calculations' reference scenario. Assuming rules are not changed, primary surpluses will be expected long after the effects of the crisis on the public finances have abated. Assuming positive primary net lending each year during the period 2012-2088, public sector net financial worth will grow to 110 per cent of GDP by 2090. By the end of the current century, the primary surpluses will be replaced by deficits that are expected to continue indefinitely.

With an S2 indicator of zero, the present value of positive net financial worth together with the primary surpluses in 2012-2088 is exactly equal to the present value of the deficits that arise thereafter. There is accordingly no need to adjust Sweden's fiscal policy in order to achieve long-term sustainability. According to the decomposition of the S2 indicator made in the Spring Fiscal Policy Bill, the contribution to the S2 indicator is -0.1 starting from a current positive net financial worth, -0.3 from the primary surpluses up to 2089 and 0.4 from the deficits from 2089 onwards. This reaffirms that at present there are no acute sustainability problems.

How should sustainability calculations that are highly dependent on very uncertain long-term projections to 2090 be regarded? The importance given the future is largely determined by the discount rate used. In the current calculations, market rates are used. The National Audit Office (2009a) has recommended that the discount rate be selected in a way that the distant future gets less weight.

We would advise against modifying the calculations in this way. The purpose of sustainability calculations is to assess whether fiscal policy is sustainable under unchanged rules. As public finances are affected by market rates, it is these rates that should be used in the calculations of what long-term *constraint* there is on fiscal policy. Other ways of discounting introduce completely subjective assessments of the relative importance of different periods into the calculations. Such considerations also need to be made, but the basis for these considerations should contain sustainability calculations that are value neutral.

**Figure 2.4 Primary net lending and net lending in the Spring Fiscal Policy Bill's reference scenario, per cent of GDP**
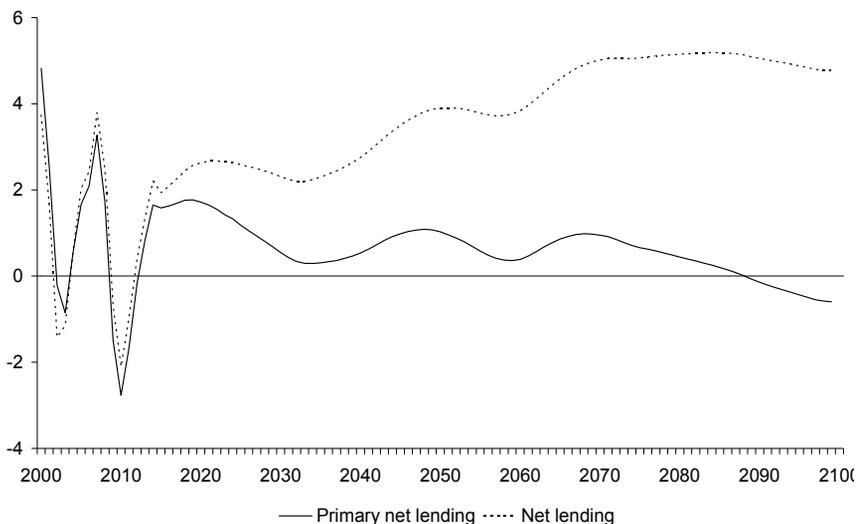


*Note:* The growing difference between primary net lending and net lending is a result of net financial worth yielding positive net interest income, which is included in net lending but not in primary net lending.
*Source*: Spring Fiscal Policy Bill 2010.

## 2.4.1 What policy impact should the sustainability calculations have?

A key issue for fiscal policy is how the sustainability calculations should affect current policy. In the 2010 Spring Fiscal Policy Bill, the Government discusses a division into three intervals for the S2 indicator with different consequences for future policy. If the S2 indicator is in the interval ± 1, the fiscal policy should be considered sustainable according to the Government and indicator values like these should therefore not induce policy changes.[42] We share the view that it is inappropriate for small changes in the S2 indicator to lead to changes in fiscal policy. Defining an interval for the S2 indicator of ± 1 where the policy is considered sustainable may be a reasonable rule of thumb for achieving sustainability.

The Government is also of the opinion that an S2 indicator of 1-3 indicates that fiscal policy will *probably* need to be revamped *in the long*

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[42] The 2010 Spring Fiscal Policy Bill, p. 266.

*run*. Using the same reasoning, an S2 indicator greater than 3 signifies "a high probability that the policy will need to be changed and it will need to be changed earlier than if the indicator value is smaller".[43] It is less obvious that such limits should be used as an indication of the probability that the policy will need to be changed. The aim of sustainability calculations is in our opinion not to estimate the probability that a fiscal policy change is needed, but rather to provide a basis for a general discussion about whether such a change is needed and if it is, how it should be made.

What importance should be attached to the conclusion that fiscal policy is exactly sustainable – and how it in turn affects the policy – depends on the importance assigned to different scenarios. There is a need to specify the reference scenario to a greater extent if it is to be given particular importance. In its current form, important aspects of sustainability – such as the cost trend in the public sector and the labour market exit age – do not receive adequate analysis.

It is excellent that the Government – as  it regularly does in the budget bills – presents several alternative scenarios in addition to the base scenario. In the 2010 Spring Fiscal Policy Bill, no fewer than ten such alternative estimates are presented.[44] In our opinion, all these scenarios are worth considering. But it may present a pedagogical problem that all the scenarios are presented as equally valid. They actually differ quite substantially, not least with respect to the ability of economic policy to affect the probability that they will be realised. For example, productivity growth and the demand for leisure are in all likelihood under less direct political control than health care costs are.

## 2.4.2 Revision of the sustainability calculations

Sustainability calculations often differ sharply between different budget bills. This is due to changes in some definitions in the base scenario and the use of new population forecasts and models in the calculations. Even though these changes have been justified, it is a shortcoming that they have not been explained in a better way.

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[43] Ibid.
[44] Estimates include the sustainability consequences of more welfare services, more leisure time, a smaller budget margin, greater labour-market exclusion, higher productivity, better health, lower inflation, higher labour-market exit ages, lower labour-market entry ages and better integration of immigrants than in the reference scenario.

**Table 2.4 The S2 indicator in various government bills**

| | |
|---|---|
| 2008 Budget Bill. | -3.4[a] |
| 2008 Spring Fiscal Policy Bill | -3.4 |
| 2009 Budget Bill. | -3.4 |
| 2009 Spring Fiscal Policy Bill | 0.5 |
| 2010 Budget Bill. | 0.6 |
| 2010 Spring Fiscal Policy Bill | 0 |

*Note*: a) excluding a technical adjustment equivalent to 3.3 per cent of GDP.

In the 2009 Spring Fiscal Policy Bill, the S2 indicator was estimated at 0.5, which was revised upwards to 0.6 in the Budget Bill for 2010. The S2 indicator of 0.5 is still deemed valid in the 2009 Convergence Programme. In the 2010 Spring Fiscal Policy Bill, the Government's estimate of fiscal sustainability has accordingly been revised to an extent corresponding to a permanent budget improvement of 0.6 per cent of GDP compared with the 2010 Budget Bill and the 2009 Convergence Programme. This revision is not explained in the Spring Fiscal Policy Bill for 2010. Instead the reader has to go to a background memorandum from the Ministry of Finance to find out that the Government considers the revision marginal.[45]

It is unsatisfactory that the Government does not systematically report, in the context of the sustainability calculations, how these differ from earlier calculations. Table 2.4 shows substantial differences between calculations made at different points in time. It currently appears that selecting the previous estimates for comparison is done rather arbitrarily. For example, the Spring Fiscal Policy Bill for 2010 reports the difference between the EU Commission's estimates published in autumn 2009, but omits commenting on the deviations from the Ministry of Finance's own estimates in the Convergence Programme published in early 2010.

The Ministry of Finance's explanation of the change from the 2010 Budget Bill to the 2010 Spring Fiscal Policy Bill also leaves something to be desired. The only explanation for the large differences in primary revenue and expenditure are that "both tax revenue and transfer expenditures have surprised on the downside and it is expected to also have a sizeable impact in the long run".[46] Furthermore, the improvement in the sustainability indicator is mainly attributed to increased revenue in addition to taxes and

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[45] Ministry of Finance (2010b).
[46] Ministry of Finance (2010b), p. 12.

charges.[47] But the different time profiles for primary net lending must be partly due to the fact that the Ministry of Finance now makes a more positive assessment of how long the current economic downturn will be. There is no attempt to analyse this in the Ministry of Finance memorandum.

## 2.4.3 Models

We have previously argued that the importance of the sustainability calculations necessitates an improvement in the models used to calculate them. The current models have several shortcomings. One particular problem is that the models do not take into account that economic policy and demographic developments affect savings and labour force participation. It is currently assumed, for example, that household consumption expenditure is a constant percentage of GDP because it gives "a reasonable development of household savings and net assets". It is not obvious that this is the most reasonable assumption in an economy with large demographic changes.

Another problem is that current models are based on projections through 2099. After these projections end, it is assumed that primary net lending remains at the 2099 level to infinity. There is a great need to improve the analysis so it is less dependent on a single end year.

[47] Ibid, p.13.

# 3 How will the budget deficits be phased out?

The current large budget deficits in most developed countries are not sustainable in the long run. This has been discussed in Section 2. The key fiscal policy issue is the pace at which these deficits should be phased out. The fashionable terminology in the international discussion refers to choosing an appropriate *exit strategy*. This involves a difficult balancing act for most countries. On one hand, there is a risk that a rapid phase-out of the stimulus measures will delay the economic upturn. On the other hand, too slow a phase-out may create serious sustainability problems.

There are two aspects of this issue for Sweden. The first is our own fiscal policy. Public finances have to be normalised in the long run in Sweden too. But as the Swedish budget deficit is small, the conflict between stabilisation policy objectives and sustainability objectives is much less serious than in most other countries. The second aspect concerns international developments. To the extent that budget deficits in other countries affect international macroeconomic developments, there will also be consequences for Sweden.

This section analyses the considerations that should guide fiscal policy in the next few years, both internationally and in Sweden. Section 3.1 clarifies the relationship between public finances, interest rates and inflation. Section 3.2 is a general discussion of how fiscal policy effects are influenced by *expectations* about future policy. Lastly, Section 3.3 analyses the design of Swedish fiscal policy in recent years.

## 3.1 Public finances, interest rates and inflation

The most discussed risk with budget deficits is that interest rates will be driven up. Two distinctions are important. The first is between short and long interest rates. Short rates in a country are normally governed by the central bank's monetary policy, even though large differences may arise between the central bank's key interest rate on the one hand and interest rates on loans between banks and between

banks and households/firms on the other hand. To the extent that the short interest rates react to budget deficits, it is primarily because the central bank changes its monetary policy: if, as a result of an expansive fiscal policy, there is a threat that the inflation target will be exceeded, the central bank will raise its key interest rate.

The central bank's influence over the long real interest rates is, however, limited. These rates are determined mainly by other market participants' supply and demand for loans with long maturities, which in turn are largely determined by long-term *expectations* about economic developments, not least about the future government debt ratio. In the discussion that follows, we focus first on the long interest rates.

It is also important to differentiate between how budget deficits affect interest rates in the world economy and how they affect interest rates in a particular country.

## 3.1.1 Interest rates in the world economy

In line with the increasing integration between capital markets in different countries, it has become all the more common to view them as an integrated international capital market. The supply of loans in this market comes primarily from private sector savings. The demand for loans comes mainly from investments in the private sector and from fiscal deficits. It can be assumed that the real interest rate in the world economy is determined so that the total supply equals the total demand for loans in the world economy.[48]

An increase in budget deficits in the world leads to an increase in the total demand for loans relative to the supply, everything else equal. As a result, the real interest rate has to rise. This increase applies to every country. With a higher real interest rate, some investments that previously were profitable are no longer so. Large budget deficits therefore crowd out investment. The capital stock therefore increases more slowly, reducing long-term growth.

Long-term interest rates are currently low despite the large budget deficits in most countries. This can be seen in Figure 3.1. There are various explanations. One is that private investment collapsed during the crisis (see Figure 3.2), another that households increased their

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[48] A textbook description of this standard analysis can be found in Mankiw (2009), Chapter 3.

**Figure 3.1 Long-term real interest rates and budget deficits in G7 countries**
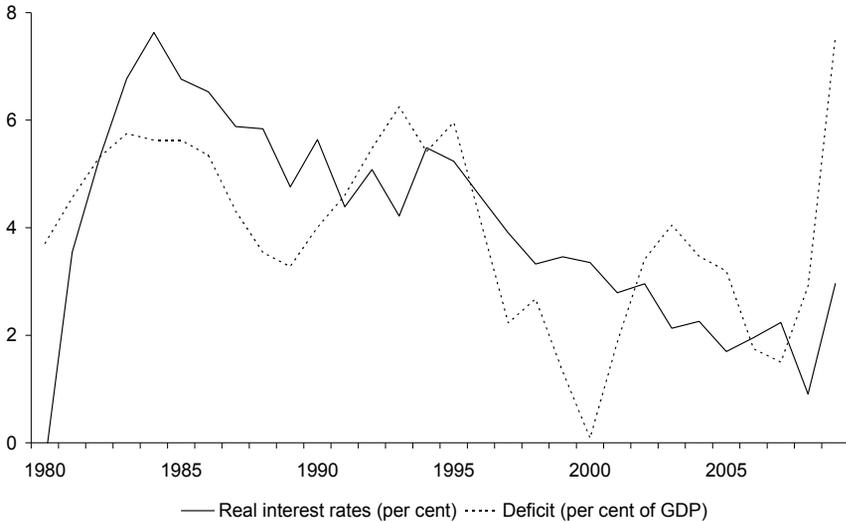


*Note*: The real interest rate is calculated as an unweighted average of the nominal rate on government bonds with a ten-year maturity minus actual inflation in Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. The increase in the real interest rate in 2009 is largely attributable to the low inflation this year. Long-term inflation expectations have not fallen to the same extent. Therefore, the real interest rate calculated as the difference between nominal interest and the long-term expected inflation would give a different picture for 2009.
*Source*: OECD.

savings in response to increased uncertainty and to compensate for the temporary fall in asset prices that occurred.[49] There is concern that the real interest rate will rise sharply later on when investment demand increases again in an economic upturn. Investment will then compete for the existing lending capacity with government borrowing which is needed if the large budget deficits persist.

A possible increase in the long-term real interest rate in the international capital market would thus depend on the total budget deficits in the world economy. The interest rate increase in that case will also affect Sweden even though Swedish fiscal policy is well managed. An increase does not, however, imply any international *cyclical problem,* as one condition for it to take place is that there has actually been an economic upturn. The problem instead is that long-term growth is reduced.

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[49] During the acute financial crisis, interest rates on government borrowing fell globally relative to average interest rates for other borrowers because investors saw government securities as less risky than other loans.

**Figure 3.2 Annual percentage change in investment in Sweden, the United States and the euro area**
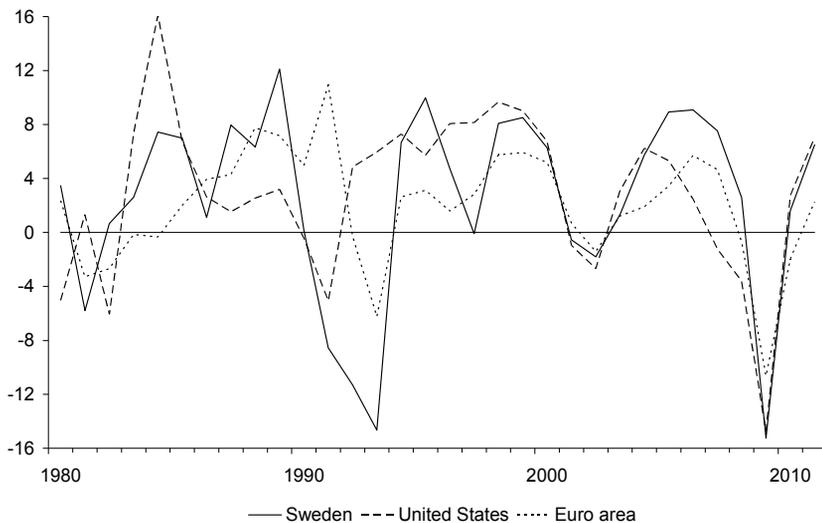
## 3.1.2 Interest rates in individual countries

A country's fiscal policy also has considerable impact on its long-term real interest rates. One reason is that the financial markets in various countries are still not fully integrated. The long-term interest rate in a country is therefore determined not only by the international level, but also by financial savings and investment in the country. Research indeed shows that changes in a country's savings-investment balance increasingly leads to changes in cross-border capital movements but these do not fully absorb the imbalances between domestic savings and domestic investment.[50]

Another – and presumably more important – reason why domestic budget deficits may affect domestic long interest rates is

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[50] See, for example, Obstfeld and Rogoff (2000), Blanchard and Giavazzi (2002), Ventura (2003) and Abiad et al. (2007). Some empirical studies have examined the relative importance for interest rates in a particular country of domestic budget deficits and budget deficits in the world as a whole. As most studies concern the United States, which is such a large economy that changes there have a major impact on the international interest rate, the results are difficult to interpret. According to Faini (2006), a change in the total budget balance in the euro area – which can be viewed as a 'miniworld' with a high level of financial integration between countries – has a much greater effect on the interest rate in a euro country than an equally large change in the budget balance in the country in question. However, the study concerns the period 1979-2002 and therefore the conclusions hardly apply to today's more turbulent situation.

that fears that the government will not be able to service its debt may increase the risk premium. This raises real interest rates on government debt in the country in question compared with government debt in other countries.

Empirical research supports the finding that higher government debt ratios result in higher risk premiums. There is no consensus, however, about whether interest rates are best explained by the debt level or by the budget balance. In studies focusing on the budget balance, *forecast* future budget deficits appear to explain interest rate developments better than current deficits. Estimates of the magnitude of the effect vary sharply from study to study. There are studies that indicate that an increase in the budget deficit of one per cent of GDP may increase the long-term interest rate by 0.5-0.7 percentage points, but most studies find smaller effects.[51] The studies also indicate that the effects are small to begin with, but then grow at an accelerating pace when the debt ratio increases.

That these risks are very real is shown by the large interest rate differentials to Germany on government debt which have arisen in recent years for the countries in the euro area with the greatest problems with budget deficits and long-term fiscal sustainability.[52] This is illustrated in Figure 3.3.

At our request, two researchers at Indiana University, Huixin Bi and Eric Leeper, have modelled how sensitive the interest rates on Swedish government debt is likely to be to changes in the government debt ratio. The estimates are discussed in more detail in Box 3.1. The aim is to shed light on the constraints that the risk of increasing risk premiums pose for fiscal policy and how these constraints have changed over time.[53] Calculations of this type are naturally very uncertain, since they are based on assumptions that can always be questioned. The estimates should therefore serve only as illustrative examples. At the same time, they may help explain why credit ratings and interest rate reactions often differ sharply from one country to another and at different points in time despite a similar fiscal situation.

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[51] The studies use data either for various OECD countries or for various American states. Good overviews of the empirical research can be found in Faini (2006), Haugh et al. (2009), Laubach (2009), Bi (2009), Bi and Leeper (2010) and the Ministry of Finance (2010a).
[52] See for example Barrioss et al. (2009), Haugh et al. (2009) and the OECD (2009a). See also Table 3.1 in this report.
[53] Bi and Leeper (2010). The study is based on Bi (2009).

**Figure 3.3 Interest rate differentials with Germany on ten-year government bonds, percentage points**
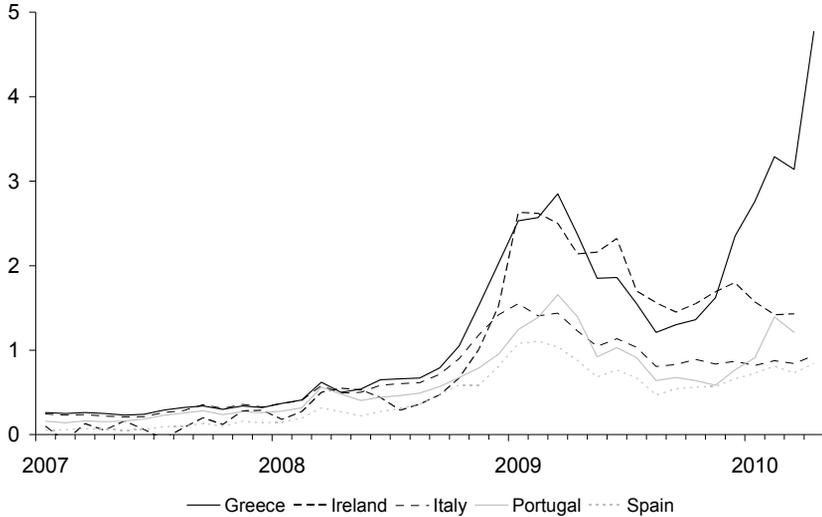


*Source:* OECD.

Bi and Leeper's modelling indicates – like the empirical research described above – that increased government debt ratios have very small effects on the interest on the central government debt to begin with. It is only when the debt ratio exceeds a certain level that interest rates rise sharply. The two researchers' conclusion is that this *critical debt level* has increased substantially in Sweden since the 1990s. The main explanation according to them is that both taxes and government expenditure as a percentage of GDP have decreased, leading to larger margins for tax increases that actually provide substantial increases in total tax revenue if necessary. A further – but quantitatively less important – explanation according to the study is that the expenditure ceiling sets a limit on how high government expenditure can be in an economic downturn.[54]

Bi and Leeper's calculations support our opinion in our 2009 report that the Government made a much too pessimistic assessment

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[54] Bi (2009) similarly explains the current tendency for credit ratings in the United Kingdom to be more negative than in the United States, despite a similar fiscal situation, with higher tax and government expenditure ratios in the former country. Bi and Leeper's assumption in their background paper that fiscal consolidations only take place on the tax side should not be interpreted literally but only to illustrate that there often is greater opposition to expenditure cuts than tax increases.

of the room for manoeuvre in stabilisation policy at the beginning of the crisis when it did not want to take further stimulus measures.[55]

It is also reasonable to think that a country's *track record* on budget consolidations is important for how sensitive the interest rate is to debt increases. This hypothesis is supported by a recent study of interest rate differentials between countries' government bonds that emerged in the euro area during the crisis. Interest rate differentials to Germany were greater for those countries with a previous history of large budget deficits than for others.[56] An illustration of this is Belgium, which earlier had carried out a successful debt reduction, but which still has a high debt ratio. It has experienced considerably smaller increases in the interest it pays on government debt than Greece, Italy and Portugal, all of which have bad track records.

### 3.1.3 Inflation as a method for reducing the debt ratio

Diluting the real value of outstanding government debt through inflation has historically been a common method of consolidating depleted public finances. In principle, large budget deficits may force a central bank to pursue an interest rate policy that allows high inflation as a way of financing the deficits.[57] The probability of such a development should, however, be small with today's independent central banks with inflation targets.[58]

There have, however, been proposals in the international economic debate that a 'moderate' increase in inflation could be an appropriate way of reducing the real value of government debt.[59] But one problem with such a policy is that there are no guarantees that it is possible to increase inflation only 'a little'. There is an obvious risk that the credibility for low-inflation policy that most economically developed countries have succeeded in establishing could again be lost. High inflation expectations would rapidly lead to higher *nominal* long-term interest rates: lenders would take compensation in advance

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[55] Fiscal Policy Council (2009a), Section 1.4.
[56] Haugh et al. (2009).
[57] The best known analysis of this is Sargent and Wallace (1981).
[58] It may, however, be an eye-opener that the hyperinflation in Germany in the 1920s was caused by an independent central bank with the very aim of salvaging public finances exhausted by the heavy reparations that the country had to pay under the Versailles Peace Treaty (see, for example, Weitz 1997).
[59] See, for example, Rogoff (2008) and Blanchflower (2009).

for the expected inflation. Likewise, the long-term *real* interest rates (the nominal interest minus inflation) would rise because increased *uncertainty* about inflation justifies higher risk premiums.

Using a completely different reasoning, growing government debt may in the end result in the central bank losing its ability to control the price level. This theory is known as the *fiscal theory of the price level*. The analysis builds on the intertemporal budget constraint discussed in Section 2.1. According to it, the government's future primary net lending (revenue minus expenditure excluding interest payments) must be at least as big as the outstanding government debt. This constraint is sometimes seen as an equilibrium condition that must hold with equality and that then determines (the real) value of outstanding government debt. The idea is that government bonds have a value only because they are backed up by expected fiscal surpluses that can be used either to redeem the bonds or pay the interest on them. If government bondholders begin to think that the future surpluses will not suffice to service the debt, they will try to sell the government bonds and buy goods and services instead. As a result, product prices and, under certain assumptions, nominal interest rates will rise.[60] The real value of outstanding government bonds must, according to this reasoning, fall to a level where the future budget surpluses are sufficient for servicing the debt.[61]

## 3.1.4 Budget deficits and the sustainability of an expansive fiscal policy

A country with a large and rapidly growing debt ratio may get itself into an untenable position if the critical debt level at which the interest on government debt begins to increase sharply is exceeded. As discussed in Section 2.1, the result may be that *snowball effects* propel runaway debt that leads in the end to a default. This could have happened in Sweden during the 1990s crisis if the country had not pursued a strict consolidation policy. The risk of such a development in Sweden today is, however, very small. On the contrary, its fiscal policy appears to have considerable room for

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[60] An increased supply of government bonds reduces their price. With a fixed return (a specified number of kronor per bond), the interest rate (the number of kronor divided by the price) rises.

[61] See, for example, Cochrane (2001, 2009) or Leeper (2009).

**Figure 3.4 Interest rates on ten-year government bonds in Sweden and Germany, per cent**
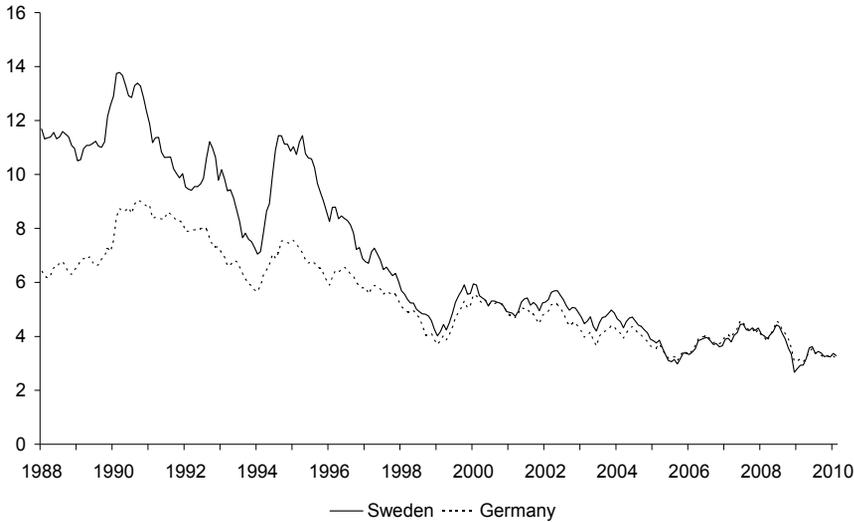


*Source*: Reuters.

manoeuvre before negative interest rate reactions could be expected to imply constraints. Both the calculations described in Box 3.1 and the small credit market differentials with Germany (see Figure 3.4) support this assessment.

However, there is an obvious risk that snowball effects may create an untenable situation in several other countries. This has already happened in Greece. But there is also a substantial risk of this happening in Portugal and Spain. These countries do not have much choice in the balance to be struck between stabilisation and sustainability. Instead, they are compelled to make rapid reductions in their budget deficits regardless of the economic situation. Ireland has already been forced to make such an adjustment.

The greatest concern is that large countries such as the United States, Japan and the United Kingdom have budget deficits of the same order of magnitude as Greece (and Sweden in the 1990s crisis) and have run up high government debt levels (see Table 3.1). The financial markets have not yet reacted to this with increases in risk premiums. Long-term interest rates in these countries are still historically low. But in our opinion, there is considerable risk that the markets could suddenly and swiftly react with large interest rate increases. If such reactions reflect uncertainty about future inflation,

they will spread to every type of long-term loan and may have substantial contractionary effects. If interest rate reactions instead primarily reflect the risk of write-downs of government debt, interest rate increases will not spread to other borrowers to the same extent, but they may precipitate sharp fiscal consolidations. This would imply large risks that the international economic upturn would be weakened or even stopped in its tracks. This may also come about if strong fiscal consolidations are carried out at an early date with the preventive aim of avoiding subsequent interest rate crises.

Despite the support package that has been negotiated for Greece from the euro countries and the IMF, there is still a sizeable risk that the country at some stage will be forced to write down its outstanding government debt. If so, this will lead to credit losses for lenders. It cannot be ruled out that Spain and Portugal may have problems meeting their loan payments. This could lead to acute new problems in the financial markets with strong negative effects on international economic growth.

Because of Sweden's heavy dependence on exports, weaker global economic development would have serious consequences in our country. It could make Swedish fiscal policy much more difficult. On one hand, demands for stimulus measures to keep up demand would increase. On the other hand, the risk of the economic downturn having lasting adverse consequences on the public finances would increase, leading to sustainability problems.[62]

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[62] See Section 2.2.

## Table 3.1 Net lending and debt ratios in the OECD, per cent of GDP

| | Net lending | | Gross debt | |
|---|---|---|---|---|
| | 2009 | 2010 | 2009 | 2010 |
| Australia | -4.0 | -3.5 | 15.9 | 20.3 |
| Belgium | -5.7 | -5.6 | 101.2 | 105.2 |
| Canada | -4.8 | -5.2 | 82.8 | 85.7 |
| Denmark | -2.5 | -5.4 | 45.3 | 48.8 |
| Finland | -2.3 | -4.8 | 43.7 | 52.3 |
| France | -8.2 | -8.6 | 84.5 | 92.5 |
| Greece | -12.7 | -9.8 | 114.9 | 123.3 |
| Ireland | -12.2 | -12.2 | 65.8 | 81.3 |
| Iceland | -15.7 | -10.1 | 117.6 | 142.5 |
| Italy | -5.5 | -5.4 | 123.6 | 127.0 |
| Japan | -7.4 | -8.2 | 189.3 | 197.2 |
| Luxembourg | -2.3 | -4.3 | 18.2 | 25.0 |
| Netherlands | -4.5 | -5.9 | 71.4 | 77.1 |
| Norway | 9.6 | 9.9 | 59.9 | 59.0 |
| New Zealand | -1.2 | -3.3 | 27.0 | 31.0 |
| Poland | -6.4 | -7.8 | 58.1 | 62.8 |
| Portugal | -6.7 | -7.6 | 83.8 | 90.9 |
| Switzerland | -0.7 | -1.3 | 44.4 | 45.0 |
| Slovakia | -5.9 | -6.3 | 36.7 | 43.0 |
| Spain | -9.6 | -8.5 | 59.3 | 67.5 |
| United Kingdom | -12.6 | -13.3 | 71.0 | 83.1 |
| **Sweden** | **-2.0** | **-3.0** | **52.7** | **55.2** |
| South Korea | -1.8 | 0.4 | 33.2 | 36.8 |
| Czech Republic | -5.7 | -5.6 | 46.5 | 53.1 |
| Germany | -3.2 | -5.3 | 77.4 | 82.0 |
| Hungary | -4.3 | -4.1 | 85.2 | 89.9 |
| United States | -11.2 | -10.7 | 83.9 | 92.4 |
| Austria | -4.3 | -5.5 | 72.9 | 77.9 |
| **Euro area** | **-6.1** | **-6.7** | **81.8** | **88.3** |
| **OECD** | **-8.2** | **-8.3** | **90.0** | **97.4** |

*Note*: The gross debt ratios in this table also include (unlike the consolidated gross debt) internal claims and liabilities in the government sector (see Box 2.1). Values for 2010 are OECD forecasts.
*Source*: OECD Economic Outlook November 2009.

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**Box 3.1 Interest rates on government debt and the government debt ratio in Sweden**

In a background paper for the Council, Huixin Bi and Eric Leeper have modelled how sensitive interest rates on Swedish government debt can be expected to be to changes in the government debt ratio.[63] The calculations have a simple basis: the risk premium on government borrowing compensates for the risk of capital losses that investors take because they may be forced to write down their claims if a government is unable to service its debt.

Bi and Leeper estimate the risk of write-downs of the public debt based on estimates of what they call the *fiscal limit*: the maximum debt that the government can manage either to amortise or pay interest on. This *debt limit* is given as the 'accumulated sum' of the *highest possible* primary net lending that the government can achieve in the future (more precisely, the present value of the maximum difference between tax revenue and government expenditure excluding interest payments in the future).[64]

When the maximum primary net lending in the future is estimated, an unchanged average government expenditure level in the future is assumed. Maximum primary net lending is thus reached when tax revenue is maximised. Maximising tax revenue requires making a trade-off between two different effects of a higher tax ratio. On one hand, a higher tax ratio leads to higher tax revenue for given employment and output. On the other hand, a higher tax ratio reduces labour supply and thus lowers employment and output. If the tax ratio is raised from a low level, tax revenue will at first increase because the first effect prevails. But at some tax ratio, the negative effect of the lower labour supply on tax revenue begins to dominate and revenue therefore declines if the tax ratio is raised further. This reasoning is usually illustrated by the Laffer curve which shows a hump-shaped relationship between tax revenue and the tax rate.[65]

For each possible combination of future events, the maximum debt the government can service can be estimated. Using various

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[63] Bi and Leeper (2010).

[64] See the discussion on the government's *intertemporal budget constraint* in Section 2.1.

[65] The simplest way to understand the Laffer curve is to consider what would happen with tax ratios of 100 per cent and 0 per cent respectively. With a tax ratio of 100 per cent, it is not profitable to work at all in the formal sector and tax revenue would therefore fall to zero. Tax revenue is of course also zero with a tax ratio of zero. Consequently, there must be a tax ratio between 0 and 100 per cent at which tax revenue is maximised.

assumptions, Bi and Leeper estimate probability distributions for the fiscal limit. They can thus also calculate the probability that a specified actual debt level will exceed this limit and so require a write-down of the debt. With this basis, the risk premium that investors must get to compensate for expected capital losses can be estimated.

Bi and Leeper do these calculations in order to compare the interest rate sensitivity of Swedish public finances today with that before the fiscal framework was introduced at the end of the 1990s. Figure 3.5 shows indicators of the probability distributions for the fiscal limit under the previous conditions and under current conditions using three different assumptions. It is clear that the fiscal limit in all three cases has shifted upwards: the median value has climbed from about 80 to over 100 per cent. The main explanation is that both the government expenditure ratio and the tax ratio have decreased.[66] Accordingly, the risk of needing increases in tax revenue that are impossible to achieve even at the top of the Laffer curve has decreased. This in turn increases the probability that the government will be able to service its debt at a given debt level.

The shape of the probability distribution is also affected by whether one assumes a less countercyclical pattern for government expenditure than before (third row from the top in Figure 3.5): the result is a more compressed distribution for the fiscal limit. The probability distribution is also affected if one assumes that a binding *expenditure ceiling* prevents large expenditure increases during economic downturns: it reduces the risk of a situation in which government debt cannot be serviced and thus raises the fiscal limit (the fourth row in the figure).

Figure 3.6 shows how, according to Bi and Leeper's calculations, the interest on government debt depends on the debt ratio. The figure shows a clear non-linear relationship. Increases in the debt ratio from low levels have no significant impact on the interest rate. It is only when the debt ratio increases over a certain critical level that the interest rate on government debt rises, but then it happens very rapidly. According to Bi and Leeper, this critical debt level is considerably higher today than it was in the 1990s: a consolidated gross debt ratio of around 90 instead of around 60 per cent.

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[66] Bi and Leeper assume a reduction in the average government's expenditure ratio of 2.5 percentage points and a two percentage point reduction in the average tax ratio.

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**Figure 3.5 The fiscal limit under various assumptions, per cent of GDP**
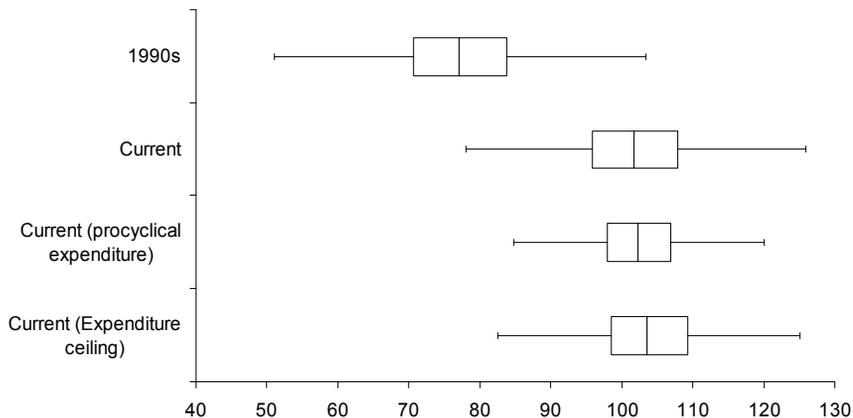


*Note:* The horizontal axis shows general government consolidated gross debt as a per cent of GDP. The vertical line in the middle of each box is the median. The left-hand side of each box is the 25th and the right-hand side the 75th percentile. The outer edge of the horizontal lines gives extreme values in the calculations.
*Source:* Bi and Leeper (2010).

**Figure 3.6 Relationship between the government debt ratio and the interest rate on the government debt**

**(a) 1990s compared with today**

**(b) different policies today**



*Note*: The vertical axis gives the interest rate on government debt in per cent and the horizontal axis the consolidated general government gross debt as a percent of GDP.
*Source*: Bi and Leeper (2010).
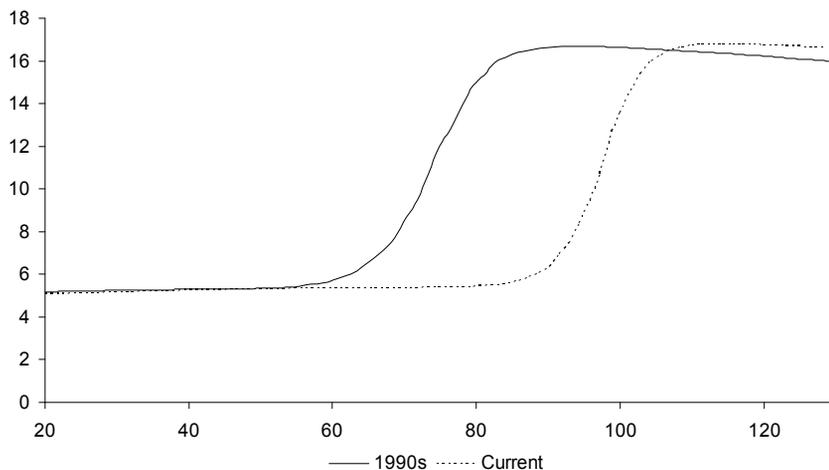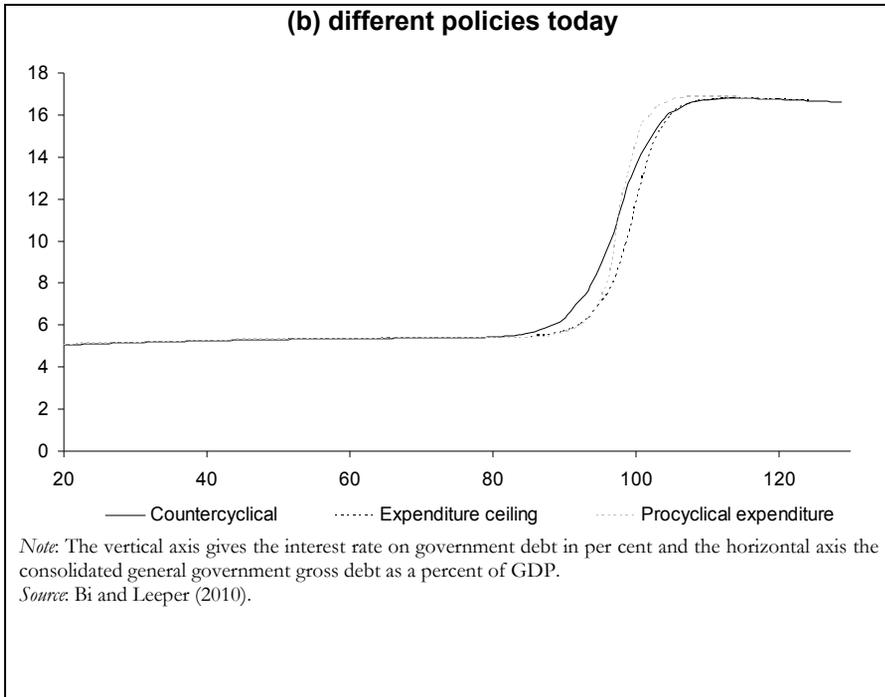
## 3.2 Role of expectations in fiscal policy

In choosing an *exit strategy* for fiscal policy, i.e. how the current budget deficit is to be phased out, the impact on the business cycle that the future policy will have even now must be considered. A key insight from recent research is that current policy affects demand both through its direct, immediate effects on public expenditure and household disposable income and through *indirect* effects on *expectations* about future policy.[67] Thus, one cannot estimate the effects of the current fiscal stimulus measures without forming an opinion on how the policy will eventually be normalised.

The reason that expectations about future fiscal policy affect demand today is that individuals who are not liquidity constrained (i.e. those who can save and borrow in the credit market) are likely to base their consumption decisions on their *expected lifetime income*

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[67] See Leeper (2009) for a detailed discussion of this. Leeper et al. (2009) provides a good illustration of how the fiscal multipliers' size (and sign) may depend on how the stimulus measures are financed in the future.

instead of their current income.[68] According to established theory, individuals in this situation aim at a smooth consumption profile over time: given variations in current income, they therefore vary savings and borrowing with the aim of counteracting fluctuations in their consumption.[69] Individuals in this situation will change their consumption when expectations about future income change.

The importance of expectations about future fiscal policy has empirical support in a long series of studies indicating that households and firms adjust their behaviour already when tax changes are *announced* rather than when they are implemented.[70]

## 3.2.1 Effects of the current budget deficit

The above reasoning means that the demand effects of the current large budget deficits in the economically developed countries are dependent on expectations of how these deficits will eventually be eliminated. If it is expected that households will have to pay for the deficits in the form of higher taxes and lower transfers received in the future, the expansive fiscal policy now being conducted will under certain assumptions not stimulate consumption at all by households that are not liquidity constrained. These households will instead save to be able to maintain their consumption when a future fiscal tightening leads to reduced household incomes.

The current budget deficits are likely to have completely different effects if they are instead expected to be financed by lower public consumption in the future. In that case, no future tax increases are anticipated and there then is no reason for forward-looking households to curb their consumption and increase their savings.[71] This is sometimes seen as an argument that variations in public consumption may be a more effective stabilisation policy than variations in taxes.

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[68] The share of liquidity constrained households is generally lower in economies with moreadvanced credit markets such as Sweden but tends to rise in economic downturns. See, for example, Tagkalakis (2005).

[69] The underlying explanation for this *consumption smoothing* is that consumption has diminishing marginal utility, i.e. that the more consumption increases, the less extra utility there is from further increases in consumption. An individual may therefore be expected to get the greatest possible utility if consumption is distributed evenly over time. See also Fiscal Policy Council (2008), Section 1.3.

[70] See, for example, Auerbach and Slemrod (1997), Ramey and Shapiro (1998) and Ramey (2009).

[71] See Corsetti et al. (2009) for both simulations and empirical analysis of the effects of budget deficits in the United States that are financed in this way.

*Reverse effects of fiscal policy*

Fiscal policy's effects on expectations make it *theoretically* possible that an expansive fiscal policy actually *reduces* demand. Similarly, a contractionary policy with tax increases and expenditure reductions could instead *increase* demand.

   These *reverse* effects of fiscal policy may arise because households understand that large budget deficits are unsustainable and that fiscal policy therefore must sooner or later change course. The probability of this happening is small if the public debt ratio is low. If so, according to this reasoning, the normal stimulus effects of tax reductions or increased public expenditure should also be expected. But in a situation with very high public debt ratios, fiscal policy measures that further raise the debt ratio may increase the likelihood of an early change in fiscal policy that must be paid by current – and not future – generations. With these expectations, households may already now reduce their consumption.[72]

   There is also an argument based on what fiscal consolidation measures are likely at different points in time.[73] If a government in a situation with large and growing government debt waits to take such measures, it may be reasonably expected that these measures – when they are forced in an emergency situation – will be more unplanned. These improvised consolidation measures probably have more negative effects on individuals' life incomes, and thus on forward-looking household consumption, than measures that are taken at an earlier stage and therefore can be carried out in a more orderly manner. If households see a 'bad' consolidation programme in the future as the likely alternative to a 'good' programme now, the latter kind of programme might therefore have positive demand effects. Similar effects can arise because tax increases at different points in time may give rise to different efficiency losses and thus different income losses. If as a result of small tax increases now, large tax increases can be avoided later on, the total efficiency and income losses will be smaller. This is likely to have positive effects on consumption.[74]

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[72] Sutherland (1997) is a theoretical analysis of this possibility.

[73] See Blanchard (1990).

[74] This conclusion is based on the broad consensus that the distortionary costs of taxation grow more than proportionally when the tax ratio increases. See Fiscal Policy Council (2008), Section 1.1 for a more detailed discussion.

The conclusion is that the greater the government debt, the higher the probability of reverse fiscal effects will be. An additional reason may be that in a situation with high and rapidly growing government debt, there is probably considerably more awareness than usual that current fiscal policy has an impact on future policy. If so, the public debate will largely focus on that. This was the case in Sweden, for example, in the mid-1990s.

An intensive debate has taken place in the research about whether fiscal tightenings actually have expansive effects. There have been both case studies of individual countries and broader econometric studies. The budget consolidations in Denmark 1983-86, Ireland 1986-89 and Sweden after the 1990s crisis have been cited as examples of expansive fiscal contractions. But the empirical results are mixed. Some studies find support for expansive effects of budget consolidations while others do not.[75] A key issue is whether these studies have actually managed to separate the effects of the fiscal tightenings from the effects of simultaneous changes in other factors. For example, in Ireland and Sweden, exchange rate depreciations had strong expansionary effects in the form of increased exports; in Denmark's case, income policies restraining wage growth may have had similar effects. A reasonable interpretation of the research to date is that reverse fiscal effects are possible in certain situations but the uncertainty surrounding them is great.

In Box 3.2, we discuss our own econometric estimates for Sweden of the fiscal effects in normal times and during the budget consolidation in the 1990s. We find statistically significant and positive effects from reduced taxes and increased government consumption on GDP and private consumption in normal circumstances. We do not find any support for other effects of fiscal policy during the budget consolidation.

In our opinion, there is no reason to believe that fiscal policy measures in Sweden in the current situation with relatively good public finances would have reverse effects. Tax cuts and expenditure increases can be expected to increase demand, while tax increases and expenditure cuts can be expected to reduce it. Thus for Sweden,

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[75] Alesina and Perotti (1995), Giavazzi and Pagano (1990, 1996), Bergman and Hutchison (1999, 2010) and Afonso (2006) find empirical support for reverse effects. Andersen and Risager (1991), Andersen (1994), Hjelm (2002) and van Aarle and Garretsen (2003) do not.

the normal trade-off in fiscal policy between short-term stabilisation and long-term sustainability in an economic downturn persists.

However, it is conceivable that budget consolidations in countries such as Greece, Ireland, Portugal and Iceland, all of which have major public finance problems, need not have such large negative demand effects and could even possibly have positive effects.[76] Nor can it be ruled out that Japan, the United Kingdom and the United States could be in similar situations now or at least may soon be. But our opinion is nevertheless that eliminating the large budget deficits in these countries can hardly be done without major consequences for international economic developments.

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**Box 3.2 Fiscal effects in Sweden in a normal situation and during the 1990s crisis**

This box describes our own estimates of the fiscal effects in Sweden in a 'normal situation' and during the 1990s crisis. Our point of departure is that crises can be seen as specific historical episodes where normal macroeconomic relationships need no longer hold true.

We use a form of time series model: a vector autoregressive model (VAR model). The model has five main variables: GDP, private consumption, public consumption, taxes and unemployment.[77] The model makes it possible to analyse how the variables develop over time when there is a macroeconomic shock or change in fiscal policy.

When the Social Democratic government took office in September 1994, a comprehensive budget consolidation was begun. We define the consolidation period as extending from the fourth quarter of 1994 to the end of 1997.[78] During this time, measures were implemented leading to a permanent SEK 126 billion improvement in the public finances.[79] The budget consolidation was divided evenly between expenditure reductions and revenue increases.

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[76] A number of empirical studies have found that the higher the government debt ratio is, the smaller are the negative demand effects of fiscal contractions. See, for example, Perotti (1999), Tagkalakis (2005), IMF (2008) and Dreyer Lassen (2010).

[77] See Michael Bergman's background paper for the Council for a more detailed description of the analysis (Bergman 2010b).

[78] The exact timing is naturally quite arbitrary. Slight changes in the classification have little effect on the results, however.

[79] Spring Fiscal Policy Bill 2000/01:100, Appendix 5.

## Figure 3.7 Fiscal effects in normal times
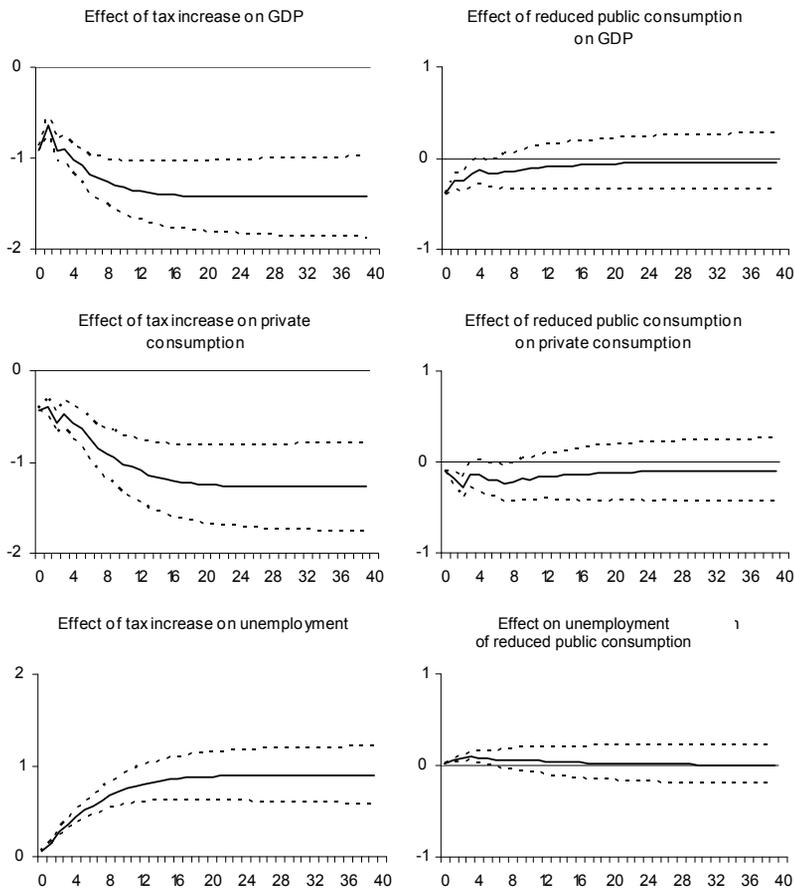


*Note*: The figures show how GDP, private consumption and unemployment are affected by increased direct taxes and reduced government consumption. The horizontal axis shows the quarter while the vertical axis shows the effect of a tax increase and a reduction in public consumption by one per cent of GDP respectively. GDP and private consumption are expressed as percentage change and unemployment as change in percentage points. The dashed lines show the uncertainty in the estimated effects. If the zero line lies between the dashed lines, the estimated effect does not significantly differ from zero. The period covered by the estimates extends from the first quarter of 1971 through the last quarter of 2008.
*Source*: Bergman (2010b).

Figure 3.7 shows how, according to our estimates, GDP, private consumption and unemployment in normal times are affected by an increase in taxes and a reduction in public expenditure. Both types of contractionary fiscal policy lead to a reduction in GDP and private consumption. These are the usual Keynsian effects that should be expected in a normal situation. According to the estimates, higher

taxes also lead to rising unemployment, while lower government expenditure has a marginally increasing, but statistically insignificant, effect on unemployment.

Figure 3.8 shows that the budget consolidation after the 1990s crisis does not appear to have had any effects other than those that fiscal policy has in normal times.[80] We find very small, and statistically insignificant, effects on GDP, private consumption and unemployment. This finding can be interpreted as meaning that the fiscal effects in this period did not differ from the normal effects.

**Figure 3.8 Effect of 1990s budget consolidation on GDP, private consumption and unemployment**
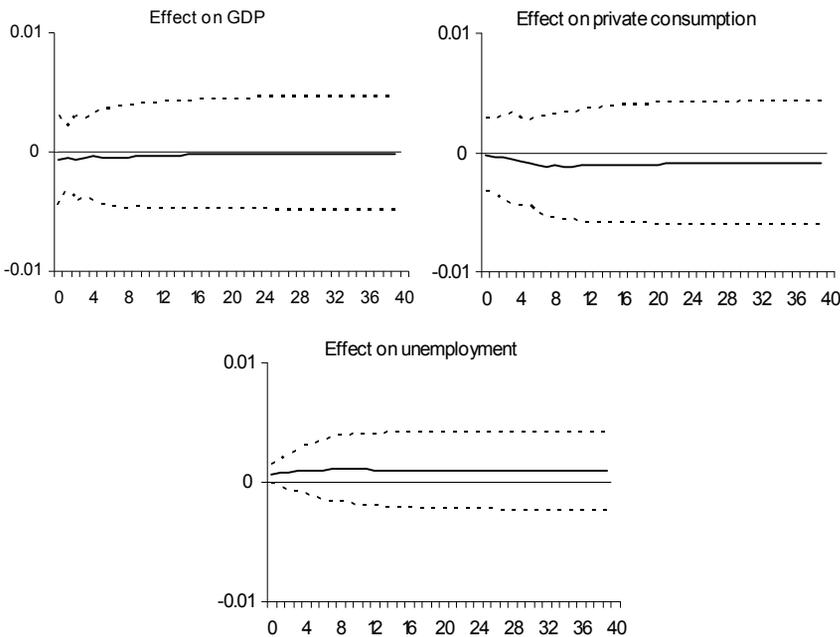


*Note*: The figures show the effects of the budget consolidation in Sweden after the 1990s crisis on GDP, private consumption and unemployment in addition to those that arise in normal times. The horizontal axis shows the number of quarters while the vertical axis shows the magnitude of the effect. GDP and private consumption are expressed as percentage change and unemployment as change in percentage points.
*Source*: Bergman (2010b).

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[80] The budget consolidation is captured in our analysis by a dummy variable that assumes the value 1 from the last quarter of 1994 through the last quarter of 1997 and 0 in other quarters. The dummy variable for the budget consolidation in the analysis will measure the effects not explained by changes in other variables. These effects are attributed to the fiscal tightening. See Blanchard and Perotti (2002) for a similar analysis of the tax cuts in the United States.

## 3.2.2 Clear exit strategies are essential

In considering the importance of expectations, it can be interesting to compare fiscal and monetary policy.[81] It is now generally accepted that one of the most important tasks of a central bank is to influence expectations. It is easier to hold inflation at the inflation target without substantial costs in the form of variations in resource utilisation if the central bank can anchor inflation expectations to the inflation target. This is usually considered one of the most important reasons for monetary policy transparency, not least in the form of publication by the central bank of its own forecasts of the future interest rate path. In recent years, theoretical developments in fiscal policy indicate that similar considerations also apply. But in practice, there have been smaller policy changes here. Fiscal policy transparency is often expressed more in terms of clear (and correct) reporting than in terms of explicit future plans.

