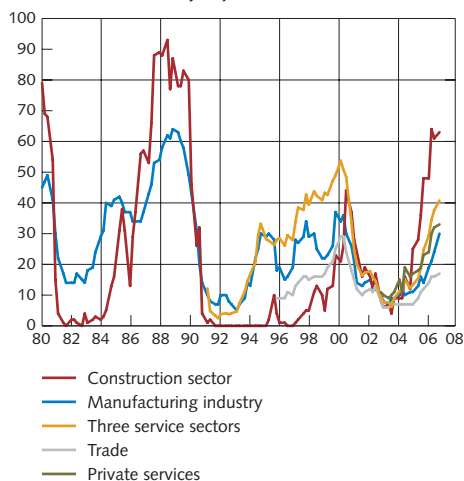


## The matching of supply and demand in the labour market

**Figure B6. Proportion of firms reporting a shortage of labour**

Per cent, seasonally adjusted data



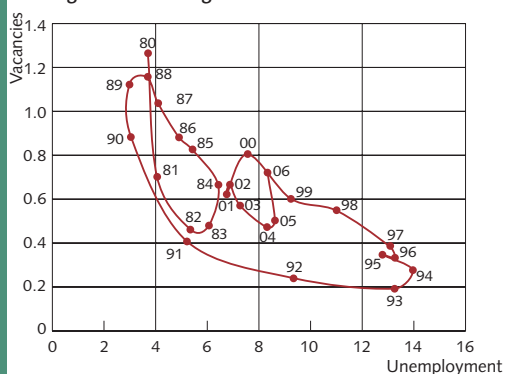
Note. Three service sectors refer to haulage firms, computer consultants and business services.

Source: National Institute of Economic Research

The number of employed have risen rapidly since the latter half of 2006. While the state of the labour market has gradually improved, there has been an increase in labour shortages in a number of sectors. If this trend continues, there is a risk of inflationary bottlenecks. This raises the question of how many unutilised resources are available in the labour market and how efficiently the matching of jobseekers and vacancies operates. The overall picture from the indicators presented here indicates that there is still no major general shortage of labour compared with the most recent economic boom. It is also difficult to find clear indications that the matching efficiency in the labour market has changed in recent years.

According to the National Institute of Economic Research's Economic Tendency Indicator, there has been a trend rise in the proportion of firms reporting labour shortages since 2004. Shortages are greatest in the construction sector although they have also increased in other sectors in the past three years (see Figure B6).

**Figure B7. Beveridge curve 1980-2006**



Note. Vacancies (unfilled vacancies) and total unemployment, per cent of labour force.

Sources: The National Labour Market Board and Statistics Sweden

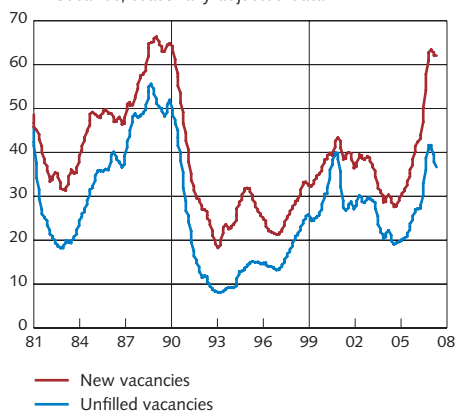
The Beveridge curve is perhaps the most common indicator shedding light on the performance of the labour market. This shows the relationship between unemployment rate and the job vacancy rate (the number of unfilled jobs expressed as a proportion of the labour force). If the unemployment rate rises at the same time as there is a fall in the vacancy rate, this may be interpreted as a fall in demand for labour in a cyclical downturn (a movement along the curve). If both vacancy rates and unemployment rates rise at the same time (the curve shifts outwards), this, however, may indicate structural changes in the labour market and impaired efficiency of the matching process.

Figure B7 shows the Swedish Beveridge curve for the period 1980 to 2006. This correlation was relatively stable throughout the 1980s. However, dramatic developments took place at the beginning of the 1990s when the proportion of unemployed rose rapidly at the same time as the vacancy rates remained largely unchanged. The curve has shifted outwards since the mid-1990s, which may indicate a deterioration of the matching efficiency since the 1980s.

The Swedish Beveridge curve uses the number of job openings, as defined by the Labour Market Board, as a measure of vacancies. According to these statistics, the number of job openings has risen very rapidly during the past year, which presumably indicates that the demand for labour has risen rapidly (see Figure B8). However, there are deficiencies in these statistics. Recently, the number of vacancies has been overestimated due to an increase in duplicated registration of job openings. Moreover, statistics are not available for the entire labour market since far from all vacancies are reported to the Employment Office.

**Figure B8. New vacancies and unfilled vacancies**

Thousands, seasonally adjusted data



Note. Three-month moving average.

