

The Swedish economy

Statistical perspective



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Growth slowed down during 2007..... page 3

GDP growth was 2.6 percent during 2007, which is the lowest since 2003. The calendar adjusted growth for the fourth quarter was 2.8 percent. Rising interest rates, raw material and energy prices during the year have led to signs of increased inflation rate at the end of the year.

The unpredictable investments in inventories page 13

What significance have inventory investments for the business cycle? Information from national accounts indicates that investments in inventories have had a slightly destabilising effect. The peaks have been somewhat higher while the recessions have been deeper due to inventories.

Higher inflation rate..... page 21

The inflation rate, measured as the change in the latest twelve months, was 3.1 percent in February. An article describes the Consumer Price Index's (CPI's) production methods and design. The differences between CPI, CPIX, NPI and HICP are also described. By way of conclusion, a short historical comparison with a connection to the development of the producer price index.

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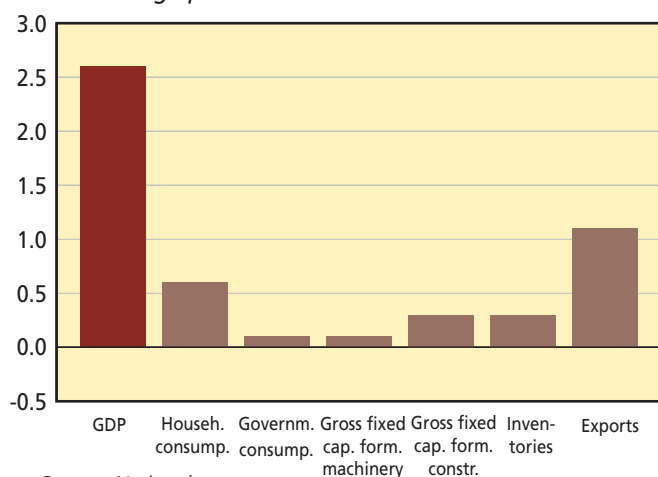
Summary

Slower growth in 2007

GDP growth was 2.6 percent in 2007, the slowest since 2003. During the fourth quarter calendar adjusted growth was 2.8 percent. Rising interest rates and rising prices of raw materials and energy have lead to signs of increasing inflation in 2007. The inflation rate according to CPI was 3.1 percent in February while the underlying inflation according to CPIX was 2.0 percent.

During the fourth quarter of 2007 the unadjusted GDP growth was 2.2 percent while the calendar adjusted growth was 2.8 percent. Economic growth in Sweden has slowed down rather significantly during the last year after the growth of 4.1 percent in 2006. At the same time the increased global demand that has caused rising prices on energy and raw materials has contributed to rising prices for consumers. The inflation rate was 3.1 percent in February. The largest part of the price increase, 1.1 percentage points, was caused by increased interest charges while the contribution from higher food prices was 0.7 percentage points and rising prices for fuel 0.6 percentage points.

Contribution to GDP growth adjusted for imports
2007 compared to 2006
Percentage points



During the fourth quarter growth was mainly powered by domestic demand. Household consumption as well as gross capital formation contributed by about 1.5 percentage points to GDP growth. At the same time the consequence of increased domestic demand was that imports of goods rose considerably faster than exports of goods. As a result net exports held back GDP growth by 1.2 percentage points. However, exports of services continued upwards at a fast rate. Three different kinds of services dominate the exports of services from Sweden: First, transport services, which are mainly conducted by ships. Secondly, income from foreign tourists and business travellers who consume goods and ser-

vices within Sweden. The third and largest kinds of services are business services, where merchanting is the dominating part.

A calculation of the contributions to GDP growth, where the different components on the expenditure side have been adjusted for their import contents shows that exports, in spite of rather poor development during 2007, are very important for the Swedish economy. During 2007 exports, adjusted for import contents, contributed to 1.1 percentage points of GDP growth, which is a larger share than any other component.

It should also be noted that over a longer period of time the goods-producing industries have gradually lost their leading role as a driving force for GDP growth. Instead service production has gradually increased its importance. Among services, the contribution from wholesale and retail trade has been fairly stable over time, while the contribution from other service industries has expanded.

Household disposable income increased sharply during 2007 – partly because of rising employment, and partly because of changes in the tax and transfer systems during the year. This has permitted higher household consumption, at the same time as the savings rate has risen. For the entire year of 2007, real disposable income rose by 4.1 percent, while the savings rate increased to 8.1 percent.

Gross fixed capital formation developed strongly during the fourth quarter after a slight weakening during the third quarter. The growth for 2007 was 8.1 percent. The growth rate during the fourth quarter was the highest one during the year, as a result of a rapid increase of investments in the business sector. The manufacturing industry continued to invest at a high level, but the increasing investment rate was mainly explained by high investments in the energy sector, trade and business services. Investment in machinery and equipment continued upwards at a fast rate, but it was mainly construction, excluding housing, that led to an increased investment rate. Housing investments continued downwards. Change in inventories contributed extraordinarily to GDP growth during 2007.

During 2007 productivity growth in the Swedish business sector slowed down. This affected most industries. During the first quarter productivity fell for goods as well as service producers and also for the manufacturing industry. However, in the three following quarters development was negative only in the service industries. A reduced productivity level in the Swedish business sector has not been previously recorded for the period starting in 1994 onwards, not even during the IT crisis of 2000–2001.

International perspectives

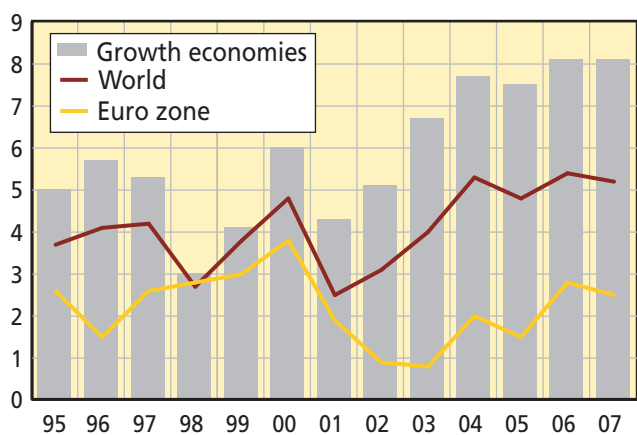
Global economic slowdown in 2007

Global growth continues to be good. IMF estimates it to land at 4.9 percent for the entire 2007. However, there is a risk that growth may be lower due to the weaker fourth quarter GDP growth in the USA and the Euro zone. Global growth in 2006 was 5.0 percent and the average for the last four years was 4.8 percent. Global growth has steadily increased over the last few decades. Between the years 1995 and 2006 global growth reached 4.0 percent annually and for the period of 1983 to 1994 it was 3.3 percent.

The explanation for the long-term rising growth trend in the world economy can be found in such countries as China, India and other newly industrialized countries with a significantly higher underlying potential for growth than the more matured economies. This is made possible by a higher investment ratio in these economies and that the labour market is restructured and the percentage of productive jobs in industry increases. The consequence is that these countries' percentage of global growth will increase as long as their growth exceeds the global average.

Global GDP

Annual percentage growth



Source: IMF

Data up to and including 2007

Growth in the world economy is primarily driven by development in the newly industrialized economies that make up an ever larger part of the global growth. For example, the BRIC countries (Brazil, Russia, India and China) make up over half of the world's GDP growth. At the same time, the USA's percentage of the world economy decreases when the new economies are integrated into the world economy, with increased global growth as a consequence. China and India continue to grow with high growth numbers through a continued strong domestic demand as well as a growing foreign trade within the Asian region, and they seem to not have been affected as adversely from the slowdown of the American economy. In case of a deeper slowdown in the American economy the effects of such will leave their mark in the high-growth countries' expansive development. This

is the case because the American household consumption still has a considerable effect on the total demand for goods and services in the world economy.

USA slows down

The USA's GDP growth for the third quarter was 4.9 percent at annual rate, which was then clearly higher than Japan and the larger European countries, but also significantly lower than countries such as China and India. The Federal Reserve warned of a significant slowdown of GDP growth in the USA for the fourth quarter GDP growth as early as at the release of the third quarter results. Such proved to be the case when the preliminary fourth quarter GDP estimates were published. Growth was a weak 0.6 percent calculated at annual rate. That means a growth of 2.2 percent for the entire year 2007, compared to a GDP growth of 2.9 percent during 2006.

The USA's economy is dependent on domestic consumption as a driving force for growth rather than exports to a greater extent than smaller countries such as Sweden, because a large part of trade occurs within the country rather than with other countries. Household consumption expenditures increased by 1.9 percent in the fourth quarter, compared to an increase of 2.8 percent the quarter before. In any case, consumption among American households has remained high in the second half of the year, even if somewhat weakened by the end of the period.

The housing sector and the motor vehicle industry were two weak areas where fourth quarter growth in GDP decreased. Weak development in the housing sector, with falling prices and reduced production of new housing, held back GDP growth by nearly a percentage point. Car and other motor vehicle production gave a negative contribution to the growth, nearly as large as that of the housing sector.

During the second half of 2007, exports of goods and services from the USA increased by an annual growth rate of roughly 11 percent, measured in constant prices. The weaker dollar and the brighter economic growth in recipient countries economies are offered as explanations. Foreign trade was also a bright point for the fourth quarter and contributed 0.9 percentage points to real GDP growth. A strong development for exports in combination with reduced imports also gave some improvement to the U.S. trade balance.

Weak consumption in the Euro zone

During the fourth quarter the Euro zone economies have, in general, developed at a more modest pace than before. Consumption grew weakly during the last quarter of last year, for household as well as public sector consumption went virtually unchanged from the previous quarter. Real

GDP growth for the Euro zone decreased from 2.6 percent to 2.2 percent between the third and fourth quarters. The contribution came primarily from foreign trade through reduced imports to the Euro zone. A certain decrease was also noted for exports in the fourth quarter.

GDP growth among the larger countries in Europe varied from 2.9 percent in Great Britain to 1.9 percent in Germany (figures from Italy are not available). Growth in Germany

declined from 2.5 percent during the third quarter. In Great Britain, perhaps the country most affected by the financial turmoil aside from the USA, growth decreased somewhat from 3.3 percent the quarter before. However, 2.9 percent was still regarded as continued good economic growth.

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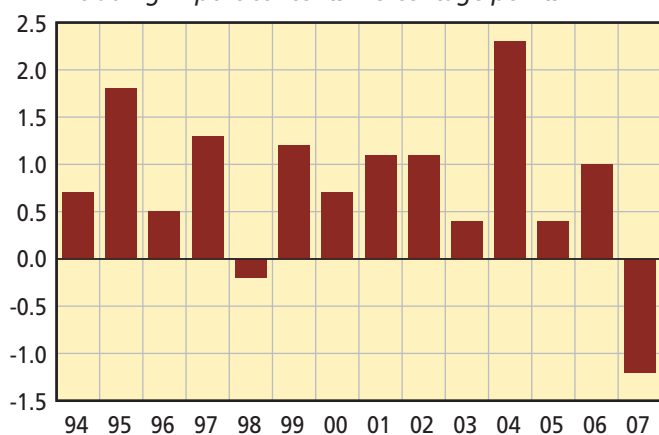
Exports and imports

A negative year in spite of late turnaround in foreign trade

A certain degree of recovery showed mercy towards exports in the fourth quarter of 2007. After four quarters in a row with higher rates of increase for imports than exports, seasonally adjusted and compared with preceding quarters, the last quarter again showed a higher growth rate for exports. Otherwise, foreign trade held back GDP growth by 1.2 percentage points for the entire year of 2007.

The year 2007 was not good for Swedish trade abroad. The net trade of goods and services contributed to a weakening of growth in the country. GDP growth stopped at 2.6 percent, significantly weaker than the 4.6 percent measured for 2006, which was otherwise a strong growth year whose starting point was already at a high level. Foreign trade's restraining effect on GDP growth, by 1.2 percentage points in 2007, was the largest during the whole period since 1994. The reason for the setback in the Swedish economy last year is thus explained by weakened foreign trade. A stronger exchange rate to the dollar, worsened terms of trade with the USA and Asia, delays in certain expanding production lines and a decreasing trend in some large and significant industries can be seen as the foremost reasons for the weak development.

