

# Summary

## Introduction

The aim of the Long-Term Survey is to provide a basis for economic policy and generate a debate about its design.

A central theme of this Survey is a discussion of the prospects of maintaining ambitious and universal publicly financed welfare systems in the future. To be able to preserve the welfare systems and achieve the level of growth and employment required to do this, developments in three areas will, according to the Survey, be particularly important:

- first, demographic change in the form of an ageing population,
- second, the importance of achieving ambitious environmental policy objectives, and
- third, continued internationalisation of the Swedish economy.

Developments in these three areas will have an impact on the conditions for labour market, education and business policy. In this way, measures taken in these areas will affect the possibilities of contributing to improved resource utilisation and higher growth, and thus making possible the financing of the welfare systems in the future.

Before these more future-oriented issues are analysed, there is a look back at the developments of the past thirty years. In this way, the picture of future developments that the Survey provides can be related to the past.

## Losing Ground, Crisis and Recovery

Since 1970 growth has been lower in Sweden than in other EU countries and the United States. This lagging behind is partially attributable to the deep recession in the early 1990s. However apart from this, the long-term growth trend has been lower in Sweden than in the rest of the world. Weak growth in productivity, investment, hours worked and *terms of trade* have all contributed to the Swedish economy falling behind. Nevertheless the importance of the different factors contributing to Sweden's slower growth has varied over time.

However there are many indications that conditions for higher long-term growth have improved in the past decade. Economic integration with the rest of the world has increased with entry into the EU in 1995 and the establishment of next-to-global capital and product markets. In addition both fiscal and monetary policy have been given explicit objectives to achieve and frameworks within which to act. The result is a considerably more stable national macroeconomic climate. Major changes in structural policy have also taken place. The changes carried out include deregulation in a number of goods and services markets and the introduction of a new law on competition.

Increased internationalisation means new conditions for economic policy. The EU's Stability and Growth Pact imposes formal requirements on the budget deficit and the debt ratio. The increased mobility of capital and labour implies practical limitations on how much economic policy – tax policy being one example – can deviate from economic policy conducted in other countries. Accordingly the scope for a discretionary fiscal policy is considerably smaller than it was 10 years ago. Instead economic policy has increasingly come to focus on structural measures as a complement to stabilisation policy. Owing to deregulation, companies, the business sector and the economy as a whole will be more efficient and more flexible than before, and thus stand better equipped to counter economic shocks.

Entering the new millennium, Sweden's economy is functioning significantly better in many respects. The conditions for investment in real capital, education and skills development are better than they have been for a long time. Sweden's economy is functioning better in autumn 1999 than it was earlier. It is now experiencing a boom with a good rate of growth and falling unemployment. Nevertheless there remains the potential for structural reforms that would contribute to improved resource utilisation and a higher rate of growth in the future.

## Developments up to 2015

Economic developments up to 2015 are described in three different scenarios prepared by the National Institute of Economic Research. The baseline scenario depicts moderately good growth over the next 15 years, with GDP growing at an average of 1.9 per cent a year. In the first few years growth will be higher as a result of a rapid improvement in resource utilisation when the labour supply and employment increase while unemployment falls. In about 2004 the economy will be at full capacity and during the years immediately following, the prospects for growth will be determined to a large extent by the underlying changes in productivity and the labour supply. Growth will decline gradually during this period.

Demography will be a critical factor in the moderation of growth. The working-age population is expected to grow at a slower rate. At the same time the average age of those in the labour force will rise. Beginning in 2008 the size of the working age population will shrink in absolute numbers. As a result of this decrease, together with a gradual drop in the average time worked, labour's contribution to growth will be negative in the latter part of the period analysed. Thanks to the improved employment situation in the initial years, the total number of hours worked – the most important part of the tax base – will be about the same in 2015 as it was in 1998. Productivity growth in the baseline scenario is expected to be 1.8 per cent a year for the economy as a whole and 2.3 per cent a year in the business sector, which is in line with growth in the 1990s, but somewhat higher than in previous decades.

In addition two alternative scenarios are presented, each based on different labour market developments. In the first, the average time worked falls more rapidly than in the baseline scenario. The result will be slower growth, even though both the number employed and productivity develop more positively. With fewer hours worked, it will become more difficult for the public sector to finance its activities. From 1998 to 2015 public consumption will increase only marginally under this alternative. The tax ratio will increase throughout the period.

The National Institute of Economic Research also shows that there is scope for a higher rate of growth in the long term if the labour market functions better than it does in the baseline scenario. Therefore in the second alternative scenario Sweden will manage, in spite of the unfavourable long-term demographic developments, to keep expanding the labour supply for the entire period up to 2015. As a result growth will decline only marginally in the latter part of the period and the scope for public activities will be considerably greater.