Fiscal policy is considerably more complex than monetary policy. This is because it has more objectives and many more instruments. This is in fact an argument that transparency about future plans is even more important for fiscal policy than for monetary policy. But one difference from monetary policy – which almost everywhere is now decided by central bankers with long and overlapping terms of office – is that political regime changes may lead to major revisions in fiscal policy plans. Therefore, there is considerable demand for clarification of the future policy on the part of the opposition. It goes without saying that the greater the cross-party agreement, the easier it is for firms and households to form expectations about future fiscal policy.

Our analysis in Section 3.2.1 led to the conclusion that current budget deficits may have greater positive demand effects now if they are financed by restraining future government consumption than if they are financed by tax increases and transfer reductions in the future. This does not mean that the former strategy is necessarily preferable, as the choice largely depends on how one values private relative to public consumption. But a government that intends to eliminate existing budget deficits primarily by reining in future government consumption may get greater stimulus effects from the policy now the more clearly it communicates this strategy.

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[81] See, for example, Leeper (2009).

*A conditional or unconditional exit strategy?*

The interest rate effects we discussed in Section 3.1 are highly dependent on expectations about future fiscal policy. It is crucial that countries with large budget deficits have a *credible* plan for how they are to be cut in order to reduce the risk of runaway debt as a result of the snowball effects that rising risk premiums otherwise may entail.

A much discussed issue is whether the exit strategy should be *conditional* on economic growth, i.e. made dependent on the pace at which the economy improves, or whether a strategy with a pre-defined timetable for phasing out the current stimulus policy irrespective of growth should be established. The standard recommendation from economists and international organisations has been a conditional strategy.[82] At first glance, this appears to be the only reasonable one. But it can be difficult to verify that a conditional strategy is actually being followed. This may give rise to credibility problems. It is interesting to note that during the budget consolidation in the 1990s, Sweden did *not* link the policy to macroeconomic developments but instead set a pace that the budget consolidation was to follow under all circumstances.[83]

An unconditional strategy may be the only possible alternative if sustainability problems are as serious as they are in Ireland and Greece, for example, or appear likely to become in the United Kingdom or the United States. However, in our opinion Sweden has enough room for manoeuvre to follow a conditional strategy. This is primarily due to the small budget deficits and low government debt ratio. But the credibility established by the consolidation policy in the 1990s and the current fiscal framework are also important factors.[84]

## 3.2.3 Fiscal sustainability and pension reforms

Deciding *now* to raise the future retirement age has been put forward as an appropriate exit strategy.[85] If changes such as this are linked to increasing life expectancy, they can contribute to a gradual fiscal adjustment. It would improve fiscal sustainability in the long run without any dramatic impact on individual age groups.

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[82] See, for example, IMF (2009b).
[83] See Fiscal Policy Council (2008), Section 2.3 and Henriksson (2007).
[84] See Section 3.4.1.
[85] See, for example, Giavazzi (2010).

It has been argued that a pension reform of this kind would give a *double dividend* because it not only improves the public finances in the long run, but also helps increase demand in the short run.[86] Higher retirement ages would in that case help resolve the conflict between fiscal policy's stabilisation objective and its sustainability objective.

A higher retirement age obviously improves fiscal sustainability in the long run. We analysed this in detail in our 2009 report.[87] A more difficult question is whether a future increase in the retirement age would have an expansive effect on demand now. The argument put forward is that a higher statutory retirement age would increase both household consumption and business investment.[88] Forward-looking individuals would realise that their future incomes will increase on account of more years in work. Forward-looking businesses would realise that investment will be more profitable if a larger future labour supply restrains wages. According to this reasoning, therefore, investment will increase long before the actual increase in the retirement age takes place.

But the basis for the argumentation is that the legislation directly determines the retirement age. This is how the pension system looks in many countries. But the analysis is more complicated in a system like Sweden has where the individual employee himself/herself decides when to retire, given that a certain minimum age (61 years) has been reached. Palme and Svensson (2007) have analysed the consequences of a reform that changes the *incentives* to retire by extending the time that the individual worker has to work to earn pension rights of a certain size. The implication of such a change is that individuals' expected pension capital, i.e. the present value of expected future pension incomes, falls. According to Palme and Svensson's analysis, this gives rise to a negative *income effect*. The reduced pension benefits cause individuals to reduce *all* their consumption: both the consumption of 'leisure' (by retiring later) and the consumption of good/services.[89]

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[86] See, for example, Barrell et al. (2009).

[87] See Fiscal Policy Council (2009a), Sections 2.3-2.5.

[88] See, for example, Barrell et al. (2009).

[89] Andersen (2010b) derives similar results based on a purely theoretical model with overlapping generations, where a person is either young (and thus always works) or old (and thus chooses when to retire). Andersen differentiates between the age when a pension begins to be paid out and the age when the individual leaves the labour market: in the analysis, an individual can thus both leave the labour market before pension payments have begun and continue to work after they have begun. In the model, it is only young people who save. According to the analysis, an increase in the retirement age (which

The conclusion is that whether the retirement age is decided by an individual decision or whether it follows a (statutory or other established social) norm does have an impact on savings and demand. In the first case, a reform that raises the retirement age (by increasing requirements for earning pension rights) may be expected to reduce demand, while in the latter case, the reform may be expected to increase demand.

Norms may also play a role in the Swedish system where individuals are free to decide themselves. This is shown by the strong tendency for retirement to be concentrated at the earlier 65 year bound.[90] In our 2009 report, we discussed the possibility of raising the effective retirement age by various changes in the pension terms: a higher minimum age for claiming the pension, a higher age limit for loss of the right to compensation from other social insurances and a higher statutory minimum age for obligatory retirement (the age at which the Employment Protection Act ceases to apply).[91] Such a reform would involve a mixture of the demand effects discussed above. It is therefore unclear whether a pension reform of this kind actually gives a 'double dividend': the exact design will be important.

But it is clear that a future increase in the retirement age – provided that it actually takes place – will result in the strengthening of public finances in the long run at a lower cost in the form of reduced demand today than if a fiscal tightening is implemented now.

One problem is what *credibility* a decision now aimed at increasing the future retirement age has. Such a decision may be more credible than promises to reduce other public spending or increase taxes in the future. One reason is that there is general agreement that future pension rules must be decided long in advance. Furthermore, it is easy to grasp that a gradual increase in life expectancy must have an impact on the retirement age. In last year's report, we argued extensively that an appropriate strategy for handling the strains on public finances resulting from an ageing population should include

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reduces the number of years that a given annual pension can be claimed) leads to both a later exit from the labour market and higher savings. Savings are higher because the increased earned incomes from a higher exit age only partially offset the income reduction for older people due to fewer years with a pension: it creates incentives for young people to save more with the aim of smoothing consumption between the time that they are young and the time that they are old.

[90] See Fiscal Policy Council (2009a), Section 6.3.2. See also Brown (2006).

[91] See Fiscal Policy Council (2009a), Section 6.3.6. See also Gabriella Sjögren Lindquist and Eskil Wadensjö's background paper for the Council's 2009 report (Sjögren Lindquist and Wadensjö 2009).

gradual changes in the pension rules.[92] The current large budget deficits in many countries constitute a strong argument for the appropriateness of taking such decisions now. Such reforms are under way in Greece and Spain, for example. These have also been discussed elsewhere. It may be appropriate to take similar decisions in Sweden now, even though our deficits are substantially smaller and our pension system more stable.[93]

# 3.3 Sweden's fiscal policy in the next few years

The fiscal policy situation in Sweden differs sharply from that in most other countries. This is illustrated by Figure 3.9, showing some Member States' expected position in relation the EU rules on the maximum government budget deficit of three per cent of GDP and a maximum gross government debt ratio of 60 per cent of GDP.[94]

According to the Commission's assessment in May 2010, Sweden, Bulgaria and Estonia are the only Member States not exceeding the three-per cent limit for budget deficits this year. Sweden is one of 15 Member States with a gross government debt ratio below 60 per cent of GDP. Sweden is also one of the few Member States that is not subject to an *Excessive Deficit Procedure*.[95] Most Member States currently subject to this procedure have received recommendations from the Ecofin Council to start consolidating their budgets in 2011 and to bring the deficits down to less than three per cent of GDP in 2013.[96]

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[92] See Fiscal Policy Council (2009a), Sections 2.3-2.5.

[93] See Section 2.1 above.

[94] The rules allow, however, deficits exceeding three per cent of GDP if they remain close to the three per cent limit, are temporary and have been caused by exceptional circumstances outside the control of the Member State concerned or a serious economic downturn (defined as a fall in GDP or the emergence of a large accumulated output gap). Debt ratios exceeding 60 per cent of GDP are also allowed provided that the ratio "is sufficiently diminishing and approaching the reference value (60 per cent of GDP, our comment) at a satisfactory pace." (Article 126 of the EU Treaty).

[95] The other countries not subject to this procedure are Bulgaria, Cyprus, Denmark, Estonia, Finland and Luxembourg.

[96] The Ecofin Council is the EU Council of Ministers in its composition of economics and finance ministers.

**Figure 3.9 Public finances in the EU in relation to fiscal rules 2010**
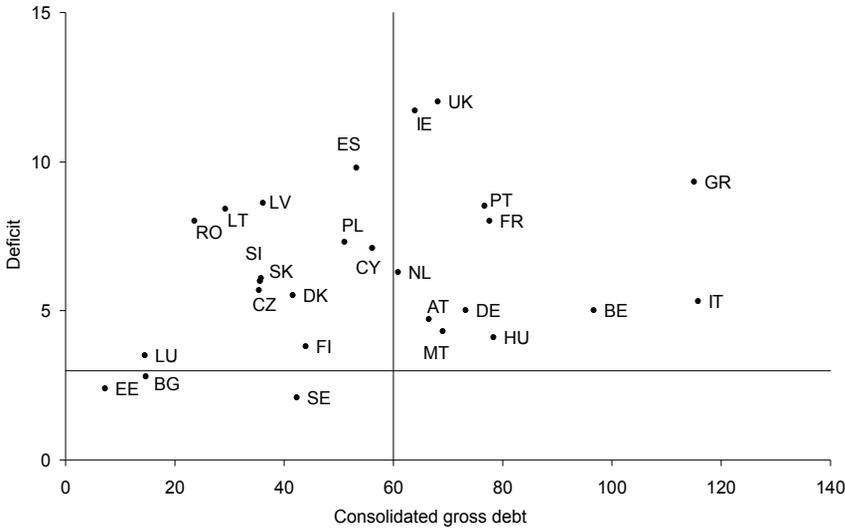


*Note*: Forecast fiscal deficits refer to 2010 and gross debt to the end of 2009.
*Source*: European Commission, European Economy Spring 2010.

## 3.3.1 Debt development in Sweden

Table 3.2 shows how the general government financial position in Sweden has changed during the economic crisis. At the end of 2007, the whole of the public sector had a net financial worth of 17.5 per cent of GDP. This net worth fell by 5.4 percentage points in 2008. Net financial worth recovered in 2009 and at year end amounted to 15.9 per cent of GDP. In 2010, some decline is expected.

The 2010 Spring Fiscal Policy Bill and the March 2010 report from the National Institute of Economic Research (NIER) show completely different data for general government net financial worth. The NIER figure at year-end 2009 is 25.8 per cent of GDP, which is 9.9 percentage points more than the Ministry of Finance shows. This is equivalent to about SEK 300 billion. The difference is primarily due to the fact that the NIER counts accrued taxes and charges as assets according to the convention now used in the financial accounts. The Ministry of Finance does not do so. It is not satisfactory that the Ministry of Finance and the NIER report public sector financial net worth in different ways without explaining the accounting principles used. In Table 3.2, we have chosen to follow the same accounting principles as the Ministry of Finance.

**Table 3.2 Level of and change in general government net financial worth as a percentage of GDP in Sweden, 2007-2010**

|  | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| Net financial worth at year-end | 17.5 | 12.1 | 15.9 | 13.6 |
| Change in net financial worth | 3.3 | -5.4 | 3.8 | -2.4 |
| *Contribution from* | | | | |
| Net lending | 3.8 | 2.5 | -0.8 | -2.1 |
| Nominal GDP growth | -0.7 | -0.5 | 0.4 | -0.6 |
| Residual (value change) | 0.3 | -7.4 | 4.3 | 0.3 |

*Note*: Accrued items referring to accrued taxes and charges are not included in net worth. The year 2008 refers to the decrease from 31 December 2007 to 31 December 2008 and so on.
*Source*: National Institute of Economic Research.

Table 3.2 also decomposes the change in net financial worth as a percentage of GDP during the period 2007-2010 in contributions from fiscal deficits, a growth factor and a residual. This type of decomposition is explained in Appendix 2. The residual mainly reflects valuation changes for public sector shareholdings and foreign currency borrowing. The table shows that the most important factor behind the decline in net financial worth in 2008 was residual, i.e. the valuation changes that took place. The residual at that time made a contribution of 7.4 percentage points to the decrease in net financial worth as a percentage of GDP. In 2009, the residual was positive (4.3 percentage points) as a result of the recovery in share prices that occurred then, but it compensated for only part of the earlier decline. Compared with the valuation changes, the fiscal deficit in 2009 played little role.

According to Table 3.3, the consolidated general government gross debt ratio fell by 2.6 percentage points in 2008 and then rose in 2009 by 4 percentage points. The gross debt ratio at the end of 2009 stood at 42.3 per cent of GDP. The table also shows a decomposition of the changes in the gross debt ratio. Here the residual plays a smaller role than it did for net financial worth.[97]

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[97] The residual for the change in the gross debt ratio is more difficult to interpret than the residual for the change in net worth, as in addition to the valuation changes, it is also affected if, for example, the government borrows funds in the capital market and then lends these funds on to the private sector. This does not affect net financial worth but it does increase the consolidated general government gross debt. The consolidated gross debt will decline if, for example, the Swedish National Pension Funds reallocates investments from private bonds to government bonds (since the latter, but not the former, are deducted from the gross debt; see Box 1.1). The 2010 Spring Fiscal Policy Bill contains a table (9.14)

**Table 3.3 Decomposition of the changes in the consolidated general government gross debt as a percentage of GDP in Sweden, 2007-2010**

|                                | 2007 | 2008 | 2009 | 2010 |
|--------------------------------|------|------|------|------|
| Gross debt ratio at year-end   | 40.9 | 38.3 | 42.3 | 41.4 |
| Change in gross debt ratio     | -5.0 | -2.6 | 4.0  | -0.9 |
| *Contribution from*            |      |      |      |      |
| Net lending                    | -3.8 | -2.5 | 0.8  | 2.1  |
| Nominal GDP growth             | -2.4 | -1.2 | 1.2  | -1.5 |
| Residual                       | 1.3  | 1.0  | 2.0  | -1.5 |

*Source*: National Institute of Economic Research.

## 3.3.2 Future room for reform

In principle, Sweden faces the same type of problem finding a balance between stabilisation and sustainability as other countries do. This is summarised well in the following way in the 2010 Spring Fiscal Policy Bill: "At the same time it is important to find a balance for fiscal policy between the need to shore up the coming recovery and the requirement to re-establish a surplus in public finances to ensure that Sweden will go into the next downturn with its public finances in a strong position".[98]

But it is also obvious that the fiscal sustainability problems are much smaller for Sweden than for most other countries.[99] There are several reasons for this. The most important presumably is that the public finances were so strong when the economic crisis broke out at full force in autumn 2008. Both the current and previous governments should be credited for this achievement.[100] Nor has the Swedish government needed to intervene with costly state aid to the financial sector. But the reduction in the cost of sick leave and early retirement that has taken place has also had some importance.

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and a short text (pp. 220-221) aimed at explaining the stock flow adjustments that correspond to the residual in Table 3.3 above. But the explanations are so brief that they probably are incomprehensible to everyone except those who are so familiar with government debt policy that they do not need any explanations.

[98] See p. 29.

[99] See also the discussion on the S2 indicator in Sections 2.1 and 2.4.

[100] The Spring Fiscal Policy Bill for 2010 also stresses in several places that the most important reason why the budget deficits have remained relatively small despite the severity of the crisis has been the strong starting position. See, for example, p. 29 and p. 47.

**Table 3.4 Net lending 2009-2013 according to the Ministry of Finance and the NIER**

|  | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| NIER (2010) | -0.7 | -1.0 | -0.3 |  |  |
| 2010 Spring Fiscal Policy Bill | -0.8 | -2.1 | -1.0 | 0.4 | 1.3 |
| 2010 Budget Bill | -2.2 | -3.4 | -2.1 | -1.1 |  |

*Note*: Net lending according to National Institute of Economic Research estimates takes into account only those reforms announced in the 2010 Budget Bill but not the reforms announced in the 2010 Spring Fiscal Policy Bill.

According to Ministry of Finance forecasts in the Spring Fiscal Policy Bill, the public finances will return to a surplus from 2012 (see Table 3.4). This is expected to take place without the need for any discretionary (active) decisions on consolidation measures. The forecasts are considerably more positive than in the Budget Bill for 2010. The NIER estimates in its March report are even more positive; it expects a budget deficit in 2011 of only 0.3 per cent of GDP based on measures already adopted or announced (the reforms announced in the 2010 Spring Fiscal Policy Bill are not included). The main explanations for the change in the estimates are that it is now thought that both employment and private consumption will improve more than previously expected. The more favourable labour market developments will lead to both higher tax revenue (when household incomes increase more rapidly) and less public expenditure as a result of lower expenditure on unemployment than previously estimated. Higher consumption results in more revenue from the value added tax.

One problem when various users assess the forecasts for the public finances in the Government's budget bills and NIER reports is that these forecasts report public sector revenue and expenditure in different ways. It therefore requires considerable work to understand what explains the differences in the forecasts. It obviously would be desirable for the Government in its budget bills to describe why the forecasts differ.

**Table 3.5 Indicators used by the Government for monitoring the surplus target, per cent of GDP**

|                                                               | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---------------------------------------------------------------|------|------|------|------|------|------|
| Backward-looking ten-year average                             | 1.3  |      |      |      |      |      |
| Cyclically adjusted backward-looking ten-year average         | 1.4  |      |      |      |      |      |
| Seven-year indicator                                          | 0.7  | 0.5  | 0.3  |      |      |      |
| Cyclically adjusted seven-year indicator                      | 1.4  | 1.6  | 1.6  |      |      |      |
| Structural net lending                                        | 2.2  | 0.4  | 0.7  | 1.5  | 2.0  | 2.4  |
|                                                               |      |      |      |      |      |      |
| Ten-year indicator (our calculation)                          | 0.7  | 0.9  | 1.1  |      |      |      |

*Note*: All the indicators refer to general government net lending. The ten-year indicator is calculated as an average of the actual net lending for the past six years and for forecast net lending for the current and coming three years.
*Sources*: The 2010 Spring Fiscal Policy Bill and Fiscal Policy Council calculations.

The Government assesses whether the surplus target has been met using several different indicators: five to be precise. We have earlier criticised this follow-up because the different indicators, which reflect fundamentally different targets, may show very different values.[101] This is evident from Table 3.5. The problem is the lack of clarity about how the surplus target is to be interpreted.

We argue in Section 4.1.4 that in the follow-up, there needs to be a clearer distinction made between a *backward-looking evaluation* of whether the target has been achieved and a *forward-looking estimate* of what room for reform exists (or savings decisions that are required) in order to meet the target in the future. Table 3.5 shows that the surplus target has been exceeded by an average of 0.3 per cent of GDP a year during the period 2000-2009. If instead, a moving seven-year average is calculated for net lending, the one per cent target is missed by 0.3 percentage points.[102] The target is exceeded, however, if a cyclical adjustment is made to the seven-year indicator. If only the structural net lending for 2011 is considered, it lies somewhat under the one per cent target, but it is expected to then exceed this target from 2012 onwards.

When the Government takes all the different indicators into account, its assessment is "that in view of the economic situation,

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[101] See Fiscal Policy Council (2008), Section 2.3, Fiscal Policy Council (2009a), Section 2.2, and Fiscal Policy Council (2010).
[102] The seven-year indicator is discussed in more detail in Section 4.1.4. See also Section 1.3.1.

there is limited room for additional unfinanced reforms in 2011."[103] It is also stated that "a strictly mechanical calculation based on the indicators used to monitor the surplus target indicates that there is some room for reform looking at the whole (up to 2014, our comment) term of office", but that this conclusion is based on an improvement in the structural net lending first at the end of the forecast period. Given the uncertainty in this estimate of the future room for reform, the Government comes to the conclusion that this room "should not be used up in advance. Instead, it should be monitored over time".

The way in which the Government uses the various indicators for monitoring the surplus target can be criticised, but we nevertheless generally share the Government's assessment of the room for reform in 2011.[104] We argue in Section 4.1.4 that if there is to be an ex post evaluation of whether the surplus target has been met in the preceding ten-year period, then it should be logical to also use a ten-year period as a basis for decision-making in the future. If this is to refer to the current year and forecasts for the coming three years, then six (and not three) years back should be included. If one calculates this indicator – which we did in the last row of Table 3.5 – it is 0.9 this year and 1.1 in 2011. This alternative estimate indicates that the surplus target with the Government's forecasts of future surpluses will be met.

We also share the Government's opinion that there is considerable uncertainty about the future development of public finances. It is due not least to the difficulty assessing what permanent effects the crisis may have on employment (see Sections 2.2 and 2.4 above). It is therefore welcome that it is stated that "if, for structural reasons, the economy grows more weakly than current estimates indicate, the Government is well prepared to take the measures

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[103] The 2010 Spring Fiscal Policy Bill, p. 42.

[104] One problem – that the Government is highly aware of – is that the structural net lending, as estimated by the Ministry of Finance, tends to overestimate the strength of the public finances because it is estimated as net lending at a GDP gap of zero (full resource utilisation), while the GDP gap on average is negative over longer time periods (see, for example, the Ministry of Finance 2010a). If the GDP gap is estimated in this way, the structural net lending should consequently be estimated as net lending at the *average* GDP gap. Alternatively, the GDP gap should be calculated so that the average GDP gap is zero. See also Fiscal Policy Council (2010), Section 4.1.4.

required for fiscal policy to be consistent with the budgetary targets".[105]

But given the considerable uncertainty about the long-term effects of the economic crisis on the public finances, it would have been desirable if the Spring Fiscal Policy Bill had more clearly stated what measures may be considered in case active decisions are required to return to a budget surplus. This would be in line with our argumentation in Section 3.2.2 that fiscal stimulus effects in the short run largely depend on expectations about future policy.[106]

The Spring Fiscal Policy Bill for 2010 contains proposals for permanent measures from 2011 with a cost frame of about SEK 6.8 billion. The majority consist of reduced taxes for people over 65 (SEK 5 billion), infrastructure improvements (SEK 1.3 billion) and higher supplementary allowances for additional children (SEK 0.7 billion). The reforms are of limited extent and it is therefore difficult to claim that they would jeopardise fiscal sustainability in the long run, even though there is considerable uncertainty about the future room for reform. But we want to stress the importance of the Government maintaining its approach that any possible future room for reform "should not be used up in advance".[107] In our opinion, it is very risky to make promises of further costly reforms without specifying the funding at the same time. It would be unfortunate if this happened in the election campaign.

One way to expand the room for manoeuvre in fiscal policy could be to decide now on changes in the pension system with the aim of raising the effective retirement age. We discussed this in Section 3.2.3.[108] We noted with regret that there is no broad political debate on these issues. It should be a main topic in the election campaign.

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[105] The 2010 Spring Fiscal Policy Bill, p. 42. It also states that "economically justified tax increases can be used to finance a reduction in economically harmful taxes, but that tax increases are not to be used to finance increased expenditure". One may have differing values with respect to these policy intentions, but it makes matters clearer when the Government specifies that it has no intention of raising taxes to fund increased expenditure. But it is less clear what is intended by 'economically justified tax increases' and 'economically harmful taxes' as what is viewed as 'economically justified' and 'economically harmful' obviously depends on political values. We have previously criticised the Government's use of such concepts (Fiscal Policy Council 2009b).

[106] The Budget Bill for 2010 was somewhat clearer, since it stated that "if budget reinforcements become necessary, they should aim at tax adjustments that contribute to a better environment and better health without reducing the incentives to work" and that "expenditure reductions may also be required" (p. 62).

[107] The 2010 Spring Fiscal Policy Bill, p. 42.

[108] See also Sections 2.1 and 4.1.6 in this report. Fiscal Policy Council (2009a), Sections 2.3-2.5 and 6.3, contain a more detailed discussion.

### 3.3.3 Room for manoeuvre in stabilisation policy

Our discussion above also shows, however, that the Government has some room for manoeuvre in *stabilisation policy*. Sweden, unlike many other countries, is not compelled to undertake a rapid consolidation of the public finances. Instead, the Government can choose the pace at which a consolidation will take place. In Sweden's current situation, fiscal policy also likely has normal Keynesian effects on demand (positive effects of tax cuts and government expenditure increases).[109]  It is then a matter of making a trade-off between the advantages of continuing stimulus measures that stabilise the economy now and the disadvantages of the longer time it will take to restore the desired public finance buffers.

The Government's opinion in the Spring Fiscal Policy Bill for 2010 is that "given the considerably brighter macroeconomic outlook now...there is no need for further large stabilisation policy measures".[110] It is also of the opinion that the room for further stabilisation policy measures is limited. But the continuing low resource utilisation is thought to indicate that "certain stabilisation policy measures aimed in part at underpinning the recovery and reaching those most detached from the labour market are justified".[111] Some stabilisation policy measures are proposed for 2010. These include bringing forward some infrastructure projects, an initiative for summer school and summer jobs for young people, and a shorter qualification period for new start jobs for older workers. All in all, the measures proposed and announced will reduce net lending by about SEK 5 billion in 2010.

Structural net lending is forecast to increase in 2011 by 0.3 per cent of GDP according to Ministry of Finance estimates in the Spring Fiscal Policy Bill for 2010 and by 0.5 percentage points according to the latest estimates by the National Institute of Economic Research, based on the policy that was adopted or announced before the Spring Fiscal Policy Bill. This indicates some tightening of the fiscal stance, even though changes in the structural net lending are a very rough measure.[112] It is not obvious that fiscal

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[109] See our discussion above in Section 3.2.2 and Box 3.2.
[110] p. 49.
[111] Ibid.
[112] This is why we previously argued that the Ministry of Finance should report more elaborated impact studies (Fiscal Policy Council 2008, Section 2.4.2).

policy in the current economic situation should be given such a direction. But here choices depend on what trade-off is made between stabilising the economy now and restoring the public finance buffers for the future. This trade-off should reflect political value judgements that we have no reason to have views on. Nevertheless, there is reason for us to analyse the considerations that should be made.

We share the Government's opinion that it is essential to return to a surplus in the public finances within a reasonable time.[113] But our analysis also shows that there is hardly any binding sustainability restriction on limited temporary stabilisation policy measures.

*If* a more expansive fiscal policy stance is wanted in 2011, an extension of the extra grants to local governments that expire this year is the most obvious option. If so, the reason would be to try to achieve an increase in employment in the local government sector in 2011 (which is now forecast to remain largely unchanged after a fall of 2.4 per cent in 2009 and a further fall of 1.7 per cent expected in 2010 according to the Spring Fiscal Policy Bill) and thereby keep unemployment down in a situation where resource utilisation is expected to remain low in 2011.[114]

If further stimulus measures are desired, then extending the extra central government grants to local government is preferable to further stimulus of private consumption, as this consumption can be expected to increase quite sharply in any event in 2011 (by 3.8 per cent according to the 2010 Spring Fiscal Policy Bill). This increase in consumption is also expected to help employment keep increasing in the private service sector. According to the NIER estimates, the number of hours worked in this sector will increase by about 2 per cent in 2010 and by about 1 per cent in 2011.[115]

But there are also arguments against extending the extra central government grants to local government. One such argument is the

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[113] The 2010 Spring Fiscal Policy Bill, p. 40.

[114] The 2010 Spring Fiscal Policy Bill, p. 151. To some extent, the increase in employment in the business sector financed by the local government sector has offset the fall in local government employment. In the Spring Fiscal Policy Bill, total local government financed employment is estimated to have fallen by about 20 000 people between 2007 and 2009. Most of the fall is due to the phase-out of bonus jobs and sabbatical years. According to estimates in the Spring Fiscal Policy Bill, total local government financed employment will drop slightly between 2009 and 2010 and then remain more or less unchanged between 2010 and 2011.

[115] National Institute of Economic Research (2010). A similar estimate is made in the Spring Fiscal Policy Bill for 2010, p. 151.

risk that the *pace* of the economic upturn will be too rapid, even though the employment level will remain low. The higher the rate of increase in resource utilisation, the greater the price and wage increases that a given level of resource utilisation can be expected to lead to. Another important argument is the risk that an extension of the temporary grants would result in their being perceived as *permanent*. It could make it difficult not to continue paying them when the economy improves.[116] This risk is bound up with the discretionary nature of the grant increases, i.e. they are decided on a case-by-case basis.

In our previous report, we argued in favour of introducing a system under which the local government grants regularly varied in a countercyclical manner so that they increase more when the local government aggregate tax base in economic downturns grows more slowly than the long-term trend and increase less in economic upturns when this tax base grows more rapidly.[117] The Government has also established terms of reference for an inquiry on supporting stable local government operations over the business cycle. The inquiry is to study the possibilities of both designing the balanced budget requirement for local governments in a new way and smoothing local government sector revenue over time by means of a local government stabilisation fund.

The idea of a local government stabilisation fund is similar to our proposal for a cyclical local government grant in accordance with a predetermined rules system. With such a system, local governments would presumably also be allocated extra resources in a year with low economic growth like 2011. In our opinion, it is important to try to get a rules system like this in place as soon as possible, as it would reduce the risks that stabilisation measures targeting the local government sector would become permanent. Since the issue is so important, it is remarkable that it has taken so long to get the inquiry established.[118]

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[116] A good example of this risk is the argumentation of two economists with the Swedish Confederation for Professional Employees in a debate article in Dagens Nyheter (Zettergren and Mörtvik 2010). Instead of arguing in favour of an extension of the temporary local government grants for one more year, they argue *against* "the Government's proposal to withdraw the support" and against "a rapid and disagreeable premature withdrawal now of the support".

[117] Fiscal Policy Council (2009a), Section 1.3.3.

[118] The inquiry was announced as early as in the 2009 Spring Fiscal Policy Bill, but the Government did not decide the terms of reference before March this year. The members of the inquiry have still not been appointed.

**Figure 3.10 Prices on single-family homes, deflated by the CPI, 1995 = 100**



Spain ······ United Kingdom —— Sweden ····· United States
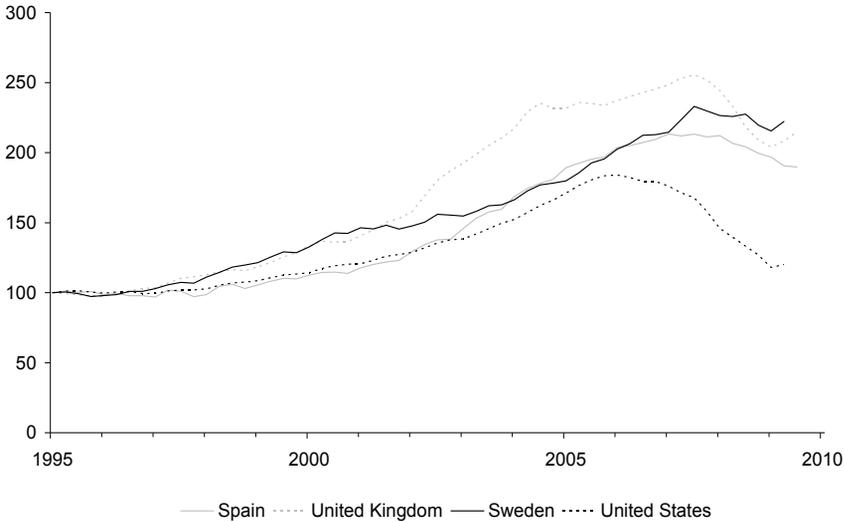
*Source*: The Riksbank.

## 3.3.4 The balance between fiscal and monetary policy

How best to design fiscal policy is related to the issue of the appropriate balance between fiscal and monetary policy. In countries with serious fiscal problems, fiscal policy will probably have to be tightened before resource utilisation has reached a satisfactory level. If so, continued expansive monetary policy may be needed to compensate, particularly in countries that are still experiencing problems in the financial sector and where there has been a substantial fall in property prices.

However, the Swedish situation is quite different. Here there has not been any permanent fall in housing prices. Instead, prices have recovered after a temporary downturn (see Figure 3.10). The Riksbank decided in autumn 2009 that there was a large risk that housing prices in Sweden were at an unsustainably high level. We are concerned that the current low interest rate policy will lead to excessive borrowing by households and thus to too high housing prices. The result may be imbalances that cause future crises. There is a general opinion that too low interest rates in many countries after

the IT crash early this century contributed to the imbalances in the credit and property markets that triggered the current crisis. This may be an argument for the Riksbank to begin raising the repo rate more rapidly than justified by the medium-term inflation forecast alone. But this would have negative effects on aggregate demand. To offset that, fiscal policy would need to be more expansive than would otherwise be desirable.

The issue of the appropriate balance between fiscal and monetary policy in the current situation should be of considerable interest. The stronger fiscal situation in Sweden combined with no fall in housing prices argues in favour of a policy mix that differs from that in most other countries. Monetary policy could be tightened earlier, while fiscal policy could remain expansive longer.[119] But how to effectively coordinate monetary and fiscal policy in a system in which – for good reasons – the former is managed by an independent central bank and the latter by the Government is not obvious.

Finally, the great uncertainty about cyclical developments in the near future should be pointed out. Most forecasts indicate a recovery in the world economy. The forecasts of both the Ministry of Finance and the NIER are relatively optimistic. At the same time we have pointed out the risk that the public finance problems in many countries will have negative effects on the international economy. A similar assessment is made in the Spring Fiscal Policy Bill, which expresses the opinion that the downside risks for economic growth are substantially higher than the upside risks.[120] Economic policy – and fiscal policy in particular – must therefore have a large readiness to act. As a result of the fiscal situation in Sweden, however, there is substantial room for manoeuvre in stabilisation policy if the recovery were to be weaker than expected.

Exchange rate developments constitute a particularly uncertain factor. If the krona were to strengthen substantially as a result of public finance problems in other countries, it could be an argument for the Riksbank to put interest increases on hold.

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[119] This would be in line with the principles for the use of fiscal policy as a stabilisation tool that we analysed in our first report (Fiscal Policy Council 2008, Section 1.3). There we discussed a situation in which monetary policy out of consideration for the risk of abnormally high property prices would need to be made more restrictive than justified by inflation and output considerations. The conclusion was that a situation like this could justify a more active use of fiscal stimulus measures.

[120] The 2010 Spring Fiscal Policy Bill, p. 156. See also the National Institute of Economic Research (2010).

# 4 The fiscal framework

After the economic crisis in the 1990s, the Swedish public finances needed consolidation. The current fiscal framework in effect grew out of experiences from this process. The framework has four cornerstones:

- a two-step decision-making procedure for the central government budget[121]

- the surplus target

- the expenditure ceiling

- the balanced budget requirement for local governments.

In the Budget Bill for 2007, the Government announced a review of the fiscal framework with the aim of strengthening it. As a result of the review, the Government in the Spring Fiscal Policy Bill for 2010 proposes making the surplus target statutory. The expenditure ceiling has already been strengthened previously. In 2009, a stipulation that it is obligatory to set a central government expenditure ceiling was introduced in the Budget Act.

Section 4.1 discusses the surplus target and Section 4.2 the expenditure ceiling. Finally, Section 4.3 considers the relationship between financial market regulation and stabilisation policy.

## 4.1 The surplus target

The *surplus target* has been a key feature of the Swedish fiscal framework since the end of the 1990s.[122] Under the target, general government net lending, i.e. the difference between revenue and expenditure, should be one per cent of GDP over a business cycle.[123]

The introduction of a surplus target can be seen as a continuation of the budget consolidation following the 1990s crisis. This

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[121] In the first step, the Riksdag decides the total budget and its allocation between different expenditure areas. In the second step, the allocation of appropriations within the different expenditure areas is decided. See Fiscal Policy Council (2008), Section 2.1.

[122] The Riksdag approved the target in 1996. It was gradually phased in and has been fully in force since 2000.

[123] The original target was two per cent of GDP but it then also included savings in the premium pension system (PPM), which amount to about one per cent of GDP. Since 2007, these savings are no longer part of the public sector; instead they are now classified as private sector savings. There has therefore been a corresponding downward adjustment in the surplus target.

consolidation policy was supported by clear targets for the pace at which the budget deficit would be reduced. But the surplus target was established without any thorough discussion of the considerations behind it. Subsequent budget bills have mentioned various reasons, but they have never given a full account of why the target should be designed as it has.

The Government has now reviewed the surplus target. In spring 2010, a report from Ministry of Finance officials was published.[124] With this report as its basis, the Government in the 2010 Spring Fiscal Policy Bill proposes making the surplus target statutory.

## 4.1.1 Motives for the surplus target

The surplus target is an *intermediate target* aimed at making it easier to achieve overall, more fundamental goals. These underlying motives have been specified in somewhat different ways in different budget bills.[125] The most important motives – stated by both the current and the previous governments – can be summarised as:

- long-term sustainable public finances

- economic efficiency

- income equality between generations

- sufficient margins so that large deficits can be avoided in economic downturns even with a policy that actively tries to prevent sharp economic downturns.

We have – like the Swedish National Audit Office (SNAO) – previously argued that these motives need not be consistent with each other. On the contrary, they could justify different levels in the fiscal balance target.[126] We have therefore requested a clarification from the Government of the importance attached to the various motives.

The Government has presented a clearer discussion of the reasons for the surplus target in the 2010 Spring Fiscal Policy Bill. The Government explains that the sustainability target is 'a prerequisite' for meeting other targets and that the stabilisation policy

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[124] Ministry of Finance (2010a).

[125] This was discussed in detail in Fiscal Policy Council (2008), Section 2.3.1.

[126] Fiscal Policy Council (2008), Section 3, and Fiscal Policy Council (2009a), Sections 2.1 and 2.2, respectively. See also, for example, the National Audit Office (2006, 2008a and 2008b).

motive "should be accorded considerable importance".[127] Regarding intergenerational equity, the Government writes that "the surplus target... [is] not to be used to handle the continuously rising life expectancy… [nor] to pre-fund possible future demands for welfare services of higher quality".[128] We welcome these clarifications. At the same time, there remain a number of unclear points in connection with the overall reasons for the surplus target and its follow-up (see Section 4.1.3 below).

### Fiscal sustainability

The demographic challenges pose problems for fiscal *sustainability* in the long run. For public finances to be sustainable, the public sector *intertemporal budget constraint* must be satisfied. This means that the sector's net financial worth must at least equal the present value of all future *primary* fiscal deficits (the difference between expenditure and income excluding interest payments). [129]

Fiscal sustainability is not sufficient for defining a path for net lending. There are a number of different paths with different distributions of budget surpluses and deficits over time that are all compatible with long-term sustainable public finances. The criteria for economic efficiency and equal distribution of resources between generations does, however, provide a basis for choosing a particular path.

The Government's view that sustainability is a prerequisite for meeting other targets is well in line with this view. Problems for fiscal policy credibility may lead to both increased risk premiums on public sector borrowing and emergency measures which are not compatible with either economic efficiency or intergenerational equity.

### Economic efficiency

According to the *efficiency criterion*, it is desirable to smooth the efficiency costs of taxation over time. This is usually seen as an argument for *tax smoothing*, i.e. for smoothing the tax ratio over time. The explanation is the economic efficiency losses resulting from the fact that taxation distorts the incentives to work. According to

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[127] p. 88.
[128] Ibid.
[129] See Box 2.1.

accepted economic analysis, these losses grow more than proportionally when (marginal) tax rates rise. If a given path for government expenditure is to be funded, it is therefore better to do it with a tax ratio that is fixed over time than with a variable tax ratio.[130] So, according to this view it is better to *pre-fund* government expenditure (which gradually increases as a result of demographic developments) by setting taxes already now at a level that is sustainable in the long run rather than gradually raising them. In that case, budget surpluses now (pre-funding) will fund future budget deficits.

*Risk sharing*

Fiscal policy may also be used to *share the risks* in the event of temporary unexpected shocks in the economy. The costs of the debt increase resulting from the current economic crisis may, for example, be shared between current and future generations by means of a permanent fiscal surplus.[131]

*Intergenerational equity*

An equitable *distribution between generations* may also justify surpluses in the public finances in some periods. What is perceived as equitable is a matter of values. Economic research cannot provide any guidance on what the values should be. But economic analysis may shed light on the connection between different values and different policies and clarify whether different decisions are internally consistent.

The discussion to this effect in the Spring Fiscal Policy Bill for 2010 goes considerably beyond that in earlier budget bills. The earlier view was that pre-funding is an appropriate method for handling *all* future strains on the public finances resulting from an increase in the dependency ratio.[132] In the 2010 Spring Fiscal Policy Bill, the Government gives a different assessment: according to the reasoning here, there are no egalitarian arguments that say that the increased costs that arise because one generation has the advantage of living

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[130] In a more sophisticated analysis, it should be taken into account that a given tax rate may give rise to economic efficiency losses of different sizes at different points in time. One possible argument is that globalisation leads to increasingly mobile tax bases over time. If so, it may be desirable for an individual country to have a gradually declining tax ratio as long as this process continues.

[131] See also Section 2.1.

[132] The age dependency ratio is usually defined as the ratio between children (under 20) and older people (over 64) on the one hand and people aged 20-64 on the other hand.

longer should be paid by earlier generations with a shorter life expectancy.

This conclusion is in line with our arguments in our previous reports. We have maintained that the fiscal strains that arise on account of rising life expectancy should justify a gradual increase in the retirement age rather than pre-funding.[133]

The Government also makes clear how it intends to handle future fiscal problems that may arise on account of the combination of *Wagner's Law* and *Baumol's Disease*. According to Wagner's Law, the demand for welfare services increases when real incomes rise. According to Baumol's Disease, the relative cost of producing public (and other) services increases over time, because productivity growth in the production of services is lower than in the production of goods.[134] The Government is now also of the opinion that these problems should not be solved by pre-funding. This position is in line with the view that current generations should not have to assume the costs of future generations' higher standard of living.

The Government's clarification of its position in this respect is welcome. Nevertheless, there is still a fundamental flaw in the analysis of the distribution between generations. There are still no *generational calculations* of the type we previously asked for.[135] These types of analyses are essential to form a well-founded opinion about an appropriate fiscal balance target based on intergenerational equity concerns. There is reason to be critical of the failure to do such analyses in the Ministry of Finance's review of the surplus target.[136]

*Stabilisation policy motives for the surplus target*

The surplus target can also be seen from a purely *stabilisation policy* angle. The overall motive in that case is to build up fiscal buffers that create room for manoeuvre for using fiscal policy for stabilisation purposes so that the chances of countering economic downturns

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[133] Fiscal Policy Council (2009a), Section 2.3-2.5. See also Andersen (2008).

[134] See also Section 2.1.

[135] Fiscal Policy Council (2008).

[136] The Ministry of Finance (2010a, p. 94) concludes that "there needs to be a more in-depth analysis in the form of intergenerational analyses" in order to be able to judge how the public sector redistributes resources between generations. The working group behind the report has, however, not made any analyses of its own but "recommends that the Ministry of Finance's current sustainability calculations be regularly supplemented with intergenerational analyses". We concur with this recommendation (see Fiscal Policy Council 2008, pp. 80-81).

with fiscal stimulus measures are not restricted by interest rate reactions in the financial markets.

This stabilisation policy motive appears to have been shunted to the background previously since, for example, it was not mentioned at all in the Spring Fiscal Policy Bill for 2008. The fact that the stabilisation policy motive is pointed out as particularly important in the 2010 Spring Fiscal Policy Bill is an indication that much greater importance is now being attached to stabilisation policy considerations. This is natural, given recent years' crisis experience.

## 4.1.2 The level of the surplus target

In the Spring Fiscal Policy Bill, the Government states that the surplus target is to be one per cent of GDP over a business cycle "during at least the current term of office and as long as necessary for long-term fiscal sustainability".[137] The main argument is that the target is well established and that a reformulation risks undermining the confidence fiscal policy has earned. The Spring Fiscal Policy Bill does not provide any more detailed analysis of the appropriateness of a one per cent surplus over a business cycle. There is an analysis of this kind, however, in the background report from Ministry of Finance officials.[138]

*Derivation from the long-term fiscal policy targets*

The Ministry of Finance report contains an interesting principled outline of how the fiscal balance target level can be derived from sustainability calculations. The outline has several basic premises. Future generations are to be guaranteed the same level of welfare services as current generations. The labour market exit age and the retirement age are expected to rise at the same pace as life expectancy. Finally, the tax ratio should be at a level that remains constant over time and that at the same time fulfils exactly the intertemporal budget constraint as discussed above (i.e. the condition that future primary fiscal deficits are not larger than current financial net worth) for the central and local governments, given an assumed path for government expenditure.

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[137] Ibid, p. 89.
[138] Ministry of Finance (2010a).

Under the given assumptions, the report derives a sequence of surplus targets which are assumed to apply for ten years at a time, for the entire public sector. According to this analysis, the surplus target for the next ten-year period is in the interval 0-1 per cent of GDP after which it will gradually increase until the end of the century. The basic methodology in the calculations is in our opinion reasonable. It is in certain respects close to the principled analysis that we discussed in our 2009 report.[139]

*Surplus target level justified by stabilisation policy*

The Ministry of Finance report analyses the stabilisation policy basis for the surplus target from two perspectives:

- the need for an adequate safety margin for the three per cent budget deficit ceiling in the EU Stability Pact.

- the merit of avoiding high risk premiums on government borrowing in economic downturns.

EU rules specify a deficit ceiling of three per cent of GDP. The report devotes considerable space to analysing what safety margin in relation to this ceiling would be appropriate. This is the same approach used in the STEMU Committee (the Committee for Stabilisation Policy in the Monetary Union) in 2002 on what should be required of fiscal policy if Sweden were to join the single currency.[140]

The report analyses the extent to which net lending can be expected to weaken in economic downturns. It is estimated that the median value of such deteriorations from 1970-2009 has been about 3 per cent of GDP over two years and about 4.5 per cent over three years. From this, it concludes that fiscal policy would need "to aim at surpluses of 1.5 per cent of GDP in order for the deficit not to go below 3 per cent of GDP in more than half of all the decreases over three years".[141] An obvious objection is that the reasoning seems to assume that the budget weakening starts from a situation in which the surplus target is exactly met. But since the target is in effect *over a business cycle*, it can be assumed that a budget weakening that starts from a peak where the surplus target is exceeded is normal. If this is

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[139] Fiscal Policy Council (2009a), Section 2.5.
[140] SOU 2002:16.
[141] pp. 134-135. 'Below' in the citation should in all likelihood be interpreted as 'above'.

taken into account, the conclusion according to this reasoning should be that the surplus target can be set lower than that specified by the working group.

Another perspective refers to the risk that increased government borrowing costs will reduce the room for using fiscal policy for stimulus purposes. This risk has been convincingly illustrated by the recent interest rate increases on government debt in euro countries with large deficits and high government borrowing.

Extensive research has been done on the connection between the budget deficit and the central government debt on one hand and the interest on that debt on the other hand. The report provides a good overview of this research, which also includes a study done in the Ministry of Finance.[142] The report reasonably found "that based on existing empirical studies, it is not possible to draw any definite conclusions on what is a well-balanced target for general government net lending if the primary aim of the target is to avoid high risk premiums in the event of sharp economic slowdowns".[143] But further illumination of this matter would have been desirable. At our request, Huixin Bi and Eric Leeper studied this matter.[144] This study, which was reported in Section 3.1.2 and Box 3.1, comes to the conclusion that the critical threshold for the consolidated general government gross debt at which interest on government debt begins rising sharply has increased from about 60 per cent to about 90 per cent of GDP today. All these estimates are very uncertain but there are good reasons for believing that there has been a change in this direction. It would have been valuable if the Ministry of Finance report had analysed in more detail how the situation in Sweden has changed since the surplus target was adopted.

*Relative importance of different motives*

The report's conclusion is that the long-term motives for the surplus target argue in favour of a target of 0-1 per cent of GDP, while stabilisation policy considerations instead may justify a target in the interval of 1-2 per cent. We have above questioned the latter conclusion.

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[142] Ministry of Finance (2009a).
[143] p. 142.
[144] Bi and Leeper (2010).

The working group's overall conclusion is that the current one-percent target is reasonable: "since the current surplus target is well established, the working group does not see any strong reasons for changing the level of the target in the foreseeable future".[145] This opinion is shared by the Government in the Spring Fiscal Policy Bill for 2010. A critical observation is that it would have been surprising if Ministry of Finance officials and the Government had come to any other conclusion. Even though the target was roughly designed from the very beginning, there has been a strong tendency in Ministry of Finance analyses to always find that the level chosen originally is 'exactly right'. This may raise some doubts.

One may, however, also look at the issue in an entirely different way. What is presumably important is not the exact level of a fiscal balance target but its very *existence*. Experience as well as research shows that there is a strong tendency for short-term considerations to dominate over more long-term ones and thus lead to a rapid debt build up. Well-defined fiscal balance targets counteract this. It cannot be said for certain whether a target of -1,-0.5, 0, 0.5, 1 or 1.5 per cent of GDP is most appropriate. But neither can any of these targets be expected to have unreasonable consequences.

Since the one per cent target now is well established, it is also in our opinion difficult to argue that it should be changed. The current economic crisis with large budget deficits and with the credibility of long-term fiscal sustainability in question in many countries provides a further argument for a pragmatic approach like this. If in such a situation, Sweden can stick to the earlier surplus target without any large costs, the credibility gains should be substantial. This could yield substantial benefits in the form of low risk premiums in the future.

## 4.1.3 Formulation of objectives

The Ministry of Finance report discusses three basic aspects of fiscal targets that merit comment:

- Should the target refer to general government debt/net worth or the fiscal balance?
- Should the target apply to net lending or total savings?

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[145] p. 156.

- Should the target cover all or only parts of the public sector?

*Debt or balance target*

There is an ongoing discussion in the research on whether the fiscal target should be designed as a target for government debt/net worth or for the fiscal balance. In practice, it is most common that targets or constraints refer to the fiscal balance, but there are also examples where they refer to debt.

An opinion on debt targets versus balance targets is connected to the importance assigned the different overall motives for fiscal policy that we discussed in Section 4.1.1. The objective of intergenerational equity may justify a debt target, which involves having to compensate for previous deficits with surpluses because it is the debt that a generation leaves behind it that determines the distribution of consumption between generations. But it may also be maintained that "bygones are bygones", i.e. that earlier deviations from the target should not be compensated for. This suggests a forward-looking surplus target instead of a debt target.[146]

In the Spring Fiscal Policy Bill, the Government takes a position favouring a fiscal balance target instead of a debt target. The Government's main reason is that in "the current fiscal situation, … it is essential not to get into a situation with large deficits with the risk of rapidly growing debt that this entails".[147] There is indeed an argument that the debt level is important because a high debt reduces the chances of conducting an active cyclical policy. But at the same time, it is the Government's opinion that experience from the public debt crises in some countries shows that high budget deficits lead to expectations of high debt levels and thus high risk premiums.

The Government's conclusion concerning a surplus target versus a debt target may be problematic since the stress is on the requirement for room for manoeuvre in stabilisation policy. There is not a great deal of support in the existing research that a budget deficit would affect risk premiums much more than high debt levels would. To the extent that the risk premiums on government borrowing depend more on the debt level (current and forecast) than

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[146] A more detailed analysis of this issue can be found in Fiscal Policy Council (2009a), Section 2.2.1.
[147] p. 90.

on the deficit, this constitutes an argument for a debt target rather than a surplus target.

*Target for net lending or total saving*

In our first report, we proposed that there should be a review of whether the surplus target should only apply to general government net lending or whether it instead should refer to the sector's total saving, i.e. also include real saving in the form of investment in real capital (a *golden rule*).[148] The basis for our proposal was that when the original surplus target was formulated, no consideration was apparently given to these aspects.

The theoretical argument *for* a golden rule is that if government investment has to be tax financed by current generations, at the same time that part of the return goes to coming generations, the investment level will be lower than what is socially desirable. The most important argument *against* a golden rule is that it may give rise to difficult demarcation problems with respect to what expenditures should be considered investments, how large the depreciation should be judged to be and so forth. These demarcation problems lead to increased opportunities for manipulation.

In the Government's opinion, the surplus target should refer to net lending. Here the 2010 Spring Fiscal Policy Bill does not give the reasons in any more detail. In previous budget bills, the Government has cited the above-mentioned demarcation problem and "experience from 1950-1960 when the central government budget was divided into a current budget and a capital budget" as reasons for its stance.[149]

There may be grounds in the long run for further examining the issue of a golden rule. But the current economic crisis, when many countries have large budget deficits and the financial markets are therefore focusing their attention on fiscal deficits in particular, is not the right occasion to bring up this issue. There is therefore no reason to redefine the surplus target now so that it also covers public sector real savings.

In earlier reports, we have emphasised the inadequate reporting in the budget bills of both public investment and the growth in the

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[148] Fiscal Policy Council (2008), Section 2.3.3.
[149] Budget Bill for 2009, p. 274.

public sector real capital stock.[150] In our opinion, this reporting is so inadequate that the Riksdag is not given a satisfactory basis for public investment decisions. This criticism still stands, even though we note that the Ministry of Finance report on the surplus target agrees with our view. The report writes that there is "reason to closely follow the development of public sector investment and real capital stock" and that it is important to improve the reporting in this area in the Spring Fiscal Policy and Budget Bills and in the Annual Report for the Central Government Sector.[151] Even though such an improvement should be in everyone's interest and could be realised with only small resource inputs, the Government has thus far not made any improvements in this area.[152] Now the Government has announced that work will be begun on "developing…. reporting of public sector real assets and investments". The intention is to report on this work in the 2011 Spring Fiscal Policy Bill.[153] We welcome this. But it has taken a surprisingly long time to make a change.

*What parts of the public sector shall the surplus target apply to?*

Another issue is whether the surplus target should refer to the central government, the central government and local governments or, as it does now, the entire public sector. It is the Government's opinion that the target should apply to the entire public sector. No further justification is given in the 2010 Spring Fiscal Policy Bill other than that the surplus target is "an anchor for fiscal policy [and] should cover all sectors that may affect sustainability".

The Ministry of Finance report, which the Government refers to, argues that it is the central government that has the ultimate responsibility for public services and that it is therefore inappropriate to regard the local government sector and the pension system as autonomous. If sustainability problems were to arise in these parts of the public sector, the central government could be forced to contribute resources. Therefore, according to the report, it is important to consider net lending in the public sector as a whole. We share this opinion.[154] Illustrative examples are the tax cut for people

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[150] Fiscal Policy Council (2008), Section 2.2.3, and Fiscal Policy Council (2009a), Section 4, respectively.
[151] Ministry of Finance (2010a), p. 163.
[152] Fiscal Policy Council (2009b).
[153] Spring Fiscal Policy Bill 2010, p. 92.
[154] We came to the same conclusion in our 2008 report (Fiscal Policy Council 2008, Section 2.3.3).

over 65 implemented in 2009 as well as a similar tax cut announced for 2010. These tax cuts – as well as an adjustment to the pension system's balancing mechanism – have been made to counter weak pension growth as a result of pension system assets' fall in value during the economic crisis.

## 4.1.4 Follow-up of the surplus target

Up to the 2010 Spring Fiscal Policy Bill, the Government had used five different indicators to judge whether the surplus target had been met:

- A *backward-looking average indicator* for *actual* net lending, which is the average net lending since 2000 (this was the first year that the surplus target was fully implemented).