Contributions from net exports to GDP growth
Including import contents. Percentage points



Source: National accounts

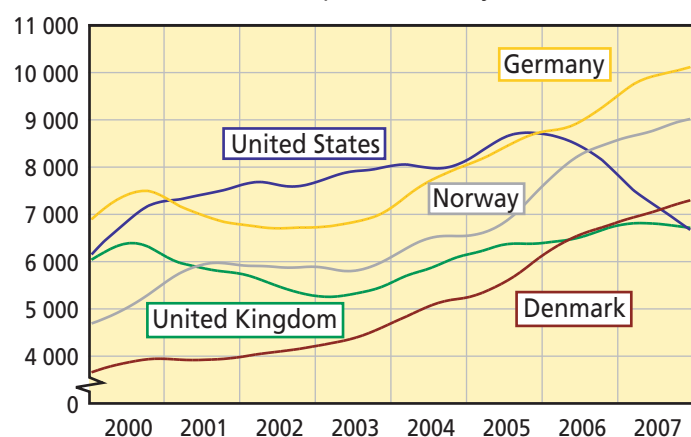
Data up to and including 2007

Russia surpassed China in Swedish exports statistics

Sweden's nearest neighbouring countries have increased their importance as export markets. Foreign trade statistics can now be summarised this way, as 2007 has come to an end. The Nordic countries together with Germany import a third of Sweden's exports. All these countries have also increased above the average, which means that the percentage has increased from barely 33 percent to 34 percent. That means that exports to neighbouring regions compensates for generally weaker development affecting exports to places farther away. Exports to the USA showed the least favourable development. It decreased by 14 percent in current prices during 2007, while exports on the whole increased by 5 percent. Exports to Russia and Poland increased strongly last year by 27 percent and 24 percent, respectively. Thus, Russia surpassed China as a recipient country for Swedish exports.

Exports of goods by countries

SEK millions, current prices. Trend cycle estimation



Source: Foreign trade statistics

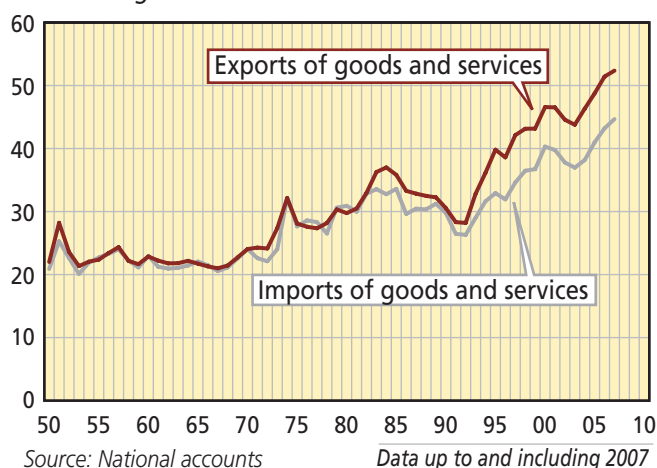
Data up to and including December 2007

Foreign trade's increased significance for the Swedish economy

Swedish foreign trade in goods and services has on average increased by 5 percent since 1980. This is significantly higher than the annual production growth and means that

the size of imports and exports in relation to Gross Domestic Product (GDP) has risen over the years. This would seem to lead to an increased significance of exchange rates for the Swedish economy, when imports and exports as percentages of production increase. It is not only foreign trade that has had a high growth rate. Swedish direct investments abroad increase at an even higher rate than foreign trade.

Exports and imports of goods and services Percentage of GDP

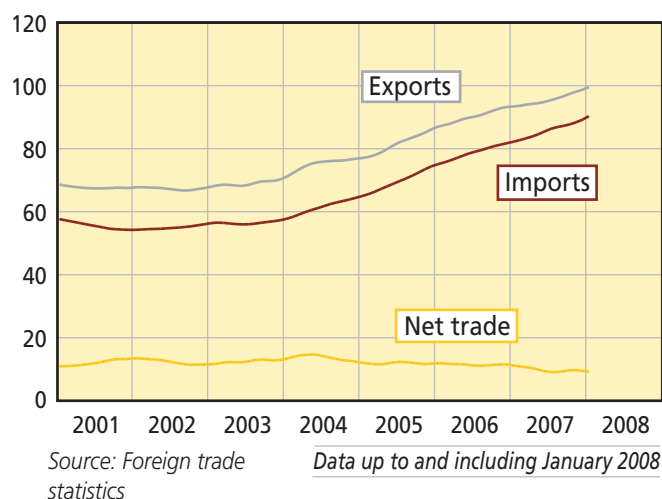


The great importance of world trade as a factor in the good economic development of recent years is asserted by the UN in the report "World Economic Situation and Prospects 2008". During the last four years global trade has increased twice as fast as production. Last year world trade grew by 7 percent. Asia, and in particular China, has been the motor for increasing global foreign trade. Asia contributed approximately 40 percent of the growth in foreign trade while the developed countries accounted for 45 percent of the 2007 growth and roughly half of the growth since 2001.

Foreign trade shows continued upward trend

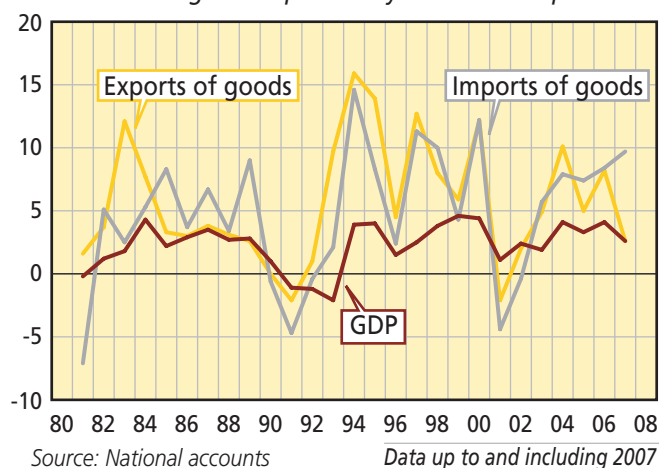
The increasing foreign trade and its increasing importance for the Swedish economy have been ongoing for many decades and is now a known fact. During certain periods foreign trade has increased quicker than during others. Recent years have been such a period with good growth in foreign trade. The tendency over the last year has been that the rate of increase for exports has fallen off, even if the fourth quarter indicated a certain improvement, while imports showed a continued high growth rate. Exports of services have, on the other hand, continued to perform well and Sweden has enjoyed a foreign trade surplus for many years.

Exports and imports of goods Billion SEK, current prices. Trend



As mentioned earlier, the rate of increase in exports and imports has exceeded the GDP growth rate, which generated increased imports and exports percentages in relation to the GDP. It seems to be that during weaker growth years that foreign trade grows more slowly than GDP. For example, recipient would have seemed to be the case in the early 1980s, in the 1990s financial crisis and the IT crisis of 2001. Note that the rate of change for imports was weaker than for exports during those years as well. The diagram illustrates how activity in the economy has decreased during crisis years and how the change in foreign trade has been small.

Exports and imports of goods and GDP Percent change from previous year. Constant prices



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Exports of services

Trade in services grow at expense of traditional exports of goods

Cross-border trade in services now increase faster than trade in goods for many countries. However, trade in services is still lower than trade in goods. This is the case for most OECD countries. The USA is the country with the largest export revenues from service trade but loses ground, among other things, to the advantage of Euro countries. Denmark is the largest service exporter among the Nordic countries. Service production in relation to trade in goods, sometimes called business services, is the service category that generates the biggest export revenues for Sweden and others in the OECD collective. Merchanting is the most important contribution to the increase in Swedish service exports.

The service sector makes up approximately 70 percent of GDP and is, thus, an important part of the economy for countries in the OECD. Consequently, manufactured goods makes up barely a third of the total production. This division also holds true for Sweden. Luxembourg has the highest percentage of services, approximately 80 percent, while Norway is one of the developed countries with the lowest percentage of service production, at approximately 60 percent, according to statistics from the World Bank.

When it comes to cross-border trade in goods and services the division reverses itself. An important explanation is, of course, that primarily public sector services but also the private service sector is designed to provide for the domestic market. Thus, trade in services accounts for only 20 percent of the total exports and imports in OECD countries, while trade in goods consequently accounts for nearly 80 percent. Sweden's percentage of cross-border trade in services is somewhat higher than the OECD average. Service exports amounted to nearly 28 percent of the total export of goods and services during 2007, while the percentage for service import was approximately 26 percent. Seen over the last twenty five years, both imports and exports of services have clearly increased faster than trade in goods in Sweden and that is why the percentages have steadily increased. Since the mid 1990s the increase in service exports is significant – from roughly 20 percent to 28 percent today.

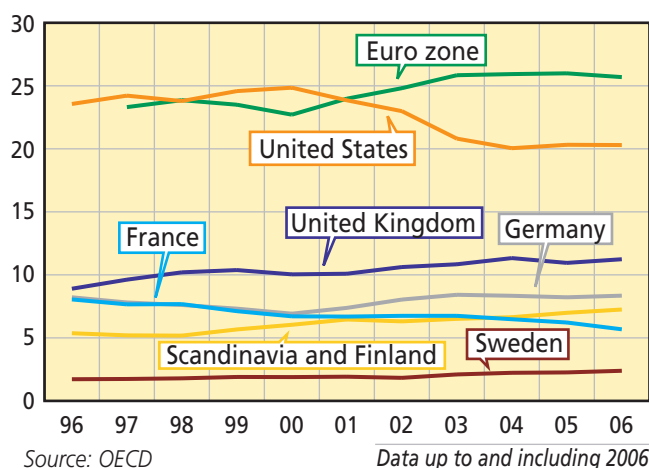
It would seem that obstacles do limit the trade in services despite service production being primarily designed to serve the domestic market. There are many reasons for this circumstance – it has historical, technological and, simply put, protectionist reasons. The reason why cross-border trade in services has such a small percentage of total trade shall not be pursued further in this article. Instead the purpose is to summarise different aspects of service exports based on recently published statistics from the OECD.

Euro zone increase (at expense of the USA)

The USA accounts for over a fifth of the total service exports for OECD countries, and as an individual country has the largest service exports in terms of value. It should be noted that the USA's percentage has decreased since the turn of the millennium. This depends on the Euro zone's total service export performed quite well but also because Great Britain has taken on market share at the expense of the USA. The weakened dollar is also a contributing factor to the USA reduction. France shows a downward trend for service exports from big EU countries, while Germany and Great Britain increase percentages.

Exports of services

Percentages of total OECD exports of services



Sweden's percentage of the service exports is relatively modest at over two percent. The development in recent years does, however, show that the Swedish percentage has increased somewhat. It should be noted that this contrasts the background of Sweden having lost percentage of trade in goods worldwide since 1970¹.

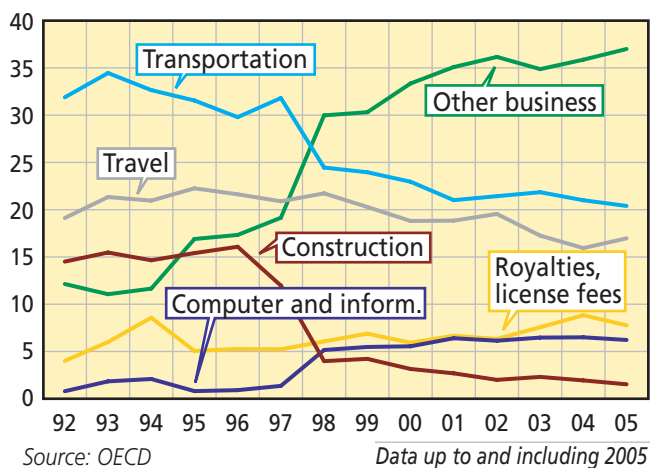
Merchanting lifts Swedish service exports

Three service categories dominate Swedish service exports. Firstly, there are transport services, a traditional Swedish export source, where transport by ship dominate. Transports have historically been the service category that has generated the most income for Sweden. Transport's percentage of total service exports has decrease significantly in recent years. The second category is income from travel services, i.e. the consumption of goods and services by foreign tourists and business travellers in Sweden. The travel service share of total service exports has been very stable for a long time and makes up roughly 20 percent.

¹ National Board of Trade (Trade-political status report 2005:1, "New spring for Swedish exports?").

Swedish exports of services

Percentages of total exports of services



The third, and since the 1990s largest service category, is that which has been somewhat anonymously named other business services. Other business services refer primarily to service production arising in relation to trade in goods. One of the dominant service categories within this category, that has shown especially strong growth figures in recent years, is merchanting, which means Swedish enterprises buying and selling goods from abroad that are then sold abroad without being brought into Sweden. The trade margin arising from the difference between purchase price and sales price is called merchanting. Merchanting has increased at a dramatic pace equal to how Swedish companies have placed production of goods abroad. This often is about products with low production costs but high knowledge content from earlier research and development. This means that in certain cases very significant margins arise between purchase and sales¹. Merchanting is the single service category that offers the largest contribution to the increase of Swedish service exports. It deserves to be noted that merchanting is not a service affected by stiff competition between countries fighting for market shares. Rather, it reflects certain forms of corporate behaviour where Swedish companies report large export revenues due to being well established internationally. One might also say that the phenomenon of merchanting is, to some extent, compensation for the decrease in Swedish goods exported mentioned earlier by moving the production of goods abroad and measuring such as trade in services.