Source: The National Labour Market Board

A more direct measure of “unfulfilled” demand for labour is Statistics Sweden’s statistics for private sector vacancies, which should reasonably be the most relevant measure for clarifying the amount of labour demand.<sup>22</sup> These statistics measure the number of vacant jobs (a job is considered to be vacant when the employer has begun active recruitment outside the enterprise but has not yet filled the position) and vacancies (unmanned vacant jobs that can be started immediately). Unfortunately, these statistics are only available from 2001, which limits their usefulness. The number of vacant jobs and vacancies in the private sector have both increased slightly since 2004 (see Figure B9).<sup>23</sup> However, the development is not as dramatic as the vacancy statistics of the National Labour Market Board, where vacancy volumes are as high or higher than in 2001.

The recruitment rate and vacancy rate can be calculated with the aid of Statistics Sweden’s vacancy statistics. The recruitment rate is defined as the number of vacant jobs (recruitment processes) expressed as a proportion of the number of employees. The recruitment rate can be used as an indicator of changes in the demand for labour. A high recruitment rate means greater recruitment activity and vice versa. The vacancy rate is the number of vacancies expressed as a proportion of the number of employees and shows the relative shortage of labour. The higher the vacancy rate, the higher the relative shortage of labour.

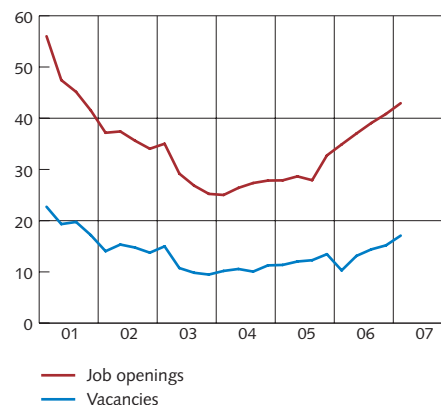
The development of the recruitment and vacancy rates can be monitored by sector. Recruitment activity has been increasing in the construction sector since the end of 2003 and is now at approximately the same level as in 2001 (see Figure B10). It has been somewhat lower for the manufacturing industry and trade in recent years. The vacancy rate shows even more clearly that the labour shortage is most noticeable in the construction sector. The shortage is not at all as evident in other sectors of the economy (see Figure B11). Even though both the recruitment rate and the vacancy rate in the private sector have gradually risen, the levels are lower than in 2001. This could indicate that recruitment activity and the relative shortage of labour are slightly lower now than at the time of the last cyclical peak.

Another interesting measure of labour market performance is the average recruitment time. This is defined as the number of vacant jobs on a particular day in the month divided by the number of people recruited during the whole month and can be interpreted as a measure of how well matching operates. Given a constant unemployment rate, an increasing average recruitment time might indicate a deterioration in matching efficiency for new employees.

22 Statistics Sweden’s statistics regarding vacancies is a company-based sample survey that aims to provide information on labour market demand. The sample comprises approximately 16,600 workplaces in the private sector that have been measured on a quarterly basis since the first quarter of 2001. Since the second quarter of 2006, the reporting of vacancies in the public sector has been discontinued, since the target of the survey was changed from a workplace to a legal entity. One clear disadvantage with Statistics Sweden’s vacancy statistics, however, is the short time series, which make it impossible to analyse changes between entire business cycles. See Ante Farm “The new vacancy statistics” in *Ekonomisk Debatt* 2006, Volume 31, no. 6, for more details of Statistics Sweden’s vacancy statistics.

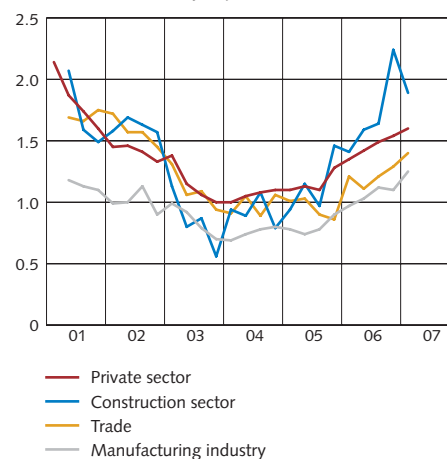
23 The number of vacancies constitutes a relatively constant proportion of vacant jobs.