- A *rolling forward-looking average indicator* for *actual* net lending. It is a seven-year moving average of net lending centred on the current year. The moving average for a particular year thus includes the specified year, the three years immediately preceding it and (a projection for) the coming three years.

- *The structural net lending*, i.e. the cyclically adjusted net lending for the current year (adjusted for one-off effects and extraordinary capital gains).

- A *backward-looking average indicator* for the cyclically adjusted net lending, which is estimated in a manner analogous to the corresponding indicator for actual net lending.[155]

- A *rolling forward-looking average indicator* for the cyclically-adjusted budget balance, which is estimated in a manner analogous to the corresponding indicator for actual net lending.

According to the 2010 Spring Fiscal Policy Bill, the two previous indicators that look back to 2000 are to be replaced by new, rolling, backward looking indicators that go back ten years in time. This does not entail any difference this year but it will make a difference in the future when earlier years gradually are excluded.

   One obvious problem is that the different indicators may show very different results, as shown in Table 3.5 in Section 3.3. This

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[155] The cyclically adjusted net lending differs from the structural net lending in that one-off effects and extraordinary capital gains are excluded in the latter measure.

makes the extent to which the surplus target is met unclear. A more fundamental problem is that the different indicators reflect different higher-level objectives. If structural net lending in the current year is the basis for the assessment, there is no need to compensate for one year's deviation in another year. If instead the backward looking average indicator is the basis – which is much like a debt target – then earlier deviations must be compensated for. Based on the rolling forward-looking seven-year indicator, an *attempt* will be made in the current and the coming three years to compensate for deviations in the three preceding years, but not any further back.

The choice of monitoring indicators is crucial since it defines the surplus target and thus also what importance is attached to the different underlying motives for the target.[156] The Government makes the point in the 2010 Spring Fiscal Policy Bill that the surplus target is primarily to be evaluated looking forward.[157] The aim of the backward-looking indicators is, according to the Government, primarily to "judge whether there were previously systematic errors in the forward-looking direction of fiscal policy that reduce the probability of meeting the surplus target".[158] Nevertheless, the Government plans to use all the indicators above. The Government's argument for continuing to use all five indicators is that it wants to avoid a 'too mechanical' analysis, since it thinks such an analysis "risks leading the policy astray".[159]

It may be interesting to compare the Government's opinion with the reform of the fiscal framework recently decided in Germany.[160] As part of this reform, a fiscal balance target of zero for structural net lending is being introduced. For the target to be truly binding, it is to be followed up with the help of a backward-looking indicator with 'memory'. Deficits that exceed 0.35 per cent of GDP will be charged to a special account. When the accumulated deficits exceed 1.5 per cent of GDP, the Government is obliged to reduce them. But this needs to be done only in an economic upturn. The German government has thus made a different assessment than the Swedish government of the appropriate balance between backward and forward-looking indicators.

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[156] See Section 2.1 above.
[157] Spring Fiscal Policy Bill 2010, p. 91.
[158] Ibid, p. 227.
[159] Spring Fiscal Policy Bill 2010, p. 91.
[160] See Federal Ministry of Finance (2009).

No one would recommend that the follow-up of the surplus target be too mechanical. When we previously pointed out that the Government should specify what weights the different indicators should have, we did not intend to say that the indicators should be a (mechanical) weighted average of the existing indicators. It is, of course, unlikely that there is *one* indicator that summarises all relevant information in all conceivable situations. But we are critical of the Government's reasoning all the same.

In our opinion, the Government confuses a backward-looking perspective, aimed at evaluating whether the target *has been met*, and a forward-looking perspective, which should be a *planning tool* for meeting the target in the future. If the surplus target is to be sufficiently binding, considerable weight has to be attached to a backward-looking evaluation. At the same time, we share the Government's view that it is desirable to look ahead in order to plan fiscal policy so that the target can be met in the future. It is our view that it would be a better follow-up of the surplus target to have only *two* main indicators: one that is backward-looking and a partially forward-looking one.

None of these indicators should be based on estimates of the structural net lending, particularly not estimates based on the method used thus far. Structural net lending is obtained by correcting actual net lending for the variations that arise because tax revenue and some government expenditures vary with resource utilisation. One problem with the Ministry of Finance and many other estimates of structural net lending is that on average over longer periods, they are higher than actual net lending. This is because the GDP gap is on average negative over longer periods. Such estimates of structural net lending are a less useful indicator of whether the surplus target has been achieved.

It is our opinion that the rolling backward-looking ten-year indicator should be used as the main indicator of whether the surplus target has been met. There should not be any cyclical adjustment. However, the previous economic situation should of course be a key factor in assessing whether deviating from the surplus target was justified in the previous ten-year period.

A forward-looking indicator should be used to assess what will be required of fiscal policy in the future to meet the surplus target in the rolling ten-year period, i.e. to estimate the room for reform or

consolidation measures, just as it is now. But if the backward-looking indicator refers to a rolling ten-year period, it is difficult to understand why the forward-looking indicator should refer to only seven years. It would be logical if it was also to cover a ten-year period if that is the period for which the surplus target is to be evaluated retrospectively. If forecasts for a maximum of three years forward are preferred, then the forward-looking indicator should be estimated as an average for a ten-year period that includes actual net lending six years back and forecasts for the current year and the three coming years.

We thus recommend that two indicators be used: a rolling backward-looking indicator estimated as average net lending for ten years back and a rolling forward-looking indicator estimated as an average of six years back and three years forward. The backward looking indicator should be regarded as an indicator for evaluating whether the target has been met in the past and the forward-looking indicator as a basis for decision-making in order to meet the target in the future.

We share the Government's view that mechanical adjustments to earlier or future expected deviations from the target should be avoided. However, the importance of clearly taking into account any deviations from the target could be stressed by stipulating that if deviations from the surplus target occur above a certain order of magnitude according to either of the two indicators, then the Government will be obliged to account for the causes and state what remedy is intended.[161]

## 4.1.5 Status of the surplus target

The State Budget Act currently does not contain any provisions about the surplus target. In the Spring Fiscal Policy Bill, the Government proposes making this target statutory. However, the Government's opinion is that the level of the target should not be regulated by law.

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[161] See Section 4.1.5 below.

*Legislating a surplus target*

The credibility of the surplus target would be strengthened by a provision in the Budget Act to the effect that there is to be a target for general government net lending. It is reasonable not to legislate the target level in order to accentuate that different governments based on their opinions of the fundamental motives for the target *may* come to different conclusions. It is important, however, for the target's credibility for there to be a broad political agreement on the level in order to avoid changing it too often.

*A code of conduct for fiscal policy*

The Ministry of Finance report argues in favour of a *code of conduct* for fiscal policy formulated by the Government in a communication to the Riksdag. The code would state the overall fiscal policy objectives, existing intermediate fiscal targets (particularly the surplus target) and the Government's view of the division of responsibility in stabilisation policy and of how different conflicting objectives are to be handled in principle.

In the Spring Fiscal Policy Bill, the Government announced that work was beginning to draw up a code of conduct with the intention of presenting it in the Spring Fiscal Policy Bill in 2011. We welcome this. It would have been a big advantage when the economic crisis began if the Government had had in advance well-thought out principles on the situations in which fiscal policy should be used for cyclical stabilisation.[162]

One possibility would be to fix exactly how large the deviations from the target may be, according to the indicators selected for the target, which will trigger a reaction by the Government.[163] The Government could, for example, be obliged to specify what strategy it intends to follow if there is a deviation of more than 0.5 per cent of GDP from the surplus target for *either* the backward-looking *or* the forward-looking indicator that we recommended in the preceding section. In our opinion, it is important to also look backward if the surplus target is to be regarded as sufficiently binding. But this presupposes that importance is attached to the previous debt

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[162] We argued for this as early as our 2008 report (Fiscal Policy Council 2008, Sections 1.3 and 2.4).
[163] See Section 4.1.4 above.

accumulation as such (compare with our earlier discussion). If so, deviations from the target in previous periods could also initiate a discussion on whether there is reason to revise the surplus target in the future.

To get a sharp enough focus on deviations from the surplus target, special procedures alongside the usual budget process may be justified. Otherwise there is a large risk that medium- and long-term considerations will get swamped in the more short-term debate on the current year's budget. This could justify requiring the Government to submit a *special communication to the Riksdag* in the event of deviations from the target over a certain size according to the indicators selected. It may be seen as a parallel to the provisions that apply for the *Bank of England*, where the governor must write a special communication to the chancellor of the exchequer when inflation deviates more than one percentage point from the target. But the Riksdag could also routinely obtain opinions from such bodies as the Fiscal Policy Council, the National Institute of Economic Research and the National Audit Office when a communication of this kind has been drafted.

A code of conduct can also specify how the review of the surplus target level is to be carried out. The Ministry of Finance report proposes that it be done on a regular basis. We support this proposal. These reviews should not be done too often if they are to be credible, but it is also important that they actually take place. This may be a reason for specifying in a code of conduct that they will *normally* be done at a fixed time interval, for example, every ten years. This should obviously not be allowed to prevent a review at an earlier date if major unforeseen events justify it.

## 4.1.6 Surplus target and pension system rules

Fiscal policy and employment policy are closely related. Fiscal policy affects employment in various ways. At the same time, employment plays a key role in the public finances. We have therefore previously argued for the need for closer coordination of the fiscal and employment frameworks.[164]

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[164] Fiscal Policy Council (2009a), Sections 2.3-2.5.

The interplay between employment and public finances is particularly clear in the labour market *exit age*. The exit age is primarily influenced by the rules in the pension system. The higher the retirement age, the less strain the future demographic developments will exert on the public finances. The Ministry of Finance report puts much emphasis on this. The estimates aimed at deriving an appropriate balance target from long-term sustainability calculations are based on an exit age which rises in line with life expectancy.[165]

The pension rules are designed so that pensions tend to fall when life expectancy rises. They thus create incentives for individuals to postpone their exit from the labour market. But it is difficult to know how strong this effect is. The private financial incentives that the individual faces do not take into account the increased tax revenue generated by later exit/retirement. Individual decisions may therefore not automatically be expected to yield the 'socially desirable' adjustment of retirement/exit ages when life expectancy increases, without presumably also requiring collective decisions on changes to the pension rules.

In our 2009 report, we argued for a pension reform in accordance with earlier policies in Denmark which would involve some form of automatic adjustment of the pension rules to life expectancy.[166] Our outline also contained proposals for regular reviews of the pension rules in light of developments. There were no comments on this at all in the Spring Fiscal Policy Bill.[167] We wish, however, to return to the matter of the link between fiscal policy objectives and pension rules. A rising life expectancy sooner or later requires changes in the pension system. It may therefore be wise already now to supplement the fiscal framework with provisions on regularly recurring reviews of the pension rules in order to provide a basis for possible changes. It would at the very minimum help increase public awareness of how the requirements for long-term fiscal policy and pension rules are interrelated.

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[165] See Section 2.1 above.

[166] Fiscal Policy Council (2009a), Sections 2.3-2.5 and 6.3.

[167] Nor does the Ministry of Finance (2010a), which approaches the fiscal framework in a narrower sense, analyse these issues.

## 4.2 Expenditure ceiling

The expenditure ceiling requires the Riksdag to establish a nominal ceiling for central government expenditure for several years ahead. The role of the expenditure ceiling has been strengthened now that it is part of the Budget Act. It now stipulates that:

- It is obligatory to set an expenditure ceiling.

- The Government in the Budget Bill is to present a central government expenditure ceiling for the additional third fiscal year.

- There is to be a budget margin to handle both macroeconomic uncertainty and, if there is room, needed additional expenditures.

- Adjustments of an approved expenditure ceiling are to be made so that the ceiling retains the tightness originally intended in the event of 'technical' changes in various rules systems.

The expenditure ceiling is an important part of the fiscal framework. The ceiling was previously voluntary. It is good that the expenditure ceiling is now obligatory under the Budget Act. This increases the political cost of abandoning the system since the law would have to be amended.

When the expenditure ceiling first came into effect, ceilings were proposed in the Spring Fiscal Policy Bill and applied for the three following years, i.e. for a 3½ year period. In the early 2000s, expenditure ceilings were proposed for only one or two years ahead. Longer time horizons increase fiscal policy predictability and thus help strengthen its credibility.

In last year's report, we argued that the expenditure ceiling should not stand in the way of stabilisation policy measures during recessions. We are still of the opinion that an explicit *escape clause* specifying the circumstances under which the expenditure ceiling could be exceeded to allow for stabilisation policy measures should be incorporated into the Budget Act. Escape clauses can be found in the EU Stability Pact, for example. An explicit escape clause is preferable to various manipulations to get around the expenditure ceiling.[168] One possible alternative to an escape clause would be to

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[168] See Fiscal Policy Council (2009a), Section 1.3.2, Fiscal Policy Council (2009b), Fiscal Policy Council (2008), Section 2.5.4 and Calmfors and Flodén (2009).

introduce *two* budget margins: one for *cyclically dependent expenditures* and one for *unforeseen expenditures.*

Because expenditure ceilings apply for three years ahead, there may be technical regulatory amendments that affect government expenditure reporting. The Government has previously been criticised for having failed to make technical adjustments in the expenditure ceiling when these would have resulted in a decrease in the ceiling.[169] In our opinion, the technical adjustments are necessary and they must be applied *symmetrically*, i.e. both upwards and downwards.

Our previous reports have criticised the Government for having undermined the expenditure ceiling's credibility by paying the temporary increase in the local government grants for 2010 already in 2009.[170] Its aim has been to reduce the risk of formally exceeding the expenditure ceiling. This treatment is quite similar to the circumventions which took place under previous governments and were criticised by the current government.

# 4.3 Financial markets and stabilisation policy

The financial crisis has shown the need for regulatory changes and better supervision of the financial markets. There is a clear link to stabilisation policy as stabilisation policy affects the financial markets and the financial markets affect macroeconomic developments.

Already before the financial crisis, there was a discussion about what effects monetary policy has on credit volumes and asset prices. Some are of the opinion that an expansive monetary policy with low interest rates risks causing an unsustainable credit expansion and increase in asset prices even if price developments do not threaten the inflation target.[171] Even if one shares this concern, there are different opinions on how stabilisation policy should manage the risks in the financial markets.

Perhaps the most common view before the financial crisis was that economic policy decision-makers have just as much difficulty as other actors in identifying bubbles in the financial markets. In that case, the problems the bubbles give rise to are best handled with the

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[169] See the National Audit Office (2008b).
[170] Fiscal Policy Council (2009a), Section 1.3.2 and Fiscal Policy Council (2009b).
[171] See, for example, Borio (2005).

help of a strong monetary policy once the bubbles burst.[172] Another view was that monetary policy should take credit volumes and asset prices into account even if the decision-makers have limited ability to identify bubbles. Monetary policy should according to this view be tightened if credit volumes or asset prices rise extremely rapidly.[173] Finally, some were of the opinion that the monetary policy framework with its focus solely on the inflation target and stable resource utilisation is ill-conceived, and that there needs to be a broader view of macroeconomic stability that includes imbalances in the financial markets.[174]

After the financial crisis of recent years, most have now abandoned the view that prevailed earlier that bubbles are best handled only after they have burst. A consensus appears to have developed that changes need to be made in the way stabilisation policy takes the financial markets, credit volumes and asset prices into account. But how these reforms will look is still unclear, in part because there are different opinions on the causes of the financial crisis. Thus, for example, there is a discussion of the role interest rate policy has had in the growth of credit volumes and asset prices.

It is also unclear if interest rate policy is an effective instrument for trying to prevent similar crises in the future. There are many indications at least that interest rate policy is an *inadequate* instrument for handling imbalances in the financial markets. There need to be changes (and probably increased) regulation of these markets, and in particular, a clearer mandate for some authority to keep the interplay between financial markets, cyclical developments and general macroeconomic risks under observation.[175] We therefore support the Riksbank's (2010c) proposal to the Riksdag that the Government expeditiously examine how the fiscal frameworks should be reformed and what authority should be responsible for market surveillance from a macroeconomic perspective.

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[172] See, for example, Greenspan (2002), Trichet (2005), and Giavazzi and Mishkin (2006).
[173] See, for example, Ingves (2007).
[174] See, for example, White (2006).
[175] See Bank of England (2009), Blanchard et al. (2010) and Calmfors (2009).

# 5 The Government's forecasts

The Government's economic policy depends on good economic forecasts. This section evaluates the Ministry of Finance forecasts from a number of perspectives. The section begins with a description of the forecasts in connection with the dramatic developments from autumn 2008 until now. Then we analyse how good the Ministry of Finance forecasts have been over a longer period. We also discuss how the Government manages the uncertainty surrounding macroeconomic forecasts. Last, there is an analysis of whether the forecasts deviate from the normal during election years.

## 5.1 Forecasts and the financial crisis

The financial crisis entered its most acute phase when Lehman Brothers filed for bankruptcy on 13 September 2008. About one week later, the Government presented its economic forecast for 2009-2011 in the 2009 Budget Bill. The Government's assessment at that time was that GDP growth would be 1.3 per cent in 2009. This forecast was far too optimistic.

There has been some criticism of the Government for making a forecast which turned out to be so wrong. To some extent, the criticism is unwarranted. The Government's assessment in autumn 2008 did not deviate significantly from those of other forecasters. The reason for the major forecast errors was that no one predicted the dramatic events in the financial markets.

As Figure 5.1 shows, the Government's forecasts for GDP growth, unemployment, inflation and general government net lending from autumn 2008 through autumn 2009 were very similar to those of the National Institute for Economic Research (NIER). Both the Ministry of Finance and the NIER underestimated the severity of the crisis in autumn 2008. In spring 2009, the forecasts were drastically revised downwards. As late as November 2008, the Government expected growth in 2009 to exceed one per cent. When the Spring Fiscal Policy Bill was published in April 2009, the forecast had been revised downwards by more than five percentage points. This must be regarded as an extreme revision of the economic outlook.

**Figure 5.1 Forecasts for 2009 at different points in time**
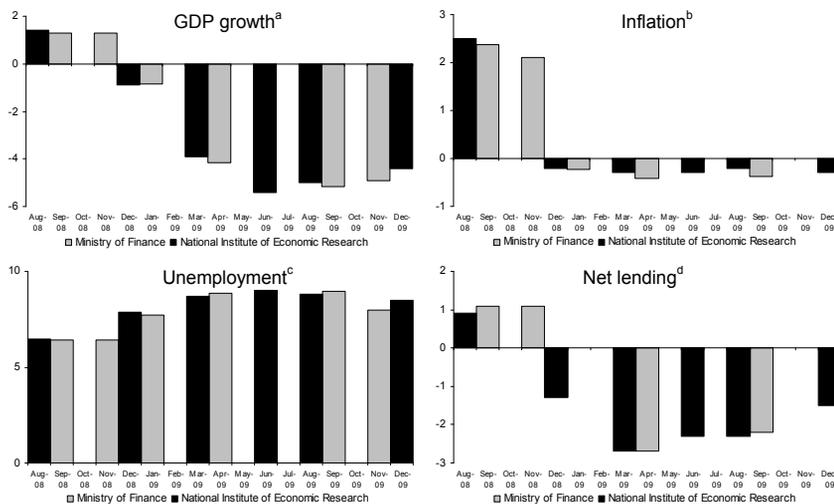


GDP growth[a]

Inflation[b]

Unemployment[c]

Net lending[d]

*Note*: a) Volume growth. b) Average annual increase in the consumer price index (CPI). c) Percentage of the labour force aged 16-64. d) General government net lending as a percentage of GDP.
*Sources*: Budget Bill 2009, Govt. Bill 2008/09:87, 2009 Spring Fiscal Policy Bill, 2010 Budget Bill and National Institute of Economic Research (2008b,c, 2009a,b,c).

The NIER made a somewhat smaller revision between its December 2008 and March 2009 forecasts. The revisions were due not least to the unprecedentedly large fall in GDP in the last quarter of 2008, which first became known when Statistics Sweden published the national accounts for 2008 in March 2009. There were other forecasters who saw the severity of the financial crisis much earlier.[176] But it is difficult to claim that the Government in particular lagged behind. A probable explanation for the Government's slowness in adjusting its forecasts is *how* the Ministry of Finance manages risk for worse outcomes rather than that the Government did not realise that there was a relatively high probability that a severe economic crisis could occur.[177]

The change in the outlook for GDP growth also led to a gradual adjustment in the forecasts for inflation and unemployment to the view that the crisis would be severe and long-lasting. The fall in GDP

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[176] See the evaluation of the forecasts for GDP growth in 2008 by Andersson and Aranki (2009). According to this study, the forecasters who historically were most successful were those who made the most pessimistic forecasts. It goes without saying that the forecasters who always expect the lowest growth are the most accurate in the event of large economic downturns.

[177] We discuss in more detail how the Government has managed uncertainty in its forecasts in Section 5.3.

was forecast to lead to low resource utilisation, which together with falling prices on raw materials in the wake of the crisis led to the revision of the inflation forecasts from over two per cent in autumn 2008 to negative numbers in spring 2009. The Ministry of Finance and the NIER revised the 2009 unemployment forecast upwards by 2.5 percentage points from autumn 2008 through spring 2009. But in autumn 2009, the unemployment forecasts were revised downwards by almost one percentage point when it became apparent that the labour market had weathered the crisis better than expected.[178]

The net lending forecasts were also substantially revised from autumn 2008 to spring 2009. The Government made a downward revision in the forecast for general government net lending as a percentage of GDP by 3.8 percentage points between the 2009 Budget Bill and the 2009 Spring Fiscal Policy Bill. The NIER believed that the outcome would be slightly worse, which can be attributed to the Institute's forecast of a more expansive fiscal policy in 2009 than that announced by the Government. The change in outlook for the public finances from the 2009 Budget Bill to the 2009 Spring Fiscal Policy Bill was primarily due to allowing the automatic stabilisers to work in the downturn but also to the discretionary stimulus measures announced in the government bill *Measures for Jobs and Adjustment* and in the 2009 Spring Fiscal Policy Bill. In summer 2009, statistics were published indicating that the Government had been too pessimistic about the development of public finances. Lower than expected costs for sickness benefits and sickness compensation resulted in an upward revision in the 2010 Budget Bill.

The economic outlook in 2010 was substantially revised in autumn 2009. Figure 5.2 shows the Government and the NIER forecasts for 2010 at different points in time.

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[178] See Section 1.2 for an analysis of employment developments during the crisis.

**Figure 5.2 Forecasts for 2010 at different points in time**
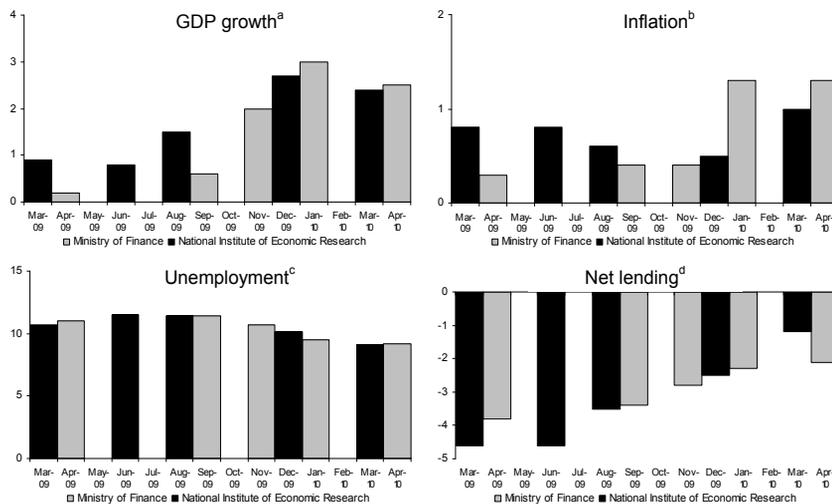


*Note*: a) Volume growth. b) Average annual increase in the consumer price index (CPI). c) Percentage of the labour force aged 16-64. d) General government net lending as a percentage of GDP.
*Sources*: Spring Fiscal Policy Bill 2009, 2010 Budget Bill, Ministry of Finance (2010c), Press conference with Minister for Finance Anders Borg 27 January 2010, 2010 Spring Fiscal Policy Bill and National Institute of Economic Research (2009a,b,c,d, 2010).

The Government's outlook for GDP growth in 2010 was considerably more pessimistic in the 2009 Spring Fiscal Policy Bill and the 2010 Budget Bill than the NIER forecasts in March and August 2009. The issue has been raised of whether the Government consciously painted a gloomy picture of the economic outlook for 2010 so that it could later, closer to the election, revise its forecasts upwards.[179] The Government has also revised the growth forecast for 2010 sharply upwards since the 2010 Budget Bill. In the 2010 Spring Fiscal Policy Bill, the Government estimates that growth will be 2.5 per cent in 2010, which is an upward revision by as much as 1.9 percentage points compared with the estimate in the 2010 Budget Bill.

Interpreting the Government's change in the estimate and the differences compared with the NIER as manipulating the forecasts for strategic reasons may immediately suggest itself. But at the same time, it must be borne in mind that the situation was extremely difficult to judge. Other important reasons for the differences compared with the NIER estimate in spring 2009 were probably that

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[179] See, for example, Petersen (2009).

the Institute both made a different assessment of the need for fiscal stimulus measures in 2010 and makes macroeconomic forecasts taking into account fiscal policy measures that have not been announced. In spring 2009, the NIER forecasted (and recommended) fiscal stimulus measures of SEK 50 billion in 2010 in addition to the policy that had then been announced, while the Government's forecast in the Spring Fiscal Policy Bill of that year only took into account policy that had been adopted or announced. Accordingly, the NIER estimated that general government net lending would be -4.6 per cent of GDP in 2010, while the Government's forecast in the 2009 Spring Fiscal Policy Bill was a net lending of -3.7 per cent in 2010.[180] Given the large differences in the fiscal forecasts, the discrepancy in the growth forecasts for 2010 between the 2009 Spring Fiscal Policy Bill and the March report of the NIER is not conspicuous.

It is more difficult to understand why the Government still had such a gloomy picture of growth in 2010 compared with the NIER in autumn 2009. In the 2010 Budget Bill, the Government in its GDP forecast could take into account the SEK 32 billion in measures announced in the bill. The difference between the Government and the NIER estimates of net lending was also relatively small in autumn 2009.

In spring 2010, the Government's forecasts were more in accordance with the NIER forecasts. In the 2010 Spring Fiscal Policy Bill, GDP growth in 2010 is estimated at 2.5 per cent compared with the National Institute of Economic Research March forecast of 2.4 per cent. The Government and the NIER forecasts for the public finances still differ. The Government estimates, based on adopted and announced fiscal policy, that general government net lending in 2010 will come to -2.1 per cent of GDP while the NIER estimate is that net lending will be -1.0 per cent if only policy that has been adopted and announced is taken into account. In addition, the NIER forecasts further fiscal stimulus measures, resulting in its unconditional forecast for net lending of -1.2 per cent of GDP.

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[180] The National Institute of Economic Research in March 2009 stressed that the forecasts would have been more alike had they had the same basis when it expressed the opinion that "the public finances in 2010 would show a deficit equivalent to -3.7 per cent of GDP with the policy adopted and announced thus far".

## 5.2 How good are the Ministry of Finance forecasts?

The discussion in the preceding section shows clearly how difficult macroeconomic forecasts are. It is typically difficult for outsiders to get an overview of the forecasting process, and thus what estimates form the basis of a particular forecast. One reason is that forecasters normally use a large amount of data from various sources and analyse the information with the help of a number of models and other analytical tools which are seldom explicitly described. For most forecasters, informal judgement plays an important role.

As a result of the lack of transparency, forecast evaluations most often focus on the predictive power (absolute or relative to other forecasters) and neglect to analyse the reason for errors more systematically. An alternative approach is to compare different forecasters' estimates with forecasts based on mechanical statistical models.

This section compares the Ministry of Finance forecasts with those of the National Institute of Economic Research and with simple statistical models over a longer time period. The aim is to decide what value the forecasting activity provides and whether there are circumstances when it is particularly important to devote resources to forecasting. The statistical models are greatly simplified. The intention is not to find forecasting models that would replace the forecasting methods used by the Ministry of Finance and others, but to see what a forecasting organisation can achieve beyond mechanically assuming that economic developments follow historical patterns.

Our comparison concerns GDP growth, unemployment and inflation from 2001-2008. For GDP growth, the statistical model assumes that growth in the current quarter (expressed in annual terms) is determined by growth in the preceding quarters according to a stable pattern.[181] The model is then estimated using *real-time data* for each quarter in the period from the second quarter of 1993 up to the quarter when the forecast is made. Because it uses real-time data, the model cannot be based on any information other than that available at that time. The models for unemployment and inflation

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[181] See Appendix 3 for a detailed description of the models.

are similar to that for GDP growth. Unemployment is assumed to depend on the unemployment level in the preceding quarters.[182] Inflation is modelled in the same way, though with monthly data for the rate of increase in the consumer price index (CPI) compared with the same month a year earlier. The forecasts are then evaluated against the latest outcome. Since the Ministry of Finance and the National Institute of Economic Research use more information and have access to more sophisticated models of the economy than we use in our statistical models, their forecasts should be substantially better than the statistical model forecasts.

In comparing the forecasts with the models, we study both the average forecast errors and the average absolute errors. Average errors show whether forecasters make systematic errors, and are often called *bias*. This is, however, a poor measure of predictive power. The reason is that large negative errors one year may be compensated for by large positive errors another year. The average absolute error, estimated as the average of all deviations from the outcome independently of their sign, is a better measure of predictive power. It gives an indication of how large errors a forecaster or model makes on average.[183]

As Table 5.1 makes clear, the average forecast errors for GDP growth 2001-2008 made by the Ministry of Finance and our statistical model are very similar, while the NIER made somewhat larger errors. During the period 2001-2007, when macroeconomic development was less dramatic than in the past two years, the model makes somewhat larger (negative) forecast errors than the forecasters do. Even in dramatic 2008, the model made average errors of the same magnitude as the Ministry of Finance and the NIER. The Ministry of Finance, the NIER and our model all made overly optimistic forecasts of GDP growth, seen over the entire period. In total, the bias for forecasters is low for all variables, indicating that the forecast methods do not systematically distort the forecasts. The statistical models systematically generate too low inflation and unemployment.

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[182] Unemployment is measured throughout according to the definition in effect before 2007. This definition excludes full-time students looking for work and thus the level is lower than under the current official definition. The reason for choosing the old definition is that it was the official definition for most of the period studied and that both the Government and the National Institute of Economic Research still make forecasts using the old definition.

[183] If the forecast exceeds the outcome by 2 percentage points one year and falls short of it by 1 percentage point another, the average error for these years is (2+(-1))/2=0.5 percentage points and the average absolute error (2+1)/2 =1.5 percentage points.

As to the average absolute forecast errors, it is only for GDP growth that the statistical models make errors of the same magnitude as the Ministry of Finance and the NIER. It is clear from Table 5.2 that this model even generates somewhat lower absolute forecast errors for GDP growth than the Ministry of Finance and the NIER do, seen over the entire period 2001-2008. During the period 2001-2007, when economic developments were relatively undramatic and forecast errors are small for all forecasts, the model also makes better growth forecasts than the forecasters do, while the model makes errors of about the same magnitude for 2008. This is in line with a familiar argument among forecasters, namely that a less dramatic macroeconomic development on one hand makes it easier to make forecasts with small forecast errors, but on the other hand makes it more difficult for forecasters to make better forecasts than simple mechanical models.[184] This argument does not hold, however, for inflation and unemployment. Here the statistical models make much worse forecasts than the Ministry of Finance and the NIER do. The models here give forecast errors more than twice the size of those in Ministry of Finance and NIER forecasts from 2001-2007, while the models' errors are relatively smaller (even though they are still larger from an absolute perspective) in 2008.

Tables 5.3 and 5.4 show the forecast errors for different time horizons. Horizon 1 corresponds to the Budget Bill for the current year and horizon 2 corresponds to the Spring Fiscal Policy Bill for the current year. Horizons 3 and 4 correspond to the preceding year's Budget Bill and Spring Fiscal Policy Bill respectively. Except for the statistical model forecast of GDP growth, the earlier the forecast is made, the greater the forecast errors are. This is to be expected. There is also some support showing that the statistical model forecasts are relatively worse on shorter horizons and better on longer. It is to be expected that the estimated forecasts are better than a model in the short run as recent information on the current situation then plays a significant role. Forecast errors for all the variables for more than one year ahead are large, both for the Ministry of Finance and the NIER as well as the statistical models.

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[184] See Stock and Watson (2007).

## Table 5.1 Average forecast errors

|  | GDP growth | | | Inflation (CPI) | | | Unemployment | | |
|---|---|---|---|---|---|---|---|---|---|
| Period | MoF | NIER | Model | MoF | NIER | Model | MoF | NIER | Model |
| 2001-2008 | 0.25 | 0.38 | 0.20 | 0.04 | -0.09 | -0.47 | -0.27 | -0.27 | -0.44 |
| 2001-2007 | -0.10 | -0.01 | -0.19 | 0.11 | 0.01 | -0.29 | -0.25 | -0.24 | -0.59 |
| 2008 | 2.73 | 3.08 | 2.88 | -0.42 | -0.77 | -1.74 | -0.42 | -0.45 | 0.60 |

*Note*: Forecast errors are forecast minus outcome and stated in percentage points. Unemployment refers to the previous official definition, which does not include full-time students. Ministry of Finance forecasts are taken from the Spring Fiscal Policy and Budget Bills beginning with the Spring Fiscal Policy Bill 2000 through the 2009 Budget Bill. The statistical models that are compared with the Spring Fiscal Policy Bills use data from the first quarter of each year (for GDP and unemployment) and from January of each year for the CPI. The models that are compared with the Budget Bills use data from the second quarter of each year (for GDP and inflation) and from July of each year for the CPI. For each year, there are four forecasts: the Spring Fiscal Policy Bill one year before the outcome, the Budget Bill, which is published one year before the outcome, the Spring Fiscal Policy Bill for the outcome year and the Budget Bill which is published in the outcome year. The National Institute of Economic Research forecasts are from The Swedish Economy, with the first forecast of the year (usually March) compared with the Spring Fiscal Policy Bill and the third forecast (August) compared with the Budget Bill.
*Sources*: Statistics Sweden, Ministry of Finance, National Institute of Economic Research and Fiscal Policy Council calculations.

## Table 5.2 Average absolute forecast error

|  | GDP growth | | | Inflation (CPI) | | | Unemployment | | |
|---|---|---|---|---|---|---|---|---|---|
| Period | MoF | NIER | Model | MoF | NIER | Model | MoF | NIER | Model |
| 2001-2008 | 1.11 | 1.20 | 1.09 | 0.41 | 0.45 | 1.06 | 0.38 | 0.30 | 0.89 |
| 2001-2007 | 0.88 | 0.94 | 0.83 | 0.38 | 0.38 | 0.97 | 0.38 | 0.28 | 0.93 |
| 2008 | 2.73 | 3.08 | 2.88 | 0.60 | 0.95 | 1.74 | 0.42 | 0.45 | 0.60 |

*Note*: See Table 5.1.
*Sources*: Statistics Sweden, Ministry of Finance, National Institute of Economic Research and Fiscal Policy Council calculations.

## Table 5.3 Average forecast errors on different time horizons

|  | GDP growth | | | Inflation (CPI) | | | Unemployment | | |
|---|---|---|---|---|---|---|---|---|---|
| Horizon | MoF | NIER | Model | MoF | NIER | Model | MoF | NIER | Model |
| 1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | -0.3 | -0.1 | -0.1 | -0.2 |
| 2 | 0.2 | 0.2 | 0.1 | -0.1 | -0.3 | -0.4 | -0.2 | -0.1 | -0.2 |
| 3 | 0.5 | 0.6 | 0.3 | 0.1 | -0.2 | -0.5 | -0.3 | -0.4 | -0.6 |
| 4 | 0.4 | 0.6 | 0.4 | 0.1 | 0.0 | -0.6 | -0.5 | -0.5 | -0.8 |

*Note*: Horizon 1 corresponds to the Budget Bill published in the year in question, horizon 2 corresponds to the Spring Fiscal Policy Bill the same year, horizon 3 corresponds to the Budget Bill published the year before and horizon 4 corresponds to the Spring Fiscal Policy Bill this year. See also Table 5.1.
*Sources*: Statistics Sweden, Ministry of Finance, National Institute of Economic Research and Fiscal Policy Council calculations.

## Table 5.4 Average absolute forecast errors for GDP growth on different time horizons

|  | GDP growth | | | Inflation (CPI) | | | Unemployment | | |
|---|---|---|---|---|---|---|---|---|---|
| Horizon | MoF | NIER | Model | MoF | NIER | Model | MoF | NIER | Model |
| 1 | 0.7 | 0.8 | 1.2 | 0.2 | 0.2 | 0.7 | 0.1 | 0.1 | 0.5 |
| 2 | 1.1 | 1.2 | 1.3 | 0.3 | 0.4 | 1.1 | 0.3 | 0.3 | 0.7 |
| 3 | 1.3 | 1.4 | 0.9 | 0.6 | 0.6 | 1.2 | 0.6 | 0.4 | 1.1 |
| 4 | 1.3 | 1.4 | 1.0 | 0.6 | 0.7 | 1.3 | 0.5 | 0.5 | 1.3 |

*Note*: See Table 5.1 and Table 5.3.
*Sources*: Statistics Sweden, Ministry of Finance, National Institute of Economic Research and Fiscal Policy Council calculations.

The overall conclusion is that the Ministry of Finance (and the NIER) forecasts of unemployment and inflation have been better than those of mechanical statistical models in the period 2001-2008. This is what one should expect. But somewhat surprisingly, this is not true of the GDP forecasts. Here the forecasting in the Ministry of Finance and the NIER has not brought any improvement over mechanical projections of historical developments.

## 5.3 Forecasting strategies and managing uncertainty

Macroeconomic forecasts are always surrounded by considerable uncertainty. Since forecasts often deviate substantially from outcomes, even in the relatively short run, there is reason for being prepared for errors in the forecasts. This is particularly important for forecasts that serve as a basis for economic policy.

How the uncertainty should be handled depends partly on the economic forecasts' fundamental goal. Here there are different views.

One view is that the forecasts should reflect the most likely outcome. If such a strategy is used, the risk picture may be asymmetric, i.e. the forecasters' estimate of the probabilities for better or worse outcomes may differ. The advantage of a forecast of this kind is that the probability of getting it 'spot on' is maximised. A disadvantage is that the forecast risks being quite wrong, particularly when there is substantial uncertainty. This can be explained by an example. Assume that there is a risk that there will be a financial crisis, but it is highly uncertain if it will happen. Assume also that the forecaster estimates that the probability that the crisis will not happen is 60 per cent and that the risk that the crisis will happen is 40 per cent. If GDP growth is estimated at 3 per cent in the former instance and -5 per cent in the latter, the most probable outcome is that GDP growth will be 3 per cent. A forecast like this may be spot on (with a 60 per cent probability), but there is a 40 per cent risk that it will deviate as much as 8 percentage points from the outcome.

An alternative forecasting strategy is for the forecasts to represent the *expected value* of the possible outcomes, i.e. the average of the different outcomes weighed with the forecaster's view of their probability. With this approach, the risk picture will be more symmetric. The risk of large errors in situations such as in the

example above is lower than if the forecast reflects the most likely outcome. In the example above, the expected value for GDP growth is $0.6\times3+0.4\times(-5) = -0.2$ per cent. Such a forecast will thus at best err 2.8 percentage points, but the forecast cannot deviate from the outcome by more than 4.8 percentage points.

The Ministry of Finance manages forecast uncertainty by both regularly updating the forecasts in light of new information and by presenting alternative scenarios. A number of analyses of alternative macroeconomic scenarios are generally appended to the forecasts in the budget bills. The alternative scenarios constitute an important complement to frequent forecast updates as economic policy has to be designed a relatively long time before it comes into effect.

The alternative scenarios considered in recent years' budget bills are shown in Table 5.5. Except for the 2010 Budget Bill, all the bills contain one alternative scenario with a better outcome than the base scenario and one with a worse outcome. This suggests that the Government has had a balanced risk picture throughout most of the economic crisis. But in the bills' scenario descriptions and the associated discussion of the risk picture, it is clear that this is not the case. For example, in the 2009 Budget Bill published when the financial crisis was at its most acute stage, the Government writes that "the downside risks [from the base scenario] are expected to prevail in the short run".[185] The Government further writes in 'the mini budget bill' *Measures for jobs and adjustment*, published in January 2009, that there "is a risk that the financial crisis will be more protracted than the assumption in the base scenario" and that "all in all the downside risks predominate".[186] The risk picture is also asymmetric in the 2010 Spring Fiscal Policy Bill. In it, the Government also presents two alternative scenarios, one of which is more positive and one more negative than the base scenario. The Government's current overall assessment of the risk picture is that "the risks of a weaker economic outcome than in the base scenario predominate".[187]

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[185] p. 128.
[186] Govt. Bill 2008/09:97, p. 38.
[187] p. 156.

## Table 5.5 Alternative scenarios and forecast revisions in the budget bills autumn 2008-spring 2010

| Government Bill | Scenario | Deviation from the base scenario | | Next bill's revision | |
|---|---|---|---|---|---|
| Budget Bill 2009 | Weaker domestic demand | GDP 2009 | -0.5 | GDP 2009 | -0.5 |
| | | Unemployment 2009 | 0.1 | | |
| | | Net lending 2009 | -0.3 | Unemployment 2009 | 1.3 |
| | Higher productivity | GDP 2009 | 0.8 | | |
| | | Unemployment 2009 | 0.4 | Net lending 2009 | -1.8 |
| | | Net lending 2009 | -0.3 | | |
| Government Bill 2008/09:97 | Acute financial crisis | GDP 2009 | -1.6 | GDP 2009 | -3.4 |
| | | Unemployment 2009 | 0.4 | | |
| | | Net lending 2009 | -0.5 | Unemployment 2009 | 1.2 |
| | More rapid recovery | GDP 2009 | 0.1 | | |
| | | Unemployment 2009 | 0.0 | Net lending 2009 | -1.6 |
| | | Net lending 2009 | 0.1 | | |
| Spring Fiscal Policy Bill 2009 | More rapid recovery | GDP 2009 | 0.6 | GDP 2009 | -1.0 |
| | | Unemployment 2009 | 0.0 | Unemployment 2009 | -0.1 |
| | | Net lending 2009 | 0.3 | Net lending 2009 | 0.5 |
| | Deflation | GDP 2010 | -0.1 | GDP 2010 | 0.4 |
| | | Unemployment 2010 | 0.1 | Unemployment 2010 | 0.3 |
| | | Net lending 2010 | -0.3 | Net lending 2010 | 0.4 |
| Budget Bill 2010 | More rapid recovery | GDP 2010 | 0.8 | GDP 2010 | 1.9 |
| | | Unemployment 2010 | -0.3 | | |
| | | Net lending 2010 | 0.4 | Unemployment 2010 | -2.2 |
| | Stronger productivity | GDP 2010 | 0.0 | | |
| | | Unemployment 2010 | 0.3 | Net lending 2010 | 1.3 |
| | | Net lending 2010 | 0.1 | | |

Continuation of Table 5.5

| | | | | | |
|---|---|---|---|---|---|
| Spring Fiscal Policy Bill 2010 | Weaker international outlook | GDP 2010 | 0.9 | - | - |
| | | Unemployment 2010 | 0.2 | | |
| | | Net lending 2010 | -0.1 | - | - |
| | Economic impact of the Government's policies | GDP 2010 | 0.2 | | |
| | | Unemployment 2010 | 0.2 | | |
| | | Net lending 2010 | -0.1 | - | - |

As Section 5.1 made clear, the Government's forecasts for 2009 from the 2009 Budget Bill up to summer 2009 were overly optimistic. One interpretation is that the Government, like the National Institute of Economic Research, realised too late how severe the financial crisis would be. In light of the risk picture that the Government presented, a more plausible interpretation is, however, that the aim in the forecasts' base scenarios was the most probable outcome, given the information then available. The result has been an asymmetric risk picture and has thus repeatedly forced downward revisions in the forecasts when fears of a worse outcome, like those expressed in the alternative scenarios, have been confirmed. The direction of the revisions in the budget bills follows the risk picture in the preceding bill, supporting this interpretation.

The accuracy of the forecasts would have been greater if the Government had instead taken the asymmetric risk picture and the alternative scenarios into account in the base scenarios, and thus made forecasts reflecting the expected (probability-weighted) outcome under the second strategy discussed above. The Riksbank appears to use just such an approach.[188] We are of course aware that this is easy to say with hindsight. We do not think that the Government has necessarily chosen an inappropriate forecasting strategy. However, the Government should take into consideration that the forecasting strategy that it appears to have chosen is particularly sensitive to situations like that in 2008. It may be argued that it is in precisely this kind of situation that it is, as a precaution,

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[188] Svensson (2010) writes, for example, that "the forecasts are expected value forecasts, and some probability of a negative outcome affects the expected value negatively. The forecasts are in this sense risk adjusted".

very important to have a forecasting strategy that minimises the risk of very large errors.[189]

It would be desirable if the budget bills made it clear how the Government manages macroeconomic uncertainty in its forecasting. We do not intend that the Government should assign exact probabilities for specific alternative scenarios. There are other ways of quantifying uncertainty in the macroeconomic forecasts. In addition to alternative scenarios, the Riksbank publishes, for example, uncertainty intervals around the base scenario based on previous forecast errors. Another possibility would be to publish subjective assessments of the forecasts' uncertainty. A strategy like this could be valuable as it makes it possible for uncertainty to vary over time, depending on the assessment of the situation when the forecast is made. Whatever the Government chooses to do, it would be desirable to clarify to the extent possible how uncertain it considers its forecasts to be.

## 5.4 Do politics influence forecasting?

### 5.4.1 Political considerations

Macroeconomic forecasts are not only used as a basis for decision-making for economic policy, but also function as information to the public on the economic outlook. It is not only the actual economic developments, but also the outlook that affect public opinion of the Government and its competence in designing economic policy. A sound macroeconomic performance has been seen to lead to greater electoral support for an incumbent government. Accordingly, it may be tempting for a government to publish overly optimistic forecasts before a general election.

Table 5.6 shows that it is not possible to substantiate any such pattern in Ministry of Finance forecasts of GDP growth over the past four decades. On the contrary, the average error, or bias, is (weakly) *negative* for forecasts published the year before a general election and positive in other years.

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[189] In addition to the forecasting strategies discussed in this section, there are alternative strategies that emphasise risks even more than expected value forecasts. Ellison and Sargent (2009), for example, discuss a forecasting methodology where the forecast is oriented towards the *worst-case-scenario judged to have a reasonably high probability*.

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**Table 5.6 Forecast errors for GDP growth in the Budget Bills for 1971-2008**

|  | All years | Election year | Not an election year |
|---|---|---|---|
| Average error | 0.28 | -0.05 | 0.41 |
| Standard deviation | 1.53 | 0.97 | 1.74 |
|  |  |  |  |
| Average absolute error | 1.25 | 0.77 | 1.46 |
| Standard deviation | 0.89 | 0.54 | 0.90 |

*Note*: Forecast errors are stated in percentage points.
*Sources*: Statistics Sweden and the Budget Bill for each year.

Nor does forecast quality appear to be worse during election years. Instead, the average absolute error is smaller for forecasts published during election years than for other years.

Electoral considerations thus appear not to have biased or impaired the forecasts to any significant extent. Our impression is that forecasting in the Ministry of Finance does not differ significantly from the methods used by non-political organisations. The forecasts generally appear to be based on professional estimates by officials in the Government Offices.

## 5.4.2 Different governments' predictive power

Nor does the incumbent government's party colour seem to have any influence on the forecasts. When we compare the forecasts published under the Social Democratic governments 2001-2006 with those published by the current Government, there is no difference that can be attributed to their respective predictive powers. It is clear from Table 5.7 that forecast errors were considerably smaller during 2001-2006 than in recent years but the Government and the National Institute of Economic Research's forecast errors were of the same magnitude during both periods. The better government forecasts in 2001-2006 than in 2006-2008 thus most likely reflect much less forecast uncertainty in the earlier period.

**Table 5.7 Different governments' forecast errors 2001–2008**

| | Social Democratic Government (2001-2006) | | | | Centre-right government | | | |
|---|---|---|---|---|---|---|---|---|
| | Average error | | Average absolute error | | Average error | | Average absolute error | |
| | MoF | NIER | MoF | NIER | MoF | NIER | MoF | NIER |
| GDP growth | -0.2 | -0.1 | 1.0 | 1.0 | 1.3 | 1.5 | 1.5 | 1.6 |
| Unemployment | -0.4 | -0.4 | 0.4 | 0.4 | -0.2 | -0.3 | 0.4 | 0.3 |
| Inflation | 0.0 | -0.1 | 0.5 | 0.5 | -0.3 | -0.5 | 0.4 | 0.5 |

*Sources*: Ministry of Finance, National Institute of Economic Research, Statistics Sweden and Fiscal Policy Council calculations.

# 5.5 Conclusions

The financial crisis has presented a major challenge for all macroeconomic analysts. The Government has, like the National Institute of Economic Research, been too slow in adjusting its forecasts to the recession. But we have no evidence that there has been any manipulation of the economic outlook. Nor from a longer perspective is there any support indicating that Ministry of Finance forecasts would be worse (or more optimistic) in an election year than otherwise.

In a longer perspective, the Government's forecasts for unemployment and inflation have proved more accurate than mechanical statistical models. However, neither the Government nor the National Institute of Economic Research forecasts for GDP growth are better than a simple statistical model. Here, there is obviously a need to improve forecasting methods.

The Government also needs to clarify how it takes into account the uncertainty that is always associated with macroeconomic forecasts. Currently the information in the budget bills on this subject is so vague that it is difficult for the reader to get an adequate picture of what the forecasts represent.

# 6 Labour market developments

Employment has declined by about two per cent from its peak in summer 2008 to spring 2010. This section describes developments in different parts of the labour market and compares labour market developments in the current economic downturn with those in earlier downturns. Section 6.1 discusses developments in different industries and regions while Section 6.2 analyses the flows to and from employment. Section 6.3 describes developments for different groups with a weak foothold in the labour market. Section 6.4 deals with the long-term effect of the crisis on employment. Section 6.5 discusses the appropriateness of using benefit dependency as an indicator of the labour market situation.

## 6.1 Developments in different industries and regions

The negative labour market consequences of the economic crisis are illustrated in Figure 6.1 which shows unemployment and the employment rate. The employment rate is expected to fall to approximately the same levels that prevailed in the crisis in the 1990s. But the change is not as great since the level of employment was lower at the beginning of the current crisis than before the 1990s crisis.

To get a perspective on employment developments in the current crisis, they are compared with developments during the 1990s crisis. It is, however, not entirely clear which period in the 1990s crisis is the most relevant for comparison purposes. We have therefore chosen two periods: (i) the first two years of the 1990s crisis (quarter 1, 1990 – quarter 1, 1992) in order to compare with an equally long period thus far into the current crisis; and (ii) the entire 1990s crisis from its start until employment sustainably rose again (quarter 1, 1990 – quarter 1, 1997) in order to have a comparison with a period with a large drop in employment.

**Figure 6.1 Unemployment and employment**
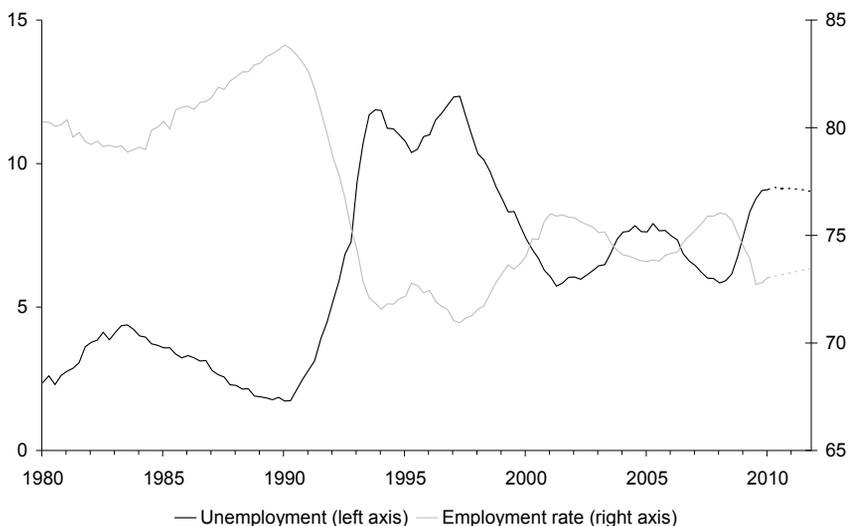


*Note:* Unemployment is measured as the number of unemployed as a percentage of the labour force and follows the ILO definition, which includes full-time students looking for work. The employment rate shows the number of people employed as a percentage of the population aged 16-64.
*Source:* National Institute of Economic Research.

Table 6.1 shows the change in employment in different industries. Almost all the downturn in employment in 2008-2010 has been in the manufacturing industry. Welfare sectors such as health care and education have been affected to some extent, while employment in other industries is largely unaffected. In contrast, during the crisis in the 1990s, employment decreased in several sectors. At that time, the construction sector, retail trade, and health care also experienced substantial contractions very early in the crisis. Because of the stronger public finances today, there is little risk of large contractions in employment in the public sector further down the road. This is an important difference from the 1990s crisis when employment in health care and social services shrank by almost 14 per cent between 1990 and 1997.

That the manufacturing industry has been worst affected during the current crisis can also be seen in the change in the number of employed by occupation (Table 6.2). The largest contraction in employment has occurred in the category plant and machine operators and assemblers, drivers and mobile-plant operators, etc.

## Table 6.1 Change in employment by industry

| | 2008 Q1 to 2010 Q1 | | 1990 Q1 to 1992 Q1 | | 1990 Q1 to 1997Q1 | |
|---|---|---|---|---|---|---|
| | Number of people | Per cent | Number of people | Per cent | Number of people | Per cent |
| Agriculture, forestry and fishing | -7 200 | -7.6 | -12 800 | -8.6 | -40 800 | -27.5 |
| Manufacturing, mining and quarrying and other industry | -78 550 | -11.8 | -135 400 | -13.7 | -202 300 | -20.4 |
| Construction | -5 600 | -1.9 | -28 600 | -9.2 | -107 400 | -34.6 |
| Wholesale and retail trade | -11 600 | -2.1 | -36 600 | -6.3 | -88 600 | -15.4 |
| Transportation and storage | -3,850 | -1.6 | -11 800 | -3.8 | -50 300 | -16.4 |
| Accommodation and food service activities | -650 | -0.5 | -3 100 | -3.3 | 1 700 | 1.8 |
| Information and communication | -10 700 | -5.9 | -4 100 | -3.7 | -30 100 | -27.1 |
| Financial and insurance activities, business services | 18 000 | 2.6 | 13 700 | 3.6 | 53 400 | 13.9 |
| Public administration, etc. | 14 200 | 5.6 | 8 800 | 3.8 | -21 800 | -9.5 |
| Education | 5 050 | 1.0 | 15 800 | 3.2 | -24 700 | -5.0 |
| Human health and social work activities | -26 950 | -3.8 | -30 400 | -4.3 | -99 500 | -14.2 |
| Personal and cultural services | 13 850 | 6.6 | 8 800 | 11.4 | 41 100 | 53.1 |
| No data available | -800 | -10.5 | -100 | -1.8 | -1 700 | -30.9 |
| *Total* | *-94 900* | *-2.1* | *-215 800* | *-4.9* | *-571 000* | *-12.9* |

*Source:* Statistics Sweden and Fiscal Policy Council calculations.