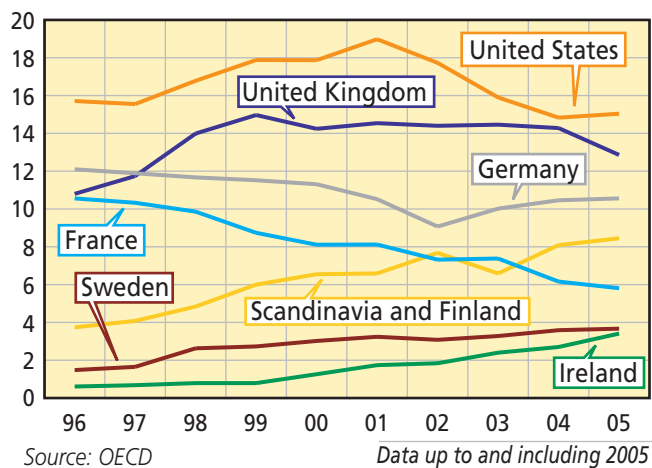
Sweden is not alone when it comes to business services being the most important service category in terms of income, but rather the same is true of the entire OECD collective. Sweden is alongside Ireland, the country that shown the greatest increase in that item since the middle of the 1990s.

In value terms, the USA has the largest percentage of OECD countries total export for other business services, but since 2001 the lead is closing. Of the countries in the diagram,

Germany and especially Sweden and Ireland, display an opposite trend.

Other business

Percentages of total OECD service exports

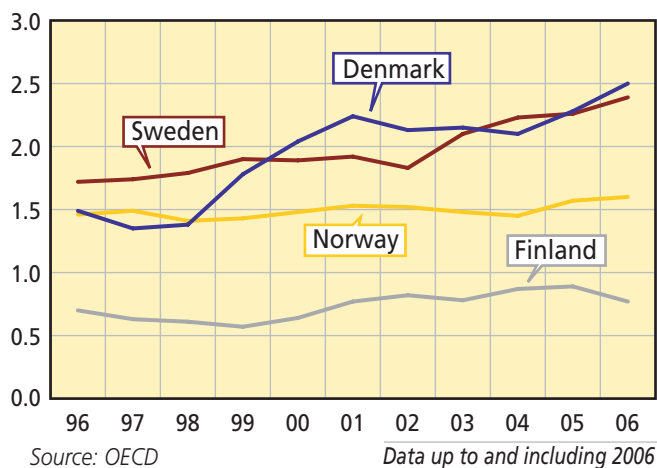


Denmark, biggest among Nordic countries

The Nordic countries accounted for seven percent of the OECD countries service exports during 2006. This can be compared to the Nordic countries percentage of OECD area's total GDP that only amount to 3.5 percent. During the past ten years, the Nordic countries have slowly but surely increased their percentages of service exports. Denmark is the country that accounts for the largest increase during the period and the country's service exports were the largest among the Nordics in 2006. Denmark's service exports were dominated by transport where the shipyard incomes were of course largest. Both Norway and Finland have had relatively unchanged market shares since the middle of the 1990s. Finland deviated last year from the other three countries and noted a relatively decrease in service exports. It should be noted that Denmark's strong upturn in service exports is partially an effect of improved measurements and measuring methods implemented by Statistics Denmark at the end of the 1990s.

Exports of services

Percentages of total OECD service exports



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¹ For more information about merchanting see Sweden's economy – statistical perspective fourth quarter 2004 and "Merchanting – a growing part of service exports" by Kurt Gustafsson and Lars Fors, Sveriges Riksbank, Economic Review 3/2006.

Household consumption

Household consumption increased strongly

Household consumption contributed 1.5 percentage points to the GDP growth, as demand from households continued upwards during the fourth quarter of 2007. For the second quarter in a row, household consumption growth was over 3 percent. Disposable incomes continued upwards but the high consumption also conferred an unchanged household savings ratio. Disposable income increased by 4.1 percent for the entire year 2007, while the household savings ratio rose to 8.1 percent.

Real disposable income for households rose by 2.8 percent in the fourth quarter compared with the same quarter last year. The increase for the entire year was 4.1 percent, but the growth rate decreased during the second half of the year. Higher incomes from wages and salaries, together with reduced income and wealth taxes, have formed the basis for a positive development for household incomes.

Household consumption rose by 3.2 percent in constant prices during the fourth quarter of 2007 compared with the same period last year. This means that during the second half of the year, consumption grew significantly faster than in the period of January to June. Household consumption rose by 3.1 percent for the entire year 2007.

The fourth quarter consumption pattern coincided with the entire year's development. Leisure products continued to show high growth and contributed 1 percentage point to household consumption. Demand for audiovisual equipment continued to increase by 25 percent during the fourth quarter and charter trips increased by 12.5 percent. Car sales continued to increase during the last quarter of the year. Demand for food as well as clothing and footwear decreased during the period, the first time a decrease occurred for these products during a single quarter since 2004.

Housing costs rose more than normally and contributed by 0.4 percentage points during the quarter, as a result of higher energy consumption when the weather was chillier than it was for the same period in 2006. This item makes up one fourth of household consumption and affects the consumption development to a comparatively large extent.

Financial services showed a continued increase, among other things, as a consequence of the premium for traffic insurance being raised in June, and also due to a turbulent financial market.

During the fall, foreign consumption in Sweden did not increase at the same rate as during the last 2–3 years, and during the fourth quarter the increase was only 1.9 percent.

Demand for leisure products grew the most, which contributed 1.0 percentage points to household consumption. Financial services and car purchases also contributed a combined 1.0 percentage point of growth in the sector.

Household consumption 2007

	Household consumption, %	Volume change, %	Contribution to growth in household consumption, % points
Housing	23.1	0.5	0.1
Recreation and culture	13.7	8.4	1.0
Transport	12.8	3.2	0.4
Food and non-alcoholic beverages	12.3	1.6	0.2
Miscellaneous goods and services	10.1	6.3	0.6
Furnishings etc.	5.4	5.9	0.3
Clothing and footwear	5.2	3.9	0.2
Restaurants, hotels	5.1	5.6	0.3
Communications	4.0	3.4	0.1
Alcoholic beverages and tobacco	3.4	-0.8	0.0
Health	2.7	1.8	0.1
Education	0.3	3.3	0.0
Direct purchases abroad by residents	4.2	9.8	0.4
Purchases by non-residents in Sweden	-5.3	17.2	-0.5
Non-profit institutions serving households	3.0	-1.2	-0.1
Total consumption	100.0		3.1

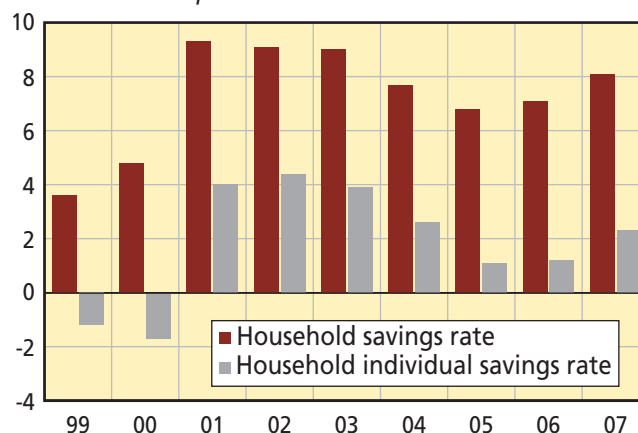
Source: National accounts

Savings increased during 2007

The household savings ratio increased during 2007 by one percentage point to 8.1 percent. Saving was greatest during the first half of the year and savings rose during the fourth quarter to SEK 8.6 billion, which is a virtually unchanged level compared to the same quarter last year. Total household savings reached SEK 126 billion during 2007. Individual household savings, household savings exclusive of occupational pensions, was SEK 31 billion at the New Year. The individual household savings ratio rose to 2.1 percent.

Household savings rate

Percent of disposable income



Source: National accounts

Data up to and including 2007

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General government consumption

An average year for general government consumption expenditures

General government consumption expenditures rose by 0.8 percent during 2007, a weaker increase than the previous year. The increase was greatest for county councils, while central government reduced spending. The trend for the fourth quarter of 2007 was somewhat more evenly distributed among the sub-sectors. At the same time, the fourth quarter was the only period with increased central government spending.

As of the release of the third quarter of 2007, calculations of general government consumption expenditures in constant prices are affected by a new method for volume calculation of governmentally produced individual services. The method is called the production method, in contrast to the previously used costs method.

As a consequence of implementing the new method, it is no longer possible to analyse volume development of the cost components of the expenses such as intermediate consumption, salaries and collective fees, consumption of fixed capital etc for neither the sub-sectors nor for the general government on the whole. In the future, only volume development for individual and collective consumption as well as social benefits in kind for the sub-sectors and the general government can be analysed.

General government consumption expenditures 2005–2007

Volume change, percent

	Method	2005	2006	2007
General government	production method	0.4	1.5	0.8
	costs method	0.1	2.4	1.8
Municipalities	production method	0.4	1.5	0.6
	costs method	0.6	3.0	2.7
County councils	production method	3.5	2.2	3.0
	costs method	2.2	2.2	2.2
Central governm. + social security funds	production method	-2.5	0.9	-0.8
	costs method	-2.8	1.5	-0.3

Source: National accounts

Collective and individual consumption vary in size in the sub-sectors.

Individual consumption is largest within municipalities and county councils, and thus these sectors are most affected by the production method. Within the county councils, health and medical care account for the largest percentage, while

within the municipalities education and social protection have the highest shares. The following tables illustrate the situation in broad strokes.

General government consumption expenditures 2007

	Collective consumption	Individual consumption	General government consumption	General government consumption of GDP
SEK billions				
General government consumption expenditures	216	580	796	26
Municipalities	58	329	387	13
County councils	4	192	196	6
Central government	154	59	213	7
Percent				
General government consumption expenditures	27	73	100	
Municipalities	15	85	100	
County councils	2	98	100	
Central government	72	28	100	

Source: National accounts

The affect of the change in methods in volume development of general government consumption expenditures is not insignificant. The new calculation's method of governmental production of individual services lowered general government consumption expenditures by 1 percent and thus also GDP growth for the entire year of 2007 by 0.3 percent compared to the calculation made according to the costs method.

General government consumption expenditures 2007 for individual services

SEK billions

	Municipalities	County councils	Central government	General government consumption expenditures for individual consumption
Health and medical care	2	188	4	194
Leisure activities, culture and religion	18	1	4	23
Education	163	2	28	193
Social protection	146	1	23	170
Total	329	192	59	580

Source: National accounts

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Gross capital formation

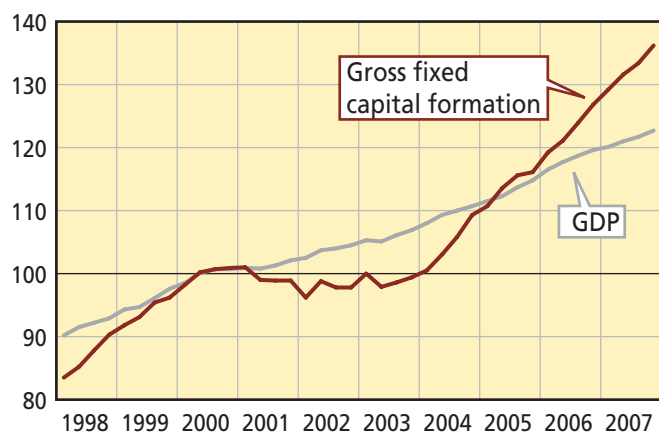
Continued strong upswing for gross fixed capital formation

The gross fixed capital formation made a strong finish in 2007 after slowing in the third quarter. Revision of the third quarter made the slowdown more visible, but the fourth quarter showed the year's highest growth rate as a consequence of a quick upturn for the business sector. Industry continued to invest heavily, but the increasing growth rate could be found primarily in the energy sector, trade and business services. Machine investments continued to increase at a fast rate, but it was buildings rather than housing that sparked the investment rate. Housing investments, on the other hand, continued to slow.

