# The enigma of the Icelandic labour market

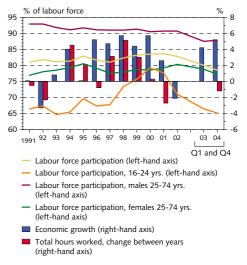
Recent developments in the labour market have proved surprising. Labour use contracted substantially for a long time after the vigorous recovery of GDP growth. The rate of unemployment was high and even increased towards the middle of 2004. Contrary to what might have been expected, the number of vacancies increased at the same time as unemployment. Wage drift has been modest in sectors that have experienced labour shortages. The following article attempts to explain these paradoxes. It seeks to answer the question whether recent changes in the labour market can be mainly explained by cyclical factors or whether they are also attributable to structural changes in the lcelandic economy over the past decade.

Two qualifications need to be made, however, concerning complications in discussing Icelandic labour market developments in recent years. First, the format of Statistics Iceland's labour market surveys was changed in 2003.<sup>2</sup> This produced a break in the data series and the two survey formats have not yet been linked. Consequently, it is difficult to compare the last cyclical upswing with the current one. Events in 2003 are difficult to assess and the trends for unemployment and vacancies that year came as something of a surprise. Second, in recent times there has apparently been a sizeable increase in the share of foreign labour, which is still not recorded satisfactorily in official statistics. As a result, thorough statistical support cannot always be provided for the hypotheses put forward in this article.

# 1. Faster GDP growth – less labour use

Labour market participation in Iceland is still fairly flexible, judging from Statistics Iceland's labour market surveys. As Chart 1 shows, the participation rate increased as the upswing progressed at the end of the last decade, but has contracted since 2001 in pace with diminished demand for labour. The same applies to total hours worked.<sup>3</sup> As before it is mainly changes in labour market participation by the youngest age group (16-24 years) which mirror the cycle. In the last upswing the participation rate for the age group 16-24 increased from 65% in 1993 to 79% in 2000, but had dropped back to 65% in 2004. Interestingly, the participation rate fell by 1½ percentage points in 2004, long after GDP growth had made a robust recovery.<sup>4</sup> This is a different trend from the onset of the last upswing, when labour use, especially measured in terms of total hours worked, recovered much faster.

#### Chart 1 Labour force participation, total hours worked and economic growth 1991-2004



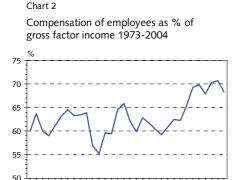
Source: Statistics Iceland.

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<sup>2.</sup> Until 2003 the survey only covered one sample week in April and November, but it has been conducted continuously since then with each quarterly sample divided into 13 equal weeks and the results published quarterly. Thus the results since January 2003 inclusive are not fully comparable with those of previous surveys. The surveys are better comparable if the findings for the first and fourth quarters in the new survey are compared with earlier findings.

Total hours worked are defined as the number of employed during the reference week multiplied by average actual hours worked.

If the participation rate had not been so flexible, unemployment in 2004 could have been expected to move well above the recorded figure of 3.1%.



1974 76 78 80 82 84 86 88 90 92 94 96 98 00 02 04 Source: Statistics Iceland.

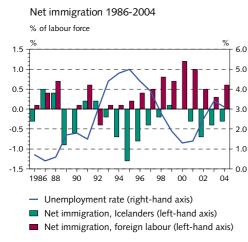


Chart 3

It is common for labour use to shrink at the start of an upswing. However, the present contraction is exceptionally marked, and considerably greater than at the start of the previous upswing. GDP growth has been faster as well.

Jobless growth is not unique to Iceland. Most developed economies have been surprised by the sluggish increase in demand for labour relative to GDP growth. One suggested explanation has been that large investment in information technology at the end of the last decade is now beginning to deliver increased productivity and a reduction in jobs, since it has taken time for management to reorganise operations (Bernanke 2003). It is likely that the contraction in labour supply to some extent is a result of the introduction of IT, since Iceland has not lagged behind other nations in this respect.

#### 1.1. High wage ratio

Wage cost developments at the end of the previous upswing may have motivated rationalisation and reduced labour use. As Chart 2 shows, the wage ratio rose considerably in the last upswing, driven by strong wage drift. The wage ratio was not so high in preceding upswings. One conceivable explanation for the high wage ratio has been that fiercer competition has made it more difficult for businesses to pass higher wage costs on to prices.<sup>5</sup> Instead, they have been forced to cut into their operating profits.

A high wage ratio should have encouraged businesses to reduce their operating costs by trimming labour use. The wage ratio declined in 2001 but grew again in 2002 and 2003 and the incentive to cut labour use is likely to have remained fairly strong then, as the wage ratio dropped again in 2004.