## Table 6.2 Change in employment by occupation, 2008 Q1–2010 Q1

| | Number of people | Per cent |
|---|---|---|
| Managers | 9 800 | 4.2 |
| Professionals | -10 500 | -1.2 |
| Technicians and associate professionals | 50 200 | 5.6 |
| Clerks | -31 150 | -7.8 |
| Service workers and shop sales workers | -12 200 | -1.4 |
| Skilled agricultural, forestry and fishery workers | -4 500 | -5.3 |
| Craft and related trades workers | -30 550 | -6.3 |
| Plant and machine operators, and assemblers | -49 950 | -11.3 |
| Elementary occupations | -10 500 | -4.8 |
| Armed forces | -1 650 | -18.3 |
| Occupation unknown | -3 800 | -54.3 |
| *Total* | *-94 900* | *-2.1* |

*Source:* Statistics Sweden.

**Figure 6.2 Open unemployment 2007 and change in unemployment 2007–2009 in different regional labour markets, percentage points**
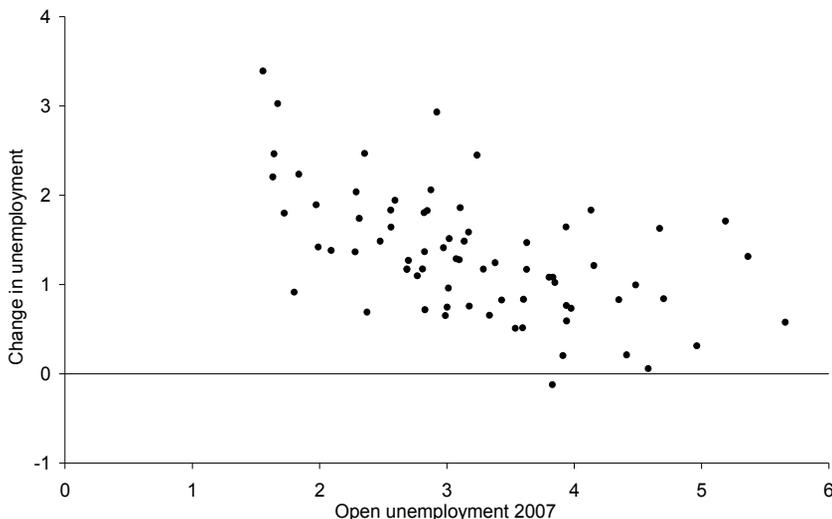


*Source:* Public Employment Service.

The effects of the crisis differ greatly between different regions. The hardest hit were industry clusters linked to the automotive industry such as Gnosjö, Olofström, Trollhättan and municipalities in Örebro County.[190] Most of these regions have previously had low unemployment and high employment. Figure 6.2 shows that regional labour markets with low unemployment before the crisis were in several cases more severely affected than regions where unemployment had been relatively high for some time before the crisis.[191]

Because employment decreased the most in male-dominated sectors and occupations, unemployment increased more among men than among women. This can be seen in Figure 6.3. In the initial stages of the 1990s crisis, unemployment also increased more among men than among women, but the crisis spread to the public sector and then unemployment among women increased dramatically. In the economic downturn in the early 2000s, both sexes were affected about equally.

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[190] We have compared employment developments with FKGs (the organisation for Scandinavian suppliers in the automotive industry) database of suppliers to the automotive industry. Almost all the counties that have had the biggest drop in employment are the counties that have had the highest percentage employed by the automotive industry's suppliers.

[191] The division of Sweden's 290 municipalities into 72 labour market regions is based on the commute to work between municipalities. The labour market regions are intended to represent regional labour markets.

**Figure 6.3 Unemployment among men and women**
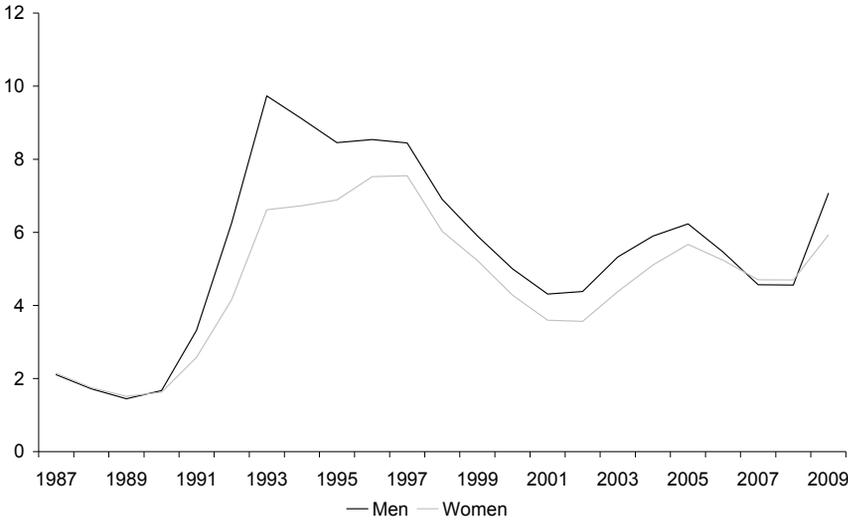


*Note:* 16-64 years. Older LFS definition where full-time students are not counted as unemployed.
*Source:* Statistics Sweden.

## 6.2 Flow to and from employment

Figure 6.4 shows how the flow in and out of employment has changed during the current crisis. From the second quarter of 2008, there has been a dramatic increase in the flow out of permanent employment to unemployment. The flow from temporary to permanent employment has at the same time declined, as has the flow from non-employment to permanent employment. All in all, considerably fewer people have permanent jobs today than in 2008. The flow from unemployment to temporary employment has also decreased, but this development had already started in early 2007.

Figure 6.5 shows the flows in relation to the size of each group. The curves thus show the risk of unemployment for the employed and the job chances for people without work. It is evident that the unemployment risk for the permanently employed almost doubled between the second quarter of 2008 and the second quarter of 2009. Subsequently, the risk of unemployment has declined slightly. The unemployment risk for people in temporary employment has been higher than for those in permanent employment throughout this period, but the increase has not been as sharp during the current economic downturn.

**Figure 6.4 Number of people moving in and out of employment, grouped by form of employment, 2006 – 2009**



Temporary employment to non-employment — Permanent employment to non-employment
Non-employment to temporary employment — Non-employment to permanent employment
Temporary to permanent employment (net)

*Note:* Seasonally adjusted values.
*Source:* Statistics Sweden.

**Figure 6.5 Unemployment risk and job-finding probability, grouped by form of employment, per cent**



Temporary employment to non-employment — Non-employment to temporary employment
Permanent employment to non-employment — Non-employment to permanent employment
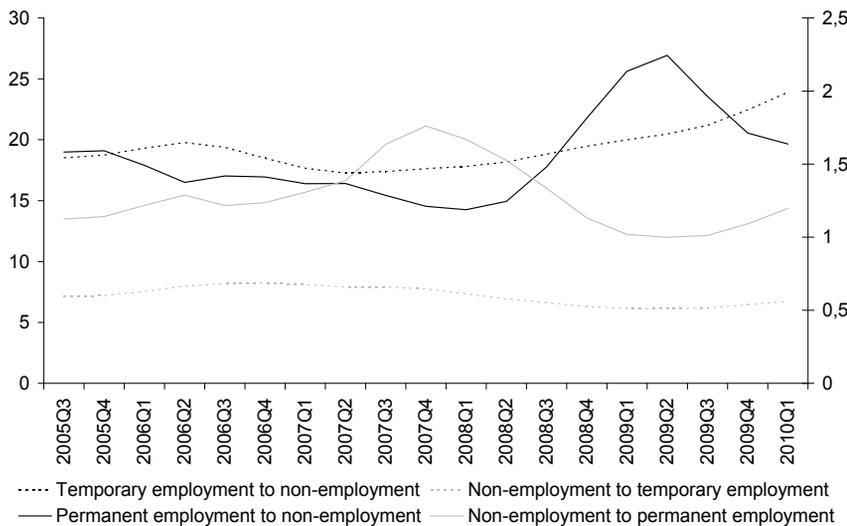
*Note:* The flows into and out of temporary employment are shown on the left axis. The flows into and out of permanent employment are shown on the right axis.
*Source:* Statistics Sweden.

## 6.3 Labour market developments for particular groups

During its term of office, the Government has taken several measures aimed at strengthening the position of groups with a weak attachment to the labour market. In our 2008 report, we analysed the labour market situation for young people (aged 16-24), older people (aged 55-64), people born outside Europe and people who have not completed an upper secondary education. Because the Government expressly prioritises these groups, there is reason to again review developments for them and make a comparison with earlier downturns.[192] It should be expected that as a result of the Government's reforms targeting precisely these groups, they are less affected by this crisis than previous ones when compared to the population as a whole.

The upper part of Table 6.3 shows changes in the employment rate for each group in the last three economic downturns. The relative change in employment rate in the lower part of the table shows how employment in each group developed compared with developments in the population as a whole. Employment among young people, for example, dropped 2.3 times more than employment in the population as a whole between 2007 and 2009. To supplement the picture, Figure 6.6 shows the ratio between the employment rate in the four groups and the employment rate in the population as a whole and Figure 6.7 the corresponding ratio for unemployment since 1987.

Table 6.3 shows that there is no common pattern for groups with a weak attachment to the labour market. Different crises have hit different groups with different force. Relative to the population as a whole, young people have been hit about equally hard during all the economic downturns since the early 1990s. But people born outside Europe appear to have fared much better during this crisis than during the previous ones. The older age group has fared somewhat better in this crisis than in the 1990s, but somewhat worse than in the downturn in the early 2000s. The opposite is true for people without an upper secondary education.

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[192] Labour market developments for various groups with a weak foothold in the labour market are discussed in the 2010 Spring Fiscal Policy Bill, Section 5.2.2. The Government describes its labour market priorities on p. 108.

## Table 6.3 Changes in the employment rate

| | All | Young people | Older workers (55-64) | Born outside Europe | Without upper secondary education |
|---|---|---|---|---|---|
| *Change in employment rate, percentage points* | | | | | |
| 1990–1992 | -5.8 | -13.9 | -2.4 | -12.7 | -8.0 |
| 1990–1997 | -12.4 | -26.4 | -6.8 | -20.0 | -14.0 |
| 2001–2004 | -1.8 | -5.1 | 2.6 | -2.5 | -4.4 |
| 2008 Q1–2010 Q1 | -2.8 | -5.7 | 0.6 | - | - |
| 2007–2009 | -2.2 | -5.0 | 0.0 | -2.4 | -5.1 |
| *Relative change in employment rate (change/ change for the population as a whole)* | | | | | |
| 1990–1992 | | 2.4 | 0.4 | 2.2 | 1.4 |
| 1990–1997 | | 2.1 | 0.5 | 1.6 | 1.1 |
| 2001–2004 | | 2.8 | -1.4 | 1.4 | 2.4 |
| 2008 Q1–2010 Q1 | | 2.0 | -0.2 | - | - |
| 2007–2009 | | 2.3 | 0.0 | 1.1 | 2.4 |

*Note:* The reason why people aged 55-64 show negative values for relative change in the employment rate during 2001-2004 and 2008 Q1–2010 Q1 is that the employment rate in this group rose at the same time that the employment rate in the population as a whole fell.
*Source*: Statistics Sweden.

There are several trend changes behind the figures in Table 6.3. Figure 6.6 shows how since the 1990s crisis, there has been a steady recovery in relative employment for immigrants from outside Europe, but not for young people. Part of the continued low employment rate for young people can be attributed to the sharp increase in the percentage of young people who are students. But developments have also been weak for young people in the labour market. Unemployment for young people has risen relative to unemployment for the population as a whole throughout the 2000s (see Figure 6.7). It is striking that youth employment has decreased so sharply during this economic downturn, since one of the Government's major initiatives has been to reduce the cost of hiring young people. There are several possible explanations why immigrants' position on the labour market has strengthened; for example, the group's composition may have changed or the foreign born may work to a lesser extent in sectors hardest hit by the crisis.[193]

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[193] See the 2010 Spring Fiscal Policy Bill, p. 114 ff.

**Figure 6.6 Ratio between the employment rate in different groups and the employment rate in the population as a whole**



Young people (16-24) — Older people (55-64) — Born outside Europe (16-64) — Not completed upper secondary education
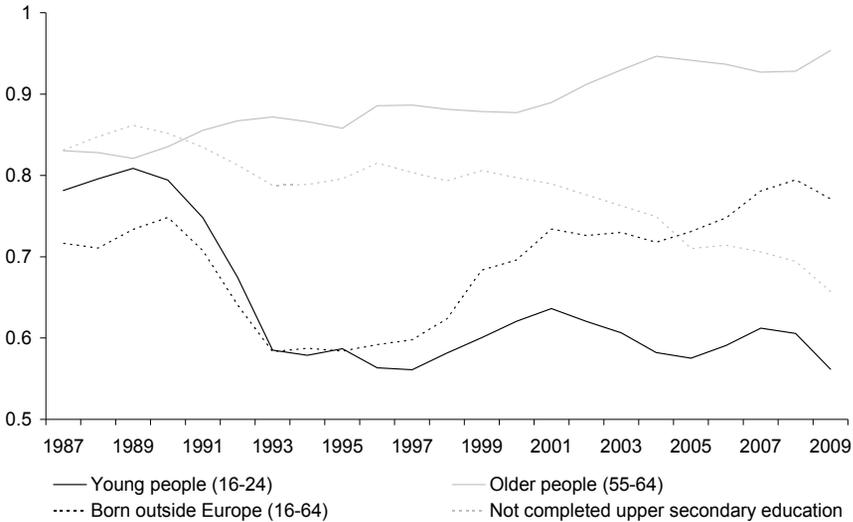
*Source*: Statistics Sweden.

Figure 6.6 shows that employment for older people has been relatively insensitive to cyclical swings. This economic downturn is no exception. In the group aged 55-64, the employment rate has remained almost unchanged, even though it has fallen by three percentage points in the population as a whole. There has been a positive trend in the relative employment rate for older people during the entire period studied. Figure 6.7 shows that unemployment has been consistently lower for older people than in the rest of the population. That older people as a group have fared so well during the crisis may have positive effects on employment in the long run, because older people who become unemployed often leave the labour market for good.

People who have not completed their upper secondary education appear to be one group faring progressively worse in the labour market. Their employment rate compared with the employment rate in the population as a whole has been declining steadily and relative unemployment in this group has risen since the mid-1990s.

**Figure 6.7 Ratio between unemployment in different groups and unemployment in the population as a whole**



Young people (16-24)                 Older people (55-64)
Born outside Europe (16-64)          Not completed upper secondary education
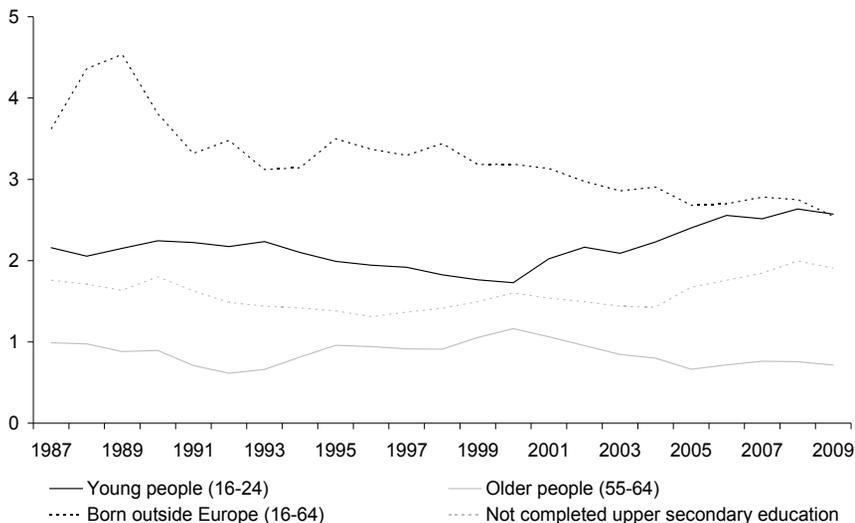
*Source:* Statistics Sweden.

The Government has taken special measures to increase the labour supply in the group over the age of 65. Since 2009, people over 65 receive double the earned income tax credit of younger people.[194] Figure 6.8 shows how the employment rate for people aged 65-74 and for the population as a whole has changed since the second quarter of 2005. Employment has risen without interruption for the age group 65-74. Although employment in other parts of the population has fallen sharply, employment among older people has continued to increase.

# 6.4 Risk of persistent unemployment

Previous experience of recessions indicates that there is a risk of what was originally cyclical unemployment becoming persistent, even after the business cycle has turned upwards. For example, according to the National Institute of Economic Research (2010), the equilibrium rate of unemployment in Sweden increased by about 5.5 percentage points after the 1990s crisis.

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[194] The earned income tax credit and its effects on employment for older people are discussed in more detail in Section 7.1.6.

**Figure 6.8 Change in employment rate for older people since the second quarter 2005, percentage points**
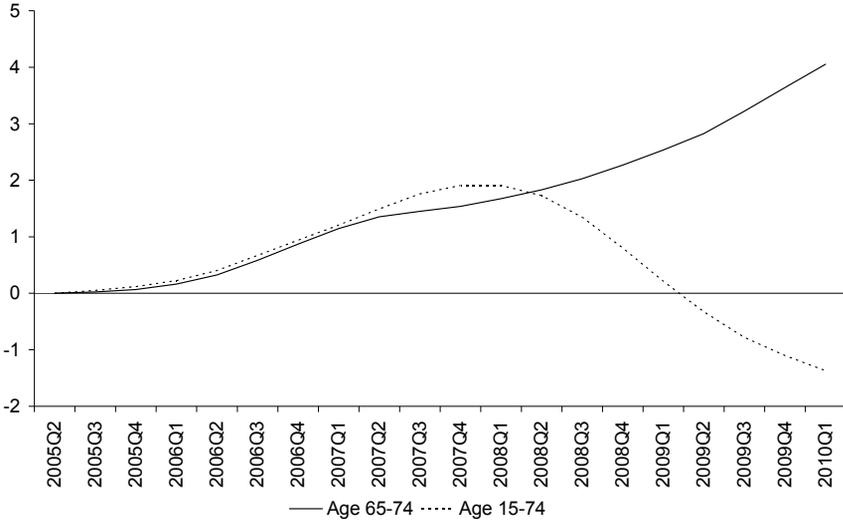


*Note:* The employment figures are seasonally adjusted.
*Source:* Statistics Sweden.

## 6.4.1 Reasons for persistent unemployment

There are several reasons why cyclical unemployment may become structural. Those who become unemployed may come from sectors that are contracting and have skills that are no longer in demand. The longer the unemployment spell is, the more obsolete the individual's skills become. There is thus less motivation to look for work. Employers may often be hesitant to hire people who have previously been long-term unemployed (statistical discrimination). Another possible mechanism works via wage formation. If when bargaining the union considers its employed members (*insiders*) first, but not those who are unemployed (*outsiders*), a cyclical upturn may lead to such large wage increases even at an early stage that it is not profitable for companies to hire new employees. A further reason for unemployment becoming persistent may be that investments that failed to materialise in an economic downturn lead to a fall in capital stock, which reduces the demand for labour.

According to the research, the risk of cyclical employment becoming persistent depends on institutional factors. High dismissal costs may, for example, reduce new hiring and make unemployment

spells longer. As a result of a generous unemployment insurance, it may take a long time for unemployment to resume its original level after a temporary macroeconomic shock. It depends on how jobseekers' search intensity and reservation wages are affected. Blanchard and Wolfers (2000) found, for example, that the macroeconomic shocks in the 1970s and 1980s seem to have led to greater increases in unemployment in countries that had generous unemployment insurance, strict employment protection, high taxes, a small volume of active labour market programmes and decentralised wage negotiations. A study done a few years ago indicated that the active labour market policy in Sweden contributed to keeping the unemployed in the labour force during the 1990s crisis.[195]

Our analysis of previous unemployment in Sweden indicates that increases in unemployment seem to have long-term consequences. This analysis is described in more detail in Bergman (2010a) and summarised in Box 6.1 below. Shocks in the labour market generally have a long duration, but the duration appears to be somewhat higher in economic downturns than at other times.

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**Box 6.1 Unemployment persistence**

Michael Bergman's background paper (2010a) examines persistence in Swedish unemployment.[196] The study distinguishes between *upward phases* in the economy and two types of downward phases: smaller downturns (*contractionary phases*) and larger downturns (*crisis phases*). One important question is whether the probability of shocks having permanent effects differs between various cyclical phases.

Figure 6.9 shows the results of the estimates. Dark grey bars indicate crisis periods. In total, four crisis periods are identified: the 1990s crisis, the budget consolidation in the mid-1990s, 2003 and the current crisis. Light grey bars indicate contractionary phases when unemployment was rising at a lower pace than in crisis periods. Lastly, upward phases with low or falling unemployment are identified. Upward phases include the entire 1970s, the second half of the 1980s (when unemployment declined from 5 to just under 2 per cent), the period after the budget consolidation in the 1990s and a short period around 2006.

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[195] Johansson (2006a).

**Figure 6.9 Swedish unemployment cycles 1970-2009**
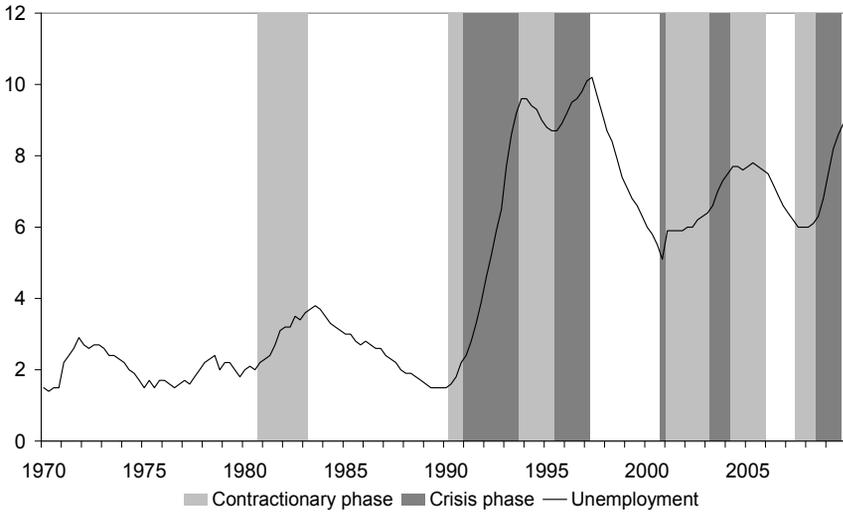


*Source:* Bergman (2010a).

The first column in Table 6.4 shows that unemployment on average has been twice as high during crises compared with upward phases and two percentage points higher in crises than in contractionary phases. Over half of the total of 159 quarters are in an upward phase, a fourth in a crisis phase and the remaining 28 quarters in a contractionary phase. The second column shows that the upward phases have been considerably longer than the downward phases: 19 quarters against about 6. In the 1990s and the 2000s, the difference in the length of the phases has been smaller. The third column shows how long it takes on average before half of the initial effect of a shock has disappeared. The half-life differs between phases. When a shock occurs in an upward phase, it takes more than 13 quarters before unemployment comes halfway back to its average value. The half-life is estimated at one half-year longer, about 15 quarters, when the shock occurs in a contractionary phase or a crisis.

Swedish unemployment shows a high degree of persistence. Shocks in the contractionary and crisis phases have somewhat more persistent effects on unemployment than shocks in upward phases But the speed of the downturn does not appear to play any role in its persistence.

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[196] The method has been developed by Hamilton (1990, 1994) and has previously been used by Bianchi and Zoega (1998), among others.

| Table 6.4 The Swedish unemployment cycle 1970-2009 | | | |
|---|---|---|---|
| | | Average | |
| | Unemployment (per cent) | Half-life (quarters) | Duration (quarters) | Number of quarters in respective phases |
| Upturn | 4.5 | 13.5 | 19.2 | 91.5 |
| Contraction | 7.1 | 14.9 | 5.7 | 39.1 |
| Crisis | 9.1 | 15.1 | 6.5 | 28.4 |

*Source*: Bergman(2010a).

## 6.4.2 Lower risk of persistent unemployment now than after the 1990s crisis

Several factors indicate that the risk of persistent unemployment may be less now than in previous crises. First, the changes in the unemployment insurance and earned income tax credit are expected to mitigate an increase in the equilibrium rate of unemployment because they strengthen the incentives to work. Second, there are probably less serious consequences from higher unemployment among young people relative to older people during the current crisis. It is often easier for young people than for older people to re-enter the labour market after an unemployment spell.[197] Older people who lose their jobs tend to leave the labour force permanently. Third, it is positive that immigrants born outside Europe have fared better now than in the 1990s crisis. As this group has traditionally had a weak position in the labour market, the risk of an increase in the equilibrium rate of unemployment because of labour market exclusion presumably decreases.

But there is reason to be concerned that people without an upper secondary education are faring progressively worse in the labour market. This indicates that structural factors, such as rising qualification requirements combined with high starting salaries, are making it more and more difficult for this group. Various forms of training are probably needed so that this group does not end up outside the labour market for a long time. We therefore take a positive view of the Government's initiatives in adult vocational training to improve the skills of people without an upper secondary education. There is, however, a risk that people in need of training to succeed in the labour market will not apply for adult vocational

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[197] See, for example, Arulampalam et al. (2001).

training. For this reason, we are critical of the reduction in labour market training to such low levels.[198]

The low volume of labour market training levels may also hamper the recovery in the labour market. The downturn has taken a toll on certain industries and occupations in particular. To the extent that these industries are permanently knocked out, unemployment will persist, even though other sectors experience labour shortages. Labour market training facilitates structural change in order to avoid this.

## 6.4.3   Inadequate   statistics   on   long-term unemployment

The weaker the links the unemployed have to the labour market, the greater the risk is that unemployment will become persistent. Thus it is important to be able to undertake studies of long-term unemployment and how it is connected with economic developments in general.

We would like to point out two problems concerning the availability of statistics. First, Statistics Sweden no longer reports any statistics on long-term unemployment that are comparable over longer time periods. This makes it impossible to do any in-depth analysis of long-term unemployment. Given that the Government's expressed intention for employment policy is to increase the number of people in work and reduce exclusion, this is a remarkable shortcoming in the available statistics. Second, there are uncertainties surrounding the Public Employment Service's statistics. The 2010 Spring Fiscal Policy Bill contains data on the number of unemployed and in programmes with various registration periods at the Public Employment Service. It is remarkable that the Employment Service does not regularly publish statistics like these on long-term registrations. We have previously tried to get such information from the Employment Service but have not succeeded. We are surprised that the Ministry of Finance, but not the Fiscal Policy Council, has been given access to these statistics.

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[198] This is discussed in more detail in Sections 8.1.3 and 8.1.4.

## 6.5 Benefit dependency as an employment indicator

The Government uses the number of full-year equivalents in the social security systems (benefit dependency) as an indicator of whether employment policy meets its objectives. Beginning with the 2009 Spring Fiscal Policy Bill, a cyclically adjusted measure of the number of full-year equivalents in the social security systems has also been estimated as an indicator of sustainable employment.[199]

There are, however, major problems in using benefit dependency as a measure of employment growth. Utilisation of the social security systems depends not only on the labour market situation, but also on the terms for social insurance: a reduction in the number of people in the social security systems may ensue from stricter requirements for getting social benefits even though employment does not increase.

Figure 6.10 shows the number of full-year equivalents in the social security systems and an estimate of what the number would have looked like if it had followed the historical correlation with employment. Since the early 1980s, the number of people supported by the social security systems has had a very strong correlation with employment. It rose sharply during the 1990s crisis and then declined somewhat when employment again increased. From 2007 onwards, the number of full-year equivalents in the social security systems has been substantially lower than labour market developments alone can explain.

Figure 6.11 shows the full-year equivalents for the five largest social security systems: sickness and activity compensation (formerly early retirement), sickness insurance, unemployment benefits, labour market measures benefits and welfare benefits.

Up to 2008, it was primarily sickness insurance (those on sick leave and sickness and activity compensation) and unemployment insurance that declined. The lower number of benefit days with sickness benefit is a result of the trend towards lower sickness absence – particularly a reduction in the number of people on long-term sick leave – that has occurred since 2003.[200] The reduction has not been matched by an increase in the other transfer systems. The number of people who collect unemployment benefits is now

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[199] See, for example, the 2010 Spring Fiscal Policy Bill, Sections 5.3 and 5.4.1.
[200] See Section 10.1 for an in-depth discussion.

increasing again but not to the same extent as the total number of unemployed. The total number of full-time equivalents in the social security systems is, as shown above, lower than that justified by the labour market situation. There thus seems not to have been any systematic shift from the unemployment insurance to other social insurances.[201]

**Figure 6.10 Number of full-year equivalents in the social security systems aged 20-64 and an estimate based on the percentage of people who are not employed, students or conscripts, per cent of the population**
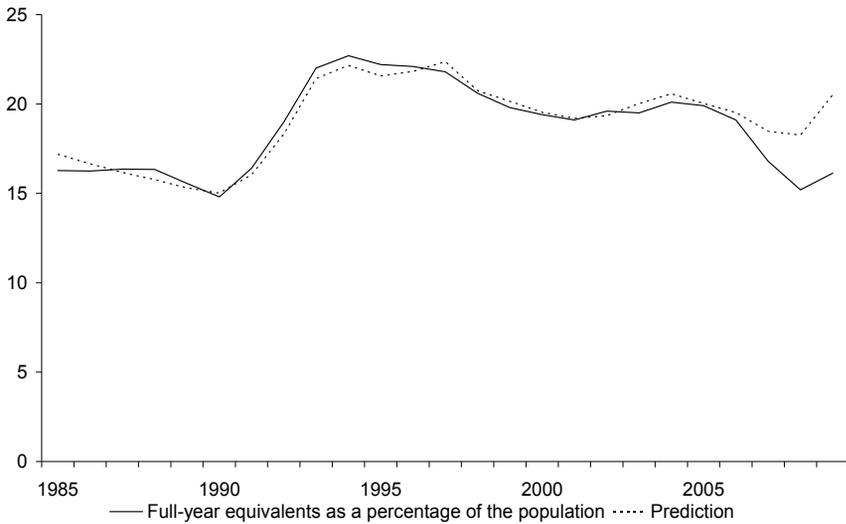


*Note:* The predicted number of full-time equivalents is a linear function of the percentage of unemployed minus students and conscripts. The correlation has been estimated based on data for 1985-2006. The values for 2009 refer to the second quarter and the number with welfare benefits is based on a forecast. All data refers to people aged 20-64.
*Source:* Statistics Sweden and Fiscal Policy Council calculations.

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[201] See also Section 11.

**Figure 6.11 Full-year equivalents aged 20-64 in various benefit systems, per cent of the population**
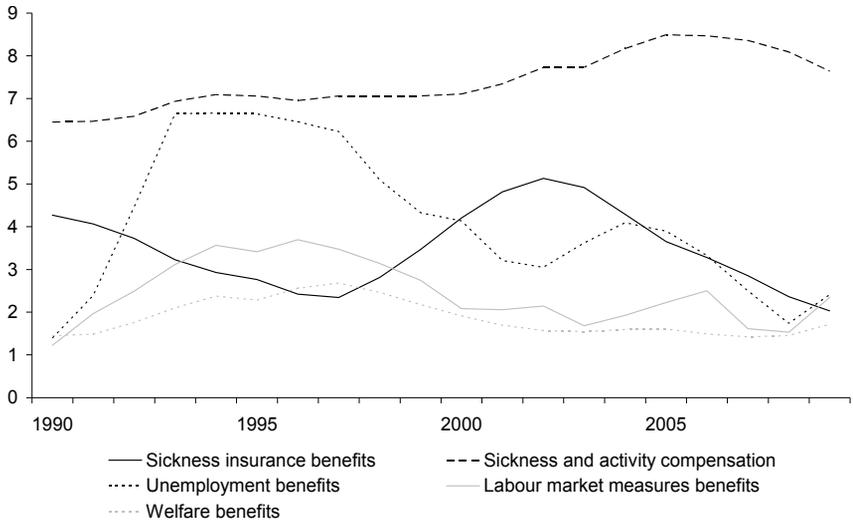


*Source*: Statistics Sweden.

# 7 Tax policy

This section discusses some of the most important parts of the Government's tax policy. Section 7.1 analyses the earned income tax credit, while Section 7.2 focuses on the permanent tax credit for household services (*RUT-avdraget*) and the Repair, Maintenance and Improvements (RMI) tax credit.

## 7.1 The earned income tax credit

The earned income tax credit is in the Government's opinion "the single most important reform" to "get more people working and reduce exclusion".[202] The credit has been introduced in four steps. This has resulted in tax cuts on earned income every year of the current government's term of office. The total costs in the form of reduced tax revenue (*static* costs without taking into account the effects on hours worked) come to about SEK 70 billion, of which the first step in 2007 represented about SEK 40 billion and each of the three subsequent steps about SEK 10 billion.

There has been an intensive debate on the earned income tax credit during which its effectiveness has often been questioned. The mechanisms by which the credit increases employment have also been discussed. In our view the Government has not explained these issues clearly enough. At the same time, there have been many misunderstandings in the criticism of the earned income tax credit.[203] Another leading issue in the debate is the fairness of taxing earned income and pensions differently.

In earlier reports, we have analysed the earned income tax credit in detail and concluded that it will have considerable positive employment effects.[204] Both the Government's continued emphasis on the earned income tax credit and the ongoing debate warrant further analysis. We discuss the following points:

- Earned income tax credits in other countries

- Various theoretical analytical frameworks

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[202] Budget Bill for 2009, p. 39.
[203] Fiscal Policy Council (2009b), pp. 9-11.
[204] Fiscal Policy Council (2008), Section 8.1, Fiscal Policy Council (2009a), Section 7.3 and Fiscal Policy Council (2009b), pp. 9-11.

- Empirical studies in other countries

- Ministry of Finance estimates of the Swedish earned income tax credit's labour market effects

- Public understanding of the earned income tax credit

- The earned income tax credit and pensions

## 7.1.1 Earned income tax credit in other countries

The debate in Sweden on the earned income tax credit is usually conducted as an isolated national debate. There is therefore reason for making an international survey to get a better perspective. [205]

The best known example of such a tax credit is the *Earned Income Tax Credit* in the United States. It was introduced in 1975 and has since been expanded several times. The tax rebate can amount to substantial sums: in 2007, the maximum amount for a family with two children was as much as USD 4 716 a year.[206] The United Kingdom has also had a generous earned income tax credit for a couple of decades which has been reformed in several steps. The current system is called the *Working Tax Credit* and in 2007 could give a household up to £4 135 a year.[207]

Earned income tax credits have gradually begun to attract growing interest in the international employment policy discussion. This is particularly true in the OECD and the EU. A large number of countries have introduced an earned income tax credit. According to the OECD's most recent *Employment Outlook*, at the beginning of 2007 a majority of OECD countries – 16 out of 30 – had some form of earned income tax credit (*in-work benefits* using the OECD's terminology). The countries are: Australia, Belgium, Canada, Finland, France, Germany, Hungary, Ireland, Korea, Japan, the Netherlands, New Zealand, Slovakia, Sweden, the United Kingdom and the United States. Denmark has also had an earned income tax credit since 2004, which the OECD study missed.

In most of these countries, the issue of the earned income tax credit has not been as politically polarised as in Sweden. The earned

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[205] Unless otherwise noted, this section is based on Immervoll and Pearson (2009) and the OECD (2009b).

[206] See, for example, Meyer (2008) for an overview of the American system.

[207] Immervoll and Pearson (2009). See also Blundell (2006) and Brewer (2009).

income tax credit has been introduced by governments on both the left and the right as well as by broad coalition governments. After changes of government, previous systems have not been dismantled. Instead, incoming governments have further expanded the earlier constructions. This has been particularly true of the United States and the United Kingdom. One explanation for this broad political consensus may be that the earned income tax credit usually has dual objectives. The credit is seen both as a method of reducing income inequality and as a method of increasing employment. The intent has been to achieve both these objectives simultaneously. On one hand, tax rebates for low-wage earners have directly increased their incomes. On the other hand, they have increased the profitability of working in the lower part of the income scale where there is most potential for increased employment.

The relative importance of income distribution and employment objectives has varied between different groups of countries. The distribution objective seems to have been most important in the Anglo-Saxon countries, while the employment objective appears to have played the bigger role in most EU countries that have introduced the earned income tax credit. This is logical, given the larger income inequalities in the former group of countries and the more difficult employment problems in the latter group.

Earned income tax credits can take quite different forms. In a smaller group of countries, the tax credit is *temporary* and limited to *former benefit recipients* who begin to work.[208] These credits aim at strengthening the incentives for making the change from receiving welfare benefits and inactivity to paid employment. This construction has the advantage of holding down the cost of the credits but the disadvantage that it does not in the long run strengthen the incentives to keep on working.[209] Temporary credits also of course have limited income distribution effects.

In several countries with an earned income tax credit, it is a *permanent* tax credit that is paid irrespective of workers' previous labour market status as long as other qualification requirements are met. These countries include Belgium, Denmark, Finland, France,

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[208] These are Australia, Belgium, Canada, Ireland, Korea, Japan and Slovakia. See Immervoll and Pearson (2009).

[209] The construction may actually strengthen the incentives to become benefit dependent for a time in order to qualify for the earned income tax credit at a later date.

Germany, Hungary, Ireland, Korea, the Netherlands, New Zealand, Slovakia, Sweden, the United Kingdom and the United States.

Another difference in the earned income tax credits in various countries is that they can be based on either household or individual income. In the Anglo-Saxon countries in particular, household income plays a role, whereas in continental EU countries (including Sweden), the individual's income is the criterion for qualifying for the credit. This difference reflects the relatively greater importance attached to the income distribution aspects compared with the employment aspects in the former group of countries. This also explains why dependent children often constitute a further qualifying criterion – or criterion for more generous credits.[210]

The Swedish earned income tax credit differs from corresponding credits in almost all other countries in one respect: it is paid to everyone who works regardless of how high their earned income is (even though it gives a larger percentage increase in income to low-wage earners than to high-wage earners). As far as we know, only two other countries, Denmark and the Netherlands, have the same design. In other countries, phasing out the credit begins at a specified earned income threshold to eventually end altogether. As can be seen in Figure 7.1, the income threshold at which the phase-out of the earned income tax credit begins in other countries is less than or around 50 per cent of the median income and the income threshold at which the credit disappears entirely is well below the median income.

Three conditions appear to have been crucial in the design of the Swedish earned income tax credit. First, the objective of increasing employment has been paramount while the distribution objective has played a smaller role.[211] Second, the expanded state childcare entails a large subsidy for all households that use it and the earned income tax credit therefore is not needed as a support for families with children

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[210] This is particularly true in the United States. See, for example, Meyer (2008). But responsibility for dependent children also plays a role in Belgium, France, Korea, the Netherlands and Slovakia.

[211] In the Budget Bill for 2007 (p. 136 ff) for example, the earned income tax credit for low and average income earners (which gives higher percentage increases in income than it does for higher income earners) is justified as follows: "the economic incentives to work are particularly weak for those with low incomes". It continues, stating that: "To have the maximum possible impact on the labour supply and employment, tax relief should aim in particular at making it pay to make the transition from full-time unemployment to part-time work. Tax relief should thus be designed so that the greater part of the tax relief goes to low and medium income earners".

## Figure 7.1 Net incomes qualifying for earned income tax credits in various countries



Households with two children          Households without children

Legend:
— Net income at which credit begins      ▲ Net income at which credit ends
● Net income for maximum credit          —— 50 per cent of median income
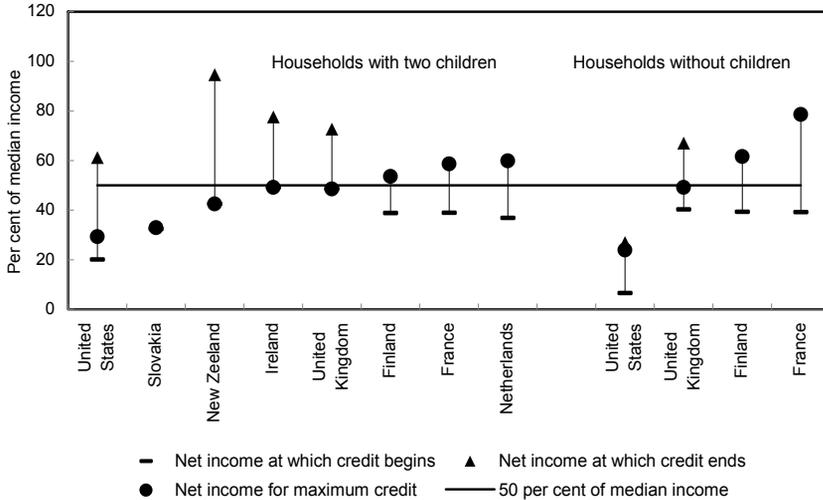
*Source*: OECD (2006).

with low incomes to the same extent as it is in many other countries.[212] Third, because of the generally high marginal taxes, a declining earned income tax credit would have high efficiency costs, since it would further increase the marginal effects in the phase-out interval.[213] This is discussed further in Sections 7.1.2 and 7.1.3.

Because the Swedish earned income tax credit is paid to everyone, it is relatively costly. This can be seen in Figure 7.2. The direct budget cost – without taking into account that the cost of other social benefits decreases and tax revenue increases to the extent that the objective of getting more people in work is achieved – comes to about 2.3 per cent of GDP in Sweden, while in most other countries, it is in the interval 0.3-0.5 per cent of GDP. The country closest to Sweden in direct budget costs is the Netherlands with about 1.6 per cent of GDP.

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[212]  Kolm (2008). The municipalities are only obliged to offer children whose parents are unemployed (or on parental leave) pre-school activities for 15 hours a week, although many municipalities offer more time. In 2005, children whose parents worked or studied attended pre-school an average of 32 hours a week, while the corresponding figure for children of people who were unemployed was 21 hours (National Agency for Education 2006). Consequently, state childcare to some extent functions as an *in-work benefit*.

[213]  Section 8.1.4 in Fiscal Policy Council (2008) contains estimates of these effects.

**Figure 7.2 Direct budget cost of the earned income tax credit in selected countries, per cent of GDP**
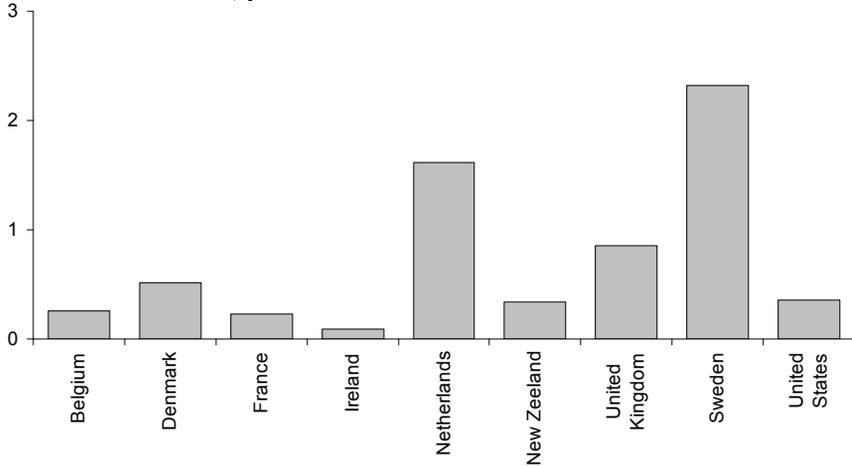


*Note*: The figure shows only the direct budget costs of the earned income tax credit. Not taken into account are the effects in the form of either reduced costs for other social benefits or increased tax revenue as a result of higher employment. The net costs of the credits are thus considerably less than the direct budget costs shown in Figure 7.2. The numbers refer to 2010 for Sweden, 2007 for the United Kingdom and the United States and 2008 for other countries.
*Source*: Fiscal Policy Council calculations.

Figure 7.3 shows the size of the earned income tax credit in different countries as a percentage of median after-tax income for both those who receive the maximum credit and those who have an income of 50 per cent of median income. One problem with the comparison is that the Swedish earned income tax credit, as discussed above, is linked to the individual, while the household income decides the size of the credit in most other countries. But a simple comparison can be made with Sweden if it refers to a household with only one earned income. If so, the maximum earned income tax credit in Sweden is about 11 per cent of the median income and the earned income tax credit for an income of 50 per cent of the median income is about 5 per cent of the median income. It is about the same order of magnitude as in the United States, New Zealand and the United Kingdom.

**Figure 7.3 Size of the earned income tax credit in various countries, per cent of median after-tax income**



▲ Maximum credit  ● Credit at 50 per cent of median income
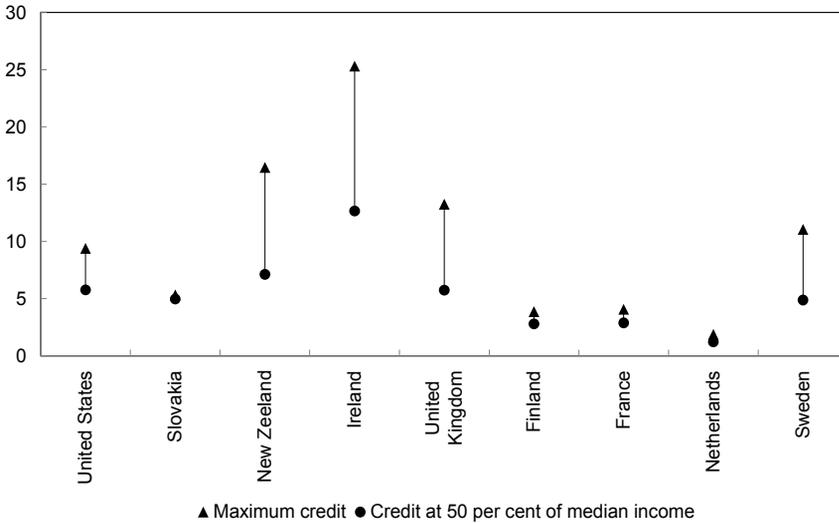
*Note:* The figure refers to households with two children. The earned income tax credit in Sweden, unlike most other countries, is individual and not decided by household income. In order to ensure comparability, it has been assumed for Sweden that there is only one wage earner in a household.
*Source:* OECD (2009b) and Fiscal Policy Council calculations.

## 7.1.2 Theoretical analytical frameworks

A rational discussion of the earned income tax credit presupposes an attempt to explain as clearly as possible the mechanisms through which employment can be affected. In our comments on the 2010 Budget Bill, we noted that that the Government's explanation of how the earned income tax credit can be expected to increase employment left much to be desired.[214] The 2010 Spring Fiscal Policy Bill did not do any better. Most readers probably do not find it particularly helpful when it states that "experience indicates that in the long run, labour supply determines employment" or that "reforms to unemployment insurance and the earned income tax credit have also aimed to *improve* (the italics are ours) wage formation".[215] The reader may admittedly suspect that the expected positive employment effects have something to do with the impact of the earned income tax credit on wage formation, but the exact significance of this is not

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[214] Fiscal Policy Council (2009b), pp. 9-11.
[215] The 2010 Spring Fiscal Policy Bill, p. 120.

revealed. This obscurity has also been reflected in some of the public debate.[216] Nor can it be said that critics of the earned income tax credit have contributed to an understanding of how the earned income tax credit is supposed to function. There is therefore reason to try to expound on the mechanisms that may be relevant.

*Supply-side effects*

The analytical framework most often used in studies of the labour market effects of the earned income tax credit is the theory of *labour supply*.[217] In such analyses, it is essential to differentiate between the effects on (1) participation in the labour force and (2) hours worked for those who already work.

*Labour force participation*

The primary aim of the Swedish earned income tax credit is to increase the number of people in work. *Labour force participation* is usually analysed as an individual choice between work in the labour market and leisure time in a broad sense (leisure time may also include work at home). In the simplest analytical models, this choice is seen as a decision that only takes into account the situation at a given point in time (and thus not expectations about the future). The individual will choose work in the labour market over leisure time if it provides greater utility. This means that the market wage must exceed the individual's *reservation wage* (the wage at which the individual's utility from working in the labour market is the same as the utility from not working). The reservation wage depends on such factors as individual preferences, other income and private wealth. The reservation wage thus differs from one individual to another. An earned income tax credit increases the profitability – after tax – of work in the labour market and consequently reduces reservation wages. This effect is because *the average tax rate* on earned income is lowered. A given market wage will therefore exceed the reservation wage for more people who will therefore choose to participate in the labour force.

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[216] See, for example, Expressen (2009a,b,c,d), Radio Sweden (2009a) or Radio Sweden (2010a).

[217] This is well described in Björklund et al. (2006), which is a basic textbook in Swedish in labour economics. SNS Economic Policy Group (2008) and the Ministry of Finance (2009b) have good summaries of how this theoretical framework can be used to analyse the labour market effects of the earned income tax credit.

Labour market decisions by people whose alternative to work in the labour market is unemployment with unemployment benefits are often analysed with the help of models for *search unemployment*. The thinking is that an unemployed person over time receives job offers with different rates of pay. Each time the unemployed person gets a job offer, he or she must decide whether or not to accept it. The decisions are therefore *forward-looking*. It is a matter of comparing the (present) value of two expected income streams: the income stream resulting from taking a job now at a particular wage and the income stream resulting from continuing to search for a job in the hope of later finding one with a higher wage.

With a forward-looking view, it is also optimal for the worker with a decision rule where the job offer is accepted only if the wage exceeds the reservation wage. This depends on unemployment benefits and the labour market situation (which decides the pace at which job offers come). But the reservation wage is also affected by an earned income tax credit: the higher the credit is, the higher the after-tax income from working relative to unemployment benefits and thus the lower the reservation wage will be. A lower reservation wage in turn increases the probability that the unemployed will get job offers with a higher wage than the reservation wage. This shortens unemployment spells and thus reduces unemployment.[218]

*Hours worked by those who already work*

According to the theory of labour supply*,* an earned income tax credit increases labour force participation. However, it is not clear how the number of hours worked by those who already have a job is affected.

The earned income tax credit in most countries is designed in the following way. In a phase-in interval, the credit increases with earned income, causing the marginal tax rate to fall. At the same time the average tax rate in this interval is reduced. In the next higher income interval, the credit is fixed and thus does not affect the marginal tax rate. However, the credit also reduces the average tax rate here. Thereafter the credit is phased out, i.e. it declines with the increase in income. In the phase-out interval, the marginal tax rate thus increases

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[218] A further mechanism is that an earned income tax credit can be expected to induce the unemployed to increase their *search intensity*, as the credit increases the return – after tax – of finding a job. But this effect is presumably less important. See Section 11.3.3.

compared with the situation without a credit, while the average tax rate falls (as long as there is still a credit).

In the phase-in interval, two effects work in opposite directions. On one hand, because of the lower marginal tax rate, the after-tax return to each hour worked increases. This *substitution effect* tends to increase the number of hours that the individual wants to work. On the other hand, the lower average tax rate leads to a higher income for workers who thus "can afford" to work less. This is usually called the *income effect*. Because the two effects go in different directions, it is not possible from a purely theoretical perspective to predict what the net effect will be on hours worked for those who already work and have earned income in the phase-in interval.

In the interval where the credit is fixed, and thus independent of income, the earned income tax credit does not change the marginal tax rate. There is therefore no substitution effect in this interval. The only effect is the income effect which clearly reduces the hours of work desired.

If there is a phase-out interval, then the earned income tax credit also clearly reduces the desired number of hours worked. This is due to both a negative substitution effect (because the marginal tax rate increases) and a negative income effect (on account of the lower average tax rate). The negative substitution effect may be particularly large if the marginal tax rate – as in Sweden – is already high under the initial tax rules without any earned income tax credit to be phased out. We analysed this in our first report, which showed estimates according to which the employment effects of the first two steps in the earned income tax credit would be sharply reduced by a phase-out.[219] This is a strong argument for doing what the Government has done: not phasing out the earned income tax credit at higher income thresholds.

*Interaction between supply and demand*

The analysis of individuals' labour supply decisions is *partial*, as it is based on an unchanged before-tax wage. This analysis explains why an earned income tax credit can be expected to increase the number of people who want to have a job but not why new jobs are created.

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[219] Fiscal Policy Council (2008), Section 8.1.4.

The latter implies an analysis of labour demand and wage formation as well.

In the very simplest model of labour market equilibrium, an upward sloping supply curve – according to which a higher wage, everything else unchanged, leads to a bigger labour supply – is combined with a downward sloping demand curve – according to which a lower wage (cost) is required for it to be profitable for companies to hire more people. As evident from Box 7.1, in an analytical framework such as this, an increase in the labour supply will lead to a lower wage level *before tax* than would otherwise have been the case. It gives firms an incentive to increase employment. The increase in employment will, however, be less than the initial supply increase, as the lower before-tax wage offsets some of the increase. At the same time, the *after-tax* wage will be higher with the earned income tax credit than without it. This obvious distinction between before-tax and after-tax wages has – strangely enough – often not been made clear in the public debate.[220]

### Earned income tax credit and collective agreements

Another way of analysing the interaction between supply and demand in the labour market is based on the theoretical models originally developed by the British economists Layard, Nickell and Jackman.[221] These models generally analyse only how large a part of the labour force is unemployed, but do not take into account the determination of labour force participation and hours worked. It is usually assumed that wages are decided in negotiations between employers and trade unions. The latter are expected not to try to get the highest wages possible but instead weigh the advantages of higher wages against their disadvantages of resulting in lower employment than would otherwise be the case. A standard result is that the market wage *after* tax will be a mark-up over the unemployment benefit *after* tax. The higher unemployment is, the smaller the mark-up will be. This is because higher unemployment makes it more difficult for employees who lose their jobs in one firm to find jobs somewhere else: this strengthens the incentives for wage moderation.

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[220] A typical example is the series of articles on the earned income tax credit in Expressen in 2009 (Expressen 2009a,b,c,d).
[221] See Layard et al. (1991) and (2005). Calmfors and Holmlund (2000) provide an overview of models of this type in Swedish.

According to this view, an earned income tax credit causes a decrease in unemployment (as a percentage of the labour force). This is due to less *wage pressure* when tax cuts on earned income increase the income differential between the employed and the unemployed and therefore create incentives on the part of unions to restrain wages in order to create more jobs (as it has now become even more attractive to be employed compared with being unemployed). This makes possible a labour market equilibrium with a lower before-tax wage than would otherwise be the case (precisely as in the above analysis).[222] At the same time, the after-tax wage will again be higher than without the earned income tax credit.

### *Joint analysis of unemployment and labour force participation*

It is desirable to analyse in the same theoretical framework how an earned income tax credit affects employment by its effects on *both* the percentage of the population in the labour force (labour force participation) *and* the percentage of the labour force that is employed. It is also desirable to take into account the matching problems which signal that *frictional unemployment* is always present on account of the difficulties pairing job vacancies and the unemployed.

Kolm and Tonin (2006) have done an analysis of this kind.[223] According to their model-based reasoning, firms cannot do any hiring without first having posted job vacancies that are associated with costs. The individual firm's decision to post a job vacancy is *forward looking* and takes into account both the expected future wage costs and the length of time it may take to fill the vacancy. The wages are assumed to be set through negotiations between employers and *individual* employees, so that the two parties share the surplus that a hiring creates.

According to Kolm and Tonin's analysis, an earned income tax credit results in a greater surplus to share between employers and employees. For the employer to benefit from the increased surplus, the before-tax wage has to fall (relative to what it would have been

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[222] Henreksson (2010) has questioned whether the Swedish earned income tax credit has thus far had such wage-dampening effects based on the observation that the collectively agreed real minimum wages have risen sharply in recent years even though the credit has given a larger percentage increase to low wage earners than to higher wage earners. But according to Statistics Sweden's wage statistics, wage increases for the lowest wage earners have been lower than for higher wage earners in recent years. The difference was somewhat smaller, however, from 2006-2008 than from 2004-2006.