The gross fixed capital formation continued to increase at a fast rate during the fourth quarter. The rate of increase, after slowing during the third quarter, rose again in the last quarter to 2.1 percent compared with the nearest preceding quarter. The difference to the third quarter is more visible in so far as the third quarter was revised downwards and showed a clearer slowdown than was evident from the National Accounts released in November. This was the case despite the increased third quarter investment at 1.3 percent, compared to the preceding quarter.

Gross fixed capital formation

Volume index 2000=100. Quarterly figures, seasonally adjusted



Source: National accounts

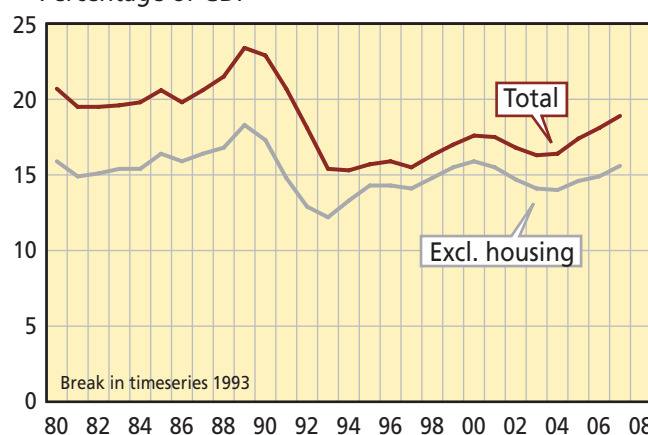
Data up to and including fourth quarter 2007

After a minor downward revision of the first quarter also, the gross fixed capital formation increased for the entire year by as much as 8 percent. Since the millennium, this growth rate has only been exceeded by the development in 2005, when the increase reached 8.9 percent. Investments have now increased five years running, something that has not happened since the 1982–1990 period when investments increased eight years in a row. The rate of increase over the last four years has also exceeded GDP growth, which has caused the investment ratio to rise. The investment ratio, calculated as the gross fixed capital formation

percentage of the GDP in current prices, rose in 2007 to 18.9 percent of GDP, which is the highest value since 1991.

Gross fixed capital formation

Percentage of GDP



Source: National accounts

Data up to and including 2007

Energy, trade and business services behind the rising investment rate

Compared with the corresponding quarter last year, the gross fixed capital formation increased by 7.5 percent during the fourth quarter and have, thus, continued to be one of the most growth-creating components on the expenditure side of GDP. The gross fixed capital formation contributed 1.4 percentage points to the 2.2 percent GDP growth. Seen for the entire year, investments made up 1.5 percentage points of the GDP development of 2.6 percent. With due consideration for import content, the effect on GDP development is estimated, by means of a standardised calculation, to 0.5 percentage points both for the fourth quarter and the entire year. In both cases buildings made up the larger part of the contribution while machines, with a higher import content, made up a smaller part.

Behind the high rate of increase and powerful effect on GDP development was investments in the business sector, where the rate of increase rose to 8.7 percent during the fourth quarter. On the contrary, the rate of increase for public sector investments has slowed down. Municipal investments still increased at a high rate, but there was a slight slowdown compared to the third quarter and the rate of increase was significantly weaker compared to the first half of the year. General government investments again turned to a minor reduction after increasing a corresponding amount in the third quarter.

The positive development for investments in the business sector in the fourth quarter had a broad foundation in the strong increases for goods and service producers. The growing rate of increase depended, however, primarily on the energy sector, wholesale and retail trade and business services where the investment growth accelerated, compared to

the third quarter. Investments in the manufacturing industry grew powerfully during the fourth quarter, by 7.7 percent compared to the corresponding quarter the year before, but the rate of increase decreased somewhat compared to the third quarter when growth rose to 8.3 percent. At the same time, investments in transport companies decreased by 7.1 percent after having increased over the first three quarters.

The investment survey for February showed continued industrial optimism for the new year. Once again, a strong increase in industrial investments was expected, but this depends in part on the investments for 2007 being rescheduled for 2008. This optimism is also limited primarily to mining and metal goods industries, motor vehicles and the energy sector. Furthermore, none of the service industries included in the February survey planned for increased investments during 2008.

Local investments behind increased growth

The largest type of investment, machinery and inventories, maintains a high rate of increase from the third through the fourth quarters compared to the corresponding quarters from the preceding year. The increase rose to 9.9 percent, which was almost the same as it was for third quarter.

Machinery investments did not contribute, in other words, to the rising rate of increase for the total gross capital formation. Instead it was buildings, except for housing, where the investment rate rose the most, reaching 10.8 percent during the fourth quarter after a 3.1 percent increase in the third quarter.

Even vehicles, to a certain extent, were responsible for the rate of increase, in so far as the strong downturn that occurred during the third quarter stopped during the fourth quarter. Housing investments have, on the other hand, seen a continued downturn. As was the case in the third quarter, the overall image is a divided one, between new construction, rebuilding and additions. The decline in new constructions has gone on since the first quarter, reflecting the climate for total housing investments in general, and is most clear for multi-dwelling homes that have gone from a rate of increase of 22.2 percent during the first quarter to 2.8 percent during the fourth quarter. The corresponding development for the new construction of one to two dwelling houses was 11.0 percent in the first and 2.1 percent in the fourth quarter. Rebuilding and additions showed the highest growth rate of the year as early as the third quarter, but the rate continued high during the fourth quarter as well.

Approved building permits, an early indicator for construction, showed the same tendencies in the third quarter. Building permits for dwellings has brought down the total number of building permits, which sank drastically during the fourth quarter. The marked decrease occurring in the fourth quarter, after a slowdown in quarters two and three, can be explained by unusually high level for comparative quarters, namely the fourth quarter of 2006. While dwellings contributed to a reduction of the total number of building permits, the overall image for non-residential premises is thoroughly

different, as building permits for non-residential premises in 2007 showed the strongest development since 1997.

Gross capital formation

SEK billions, current prices and percentage change from corresponding period the previous year, constant prices

	2006 Q 1–4	2007 Q 3	Q 4	Q 1–4	Entire year
Industry	7.8	6.0	8.7	8.8	493
Manufacturing industry	0.9	8.3	7.7	8.8	89
Energy sector	10.9	3.1	15.2	14.9	41
Service producers ¹	5.7	4.5	9.8	8.1	175
Business services	6.7	8.7	17.1	13.8	40
Government agencies	7.1	5.2	2.7	3.6	89
Central government	2.8	2.1	–1.8	–3.5	42
Municipalities	11.8	7.9	6.7	10.9	47
Total	7.7	5.9	7.5	8.0	582
Machinery	4.8	10.0	9.9	12.0	186
Transport equipment	9.1	–6.3	0.1	7.7	53
Housing	13.8	7.5	4.7	8.7	103
Other construction	7.3	3.1	10.8	5.1	145
Software etc.	7.1	6.7	2.6	4.6	93

Source: National accounts

Considerable inventory effect on GDP for entire year of 2007

Industry's total inventories had a negative effect on GDP development by 0.2 percentage points during the fourth quarter. Original inventory data from primary statistics showed a positive contribution of 0.8 percentage points from the start. As such data was not in agreement with other statistics, a reconciliation adjustment was performed to align the usage and production sides, accounting for 1.0 percentage points of GDP growth.

Inventory investments, seen for the entire year, made up 0.7 percent points of GDP growth at 2.6 percent, which is an unusually high inventory effect. The quarterly inventory effect on growth can meanwhile be large, but usually the quarters cancel one another out over the course of the year. The contribution from inventories for the entire year has varied around a few tenths of a positive or negative percentage point during the last year. During the turn of the millennium the annual inventory effect was rather large, but one has to go back to 1996, when inventory investments brought on a dip in growth by 0.9 percentage points, in order to find a greater inventory effect on GDP than in 2007.

The business tendency survey shows that industry inventories of finished goods during January and February were considered as being somewhat too large. There was a sign of a smaller increase in inventories between the months of December and January. The goods inventories of retail trade have successively been evaluated as larger ever since August. The evaluation has remained unchanged between January and February, though it was at its highest level since April 1995.

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¹ Excluding property management.

Inventory investment and the business cycle

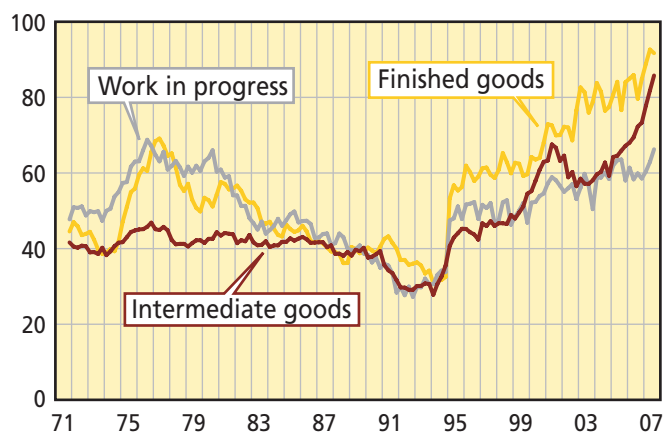
The unpredictable investment in inventories

Of what significance is investment in inventories for the business cycle? The economic theory on inventory stocks is built on the notion that inventories are held so that companies can maintain a steady production rate, despite temporary disturbances in demand for their products or in deliveries of input goods. The theory also allows for inventories to have a destabilising effect on production. National Accounts data on inventory investment since 1993 suggest that they have had a mildly destabilising impact, which means that production has varied more than sales. The peaks of the business boom have been somewhat higher while the recessions have been deeper due to inventories.

The fact that many goods can be kept in inventories allows production to be freed from sales and the end use to a certain extent. Goods can be produced and/or delivered in quantities that are much larger than required for daily consumption, which is conducive to solutions in production technology that make the goods less expensive. Inventory stocks also allow delivery times to shorten, so that customers experience a higher level of service and the vendor can charge higher prices.

On the other hand, inventory stocks also confer costs. Aside from costs for premises, handling of goods and a certain obsolescence, inventories bear an interest cost for the time span between the production cost and the income from sales. The interest costs were the main argument for the campaign for reduced inventory stocks conducted by corporate consultants during the 1980s, when many touted the slogan of delivering “just in time”. It appears that the campaign had an effect on industry’s inventories, especially on the stocks of finished goods. Inventories decreased up to the middle of the 1990s but appear to have had a rising trend after that.

Inventories in manufacturing industry
Billion SEK. Seasonally adjusted, constant prices



Source: National accounts

Data up to and including third quarter 2007

Inventories in the production of goods and services

In goods production, including industry, agriculture and forestry, official statistics distinguish between three kinds of inventories: input goods, goods in process, and finished goods. The values of the three inventory kinds are roughly equal. Stocks of input goods consist of goods awaiting entry into the production process. Goods in process are intermediate goods that are objects of processing on the occasions of measurement. In production activities where one works for long periods of time on one product, like shipbuilding, the inventories of goods in process can be rather large. Stocks of finished goods consist of goods awaiting delivery to a buyer. Inventory stocks are measured at quarterly shifts and published quarterly by Statistics Sweden. Inventory investment, a component of GDP, is the difference between the measured inventory stocks.

Only goods can be inventoried, not services. This does not prevent inventories from playing a part in the production of services, especially in trade where there are large inventories, of course. In certain respects, the outgoing stocks of industry and trade inventories substitute one another. If industry’s production of a product exceeds trade’s sales of it during a given period, then this could as easily result in an increase in trade inventories as in industry inventories. In the same way, trade’s inventories of intermediate goods, to a certain extent, are a substitute to the industry’s stock of input goods. This means that overproduction of intermediate goods can result in an increase in the stocks of finished goods in the producing industry, an increase in trade inventories, or an increase in the stocks of input goods in the industry that uses the intermediate goods. This undeniably complicates the analysis of inventory variations, among other things due to the fact that industrial inventory statistics are kept according to industry sectors while those for trade are kept according to product groups.

Production, sales, and inventory investment

All goods in inventories contain some form of value added. This means that a change in inventories, regardless of whether it deals with stocks of input goods, goods in process, or stocks of finished goods, is part of the value added, which is the GDP on the aggregate level. On the aggregate level, the following relationship applies:

$$\text{Value added} = \text{Final use} + \text{Inventory increase}$$

which, in terms of GDP on the expenditure side, can be expressed as

$$\text{GDP} = \text{Private sector consumption} + \text{Private sector fixed investment} + \text{Public sector consumption} + \text{Public sector investment} + \text{Net exports} + \text{Increase in inventories}.$$

On the non-aggregate level, e.g. on the level of industrial sectors or companies, inventory changes are included in a somewhat different relation. Inventory increase is the difference between the gross production (not value added) and the sales, that is

$$\text{Gross production} \equiv \text{Sales} + \text{Inventory increase}$$

where

$$\text{Gross production} \equiv \text{Consumption of intermediate goods} + \text{Value added}$$

and

$$\text{Sales} \equiv \text{Sales for final use} + \text{Sales of intermediate goods.}$$

A goods producing company can, thus, sell its products to households for consumption or to companies for investment but also to other companies for consumption, while also using other companies' products as inputs. Sales of input goods and the use of them cancel one another out on the aggregate level, which makes value added and gross production identical.