The baseline scenario also shows that Sweden will not achieve the limitation of emissions of greenhouse gases that it has undertaken within the framework of international climate negotiations if no further measures are taken.

## Future Challenges for the Welfare Systems

With more older people in the population there will be an increased demand for publicly financed welfare services, especially geriatric care and health care. Therefore population changes expected to take place in the next few decades will put pressure on the financing of Sweden's welfare systems. However it is possible that the population will become not only older but also healthier, in which case it could be argued that the cost of geriatric care and health care will not need to increase at the same rate as the number of elderly.

The largest part of the publicly supplied welfare services will probably continue to be financed by the tax system in the future. The increasing internationalisation of the economy will set bounds on how high taxes can be and thereby limit the possibilities of increasing the tax ratio in order to finance the increased demand for welfare services. A likely outcome of internationalisation is that in the future it will not be possible to increase tax revenues by raising tax rates, but only as a result of growth in the economy.

Analyses in the Survey indicate that production capacity will exceed the expected increase in the demand for welfare services until 2017. However from 2017 to 2030, it will be more difficult to finance the welfare systems fully via taxes, at least if present ambitions are maintained. A reduction in the number of persons in the labour force, combined with an unchanged or lower tax ratio, will put a ceiling on the possibilities for public revenue growth.

The public sector is dependent on the number of hours worked in the private sector for an increase in tax revenues. It is therefore important to conduct a policy that promotes high growth and efficient resource utilisation in the economy. Thus high labour force participation and high employment, even by the older part of the labour force, is important. A flexible retirement age, together with a tax system aimed at stimulating growth, improves the conditions for achieving this. Under these circumstances, it is also important to maintain the number of hours worked in the long term by keeping up the average working hours. The welfare gains that a shortened working time brings about have to be weighed against the poorer prospects of financing the various welfare services via the tax system that such a change would imply.

Another possible way of making it easier to finance the welfare systems is to make better use of the reserve of labour that exists in the immigrant population, many of whom currently have a weak foothold in the labour market. From a long-term perspective, when current reserves of labour have been more fully utilised, labour immigration may also be considered. It will then be a question of actively trying to attract people with specific knowledge and skills in demand in the labour market to come to Sweden.

If future tax revenue is no longer able to grow with the help of higher tax rates but only in line with the tax base, then the importance of greater efficiency and lower costs in the transfer system will increase. Here alternative ways of financing may, in the future, provide complements.

In addition to a large labour supply in the economy, a high level of savings makes the financing of welfare easier. A high level of savings in the period up to 2015 would lead to a reduced debt burden and lower interest expenditure. Therefore when the public sector's savings goals are formulated, increased consideration should be given to the future demographic changes. The objective of a surplus in public finances may need to be raised or extended for a longer time in order to improve the possibilities of fending off increased consumer demand after 2017. Therefore the growth in public consumption should be checked in the first few years when the demographic reasons for increased consumption are weak.

## Sustainable Growth

One of the greatest challenges in the future in the area of the environment is to limit the occurrence of gases leading to the greenhouse effect. The National Institute of Economic Research in its baseline scenario expects the emission of carbon dioxide to continue to increase by 1 per cent a year until 2015. Therefore in order for Sweden to meet its undertaking within the framework of the Kyoto Protocol, additional measures need to be taken over and above the instruments now in use. Cost effectiveness should be a fundamental principle in the design of instruments. Economic instruments such as environmental taxes and fees and emissions trading increase the chance of cost-effective solutions.

The cost of achieving a further limitation of carbon dioxide emissions in particular, as established in the Kyoto Protocol, could be reduced to a minimum with the help of international trade in emissions quotas. Another way of reducing the costs is to implement a reform of the energy tax system, whereby export-intensive industries are also protected in the

future by a lowering of the carbon dioxide tax by about the same extent as today.

Studies show that there is no clear relationship between economic growth and environmental impact. When income rises, resources for developing new, more environmentally friendly technologies are also created in the long run and a greater demand for a clean environment can often be shown. However over the shorter term, increased environmental requirements may constitute restrictions on economic growth. Historical data for Sweden – and for other countries as well – show that several types of emissions into the environment increased up to the end of the 1960s and then began to decrease, even though economic growth remained positive. The immediate explanation for this break in the relationship between GDP growth and discharges into the environment is the environmental protection law that was introduced in 1969, together with the reduced use of fossil fuels. Technological developments and an increased demand for a clean environment are the explanations underlying the relationship. This supports the argument that economic policy should be aimed at promoting economic growth and technological development. Together with the conduct of an active environmental policy, this can create the conditions for a clean environment.