[223] Their analysis is based on the matching model developed by Pissarides (2000).

otherwise). This makes it profitable for employers to post more vacancies, thus increasing employment at a given level of labour force participation.[224] But labour force participation will also increase. Under certain assumptions, participation increases both because the after-tax wage is higher and because the probability of finding a job increases for those entering the labour force (since firms post more job vacancies).[225]

Kolm and Tonin's analysis comes to the conclusion that an earned income tax credit increases the percentage of employed in the population both because the percentage of the population choosing to participate in the labour force increases and because the percentage of the population that is unemployed declines.

*Different time perspectives for the earned income tax credit*

Over what time horizon an earned income tax credit actually has an effect is a key issue. Economic theory often works with different models for different time horizons. These are defined by assumptions about what adjustments there is time to make. Unfortunately there is seldom any agreement on a more exact period of time for the adjustments, as different empirical studies give very different results on this point. Thus judgements on what adjustments will take place on different time horizons is normally more qualitative than quantitative.

The above analysis presupposes a time horizon that is long enough that wages and prices are totally flexible, but not so long that *all other* inputs (primarily the *capital stock*) can be varied freely. In wage-bargaining systems with time synchronised agreements, as in Sweden, this likely means that the time remaining in a current agreement (up to three years) sets a lower bound on how soon a complete price and wage adjustment can take place. But the time horizon may be considerably longer if for various reasons it takes time before all market participants completely change the prices

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[224] A further mechanism in the model is that the earned income tax credit, by making work relatively more profitable, creates incentives for the unemployed to increase their search intensity. This in itself increases employment for a given number of job vacancies, but it also has the indirect effect that firms are encouraged to post more vacancies, as the expected vacancy duration decreases when the unemployed look more intensively for a job.

[225] Under other assumptions, the after-tax wage may actually *fall* compared with what it otherwise would have been. Labour force participation in that case increases nevertheless, as the effect of there being more job vacancies on the value of participating in the labour force will always prevail over a possible negative effect on the after-tax wage.

and/or wages they control. One indication of how economists conceive the time period may be that in many empirical studies of (equilibrium) unemployment in OECD countries, they have worked with five-or six-year averages.[226]

The models described cannot be used to explain cyclical variations in employment for only a couple of years ahead.[227] In the explanatory models used for short time periods like this – often called new Keynesian models – the standard assumption is that nominal wages and prices are fixed. Hence output, and thus indirectly employment, instead will be determined by the aggregate *demand* for goods and services in the economy. Over this time horizon, an earned income tax credit probably does not have any significant effect on employment through its effects on the profitability of working but mainly through its effects on household real disposable income and thus household consumption.[228] Therefore, the short-term positive employment effect will be larger the more low-income earners, who can be assumed to have a higher marginal propensity to consume than medium- and high-income earners, benefit from the earned income tax credit.

In the short run, it should be expected that the long-term labour market effects of the earned income tax credit are completely swamped by the effects that the variations in demand lead to. This has been particularly true, of course, in the severe recession the Swedish economy finds itself in. Recent years' employment developments thus say very little about the earned income tax credit's effects in the long run.

Using a *very* long time perspective also affects the analysis of the earned income tax credit. An implicit assumption behind the above analysis is the inability to adjust the capital stock in a country to changed conditions with the same speed as prices and wages. One reason is that it generally takes a long time both to decide and to carry out large investments. Another reason is that an investment's costs can be expected to grow the more rapidly the investment is carried out.

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[226] See, for example, Nickell and Layard (1999), Blanchard and Wolfers (2000) and Belot and van Ours (2004).

[227] This is reflected, for example, in the fact that variables aimed at capturing cyclical variations are usually added to empirical studies of year-to-year variations in unemployment based on the theoretical models of the kind discussed in Sections 8.2.3 and 8.2.4.

[228] See also Fiscal Policy Council (2009b), pp. 9-11.

A common assumption in economic theory in some other areas – for example, in public finance – is that the return to capital between different countries is equalised over the very long run. In a small, open economy with free capital movements – as in Sweden – the return to capital will in that case adjust to the international return to capital. A temporary increase in the return to capital in an economy like this relative to the world economy will lead to such a large accumulation of capital that the return to capital in the end will be driven down to the same level as the international return.

An internationally determined return to capital also has consequences for wages. Under certain assumptions, the given return to capital will unambiguously determine the domestic wage level in the very long run. Assume that to start with, the domestic return to capital is the same as the international return. If an earned income tax credit is introduced that leads to wage restraint, the consequence is a return to capital that is higher than the international return. It starts a process where investment increases and the capital stock grows more rapidly than would otherwise have happened. This process continues until the domestic return to capital again is pushed down to the international level. When this happens, the before-tax wage level will be the same as without an earned income tax credit. This is due to the greater room created for wage increases because productivity has increased when the capital stock has grown. In that case, under certain conditions the *entire* gain from an earned income tax credit will in the very long run go to employees in the form of higher *after-*tax wages.

It is not clear from the Government's budget bills if that is what the thinking was in writing that wage formation is 'improved ' as a result of the earned income tax credit. We have not been able to find this kind of reasoning anywhere in the budget bills.[229] Even with this perspective, however, the mechanism through which jobs are created is reductions in the wage level (compared with what otherwise would have been the case) *preceding* the increased investment.[230] Then there is also the issue of whether the extreme conditions required in order

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[229] Nor is there any such reasoning in the Ministry of Finance report on how the labour market effects of different income tax reforms have been estimated (Ministry of Finance 2009b).

[230] If investment is to increase without being preceded by any effect on wages, firms need to be sufficiently far-sighted to foresee that the earned income tax credit will restrain wages in the future and therefore promptly adjust their investment decisions accordingly.

for the earned income tax credit not to have any effect on the before-tax wage level in the very long run are satisfied. This is questionable.

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### Box 7.1 Diagrammatic analysis of the labour market

The simplest statistical analysis of the interaction between supply and demand in Section 7.2.2 is illustrated diagrammatically in Figures 7.4a and 7.4b.

Figure 7.4a analyses the labour market from the *firms'* perspective. The figure shows how labour supply and demand (the number of people) depends on the market wage before tax. The higher this wage is, the more people there will be for whom this wage exceeds the reservation wage. Consequently, the supply curve is upward sloping. The demand for labour is downward sloping, meaning that demand increases if the before-tax wage (the firms' wage cost) falls. This reflects an assumption about diminishing returns, i.e. that each increase in the number of employed makes successively smaller additions to output. This is a reasonable assumption if output also requires the use of other production factors, primarily capital, which it takes time to vary when conditions change. In equilibrium, the wage is determined in such a way that supply and demand are equal (point A). Figure 7.4b shows the same supply and demand relationships but instead with the *after*-tax wage on the vertical axis.

An earned income tax credit shifts the supply curve in Figure 7.4a to the right. This is because the after-tax wage increases for each given before-tax wage and workers therefore reduce their reservation wages. A given before-tax wage will then exceed the reservation wage for more people than previously. Given unchanged before-tax wages, labour force participation would increase to the level indicated at point B. But the increase in the supply presses down the wage to a level indicated by point C where labour supply and demand are again equal. In this new equilibrium, employment has increased relative to its initial position, but the increase in employment is smaller than the increase in supply that occurred at the original wage (to point B). The reason why firms choose to employ more people than at point A is that it is profitable because the *before*-tax wage has fallen.[231]

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[231] This should not be taken to mean that the earned income tax credits introduced in various countries actually lowered the before-tax wage level from one point in time to another but rather that the wage level is lower than what it *otherwise* would have been. The reason is the continuing rise in productivity that takes place and that leads to an upward trend in the real wage level.

**Figure 7.4 Labour supply and demand**
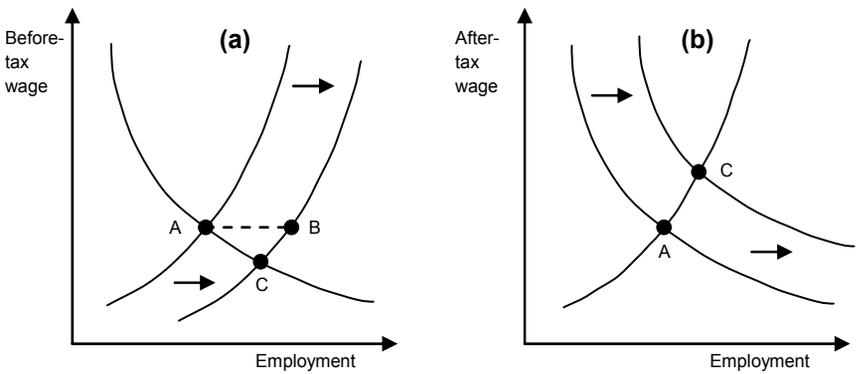


Figure 7.4b looks instead at the labour market from the *wage earners'* perspective. The figure shows what happens to the *after*-tax wage. In this figure, the supply curve does not shift, as here it illustrates the relationship between the labour supply and the after-tax wage. The introduction of an earned income tax credit is instead shown by a shift in the demand curve to the right. This occurs because with the credit, a given *after*-tax wage can now be achieved with a lower *before*-tax wage, i.e. with a lower wage cost for the employer. This makes it profitable to employ more people. According to the figure, this shift to the right by the demand schedule must increase the *after*-tax wage (to the level given at point C).

   The figures can also be interpreted so that they instead show how an earned income tax credit affects employment – and thus unemployment as a percentage of the labour force according to the Nickell-Layard-Jackman model discussed in Section 7.1.2. In that case, the vertical axis in the two figures still shows the before-tax wage and the after-tax wage respectively. But the horizontal axis now instead gives employment as a percentage of the labour force. The upward sloping curve should now be interpreted as a *wage-setting curve*, which shows what wage outcome the labour market parties try to achieve at various employment levels. The wage outcome sought is often called *wage pressure*. The downward-sloping curve as in the above diagram shows the labour demand. In this model, employment functions as an equilibrating mechanism.

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[232] See footnote 29.
[233] See, for example, Jackman (1990) or Calmfors et al. (2005), Chapter 3.

For each given before-tax wage, an earned income tax credit results in a higher after-tax wage. It increases an employed person's income relative to that of an unemployed person. So, there is more incentive for the union to hold back wages with a view to increasing employment. This can be shown as a downward shift in the wage-setting curve (Figure 7.4a). Consequently, wage bargaining will give a lower before-tax wage outcome, thus reducing the firms' wage costs and thus inducing them to employ more people.[232] In this case, Figure 7.4b at the same time also shows that the after-tax wage rises; as above, the earned income tax credit implies that each given after-tax wage will be associated with a lower before-tax wage so that the demand curve shifts to the right.

Under certain conditions, real before-tax wages will in the *very long* run (when the capital stock can vary freely) be determined only by the international return to capital and will therefore be independent of an earned income tax credit. According to established theory, it takes place under three conditions.[233]

1.  Output typically has constant returns to scale. This means that a given percentage increase in both labour and capital inputs yields an equally large percentage increase in output.

2.  Capital owners view the capital they own in the home economy and the capital that they own abroad as perfect substitutes.

3.  Goods and services produced in different countries are perfect substitutes for each other and thus they cannot differ in price.

In Figure 7.5, the horizontal line shows a real before-tax wage determined by the international returns to capital. If an earned income tax credit is introduced, according to our analysis above, it first lowers the wage at the level that corresponds to point B. Consequently, the return to capital rises above the international level. The result is increased investment and a gradually growing capital stock. This gradually shifts the demand curve for labour to the right, resulting in equilibria with steadily increasing real wages and employment. This process continues until the initial real before-tax wage – and thus the same return to capital as abroad – is restored at point C.

**Figure 7.5 Labour supply and demand with perfectly variable capital stock and a given international return to capital**
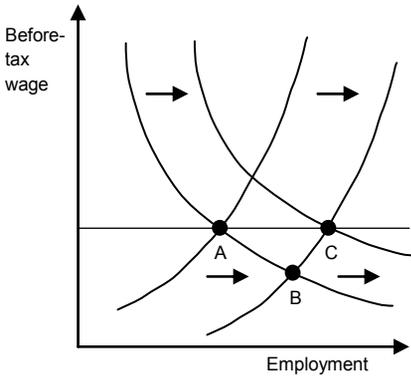


The question is whether the above three conditions are likely to be met in the very long run. The most problematic assumption is presumably that the output in different countries would be perfect substitutes in the long run. If so, all demand for a country's output would disappear if product prices exceeded those in other countries. This is unlikely. The assumption is also inconsistent with much of the economic research in recent decades which emphasises that different firms' products are *imperfect* substitutes for each other (monopolistic competition).

It could thus hardly be expected that the before-tax wage level even in the very long run would be unambiguously determined by the international return to capital and that an earned income tax credit therefore could create jobs without affecting the wage level. However, the effect on the wage level will be smaller in the long run than in the short run once the capital stock has adjusted.

## 7.1.3 Foreign empirical studies

There are a large number of studies of the effects of the earned income tax credit. As the credit has been in effect longest in the United States and the United Kingdom, most studies concern these two countries but a few also refer to other countries.[234]

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[234] More or less complete reviews of the studies made can be found in Hotz and Scholz (2003), Eissa and Hoynes (2006), Blundell (2006), Meyer (2008), the Ministry of Finance (2009b), Immervoll et al. (2007), Immervoll and Pearson (2009) and the OECD (2009b).

The studies are of two different types: The first type is *quasi-experiments* which are based on comparisons between groups who have received the earned income tax credit and groups that have not. These studies primarily use the fact that the earned income tax credit in the United States and the United Kingdom principally targets single mothers and compare employment developments for this group with developments for married mothers and single people without children (after controlling for other factors that may differ between these groups). These *differences-in-differences* studies can obviously only be conducted *after* an earned income tax credit has been introduced.

The other type of studies is a *microsimulation study* of labour supply. They use estimates of the relationship between the return to labour and the labour supply for different groups. The estimates are then combined with detailed information on grants and tax rules, including the design of the earned income tax credit, so that the effects on labour force participation and hours worked can be estimated. These microsimulation studies can be done also before an earned income tax credit is introduced and can be used to compare different potential constructions.

The two types of studies do not measure the same thing. The quasi-experimental studies capture the 'total effect' for a certain group, including possible wage reactions.[235] This 'total effect' for a particular group may not, however, translate into a 'total effect' for the entire economy, as the group effect only measures the *difference* in relation to another group. A difference in employment developments between the group that receives an earned income tax credit and a group that does not, may obviously be due to both increased employment for the former group and reduced employment for the latter group (on account of displacement effects).[236]

Almost all microsimulation studies estimate the effects on employment (which are assumed to be the same as the effects on the labour supply) for a *given* before-tax wage. This has been criticised by Azmat (2006) and Rothstein (2009) among others who tried to estimate how much an expanded earned income tax credit reduces

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[235] The estimated relationship consists of what in economic terminology is called 'reduced forms', as it is not possible to control (adjust) for the effects on wages.

[236] None of the two types of studies takes into account the possible employment effects of having to fund an earned income tax credit. The funding can strengthen or weaken the employment effects, depending on how it is done.

the before-tax wage in the United Kingdom and United States.[237] The conclusion is that the wage effects are substantial. For example, in his base scenario, Rothstein finds that each extra dollar spent on the earned income tax credit (targeted to families with children) results in a *drop* of USD 0.27 in the total earned incomes for women *before tax* (before-tax wage × number of hours worked). This is to be compared with an estimated *increase* in total earned incomes before tax of USD 1.39 if the before-tax wage had been assumed to remain unchanged. The difference between the two cases reflects both the direct effect of the wage reduction and the indirect effect of a smaller effect on the labour supply associated with a wage reduction.[238] The revised figures should only be seen as a numerical example, but they nevertheless show the considerable importance different assumptions about the wage effects have.

Even though the quasi-experimental studies and the microsimulation studies theoretically measure different things, they give – somewhat surprisingly – similar results.[239] The conclusions are as follows:

- The effects on labour force participation are considerably greater than the effects on hours worked for those who already work. A likely estimate from existing studies is that the average *participation elasticity* for the population as a whole is around 0.2. This means that an increase in the net after-tax wage by one per cent leads to an increase in labour force participation of 0.2 per cent.[240]

- The effects on labour force participation are considerably greater for single mothers than for other groups. Here the estimated participation elasticity lies in the interval 0.3–1.2.[241] The estimated effects are also much greater for low-income groups than for other groups.

- Even though according to the theory, the phase-out of the American earned income tax credit should have negative effects

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[237] In terms of our Figure 7.4.a earlier, the microsimulation studies in principle estimate the effects of the shift from the original equilibrium A to point B. Azmat and Rothstein instead estimate the effects of a shift from A to C.

[238] But in both cases, the total after-tax incomes for women increase. In the case of an unchanged before-tax wage, the after-tax incomes increase by USD 1.39, while they increase by USD 0.73 in the case with a before-tax wage reduction.

[239] See, for example, Eissa and Hoynes (2006) and Blundell (2006).

[240] See, for example, Immervoll et al. (2007) and Immervoll and Pearson (2009).

[241] See, for example, Eissa and Hoynes (2006) and Immervoll and Pearson (2009).

on the hours worked for people in the phase-out interval (see Section 7.1.2 above), it has been difficult to find empirical evidence of this. This may be due to poor measurements of hours worked or to employers' unwillingness to permit employees to vary their hours worked as they wish. But the explanation that most researchers appear to believe is that (even) the American earned income tax credit is so complicated that employees do not understand the consequences in the form of a higher marginal tax in the phase-out interval (see also Section 7.1.5 below).[242]

According to studies that have been done, the employment rate (employment as a percentage of the population in the group) for single mothers with children in the United States increased sharply compared with other groups (approximately 5-10 percentage points) as a result of the large earned income tax credit introduced for this group.[243]

Critics of the Swedish earned income tax credit sometimes maintain that there is no empirical support indicating that this kind of credit would increase the number of people in work. Our review shows that this is not true. There is an extensive research literature about the effects of the earned income tax credit, particularly in the United States and the United Kingdom, and the positive employment effects must be regarded as very well documented.

At the same time, it is important to understand the differences in the earned income tax credit between Sweden and other countries. There are a number of reasons why the earned income tax credit can be expected to be a less cost effective measure for increasing employment in Sweden than in other countries. One reason is that Sweden presumably makes more extensive use of active labour market policy to test the willingness to work, for example, of those receiving unemployment benefits. Another reason is that we already had considerably more single parents (mothers) in work at the time the credit was introduced in Sweden than the United States and the United Kingdom had before the equivalent tax reforms there.

A couple of studies have shown that an earned income tax credit for only low-income earners would be less cost effective in Sweden

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[242] Eissa and Hoynes (2006) and Meyer (2008).
[243] See, for example, Brewer et al. (2006) and Immervoll and Pearson (2009).

than in other countries.[244] This is because phasing out an earned income tax credit at higher incomes would add to the marginal tax rates, which were already high to begin with, and thus – according to the theory – give rise to quite substantial reductions in the number of hours worked for those who already work. On account of the even income distribution, these effects would be quantitatively very substantial if the phase-out started at a relatively low income level. Estimates we made in our first report showed that an earned income tax credit phased out in this way would have much less impact on the total number of hours worked than the construction now chosen.[245] Therefore it is sensible that the Swedish earned income tax credit is not phased out but includes everyone. The supply effects of a phase-out are, however, less the higher the income level at which the phase-out starts.

## 7.1.4 Ministry of Finance estimates

All the current Government's budget bills and spring fiscal policy bills have reported estimates of the long-term labour market effects of the earned income tax credit. These have been based on the supply effects. The 2010 Budget Bill estimates "that the effect of the earned income tax credit (all four steps, our comment) will be that close to 80 000 more people will get jobs in the long run" (p. 45) and that "the first three steps of the earned income tax credit" will "increase sustainable employment by about 70 000 people" (p.116).[246]

The methodology used by the Ministry of Finance in its calculations has evolved over time. At first, it made highly aggregated estimates for an average individual or a typical household. Beginning with the third step of the earned income tax credit, the effects have instead been estimated with the help of a microsimulation model. It consists of a detailed description of the rules in effect for taxes, transfers, pensions, unemployment benefits and so on within the framework of the FASIT model, which is used to describe how individuals' disposable income depends on how much they work. The FASIT model is then combined with statistical estimates that

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[244] Bassanini et al. (1999) and Immervoll et al. (2007).
[245] Fiscal Policy Council (2008), Section 8.1.4.
[246] In the 2010 Spring Fiscal Policy Bill, it was estimated that the four steps of the earned income tax credit and the reduced state tax increase sustainable employment by around 75 000 people, which appears to be about the same estimate as in the 2010 Budget Bill.

explain how labour force participation and hours worked for those already working are affected by the replacement rate in various social insurance systems and by other variables.[247] The analysis is very detailed. It distinguishes between nine different labour market situations for individuals: children, pensioners, students, people with sickness or activity compensation, those on parental leave, the unemployed, people on sick leave, those in work and others (people with neither earned income nor benefits from the social insurance system). In the statistical estimates used to describe individual behaviour, four different groups are singled out: single mothers, single women, single men and cohabiting couples.

The National Audit Office (2009b) has reviewed the Ministry of Finance estimates and also made its own calculations with the same model which give similar results. The Ministry's estimates are close to those made by others using similar methods.[248] This can be seen in Table 7.1

According to Ministry of Finance calculations, the pattern for different groups is what one would have expected from foreign studies. Of the total increase in the number of hours worked as a result of the first three steps of the earned income tax credit (and the cut in the state income tax in 2009), the 25 per cent with the lowest incomes accounted for as much as 70 per cent and of these, 80 per cent can be attributed to more people working.[249]

The National Audit Office makes some criticism of how the Ministry of Finance estimates are presented, in particular that the effects of the different steps in the earned income tax credit are not separately reported. Separate reporting of the different steps is essential in order to form an opinion of whether the earned income tax credit has diminishing returns, i.e. if the employment effects for each krona spent gradually decline. But the National Audit Office generally makes a quite positive assessment of the methods used in making the estimates.

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[247] The model has been developed by Lennart Flood at the School of Business, Economics and Law at the University of Gothenburg in cooperation with the Ministry of Finance. It has been described by the SNS Economic Policy Group (2008) and the Ministry of Finance (2009b). See also the National Audit Office (2009b).

[248] SNS Economic Policy Group (2008), Fiscal Policy Council (2008), and National Institute of Economic Research (2006, 2008a,d, 2009f). See also Liang (2008).

[249] Ministry of Finance (2009b), p. 40.

## Table 7.1 Different estimates of the earned income tax credit's long-term effects

| | I | II | III | IV | I-II | I-III | I-IV |
|---|---|---|---|---|---|---|---|
| **Effect on number of hours worked, per cent** | | | | | | | |
| Ministry of Finance | 1.3 | 0.5 | 0.5 | 0.3 | | 2.3* | 2.6 |
| National Institute of Economic Research | | 0.3 | 0.4* | 0.2 | | | |
| Swedish National Audit Office | 1.5 | 0.4 | 0.4 | 0.3 | | 2.2 | 2.6 |
| Swedish Fiscal Policy Council | 1.6 | | | | 2.0 | | |
| SNS | | | | | 1.8 | | |
| **Effect on number of people in work** | | | | | | | |
| Ministry of Finance | | | | | | 82 000* | |
| Swedish National Audit Office | 53 000 | 13 000 | 11 000 | 10 000 | | 78 000 | 88 000 |
| Swedish Fiscal Policy Council | 78 000 | | | | 97 000 | | |
| *Employed* | | | | | | | |
| Ministry of Finance | 71 000 | 18 000 | 20 000 | 8 000 | 90 000 | 72 000* | 75 000 |
| National Institute of Economic Research | | 13 000 | 27 000 | 9 000 | | | |
| SNS | | | | | 75 000 | | |
| *In the labour force* | | | | | | | |
| Ministry of Finance | | | | | | 66 000* | |

*Note:* The Roman numerals represent the different steps in the earned income tax credit. *states that the effect of the increase in the tax threshold in the state income tax is also included. The various estimates have been rounded to the nearest thousand.

It is also our opinion that the Ministry of Finance's model calculations have been done in a competent way. We also welcome the presentation of the estimates in detail in a special report. We called for external documentation like this in our first report.[250] The calculations are well in line with the methods used in the research in this area. Quasi-experimental studies like those discussed in Section 7.3 would certainly also have been desirable for Sweden. But it is not possible to compare groups that received the earned income tax credit with groups that did not when everyone receives it.[251]

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[250] Fiscal Policy Council (2008), Section 11. Unfortunately, the report on the labour supply effects from March 2009 is so far both the first and the only report in the in-depth report series from the Ministry of Finance's Economic Affairs Department that has been announced (see the 2009 Budget Bill, p. 57).

[251] A current study on behalf of the IFAU has attempted to use the variation in the size of the earned income tax credit that arises between the employed in different municipalities because the credit depends on how high the municipal tax is (see Fiscal Policy Council 2009a, Box 7.2, and Section 7.5

One weakness in the modelling is, however, that the effects for pensioners, students and those on parental leave are not taken into account. This is a rather serious problem, since there is thought to be considerable potential for increasing the labour supply particularly among pensioners and students. Furthermore, the earned income tax credit for people over 65 has been made larger than for others to encourage this group to increase its labour force participation.[252] It would have been valuable – not least for the debate now going on about the earned income tax credit being unfair to older people – if the supply and income effects for older people had been clarified.

One should not draw too wide-ranging conclusions from the similarity of the different estimates of the effects of the earned income tax credit in Sweden. It is to be expected as the same calculation models have generally been used. The broader issue is instead how relevant these models are.

The Ministry of Finance's calculations concern how the labour *supply* is affected at a *given* before-tax wage. In our reasoning above, we have questioned this assumption even with the supposition that a traditional supply-demand model would provide a good picture of the labour market.[253] It is clear from Section 7.1.3 that assumptions about a downward wage adjustment can lead to much lower estimates of the supply and employment increases. It is unclear what the Ministry of Finance's view of this is. One possible way of arguing that the before-tax wage is not affected would be to view the calculations as estimates over the *very* long run and in that case, assume that adjustments in the capital stock peg the real before-tax wage at a level decided by the global return to capital.[254] There has been no discussion of this kind, however, in neither the Government's budget bills nor the Ministry of Finance report on the labour supply effects of the Government's income tax reforms. The report instead views the analysis done as *partial* because it does not take wage formation effects into account.[255] Even if the effect on

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below). The variation in the size of the ensuing credit, however, is probably too small to be able to discern any effects.

[252] One problem in this context is, however, that it is difficult to estimate how the decision to retire can be affected by different variables based on historical data, as almost everyone over the age of 65 has already retired under the rules in force when they retired (SNS Economic Policy Group 2008).

[253] See Sections 7.1.2 and Box 7.1.

[254] Ibid.

[255] Ministry of Finance (2009), p. 12.

wages can be expected to be smaller in the very long run than in the short run, such effects are still likely.[256]

Our other main point concerns the view of unemployment in the models being used. The Ministry of Finance estimates only take into account search unemployment because it takes time for the unemployed to find a suitable job. This is presumably the explanation why the decrease in unemployment plays only a very small role in the increase in the number of people in work according to the calculations: only 10 per cent of the increase as a result of the first three steps in the earned income tax credit is estimated to be due to reduced unemployment.[257]

A more complete assessment of the earned income tax credit's effects on unemployment would also need to take into account the structural unemployment due to wages in collective agreements that exceed the level at which supply and demand are equilibrated and to difficulties in matching job vacancies and the unemployed.[258] An analysis like this should preferably also take into account that decisions on participation in the labour market are largely dependent on the labour market situation.

Our conclusion is that the Ministry of Finance estimates of the earned income tax credit's employment effects are well in line with the 'best practice' in the area. The issue on which a position must be taken is, however, how good this best practice is. There is a tendency in economic research to focus on greatly simplified, but long-established and thoroughly analysed, analytical models for individual behaviour that make precise empirical estimates possible.[259] At the same time it is often obvious that the assumptions do not take key

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[256] See Section 7.1.2 and Box 7.1 above.

[257] Ministry of Finance (2009b), p. 41.

[258] See Section 7.1.2. An alternative analysis like this was done in Andreas Westermark's background paper for our first report (Westermark 2008) and also to some extent in Anders Forslund's background paper (Forslund 2008). Westermark's conclusion was that the combined effect of the first two steps in the earned income tax credit and the reduction in the unemployment replacement rate reduced the equilibrium rate of unemployment by about one percentage point, while Forslund's corresponding estimate was between one and two percentage points. Both these estimates indicate that the earned income tax credit's effects on unemployment may be much greater than the Ministry of Finance calculations show.

[259] It could be maintained – with only some exaggeration – that in economics there is a general predilection for making "exact estimates of the wrong things" rather than "inexact estimates of the right things". Thus, for example, the Ministry of Finance (2009b) justifies the way the estimates are done by noting that it would be "impossible to have an empirically based opinion of the effects via wage formation". A more reasonable approach would be to supplement the supply analysis with the best possible estimates of how a consideration of the wage effects could change the conclusions, but of course indicating the uncertainty thought to exist.

aspects into account. It creates a dilemma for users like the Ministry of Finance. A good way to handle the problem would be to more clearly report in the budget bills the most important assumptions behind the estimates and the uncertainty that results when important mechanisms are not considered, instead of only reporting individual quantitative assessments. But our comments do not imply any criticism to the effect that the Ministry of Finance would have overestimated the long-term effects: it is not possible to have an opinion on whether consideration of additional effects would result in the estimated effects being greater or smaller.

## 7.1.5 Awareness of the earned income tax credit

One problem with the earned income tax credit is its complicated construction.[260] For people under 65, the credit is calculated by multiplying the municipal tax rate with the difference between what is called the the *base for calculating the earned income tax credit* and the *basic allowance* in the income tax.[261] The base for calculating the earned income tax credit depends on earned income. The basic allowance, however, depends on the *total* income (including income from transfers), not only on earned income. The construction makes it difficult for the individual to estimate how large the earned income tax credit will be at various earned incomes. Thus, it is also difficult to form an opinion about how high the tax will be and hence about the profitability of getting a job or increasing the number of hours worked.

The National Audit Office has discussed the issue of how much the public knows about the earned income tax credit.[262] Supplementary questions on the earned income tax credit were added to one of Statistic Sweden's ordinary Labour Force Surveys and the Office in addition conducted its own survey. Both these surveys indicate little public awareness of the earned income tax credit. According to the Statistics Sweden survey, only about 40 per cent of respondents know of the earned income tax credit. Of these, only about a quarter say that they are very familiar with the credit. The National Audit Office's own statistical survey indicates that only

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[260] See, for example, Fiscal Policy Council (2008), Section 8.1 or Lodin (2008).
[261] As to the earned income tax credit for people over 65, see Section 7.1.6.
[262] The National Audit Office (2009b). See also Andersson and Antelius (2010).

about 50 per cent of respondents both "have heard of the earned income tax credit and know that it only applies to earned income". Familiarity with the credit is particularly low among the unemployed, young people, and the foreign born, i.e. the groups that the credit is primarily intended to influence. In the National Audit Office study, about 8 per cent of those who work and had not heard of the credit stated that they would have chosen to work more if they had had information about it. Of those not working and also unfamiliar with the credit, approximately 15 per cent stated that they would have been more positive to employment if they had known about the credit.

A key issue is how the lack of awareness of the earned income tax credit affects its effectiveness. Studies in the United States have shown that few understand the incentives structure that the *Earned Income Tax Credit* there gives rise to.[263] It has also been shown that the reach of information about this tax rebate affects individuals' behaviour. According to one study, individuals who had easily accessible information on the tax rebate increased their labour supply compared with individuals who did not.[264]

The National Audit Office questions the Ministry of Finance estimates of the earned income tax credit's effects on the labour supply, because these "are based on the assumption that the public is fully informed about the earned income tax credit".[265] In our opinion, this objection is not quite correct.[266] The Ministry's estimates are based on estimates of how individuals' labour supply is affected by after-tax income (and thus by the tax rules) for different numbers of hours worked. But since knowledge of the tax rules in effect before the earned income tax credit was introduced is also inadequate, the estimates thus take into account the existence of imperfect information.[267] What is relevant here is not that people do not know much about the earned income tax credit, but that they presumably know much *less* about it than about other tax rules. To assess how this affects the estimates of the credit's effects, more information is

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[263] See Liebman (1998) and Romich and Weisner (2000) respectively.
[264] Chetty and Saez (2009).
[265] The National Audit Office (2009b), p. 62.
[266] See also Section 7.1.4.
[267] Thus, for example, Klevmarken et al. (1995) showed that the majority of those asked in a survey did not know what the marginal tax was on an increase in earned income in the tax system in effect in 1992.

needed about *how much poorer* knowledge of the earned income tax credit is.

How important detailed knowledge of the tax rules is for behaviour presumably depends on the time perspective. In the long run, the fact that the earned income tax credit results in a higher income, and thus a higher standard of living for those who work, may lead to changed *norms*. This can be expected to affect behaviour even though many individuals do not have a detailed knowledge of the tax rules. It is also likely that the fact that wage earners find that they have more 'money in their wallets' after taxes has an effect on wage demands even though people are not any more familiar with the tax rules.

The National Audit Office concludes that efforts to inform people about the earned income tax credit should be increased. We share this conclusion. It is reasonable to think that greater efforts to inform the public can increase the earned income tax credit's effectiveness. Such efforts are relatively inexpensive, particularly when compared to adding more steps to the earned income tax credit. Considering the importance that the Government has given the earned income tax credit, it is remarkable that it has not put more weight on efforts to inform the public.

## 7.1.6 Earned income tax credit and pensions

There has been an intensive debate going on about whether it is 'unfair' that as a result of the earned income tax credit, the gainfully employed and pensioners are taxed differently. Economic research cannot answer the question of what role income distribution considerations should play in tax policy. It is a matter of values. But some reflections may nevertheless be justified.

The chief aim of the earned income tax credit stated by the Government is employment policy, not income distribution policy.[268] On this basis, it is logical to have a tax credit for earned income but not for pensions.

The call for equal taxation of earned income and pension income is often justified by arguing that pensions are 'deferred wages'. But this is only true to the extent that the pension rights are accrued on

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[268] See Section 7.1.1.

earned income and not on social security benefits. From a purely theoretical perspective, it would be conceivable to apply the earned income tax credit to both earned income and that part of the pension that is accrued on earned income (thus only on the part that was actually 'deferred wages'). Also an earned income tax credit on what are actually 'deferred wages' would strengthen the incentives to work, since the higher incomes then would lead to lower taxes on future pension incomes.[269] But a system in which one would need to keep track of how large a part of the pension rights were accrued on earned income versus other income would obviously be even more complicated than the current system.

It is often forgotten in the debate that the earned income tax credit also goes to people over the age of 65 who work and that it is more generous for this group than for others.[270] This is illustrated in Figure 7.6. With an earned income of SEK 100 thousand, the 2010 earned income tax credit for a person over 65 was more than double that for a person under 65 (SEK 20 thousand as against about SEK 9 thousand). With an earned income of SEK 200 thousand, the difference was somewhat smaller: SEK 25 thousand compared with about SEK 14 thousand. This compensates for the income redistribution from older people to younger employed people that the current earned income tax credit involves. But the compensatory effect is only partial, since many older people either cannot work or do not want to continue working.

A further reflection is that the income redistribution effects of the current earned income tax will change over time. It is important to distinguish between, on one hand, redistributions of (life) incomes between persons and on the other hand, redistribution of a given life income between different parts of the life cycle for a particular person. Distribution policy values would chiefly be expected to be tied to the first type of redistribution.

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[269] Under certain theoretical assumptions about individuals acting with a view to the future, it does not play any role whether an earned income tax credit is based on current earned income or on future pensions accrued on earned income. But in practice, it is probable that an immediate credit acts as a greater incentive to work than the equivalent credit in the future.

[270] For people over the age of 65, the earned income tax credit comes to 20 per cent of earned income up to SEK 100 thousand. In the interval SEK 100-300 thousand, the credit is SEK 15 thousand plus 5 per cent of income. For incomes over SEK 300 thousand, there is a fixed tax credit of SEK 30 thousand.

**Figure 7.6 Earned income tax credit and annual income for people under and over 65 years**
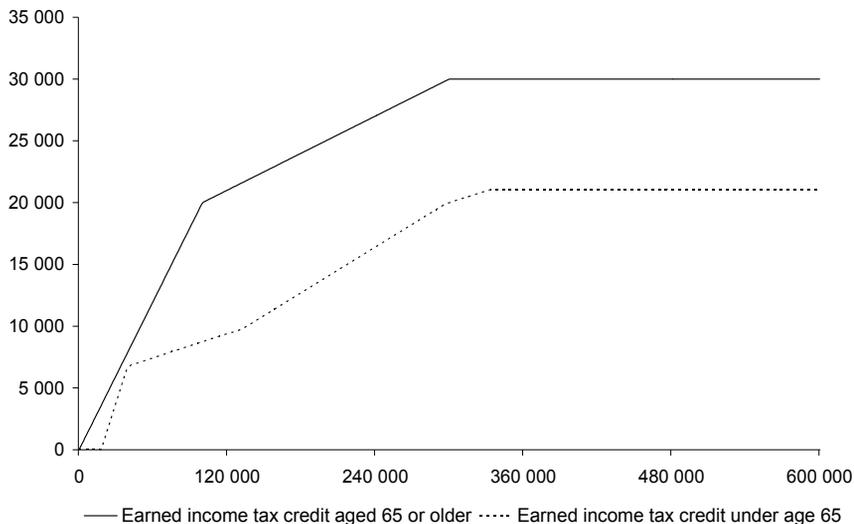


*Note:* In the estimates, the assumption is that people over 65 have income other than earned income, for example, pensions, that exceeds SEK 40 000 a year and that people under 65 do not have any income other than earned income.
*Source:* Fiscal Policy Council calculations.

The earned income tax credit gives rise to *interpersonal* redistributions because most of today's pensioners did not receive any earned income tax credit when they were working. These income redistribution effects will, however, gradually diminish if the current design of the earned income tax credit is permanent: ultimately everyone who retires will have benefited from the credit while they worked. Then the earned income tax credit will no longer involve any redistribution effects between people born in different years who have earned income but only between incomes for a particular person at different stages of life (between working age and retirement age).

One way of avoiding interpersonal income redistributions would be to compensate the retired generations who have not received – or only receive in part – the earned income tax credit by means of targeted tax cuts. The tax cuts for older people implemented by the Government in 2010 (about SEK 3.5 billion) and announced for 2011 (about SEK 5 billion) – via an increase in the basic allowance for people over 65 – could possibly be seen as a way of providing

such compensation, even though they have not been justified in this way.[271] But in this case, the tax cuts should not be designed so that everyone over a certain age gets a tax cut. Instead, the cuts should be linked to year of birth. The cuts should be made smaller the later the people who are retiring were born, since later generations will to an increasing extent benefit from the earned income tax credit during their working life. Thus, there would also be an automatic phase-out of these tax cuts over time. There would be some rational basis for a tax reform like this. One obvious disadvantage would be that the tax system would be even more complicated than it currently is. In practice it would hardly do to have different tax rules for each age class. Instead, it would be reasonable to differentiate between quite broad age classes, which would probably instigate new arguments about fairness.

As the increased basic allowance is given to everyone over the age of 65 irrespective of whether the income is earned or pension income, and not solely to people with pension income, it does not directly affect the return to work relative to the return to pensions. However, the higher income for everyone over 65 leads to a negative income effect because people are better able to afford not to continue working.

The Government has noted that earnings-related old-age pensions in 2011 will decrease, while the guaranteed pension will increase. To offset the negative effects that this will have on the labour supply, the tax cut has been designed so that it increases with income. It has positive effects on the incentives to work both for older people with low pensions and for younger people with low incomes who can then save up for a pension which is taxed at a lower rate than would otherwise have been the case.

## 7.2 Household services and RMI tax credits

During its term of office, the Government has cut taxes targeting specific sectors. In 2007, the first to be introduced was a tax reduction for household services that includes cleaning, maintenance and laundry (household services). At the end of 2008, this tax reduction was expanded to also include repairs, maintenance, and

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[271] The justification that is given instead is to "reduce the after-effects of the crisis" on pensioners (2010 Spring Fiscal Policy Bill, p. 176).

improvements (RMI work). With the tax reduction, 50 per cent of the labour cost may be deducted from income tax up to a maximum of SEK 50 thousand per year and per person.

The debate on these tax reductions has been polarised. The Government has in general focused on the social efficiency effects, while the opposition has emphasised the income distribution effects. In earlier reports, we have primarily analysed the efficiency effects of the household services tax credit. This section discusses both the efficiency and the income distribution effects of the household services tax credit and the RMI tax credit.[272]

During the second half of 2009, the tax reductions came to SEK 283 million for the household services tax credit and SEK 3.4 billion for the RMI tax credit. Thus the fiscal cost of the RMI tax credit is much higher than the household services tax credit. The fiscal cost of the tax credits will increase in 2010; for the first four months of the year, these tax reductions have amounted to about SEK 4 billion.

## 7.2.1 Social efficiency effects

The Government's main justification for the RMI tax credit and the household services tax credit is to boost the labour supply and reduce unregistered labour.[273] According to theory, this is what can be expected to happen when tax relief on services that are close substitutes for housework or on services that easily can easily move to the unregistered sector is introduced. The reason why tax cuts on household-related services can be socially efficient is that work in the labour market is taxed but not housework, thus leading to too much housework and too little work in the labour market. Since high taxes are more distortionary for household-related services than for other sectors in the economy, differentiated taxes can increase efficiency in the tax system.

One disadvantage is that tax relief gives rise to new distortions in the form of increased consumption of the services favoured at the expense of other consumption that does not enjoy tax relief. It is therefore a matter of weighing the distortions that are eliminated against the new distortions that arise. Research seems to indicate that

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[272] Fiscal Policy Council (2008), Section 8.2. and Fiscal Policy Council (2009a), Section 7.4 respectively.
[273] Govt. Bill 2006/07:94, p. 34 ff and Govt. Bill 2008/09:97, pp. 93-94.

the advantages of a tax credit for household-related services outweigh the disadvantages.[274]

There are, however, other reasons for avoiding differentiated taxes. In practice, it can be difficult to decide what is a household-related service. The credit may therefore be abused. Moreover, it makes the tax system more complicated. Differentiating taxes on social efficiency grounds may also provide an opening for various lobby groups to secure more favourable taxation on totally different grounds, leading to income redistributions without any efficiency gains.

The closer the substitute housework is for services purchased in the market, the higher the probability that tax reductions will have positive social efficiency effects will be. This means that the argument for the tax credit for household services such as cleaning, laundry and grass cutting, most of which are quite simple to do oneself, is considerably stronger than for repairs, maintenance and improvement work, which often require special skills. It is uncertain whether the RMI tax credit actually contributes to greater social efficiency.

## 7.2.2 Income distribution effects

The public debate on the RMI tax credit and the tax credit for household services has largely been about the income distribution effects rather than social efficiency. This justifies further analysis of what income distribution effects a tax reduction targeting specific sectors gives rise to.

An assessment of the income distribution effects requires studying both the supply and demand sides of the market**s** for RMI work and household services. Tax relief leads to increased demand for the services included in the tax cut, thus benefiting firms and labour operating in these areas. Those purchasing the services benefit at the expense of other groups. The purchasers are people who put a relatively high value on the service, for example, those who can increase their labour supply and/or have high incomes. An evaluation of the Danish system with subsidies for household related services shows that the purchasers are primarily families with small

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[274] See, for example, Sorensen (1997).

children where both spouses worked full time, better-off families and older people.[275]

If the tax reduction is paid for services that would have been purchased anyway, there are no social efficiency gains. All that happens is a redistribution of resources to the purchasers and the sellers of the service. Some of the gain goes to the seller of the service as he or she can charge a higher price. The remainder of the tax relief goes to the purchaser in the form of a lower after-tax price.

There are still not any good evaluations that show the social efficiency effects of the household services and RMI tax credits. There is also only limited information on which groups benefit from the tax relief. The groups that benefit on the demand side are relatively easy to identify by investigating who uses the credit.

Statistics Sweden publishes statistics on the number of individuals who used the household services credit in different income brackets and age groups in 2008. There are, however, no statistics on who uses the RMI tax credit. Figure 7.7 shows the percentage of people making use of the credits in different age groups. The highest percentage of users can be found among people over the age of 75 and in the group aged 35-44. Figure 7.8 shows the percentage of people in different income brackets who during 2008 took a deduction for household services. Figure 7.9 shows how large the credits were on average in various groups. It clearly shows that individuals with a higher income make more frequent use of the credit and that they on average take a larger deduction.

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[275] Danish Agency for Trade and Industry (1999).

**Figure 7.7 Share of people with credits for household-related services in different age groups, per cent**
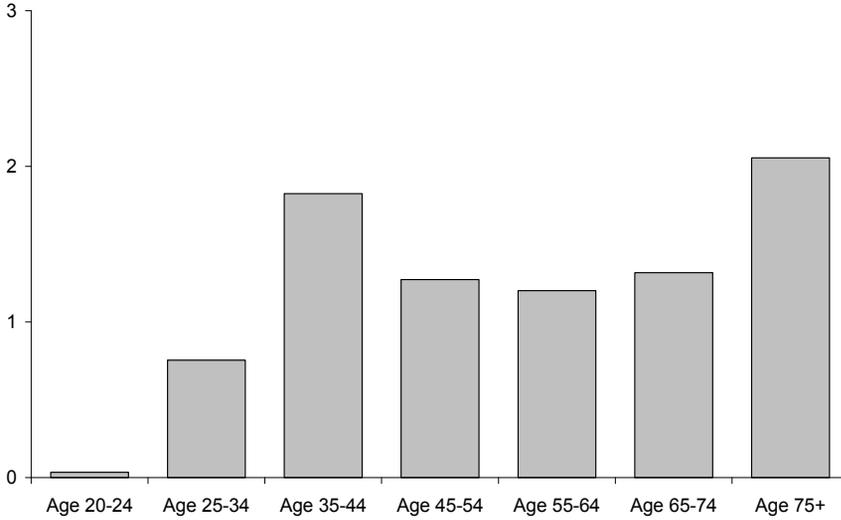


*Source*: Statistics Sweden.

**Figure 7.8 Share of people with credits for household-related services in different income brackets, per cent**
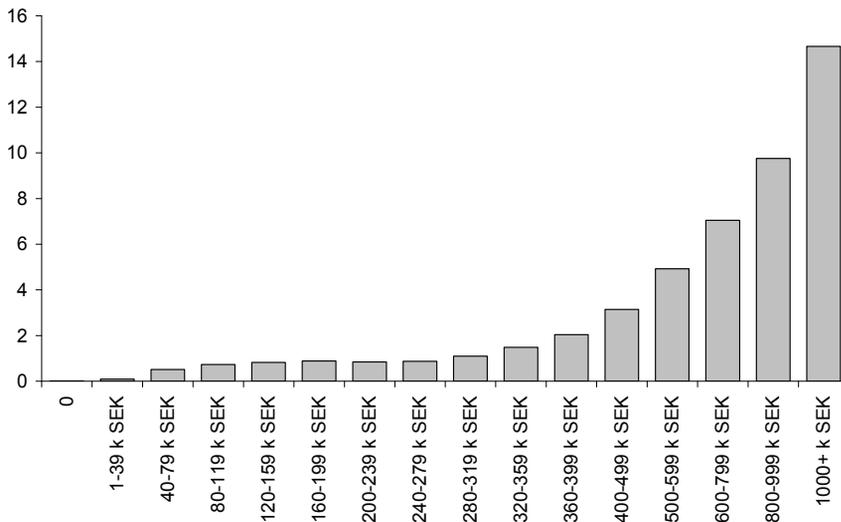


*Source*: Statistics Sweden.

**Figure 7.9 Average credit in kronor for household-related services per person in different income brackets**
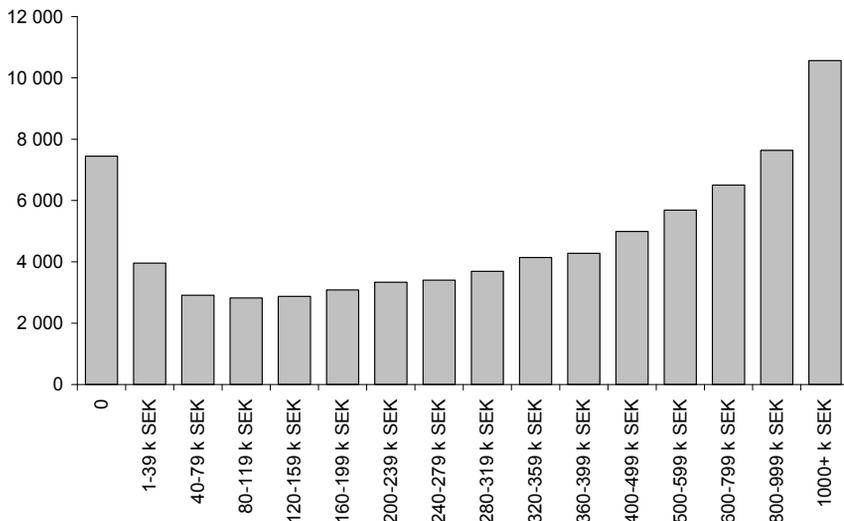


*Source*: Statistics Sweden.

As in Denmark, the credits are used largely by older and better-off people. Unfortunately, statistics are not available to investigate whether families with small children and those who work full time are overrepresented among those using the tax reduction. Statistics Sweden has, however, previously published graphs with statistics from 2007 showing that for households of working age, it was more common for cohabitants with children to make use of the tax reduction than single people and households without children.[276] The larger share of people using the credit in the age group 35-44 also indicates an overrepresentation of families with small children.

Firms and labour in the sectors covered by the tax relief benefit because demand increases. It probably leads to more employment, higher wages and higher profits in these sectors. Workers who benefit from the RMI tax credit are mainly craftspeople such as carpenters, painters, electricians and so forth. The household services tax credit presumably benefits mainly workers with less education and training, particularly immigrants, as many of the tasks covered under the tax reduction require relatively little skill.

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[276] The graphs refer to credits taken in the first half of the year following the introduction of the tax reduction (Welfare 2009).

## 7.2.3 Conclusions on the household services and RMI permanent tax credits

Permitting or increasing the credits only for particular groups such as pensioners and families with children (which has been proposed in the debate[277]) would have consequences for both income distribution and social efficiency. Those groups entitled to the credit would clearly benefit at the expense of other groups in society. As to the consequences for social efficiency, the effects differ between families with children and pensioners. The social efficiency gains resulting when households increase their labour supply in the market when it becomes less costly to purchase household-related services are understandably much greater for families with children than for pensioners. Today part-time work is common among women with children. It is possible that further tax reductions would lead families with children to purchase services in the market and at the same time increase their labour supply. In contrast, it is unlikely that pensioners' labour supply would be affected to any greater degree.

The timing of the introduction of the RMI tax credit was cyclically motivated. A permanent credit is, however, less effective as a stabilisation policy instrument than a temporary credit, since it does not create incentives to bring the investment forward. RMI work has grown considerably larger than the Government reckoned on in the 2009 Spring Fiscal Policy Bill. The Government's original estimate was that the RMI tax credit would cost about SEK 3.5 billion gross a year.[278] The Ministry of Finance now forecasts that the gross cost will be SEK 5 billion a year. One explanation may be that homeowners believe that the reduction is only temporary as the opposition has declared that it considers the RMI tax credit a cyclical measure.[279]

It is important to evaluate the credits to decide whether they are cost effective. The possible social efficiency gains thus have to be weighed against the income distribution effects that arise when purchasers and sellers of services covered by the tax reduction benefit at the expense of other groups in society. As discussed above, the theoretical arguments for the RMI tax credit are weaker than for the tax credit for household services. There are grounds for re-

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[277]  Dagens Nyheter (2010a).
[278]  The 2009 Spring Fiscal Policy Bill, p. 151.
[279]  Dagens Nyheter (2009a).

examining whether the RMI tax credit should be retained when the business cycle turns upwards.

# 8 Labour market policy

The Government has taken a number of measures to adapt its active labour market policy to the economic downturn. This section evaluates this policy. Section 8.1 analyses the scope and direction of active labour market policy. Section 8.2 discusses the job and development guarantee. Section 8.3 considers the procurement of employment services from private providers.

## 8.1 Labour market policy during the crisis

There is a risk that cyclical unemployment will become persistent even after the business cycle has turned upwards.[280] One of the most important tasks of labour market policy is to try to prevent this.

Up to the outbreak of the economic crisis, the Government's labour market policy focused on effective matching and greater competitiveness for those most detached from the labour market.[281] The policy concentrated on individually tailored employment services and job search activities as well as measures for the long-term unemployed within the framework for the job and development guarantee and the job guarantee for young people.

In 2009, the labour market policy was adjusted for the worsened economic situation. More resources were directed at people with short unemployment spells. In the Bill *Measures for jobs and adjustment* and in the 2009 Spring Fiscal Policy Bill, labour market policy was allocated resources for coaching measures and work experience placements outside the guarantees.[282] The Government also introduced a new type of work practice (practical skills development) to enable people with longer work experience to maintain and develop their skills. The Government also strengthened measures for the long-term unemployed by doubling the reduction in employers' social contributions in new start jobs.

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[280] See Sections 2.2 and 6.3 and Bergman (2010a).
[281] Budget Bill for 2007, Expenditure area 13, p. 75.
[282] Govt. Bill 2008/09:97 and Spring Fiscal Policy Bill 2009.

## 8.1.1 Changes in active labour market policy in 2010

In the 2010 Budget Bill, the Government again stressed that "the most important task of labour market policy during an economic downturn is to prevent people from being unemployed for a long time".[283]

The changes in the 2010 active labour market policy are reported in Box 8.1. The biggest change was the introduction of a new activation initiative, *Lyft*, a work experience programme for the unemployed. The measure targets both those in the guarantees and those who are not. Its aim is for participants to remain in contact with the labour market. Otherwise the changes consist of strengthening ongoing measures. Increases in appropriations will provide more places in coaching, work experience placements and practical skills development. But labour market training will increase by only 1 000 places. Those who are in need of education will be encouraged to enrol in the regular education system.[284]

There are increases in measures for long-term unemployed young people. Further, a new labour market introduction programme will be introduced for people whose entitlement to sickness benefits or sickness compensation has run out and who either do not have a job or cannot return to their previous job.[285]

In the 2010 Spring Fiscal Policy Bill, two temporary changes are proposed. To prevent long-term unemployment among older workers, the qualification period for new start jobs for people who have turned 55 will be shortened from twelve to six months. The Government also proposes an initiative for summer jobs for young people in 2010.

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**Box 8.1 Changes in active labour market policy 2010**

There will be an increase of SEK 600 million in the Swedish Public Employment Service's administration appropriations.

Active labour market policy will receive SEK 3.9 billion in increased appropriations:

- 40 000 places in a new activation measure, *Lyft*, in central

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[283] Budget Bill for 2010, Budget Statement, p. 47.

[284] Budget Bill for 2010, Expenditure area 14, p. 47.

[285] This programme is discussed in detail in Section 10.4, which deals with the reforms in sickness insurance.

government and local government activities and in privately owned companies and certain types of non-profit organisations. The aim of the measure, which can be offered to both the short- and long-term unemployed, is for participants to remain in contact with the labour market. For short-term unemployed adults and for participants in the job guarantee for young people, the measure will last for up to three months and up to six months for participants in the job and development guarantee. In this activation measure, 25 per cent of the time is to be devoted to job search. Participants receive activity support. [286]

- A further 8 000 places in coaching by the Public Employment Service.
- A further 4 000 places in work experience placements and practical skills development.
- A further 1 000 places in labour market training.
- 1 000 education places for unemployed young people. Participants in the job guarantee for young people who lack a compulsory school or an upper secondary school-leaving certificate will be offered places in a folk high school.