Buffer inventory theory

Buffer inventory theory is the most common way of looking at inventory stocks in economic literature. It regards stocks of finished goods as a means of guarding oneself against unexpected sales increases or service interruptions. Stocks of input goods are, in a similar way, a safeguard against service interruptions in the delivery of input goods. The basic idea is that companies want to maintain as steady a rate of production as possible, even if the demand for their products and the availability of input goods vary. It is natural to think that the desired outgoing stock is proportional to the sales expectations and that the desired incoming stock is proportional to the planned production volume.

This means that inventories, existing to stabilise the rate of production, can easily have a destabilising impact. Assume that a company has a weekly (5 workdays) production volume that matches sales and an inventory stock that matches one day's sales, and that they are satisfied with that status. Assume that sales suddenly increase by 20 percent. To meet the increase in sales the company needs to increase production by 20 percent. Even if they can do this immediately, the inventory stocks now match less than one day's production. To restore the inventory's relation to sales, the company must increase production more than what would match the increase in sales for a limited period of time. In a similar way, one can imagine that inventory stocks make production decrease more than the sales in times of recession.

The company can thus decide either to adapt inventory stocks to changed circumstances, which leads to even greater variations in production, or to allow inventory stocks to fulfil their purpose and even out production over time. The decision probably depends to a great extent on whether the variations in sales are regarded as temporary or permanent.

An increase in sales regarded as being a part of a larger business boom, or even a changed long term trend, should motivate an increase in both stocks of finished goods and stocks of intermediate goods. Increases regarded as temporary, such as seasonal changes, should probably be evened out by using the inventory.

The desired inventory size also depends on costs for inventory stocks. Higher interest rates mean, e.g., higher financial costs for inventories and believably would have a restraining effect. These costs can be weighed against the risk of losing revenue, through reduced goodwill etc., due to not being able to meet customer requirements.

If one accepts the idea that companies strive to maintain a certain size of inventories and that this varies with sales expectations, the planned production volume, level of interest rates etc., then the question remains how quickly the actual inventories are adapted to new desired levels. The status of the productive capacity and other factors influence the flexibility of production. When sales begin to increase after a recession, inventories start to build up quicker if there is an underemployed labour force in the company than if new employees have to be recruited. In the same way, the inventories will be reduced more rapidly when demand wanes after a business boom, if the company can easily and quickly reduce the labour force than if the process is slow and expensive.

Inventories, stabilising or destabilising?

To get an indication of whether Swedish inventory investment has had a stabilising or destabilising effect on production at the aggregate level (GDP), we use the quarterly National Accounts¹. The starting point is that sales, that is final use², (F) is the difference between GDP and the inventory investment (ΔL), that is

$$F = \text{GDP} - \Delta L$$

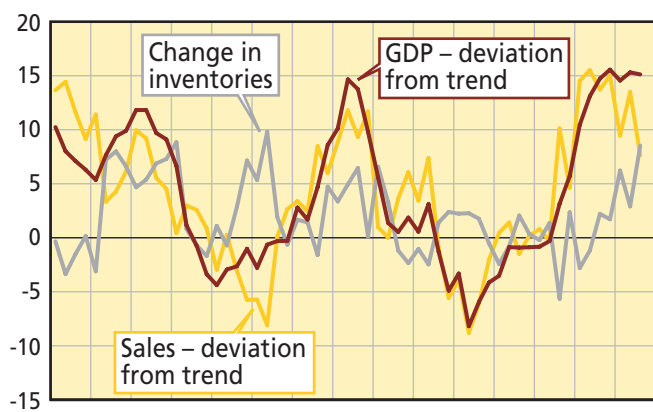
To gain a clear image of the business cycle variations, it is necessary to eliminate the long term growth trends from GDP. Inventory investment can not be a long term growth component, but is rather assumed only to affect GDP's variations around a given trend. The diagram below shows the GDP's and sales' variations around a linear trend and the inventory investment since 1993.

¹ National Accounts data on inventory investments are naturally, like all statistics, associated with uncertainty due to errors in measurement etc. Furthermore, it is often the case that inventory investment is adjusted in the follow-up of National Accounts, when production and use data are reconciled, and, thus, contains a correction item.

² The concepts "sales" and "final use" are synonyms on the aggregate level. We prefer to use "sales" because it connects to the customary language of inventory research. (Actually the concept "deliveries" is more correct, because it indicates that the transfer of goods is what counts, rather than a business agreement.)

GDP, sales and change in inventories

Billion SEK. Seasonally adjusted, constant prices



Source: National accounts

Data up to and including third quarter 2007

A simple criterion for whether or not inventory investment has a stabilising or destabilising impact is if the variation in production is greater or lesser than the variation in sales, which means that $GDP\ variance > F\ variance$ indicates a destabilising impact from inventory investment and the converse.

Measured in terms of the seasonally adjusted variables' deviation from the linear trend

GDP variance = SEK 42 109 millions and

F variance = SEK 40 378 millions.

Inventory investment, thus, appears on average to have made GDP vary more than what is justified by sales' variations.

Traditional business boom peaks in GDP in 1995 and 2000, as well as the delayed peak in 2006¹ are clearly seen in the diagram. The pattern for sales is, on the other hand,

somewhat more diffuse, which indicates that the impact of inventory investment is not wholly regular. Some episodes where inventory investment is thought to have had a clear impact on the business cycle can be noted.

The GDP upswing in the second quarter of 1994 started with a strong inventory build up. The business boom in 1995 was enhanced and extended due to inventories being increased over nine consecutive quarters.

The GDP upswing after the subsequent recession already started in the second quarter of 1997, which means it began one year before the sales began to increase. The level of the recession was also weakened by the inventory investment.

The business boom of 2000 was enhanced due to inventory build up.

During the recession of 2003 the inventory investment impacted only marginally and the GDP largely followed suit with sales.

The latest business boom has been extended due to positive inventory investment. Sales began to wane at the end of 2006 but GDP had only levelled off as of the third quarter of 2007.

In summary, one can say that inventory investment seems to have impacted interchangeably stabilising or destabilising on GDP development since the beginning of the 1990s, and it seems to have played a significant part for the development of the business cycles in certain periods. Because inventory investment has been predominantly positive, it has had a tendency to amplify the business booms and weaken the recessions.

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¹ The years ending in a 0 (zero) or 5 (five) have been years of business booms ever since the Second World War.

Contribution to GDP growth

Actual GDP growth was 2.6 percent in the year 2007. The volume increase from 2006 to 2007 for the different components on the expenditure side of GDP and their effect (or contributions) to GDP growth was as is indicated in the table.

	Volume change, percent	Contribution, percentage Not import adjusted	points Import adjusted
Household consumption expenditure	3.1	1.5	0.6
General government consumption expenditure	0.8	0.2	0.1
Gross fixed machinery	9.1	0.9	0.1
capital formation construction	6.6	0.5	0.3
Inventories		0.7	0.3
Net exports		-1.2	
Exports	5.6	2.9	1.1
Imports	9.5	-4.1	

The first contribution column shows contributions from the different components on the expenditure side according to traditional reporting, where no correction is made for import content in the different components. However, demand in each component refers to a greater or lesser percentage of imported products. Using input/output tables for 2000¹ and the import relationships presented there, it is possible to adjust for the import content in demand and to calculate an adjusted contribution measuring demand in Swedish production to GDP².

The modified calculation shows that exports, despite a comparatively weak development in 2007, accounts for 1.1 percentage points of GDP growth, which is a larger percentage than for any other component on the expenditure side of GDP. Exports are thus of the greatest importance as a driving force in the economy, even when the development seems rather weak. The contribution from investments in machinery decreases drastically after adjustment due to the large import content, while the difference is less for general government consumption and construction investments, as well as for household consumption.

1 The weights used are subsequently not especially relevant and the results may therefore be regarded with due caution. New input and output tables for 2005 should be published during 2008.

2 For more information of these calculation methods, see Swedish economy – statistical perspective number 1 2007.

A corresponding calculation can also be done for GDP, production approach. In this case the contribution from the different industries to the change in total value added is calculated. Results for 2007 are indicated in the table. In 2007 service production accounted for two thirds of GDP growth.

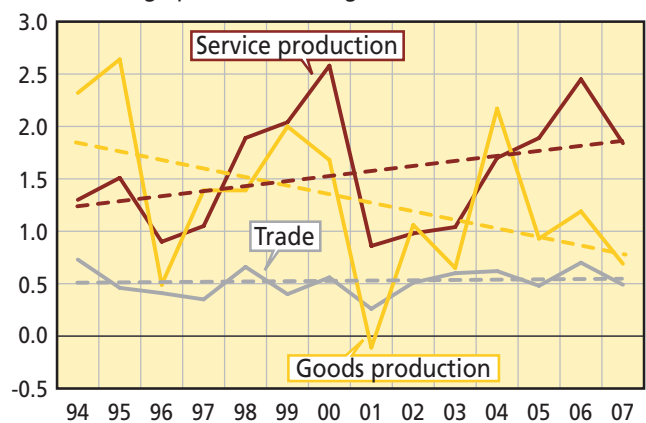
Contributions to GDP growth from selected industry aggregates in 2007

Goods production, total	0.7
– of which manufacturing	0.4
Construction industry	0.2
Service production, total	1.8
– of which wholesale and retail trade, hotels and restaurants	0.5

It can also be stated that over the course of time, at least since 1994 from which year there are unbroken time series, the goods producing industries have successively lost their leading role as a driving force for GDP growth. Instead, service production has gradually climbed in significance. Wholesale and retail trade's contribution has, among the services, been stable to a high degree over time, while other service industries have expanded. The construction industry's contribution to GDP growth has consistently been of a low level, even if the significance appears to have increased over the past few years.

GDP growth – contributions from different industries

Percentage points. Including trends



Source: National accounts

Data up to and including 2007

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Developments in the business sector

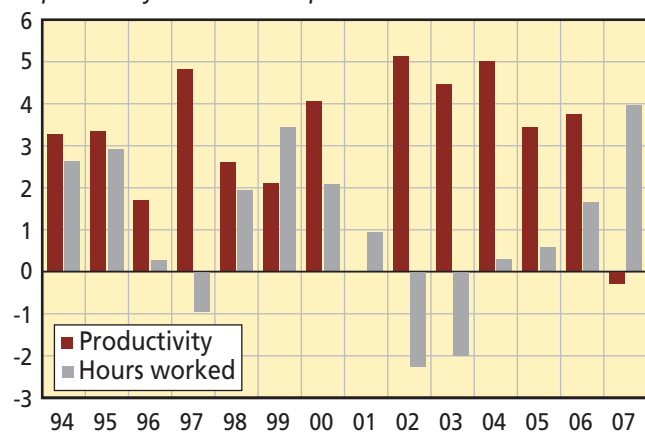
Stagnation in productivity growth

In 2007 productivity development in the Swedish business sector came to a standstill. This phenomenon affected nearly all industries. During the first quarter of 2007, productivity fell for goods and services production alike – this even affected the manufacturing industry. However, during the three following quarters only service production noted a downward trend. Reduced productivity in the business sector has not been registered at all during the period 1993–2006.

The large increase in the number of hours worked in industry by an entire 4 percent in 2007 and the non-existent productivity growth must be seen in light of the development during the most recent years. These years have been characterised by a strong productivity development, while at the same time the number of hours worked dropped sharply for a few years, followed by a slight rise for another few years. Starting in 2006, the fifth year in a row with sharp productivity growth, the number of hours worked clearly increased.