However a reduced environmental impact does not immediately translate into improved environmental conditions as a consequence of a time lag in nature's capacity for recovery. Environmental conditions in Sweden are also affected by what is happening in the rest of the world, which underlines the importance of international co-operation in environmental policy.

One way of trying to assess whether long-term growth in Sweden is sustainable is to estimate the net national product (NNP) adjusted for the impact on the environment. Estimates of an adjusted NNP made by the National Institute for Economic Research indicate that the cost of the total negative environmental effects is small. In a comparison of 1993 with 1997, the cost to the environment has not risen, which suggests that a technology that is more effective and less disturbing to the environment has begun to be used. The calculations indicate that Sweden's development can be considered sustainable. However at the same time certain threats to the environment such as climate change and depletion of the ozone layer have been omitted from the calculations.

One conclusion is that the evaluation and synthesis of information in an adjusted NNP measure can provide valuable information on the importance of emissions arising from production and therefore constitute a basis for policy design. At the same time this measure can hardly be the only grounds for assessing whether or not development is sustainable. There is also reason to expand the current meaning of

sustainable development to include aspects other than natural resources and the environment.

## A Labour Market for All?

The 1990s have meant major changes in the labour market, with high unemployment that has only slowly begun to fall as its principal characteristic. Many groups have suffered from unemployment in the 1990s. However unemployment has affected some groups to a greater extent than others. This is especially true of persons of foreign background. Active labour market policy has played a prominent role in trying to overcome unemployment. However it is unclear how effective the policy has been. As noted previously, many individuals have spent long periods unemployed or enrolled in labour market programmes, with the latter contributing to an increase in the actual time spent unemployed. Labour market programmes may have contributed to maintaining an efficient supply of labour. As a result the labour market recovery that Sweden now faces can take place without serious bottlenecks.

Considerable uncertainty prevails regarding the equilibrium level of unemployment and thus the extent to which unemployment can go down before prices and wages accelerate. A lasting reduction in unemployment requires a well-functioning matching of available jobs and unemployed persons. It also requires that an increased demand for labour does not result in higher wage increases instead of higher employment. At the time of writing, it does not appear that the labour market has functioned dramatically worse in this respect in the 1990s. This would indicate that there is a considerable supply of labour available having qualifications that are in demand in the labour market. Changes in labour market institutions also have a significant impact on the labour market. Developments in this area are also characterised by uncertainty. However there are also signs that institutional changes have contributed to raising the equilibrium level of unemployment. In any event it is important to make use of the existing recovery in the labour market to reduce unemployment and take measures that will permanently increase the labour supply. Otherwise the labour market difficulties of certain groups, not least immigrants from outside Scandinavia, risk becoming cemented and reinforced in the future. Such a situation would have negative effects on income distribution and other social structures in Swedish society.

High unemployment and weak growth in employment have dominated the picture of the Swedish labour market for quite a long time.

Simultaneously changes – mainly cyclical changes – have taken place on both the supply side and demand side of the labour market. These changes may have an impact on the labour market in the future. Demographic developments mean that the number of working-age persons is declining. This necessitates measures to reinforce labour supply. From this perspective, reforms that reduce the labour supply are most inappropriate, as they result in lower production and thereby reduce the chance of meeting future needs for welfare services. For example, even though shorter working hours and various early retirement options would appear acceptable in a boom, the future demographically determined changes in the labour force will make it very necessary to utilise the available factors of production to the fullest. It is therefore important to ensure that all individuals have the opportunity to participate fully in working life. However the new requirements on labour owing to the new conditions will be different for different groups. As to older workers, the social insurance system should be designed to encourage continued participation in the labour force. Flexible forms of employment may also be a means of maintaining high labour force participation by these groups.

Continued internationalisation and technological developments increase the need to invest in training workers as the demand for unskilled labour will fall. In addition these developments mean that the need for mobility between sectors and regions will rise. The main responsibility rests on employees and their employers, but the organisers of government-sponsored training should also be required to ensure the quality and relevance of the training programmes aimed directly at the labour market. In the 1990s a series of training programmes took place that should cause the supply of labour with more education to increase. It is still too early to say whether these programmes are sufficient to counteract the trend to higher unemployment among the unskilled or the trend to increased wage spreads.

## Education to Meet Future Needs

The availability of human capital is important for long-term economic growth. However research on the connection between education and growth provides no clear-cut recommendations on what education policy should be pursued, even though a well-functioning basic education is very important. The importance of the education provided to the young will probably increase. At the same time, additional supplementary education later in life will become all the more important.