Participants in the job guarantee for young people will be eligible for support for starting a business and vocational rehabilitation. Young people will also have the opportunity to participate in the guarantee part time so that they can study in the municipal adult education system or Swedish for immigrants at the same time.[287]

A new labour market introduction programme will be introduced for people whose entitlement to sickness benefits or sickness compensation has run out and who either do not have a job or cannot return to their previous job. The Public Employment Service estimates the average number of places in 2010 at 9 000.[288]

The 2010 Spring Fiscal Policy Bill also contains proposals for:

- A shortened qualification period for new start jobs for people who have turned 55 from twelve to six months from 1 July 2010 to 30 June 2012.

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[286] Activity support is financial support provided to a person participating in a labour market programme.
[287] Swedish Code of Statutes SFS 2009:1604.
[288] Public Employment Service (2010a).

> - 15 000 summer jobs for young people in municipalities, county councils and non-profit organisations in 2010. The target group consists of those young people completing year nine and the first and second years of upper secondary school.

## 8.1.2 The scope of active labour market policy

It is natural for labour market policy to expand during an economic downturn. It is not, however, obvious that resources should increase proportionally with unemployment. The cost of helping a jobseeker find a job is higher in an economic downturn on account of the lower probability of finding a suitable job. At the same time, the revenue from a successful effort is higher since the expected unemployment spell is longer in a downturn. Participation in active measures may also prevent the unemployed from leaving the labour force for good. In addition, the large inflow into unemployment in an economic downturn results in an increase in the average level of competence of the unemployed, which makes them more attractive in the labour market. This makes it possible to reduce resources per person without a decrease in efficiency.

*Growth in cyclically dependent programmes – particularly job search activities*

In last year's report, we noted that the reduction of the programme volumes in Sweden in 2007 and 2008 generally followed a previously established cyclical pattern.[289] Recent years' developments are illustrated in Figures 8.1 and 8.2 where the number of participants in cyclically dependent labour market programmes is set in relation to the labour force and to total unemployment respectively.[290] It is difficult to gain a true picture of the measures. As everyone who has been unemployed for some time is enrolled in the guarantees, an increase in unemployment will automatically increase the programme volume. This occurs regardless of what activities the individual is offered. A large number of the activities are job search activities. If these activities actually involve active job searching, they should be

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[289] Fiscal Policy Council (2009a), Section 5.2.2.
[290] The data are on-demand from the Public Employment Service's statistical division (Göran Selin, 2010-03-18). Where possible, disabled people are excluded (1992-2009).

considered active measures. But if they are in reality passive activities, they should not be included.[291] We therefore use two measures: a minimum measure and a maximum measure.

Included in the minimum figure are participants in labour market training (preparatory and vocational), work experience placements and subsidised jobs (including new start jobs and Phase 3 of the job and development guarantee). The maximum figure also includes participants in job search activities.[292] The average number of participants in cyclically dependent programmes increased from 1.4 per cent of the labour force in 2008 to 2.2 per cent in 2009 when job search activities are included (see Figure 8.1). When job search activities are excluded, the programme participants make up 1.0 per cent of the labour force in 2009. This is only a marginal increase over 2008, when they represented 0.8 per cent.

If the number of participants in active labour market programmes instead is set in relation to the total number of unemployed (including programme participants), a measure of the labour market policy activation rate is obtained (see Figure 8.2).

With our maximum measure, the activation rate has declined somewhat in the past year to 30 per cent, but remains at approximately the same level as it was earlier this decade. However, the activation rate has declined considerably when the minimum measure is used: it was in that case only 13 per cent. The large and growing difference between the two measures in Figure 8.2 indicates the large weight assigned job search activities in the policy mix.

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[291] A large share (57 per cent) of the participants in the job and development guarantee state that they do not have any current activity but are looking for a job on their own. Participants in job search activities are overrepresented in this group (Public Employment Service 2010c).

[292] Before 2000 there was no search category for job search activities. Therefore there is no information on how extensive these activities were then. This limits comparability between periods. Personal job coaching outside the guarantees is not included.

**Figure 8.1 Number of participants in cyclically dependent labour market programmes, annual average, per cent of the labour force**



——— Excluding job search activities  ·········· Including job search activities  ——— Unemployment
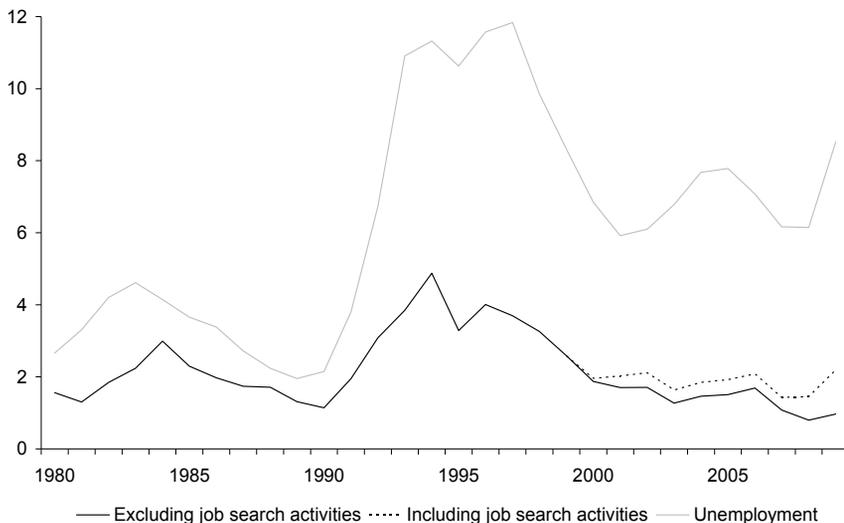
*Note*: Programme volume exclude disabled people. Included in the programmes are training, work experience placements, subsidised jobs (including new start jobs) and job search activities inside and outside the guarantees (only the maximum measure). Personal coaching for the short-term unemployed is not included in job search activities. Unemployed according to the Labour Force Survey (LFS), 16-64 years under the ILO definition.
*Sources*: Public Employment Service, the National Institute of Economic Research and Statistics Sweden.

*Personal coaches – an active measure?*

The Public Employment Service offers those who have recently been dismissed or are short-term unemployed a new service in the form of personal coaching, either in-house or by a private provider. The activity lasts up to three months and supplements the usual employment services (see also Section 8.3). The service is similar in content to job coaching in both the guarantees but is not formally considered to be an active labour market programme. The participants keep their previous benefits, for example, severance pay or unemployment benefits. The intensity of the service is not specified (as a percentage of the jobseekers' labour supply) as it is in the guarantees. Unlike programme participation, placements with private providers do not require attendance reports.[293] Activities were

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[293] If the jobseeker receives unemployment benefits, deviations from the activities agreed will, however, be reported to the Public Employment Service.

**Figure 8.2 Labour market policy activation rate, annual average of programme participants as a percentage of total unemployment**



— Excluding job search activities ····· Including job search activities
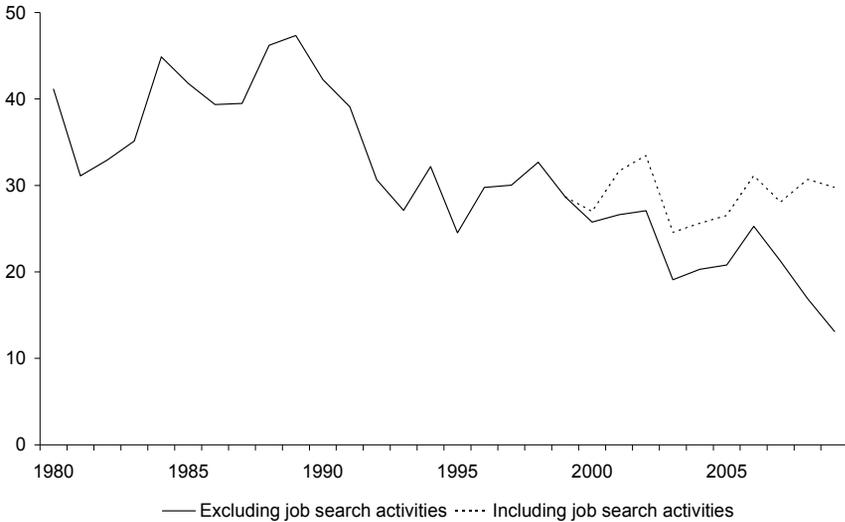
*Note*: Total unemployment is the sum of programme participation and open unemployment. See Figure 8.1 for the programmes that are included. The unemployed are those registered as unemployed at the Public Employment Service.
*Source*: Public Employment Service.

expanded in 2009 and at the end of the year, included about 26 000 participants with private job coaches and 8 000 with job coaches at the Public Employment Service.[294] If personal job coaching and other job search activities are included, the percentage of the labour force participating in active programmes increases to 2.4 per cent and the activation rate to 33 per cent of total unemployment. What is considered an active measure is thus quite important in assessing how active the labour market policy actually is.

*Except for job search activities, the active policy is considerably less extensive now than at the beginning of the 1990s crisis*

At the beginning of the 1990s crisis, the programme volume expanded from 1.1 to 1.9 per cent of the labour force between 1990 and 1991. In the crisis years that followed, programme participation increased, reaching its highest level at 4.9 per cent of the labour force in 1994. Despite the strong expansion, the activation rate declined

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[294] Data from the Public Employment Service's statistical division (Göran Selin, 2010-01-26). Disabled people are included. There are no data on participants with in-house coaches before week 32 in 2009 and thus these numbers are somewhat understated.

from previous high levels as unemployment increased even faster than the programme volume. With our maximum measure, the scale of current active labour market policy is at approximately the same level as the policy conducted at the beginning of the 1990s crisis. But if job search activities are at least to some extent considered passive, the scale of the active policy is considerably less now than at the beginning of the 1990s crisis.

We do not recommend increasing the programme volume in the same way as in the 1990s crisis since experience indicates that it is very difficult to maintain efficiency with such large volumes. But it is important that the policy actually has a real content and is efficient in helping jobseekers find a job. There are grounds for asking whether the pendulum has not swung too far in the other direction and labour market programmes are now too small in volume.

## 8.1.3 The mix of labour market programmes

There is not much research on how the efficiency of various labour market programmes varies over the business cycle.[295] But with the help of economic theory, we can have a principled discussion.

Labour market programmes include four types of measures:

- Measures aimed at strengthening the unemployeds' incentives to look for work.

- Employment services and counselling aimed at improving matching between jobseekers and vacancies.

- Labour market training and work practice aimed at maintaining and improving jobseekers' qualifications.

- Subsidised jobs that aim at creating employment for groups that have difficulty getting a job at prevailing wage rates.

In an economic downturn, unemployment is to a greater extent than in an upturn due to the weak demand for labour and to a lesser extent on inadequacies in the way in which the labour market functions. Labour market policy in downturns should therefore put more focus on demand side management measures such as recruitment incentives and direct job creation in the public sector. Recruitment incentives are, according to research, a relatively

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[295] Skedinger (2010).

effective measure but also have large deadweight and substitution effects.[296] Nevertheless, recruitment incentives may be an appropriate measure in a downturn because unemployment is then distributed more evenly across the labour force and thus counteracts long-term unemployment. Direct job creation in the public sector is a measure that seldom has a positive impact on the chances of getting an unsubsidised job in the short run.[297] The measure may still be justified for the purpose of maintaining the long-term labour supply by reducing labour market and social exclusion.

In an economic downturn, it is also useful to expand labour market training (and work practice).[298] On the one hand, the opportunity cost is lower as the chances of finding a job are reduced. If, on the other hand, low labour demand persists after the training, the likelihood of participants finding employment decreases, and thus reduces the return. But since the evaluation literature shows that the return to investment in labour market training increases over time after completing the training, the latter is probably less of a problem.[299] A carefully executed study from Germany also shows that labour market training there has been a more effective measure in economic downturns than in upturns.[300]

Measures aimed at strengthening the incentives to look for work probably have less effect in a downturn than at other times. The reason is that there are fewer jobs to look for.[301]

The OECD (2009b) makes a similar argument. According to its analysis, the focus of active labour market policy in an economic downturn should shift from a *work-first* approach towards more of a *train-first* approach for those unemployed with a high risk of long-term unemployment. It is, however, important in an economic downturn to also offer effective employment services so that jobseekers do not lose contact with the labour market. According to the OECD, activation measures should be maintained even though

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[296] See, for example, Forslund et al. (2004), Lundin (2001), Calmfors et al. (2004) and Kluve (2006). A deadweight effect arises when the same people would also have been hired without the subsidy. The substitution effect means that one type of labour replaces other types.

[297] See, for example, Martin and Grubb (2001), Kluve (2006) and Calmfors et al. (2004).

[298] For a more detailed discussion on training initiatives in different phases of the business cycle, see Section 9.

[299] See, for example, Card et al. (2009).

[300] Lechner and Wunsch (2009). But there are also studies that find other results. See Skedinger (2010).

[301] See, for example, Andersen and Svarer (2009) for an analysis of how this may justify a cyclically dependent unemployment insurance of the type we proposed in last year's report (Fiscal Policy Council 2009a, Section 5.3.2).

there are fewer job vacancies. But the policy should also be adjusted to the deterioration in the labour market situation by putting more emphasis on labour market training, work practice, recruitment incentives and direct job creation in the public sector.

The possibilities of increasing the volume without adversely affecting the quality also affect how the labour market policy mix should be designed. Previous experience, including that in Sweden in the 1990s, has shown that it is difficult to maintain effectiveness when programme volumes increase sharply.

How does the Government's labour market policy relate to the above discussion and the OECD's recommendations? The cyclical adjustments made to the policy have indeed led to increased resources for work practice, some increase in labour market training, a doubling of subsidies for new start jobs along with a shortened qualification period for older workers, and subsidies for summer jobs for young people. But the emphasis is still on matching. It is clear from Figure 8.3 that the proportion of job search activities has further increased from 45 per cent of total cyclically dependent programmes in 2008 to 56 per cent in 2009 (60 per cent if personal job coaching is included). Work practice initiatives have also increased since 2008 from 8 to 14 per cent. In contrast, labour market training (vocational and preparatory) has declined from just under 10 per cent in 2008 to only 6 per cent in 2009. The share of subsidised jobs was 24 per cent in 2009 compared with 38 per cent in 2008.

Figure 8.4 shows the participation in various programmes as a percentage of the labour force. The rapid expansion in job search activities in the past few years is obvious.

## Figure 8.3 Composition of measures in the cyclically dependent programmes, per cent
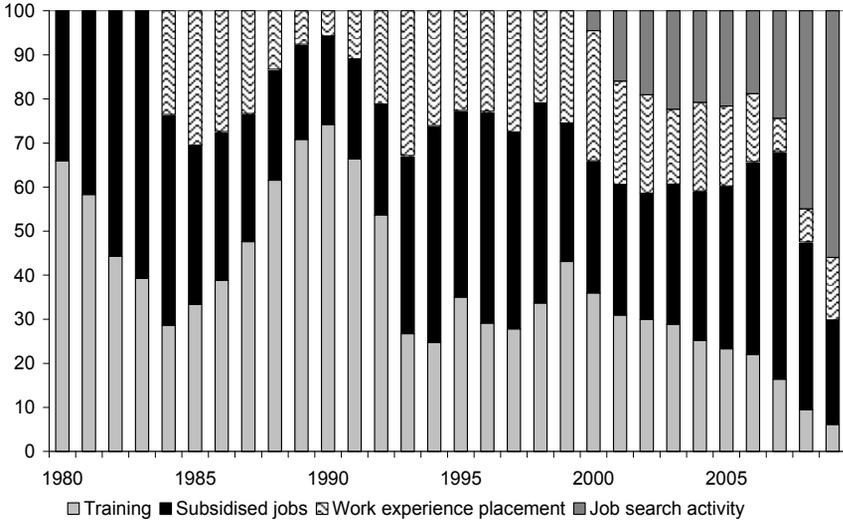


*Note*: New start jobs and participants in Phase 3 of the job and development guarantee are included in subsidised jobs. Personal coaching for the short-term unemployed is not included in job search activities.

*Source*: Public Employment Service.

## Figure 8.4 Participants in various programmes, per cent of the labour force
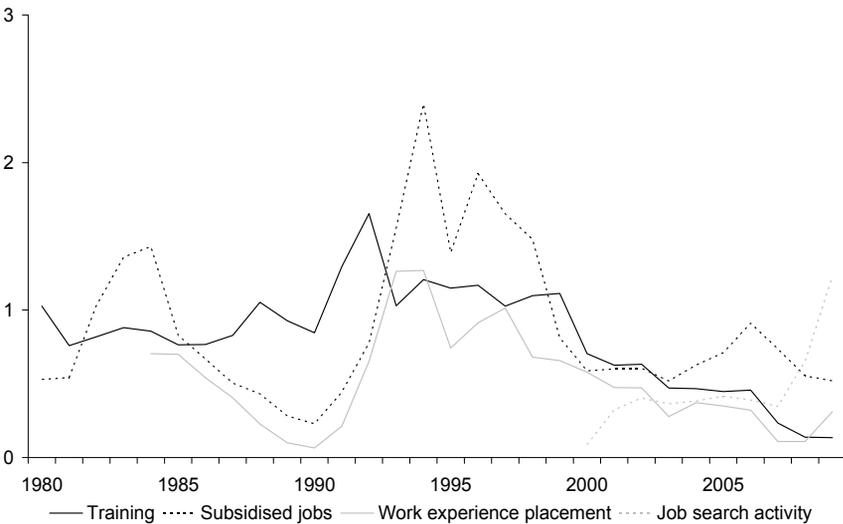


*Source* Public Employment Service and Statistics Sweden.

*Too much emphasis on job search activities*

The possibilities for early support outside the guarantees have increased with a view to reducing the inflow into long-term unemployment. We welcomed this increase in last year's report. We also share the Government's opinion that intensified coaching can be an effective measure. It is a measure that has proved effective when it has targeted vulnerable groups. For example, two current Swedish evaluations find that these measures have positive effects.[302] Both these studies, however, concern employment services directed at smaller groups and in a relatively good labour market situation.

In our opinion, the Government has gone too far with its coaching initiatives in a situation where the demand for labour is low.[303] High search intensity is a less important factor in getting a job in a recession than at other times. It is also likely that a broad coaching initiative will not yield the same positive effects that it has when targeted at small groups. Previous research indicates that a general increase in staff at the Public Employment Services did not have any effect on the duration of unemployment.[304] When intensified coaching is directed at smaller groups, some of the positive effects on this group are presumably due to the crowding out of other groups of jobseekers.

*Difficult to find work experience places in an economic downturn*

There are good reasons for subsidising work experience places for people who need to remain in contact with the labour market or improve their job skills. It has proved difficult, however, to find enough such places in the current downturn. The Public Employment Service succeeded in increasing the number of work experience places from less than 1 000 to more than 17 000 places in 2009. But the annual volume is only equivalent to less than half of what the Government requested.[305]

The new activation measure *Lyft* further requires the Public Employment Service to find more places of the same kind. The

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[302] Hägglund (2009) and Liljeberg and Lundin (2010).

[303] See also Michaillat (2010) who argues that employment services is the most effective measure in an economic upturn while wage subsidies and directly created jobs are more effective in downturns.

[304] See Calmfors et al. (2004).

[305] According to the 2009 Spring Fiscal Policy Bill (p. 75), the work practice initiative was to have 21 600 places while the annual average according to the Public Employment Service's monthly statistics was actually 9 090 places.

40 000 places that the Government would like to see seem unrealistic. In February 2010, only 197 places had been created. To come up with more places, the Government then decided to give those who arranged *Lyft* places compensation for coaching support. The Government also urged central government authorities to establish 20 000 places.[306] Even though the state sector should to some extent be able to accept work practice participants, it is unlikely that so many good quality places could be offered. We are critical of the Government's approach. It seems more designed to show a large volume of labour market initiatives rather than to put effective measures in place.[307]

*Important to exploit opportunities for subsidised jobs for the long-term unemployed*

The Public Employment Service uses a number of different recruitment incentives for different groups of jobseekers. Jobseekers who have been without work for a long time (or are newly arrived immigrants) can also get new start jobs.[308]

The total number of subsidised jobs has declined since 2006 (see Figure 8.4) This is due in part to the phase-out of the earlier plus jobs in 2008.[309] The decline also continued in 2009 even though the number of new start jobs rose sharply. The Government doubled the subsidies for new start jobs on 1 January 2009, a move that in last year's report we considered justified in view of the low labour demand.[310] But we did not expect that the number of new start jobs would increase during the recession. But as Figure 8.5 makes clear, the doubling of the subsidy appears to have had a positive effect on the number of new start jobs.

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[306] Dagens Nyheter (2010b).

[307] The Minister for Employment says in an interview in Dagens Eko that it takes time to increase the volume of a measure like this and if a high target had not been set, there would have been many fewer places (Radio Sweden 2010b). A special coordinator for the state sector was appointed in April. The total number of participants in *Lyft* had increased to 622 in March 2010.

[308] New start jobs were introduced in 2007. Unlike previous recruitment incentives, new start jobs are an entitlement for those who meet the qualification criteria and who can find an employer who wants to hire them. No assignment by the Public Employment Service is required but it must approve the new start job. The subsidy for adults is equivalent to twice the employer's social contribution that would have been paid and it would normally run for the same length of time that the person has been out of work.

[309] Plus jobs were subsidised jobs for the long-term unemployed in publicly financed activities.

[310] Fiscal Policy Council (2009a), p. 185.

**Figure 8.5 Number of current new start jobs**
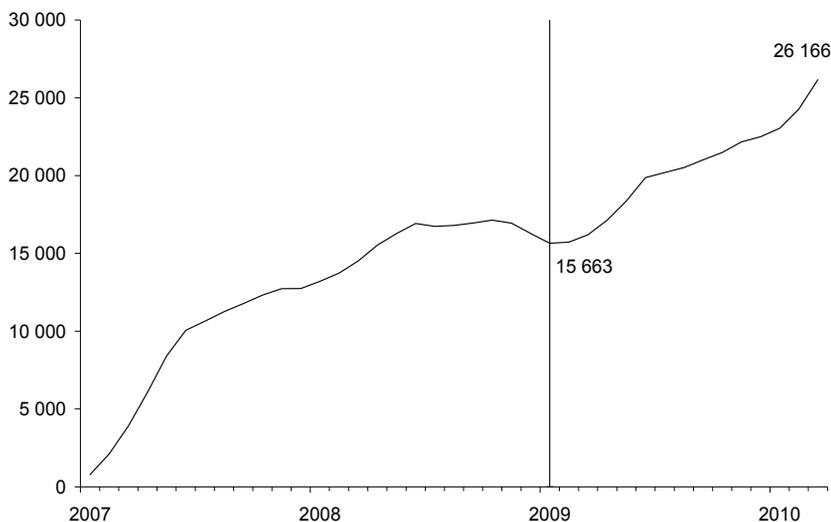


*Note:* All kinds of new start jobs (including disabled).
*Source:* Public Employment Service.

In the Spring Fiscal Policy Bill for 2010, the Government proposes a temporarily shorter qualification period for new start jobs for people who have turned 55. We welcome the proposal since experience shows that older workers who become unemployed run a greater risk of becoming long-term unemployed than do young people.

One reason for the reduction in the total number of subsidised jobs in the past year is that the measure *special recruitment incentives* in the job and development guarantee has decreased.[311] When the demand for labour is weak, it is more difficult than usual for the Public Employment Services to implement such measures. The doubling of the subsidy for new start jobs also makes these jobs more attractive to employers. Other advantages for the employer are that new start jobs may last longer and that unlike the special recruitment incentives, there is no ceiling on the amount of the subsidy. This may contribute to an increasing number of new start jobs at the cost of the special recruitment incentives.

It is important that the Public Employment Service effectively both exploits the opportunities that exist to help the long-term unemployed find work with special recruitment incentives and

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[311] Under the special recruitment incentives, the employer receives compensation equivalent to 85 per cent of the wage cost for a maximum of 12 months.

markets new start jobs so as to spread unemployment more evenly across the labour force.[312]

*Dearth of labour market training persists*

It is surprising that the Government will not increase labour market training by more than 1 000 places in 2010. The very sharp reduction in labour market training in the 2000s is clear in Figures 8.3 and 8.4. Labour market training averaged one per cent of the labour force in the period 1980-1999. In 2009, participants in labour market training made up only 0.1 per cent of the labour force.

In our 2009 report, we expressed the opinion that labour market training had been reduced too much.[313] The poor results revealed in many evaluations in the 1990s are not surprising since participation in labour market training was used to re-qualify unemployed for unemployment benefits. The volumes were also very large, making it difficult to run the training effectively.

In 1999 the '70 per cent goal' was introduced to improve the effectiveness of labour market training. Its intention was for 70 per cent of participants to have a job within three months of completing their training. Before the goal was introduced, only 40 per cent found jobs. This percentage increased in the years that followed until it reached the 70 per cent goal in 2003.[314] One contributing factor was probably the more favourable labour market situation, but the improvement was also reflected in the impact assessments of the 2000s.[315] Public Employment Service evaluations show that the percentage of people who had an unsubsidised job 365 days after the start of their training was at least 10 percentage points higher among participants in labour market training than in a control group composed of the openly unemployed during all the years between 2002 and 2007. This suggests that labour market training can be an effective measure.[316]

A possible counterargument is that according to Public Employment Service evaluations, the positive effects of participating in labour market training have decreased in recent years. In 2006, the

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[312] At the same time, the risk of deadweight and substitution effects must be taken into account.
[313] Fiscal Policy Council (2009a), p. 171ff and p. 185ff.
[314] SOU 2007:112.
[315] See, for example, Okeke (2005) and de Luna et al. (2008).
[316] Public Employment Service (2009b).

difference in the percentage who got unsubsidised jobs exceeded 15 percentage points. This positive effect declined to 4 percentage points in 2008. The Public Employment Service's analysis indicates that weaker groups now are being recruited for training. This may be due to the abolition of the 70 per cent goal in 2007 and the remit to the Public Employment Service to prioritise those most detached from the labour market. The programme results are indeed good even, for example, for the less well educated and for immigrants (see de Luna et al. 2008), but in a situation with low labour demand, it is more difficult for weaker jobseeker groups to find jobs whether or not they have participated in a labour market training programme.

## 8.1.4 Adult vocational education

At the same time that the Government has reduced labour market training, it has been possible since 2009 for the municipalities, using a targeted grant from the central government, to increase adult education with a vocational orientation (adult vocational education). The aim is to increase the availability of skilled labour by educating those groups in need of supplementary upper secondary school education. The Government has budgeted for a total of 5 600 places in 2009, 18 300 places in 2010 and 18 800 places in 2011.[317]

Adult vocational education does not target the unemployed in particular. Instead the education is open to everyone, subject to the availability of places. If all qualified applicants cannot be accommodated in a programme, however, preference is to be given to those who, regardless of previous education, have a weak foothold in the labour market.[318] Unlike labour market training, which when necessary a jobseeker may be assigned to, individuals must themselves apply for a place in adult vocational education. Participants are eligible for study support. To encourage more unemployed who are over the age of 25 to apply for adult vocational education, they can get study support with a higher benefit level (80 per cent) in 2009 and 2010.

Government grants are provided following application to the National Agency for Education. To get a government grant, a number of conditions must be met. The municipality must be able to

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[317] Budget Bill for 2010, Expenditure area 16, p. 55.
[318] Swedish Code of Statutes SFS 2009:43.

show that there is a need for the education and it is to be planned in conjunction with the Public Employment Service and with companies and organisations in the sectors concerned. When planning and implementing the education, the municipality must also offer study and vocational counselling and make good use of participants' previously acquired knowledge and skills.

In 2009, the National Agency for Education had applications from municipalities for about 10 000 places in adult vocational education.[319] Around 5 400 places were allocated based on the municipality's size and unemployment. It is difficult to draw any clear conclusions about this activity as the statistics are very inadequate.[320] Quite a large portion of the education seems to concern caregiving (51 per cent). Around 8 per cent of the participants studied subjects in commerce and administration, while electricity, manufacturing, and hotels and restaurants each made up about 6 per cent. Considerably more women than men participated in adult vocational education in 2009 (66 percent women) and most students were relatively young. Around 84 per cent were under 45 and 52 per cent were younger than 30. There is no information as to what percentage of the students were previously unemployed. This is a significant shortcoming as it makes it difficult to assess the extent to which adult vocational education has replaced labour market training as a measure for the unemployed. This deficiency should be taken care of.

We have previously argued that labour market training and adult vocational education should be considered complements rather that substitutes.[321] Adult vocational education provides adults with the opportunity to acquire an upper secondary vocational education and training, which was previously difficult to do. It is good that at least to some extent the education offered is directed at occupations with labour shortages and that the unemployed are given priority. But there presumably are unemployed people who could improve their job chances through education but cannot afford to finance it with study support. Despite the increase in the benefit level, the compensation for many is substantially lower than the activity support paid for labour market training. Furthermore, labour market

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[319] National Agency for Education (2009).
[320] See the National Agency for Education (2010). Some municipalities have included all adults who have studied vocational subjects in municipal adult education, i.e., even places without a government grant.
[321] Fiscal Policy Council (2009a), p. 173ff.

training can be more directly aimed at occupations short of labour. It is therefore important to offer sufficient labour market training.

There has been criticism of the Government's choice to reassign resources from labour market training to adult vocational education.[322] One of the Government's arguments has been that it costs two to three times more for the Public Employment Service to train the unemployed than for the regular education system to do it.[323] We are sceptical of this argument. Assessing the cost effectiveness of different training programmes requires not only information on the cost of the training (course costs and the cost of providing for oneself during the study time), but also information on the impact the training has on the probability of finding a job. Knowledge about the effects of participation in adult vocational or similar education is very limited, or non-existent. The Government should be more transparent in reporting the reasons for its re-allocation of resources and the grounds for the assessments made of the cost effectiveness of different training programmes.

## 8.1.5 Conclusions on the labour market policy as a whole

The volume of cyclically dependent labour market programmes has indeed increased in relation to the labour force in 2009, but it has not increased at the same pace as total unemployment. In our opinion, the programme volume, apart from job search activities, has become too small.

Job search activities make up over half the programmes in 2009.[324] It is our view that coaching initiatives have been too large during the economic downturn. These initiatives are more appropriate when an upturn accelerates.

We welcome in principle the initiatives for work experience places in the current cyclical situation but consider the budgeted volume unrealistic. We are critical of the Government's attempt to get the state authorities to take so many participants in work experience places within the framework for *Lyft*.

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[322] See, for example, LO (2009), Dagens Industri (2010) and Olofsson (2010).
[323] Veckans Affärer (2010).
[324] Excluding personal coaching for the short-term unemployed.

We welcomed the doubling of support for new start jobs in last year's report. The results have been better than we expected. The number of new start jobs has increased substantially despite the weak labour demand. We also welcome the proposal for a temporarily reduced qualification period for new start jobs for older workers.

But it is unfortunate that the number of participants with special recruitment incentives has declined. We also continue to be critical of the low volume of labour market training.

## 8.2 Job and development guarantee

The job and development guarantee was introduced at mid-year 2007. It is a programme to which the long-term unemployed with unemployment benefits are referred after 300 benefit days and the long-term unemployed, without unemployment benefits, after 18 months spent continuously in open unemployment or in programmes. The guarantee has three phases. Phase 1 includes mainly job search activities, coaching and preparatory schemes (counselling, rehabilitation and orientation) and is to last a maximum of six months. Phase 2 may in addition include work experience placements, work retraining and intensive work retraining and *Lyft*. Participation in the job and development guarantee also qualifies participants for a new start job for one year. Participants may be referred to other programmes. After 450 benefit days (90 calendar weeks) in the guarantee, participants enter Phase 3 where they are to be offered full-time work placement with an employer.

### 8.2.1 Difficult to preserve the quality

In December 2007, there were 30 000 participants in the job and development guarantee, 50 000 in December 2008 and 72 600 in March 2010. According to the Public Employment Service's most recent forecast, the number of participants will increase to a maximum of about 130 000 in 2012.[325]

The Public Employment Service has continued to have difficulty getting employers to offer work experience placements and work retraining positions.[326] In February 2010, the Government made it

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[325] Public Employment Service (2010a).
[326] Public Employment Service (2009a).

possible for the Public Employment Service to provide financial support to those arranging work experience placements.[327] Table 8.1 reports the activities of participants in Phases 1-2 in the job and development guarantee in December 2008 and December 2009.

The table shows that the predominant activity was job search activities with coaching. Work practice and work retraining have increased as a percentage of activities in 2009. Over the whole of Phases 1-2, work practice and job retraining made up 16 per cent and labour market training 2 per cent of all activities in December 2009. In the latter part of Phase 2, work practice and work retraining were more common: 26 per cent of all activities. Labour market training, however, became even more infrequent. Interviews of participants in spring 2009 show that a large share of them (57 per cent) do not consider themselves to have participated in any activity at all but rather looked for work on their own.[328] The National Audit Office's review of the job and development guarantee makes clear that 54 per cent of the officials have had difficulty referring participants to work experience places or job retraining.[329] The foremost problem was that officials were short of time for employer contacts and that there were more participants than expected.

According to the ordinance for the job and development guarantee, the initiatives in Phases 1-2 are to constitute at least 75 per cent of the participant's labour supply. According to the National Audit Office's survey, almost 40 per cent of the employment officers thought that these activity requirements could not be met. In response to a similar question about the previous guarantee for the long-term unemployed, the activity guarantee, 23 per cent stated that the participants could not be offered full-time activity.[330] The problem thus seems to be bigger in the new guarantee. The employment officers state that it is the large number of participants per official, an average of about 70, and time-consuming administration that are the main reasons. In the activity guarantee, an employment officer was responsible for 36 participants.

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[327] Swedish Code of Statutes SFS 2010:81. The Public Employment Service's budget letter for 2010 states that the financial support should first go to those who arrange a large number of places.
[328] Public Employment Service (2010c). Development work aimed at improvement has begun.
[329] The National Audit Office (SNAO) (2009c).
[330] Fröberg and Persson (2002). The activity guarantee was replaced by the job and development guarantee in 2007.

## Table 8.1 Activities in Phases 1-2 in the job and development guarantee, percentage of activities

| Activity | Total Phases 1-2 December 2008 | Total Phases 1-2 December 2009 | End of Phase 2 Benefit day 366-450 December 2009 |
|---|---|---|---|
| Survey, etc.[1] | 15 | 14 | 8 |
| Job search activity with coaching | 41 | 45 | 49 |
| Vocational rehabilitation | 1 | 1 | 1 |
| Work experience placements and job retraining[2] | 9 | 16 | 26 |
| Labour market training | 2 | 2 | 1 |
| Business start-ups | 0.7 | 0.5 | 0.5 |
| Projects | 0.4 | 0.5 | 0.5 |
| No registered activity | 31 | 21 | 14 |
| Total | 100 | 100 | 100 |

*Notes:* [1] Skills assessment, in-depth skills assessment/counselling, preparatory schemes and study and vocational guidance. [2] Work experience placements, work retraining, intensive work retraining, Lyft and practical skills development. A guarantee participant may have several activities going on at the same time.
*Source*: Public Employment Service.

Our earlier fears that the Public Employment Service would have large problems preserving the quality of the job and development guarantee during the economic downturn have thus been confirmed.[331] It is important that the guarantees provide meaningful content that actually has the potential to contribute to jobseekers' employability. Otherwise the guarantees risk largely becoming merely a means of providing benefits to support the long-term unemployed.

A very large share of the participants in the guarantee have no registered activity. This may mean either that people do not have any activity or that the employment officer has not registered any activity even though there is one. We have previously criticised the statistics on the job and development guarantee activities.[332] This problem limits the possibilities of evaluating how the guarantee works. According to the Public Employment Service (2009a), work to improve the statistics is under way internally, something we welcome.

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[331] See Fiscal Policy Council (2009a), Section 5.2.8.
[332] See Fiscal Policy Council (2009a), Section 5.2.2.

## 8.2.2 Third phase of the guarantee

An increasing number of participants have reached the third phase of the guarantee. In this phase, participants are offered full-time work placement with an employer. The work is to involve tasks that otherwise would not have been performed but which may be seen as improving the quality. Jobs may be with private or public employers, social enterprises or non-profit organisations. Each work placement period may last a maximum of two years. The aim is for the participant to get experience, qualifications and fresh references. In Phase 3, participants who previously qualified for unemployment benefits will receive activity support, while those who came into the guarantee without any previous right to unemployment benefits can get welfare benefits from the municipality. Participation in Phase 3 does not qualify one for a new period of unemployment benefits. When a two-year period comes to an end, it will be evaluated and the participant's labour supply will be assessed again prior to a new period in Phase 3.

Thus far 17 400 people have entered Phase 3, 13 900 of whom have got placements with an employer.[333] That one in five participants does not have a placement is due to a geographic imbalance between places and participants.[334] In the follow-up by the Public Employment Service in the summer of 2009, the majority of placements were with municipalities (40 per cent) and non-profit organisations (30 per cent).[335] According to the authority's forecasts, the number of participants in Phase 3 will gradually increase to about 51 000 in 2013.[336] There is an obvious risk that participants in *Lyft* and participants in Phase 3 of the job and development guarantee will compete for the same places in 2010.

Previous experience with similar direct job creation in the public sector and in non-profit organisations is disheartening. International overviews indicate that such measures do not appear to increase participants' chances of finding a regular job in the future.[337] The evaluations done in Sweden of the ALU work placement scheme in

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[333] Data from the Public Employment Service (Fredrik Dannelöv, 2010-04-12).
[334] Arbetsmarknaden (2010a).
[335] Public Employment Service (2009a).
[336] Public Employment Service (2010a).
[337] See Section 8.1.3.

the 1990s show similar results.[338] The programmes are not fully comparable as the ALU placements were expressly used to re-qualify participants for unemployment benefits. The scheme also had higher benefit levels, equivalent to unemployment benefits, which are comparable to the activity support of 65 per cent of previous earned income paid during participation in the job and development guarantee. The lower benefit presumably leads to smaller locking-in effects than in the ALU scheme. At the same time, the assignment length was shorter for ALU, 6-12 months, compared with up to two years for Phase 3, which works in the opposite direction.

Direct job creation in the public sector should primarily be seen as a means of testing an individual's willingness to work and counteract social exclusion by helping the individual remain in contact with the labour market. Johansson (2006b) shows that labour market programmes in Sweden from 1986-2002 had a positive effect on labour force participation and that the effect was greater in economic downturns than in upturns. It is our view that the measure, despite its low effectiveness, should be conducted to maintain labour force participation. But it is crucial that the job tasks are ones that would otherwise not have been performed to prevent direct displacement of regular jobs. This is particularly true when the business cycle turns upwards. It is, however, an almost insoluble dilemma to find tasks that do not displace regular jobs while having enough meaningful content to improve participants' chances in the labour market in a decisive way.

## 8.2.3 Conclusions on the job and development guarantee

The number of participants in the job and development guarantee is growing rapidly. We continue to be critical that participants are not offered much in the way of activities other than skills assessment and job search activities even in Phase 2 of the guarantee, which begins after up to 90 weeks unemployment.

The follow-up of the guarantee by the National Audit Office shows that Public Employment Service offices have many participants per officer, insufficient time for contacts with employers

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[338] See, for example, Sianesi (2001) and Carling and Richardson (2004).

and difficulty offering full-time activities. These problems will probably grow when the number of participants increases in the next few years. It will probably be difficult to maintain good quality in the activity.

## 8.3 Private employment services providers

As part of the attempt to make labour market policy more effective, the Swedish Labour Market Administration has been reorganised as an integrated agency, the Public Employment Service. Another change has been to open up the activity to more *private providers*.

The Public Employment Service has previously procured services, for example, labour market training, but beginning in 2007, the Government has given the Public Employment Service a number of remits to use private providers to a greater extent to improve matching and counter exclusion. Unlike before, the private providers will not only supply a certain activity, but also in some cases be responsible for a series of activities for the unemployed person for the duration of the placement.

The private provider is to analyse an individual's needs and establish an action plan, coach and act as an intermediary in arranging jobs, propose measures and arrange work experience or work retraining places in other organisations. Private providers are also responsible for providing the Public Employment Service with a basis for its decisions, such as reports on attendance and job search activities that are important for participants' benefits. Another difference from the previous situation is that compensation for providers is to some extent performance based. By using private providers, a market is established for employment services procured by the Public Employment Service. Compensation to private providers is estimated at about SEK 1 billion in 2009.[339]

### 8.3.1 Arguments of principle

The first question to be asked is whether it is generally appropriate to privatise employment services. The issue of whether production should be done in the public or private sector depends according to

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[339] Public Employment Service (2009c).

Shleifer (1998) on how different types of ownership affect the incentives to provide the quality desired at an acceptable cost. If the activity is conducted in the public sector, the authorities' incentives to invest both in cost savings and in measures that improve the quality of the service are weak as the returns will not benefit the organisation. If the activity instead takes place in the private sector, such investments will benefit the owners. It is a general argument for privatisation.

But the issue is more complicated than that because the cost savings may have negative effects on the quality of the service and the quality requirements normally cannot be fully specified in a contract. This can be compensated for by the consumer buying the service in a market with sufficient competition. In that case, the consumer has a real choice that can limit the room for a deterioration in quality. Another deterrent is the *reputation mechanism*. If private providers want to get public procurement contracts in the future, they must keep on providing a good quality.

Shleifer specifies four circumstances under which public production is better than private production of goods or services:

- There are many ways to cut costs by lowering the quality which cannot be controlled in a contract.

- Innovations are relatively unimportant.

- Competition is weak and consumers' range of choices is limited.

- The reputation mechanisms are weak.

Employment services are complex and include many qualitative characteristics. This makes it less possible to specify in a contract the quality of the services that are to be provided. There is also a conflict of objectives between on the one hand letting providers develop their own way of working and on the other hand carefully specifying the contents of the service. There is therefore a risk when employment services are procured that costs will be cut at the expense of quality.

One factor that arises in a system with procured employment services, compared with other welfare services, is that there is always uncertainty about labour market developments. The demand for labour, and thus the chances of helping a jobseeker get a job, vary with the business cycle. Compensation must be decided in a contract for a number of months, or even years, ahead. The provider's cost of

finding an unemployed person a job may, however, vary with the labour market situation. It creates uncertainty for both the buyer and the seller. Other important factors are the requirement to treat all jobseekers equally and the requirement to follow the rules in order for the unemployed person to be eligible for unemployment benefits or activity support.

The need for innovations in labour market policy argues in favour of privatisation. It is also something the Government points to in the terms of reference for the Public Employment Service. It is to be hoped that new knowledge and competence will lead to more individualised services. To get adequate competition in the market, procurement can be designed in such a way that many providers enter the market. Well-developed information and follow-up systems can make the reputation mechanisms more effective. Good information also makes it easier for the unemployed to make rational choices that promote good quality in the services. Quality can also be supported by conditioning providers' compensation on activities' results in the form of transitions from unemployment to work or studies.

It is not possible based simply on Shleifer's criteria to decide whether or not it is appropriate to privatise employment services. It depends on the exact design of the system. It is, however, clear that it may be quite difficult to procure private employment services in an effective way.

## 8.3.2 International experience

Since the end of the 1990s, a number of countries have opened up their employment services to private providers. In Australia, the public employment service has been abolished and replaced with a central public authority which only refers clients to various providers (private companies and non-profit organisations) which provide procured employment services. Other countries, such as Denmark, the Netherlands, the United Kingdom and Germany, have instead chosen to procure defined parts of the activity.

Experience with the procured employment services is not unequivocally positive. In Australia, the cost per person who made the transition to work fell sharply when *Job Network* was introduced in 1998. The effectiveness of the different services, measured as the

differences in the transition to work between those who participated in the service and those who did not, has not, however shown an equally clear improvement.[340] For Germany, the evaluations show mixed results, depending on the target group and the service. Job chances seem to decrease when the public employment service *refers* the jobseeker to a private provider compared with staying with the public employment service.[341] But if the jobseeker receives a voucher and chooses the private provider, the transition to work increases.[342] For the unemployed whose benefits had expired and for social benefits recipients who were referred to private providers, average job chances increased, but the effects were very different for different groups.[343] In the United Kingdom, programme effectiveness was higher in the *Employment Zones*, where private providers offer services to the long-term unemployed, than for the equivalent activity arranged in the public sector.[344] In the Netherlands, a recent evaluation shows that municipalities that procure private employment services for social assistance recipients do not have any higher net outflow to work among these recipients than other municipalities that do not use private providers.[345]

Experience with private employment service providers shows that this type of quasi-market needs procurement and regulation to be well-thought-out in order to provide effective services. There must be easily accessible and correct information on the quality of the services. When a market for employment services is to be created, a system must therefore be established at the same time to collect data in order to oversee that the terms of the contract are met and to ensure the quality of the activity. There is also considerable public interest in knowing how public funds are used. At the same time, the transaction costs have to be limited with respect to both the procurement and follow-up of the activity.

Compensation models must also give providers incentives to work towards quickly getting unemployed people into jobs. At the same time, this should not be done at the cost of job quality. There is a risk that providers may give priority to short-term, low-productive work

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[340] Struyven and Steurs (2005), Bredgaard and Larsen (2006) and DEWR (2006).
[341] Winterhager (2006).
[342] Winterhager et al. (2006).
[343] Bernhard and Wolff (2008).
[344] Tergeist and Grubb (2006).
[345] Koning (2009).

over investment in more long-term, high-productive work by, for example, labour market training. There is also a risk that the providers may give priority to the most profitable clients – *creaming* or *cherry-picking* – and make as little effort as possible for the unemployed who are most detached from the labour market – *parking*. The contracts with private providers should therefore contain incentives to try to prevent these problems.

### 8.3.3 The Public Employment Service's work with private providers

In 2007 the Government gave the then National Labour Market Board the remit to use private providers more actively.[346] The Board introduced a pilot project in three parts of the country. The Government defined the remit more precisely and specified a volume target in the budget letter for 2008 before the trial period had ended.[347] Private providers should be a part of the authority's array of services, particularly in the job and development guarantee and the job guarantee for young people. The Government stipulated that a third of the participants in the guarantees, or a minimum of 10 000 people, were to be offered procured services or other kinds of services that private providers participate in. As part of the Government's crisis policy, the Public Employment Service was given the remit in December 2008 to procure personal coaches for the recently unemployed and the short-term unemployed.[348]

There is currently cooperation with private providers in four areas:

- Long-term unemployed in the job and development guarantee.
- Unemployed young people in the job guarantee for young people.
- Newly arrived refugees and immigrants.
- Personal coaches for the recently unemployed and the short-term unemployed.

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[346] Budget letter for 2007 for the National Labour Market Board.
[347] Budget letter for 2008 for the Public Employment Service.
[348] Remit to procure private providers, 2008-12-18, Dnr. A2008/3628/A.

Over 20 per cent of the participants in the guarantees in the first half of 2009 had been with private providers at some time or other during their time in the programme.[349] The share of participants remaining in the guarantees who were at private providers in June 2009 was almost 12 per cent. The difference between the measures is due to the fact that the time with private providers is significantly shorter than the time in the guarantees.

*Has the cooperation had positive effects?*

It is still too early to draw any clear conclusions about the Public Employment Service's cooperation with private providers. The evaluation results are mixed. The evaluation of the trial period shows that participants with private providers were more satisfied with the help they received than those who stayed with the Public Employment Service.[350] Jobseekers with the private providers were able to meet their employment officer more often than those who remained with the Public Employment Service and their job searches were more intensive.[351] However, there were no differences in the probability of finding a job or in income for jobseekers who went to private providers compared with those who stayed with the Public Employment Service. There is, however, a tendency for the private providers to have more success with those born abroad. For young people, the evaluation showed somewhat contradictory results. In comparison with the control group, young people applied for more jobs using private providers and went to more interviews, but at the same time there was a tendency towards negative effects on income and employment compared with the control group.

The Public Employment Service has compared the outflow to work between offices that have and have not cooperated with private providers.[352] Its investigation finds a temporary positive effect from the cooperation but it lasts only for one quarter. The National Audit Office has found that the labour market areas that cooperate with private providers have a lower outflow to work from the job and development guarantee than those areas that do not have this

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[349] Public Employment Service (2009c).
[350] Bennmarker et al. (2009). The trial period lasted one year and included about 700 people.
[351] The Public Employment Service's follow-up in 2009 also shows this, but it does not take into account possible differences in the composition of participants (Public Employment Service 2010c).
[352] Public Employment Service (2009b).

cooperation.[353] The Swedish Unemployment Insurance Board (IAF) shows in its examination of private providers' documentation of job search activities during the trial period that this documentation was so inadequate that in some cases the Public Employment Service could not fulfil its control function for the unemployment insurance.[354]

*Market structure and quality of the services*

For the market to function well, there must be enough competing providers. It must be easy to enter the market. Low profitability should result in suppliers leaving the market. The market for employment services in the guarantees has a relatively large number – fifty or so – private providers.[355] The providers include many recruitment and employment agencies and training firms. The first procurement, however, gave KFG, the largest provider, a very large market share: about 40 per cent of the places. An examination of this supplier in spring 2009 revealed numerous departures from the contract. Each coach had considerably more jobseekers than the contract specified. There were also deficiencies in the documentation and there was no quality assurance system. The Public Employment Service therefore cancelled its agreement with 11 of the 26 areas of operation. The Public Employment Service demanded that other areas correct these deficiencies. The dispute between KFG and the Public Employment Service resulted in KFG declaring bankruptcy.[356] In subsequent procurements, the Public Employment Service has limited the possibilities of submitting a tender for all services in order to prevent any provider from becoming dominant. There has also been work done on the dissemination of information and simplified tender specifications.

For the procurement of personal job coaches, measures were taken to reach out to small local providers.[357] In the procurement, simplified tender specifications were used and the tender submission period was extra long. The procurement resulted in a contract with

[353] The National Audit Office (SNAO) (2009c) The Public Employment Service is divided into 69 labour market areas. This division is based on people's commuting patterns and the areas in which companies usually recruit their labour.

[354] IAF (2009a).

[355] Public Employment Service (2009c).

[356] Arbetsmarknaden (2009).

[357] Public Employment Service (2009c).

about 950 providers. Almost 40 per cent of the private providers can be found in only one labour market area. There are large employment agencies and training firms among the suppliers of this service too, but also a number of small providers.

In autumn 2009, the poor quality of job coaches' activities attracted media attention.[358] In December, an extra debate was held in the Riksdag in which the Minister for Employment, despite some concern about the quality, was convinced that the coaches were doing a good job. He referred to the good results from coaching in the outplacement agreements.[359] The Public Employment Service writes in a press release that the priority given to a diversity of providers probably was at the expense of quality requirements in the procurement.[360] An inquiry initiated by the Public Employment Service subsequently showed that the coaching measures offered to jobseekers are in accordance with the agreement and that the majority of jobseekers are very satisfied with the coaches' support.[361] But in April 2010, new warnings were sounded about inadequacies in the activity, this time by one of the major providers.[362]

It is surprising that so many providers were contracted. The question is whether so many companies can deliver good quality coaching services and have an extensive enough network of employer contacts, both for work experience places and recruitment for job vacancies. One explanation for the large number of tenders may have been too imprecise requirements for the services in the procurement.[363] Another objection to so many small providers, who accept only a few jobseekers, is that they do not have the same incentives to develop a good reputation as bigger providers with many participants do. A much larger number of suppliers also raises transaction costs both at the time of the procurement and for the subsequent evaluations. This also makes it difficult to evaluate the activity at individual providers with the usual methods.

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[358] Aftonbladet (2009) and Dagens Nyheter (2009b).
[359] The Riksdag (2009) and Dagens Nyheter (2009c).
[360] Public Employment Service (2009d).
[361] Public Employment Service (2010b).
[362] Radio Sweden (2010c, d).
[363] This is also the opinion of the Swedish Staffing Agencies; see Arbetsmarknaden (2010b).

*Information and evaluation system*

There are different ways of promoting quality in a system with procured employment services. The first way is through the requirements specified in the procurement and the way in which the tenders are evaluated. Previous experience of different providers' effectiveness can be taken into consideration in new procurements. Second, allowing the client to choose among the providers procured can improve quality.[364] A third way is to require some sort of certification by the organisations whose services are procured by the Public Employment Service.

There is currently no public information comparing the results of different providers that could facilitate the jobseeker's choice of job coach. Nor are there any comparable client surveys to consult. The jobseeker only has access to a list of available companies and a link to their websites describing the service. More information of this type would also be valuable for *benchmarking* between providers, for spreading innovations and *best practice* and as a basis for future procurements.

The Public Employment Service is in the process of building a quality assurance system.[365] It includes a monthly survey of participants and regular audit-like evaluations of a selection of providers compared with the terms in their agreement. Statistics will be reported on the Public Employment Service's website, but only in the aggregate, for the transition to work for participants with internal coaches and with private providers. Statistics for individual providers, according to the authority, will not be reported for reasons of integrity. This prevents the construction of any form of ranking system that could guide individuals. Thus competition in the market is limited.

The employers' organisation, the Swedish Staffing Agencies, this year introduced an authorisation for outplacement services firms that deliver services to outplacement organisations and the Public Employment Service.[366] The sector has grown rapidly in recent years

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[364] Currently the choice of personal coach is to take place in consultation with the jobseeker and the responsible employment officer, while the employment officer selects the providers for other services.
[365] Telephone conversation with the Public Employment Service. Ingela Söderman, 29 March 2010 and Pär Wiker, 31 March 2010, and the Public Employment Service (2009c).
[366] Jusektidningen (2009).

and the Swedish Staffing Agencies estimated at the beginning of the year that only one in 10 outplacement services firms would meet the certification requirements.[367] The companies will be evaluated annually.

The Government has proposed that the Public Employment Service should have a freedom of choice system for procured services.[368] The authority is considering using it for the procurement of job coaches for the short-term unemployed if the proposed law is approved. The individual will then have the right to choose a provider from among those with whom the Public Employment Service has signed a contract. The procurement of providers for a freedom of choice system is to take place regularly via a national website. There a specifications document will be made available stating the terms that suppliers are to meet in order to be approved. Providers performing the same service will receive the same compensation. All providers who wish to participate in the freedom of choice system have the right to apply and all applicants who meet the requirements in the specifications document will be approved by the Public Employment Service.[369] The authority is to give jobseekers information about the providers.

With a freedom of choice system for job coaches, the competition between providers in the procurement process itself will disappear. A freedom of choice system will thus continue to place heavy demands on the Public Employment Service to furnish clients with comparative information about the quality of the various providers. Otherwise there is a risk of less competition in the market and an ineffective employment service.

*Transaction costs*

There are a number of costs associated with a system with procured providers. The Public Employment Service has the cost of writing and publishing the request for tenders, evaluating the tenders, drawing up the appropriate contracts, negotiating with providers and then monitoring compliance with the agreements. Providers also

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[367] In March 2010, 11 companies were certified; see Jusektidningen (2010).
[368] Govt. Bill 2009/10:146.
[369] Some circumstances such as financial problems and crime that concerns professional practice may result in exclusion.

have the cost of preparing their tenders and providing information to the Public Employment Service.

The Public Employment Service has worked to reduce providers' transaction costs by the dissemination of information, simplified specifications and an extended time for the submission of tenders. The contract periods for the first agreements, however, were relatively short. This may be justified by the formative stage of the market and the Public Employment Service's wish to have the chance to revise the agreements and so forth. In the long run, the advantages of different contract periods should be weighed against the disadvantages. Long contract periods increase stability in the market and give providers time to get a return on their investment in the activity, but also prevent new providers from entering the market.

*Incentives for effectiveness and results*

The Public Employment Service tries to provide guidance to the providers through the agreements established. One part of the agreement is how providers are to be paid for the service. When employment services are procured, it is common for the payment to be divided up into a part that is to be paid at the beginning of the placement and a results-based part that is paid when a desired result, for example, a job or studies, is achieved.