Labour productivity and hours worked

Total business sector. Percent change compared to previous year. Constant prices



Source: National accounts

Data up to and including 2007

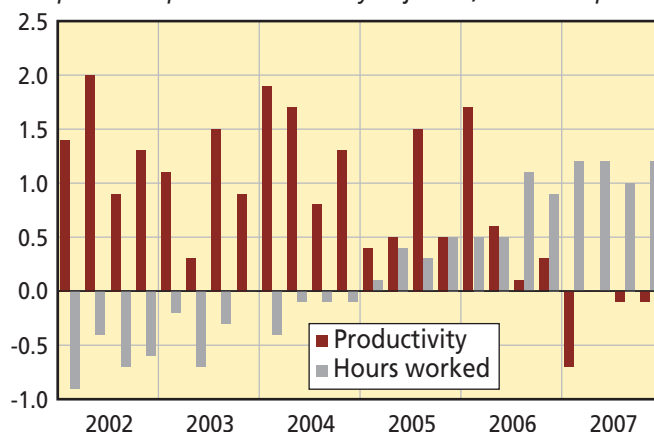
A historically poor productivity growth

As illustrated in the figure above, development in 2007 implies a marked break in the previously very strong productivity development which followed the crisis in 2001. The increase in the number of hours worked by 4 percent in 2007 was the largest growth ever registered during the entire period. In the beginning of the period, productivity and hours followed each other well, but since then have differed sharply. Following a period of reduced and then largely constant employment from 2002 to 2006, employment increased dramatically at the same time as production started to stagnate, leading to the very special development in 2007. This development was not dependent on special conditions in particular industries but was spread to both

goods and services industries.

Labour productivity and hours worked

Total business sector. Percent change compared to previous quarter. Seasonally adjusted, constant prices



Source: National accounts

Data up to and including fourth quarter 2007

A closer examination of the later years with the help of quarterly data¹ reveals a clear pattern where increases in the number of hours worked gradually rose until a level of one percent was reached during the third quarter of 2006. Since then employment growth has remained very close to this level for a full six quarters in a row. Even when looking at the entire period 1993–2007, it seems that if productivity growth is sufficiently high, the change in employment gradually becomes positive.

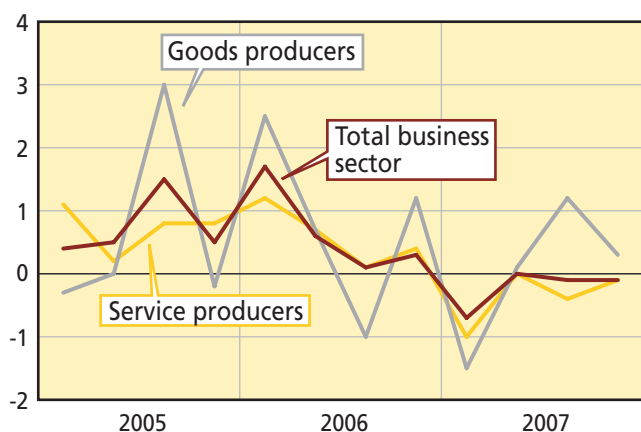
The seasonally adjusted quarterly productivity development was weakest during the first the quarter

Productivity dropped pronouncedly during the first quarter of 2007 compared to the previous quarter, both for the total business sector as well as the goods and services producing industries. Since then development has continued unfavourably for the service sector, even though the drop has been considerably less in size. As a result, the improvement of productivity that occurred in the goods producing parts of the business sector during the last three quarters of 2007 has not been able to lift the total business sector to higher productivity levels. Productivity for the total business sector has continued to drop during the last two quarters, even though the drop has been very limited.

¹ A reservation should be made concerning the conclusions of productivity development. In general, the quarterly productivity data needs to be interpreted with great caution as it consists of the difference between series which have been seasonally-adjusted independently of each other. A seasonal adjustment of the actual non-calendar corrected productivity figures directly would give considerably more reliable figures. However, until this adjustment is carried out, the analysis is based on the available but less reliable data.

Labour productivity

Percent change compared to previous quarter.
Seasonally adjusted, constant prices



Source: National accounts

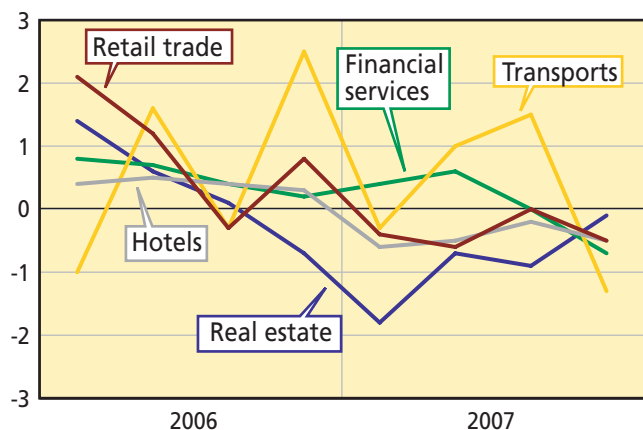
Data up to and including fourth quarter 2007

Service producers' productivity continues to be unchanged

As seen in the figure, with the exception of financial services during the first quarter and real estate and business services in the last quarter of 2007, all the four big service industries together with the hotel industry have decreased their productivity during both the first and the last quarters of 2007. However, business services have had the least favourable productivity development of all these service industries during 2007. Nevertheless, there was a consistent positive trend over the year and productivity change nearly reached the zero point during the fourth quarter. The transport and communication industries have had a very unsteady development and even if there has been a slightly positive development, the downturn from the third to the fourth quarter was significant.

Labour productivity in service industries

Percent change compared to previous quarter.
Seasonally adjusted, constant prices



Source: National accounts

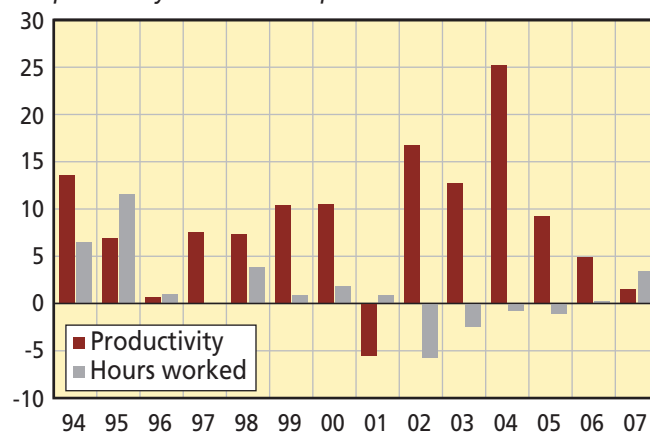
Data up to and including fourth quarter 2007

Productivity growth in the engineering industry seems to have passed the lowest point

The engineering industry has taken the lead in productivity growth during the entire period of 1993–2007. After the extremely high growth in 2004, which was considerably driven by the recovery of the electronic industry, productivity growth has gradually fallen. However, productivity still rose and the decrease in productivity growth from 2006 to 2007 has no comparison concerning development of value added which was roughly 5 percent for both years.

Labour productivity and hours worked

Manufacturing industry. Percent change compared to previous year. Constant prices



Source: National accounts

Data up to and including 2007

When studying the actual development of the productivity development of the engineering industry in 2007, where the situation for a certain quarter is compared to the corresponding quarter the previous year, we see a gradual improvement of the actual development. During the first quarter of 2007, the productivity level exceeded that of the first quarter of 2006 by only 0.1 percent, followed by 0.6 and 2.7 in the next two quarters. During the fourth quarter of 2007, productivity was 3.7 percent higher than productivity for the fourth quarter of 2006. This change was due to a greater difference in value added as well as a lesser increase in the number of hours worked.

However, a 3.7 percent growth in productivity for the engineering industry is still poor in a historical perspective, or not even half of the historical average of 8.1 percent per year.

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Financial services (FISIM)

The financial turmoil and the value of FISIM

During the fourth quarter of 2007, financial markets were distinguished by the global turmoil that started in the USA as a result of all too generous loans in the sub-prime market. The credit crisis caused the world's banks to be more restrictive with their loans to one another. This depended in part on the uncertainty factor about which banks were affected by the housing loan crisis, but also to a certain extent on the banks' wanting to maintain high liquidity until it becomes clear to what extent they were affected themselves. Swedish credit institutions, which largely finance loans through deposits and the emission of securities and not through loans from other banks, were indirectly affected of the crisis due to higher borrowing costs.

Financial Intermediation Services Indirectly Measured (FISIM) or indirectly measured financial services, refers to those services that finance institutions produce in relation to loans and deposits but do not get directly paid for in the form of commissions and fees. FISIM is calculated as the difference between a reference rate and the rate on deposits and loans multiplied by each amount loaned. The reference rate shall correspond to the risk free cost of a loan. Reduced liquidity during the fourth quarter of 2007 resulted in Stibor (Stockholm inter-bank rates), which is used in estimating the reference rate in FISIM calculations, reaching the highest level in years. The effects of the estimates of FISIM on National Accounts were most noted by the change in the distribution of production between loans and deposits.

FISIM is produced on both loans and deposits and is dependent on both the loan stocks and the level of the reference rate. The total loan stocks for Swedish credit institutions, inclusive of mortgage institutions, are approximately 2.5 times as large as the total deposit stocks. Despite this, FISIM production for Swedish credit institutions during the fourth quarter of 2007 was largely produced on deposit and borrowing stocks. In a situation where the reference rate rises, without corresponding changes in rates for loans and deposits, the margin for loans is pressed down while the margins for deposits, on the contrary, increase. Those credit institutions that mainly are devoted to loans, e.g. mortgage institutions, reported that a result of this was a lower FISIM production during the fourth quarter of 2007. In the long term, one can anticipate that the entire increased cost for

creditors to be transferred to debtors in the form of higher interest rates on loans. The banks that have the majority of all deposits have instead seen relatively high FISIM production. Nearly 70 percent of household bank deposits occur in transactional accounts, whose average relatively low rate of interest has not risen on the same scale as the reference rate. This creates the "interest rate gap" in the banks' advantage, which increases FISIM production.

The redistribution of FISIM production has gone on for some time but has earlier been a result of increased competition between loan institutions, which led to pressed loan margins and thereby to lower FISIM production in the loan markets. During the fourth quarter of 2007 it was, however, the high reference rate that affected FISIM the most.

The financial turmoil resulted in a concerted effort from several central banks to increase liquidity in the financial system at the end of the fourth quarter 2007. The aim was to reduce the inter-bank interest rates.

Difference between the repo rate and STIBOR 3 and 12 months respectively

Monthly averages



Source: Reuters, Ecowin Data up to and including February 2008

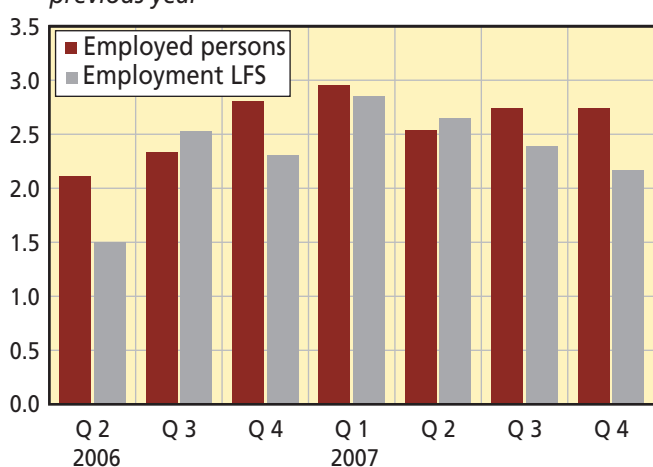
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Labour market

Continued employment growth

Development in the labour market has been strong during 2007 and the year ended with a strong increase in employment in the fourth quarter as well. According to the Labour Force Survey, the number of employed increased by 2.2 percent compared with the fourth quarter of 2006. According to the enterprise-based employment statistics the number of employed rose by 2.7 percent. Unemployment was 5.5 percent compared to 6.0 percent a year earlier.

Employment and employed persons
Percent change from corresponding quarter
previous year



Source: LFS and enterprise-based employment statistics
Data up to and including fourth quarter 2007

The increase in employment continues

According to the Labour Force Survey, employment increased in the fourth quarter among people 15 to 74 years old by 97 000 people or 2.1 percent, compared to the corresponding quarter of 2006. A total of 4 549 000 people were employed. The number of employed rose, especially among those of foreign birth. Despite the large increase compared with the fourth quarter of 2006, the percentage of employed did not increase for this group, because the number of foreign born members of the population also rose significantly during the same period.

The increase in employment among different age groups was especially large for youths aged 15 to 24, where the number of employed rose by 6.6 percent. Over the last six quarters, the increase for young people has been very strong, with 30 000 to 50 000 more employed per quarter compared with corresponding quarters one year earlier, which probably has to do with the large number of youths entering the labour market during the past few years at the same time as vacancies also increased significantly.

The increase in employment during the fourth quarter of 2007 was evenly distributed among men and women. The increase primarily affected people with permanent employ-

ment. The enterprise-based employment statistics showed an increase in the number of employees by 2.7 percent. Both the Labour Force Survey and the employment statistics showed that an increase occurred in the private sector. According to the Labour Force survey, the increase was statistically significant in the construction industry as well as in business services (inclusive of financial services). The employment statistics also showed that aside from these industries, there were upward trends within wholesale and retail trade as well as hotels and restaurants.