**Figure B9. Job openings and vacancies in the private sector**  
Thousands, seasonally adjusted data



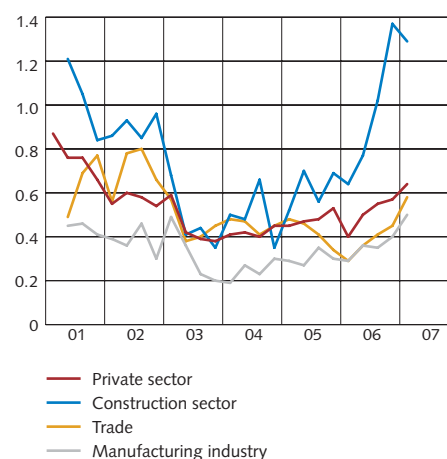
Source: Statistics Sweden

**Figure B10. Recruitment rate in the private sector**  
Per cent, seasonally adjusted data



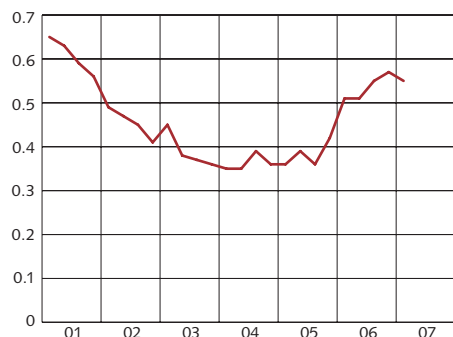
Source: Statistics Sweden

**Figure B11. Vacancy rate in the private sector**  
Per cent, seasonally adjusted data



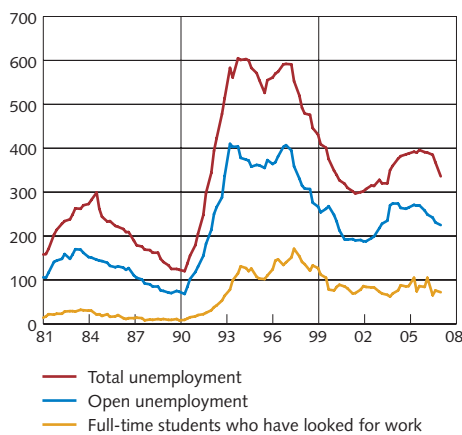
Source: Statistics Sweden

**Figure B12. Average recruitment time in the private sector**  
Months, seasonally adjusted data



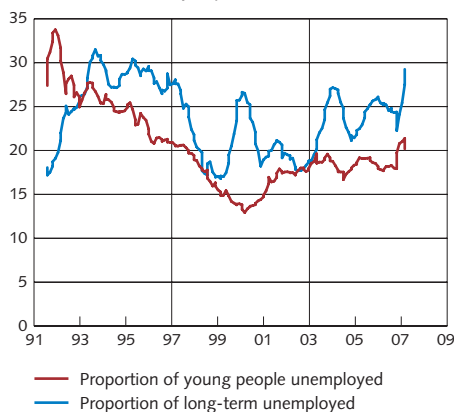
Source: Statistics Sweden

**Figure B13. Open unemployment, total unemployment and full-time students who have looked for work**  
Thousands, seasonally adjusted data



Sources: National Labour Market Board and Statistics Sweden

**Figure B14. Proportion of unemployed young people and long-term unemployed in relation to total unemployment**  
Per cent, seasonally adjusted data



Note. Young unemployed refers to persons aged 18-24. Long-term unemployed is defined as persons who have been unemployed for at least six months if aged 25 or over. Young people aged 18-24 are regarded as long-term unemployed after 100 days.

Source: National Labour Market Board

The average recruitment time has increased slightly in the private sector since mid-2005 and is now just under 0.6 months (see Figure B12). However, during the same period, unemployment has gradually fallen while recruitment activity has risen. The slightly longer average recruitment time in recent times is therefore more an indication that the demand for labour has been rising rapidly than a sign of deterioration in matching performance.

To assess how quickly and how much employment can increase in the future, one also needs to study the labour reserve and its availability in the labour market. Two groups included in the reserve are the open unemployed and full-time students who are looking for work.<sup>24</sup> The persons in these groups are relatively close to working life.<sup>25</sup> Figure B13 shows the development for these groups together with the total number of unemployed since 1980. Total unemployment is defined here as the sum of open unemployed and those participating in labour market policy measures. Both open and total unemployment have fallen rapidly in the past year. However, the levels are much higher than in the 1980s and even higher than during the previous cyclical peak in 2001. The number of full-time students looking for work fell relatively quickly at the time of the last cyclical upturn, although the number has since stabilised at just under 100,000. All in all, this indicates that there is still a relatively large reserve of labour which it should be possible to employ relatively quickly.

The composition of the labour reserve is also important for the performance of the labour market. Since young people are often more mobile and may have qualifications which better correspond to the demands made by the labour market, it is probably easier for them to find a job than for older unemployed people. From a matching perspective, it may therefore be better if unemployment is high among young people than among older people. Correspondingly, a high proportion of long-term unemployed indicates problems with matching. If a person is unemployed for a long time, their motivation for looking for work may decline. Moreover, long periods of unemployment probably indicate that the individuals concerned do not have the right skills or live in an area where there are job openings.

Figure B14 shows the number of unemployed young people and the number of long-term unemployed according to the National Labour Market Board's statistics. Since 2000, the proportion of unemployed young people has gradually increased and now accounts for around 20 per cent of all unemployed. This could indicate good matching conditions in the future. The development of the proportion of long-term unemployed since 2000 is more difficult to interpret although it has clearly increased since the beginning of 2007. If this development continues, it could imply poorer efficiency of matching.

<sup>24</sup> See the in-depth article entitled "Perspectives on the quantity of unutilised resources in the labour market", in Inflation Report 2006:3, for a more general discussion of the extent of connection to the labour market of different groups and possible labour reserves.

<sup>25</sup> Note that the term unemployed in the Labour Force Survey is defined as "job-seekers without employment who can start work immediately".