Available statistics indicate that Swedish schools manage to provide most students with a good base of knowledge for working life and for further studies. From an international perspective the percentage that go on to upper secondary school is quite high. Swedish upper secondary school students also do well in international comparisons of scholastic achievement. However viewed over the long term, it is cause for concern that many still do not complete upper secondary school with a school-leaving certificate. Therefore special programmes are needed for students who are at risk of leaving school prematurely. It is vital that these programmes are begun as early as possible in the education system.

The transition to a society characterised by more and more knowledge-intensive production and a growing services sector will likely make new demands on labour force training, both in the form of skills learned alongside formal education and opportunities for additional training later in life. The chances of such a development being linked to a relatively even wage spread are probably better in Sweden than in many other countries. International proficiency tests in particular have shown this. In addition the opportunities for supplementary basic education and vocational training have gradually been expanded in the 1990s. However to the extent that there is an increased need for recurrent education in working life, a wage formation that is able to put a premium on such education is required. Otherwise there is a risk that structural change and competitiveness will be restrained.

Proficiency in mathematics seems to have an impact on growth. Special programmes to stimulate and improve advanced skills in mathematics and science in the upper secondary school, and even earlier, may therefore be warranted in light of the obvious connection between these subjects and success in the labour market (indicated by higher wages).

The return on an education in technology and science appears to be high in the private sector. Thus it is not obvious that education's profitability represents a bottleneck. As well the number of students that can be admitted has to be adjusted to be able to meet the increased demand. However future recruitment to places in science and technology assume that interest in studying in these areas is increasing in the upper secondary school. The availability of skilled labour is also affected by the flow through the education system. In the 1990s the increase in the number of openings for university students has not resulted in a corresponding increase in the number of those beginning university studies. Therefore measures that stimulate increased efficiency in the educational system are warranted.

Increased international mobility among students and people with a university education can be expected. Favourable conditions for studying and relatively good standards of education in Swedish universities in combination with low wages for the university educated when seen from an international perspective and high taxes may constitute a problem. Sweden risks becoming a net exporter of educated workers. At the same time Swedish society in general, and the business sector in particular, can benefit from international mobility as it contributes to the introduction of new ideas and knowledge. Accordingly it is important that companies make use of the skills that immigration brings to the country. Persons who immigrate to Sweden earn a lower return than their Swedish colleagues do. This indicates deficiencies in the way in which the labour market functions that are urgent to correct.

### The Transformation and Prospects of the Business Sector

In addition to increased internationalisation and more environmental awareness, combined with higher environmental requirements – both central themes of this Survey – the business sector is affected by the trends to increased knowledge intensity in production and the increased importance of the services sector.

Internationalisation, like the greater mobility of production and input factors, contributes to the increased demand for investment to yield the same return in Sweden that it does in other countries. A competitive Swedish business climate contributes to a greater inflow of investment and thus to the faster growth of the Swedish business sector. In turn this growth facilitates managing the future challenges facing the welfare systems. However Swedish exports have lost market share in the past three decades, even though production costs fell in relation to competitors. This indicates that the Swedish business sector has not succeeded in developing and improving product quality to the same extent that the rest of the world has. At the same time Swedish multinational companies are locating abroad an increasingly larger part of their advanced, high-value added activities that lead to.

Increased environmental awareness constitutes an increasingly important means of competition in the business sector. Stiffer environmental requirements, including a reduction in carbon dioxide emissions, also affect structural change in the business sector. The extent of the impact varies between sectors and is intimately connected with the way in which the labour market functions. Therefore a well-functioning labour market is also important to the business sector's capacity to manage the need for change.

There is considerable potential for continued expansion in the services sector. Increased exposure to competition in the production of services in the public sector has, with certain exceptions, contributed to lower prices and increased employment in private firms in service industries. Internationalisation helps open new markets for Swedish services at the same time that competitive pressure on the domestic production of services increases. Technological advances also facilitate growth in the services sector, not least by electronic commerce. In the present situation, this business has most importance for trade between companies. The potential for electronic commerce between companies and consumers is more difficult to assess. At the same time the production of services is becoming all the more knowledge intensive, which requires more skills on the part of labour. Therefore one important task of industrial policy is to facilitate the provision of skills to the business sector.