Results based compensation takes into account that the Public Employment Service does not know exactly what service the provider has supplied. One disadvantage is that the result may be due to the provider giving priority to the unemployed closest to the labour market. To try to prevent the unemployed with poor prospects from being given a lower priority, the Public Employment Service could assume part of the risk by paying an initial amount. The initial amount should encourage providers to actually offer services to weak clients. With such a construction, the risk would be shared between the provider and the Public Employment Service. A results-based component will encourage the provider to achieve good results. The results-based component could be a different size for different outcomes (for example, temporary or permanent employment) or be paid in two instalments: one at the beginning of the job and the second after some time on the job.

The Public Employment Service's compensation system has incentives for effectiveness. Compensation for all the procured

services is partly based on results, with the exception of intensified job coaching in the guarantees. The compensation systems generally reflect the difficulty that each target group has in finding work. However, this does not apply to personal job coaches. For these coaches, 82 per cent of the total compensation is paid out when a participant has begun an activity at a private provider and 18 per cent as a bonus once a potential job starts. This is difficult to comprehend. This group of jobseekers has been given dismissal notices or is newly unemployed and should have a relatively strong position in the labour market. The initial payment seems unjustifiably high. There is a risk that this will lead to inadequate measures. For young people who the employment officers consider to be positioned close to the labour market, another judgement appears to have been made. For them, the results-based part of the compensation is as large as 95 per cent and only 5 per cent is paid at the start.

The National Audit Office (2009c) is critical of the compensation model in the job and development guarantee for not providing enough incentives to get participants working as rapidly as possible. One way of strengthening the incentives would be to let the results-based part of the compensation depend on how long a time it takes for the participants to get a job.

The Public Employment Service has tried in various ways to prevent providers from prioritising the most profitable participants. The private providers are obliged to accommodate the participants referred by the Public Employment Service if the needs assessment is correct. The procured services are distributed among different target groups needing different types of services. This counteracts the risk of *creaming*, i.e., providers giving priority to the most profitable clients. One example is the division of young people into two target groups depending on whether they are considered to be close to or far from the labour market.[370] The compensation is higher for the weaker groups and a larger share is paid at the beginning. Experience shows, however, that it is very difficult to prevent *creaming* entirely.[371]

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[370] See also Section 8.3.2.
[371] See, for example, Bredgaard and Larsen (2006).

### 8.3.4 Conclusions on private employment service providers

We welcome the ambitions to make more use of private providers as a way to increase effectiveness in labour market policy. Given the mixed experience in other countries, it is wise at least in the beginning to let this be done on a limited scale.

According to the Public Employment Service's budget letter, a third of the participants in the job guarantee for young people and in Phases 1-2 of the job and development guarantee should be offered procured services or services that private providers have otherwise participated in.[372] With the rapid expansion of the guarantees now under way, it is doubtful whether the market will be able to grow so rapidly while maintaining good quality services. In our opinion, it would have been better if the use of private providers had been allowed to increase at a slower pace.

The Public Employment Service has to a fairly large extent taken into account the known problems associated with privatisation. But it still has some work to do in order for the cooperation with private providers to fulfil the Government's hopes for greater effectiveness. Information and follow-up systems are an important area for development. They currently appear inadequate.[373] The compensation models should be reviewed. One gets the impression that the Government has speeded up the introduction of private providers without allowing for sufficient time to develop support structures.

The cooperation with private providers must be evaluated on an ongoing basis. It is, however, difficult to do evaluations of sufficiently high quality with the limited information currently being collected on activities in the guarantees and on various providers' working methods. The lack of well-thought-out principles for evaluating individual providers is, in our opinion, a serious shortcoming. It is not enough to compare the Public Employment Service with private providers as an aggregate. Systematic evaluations of individual providers need to be done using the prevalent methods.

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[372] Budget letter for 2010 for the Public Employment Service.

[373] Many of the problems that have to be addressed with procured employment services, however, probably also exist in the Public Employment Service's internal activities: absence of clear objectives, incomplete knowledge of cost effectiveness and inadequate follow-up and evaluation.

# 9 Regular education as a cyclical policy instrument

The Government has chosen to tackle rising unemployment by increasing the number of places in regular education. In the next few years, this will lead to 10 000 more places a year at universities and colleges, 3 000 more places a year at vocational colleges and 10 000 more places a year in adult vocational training/municipal adult education. Expenditures for these temporary education measures will come to about SEK 2.3 billion in 2010 and about SEK 2.2 billion in 2011. In the 2010 Spring Fiscal Policy Bill, an education programme for the Västra Götaland region was added.

Education volumes in higher education have historically varied with the business cycle. Higher unemployment leads to increased demand for education and the number of study places available – at least to some extent – has been adjusted to the demand. This section looks at how the demand for regular education has been affected by the economic downturn and discusses the advantages and disadvantages of using education as a stabilisation policy instrument. The focus is on higher education but the discussion in principle also applies to upper secondary education.

## 9.1 Cyclical patterns in higher education

Figure 9.1 shows how the number of registered students and unemployed has varied over time. The number of university students has been on an upward trend since the beginning of the 1990s. The expansion accelerated during the crisis in the 1990s when unemployment increased dramatically. Even though unemployment fell at the end of the decade, higher education continued to expand.

The strong trend in the education volume makes it difficult to distinguish the cyclical effects. Figure 9.2 shows deviations from the long-term trends for the number of registered students, the number of unemployed and the number of job vacancies.

**Figure 9.1 Registered university students and unemployed**

A positive (negative) deviation during a period for the number of registered students means that the number of students was higher (lower) than according to the trend. Because a deterioration in the labour market usually begins with a decline in job vacancies, the number of vacancies is also used as a measure of the cyclical situation. To facilitate comparisons, vacancies are shown with the reverse sign, i.e. 10 000 vacancies in 1996/1997 mean that there were 10 000 *fewer* vacancies than according to the trend.

The figure shows a correlation between business cycle and education volume. The number of registered students is above the trend when the labour market situation is weak, while the reverse is true in good times. The expansion taking place today is as rapid as that at the beginning of the 2000s. The expansion, however, is starting from a point where the number of students is below the trend. Also, during the crisis in the 1990s, the number of students increased but at a slower pace than today.

**Figure 9.2 Registered university students, vacancies and unemployed, deviations from trend**
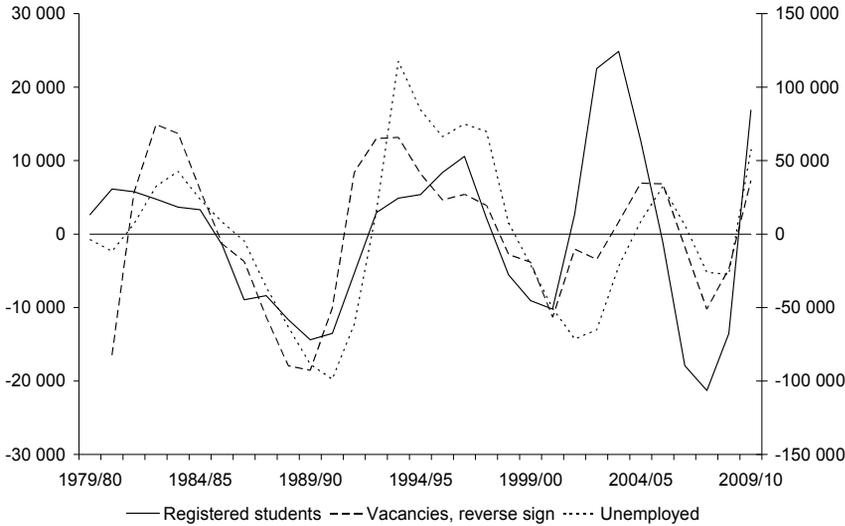


*Note:* The trend has been estimated with a Hodrick-Prescott filter. Registered students and vacancies are shown on the left axis, the unemployed on the right axis. Unemployed refer to the old LFS definition. The number of unemployed and the number of vacancies refer to the same calendar years as the autumn term of the academic year. Vacancies are reported with the reverse sign.
*Sources:* Statistics Sweden and the Public Employment Service.

# 9.2 Private and socially efficient demand for education

To determine if it is socially efficient for the education volume to vary with the business cycle, the causes of the variations in the demand for education need to be analysed.

In economic theory, education is viewed as an investment.[374] In other words, a person weighs the utility of the education against its cost. If the utility exceeds the cost, the individual chooses to get an education. Education may increase a person's utility by increasing the chances of getting a job she considers interesting. It also generally leads to higher income and a reduced risk of unemployment. The principal cost associated with education is the income that the individual foregoes while studying. The direct expenses of the

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[374] Gary Becker was the first to analyse education decisions in this way in his influential book *Human Capital* (Becker 1964). This analysis isolates the investment aspect of education decisions. Education also has a consumption element because individuals may think that it is more enjoyable to study than to work.

education must also be counted as costs, for example, the extra expenses for housing, course books, and so forth. There is strong support for these theoretical arguments in the empirical research. The percentage registered at universities and colleges increases when unemployment is high and when the return to education in the form of higher income rises.[375]

The private demand for education does not necessarily coincide with the socially efficient demand. If, for example, investment in education has positive effects on colleagues or on future generations, the private demand for education may be lower than desirable from society's perspective. Progressive taxation may be another reason why private demand is lower than the socially optimal level, as it means that income from education is taxed more heavily than the opportunity cost (wages foregone during studies). These are arguments for subsidising higher education. This is in fact done in Sweden as education is free of charge and there is an extensive student aid system in place. It is, however, difficult to determine whether the subsidy level in the education system is appropriate, so that private demand coincides with the demand from a social efficiency perspective.

## 9.2.1 Cyclically dependent demand for education

The question here, however, is not whether the private demand for education deviates from the demand that is desirable from a social efficiency point of view in *normal times* but whether the *cyclical swings* give rise to such differences. But an interpretation of the variations over the business cycle must consider whether the education volume is at an efficient level in normal times. For example, assume that the education level in normal times is too low but that private demand increases more than the socially efficient demand in an economic downturn. If so, the education volume will be near an efficient level in economic downturns and move farther away from this in an economic upturn.

Christopher Pissarides has at our request written a background paper on regular education as a stabilisation policy tool.[376] He points out several reasons why both the private and the socially efficient

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[375] See, for example, Fredriksson (1997) for a study based on Swedish data.

[376] Pissarides (2010).

demand for education may change in a downturn and why differences between them may arise.

One factor that tends to *reduce* the private demand for education in an economic downturn is that higher unemployment and lower incomes limit parents' means of financing their children's education. If the private demand and the socially efficient demand for education are the same in a normal cyclical situation, the private demand will be too low in a downturn. The cause of the inefficient reduction in demand is that it is difficult to finance human capital investment in the credit market. The relatively generous student aid system in Sweden probably means that these effects are of little importance.

There are good reasons why private demand for education may be expected to *increase* in a downturn. This is discussed below.

*Higher unemployment risk increases return to education*

Higher unemployment among the low skilled means that the expected incomes individuals must forego while studying will decrease. The size of the effect depends on the distribution and length of the unemployment; the greater the probability of becoming unemployed and the longer the expected unemployment is, the lower the expected income will be that the individual must forego while studying.

Unemployment may also have long-term negative consequences for the individual in the form of lower wages and a higher risk of unemployment in the future.[377] These effects increase with longer unemployment spells as skills and knowledge become increasingly out-of-date. In an economic downturn, there is a higher risk of long-term unemployment, which increases the value of avoiding long-term unemployment by studying. It has been shown that youth unemployment in connection with labour market entry in the 1990s had negative effects on incomes as long as five years later.[378] However, the unemployment spell is on average shorter for young

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[377] The research literature talks about *scarring effects*.

[378] Nordström Skans (2005). Young people have not managed to acquire as much knowledge during their previous employment that risks being lost in the event of a longer spell of unemployment compared with older people. This means that the long-term negative consequences of unemployment probably are smaller for young people than for older people. In 2001, the *Economic Journal* devoted a whole number to the long-term consequences of unemployment. For a summary, see Arulampalam et al. (2001).

people than for other groups, suggesting the long-term effects to be smaller for young.[379]

From a social efficiency perspective, it is desirable for the demand for education to increase when the return rises in an economic downturn. But it is possible that individuals *overreact* because of difficulties foreseeing how high the return will be in the future. A higher return to education leads many to get an education and the supply of highly skilled increases. This reduces the return to education in the long run. If the individual does not take into account the long-term effects of other people's education decisions, too many will choose an education. Similarly, a lower return to education will lead to – from a social perspective – too few choosing to get an education.[380]

A similar argument is that young people overreact to changes in the labour market because they are not sufficiently far-sighted. Since unemployment is more cyclical for the low skilled than for the highly skilled, relative unemployment increases for the low skilled in a downturn. If a downturn is perceived as a permanent deterioration in the labour market for the low skilled, rather than as a temporary effect, the demand for education will increase too much.

*Education as insurance*

The risk of unemployment may lead to increased demand for education because the individual wants to *insure* against loss of income and long unemployment spells. From an economic perspective, only changes in the expected return to education should lead to increased demand: risk is better managed with insurance. If there is no good unemployment insurance for new labour market entrants, individuals will – from a social perspective – overreact to the risk of becoming unemployed and demand too much education. Education then becomes a way for young people to insure themselves against unemployment risk.

Whether this is an important mechanism depends on the availability of income insurance and help in avoiding long-term unemployment for unemployed young people. For young people who have not studied at university, it is therefore interesting to

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[379] See, for example, Forslund and Nordström Skans (2006).

[380] In a series of publications, Richard Freeman has put forward the argument that individuals' education decisions are too short term and give rise to '*cobweb cycles'* in education volumes (Freeman 1976).

compare incomes when studying with income protection. Since 2007, young people who have been unemployed for three consecutive months have been covered by the job guarantee for young people. Under the guarantee, participants first get study and vocational guidance and coaching.[381] After three months, participants may be offered work practice or shorter training. Participants in the guarantee who have qualified for unemployment benefits have the right to activity support. Otherwise, they are paid 'development benefits'. In 2009 the lowest benefit (the development benefit) was SEK 2 700 for four weeks. For students, the study grant was SEK 2 724 for the same period. The grants paid to students and to the unemployed are roughly equal, thus limiting the insurance effect. But given the possibility of getting study loans, university studies provide better insurance than the job guarantee for young people.

The lack of unemployment insurance for students who have completed their education and are too old to be covered by the job guarantee may be more significant. The study condition in the unemployment insurance, which gave students who were members in an unemployment insurance fund and had completed university studies the right after three months to get the basic allowance in the unemployment insurance fund, was eliminated in 2007. This may have resulted in students continuing their studies in order to obtain student aid to support themselves.

*Choice of time for starting university studies*

The discussion thus far has focused on the individual's decision to get, or not to get, an education. But the labour market situation may also affect the timing of the studies – when to begin the education programme. In Sweden, it is common for young people to choose to work and travel before beginning university studies. Since an economic downturn often hits labour with less education hardest, job chances for young people deteriorate. Thus in a downturn, young people may choose to begin university studies directly after leaving upper secondary school, while in a boom they may choose to wait a couple of years. The cyclical effects on the time chosen for starting university studies results in a countercyclical demand for education.

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[381] See Fiscal Policy Council (2009), Section 5.2.7 for a more detailed discussion of the job guarantee for young people.

The increased demand for education in an economic downturn may thus be due to people starting their studies earlier as well as people choosing to extend their studies or begin an education that they otherwise would not have undertaken. If the latter group is large, the percentage of people in different age cohorts with a university education may differ, depending on the labour market situation when the cohort reached the age at which most people make their choice of education.

There appears to be a correlation between the percentage of people with a university education at a particular age and the labour market situation when they were around twenty. Figure 9.3 shows the deviation from trend for the percentage of university educated thirty-year olds and the deviation from trend for the number of unemployed nine years earlier. Those who were 30 in 1998 made their education decision at the end of the 1980s when unemployment was low. According to the figure, the percentage of 30-year olds with higher education was 1.2 percentage points *lower* than the trend in 1998. The opposite pattern holds true for the cohort which was 30 in 2003 and made the education decision during the crisis in the 1990s when unemployment was high. According to the graph, the percentage of university educated was 1.5 percentage points *higher* in the cohort than indicated by the trend.

## 9.3 Supply of university places

Both demand and supply affect the education decision. The supply of university places has – at least to some extent – been adjusted to the increased demand for education that arises in economic downturns. The question is how this adjustment is made in a system like Sweden's where education is publicly financed. Another question is whether variations in education volumes have any consequences for the quality of education.

**Figure 9.3 Percentage of university educated 30-year olds and unemployment nine years earlier, deviations from trend**
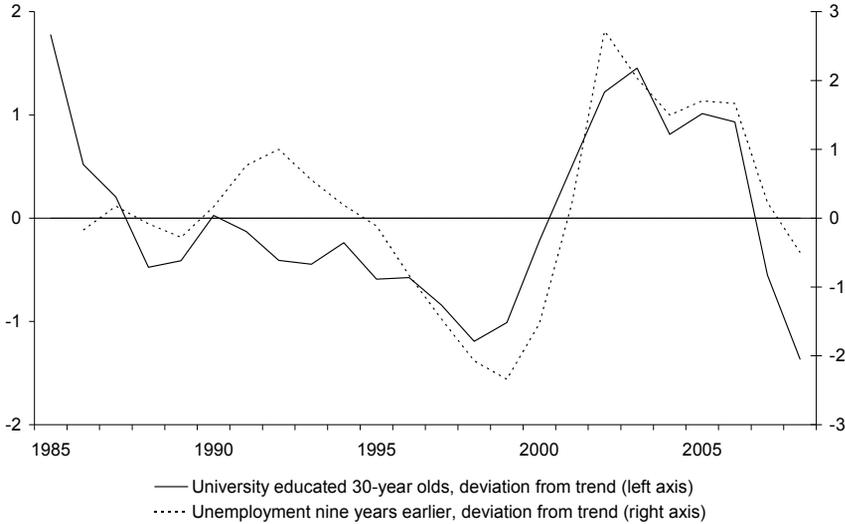


*Note:* Percentage with university education (per cent) is depicted on the left axis and unemployment (per cent) on the right axis. The trends have been estimated with a Hodrick-Prescott filter.
*Sources:* Statistics Sweden and Fiscal Policy Council calculations.

## 9.3.1 Adjustment of the supply

Since the fiscal year 1993/94, an appropriations system has been used in which both the central government and the academic institutions themselves can influence the number of education places. The central government decides a ceiling specifying how many students an academic institution can obtain compensation for. If they educate fewer students than the ceiling provides compensation for, the appropriation is saved so that the institution can later educate more than the ceiling provides for. Overproduction of education may also be 'saved' to be matched by a corresponding decrease in the number of students in the future. Neither saved education nor appropriations savings may exceed 10 per cent of the ceiling.

There are thus two ways in which the resources in the education system can be aligned with the business cycle. First, the Government can decide to raise the ceiling in the central government appropriation when unemployment and the demand for higher education are high and vice versa. Second, academic institutions can vary the education volume within the framework for unchanged appropriations by making use of the options for overproduction and

appropriations savings. Since 1997 the ceiling and the appropriation savings have covaried with the business cycle. This is illustrated in Figure 9.4 where the total ceilings' deviation from the trend and the difference between the amount paid and the ceiling are shown together with unemployment. For 2010-2012, the ceiling commitments and a forecast for unemployment are used. Colleges and universities save the appropriation when the amount paid is lower than the ceiling (when the curve is less than zero in the figure) and educate more than there is room for under the ceiling when the deviation is positive. The figure shows that the central government previously reacted by raising the ceiling even before unemployment began to rise but increased the ceiling with some lag in this economic downturn. Universities and colleges also react to changes in unemployment by accepting more students compared with the ceilings when unemployment is high.

According to Figure 9.4, the appropriations savings from 2005-2008 were relatively large; when unemployment rose, universities and colleges already had considerable financial scope for more education places. According to our estimates, universities and colleges can *in addition* to what room there is in the ceiling educate about 50 000 full-time students, or about 10 000 students a year during a five-year period, by using up their appropriation savings and accumulating the maximum amount of education saved. The possibilities of increasing the number of study places differed, however, from one academic institution to another. Most academic institutions with appropriations savings had reached their maximum level, while others instead had an accumulated overproduction. In 2009, academic institutions have chosen to increase the number of places so that they now match the ceiling. But there is still room for academic institutions to further expand education volumes by making use of the options for overproduction.

Given that it is desirable to increase education volumes in an economic downturn, the question of what kind of education is to be expanded arises. The factors that should be weighed are the cost of (temporarily) increasing the number of places in education and the return to education in the form of jobs and incomes. If the return to education is high, demand increases. In a system like Sweden's, with free education, the individual does not, however, take into account the cost of an education.

**Figure 9.4 Deviation of total ceilings from trend, deviation of paid amounts from ceilings (SEK billion) and the deviation of unemployment from trend (percentage points)**
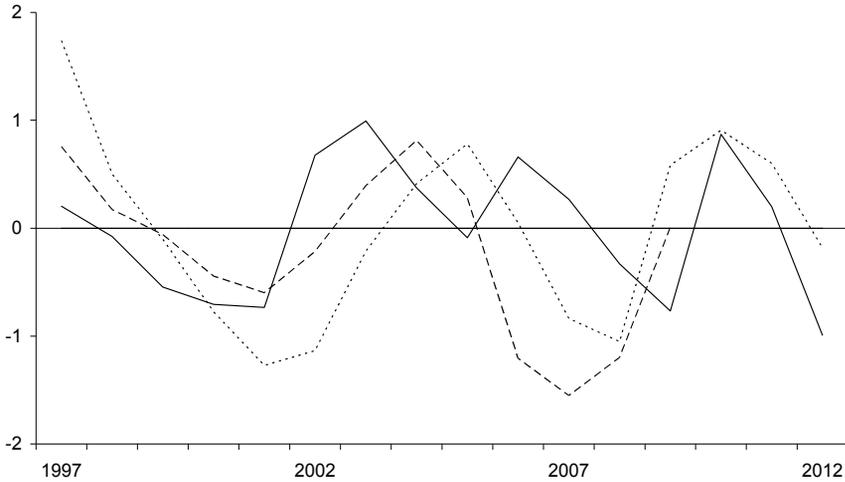


―― Ceiling, deviation from trend ― ― ― Deviation from ceiling ····· Unemployment, deviation from trend

*Note:* Deviation from the ceiling is defined as the amount paid (based on the number of registered students) minus the ceiling. The ceiling for 2010-2012 is based on the Government's forecast for the cost of undergraduate studies. The trends have been estimated with a Hodrick-Prescott filter.
*Sources:* Swedish National Agency for Higher Education, the National Institute of Economic Research and Statistics Sweden.

The central government can influence what programmes are expanded in an economic downturn by making changes in the academic institutions' appropriations ceiling and in their directives. To a large extent, the academic institutions themselves decide the programmes that will get more places. A qualified guess is that the academic institutions choose to increase the number of places in programmes with high demand and low fixed programme costs.

The academic institutions can also choose between increasing undergraduate or graduate studies. Presumably the demand for both types of education increases in a downturn. A study from the National Agency for Higher Education shows that a tougher labour market situation increases the demand for education both by new students without previous experience of university studies and by graduate students who have already earned a degree.[382]

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[382] National Agency for Higher Education (2009).

**Figure 9.5 Unemployment and registered students per teaching staff, deviations from trend**
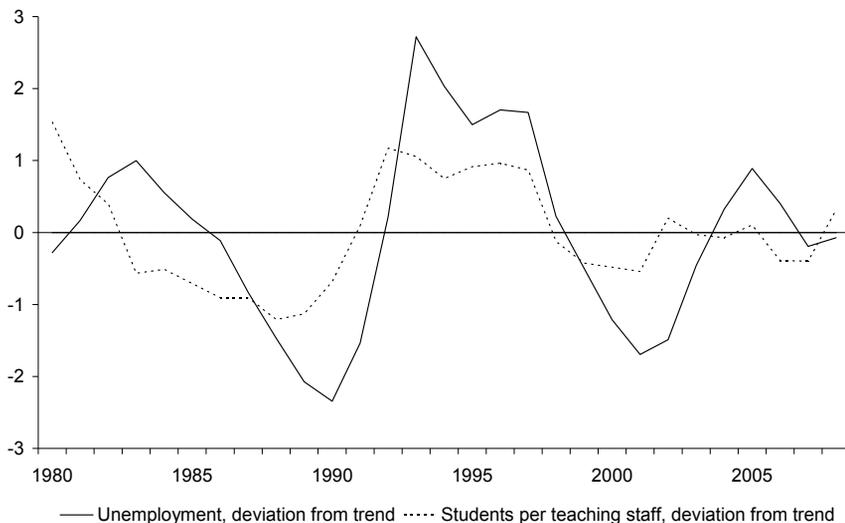


*Note:* The trends have been estimated with a Hodrick-Prescott filter.
*Sources*: Statistics Sweden and Fiscal Policy Council calculations.

## 9.3.2 Variations in the quality of education over the business cycle

One reason for not expanding education volumes strongly in an economic downturn is that a rapid expansion may be difficult to accomplish while maintaining quality. The quality of an education should be measured by how much knowledge and skills it provides. Unfortunately there are no studies examining whether the quality of the education varies with the education volume.[383]

There is support in the research indicating that class size at school affects the quality of education.[384] Even though the results primarily concern younger children, and probably are less relevant for university students, it may be interesting to see how staffing levels vary with the business cycle. Figure 9.5 shows unemployment and staffing levels as deviations from the long-term trend. The figure shows that temporary changes in unemployment covary with changes in staffing levels. It is clear that academic institutions are unable to

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[383] Studies investigating whether there are differences between various academic institutions have found only small effects (Elisasson 2006 and Öckert 2010).
[384] Lindahl (2005) and Fredriksson and Öckert (2008).

hire teachers at the same pace as programmes expand in an economic downturn.

Another aspect of the education system's cyclical sensitivity is the variation in the distribution of the number of study places between the various academic institutions. Figure 9.6 shows that the covariation with the labour market situation is approximately the same for academic institutions with a high ranking as for those with a lower ranking.[385] The cyclical variation at the highest ranking universities is due to the number of students at the five largest universities being very cyclically dependent.

Another indication of teaching quality is throughput, i.e. how rapidly students complete their education. Figure 9.7 shows credit production, defined as the share of entering students in a programme who within three years have earned at least 120 higher education credits, for entering students commencing their programmes in the academic years 1991/92 to 2005/06.[386] The pattern indicates that the throughput is slower when unemployment is high. This could be interpreted as a decline in the quality of education.

Throughput is affected not only by the quality of education but also to a large extent by the composition of the student population. The ability of those who apply to university may vary and their motivation to study change, depending on the business cycle. One way of analysing how student quality changes is to examine how admission requirements vary with the labour market situation. Figure 9.8 shows the percentage of all students admitted to a university programme on their grades who were admitted to a programme where the minimum grade for admittance was at least 15.[387]

The diagram indicates a strong positive correlation between admission requirements and unemployment.[388] However, this correlation appears to have broken down in 2009 when the percentage accepted with high grades is still at approximately the same level as in 2008 despite the worse economic situation.

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[385] The ranking refers to 2009 and is taken from Urank which conducts an annual independent ranking of Swedish universities and colleges based on statistics from the National Agency for Higher Education and other official material (www.urank.se).

[386] Higher education credits are calculated according to the new system where one term of full-time studies is equivalent to 30 credits.

[387] See the note to Figure 9.8 on how the grade is calculated.

[388] There is also a corresponding correlation for those accepted in programmes that require at least 1.5 credit points on the national university aptitude test. There also appears to be a negative correlation for the percentage accepted with no or very low admission requirements.

## Figure 9.6 Deviation from trend in the number of students admitted by high- or low-ranking academic institutions
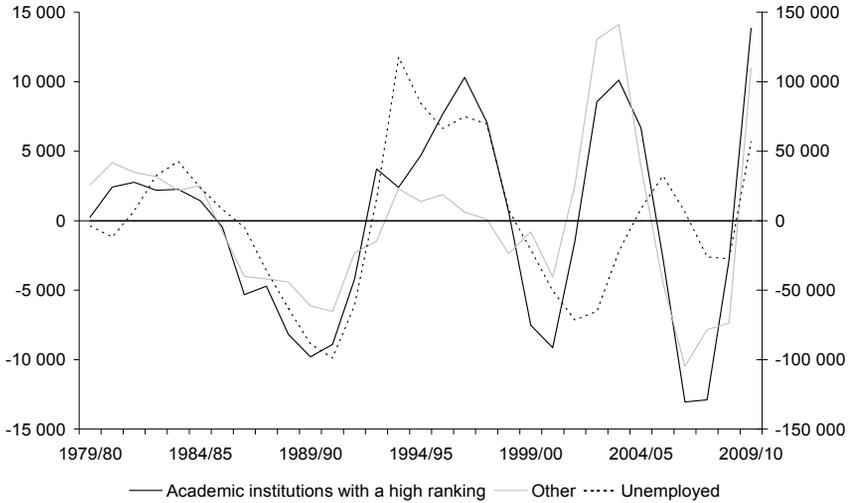


*Note:* The number of students is on the left axis and the number of unemployed (older definition) on the right axis. Trends have been estimated with a Hodrick-Prescott filter. The twelve academic institutions with the highest ranking are: Chalmers University of Technology, University of Gothenburg, Stockholm School of Economics, Karolinska Institutet, Royal Institute of Technology, Linköping University, Luleå University of Technology, Lund University, Stockholm University, Swedish University of Agricultural Sciences, Umeå University and Uppsala University.
*Source:* Statistics Sweden.

## Figure 9.7 Percentage beginning programmes who in three years have earned at least 120 higher education credits
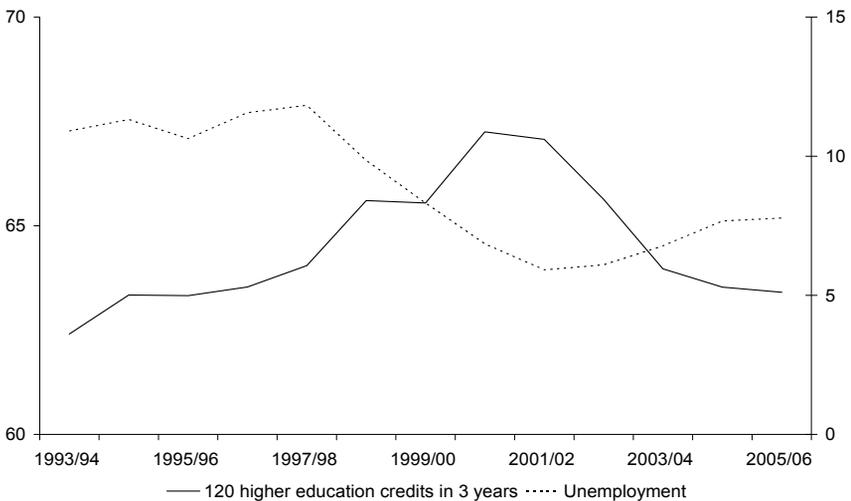


*Note:* The percentage with at least 120 higher education credits is shown on the left axis and unemployment on the right axis.
*Sources:* National Agency for Higher Education and Statistics Sweden.

**Figure 9.8 Unemployment and percentage of students admitted on their grades during the autumn semesters in programmes where the lowest grade was at least 15**



Percentage with high grades (15-20) ····· Unemployment
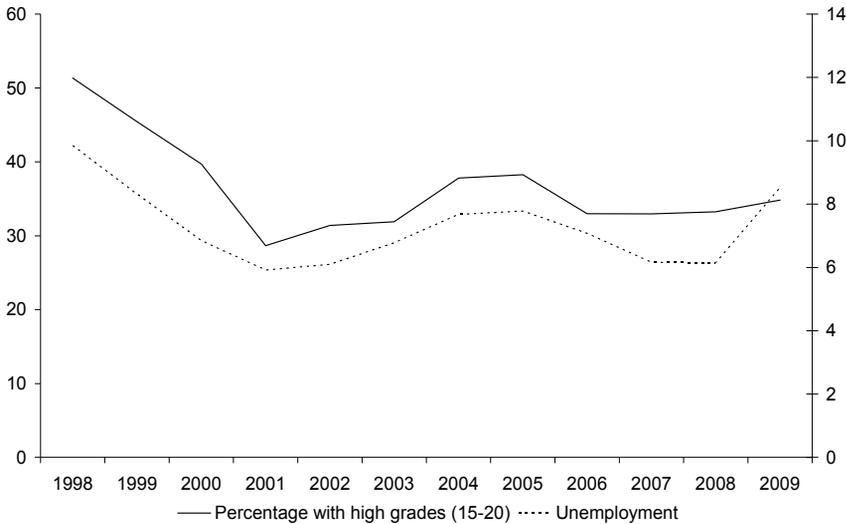
*Note:* Unemployment (ILO definition) is shown on the right axis and the percentage of students admitted on grades (per cent) on the left axis. The grades are calculated as an average of all course grades where Pass earns 10 credits, Pass with Distinction 15 credits and Pass with Special Distinction 20 credits. Older grades have been re-calculated using this scale.
*Sources:* Swedish Agency for Higher Education Services and the National Institute of Economic Research.

All in all, it appears that the supply of education places in earlier economic downturns has not been fully adjusted to meet the demand. Consequently more has been required to obtain a place at university in an economic downturn. But despite the students' better (than average) qualifications in a downturn, throughput worsens. One possible explanation is that the quality of education deteriorates when there is a rapid expansion of education volumes. Another is that the motivation to study is lower.

It is interesting that in 2009 there was a deviation from the earlier correlation between admission requirements and the cyclical situation (see Figure 9.8). The rapid expansion of university places is a possible explanation. Figure 9.9 shows how the percentage of those not accepted to their first choice of programmes has varied with the business cycle. The percentage has previously increased when unemployment has risen and vice versa. This correlation also broke down in 2009. Even though the number of qualified applicants

**Figure 9.9 Unemployment and the percentage of applicants not accepted to their first choice**
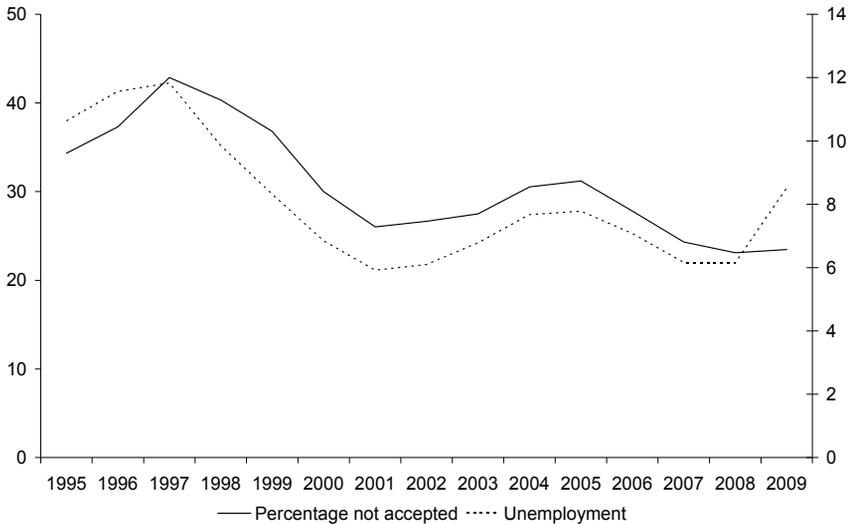


*Sources:* National Agency for Higher Education and Statistics Sweden.

accepted to their first choice increased by 29 per cent between 2008and 2009, the requirements for obtaining a university place did not.[389] Statistics for the entire academic year 2009/2010 are not yet available, but a comparison of the number of registered students between the 2008 and 2009 autumn terms show an increase of 9.7 per cent. If we assume that the percentage increase is the same between academic years 2008/09 and 2009/10 as between the autumn terms 2008 and 2009, it is the largest increase ever, both in terms of the percentage and the number of students.[390]

## 9.4 Conclusions

In the short run, an expansion of education places results in lower unemployment when younger workers disappear from the labour market. In a situation with high unemployment, the employment opportunities for those remaining in the labour market thus increase.

There is always a danger in locking in labour in education. But any possible negative consequences are less in a downturn than in an upturn. If we assume that education volumes in normal times are

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[389] In 2008, the number of first-time applicants was about 250 000 and in 2009 about 323 000.
[390] We have statistics on registered students since 1977.

socially efficient, it is appropriate to increase the number of places in a downturn when the return to education is higher.

There are reasons, however, for not increasing the number of places so much that all the increased demand for education is satisfied in a downturn. One reason is that a rapid expansion of education volumes may lead to lower quality education because academic institutions cannot increase the number of places while preserving the quality. There is also a risk of an *overreaction* in the private demand for education in a downturn. This is due to studies being used as unemployment insurance. Removing the study condition in the unemployment insurance in 2007 may have caused too many students to keep studying in a downturn in order to obtain student aid to support themselves.

But a generous unemployment insurance reduces the incentives to work. Therefore, the cost of more education has to be weighed against the negative effects of a generous unemployment insurance. In addition to the direct costs of education places, indirect costs arise as a result of: (i) lost earned income while studying, (ii) negative effects on other students of a reduction in the quality of education when there is a rapid expansion of education places, (iii) less search intensity in the labour market during studies and (iv) the effects of a large outflow of 'overeducated' a few years later. The insurance motive for education is primarily due to the risk of long unemployment spells. This means that possible measures to tackle the excess demand for education should focus on reducing the risk of long-term unemployment among young people.

It is difficult to predict how much the demand for education will increase in the next few years. Previously the number of university places has increased in economic downturns but not so much that all the demand was satisfied. The current expansion of education places is relatively large compared with expansions in earlier downturns. It is difficult on the basis of current knowledge to form an opinion on whether the volume of this expansion has been appropriate, but we would like to caution against the risk of excessive expansion of regular education in economic downturns.

# 10 Sickness insurance

The Government has carried out a number of reforms of sickness insurance during its term of office. The overall aim has been to stimulate the labour supply and overcome exclusion. Most of the reforms were announced in the 2008 Budget Bill. Our 2008 report discussed the appropriateness of the changes.[391] Our reasoning then dealt almost exclusively with the expected effects as there had not yet been time for several of the reforms to come into effect. Now, two years later, the changes have been implemented and a few evaluations of the short-term effects of the changes are available. The discussion must, however, still be based mostly on earlier research on similar measures and economic theory. This section discusses two main issues:

- How much of the reduction in the number of sick days can be attributed to the Government's reforms?

- What effects can the reforms be expected to have in the long run?

To begin with, there is a discussion of developments in sickness absence and early retirement over the last few decades. This is followed by a review of the Government's reforms and a discussion of their expected effects. We also discuss how the reforms have been implemented. A few more issues merit attention. The assessment of a person's capacity to work and the transition from sick leave to unemployment is one such issue. The continued increase in early retirements among young people is another important issue. The section concludes with an overall assessment of the Government's reforms.

## 10.1 Sickness absence and early retirements

Figure 10.1 shows how sickness absence has evolved since 1994. Only cases that lasted at least 15 days are included since the statistics for brief illnesses covered by the employer are deficient. The number of cases lasting at least 15 days declined until 1997 but increased sharply thereafter until 2002. In 2003 the trend turned downwards.

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[391] Fiscal Policy Council (2008), Section 7.

By 2008 the inflow was back to the same level as in 1997. After 2003, sick leaves have also become shorter and the outflow accordingly greater. All in all, because of the reduced inflow and the increased outflow, the stock, and therefore the number of people who are on sick leave at any given point in time, has decreased since 2003.

Internationally, Sweden is now at a normal European level after having substantially exceeded the EU average through the 1990s and up to 2003. Norway and the Netherlands have also experienced high levels of sickness absence. The Netherlands succeeded in getting sickness absences down already in the early 2000s, while Norway still has a high level. The Dutch case is interesting, as major reforms of sickness insurance have been implemented there. Employers have been made responsible for a large part of the cost of sickness absence and early retirement. Even though the empirical research on the relationship between the reduced sickness absence and the reforms in the Netherlands is limited, the experience there provides some support for the importance of strengthening employers' incentives to contribute to a prompt return to work.

Figure 10.2 shows a clear cyclical pattern for sickness absence in Sweden: it has been high in good times and low in bad times. The pattern was broken around 2005 when sickness absence continued to fall while employment turned upwards. There are still no unambiguous research results on the reasons for the trend break. A possible explanation is that the Swedish Social Insurance Agency's efforts against fraud and overuse have helped change attitudes to sick leave.[392] Since most of the Government's reforms came into force in 2008, the break in the cyclical pattern cannot be attributed to these reforms. Both employment and sickness absence have declined in 2009. It is, however, too early to say whether this means a return to the old cyclical pattern.

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[392] See, for example, Dagens Socialförsäkring (2009).

## Figure 10.1 Sick leave developments
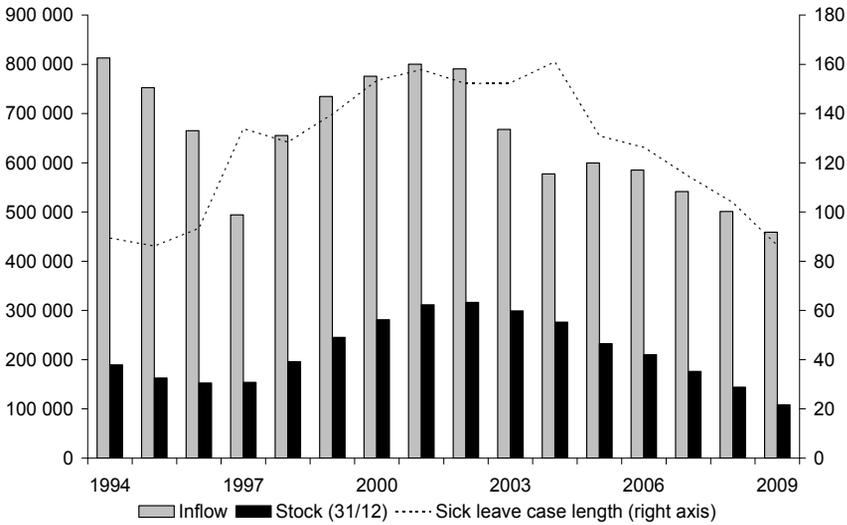


*Note*: Inflow and stock are measured on the left axis, average length on the right axis.
*Source*: Social Insurance Agency.

## Figure 10.2 Employment rate and sickness absence, per cent of the population and of the employed respectively
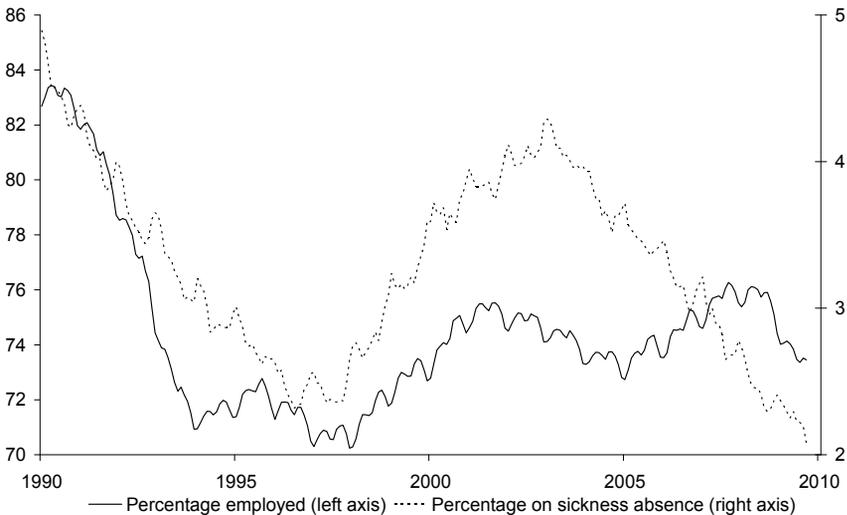


*Note*: Sickness absence measured as the number of people absent the entire week measured in the Labour Force Survey (LFS) as a per cent of the number employed. The per cent employed refers to the number employed as a per cent of the population. Both series are four-month moving averages.
*Source*: Statistics Sweden's Labour Force Surveys (LFS).

The regional dispersion of sickness absence has also declined considerably since 2003. One way of measuring sickness absence used by the Social Insurance Agency is the sickness benefit component of the sickness rate. [393] The sickness benefit component gives the average number of sickness benefit days per insured and year. In February 2010, the sickness benefit component of the sickness rate was 5.8 days. The County of Jämtland had the highest rate at 7.5, while the lowest number of days was in the County of Värmland, with 5.3. The difference between the highest and the lowest value was thus 2.2 days. In 2003 the average for all of Sweden was 15.9 and the difference between the highest and the lowest value for the sickness benefit component of the sickness rate was 10.2 days.[394]

Figure 10.3 shows developments in early retirements for the past 15 years. The number of people newly awarded early retirement increased from 1998 to 2002 for all age groups. New awards were particularly high in 2002 before early retirement changed names to sickness compensation (activity compensation for younger workers). The high number of new awards was probably due to the coming reform: the old system was seen as more generous than the new and thus there was considerable pressure to award early retirement to as many as possible before the reform. Since 2004 the number of new awards has fallen sharply. This is not so, however, for the age group 16-29. The inflow into early retirement has continued to increase for this group.[395]

The conclusion from this section is that the decrease in sick leave and early retirement began long before the current Government took office. Thus the decline cannot be solely attributed to the reforms announced and implemented since autumn 2006.

[393] The sickness rate measures the number of days with sickness benefits, sickness or activity compensation, or rehabilitation cash benefits per insured in one year.
[394] Social Insurance Agency (2010).
[395] We will return to this issue in Section 10.5.

**Figure 10.3 Newly awarded early retirements**
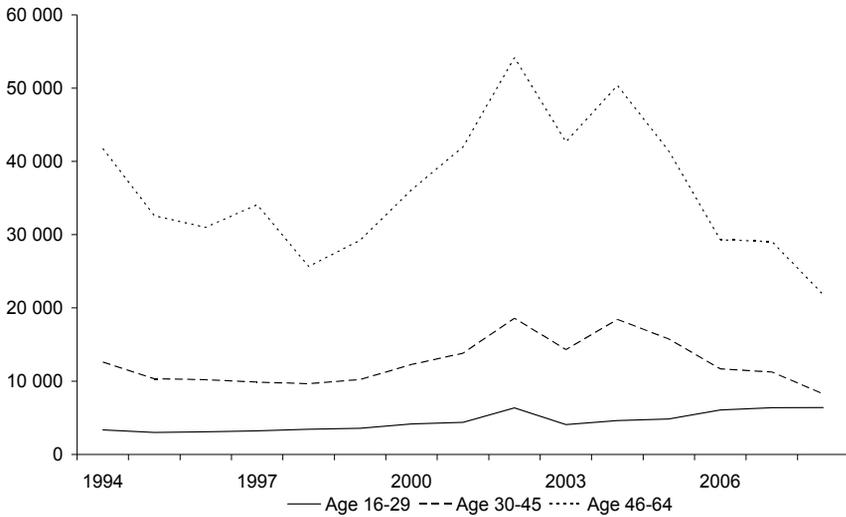
# 10.2 Expected effects of the Government's reforms

The reforms in the sickness insurance can, somewhat simplified, be divided into measures aimed at (i) strengthening the incentives to work and (ii) increasing the opportunities to work. Some of the reforms, for example, the rehabilitation chain, contain elements of both.

## 10.2.1 The rehabilitation chain

The biggest change in the sickness insurance rules is the introduction of a *rehabilitation chain* with fixed time limits specifying when work capacity is to be assessed in accordance with various criteria. In short, the rehabilitation chain means that the sick leave period looks as follows:[396]

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[396] See Govt. Bill 2007/08:136 and Pathric Hägglund and Peter Skogman Thoursie's background paper for the Council for a more detailed description of the chain (Hägglund and Skogman Thoursie 2010).

- The replacement rate in the first year (364 days) is 80 per cent of the qualifying income up to a ceiling of 7.5 base amounts.[397] The beginning of the sick leave period is the same as it was previously in so far as the employer after the initial qualifying day pays sick pay for the first *14* days. If the sick leave goes on longer than seven days, a doctor's certificate is required.

- On days *15-90* the insured is entitled to sickness benefit if unable to carry out current or other temporary assignments at his or her place of employment.

- On days *91-180,* the assessment will additionally take work capacity into consideration in relation to other assignments at the place of employment.

- From day *181*, if there are no *special grounds or it is not unreasonable*, the right to sickness benefit will be assessed vis-à-vis the regular labour market as a whole. If such grounds exist, the insured can continue on sick leave up to day 365 when he or she may apply for the *extended sickness benefit*. The extended sickness benefit is paid for up to 550 more days with a benefit equivalent to 75 per cent of one's previous income. There are also exceptions that make it possible to continue to collect 80 per cent of the benefit with the *continued sickness benefit*. The requirement for this benefit is that one is seriously ill and the illness has a serious impact on one's general state of health.

- Those who are still on sick leave after *914* days (2 ½ years) under the new rules will be transferred to unemployment insurance and the Swedish Public Employment Service's introduction programme. In some cases, however, it is possible to continue to get the extended sickness benefit.[398] This possibility thus implies a further relaxation of the time limit for sickness insurance.[399]

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[397] In 2010, a price-indexed base rate is equivalent to SEK 42 400.

[398] A further extended sickness benefit can be awarded if the person meets some of the following three criteria: (i) the person is hospitalised or being cared for at home and cannot come to the Public Employment Service; (ii) the person has a distorted concept of reality which presents an obstacle to assimilating information; or (iii) participation in the introduction programme risks aggravating the illness. In such cases, the extended sickness benefit is awarded indefinitely, i.e. without any specified time limit.

[399] A person having the right to the *continued sickness benefit* with an 80 per cent replacement rate also has the right to the sickness benefit for an unlimited time.

Before the rehabilitation chain was introduced, the Social Insurance Agency would assess work capacity in accordance with similar criteria within the framework for the step-by-step model. The new rehabilitation chain consists primarily of fixed time limits that specify when the work capacity assessments are to be carried out and the reduction in compensation that takes place after one year.[400] There is now also an upper limit of 2½ years, but with some exceptions. The rules have been tightened in two respects. The first has to do with the time limit of six months at the end of which the assessment now concerns the labour market as a whole. It is in practice an expansion of the concept of work. Previously the work capacity of the person on sick leave would be assessed in relation to a normal job within the framework for the step-by-step model. There was no exact time specified for when this would take place. Under the rules system, a possible transition to early retirement should be assessed after one year at the latest. There thus was an *indirect* time limit of no more than one year for assessing work capacity. In practice, this assessment often took place much later or never.

The second tightening of the rules concerns the right to sickness compensation (previously early retirement). The possibility of getting temporary sickness compensation has been eliminated. For the insured to be entitled to sickness compensation, his or her work capacity is to be *permanently* impaired. Before the reform was introduced, *lasting* impairment of work capacity was required. To put it simply, a permanent impairment in accordance with the law's intent is to be interpreted as 'permanent' while a lasting impairment would be interpreted as 'long'.

Thus far, there is only *one* evaluation of the rehabilitation chain.[401] It indicates that the chain helps shorten sick leave times since more sick cases end at the fixed times after 90 and 180 days. Otherwise, there is limited empirical research literature about the different elements in the rehabilitation chain: compensation that declines over time and fixed checkpoints for reconciliation and verification.

Several empirical studies in both Sweden and abroad show that the compensation level affects the use of the sickness insurance

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[400] The steps specified in the rehabilitation chain only affect people who are employed when the sick case starts. The unemployeds' work capacity is, for example, to be assessed in relation to the regular labour market as early as day two of the sick leave.

[401] Hägglund (2010).

system,[402] but there are no studies of the effects of a decreasing compensation profile apart from the above-named evaluation. Some conclusions can be drawn from a study by Johansson and Palme (2005), which finds that compensation that increases with time leads to longer sick leaves. A declining profile should, by analogy, lead to shorter sick leaves. Parallels may possibly also be drawn from the literature on unemployment insurance which shows that a decreasing compensation profile results in a greater outflow from unemployment to work.[403] Time limits at three, six and twelve months create natural control points. Swedish studies of review meetings and the requirement for a doctor's certificate have shown that control plays an important role in the probability of bringing a sick case to a close.[404]

There should be a good chance that the rehabilitation chain will make the system more uniform and help to reduce the inexplicably large variations in sickness absence that have been observed both geographically and over time but which now appear to be decreasing. Legal certainty in sickness insurance can thus be expected to increase.

## 10.2.2 Other reforms

In addition to the rehabilitation chain, stronger incentives to work have been introduced in the form of *sliding deduction*. With this incentive, individuals awarded permanent sickness compensation before 1 July 2008 are offered the opportunity to work up to a specified threshold while retaining their compensation from the sickness insurance. Incentives have also targeted employers via *new start jobs*.[405] Both these measures increase the opportunities for people on sick leave to return to work. Sliding deduction involves reduced marginal effects.[406] Empirical support indicating that this type of financial incentive increases the labour supply comes mostly from studies of the *Earned Income Tax Credit* in the United States.[407] New start jobs function primarily by increasing the demand for labour –

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[402] Johansson and Palme (2002 and 2005), Hesselius and Persson (2007), Larsson (2006) and Henrekson and Persson (2004) are Swedish studies. Krueger and Meyer (2002) and Barmby et al. (2002) are overviews of the international literature.
[403] See, for example, Carling et al. (1996).
[404] See, for example, Hesselius et al. (2005) and Lindahl (2008) respectively.
[405] New start jobs are discussed in more detail in Section 8.1.3.
[406] See, for example, Moffitt (2003).
[407] These studies are discussed in more detail in Section 7.1.3.

they reduce the cost to the employer of hiring a person with low (expected) productivity. Studies of earlier measures of a similar nature (subsidised employment) in Sweden have shown that this type of measure has a positive effect on the target group's probability of finding work.[408]

But whether the stimuli are sufficiently strong is questionable. Only just under two per cent of the target group, thus people with permanent sickness compensation awarded before 1 July 2008, have applied for a sliding deduction. New start jobs have indeed attracted substantially more participants: the average stock in 2009 was more than 19 000 people, but the overwhelming majority consisted of long-term unemployed registered with the Public Employment Service. Only a small number are people who were previously on sick leave or early retirement.[409] According to a report by Demoskop at the request of the Social Insurance Agency, the main reason that people on sick leave give against using the support is concern that the Social Insurance Agency will withdraw or reduce their sickness compensation.[410] Another issue is whether there are jobs available in the labour market for this group which, owing to its history of illness, may be expected to have low work capacity and productivity. The limited use made of new start jobs among people previously on sick leave may also be due to the small demand that exists for this type of labour, regardless of employers' wage costs.

To increase the opportunities to return to work, the Government has introduced the *rehabilitation guarantee*. It concerns people on sick leave or at risk of this as a result of long-standing problems with pain or psychological problems such as anxiety, depression or stress. The guarantee is to offer rehabilitation measures in the form of cognitive behavioural therapy and multimodal training where various support skills are combined. Even though medical research provides some support for this as an effective treatment,[411] the expected effects are uncertain. Relatively few studies have analysed the labour market outcome of both these and other rehabilitation measures.

The Government has also taken institutional initiatives intended to make the sick leave process more effective. These include

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[408] See also Section 8.1.3.
[409] In March 2010, there were about 1 500 people with special new start jobs (for people previously on sick leave or early retirement).
[410] Demoskop (2009).
[411] See Waddell and Burton (2004) and its references.

investment in *occupational health services*, stimuli for *increased cooperation* between actors in the sick leave process and *private alternatives to the Public Employment Service* and *medical insurance decision support tools for doctors*. Both the medical insurance decision-support systems and the expansion of the occupational health services should have good chances of improving the sick leave process even though the research in this area is limited. The pilot project with private actors has not yet been evaluated. But the Government, together with the Public Employment Service, has designed the assessment in such a way that the chances of a successful evaluation are good. Thus, for example, people who are offered a chance to participate in the pilot project are selected at random.