The number of hours worked was 146.7 million on average, according to the Labour Force Survey. Compared to the fourth quarter of 2006, this upward trend reached 2.7 percent.

Unemployment continues to decrease

Unemployment continued to decline. During the fourth quarter the number of unemployed was 264 000 persons on average, or 5.5 percent of the labour force. This means a decrease by 0.5 percentage points compared with the fourth quarter of 2006. Of the unemployed, some 77 000 were full time students that sought and gained employment. The number, as well as the percentage of unemployed among men, has decreased. Unemployment was at 5.1 percent for men and 5.9 percent for women in the fourth quarter. Those of foreign birth has significantly higher unemployment. For this group, unemployment was at 11.6 percent, while only 4.5 percent among the native born.

Many jobs available, but signs of slowdown

Statistics on available jobs indicates a continued increase in number of jobs available. The long term rate of increase for available jobs in the private sector is higher than the development in the fourth quarter, but still there are many jobs available. The number of available jobs was over 44 400 in the private sector during the fourth quarter, and over 52 200 available jobs for the total Swedish labour market. In comparison with the fourth quarter of 2006, there is an increase by approximately 15 percent in both cases.

Acute lack of labour increased

Vacancies increased to over 20 600 in the private sector. This means that 46.4 percent of the available jobs are vacant and can be filled immediately. Within financial services and business services as well as construction industry, the corresponding numbers were 55.1 percent and 70.3 percent, respectively. In total there were 2 500 vacancies within the construction industry and almost 8 400 in the financial services and business services fields.

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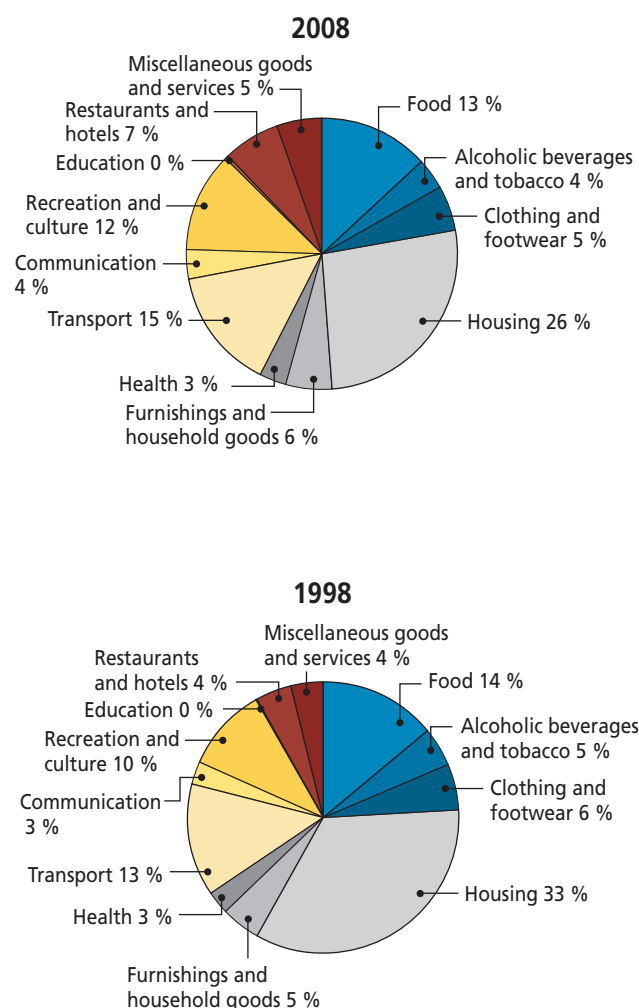
Consumer Price Index (CPI)

Higher inflation rate

The inflation rate, measured as the change in the CPI (Consumer Price Index) during the last twelve months, was 3.1 percent in February. The inflation rate has not been as high as it has been for the past three months since December 1993, when it was 4.1 percent. The underlying inflation rate, according to the CPIX, earlier called UNDI_X where mortgage interest costs and tax effects are excluded from the CPI, was 2.0 percent in February and 2.1 percent in January. The following areas are described in greater detail in this article: the design and composition of CPI, the differences between CPI, CPIX, Net Price Index (NPI) and Harmonised Index of Consumer Prices (HICP). Also, a short historical comparison with connection to price development in the producer price index is described.

An inflation rate of 3.1 percent means that consumer prices for a given combination of goods and services, a so called index basket, has increased by 3.1 percent on average over the past twelve months. This means that the same basket that cost SEK 1 000 last year now costs SEK 1 031 for the average consumer. An SEK 31 price increase may not seem large but aggregated over a longer period of time, all other things being equal, it means that the price increase hollows out the purchasing power. For example, an annual inflation rate of 3.1 percent means that the basket that cost SEK 1 000 ten years ago now costs SEK 1 357, which corresponds to a 35.7 percent price increase. In reality prices have increased significantly less during the last ten years (15.1 %), which means that the price of the basket has increased to SEK 1 151.

In Sweden the CPI aims to approximate a cost of living index. The economic approach to this index theory builds upon the assumption of optimising behaviour of the households, which has its origin in microeconomic theory. CPI aims, in accordance with these, to illuminate how price changes affect the costs of maintaining an unchanged standard of living. Such an index implies comparisons between two situations, where not only prices but also the composition of consumption distinguished themselves, due to the households' adaptation to changes in relative prices. In practice however, a price index must be calculated from a fixed basket. In Sweden the index basket composition is classified according to Classification of Individual Consumption by Purpose (COICOP), which is an international system of classification. There are twelve main groups according to COICOP and their percentage of the total CPI is illustrated in the graph below, in part for 2008 and in part for ten years ago.



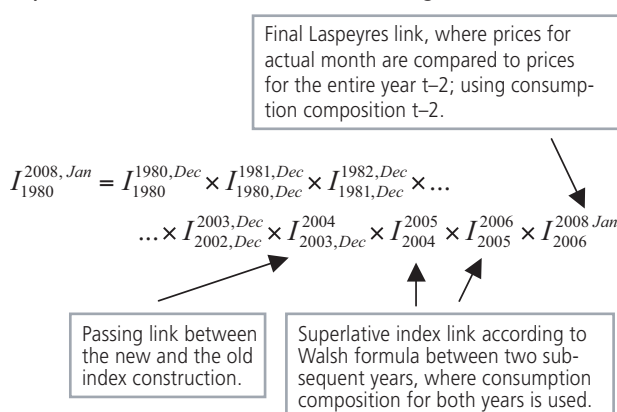
It is clear that housing costs now make up a smaller part of the total consumption expenditure compared to ten years ago. The other groups have changed significantly less. Consumption of food and non-alcoholic beverages, alcoholic beverages and tobacco, as well as clothing and footwear all have a reduced percentage share while at the same time furnishings, household equipment and routine maintenance of the house, transport, post and telecommunications, recreation and culture, restaurants and hotels as well as miscellaneous goods and services are now purchased to greater extents.

Changes in the index basket between the different main groups are usually small from year to year, while changes within the different main groups sometimes can be larger due to the occurrence of substitution in commodity groups. In addition, new goods enter the market every year while others are consumed less frequently or disappear. Over the past three years the following goods, among others, have

been added to the CPI basket: campers, heating pellets, district heating for owner occupied dwellings, E-85; MP3 players, downloading of MP3 formatted music, child care and leisure time child care fees. At the same time, goods and services such as colour television repair, video tapes, video tape players, television rentals and portable CD players have been excluded.

The purpose of the CPI is to measure the average price development for the total private domestic consumption. The basis for how much the different goods and services in the CPI will affect the measurement, that is to say their weights in the index basket, is primarily derived from the private consumption in National Accounts in the form of consumption values. Household budget statistics are used to categorise certain amounts that are not reported in the degree of detail used in the CPI. The CPI presently has a coverage of approximately 95 percent of the private consumption, which means that the index basket's total weight corresponds to more than SEK 1 120 billion. Part of the goods and services in the private consumption are missing in CPI such as certain parts of health care and financial services.

From 2005 onwards, the CPI is calculated as a Laspeyres' chain index, where index links indicating the relation between the average prices for two consecutive years are successively multiplied or chained to one another. The formula used for the calculation of these year-to-year links belongs to a class of index formulas called superlatives. These are typically symmetrical to the extent that the index basket on which the comparison is based is equally representative for each period. Further, a final index link is calculated that indicates the relation between prices for the actual month and the average price two years earlier, which is also the year the index basket refers to. By multiplying these links with the chained index numbers for earlier years, we obtain index numbers for individual months. This method of calculating the index numbers ensures that the index's development remains accurate in the long term.



If, for example, the index for January 2008 is to be compared to the one for December 2007, (i.e. the monthly change in January 2008) then there are a number of different links to be considered. In December the index chain ends with a link indicating the relationship of prices in December 2007 to the calendar year of 2005. Instead of using price changes from the entire year of 2005, the January 2008 index uses a

link indicating the relationship between the average prices during 2006 and the average prices during 2005 and a link that indicates the relationship between prices in January 2008 and the average prices during 2006. These links have differing compositions of the index basket, such as:

- the link comparing prices in December 2007 to prices during 2005 has been calculated based on the consumption composition during 2005;
- the link that compares prices in 2006 to those during 2005 has been calculated on the basis of consumption composition for both of these years;
- and, the link that compares prices in January 2008 to those during 2006 has been calculated based on the consumption composition during 2006.

The effect of changing the CPI basket at the turn of the year normally causes a decrease of approximately 0.2 percentage points to the monthly CPI change in January. This effect was 0.5 percentage points in January of 2008, which primarily depends on the National Accounts data having undergone pervasive revisions that normally are done every fifth year. The published inflation rate in January therefore decreased by 0.2 to 0.3 percentage points compared to the December inflation rate.

The composition of the CPI basket will change again at the turn of the year 2008-2009. If the decrease from changed basket composition once again is normalised near 0.2 percentage points, then the inflation rate in January 2009, with the same price changes from December to January as a year earlier, is expected to rise 0.2 to 0.3 percentage points compared to December 2008.

Price changes during the last twelve months

Consumer prices rose by an average of 3.1 percent from February 2007 to February 2008. As usual, the difference between product groups was large.

The primary reason for the rise in the inflation rate the past year is increased housing costs (5.1 %), which contributed by 1.3 percentage points. The higher housing costs are mainly explained by increased mortgage interest costs (21.5 %), which in turn are explained by higher interest rates (15.0 %) as by increased real estate prices (5.0 %). In this context, real estate prices refer to the component of the CPI that describes the change in households' capital allocated to one- or two-dwelling buildings, calculated to acquisition price. Price changes for houses affect the CPI mainly in the event of a change of ownership, when the real estate is sold at a price other than that when it last sold. Price changes for new production also affect the CPI. Another major contributing factor to the inflation rate in February is higher prices for transportation (5.7 %), which contributed with a rise of 0.8 percentage points. This group is dominated by higher fuel prices (14.5 %), but also by higher prices for local transportation (10.5 %). The most common form of fuel by a wide margin is 95 octane petrol, which on its own

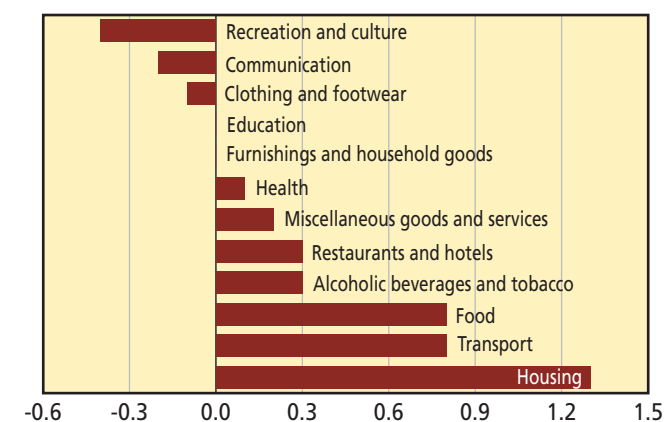
affected the inflation rate by 0.5 percentage points in February. Energy products in total make up 8.9 percent of the CPI basket. Aside from fuels, this group includes electricity, heating oil, natural gas, heating pellets and district heating for owner occupied housing. The price of these products increased on average by 7.8 percent between February 2007 and February 2008.