The challenge for economic policy is to create the conditions for a competitive business climate that induces companies to choose to invest in Sweden. To take advantage of the expansionary forces found in the business sector in recent years and expressed in increased investment and production, there is reason for improving the business climate still more. Included in such improvements is the continued work to simplify regulatory regimes and other measures to make it easier for companies. In the environmental area it means clear and long-term goals and controls to facilitate long-term structural change in the business sector. For growth in the services sector, a continued deregulation of markets where there are still problems of competition and an improved public procurement are important areas where efficiency can be increased. Taxes will also have an impact on the business climate in the future. For example, they affect access to risk capital by new companies. Tax changes in other countries may also affect business and industrial development in Sweden as companies compare conditions in different countries when planning new investments.

## Conclusion – Future Challenges and Opportunities

The future population changes mean that there will be fewer working-age persons to care for a growing number of elderly. Fewer persons in the labour force, which in addition will have an increasingly higher average age, means that the labour supply in the economy will even fall a few years into the new century. The population changes in the next few decades will put pressure on the financing of Swedish welfare systems. At the same time that the demand for welfare services is expected to increase, the possibilities of financing public undertakings via a rise in taxes will decrease as a consequence of the continued internationalisation of the economy, which will set limits on how high taxes can be. In these circumstances a high level of savings in the economy is important, and more consideration needs to be given to future population developments in the formulation of the public sector's savings targets.

Strong economic growth and a high employment rate will make the Swedish economy's adjustment to the expected population changes easier. With high growth the country's total resources will increase and thus the chances of financing the welfare systems by taxes will improve. A high employment rate will increase tax revenue and reduce public expenditure on transfers. Therefore measures contributing to high economic growth and a high employment rate have a significant impact on Sweden's ability to maintain its ambitions for its welfare systems.

Given these circumstances, it is important to maintain the number of hours worked in the long term by keeping up the average working hours. The welfare gains resulting from a shorter working time have to be weighed against the reduced possibilities of using the tax system to finance the various welfare services that such a reduction would imply. From the calculations done for the Survey, it is clear that a more extensive cut in working hours would amplify the problems of financing the welfare systems at current levels and that the problems would begin in only a few years. In a future when it is likely that there will be fewer people working and more demand for health care and social services, solidarity and confidence in the tax system will be even more important as the groups that will decide working hours are not necessarily the same groups that would be affected by a deterioration in public welfare. Flexible solutions respecting working time adapted to local or industry-specific conditions can contribute to more efficient utilisation of resources and higher growth. Another means of improving the labour supply is to make better use of the labour supply represented by immigrants who currently have a weak foothold in the labour market.

From a longer-term perspective, when today's reserves of labour are utilised to a greater extent, labour immigration should also be considered.

In addition to maintaining a plentiful labour supply, it is important to maintain business investment and productivity growth at a high level. A good business climate is important in an increasingly internationalised economy. Therefore for Sweden to be attractive to companies, it is also important to have a supply of well-educated workers, access to risk capital, regulatory regimes and a macroeconomic environment that are favourable by international comparison.

Education also has an impact on future growth. Therefore training programmes may make it easier to finance the welfare systems in the future. As the demand for unskilled labour can be expected to fall, it will be important to increase the number of young people who complete upper secondary school and thus get the training needed for the labour market of the future.

If future tax revenue can no longer grow by raising tax rates, but can only grow in line with the growth in the tax base, there will be an increased need for greater efficiency and reduced costs in the transfer system. Here alternative methods of financing can be important supplements in the future. It is possible that efficiency in the production of the publicly financed system could be improved. However as the production of health care, school and social services is very heavily dependent on personnel, the possibilities of achieving major productivity gains are probably limited. This is true irrespective of whether the production takes place in the public sector or in the business sector. However to the extent that production today is inefficient, a one-time increase in production would be possible if, for example, large parts of production were targeted for public procurement.

High growth and high employment are compatible with a clean environment and sustainable development. Studies show that in the long term there is often not any conflict between the objectives of a clean environment and economic growth. Instead growth can create new technological possibilities for solving environmental problems and achieving established environmental objectives in the long term. There is an overall objective for development to be sustainable in the long-term. Sustainability is most often seen from an environmental standpoint. The calculations of NNP adjusted for environmental factors that were made for the Survey indicate that development in Sweden can be deemed to be sustainable. However the estimated NNP adjusted for the environment does not include all the threats to the environment. Thus this measure alone can hardly form the basis for an assessment of whether development is sustainable.

However for certain environmental problems, there is a risk of potential conflict between environmental objectives and growth. One important example is the emission of carbon dioxides for which proper cleaning technology is lacking. Therefore one big challenge in the environmental area is meeting the emission restrictions to which Sweden has made an international commitment by way of the Kyoto Protocol. Estimates in the Survey show that with international emissions trading, the economic impact of meeting Sweden's commitments will be limited.