From a research perspective, there is reason to be undecided in face of the Government's expressed ambition to establish early interventions in sickness cases. While interventions in the form of assessments and controls are supported in the research, the situation with regard to (early) rehabilitation measures is more complicated. As pointed out, there is insufficient research in the area of rehabilitation. The main difficulty is to identify at an early stage those people in need of more extensive support. *Profiling* and *targeting* are methods that have produced positive results in labour market policy. These methods involve trying with the help of statistical techniques to identify the people in greatest need of measures and then the measures that are most appropriate. We would like to see these methods tried in sickness insurance as well.[412]

Some early measures based on the interaction between different actors have also been shown to prolong instead of shorten sick leaves.[413] There is a risk that early interventions will be cost ineffective for society if these cannot target the right people in an effective way.

Using the same argument, reforms aimed at encouraging the expansion of local interactive measures must be viewed with some scepticism. In recent years, SEK 1-1.5 billion has been invested in locally adapted action programmes even though impact studies are by and large lacking in this area. Here research of an experimental nature would be desirable to come to grips with the comparability

[412] See Fiscal Policy Council (2009a), Section 5.2.6, for a discussion on *profiling* and *targeting* in labour market policy.
[413] Lindahl (2008).

problems that otherwise may arise because programme participants may be different from those who do not participate in the programmes.

Finally, the earned income tax credit may have had an impact on time spent on sick leave. The fundamental idea of the earned income tax credit is to create stronger incentives to work.[414] As those on sick leave are not entitled to the credit, it entails an increase in the income from working relative to compensation for sick leave of more than 14 days. According to rough estimates in Johansson (2010), the earned income tax credit may have shortened sick leave by up to three days, or by 6.8 per cent. The Ministry of Finance has, with the help of a microsimulation model, estimated that the Government's income tax cuts will reduce sick leaves by 7.6 per cent and early retirements by 1.1 per cent in the long run. [415]

Our opinion is that the Government's reforms have helped reduce sickness absence and may provide further contributions in the future as well. The decline actually began before the current Government took office, but the reforms that have been implemented have probably helped the trend continue and strengthen. But it is impossible to form a definite opinion of how large the effects are. One disadvantage may be that the gate to early retirement has become very narrow because work capacity in principle must be permanently reduced for a person to qualify for early retirement.

## 10.3 Implementation of the reforms

When the rehabilitation chain and several of the other reforms were announced in autumn 2008, the bodies consulted were critical and wanted to see more analyses and clarification.[416] Of particular concern was the assessment of work capacity in relation to the regular labour market. The Government chose to pay little attention to the consultation responses and implemented the reforms very rapidly. This has led to a number of problems.

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[414] The earned income tax credit is discussed in more detail in Section 7.1.
[415] Microsimulation means that detailed information on the individual and household level is used to estimate the effects, for example, of tax reforms. See the Ministry of Finance (2009b).
[416] Ministry of Health and Social Affairs (2008).

The Social Insurance Agency has had difficulty interpreting the new rules. Its interpretations have on several occasions conflicted with the Government's expressed intentions. The details, as well as the exceptions, have increased even more since the Government has had to come out with clarifications. This has further complicated the application of the new rules. Given the complexity of the considerations needed when applying the rules, and the importance the insurance has for individuals, closer cooperation with the Social Insurance Agency on the design and application of the rules would have been desirable.

It is also questionable whether the Public Employment Service and municipal services were adequately prepared to take care of the people who will no longer get their means of support from the sickness insurance system. For example, the details about the upper limit for the right to sickness benefits were presented as late as October 2009. Consequently, the Social Insurance Agency, and the Public Employment Service had little time to prepare the measures and instruct their officials.[417] A large group of people on sick leave also had to wait until the last minute for notification of what compensation they would get as jobseekers. In the October 2009 Government Bill, the Government still intended that these jobseekers would be covered by ordinary activity support. But it proved difficult to produce the basis for estimating the size of the activity support quickly enough. As late as December 2009, instructions came that the compensation would instead be based on the qualifying income. Another problem was that the compensation – contrary to expressed intentions – also proved to have decreased for approximately half of the group that had transferred to the Public Employment Service.[418]

The concern caused by the introduction of the rehabilitation chain has put pressure on the Government not only to clarify the aims of the reforms, but also in some cases to withdraw proposals and review the consequences. As we have already pointed out in our 2008

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[417] Govt. Bill 2009/10:45.

[418] Radio Sweden and the publication Riksdag & Department reported on 21 December 2009 the Government's promise that those whose benefits had expired would get higher compensation because the compensation would be based on qualifying income (Radio Sweden 2009b and Riksdag & Departement 2009). On Ekot on Radio Sweden on 17 February 2010 (Radio Sweden 2010e), the Minister for Employment commented on the Social Insurance Agency's statistics which showed that the compensation was lower for many.

report, the Government has from the very beginning had to back away from several changes it had announced. The amended rules concerning pension rights for people with sickness and activity compensation and the reduction rule for supplementary insurance were examples we pointed out at that time.[419] Now the list can be supplemented with the exceptions that make sick leave possible beyond the upper limit of 2½ years, the exception to avoid unfairness in an assessment in relation to the regular labour market and new rules for the continued sickness benefit.

# 10.4 Transition from sickness absence to unemployment

## 10.4.1 Transition in the first year

According to the new rules for the rehabilitation chain, the work capacity of the person on sick leave is first assessed in relation to his or her own job, then after a maximum of three months in relation to other work with the same employer and last, after six months, in relation to the regular labour market as a whole. Should the person on sick leave on the occasion of the last named assessment be judged to have a work capacity in the labour market, his or her right to sickness benefits ceases and the person is transferred to the Public Employment Service. The new rules have been in effect since 1 July 2008.

Table 10.1 shows the status on 30 September for the years 2007-2009 for people who began a sickness case during the first quarter of the same year. Sickness cases, which have accordingly lasted 6-9 months, concern individuals who were employed at the start of their sickness case. The probability of going from sick leave to unemployment has increased considerably, from 1.7 to 2.2 per cent, i.e. by about 30 per cent, since the new rules were introduced.[420] The economic downturn may have contributed to the increase, but the percentage who got jobs also increased from 2008 to 2009.

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[419] Fiscal Policy Council (2008), Section 7.2.
[420] Since the sample for 2008 refer to the first quarter, this group did not come under the new rules until 1 January 2009. This is due to transitional arrangements.

**Table 10.1 Reason for closing sickness absence cases begun in the first quarter of the year, per cent**

|  | 2007 | 2008 | 2009 (new rules) |
|---|---|---|---|
| Work | 84.4 | 86.8 | 88.9 |
| Unemployment | 1.7 | 1.7 | 2.2 |
| Sickness or activity compensation | 0.4 | 0.5 | 0.1 |
| Ongoing cases (30 September) | 13.4 | 11.1 | 8.8 |

*Source*: Hägglund and Skogman Thoursie (2010).

The greatest change has been in the transition to sickness/activity compensation from 0.4-0.5 per cent to 0.1 per cent. This is probably related to the new stricter criteria for impaired work capacity when assessing the right to sickness compensation. The declining percentage of current cases reflects the reduction in the length of sickness periods.

Table 10.2 shows that people who were previously on sick leave got more active measures after their transfer to unemployment. This trend applies to everyone regardless of the length of the sick leave before the transfer to unemployment, i.e. for a larger group than the population in Table 10.1. Active measures may entail both regular programme activities and measures within the framework for the joint action plan of the Social Insurance Agency and the Public Employment Service.[421] Most are still registered as openly unemployed, but an increasing percentage are able promptly to take part in a programme or joint action.

The Public Employment Service is more active in cases where the individual has had a longer period of sickness absence than in other cases. So, for example, the percentage in joint action measures is 3 per cent for individuals who have been on sick leave for less than six months and 36 per cent for individuals who have been on sickness absence for two or more years.[422]

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[421] In the joint action plan, there is first a survey that aims to assess the work capacity of the jobseeker/insured. Thereafter the rehabilitation continues with work assessment, education and adjustments to increase work capacity and find employment. Activities in the joint action plan are preceded by an assessment made by a preparatory group consisting of officials from the Social Insurance Agency and the Public Employment Service that the individual is fit for these measures.
[422] Hägglund and Skogman Thoursie (2010).

**Table 10.2 Status of those previously on sick leave after transfer to the Public Employment Service, per cent**

| Status at the Public Employment Service | 2008 | 2009 | Difference |
|---|---|---|---|
| Open unemployment | 67.7 | 60.7 | -10.3 |
| Joint Action | 10.4 | 17.1 | +64.4 |
| Programme | 3.5 | 4.1 | +17.1 |
| Work | 18.4 | 18.0 | -2.2 |

*Source*: Hägglund and Skogman Thoursie (2010).

The labour market prospects for people whose benefits expire after 180 days of sick leave looks relatively bright. The Social Insurance Agency has had a survey conducted of all people whose sickness benefit came to an end in January 2009 after having lasted at least 180 days. The survey covers all the reasons for the expiry of the sickness benefit and is thus not conditional on people transferring to the Public Employment Service. About 70 per cent of these people had jobs five months later; 67 per cent were employed and 4 per cent were self-employed.[423] Only 11 per cent were still unemployed or in labour market programmes and 5 per cent had gone back on sick leave (2 per cent with sickness benefit, 3 per cent without). There is little difference between the survey results and how many in the survey population worked before they went on sick leave: then 91 per cent were employed and 5 per cent ran their own business.

## 10.4.2 People whose benefits have expired

According to the Government's forecasts, 54 000 people will reach the upper limit for either the sickness benefit (2½ years), or temporary sickness compensation in 2010.[424] If these people are judged to have work capacity, they will be referred to the Public Employment Service activities and compensation in the form of activity support.

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[423] Social Insurance Agency (2009).
[424] Govt. Bill 2009/10:45.

**Table 10.3 Outcome for individuals who reached the upper limit in the sickness insurance at the turn of the year 2009/2010, number of people and per cent**

| | Sickness benefit | | Temporary sickness compensation | | Total | |
|---|---|---|---|---|---|---|
| | Number | Per cent | Number | Per cent | Number | Per cent |
| Reached upper limit | 13 193 | 100 | 1 096 | 100 | 14 289 | 100 |
| *of which:* | | | | | | |
| Still in the sickness insurance system | 606 | 4.6 | 249 | 22.7 | 855 | 6.0 |
| At Public Employment Services in February 2010 | 11 494 | 87.1 | 548 | 50.0 | 12 042 | 84.3 |
| Not at the Public Employment Service | 1 093 | 8.7 | 299 | 27.3 | 1 392 | 9.7 |

*Source*: Social Insurance Agency reports 2010-02-12 and 2010-03-18.

The Social Insurance Agency has, in a number of reports and press releases in the first quarter of 2010, followed the first wave of people whose benefits had expired, i.e. people who at the turn of the year 2009/2010 had reached the upper limit. Table 10.3 shows that a large majority, 84 per cent, at the end of February were registered at the Public Employment Service.

About 10 per cent, however, were neither in the sickness insurance system nor with the Public Employment Service. About 6 per cent, or 855 of the total 14 289 individuals who had reached the upper limit, were awarded either permanent sickness compensation or further sickness benefits. Further sickness benefits may be awarded in connection with the exceptions that the Government announced as late as December 2009.[425] Briefly, the exceptions concern two matters. First, a new *concept of fairness* was introduced. It says that people with serious illnesses will *never* be assessed in relation to the regular labour market.[426] Second, the rules were changed for what is called the continued sickness benefit (i.e. a sickness benefit equivalent to 80 per cent of the sickness benefit base income after twelve months) with the expressed aim that everyone with cancer would be given the right to the continued sickness benefit.[427]

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[425] Ibid.

[426] What 'never' means is up to the Social Insurance Agency to interpret. It is not clear whether the exception applies to one who is declared completely or sufficiently healthy and how the assessment is made.

[427] The term for serious effect on general health was removed and the word 'serious illness' replaced the wording 'exceptional grounds'.

The National Board of Health and Welfare has been given the task of defining the concept 'serious illness'.[428] The list of criteria for illnesses that will be considered serious which the National Board of Health and Welfare draws up may indeed facilitate application of the law but it may also have drawbacks. Such a list of criteria signals that certain illnesses should lead to continued sickness benefit regardless of a person's general state of health and implies that people with an uncommon diagnosis that is not on the National Board of Health and Welfare list, but which seriously affects their general health, are excluded from the continued sickness benefit.

Many questions remain about what will happen to the group whose benefits expire this year after a very long time on sick leave. What are their chances of finding a job in the regular labour market (within the framework for the job and development guarantee)? And how many will reapply for sickness benefits after the requalification period of three months?

Our conclusion is that the prospects for the activation rate for the short-term sick and their chances of finding work quickly after they have left the sickness insurance system look promising. But the treatment of those whose benefits expire after a long period of sick leave or temporary sickness compensation has been inadequate with many instances of late information and changes. This group has a very weak foothold in the labour market. The debate and the Government's reactions to it over the past autumn and winter have also shown that this is a sensitive issue.

It presumably would have been a good idea to grant an amnesty to those on sick leave and temporary early retirement who were already in the system on 1 July 2008, when the new rules were introduced, and let the new time limits apply only to the new inflow. A justification for this could have been that those who had already been on sick leave (a long time) before the new rules came into effect had not been affected by them nor had access to the increased possibilities for rehabilitation measures at the beginning of their sick leave. Proceeding in this way would have also made it possible to try out the new rules on a smaller scale.

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[428] The 2010 budget letter of the National Board of Health and Welfare.

## 10.5 Young people on early retirement

As reported above, young people aged 16-29 are the only group in which early retirements are still increasing.[429] A number of other OECD countries have also experienced an increase in the number of young early retirees, but the increase is greatest in Sweden (OECD 2009c). The increase in Sweden is primarily related to psychiatric diagnoses.[430]

Hägglund and Skogman Thoursie (2010) present an interesting hypothesis that the increase in early retirement among young people is related to the school reforms of the 1990s. Under the 1991 upper secondary school reform, vocational programmes were extended to three years and the last year mainly consists of theoretical studies. Another reform changed the relative grading system to an objectives-based system, which probably made it more difficult to get a school-leaving certificate.

Earlier research has shown that (i) the percentage of students who do not have an approved certificate from both compulsory school and upper secondary school increased during the second half of the 1990s; (ii) both of the above-named reforms have been significant factors in the increase;[431] (iii) people with incomplete upper secondary studies are overrepresented among the unemployed; and (iv) young people who were granted early retirement in the 2000s have a long history of unemployment and sick leave.

The extended vocational programme in the upper secondary school applied mainly to individuals born in 1976 and after. These young people would be expected to finish upper secondary school in the mid-1990s. The grading system reform in upper secondary school affected people born from 1978 onwards. They may be assumed to have left school two years later than the first group. The compulsory school grading reform concerned individuals born from 1982 onwards. They may be assumed to have completed upper secondary school in the early 2000s. The process leading up to early retirement is often long with repeated periods of sick leave and unemployment. It is unlikely that people without school-leaving certificates and with difficulties getting established in the labour market would retire

[429] See Figure 10.3.
[430] See the Social Insurance Agency (2007).
[431] Hall (2009) studies the effects of abolishing the two-year upper secondary school and Björklund et al. (2010) analyses the effects of the introduction of an objectives-based grading system.

immediately. This also makes it difficult to directly relate the changes in the school system to the rise in early retirements, but the cohorts affected by the school reforms were aged 20-29 in the early 2000s, that is to say, when the number of young early retirees increased sharply.

Based on Hägglund and Skogman Thoursie's hypothesis, an increase in the probability of early retirements at a given age can be expected for each cohort from 1976 onwards. This is also precisely what Figure 10.4 shows. There is obviously a great need for studies of the possible relationship between the rise in early retirements among young people and the school reforms.

## 10.6 Conclusions

The Government with its reforms to sickness insurance should be commended for tackling a difficult problem. All the political parties were already aware of the problem for several years before the current Government took office and were also agreed on the need for reforms. The emphasis on a temporary sickness insurance came from many quarters, for example, the Swedish Trade Union Confederation.[432] There is support in the research indicating that the reforms can be expected to increase both the incentives and the opportunities to work. The rehabilitation chain appears to have had a substantial impact. The transfer to the Public Employment Service appears to be functioning relatively smoothly during the first year of sick leave. It goes without saying that the large problems that existed in the sickness insurance cannot be addressed without making mistakes. But in our opinion the  mistakes have been too many. The Government should be criticised for implementing the reforms too hastily and in some respects carelessly and for its treatment of those on long-term sick leave whose benefits had expired.

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[432] Swedish Trade Union Confederation (2007).

**Figure 10.4 The percentage of early retirement awards at different ages in different birth cohorts**
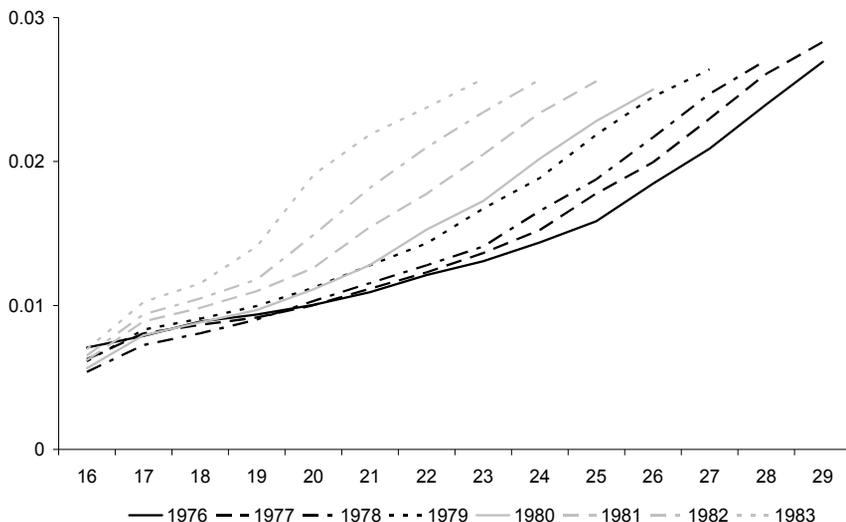
It presumably would have been wise to distinguish between *stock* and *flow* in sick leave. This could have involved granting amnesty to the stock of people on sick leave that were already in the system on 1 July 2008 when the rules were changed and letting the new rules apply only to the new inflow. That would have made it possible to try out the new rules on a smaller scale.

It is unfortunate that the implementation of the reforms has been flawed in several respects. The Government has had to back away from some of the reform proposals. In other cases, the content has been changed or exceptions introduced at a late stage. It is important that proposals are so well prepared and supported before they are presented in a bill that there is no need to change or withdraw them. This is particularly true of such sensitive issues as reductions in the generosity of the social security systems.

We also want to raise some issues that should be further analysed. The increase in early retirement among young people is alarming and more detailed analyses of the reasons behind it are needed. Possible links to school reforms that made it more difficult to complete a school-leaving certificate and increased the theoretical element in education need to be examined. From this perspective, the

Government's focus on more practical upper secondary programmes is a positive development.

For older people, it is possible that early retirement is too seldom granted. We would like to caution that the criteria for early retirement may have become too strict. The requirement for *permanently impaired work capacity* is quite severe.

# 11 Unemployment insurance

Unemployment insurance is designed to strike a balance between providing income protection in the event of unemployment and maintaining strong economic incentives to work. An appropriate balance presupposes knowledge of the income differences between working and not working and how these differences are affected by various reforms. A key issue in the debate has been the coverage by supplementary insurance schemes from trade unions or in collective agreements and the number of people solely dependent on the regular unemployment insurance (The Swedish Unemployment Scheme). This section contains an in-depth analysis of the income protection for the unemployed.

## 11.1 Changes in the replacement rate

Income protection in unemployment insurance is often described in terms of the *replacement rate*, which is the share of previous income that a person is entitled to keep in the event of unemployment. The Government has implemented several reforms that affect the replacement rate in the regular unemployment insurance. To increase the return to work (i) benefit levels after 200 benefit days have been lowered; (ii) the higher ceiling for the first 100 benefit days has been eliminated; (iii) the earned income tax credit has been introduced, and (iv) the income threshold for state income tax has been raised. In addition to the reforms, the replacement rate is affected by wage increases as the ceiling in unemployment insurance has been nominally unchanged since 2002. The cumulative effect of the reforms is reported each year in an appendix to the budget bill, but it is difficult to infer the extent to which different reforms have contributed to the development.[433]

To get a better picture, we have calculated the replacement rate for 2006 and 2010 and decomposed the change in different reforms' contribution to the development. As the effect on the replacement rate depends on previous income and the duration of the

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[433] In the Budget Bill for 2010, the replacement rate is reported in Appendix 4 (Budget supplement on income distribution). The calculation method used is reported in detail in SOU 2004:2. In the 2010 Spring Fiscal Policy Bill, however, the effect of the earned income tax credit on the replacement rate is reported separately from other reforms.

unemployment spell, we analyse three different durations for five different income classes.

Table 11.1 shows how the replacement rate after tax has been affected by the different reforms and by price and wage increases for an unemployment period that lasts an entire calendar year. The replacement rate is highest for low incomes. This is mainly due to the ceiling in the unemployment insurance whereby an unemployed person cannot get more than about SEK 15 000 a month before tax, regardless of the person's previous income. As the ceiling has remained unchanged for a long time while wages have increased, the *wage increases* have contributed to lowering the replacement rate for everyone whose income exceeds the ceiling (incomes over SEK 18 700 a month do not affect the compensation from the insurance). This effect has been greatest for people with incomes just over the ceiling. The *earned income tax credit* has also led to substantial changes in the replacement rate. The greatest change has been for people with low incomes. This is because the credit as a percentage of income is greater for low than for high incomes.

Compared with the earned income tax credit and the lack of adjustment to the wage increases, the *changes in the unemployment insurance* have had little effect on the replacement rate after one year of unemployment. Elimination of the higher ceiling in the first 100 benefit days and the lowering of the benefit level from 80 to 70 per cent after 200 days have had a different effect on the replacement rate for different groups. The lower ceiling has reduced the replacement rate for people whose incomes exceed the ceiling, while the reduced benefit level only affects those whose income is under the ceiling. Increasing the threshold at which one begins to pay state tax has led to lower replacement rates for high incomes. The reason for this is that a reduced tax on high incomes is in practice a reduced tax on earned income and not on income from unemployment insurance. The replacement rate for low incomes was previously over 80 per cent owing to the decrease in the non-taxable allowance.

## Table 11.1 Replacement rate after tax in 2006 and 2010 at one calendar year's unemployment according to monthly income and different factors' contribution to the change

| Monthly pay | 15 000 | 20 000 | 25 000 | 35 000 | 50 000 |
|---|---|---|---|---|---|
| **Replacement rate 2006** | **82.3** | **81.8** | **71.3** | **51.8** | **39.9** |
| **Replacement rate 2010** | **73.1** | **68.7** | **56.5** | **42.6** | **33.4** |
| **Change** | **-9.2** | **-13.1** | **-14.8** | **-9.2** | **-6.5** |
| From 80 to 70 per cent | -1.9 | -0.7 | - | - | - |
| Reduced ceiling for 100 days | - | -1.7 | -1.5 | -1.1 | -0.8 |
| Earned income tax credit | -7.0 | -6.5 | -5.4 | -3.2 | -1.9 |
| Raised income threshold for state tax | - | - | - | -0.6 | -0.3 |
| Price and wage increases | -0.1 | -4.0 | -7.0 | -4.2 | -2.9 |

*Note:* The table shows an individual's total income for one year of unemployment as a percentage of income for one year of work. Rows 4-8 show various factors' contribution to the change in percentage points. All estimates assume that the person is between 25 and 64, is a member of an unemployment insurance fund and meets the terms for accrued work and has no income other than earned income or benefits from an unemployment insurance fund (supplementary insurance schemes are thus not included). The monthly pay reported refers to 2010. For 2006, the monthly pay in each income group is assumed to have been 12 per cent lower.
*Source:* Fiscal Policy Council estimates.

The replacement rate was defined above as the ratio between the income at 0 and 365 days in work during one and the same calendar year. Previously the length of the unemployment period studied was less important, but because of the earned income tax credit, the income lost per month of unemployment is considerably higher for long unemployment spells than for short ones. Thus the estimates that do not allow for unemployment spells shorter than one calendar year overstate the change in the replacement rate.

**Table 11.2 Replacement rate after tax at six months of unemployment according to monthly income and different factors' contribution to the change**

| Monthly pay | 15 000 | 20 000 | 25 000 | 35 000 | 50 000 |
|---|---|---|---|---|---|
| **Replacement rate 2006** | 82.3 | 81.8 | 73.1 | 52.7 | 49.5 |
| **Replacement rate 2010** | 76.9 | 73.3 | 59.7 | 48.6 | 48.9 |
| **Change** | **-5.4** | **-8.5** | **-13.4** | **-4.1** | **-0.6** |
| From 80 to 70 per cent. | - | - | - | - | - |
| Reduced ceiling for 100 days. | - | -3.6 | -3.0 | -2.2 | -1.2 |
| Earned income tax credit | -5.3 | -2.8 | -2.2 | +1.3 | +3.0 |
| Raised income threshold for state tax | - | - | - | -1.8 | +0.5 |
| Price and wage increases | +0.5 | -5.3 | -7.3 | -1.8 | +0.3 |

*Note:* The table shows an individual's income after six months of unemployment as a percentage of income from six months' work. The tax effects caused by unemployment (reduced tax on earned incomes) are counted as income during the unemployment period. In addition to the assumptions in Table 11.1, it is assumed here that the person works during the time that he or she is not unemployed and vice versa.
*Source:* Fiscal Policy Council estimates.

Table 11.2 shows how the replacement rate has changed since 2006 for people who are unemployed for six months.[434] The change is considerably less than the change for a whole year of unemployment. This is primarily because the effect of the earned income tax credit is smaller or even positive. The earned income tax credit may raise the replacement rate because the credit does not affect the income lost in the event of unemployment for a person who for the remainder of the calendar year has earned income exceeding seven price base amounts (about SEK 300 000) and thus receives the maximum earned income tax credit. However, the credit raises total annual income and, as a result, the income lost constitutes a smaller part of total income than would have been the case without

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[434] If $I_0$ is annual income with 0 days of unemployment and $I_k$ is annual income with $k$ days of unemployment, the replacement rate can be estimated as:

$$\text{Replacement rate} = \left[ 1 - (I_0 - I_k)/I_0 \right] \times 365/k .$$

the earned income tax credit. The reduction of the ceiling the first 100 benefit days has also had a major impact on the replacement rate. The effect is greater for shorter than for longer unemployment spells as the 100 days make up a larger part of the unemployment spell.

Table 11.3 shows the replacement rate for the long-term unemployed who receive activity support for participating in a labour market programme. Compared with 2006, the replacement rate has fallen by almost 20 percentage points in the lower income brackets. This is primarily due to the reduction in benefits for the long-term unemployed from 80 to 65 per cent of previous income, but also to the earned income tax credit's contribution to lower replacement rates. The change has been smaller for people with higher incomes. Because these people also reach the ceiling at 65 per cent of previous income, they are not affected by the decrease in benefits. For these groups, the earned income tax credit and the lack of adjustments to wage increases have had the greatest impact on the replacement rate.

**Table 11.3 Replacement rate after tax for the long-term unemployed with activity support according to monthly income and various factors' contribution to the change**

| Monthly pay | 15 000 | 20 000 | 25 000 | 35 000 | 50 000 |
|---|---|---|---|---|---|
| **Replacement rate 2006** | 82.3 | 81.8 | 69.5 | 50.5 | 38.9 |
| **Replacement rate 2010** | 62.5 | 62.0 | 56.5 | 42.6 | 33.4 |
| **Change** | -19.8 | -19.8 | -13.0 | -7.9 | -5.5 |
| From 80 to 65 per cent | -12.5 | -7.4 | - | - | - |
| Reduced ceiling for 100 days. | - | - | - | - | - |
| Earned income tax credit | -6.0 | -6.0 | -5.4 | -3.2 | -1.9 |
| Raised income threshold for state tax | - | - | - | -0.6 | -0.3 |
| Price and wage increases | +0.3 | -0.2 | -5.2 | -4.2 | -2.9 |

*Note:* The table shows the income for one year with activity support for people who have been unemployed at least 420 days as a per cent of the income from one year's work. Rows 4-8 show various factors' contribution to the change in percentage points. See also Table 11.1.
*Source:* Fiscal Policy Council estimates.

## 11.2 Unemployment insurance coverage

The percentage of the unemployed who are eligible for unemployment benefits has fallen drastically in recent years. In 2009, the Swedish Unemployment Insurance Board (IAF), together with the Public Employment Service, published a report that investigated how large a proportion of the unemployed received unemployment insurance benefits.[435] They found that the share had fallen to 55 per cent of the unemployed in 2008. Figure 11.1 shows that this trend has continued and that fewer than half of the unemployed who are registered with the Public Employment Service (including the part-time unemployed and those who are temporarily employed on an hourly basis) now receive unemployment benefits.

The decrease in the share of unemployed eligible for benefits is not due to the decline in the number of members in an unemployment insurance fund, as those who have left the funds still receive the insurance's basic allowance if they meet the required work terms. The share of unemployed with these benefits is illustrated by the distance between the two curves in Figure 11.1.

There is probably some cyclical variation in the share of unemployed receiving unemployment benefits. When unemployment increases, people who have a relatively strong position in the labour market and meet the work requirement also risk becoming unemployed. Therefore, it is natural that the share eligible for unemployment benefits is *higher* than normal in a downturn and *lower* than normal in an upturn. It is clear from the diagram that the share of unemployed who receive unemployment benefits fell between 2006 and 2008, a fall which is partly due to the favourable state of the economy in this period.

The absence of an *increase* in the share with unemployment benefits now is probably due to the rule changes in the insurance since 2007. These changes include the limitation of the part-time unemployeds' possibilities of getting benefits, the elimination of the *study condition* that made it possible for students to qualify for the insurance and the reduction in the maximum number of benefit days to 300.[436]

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[435] IAF (2009b).

[436] Unemployed people responsible for supporting minors may get benefits for a maximum of 450 days. We have described these changes in our 2008 report (Fiscal Policy Council 2008, pp. 176-177).

**Figure 11.1 Share of the unemployed with benefits from an unemployment insurance fund**
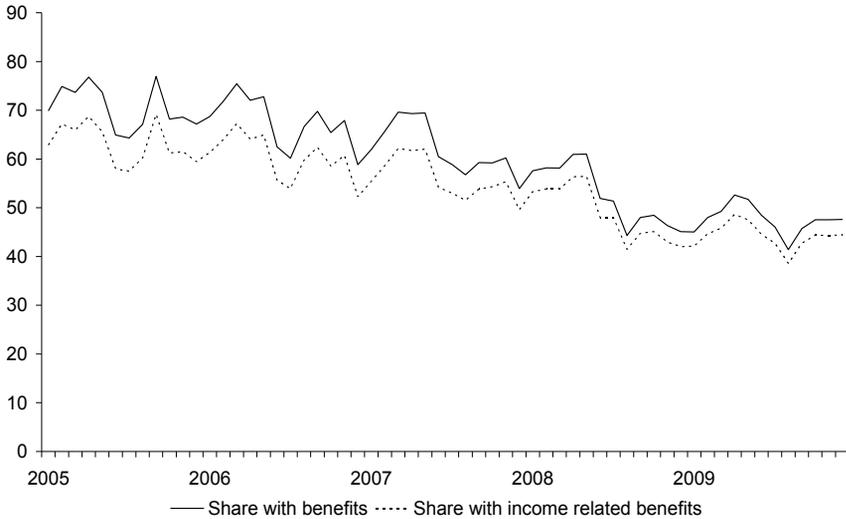


*Note:* Unemployed here are people who are registered with the Public Employment Service and classified as openly unemployed, part-time unemployed or temporarily employed on an hourly basis.
*Sources:* Public Employment Service and IAF.

# 11.3 The unemployeds' incomes

Each month, the Public Employment Service conducts an interview survey among those registered with the Service. In February 2010, the Service, on our initiative, added a number of supplementary questions about the unemployeds' incomes to its jobseeker survey. The aim was to chart what incomes the unemployed have today and how these relate to the incomes they had before they became unemployed. The questions and information about the sample are given in Appendix 4. Some information is based on relatively few responses and should therefore be interpreted cautiously.

## 11.3.1 The importance of the social security systems

Although the Public Employment Service and IAF statistics show that the share of the unemployed with income from unemployment insurance is less than 50 per cent, 65 per cent of the openly unemployed who participated in the survey report that they receive

unemployment benefits. The difference between different age groups is substantial. Only 16 per cent of openly unemployed young people receive unemployment benefits compared with 72 per cent of those over 25. This can be seen in Table 11.4.

Of the total number of people who were openly unemployed, 7 per cent received activity support, which is reserved for people in labour market programmes. At the same time, 7 per cent of people in programmes stated that they received unemployment benefits. A possible explanation is that a person may have had other employment when the interview was conducted than when the benefit was paid, but it is also possible that some of the unemployed did not know the name of their current benefit.

Among the openly unemployed over the age of 25, 19 per cent lack benefits from the major social security systems.[437] For people who have not turned 26, the corresponding figure is as much as 60 per cent. Young people also receive welfare benefits to a greater extent than older workers. As many as one fifth of the young people have incomes from some form of work, even though they consider themselves unemployed. They are probably referring to temporary jobs and work on an hourly basis.

For people in the labour market programmes, the differences between the two age groups are considerably smaller and the share without income is relatively small. One explanation for this may be that one can get activity support without meeting the work requirement.

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[437] The major social security systems here refer to all types of income in Table 11.4 except earned incomes and welfare benefits.

## Table 11.4 Occurrence of various types of income for the unemployed, per cent

|  | Open unemployment: | | Participants in programmes | |
|---|---|---|---|---|
|  | Over 26 | Under 26 | Over 26 | Under 26 |
| Unemployment benefits | 71.5 | 15.8 | 8.3 | 5.9 |
| Activity support | 5.4 | 15.1 | 81.8 | 79.6 |
| Sickness or activity compensation | 2.8 | 1.4 | 6.4 | 0.4 |
| Sickness benefit or rehabilitation compensation | 1.8 | 0.0 | 3.9 | 0.8 |
| Study support | 0.2 | 7.1 | 1.6 | 2.1 |
| Severance pay | 3.0 | 0.0 | 0.2 | 0.0 |
| Parental benefit | 1.5 | 0.0 | 0.5 | 0.0 |
| *Without benefits from any major social security system* | *19.0* | *60.6* | *4.7* | *14.0* |
| Welfare benefits | 11.3 | 21.1 | 5.2 | 14.4 |
| Earned income | 6.4 | 21.8 | 5.6 | 17.6 |
| *Without any of these incomes* | *8.5* | *21.9* | *3.4* | *6.0* |
| *Number of people who answered the question* | *657* | *92* | *440* | *290* |

*Source:* The Public Employment Service's jobseeker survey, February 2010.

### *Supplementary unemployment insurance*

In recent years, supplementary income insurance that compensates for income that exceeds the ceiling in the regular unemployment insurance has become more common. Most of those covered by such supplementary insurance have it through an agreement between their union and employer or through their trade union, but one can also sign up for insurance of one's own accord. It is difficult, based on available statistics, to get a good idea of how many have income protection on top of regular unemployment insurance because the different supplementary insurances overlap.[438]

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[438] In a review of the insurances, the Riksdag's research service stated that 67 per cent of Swedish Trade Union Confederation members, 70 per cent of the members of the Swedish Confederation for Professional Employees and 63 per cent of the members of the Swedish Confederation of Professional Associations have income insurance through their trade union that is included in the membership fee (Research Service at the Swedish Riksdag 2008). Sven-Otto Littorin, the Minister for Employment, has referred to this several times in the debate. Both the Trade Union Confederation and the Confederation for Professional Employees have maintained, however, that the percentage of wage earners covered by *supplementary insurances* is closer to 40 per cent (LO-tidningen 2008, Confederation for Professional Employees 2008).

If a large number of the unemployed are covered by supplementary unemployment insurance, then the calculations in Section 11.1 underestimate the replacement rate for people with income exceeding the ceiling in the regular unemployment insurance. In the jobseeker survey, there was also a question asked on our initiative on whether the respondent has supplementary income insurance. The distribution of the responses is reported in Table 11.5. Of all those interviewed, only 9 per cent stated that they were covered by a supplementary income insurance. Among those who have income from the regular unemployment insurance and those who reach the ceiling, it was 15 and 24 per cent, respectively. Since it can be assumed that knowledge about these supplementary insurances is inadequate, a question was also asked on trade union affiliation.

Of all those interviewed, over 20 per cent were uncertain or stated that they did not have insurance, but belonged to a trade union which included this insurance in its membership fee. This shows that many have little knowledge of their insurance situation. It is also possible that people who do not meet the terms for benefits from the insurance or whose benefit days have expired state that they do not have any insurance. Of all those interviewed, 4 per cent stated that they had supplementary income insurance from which they had received benefits in the past month. The corresponding share among those who have reached the ceiling is 11 per cent. Since so few state that they receive benefits from supplementary income insurance, at the same time that there appears to be inadequate knowledge about the insurance, there is reason to believe that many do not use the insurance benefits they are entitled to. To get benefits from this insurance, one is required to apply for them. If many are unaware of this, they will not receive any benefit from their supplementary insurance.

## Table 11.5 Occurrence of supplementary income insurance, per cent

| | Total number of unemployed and participants in programmes | People with benefits from an unemployment insurance fund | People who have reached the ceiling |
|---|---|---|---|
| State that they have supplementary income insurance | 9.4 | 15.1 | 23.8 |
| State that they do not have supplementary income insurance | 83.6 | 79.4 | 72.6 |
| Uncertain | 7.0 | 5.5 | 3.5 |
| Total | 100 | 100 | 100 |
| Uncertain or state that they do not have supplementary insurance but are members in a trade union where this insurance is included in membership fee (percentage of the total) | 21.1 | 24.6 | 20.8 |
| State that they receive benefits from the supplementary insurance (percentage of the total) | 3.9 | 9.1 | 11.3 |
| Number of people interviewed | 1 472 | 551 | 499 |

*Note:* People who have reached the ceiling also include people who receive activity support.
*Source:* Public Employment Service's jobseeker survey, February 2010.

## 11.3.2 Income level of the unemployed

In the jobseeker survey, questions were also asked about what the interviewee's income was before and during unemployment. Figure 11.2 shows the unemployeds' monthly income after tax, divided into the openly unemployed and participants in labour market programmes by income decile.[439] Apart from the two lowest deciles, the openly unemployed have higher incomes than the programme participants. This is because the openly unemployed have as a rule been unemployed a shorter time and therefore have not had their benefit level reduced. They also often had a higher income before unemployment, which is reflected in higher unemployment benefits. The higher incomes of programme participants in the two lowest deciles are due to the fact that a large number of the openly unemployed lack incomes (see Table 11.4). Most of those

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[439] Deciles group the unemployed in ten equal parts. The first decile consists of the ten per cent with the lowest incomes, the second decile of the ten per cent with the next lowest incomes, etc.

interviewed had a monthly after-tax income between SEK 5 000 and 10 000, but almost 30 per cent had a lower income.

Figure 11.3 shows the replacement rate by previous income, estimated as the median value for the ratio between the current after-tax income and the previous after-tax income.[440]

## 11.3.3 Incomes, unemployment spell and reservation wage

High benefit levels risk prolonging unemployment spells because the unemployed look for fewer jobs and have higher requirements for accepting a job offer.[441] In the supplementary questions to the jobseeker survey, we have had the unemployed state the lowest wage they would accept if they were offered a job, i.e. the *reservation wage* discussed in Section 7.1.2.

In Box 11.1, we analyse the connection between the reservation wages and the incomes that the unemployed had in the preceding month and their incomes before they became unemployed. High incomes tend to increase the reservation wage, but the incomes those interviewed had *before* unemployment has a greater effect on the reservation wage than their incomes *during* unemployment. This is particularly true of those who have been unemployed a short time.

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[440] One of the reasons why the replacement rate is generally lower than the replacement rates estimated in Section 11.1 is that there it was assumed that the unemployed were members in an unemployment insurance fund and met required work terms. This is far from true for everyone and thus the actual replacement rate may often be lower than the estimated.

[441] The relationship between benefit levels and unemployment spells was discussed in our 2008 report (Fiscal Policy Council 2008, Section 7). A review of the research in this area can be found in Fredriksson and Holmlund (2006).

## Figure 11.2 Average monthly after-tax income, openly unemployed and programme participants, deciles
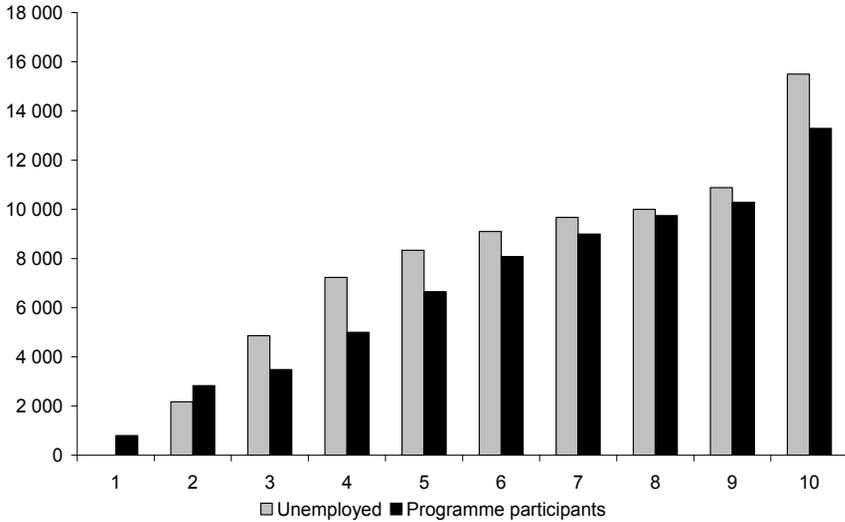


*Source:* Public Employment Service's jobseeker survey, February 2010.

## Figure 11.3 Replacement rate by previous after-tax income
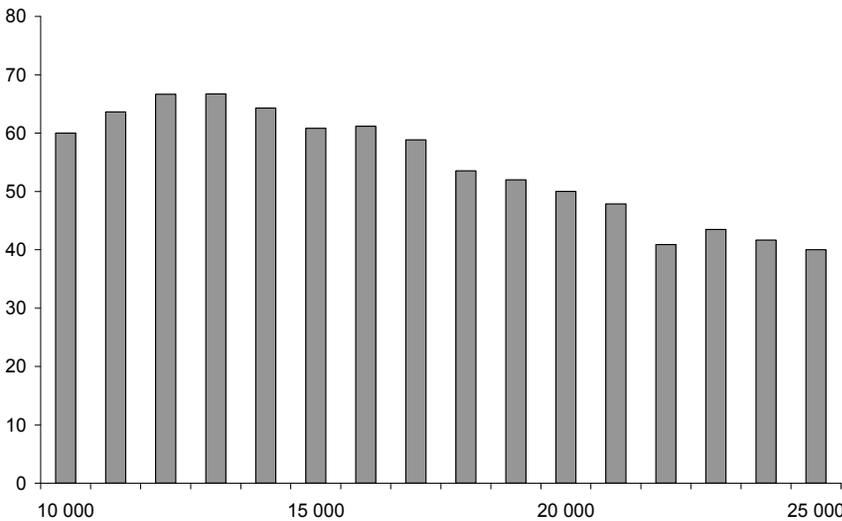


*Note:* The figure includes both the openly unemployed and programme participants. The revised replacement rate is the median value for the replacement rate in each income class.
*Source:* Public Employment Service's jobseeker survey, February 2010.

The effect of the previous incomes declines as the length of the unemployment spell increases. Incomes during unemployment have a greater effect on the reservation wage for the long-term unemployed than for people who have been unemployed for a shorter time. There are presumably two main explanations for the latter result. First, over time a person becomes increasingly dependent on income during unemployment, as savings, if any, run out. Second, the probability of finding a job with as high a wage as before declines and thus may lead the jobseeker to reassess the options. It is impossible to tell the extent to which the observed differences between different unemployment spells are due to these behavioural changes or if the differences arise because the short- and long-term unemployed differ in other respects. To the extent that results are due to behavioural changes, there is an argument that an unemployment insurance in which the benefit level declines with the length of the unemployment spell enables a better balance between income protection in the event of unemployment and economic incentives to work than if the benefit level remains the same irrespective of the length of the unemployment spell.[442] This is also in line with the research literature.[443]

The estimated effects are relatively small but are similar to results in other studies.[444] We have not found any relation between the replacement rate of those interviewed and the number of jobs they have looked for in the past month. This provides some support for the conclusion in Section 7.1.2 that the earned income tax credit primarily affects employment through its effects on wage formation and not by its effect on the unemployeds' search intensity.

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[442] This previously was accomplished with a ceiling in the unemployment insurance that was higher during the first 100 benefit days. The current Government has eliminated this higher ceiling but has introduced a degression in the benefit level, which falls from 80 to 70 per cent after 200 benefit days and a further 5 per cent to 65 per cent after 300 benefit days.

[443] Shavell and Weiss (1979), Hopenhayn and Nicolini (1997) and Fredriksson and Holmlund (2001) find in theoretical models that the replacement rate should decline over time in an optimally designed unemployment insurance. Models that take individuals' savings into account may yield other conclusions (see, for example, Werning 2002, Shimer and Werning 2008 and Hassler and Mora 2008), but since most of the unemployed have relatively small savings buffers, we consider these models to be less realistic.

[444] See, for example, Cahuc and Zylberberg (2004).

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## Box 11.1 The reservation wage and income before and during unemployment

Table 11.6 shows a regression analysis where a linear relationship is estimated between the reservation wage and incomes before and during unemployment. Higher coefficients for *the income during unemployment* for long unemployment spells mean that the level of unemployment benefits (or other incomes) has a greater effect on the reservation wage for the long-term unemployed.[445] So, for example, an increase in the unemployeds' income of SEK 1 000 raises the reservation wage by SEK 243 for someone who has used more than 300 benefit days.

### Table 11.6 The relationship between the reservation wage and income before unemployment and income during unemployment for various lengths of unemployment spells

|                                | 1-100    | 101-200  | 201-300  | 301+     |
|--------------------------------|----------|----------|----------|----------|
| Income before unemployment     | 0.401**  | 0.225**  | 0.253**  | 0.257**  |
|                                | (0.043)  | (0.027)  | (0.043)  | (0.027)  |
| Income during unemployment     | 0.012    | 0.095*   | 0.181**  | 0.243**  |
|                                | (0.047)  | (0.055)  | (0.059)  | (0.057)  |
| Constant                       | 8 191    | 10 788   | 8 913    | 8 156    |
| No. of observations            | 213      | 215      | 222      | 135      |
| $R^2$                          | 0.325    | 0.280    | 0.199    | 0.369    |
| *Average value*                |          |          |          |          |
| Income before unemployment     | 15 818   | 17 557   | 15 558   | 14 302   |
| Income during unemployment     | 8 995    | 9 426    | 8 565    | 8 827    |
| Reservation wage               | 14 647   | 15 631   | 14 402   | 13 974   |

*Note:* The table shows how changes in income before unemployment and income during unemployment affect the reservation wage for people who have been unemployed for different lengths of time. Standard deviations are given in parentheses. All income variables refer to income after tax. The model is an OLS regression where the observations have been weighted to better correspond to the original population. The results are very similar if young people are removed from the data. * Significant at a 90 per cent confidence level. **Significant at a 95 per cent confidence level.
*Source:* Fiscal Policy Council estimates.

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[445] The coefficient for the income before unemployment is significantly different from the coefficient for the income during unemployment in regressions based on the total data but not when we only study people with long unemployment spells. The coefficient for incomes during unemployment for people with 1-100 and 1-200 benefit days is significantly different from corresponding coefficients for people with longer benefit periods in the regressions. The coefficient for incomes before unemployment among people with 1-100 benefit days is significantly different from the corresponding coefficients for people with more benefit days.

## 11.4 Conclusions

The current Government's most important goal is to increase employment. To achieve this, the Government has carried out a number of reforms that make it more worthwhile to work compared with being unemployed. The reduction in the replacement rate has been greatest for the long-term unemployed and for people with a monthly wage of about SEK 20-25 000.

The earned income tax credit and the lack of adjustment in the ceiling for unemployment benefits to wage increases have contributed most to the changes in the replacement rate. But the effects of different reforms vary with the length of the unemployment spell and previous income. The earned income tax credit, for example, has less effect on the replacement rate for short unemployment spells than for long ones. For the long-term unemployed, who now only receive 65 per cent of their previous income, the degression in the benefit levels has played the most important role.

The share of unemployed who have unemployment insurance benefits has declined for several years. This is largely due to the changes made to the insurance. Since we cannot see any complete shift to other benefit systems, the share of unemployed without any means of support has probably increased. Income protection in the event of unemployment differs sharply between different age groups. A majority of openly unemployed young people do not receive benefits from the major social security systems.

According to our interview survey, the supplementary income insurances are of surprisingly little importance. Only 11 per cent of the unemployed who reach the ceiling in the regular unemployment insurance state that they have income from supplementary income insurance.

Our analysis of the interview survey also indicates that income during unemployment affects reservation wages. The employment effects of the earned income tax credit and of the lower benefits for the unemployed generally are probably due to their effect on wage formation. The unemployment insurance benefit levels have a greater effect on the reservation wages for the long-term unemployed than for people who have been unemployed a shorter time. This supports the argument that a benefit level that is lower for long

unemployment spells than for short ones may make possible a more effective balance between employment and income protection than if the benefit level is the same irrespective of the length of the unemployment spell.

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# Appendix 1 Explanation of Table 1.3

The first three columns in Table 1.3 show general government net lending from 2008-2010 divided into different subcomponents. The last two columns show how each item has changed from one year to the next relative to GDP for the initial year. Let $X$ denote the level of the variable in question and let $\Delta x_t$ denote the change reported in the last two columns in the table. For most of the components, $X$ is expressed in current prices. The change is calculated as

$$\Delta x_t = \frac{X_t /(1+\pi_t) - X_{t-1}}{Y_{t-1}},$$

where $Y$ is GDP in current prices and $\pi_t$ is the change in the consumer price index between years *t-1* and *t*. For public consumption and investment expenditures, fixed price series are used instead of adjusting by the change in the consumer price index. The change is then calculated as

$$\Delta x_t = \frac{X_t - X_{t-1}}{Y_{t-1}}$$

where both the variable in question, $X$, and GDP, $Y$, are expressed in fixed prices.

Some subcomponents of net lending in each sector have been omitted from the table, which is indicated in the rows 'other'. The largest of these subcomponents are the central government international transfer payments, its transfer payments to corporations and the public old age pension system, local government transfer payments to non-households, and the central and local governments' 'other revenue'. Because different price indices are used for the different items, the subcomponents do not need to add up to the total changes even when these other items are included in the calculations.

# Appendix 2 Decomposition of the change in the public sector debt ratio

The change in the public sector net debt ratio can be decomposed as

$$d_t - d_{t-1} = f_t - \frac{n_t}{1+n_t}d_{t-1} + v_t = f_t - \frac{\gamma_t}{1+n_t}d_{t-1} - \frac{\pi_t}{1+n_t}d_{t-1} + v_t,$$

where $d$ is the net debt ratio as a percentage of GDP, $f$ is net lending as a percentage of GDP, $n$ is nominal GDP growth, $\gamma$ is real GDP growth, $\pi$ is inflation (change in the GDP deflator) and $v$ is a residual item that reflects valuation changes. Net lending can in turn be decomposed into two components, primary net lending and interest expenditure:

$$f_t = p_t + \frac{i_t}{1+n_t}d_{t-1},$$

where $p$ is the primary net lending as a percentage of GDP and $i$ is the nominal interest rate. If we combine these two expressions, we get

$$d_t - d_{t-1} = \underbrace{p_t}_{\text{primary net lending}} + \underbrace{\left(\frac{i_t}{1+n_t} - \frac{\pi_t}{1+n_t}\right)d_{t-1}}_{\text{real interest rate effect}} - \underbrace{\frac{\gamma}{1+n_t}d_{t-1}}_{\text{real growth effect}} + \underbrace{v_t}_{\text{residual}}$$

where we now have divided the change in the debt into four parts, primary net lending, a real interest rate effect, a real growth effect and a valuation change.

Alternatively, the equation can be written

$$d_t - d_{t-1} \approx \underbrace{p_t}_{\text{primary net lending}} + \underbrace{\left(r_t - \gamma_t\right)d_{t-1}}_{\text{interest rate and growth effect}} + \underbrace{v_t}_{\text{residual}},$$

as in the equation given in Section 2.1.

# Appendix 3 – The statistical models in Section 5

Our statistical model forecasts in Section 5 are made by forecasting the variable in question (GDP growth, unemployment and inflation) with the help of the variable's previous outcomes and a time-independent constant. The GDP forecasts take into account the figures in the national accounts for GDP growth from the second quarter of 1993 up to the quarter corresponding to the latest information available to the forecasters. The data used are thus real-time data, meaning that the model does not use later revised data.

Let $y_t$ denote the outcome variable in period $t$. The estimated model is

$$y_t = a + \sum_{j=1}^{P} \beta_j y_{t-j} + \varepsilon_t.$$

For GDP and unemployment, we use quarterly data, while monthly data are used for inflation. The above equation shows that each variable is assumed to be a function of the value for growth, unemployment and inflation respectively in the $P$ most recent periods. The number of historical periods used (the value of $P$) is determined by Akaike's information criterion.

# Appendix 4 Interview survey

The gross sample consisted of 2570 people. Interviews were conducted with 1837 in this sample, which gave a response rate of 71 per cent. Of these, 781 stated that they were openly unemployed and 744 that they participated in a labour market programme. Of the rest, most had got a job or had begun studies at the time of the interview. The following questions were asked:

## 1. Which of the following incomes have you had last month?

Multiple answers are possible
1) Unemployment benefits
2) Activity support or development benefits
3) Sickness or activity compensation
4) Sickness benefit or rehabilitation compensation
5) Welfare benefits
6) Study support
7) Earned income
8) Parental benefits
9) Severance pay
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10) None of the above
11) Do not know / do not want to answer / do not understand the question

## 2a. Do you have an income insurance supplementary to the regular unemployment insurance? I mean insurance, for example, through your union, that provides compensation above the regular unemployment insurance maximum of about SEK 15 000 per month before tax.

1) Yes
2) No
----------------------------------
3) Do not know / do not want to answer / do not understand the question

*[If the person answers no to the above question or is uncertain]*

## 2b. Are you a member of a union? [If yes] which?

1) Union with income insurance (see list)
2) Union without income insurance (see list)
----------------------------------
3) Do not know / do not want to answer / do not understand the question

*[If respondents to question 2a state that they have supplementary income insurance]*

### 3. Did you receive compensation from the supplementary income insurance last month?

1) Yes
2) No
----------------------------------
3) Do not know / do not want to answer / do not understand the question

### 4. About how much income did you have last month after tax?

[If the person is uncertain, offer the alternative response of before-tax income. Add up all incomes.]
1) State answer (kronor per month):
2) State answer before tax (kronor per month):
----------------------------------
3) Do not know / do not want to answer / do not understand the question

### 5. What was your approximate monthly after-tax income before you became unemployed?

 [If the person is uncertain, offer the alternative response of before tax income. Add up all incomes.]
1) State answer (kronor per month):
2) State answer before tax (kronor per month):
----------------------------------
3) Do not know / do not want to answer / do not understand the question

### 6. If you were offered a job. What is the lowest wage you would accept (before tax)?

1) State answer: (kronor per month)
----------------------------------
2) Do not know / do not want to answer / do not understand the question

### 7. Do you have shared finances with another adult?

1) Yes
2) No
----------------------------------
4) Do not know / do not want to answer / do not understand the question