The prices within the group food and non-alcoholic beverages (5.9 %) began to rise sharply in October last year, which is mostly explained by the marked increase in prices for grain products (9.9 %) and dairy products (9.9 %). The price increases in this group affected the inflation rate upwards by 0.8 percentage points February. The price of restaurant visits has also increased (4.6 %), which further affected the inflation rate by 0.3 percentage points upwards.

The inflation rate is primarily affected downwards by price decreases for the group audiovisual equipment and computer equipment (–19.1 %), where a number of products like televisions, DVD players, digital cameras and computers decreased in price. In February the contribution from these products was 0.4 percentage points downwards. Price reductions for clothing and footwear (–2.1 %) as well as postal and telephone services (–4.4 %) affected CPI downwards in February by 0.1 percentage point and 0.2 percentage points respectively.

Domestically produced goods and services make up approximately 64.3 percent of the CPI basket, the price of these goods and services increased on average by 2.5 percent during the last year. The percentage of imported goods and services, as well as interest rates, amounts to 31.2 percent and 4.5 percent, respectively. In February the twelve month change for these was 1.4 percent and 21.5 percent, respectively. The numbers should be interpreted with a certain degree of caution, as it becomes more and more difficult to distinguish those product groups that are mainly domestically produced and those that are imported.

Contributions to inflation rate in February 2008



Source: Consumer price index

Taxes that have affected the consumer prices over the last twelve months

The CPI is calculated based on the prices actually paid by consumers, which means that part of the prices are made

up of taxes and that certain products really could be more expensive if they are subsidised. Statistics Sweden also calculates inflationary estimates that aim to show price changes exclusive of taxes and subsidies.

The Net Price Index (NPI), like the CPI, is considered as a part of Sweden's Official Statistics and shows the development of that part of consumer prices that remains after the net of indirect taxes minus subsidies are deducted. The NPI aims to measure the average relative development of those incomes that the consumption goods producing sector of industry should keep from sales of a number of goods and services, produced by a constant technology and unchanged with regard to size and composition, after deduction of indirect taxes and after addition for subsidies.

The CPIX is a measure of underlying inflation and is calculated on behalf of the Riksbanken (Swedish Central Bank). CPIX excludes mortgage interest costs for owner occupied houses and the direct effect of changed indirect taxes and subsidies, not including income taxes. "Direct effect" in this context means taxes are added in the final phase of distribution. The aim is to exclude the temporary effects of monetary policy and finance policy decisions. Last year's sharply increased interest rate costs, which were mainly due to rising short term interest rates resulting from the Riksbanken's monetary policy, are thus excluded from CPIX. A schematic overview of the calculations for the different measurements is given in the table below.

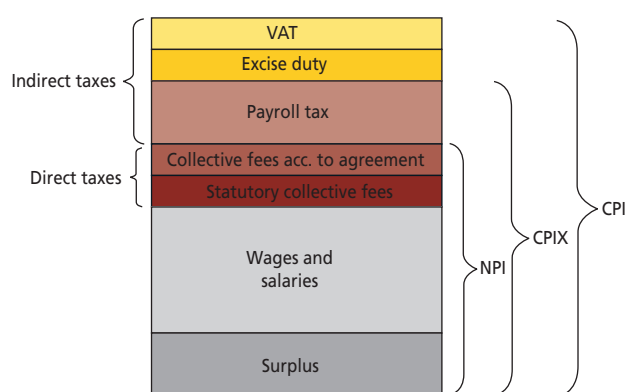
December 2007:	January 2008:
Net price SEK 100	Net price SEK 110
Excise duties SEK 20	Excise duties SEK 25
Gross price SEK 120	Gross price SEK 135
Index calculation with change in excise duties	
$CPI = (135/120) * 100 = \text{SEK } 112.50$	
$NPI = (110/100) * 100 = \text{SEK } 110.00$	
$CPIX = ((110+20) / (100+20)) * 100 = \text{SEK } 108.33$	

The NPI increased by 0.4 percent, as did the CPI, between January and February 2008, when no tax changes occurred during the period. The NPI decreased in January by all of 1.8 percent compared to the December 2008. The big difference, compared to the CPI and the CPIX, which decreased by 0.8 percent in January, was mainly due to the raised payroll tax at the turn of the year and deducted when calculating the NPI. According to the NPI, the inflation rate decreased to 2.4 percent in January while it stood at 3.2 percent according to the CPI and 2.1 percent according to the CPIX. In February 2008 the NPI was 2.3 percent. The annual rate according to the CPIX also fell in February to 2.0 percent.

During the last year a number of different tax changes have affected the CPI while not affecting the CPIX. The relatively large price increases for alcoholic beverages and tobacco are principally explained by the raised tobacco tax for snuff and cigarettes (12.8 %) and the raised alcohol tax on beer (12.9 %). Price increases for cigarettes usually do not affect

the CPI immediately after a tax increase when the inventory can sometimes be large and the price is printed on the packet, snuff prices are raised directly on the other hand. On the other hand, the effect of all taxes technically has an immediate impact on the CPIX. This implies that these impacts are removed in the month that the taxes are changed.

Other taxes that have increased effects on consumer prices in the last year are energy tax and the carbon dioxide tax on petrol. These both directly affect fuel prices but also affect a number of other goods indirectly, such as more expensive transportation that tends to spill over into higher consumer prices. In addition, the introduction of taxes on traffic insurance premiums and congestion charges has affected the consumer prices upwards. The reduction of real estate tax (26.1 %) and the tax reduction for household-related services have simultaneously caused a decrease in consumer prices. The graph below shows which price-affected factors are allowed to affect the CPI, CPIX and NPI.



Harmonised Index of Consumer Prices (HICP)

HICP was developed by the EU as an internationally comparable measurement of inflation. The CPI and the HICP are calculated from the same data, prices and information on consumption composition, but there are certain differences in the coverage of the two measurements. Compared to the CPI, the main part of the costs for owner occupied housing, tenant owned apartments as well as state gambling proceeds are not included in the HICP. The HICP includes, unlike the CPI, costs for care for the elderly and hospital care as well as certain financial services, where the fees are proportional to transactional size.

These two measurements, the CPI and the HICP, also have different aims, meaning that the methods of calculations are distinct. The CPI is calculated, to the full extent feasible, to approximate a cost of living index including superlative index links according to Walsh. The main aim of the HICP is instead to be a target variable for European Central Bank (ECB) monetary policy, and is calculated as a Laspeyres-type index. Because the reference period for weights and prices differ from each other, the index is not purely a Laspeyres index.

A Laspeyres-type index as used for the HICP gives a systematic overestimation of the development of living costs, that

earlier have been estimated to approximately 0.1 percentage point per year. On the other hand, the problems of interpretation that arise with weight revision at the turn of the year are avoided.

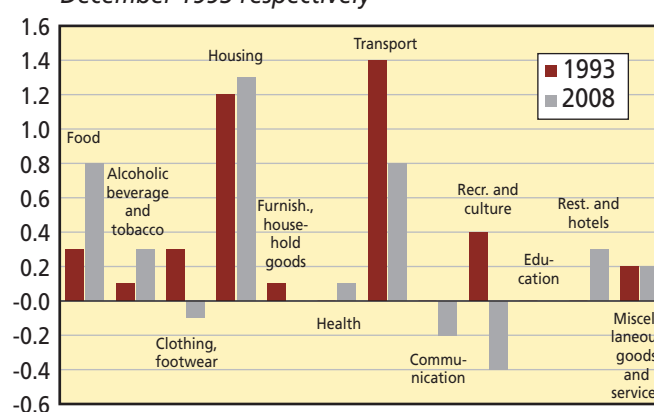
The Swedish inflation rate according to the HICP was 2.9 percent in February (3.0 % in January). Monthly changes between December 2007 and January 2008 were unchanged according to the HICP and -0.8 percent according to the CPI. The big difference is mainly explained by the CPI decreasing 0.5 percentage points through the change in index basket, while the HICP is unaffected by this. Property taxes made a further contribution, decreasing the CPI by 0.2 percentage points, which is not included in the HICP. The inflation rate, as measured by the HICP, has lately been on the rise for most European countries. The latest HICP figures published for EU countries refer to January. The inflation rate for the EU according to the European Index of Consumer Prices (EICP) which includes the 27 member states, increased to 3.4 percent in January (figures are preliminary). For the 13 member states included in the European Monetary Union (EMU) the inflation rate was 3.2 percent (figures are preliminary).

A historical comparison of the CPI and the CPIX

The rate of inflation has not exceeded 3.5 percent since December 1993. At that time inflation remained over 3 percent for all of 1993. In a comparison with February 2008, it can be noted that also in 1993 it was increased housing costs that caused inflation to rise, although then it was a result of rental increases. Higher transportation costs also caused inflation increases in 1993.

Contributions to change in consumer prices

Percentage points. February 2008 and December 1993 respectively

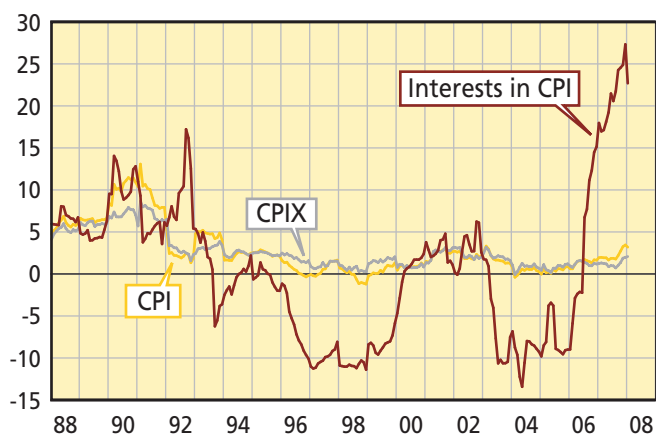


Source: Consumer price index

While similarities exist regarding what causes inflation to rise, there are also large differences. In 1993 interest rates were decreasing while they recently have been rising over a long period of time. Taxes affected consumer prices significantly more between 1992 and 1993, causing prices to rise sharply. Between 2007 and 2008 taxes have not had a great impact.

CPI, CPIX and interests in CPI

Percent change from corresponding month previous year



Source: Consumer price index Data up to and including January 2008

The inflation rate in December 1993 was 3.4 percent according to the CPIX, but is now quite lower at 2.1 percent. In 1993 inflation exceeded our present target inflation, according to both the CPI and the CPIX, while now only the CPI exceeds the target inflation.

The contribution of last year's rising interest rates to the twelve-month figures will subside during 2008, assuming an unchanged repo rate, as can be seen by the following formula.

$$I_{2007,m}^{2008,m} = \frac{I_{2007,m-1}^{2008,m-1} * I_{2008,m-1}^{2008,m}}{I_{2007,m-1}^{2007,m}}$$

The formula shows that the inflation rate for the coming month can be calculated with the information known earlier with only an expected value for the monthly change between the present and coming month.

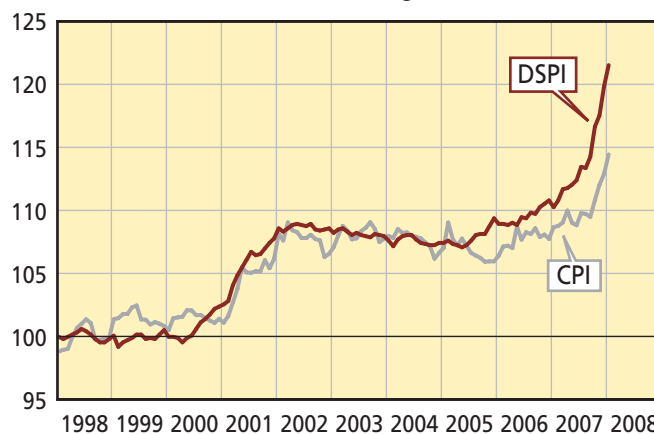
Producer price development for goods to domestic customers

Prices for goods for domestic customers, a combination of domestic market producer prices and import prices, have risen on average by 7.5 percent from January 2007 to January

2008. Prices for non-durable consumer goods increased on average by 6.6 percent, of which food prices increased by entire 11.1 percent. The rise for grain products was 12.6 percent. The rising price of raw materials is not unique to Sweden but is rather controlled to a great extent by world market prices. Among the raw materials affecting consumer prices, aside from grain products, crude oil has contributed most in recent times.

Consumer price index and producer price index, domestic supply

Food and non-alcoholic beverages. Index 1998=100



Source: Consumer price index Data up to and including January 2008

The fact that producer prices for domestically produced goods rise quicker than consumer prices of imported goods can depend on a number of factors. There is also a certain degree of uncertainty when the same items are not price-measured for producers and consumers. After a certain delay, consumer products tend to follow the price trends for producers, which is normally a good indicator for coming trends in consumer prices.

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