#### 1.2. Imported labour

According to the above, employers had both an incentive and the scope for cutting wage costs by reducing labour use. Another probable reason for sluggish growth in domestic labour use is strong imports of labour.<sup>6</sup> The increase in imported labour is to some extent an offshoot of fiercer business competition. Rival companies can no longer pass wage rises in excess of productivity growth on to prices.<sup>7</sup> They opt to import labour during shortages instead of attracting other companies' employees by wage bidding. Foreign labour use grew in certain sectors during the previous upswing and has been spurred again recently by the large-scale involvement of foreign contractors in aluminium and power sector investment projects.

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Sources: Directorate of Labour, Statistics Iceland, Central Bank of Iceland

<sup>5.</sup> The higher wage ratio at the end of the last decade reflects faster growth in real wages than in productivity over the period. When the entire period since 1973 is examined it should be borne in mind that own wages of the self-employed are recorded as profits, not as wages. The trend for the number of self-employed (e.g. with fewer farmers and more self-employed skilled tradesmen) therefore affects the wage ratio. Shifts in the weights of individual sectors (e.g. the increased share of services, including public services, where the wage ratio is relatively high) has also affected the wage ratio. This makes it imprudent to draw conclusions about wage ratio developments over a long period.

<sup>6.</sup> Statistics Iceland's labour market survey is confined to individuals in the National Register. Temporary foreign labour is therefore only recorded late, if at all, in these surveys.

<sup>7.</sup> See p. 99 for a discussion of the effects of increased competition in the product market.

Chart 4

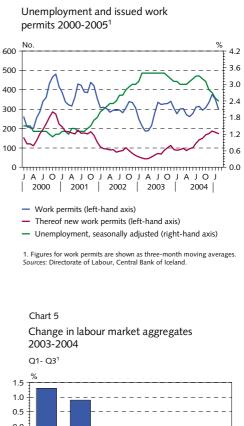
One form that the flexibility of the Icelandic labour market has taken is that migration to and from Iceland has broadly matched demand for labour.<sup>8</sup> This feature does not appear to have changed noticeably in recent times. Migration of foreign nationals has also kept pace with the economic cycle.<sup>9</sup> However, the last upswing witnessed an unprecedented increase in the number of foreign nationals. Their number also showed a marked increase in 2002 and 2003, at the same time as the unemployment rate went up.

Issuance of new work permits declined somewhat in 2002 and until February 2003, in step with higher unemployment, but began to rise again at roughly the peak of seasonally adjusted unemployment. Labour imports declined somewhat in fish processing and services, but was nonetheless significant. The subsequent increase in new work permits in mid-2003 is only partly explained by labour requirements for construction of the Kárahnjúkar hydropower station in east Iceland. Kárahnjúkar accounted for 12% of work permits in 2003 and just under one-quarter in 2004. Labour imports therefore appear to have become a factor in the business operating environment.

# 1.3. Labour supply underestimated in the labour survey but overestimated in PAYE data

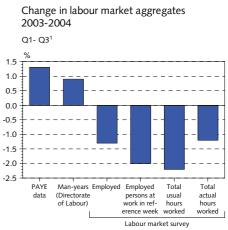
Statistics Iceland's labour surveys and PAYE registers give different pictures of changes in labour supply between 2003 and 2004, as Chart 5 shows. It is clear that foreign workers who are only staying temporarily in Iceland are reported late, if at all, in Statistics Iceland's surveys, but should by and large appear in PAYE data. However, the PAYE register includes employed persons on parental leave, who are not classified as part of the labour force in the Statistics Iceland survey. Some discrepancy between these two figures is therefore normal. All the same, it is surprising how contradictory the indications of changes in the labour supply are between the labour survey and PAYE data.

If the Statistics Iceland survey is underestimated due to increased labour imports, it can be assumed that labour supply in 2004 was greater than the figures suggest. On the other hand, the increase in the number of employed could be overestimated in PAYE data because of increased parental leave.<sup>10</sup> If anecdotal evidence from the labour unions about the number of unregistered foreign workers is correct, labour supply is underestimated both in the Statistics Iceland survey and PAYE data.



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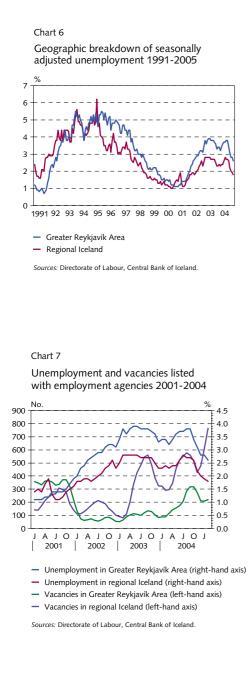


<sup>1.</sup> PAYE data for Q4/2004 not available.

<sup>8.</sup> Cyclical migration patterns have been assessed for the period 1962-1997 (Gudmundsson et al., 2000).

 $<sup>{\</sup>it 9.}\,$  Not all foreign nationals move to Iceland to work, but the overwhelming majority do.

<sup>10.</sup> According to Statistics Iceland's labour market survey.





Correlation between long-term unemployment and total unemployment % of labour force



Sources: Directorate of Labour, Statistics Iceland, Central Bank of Iceland

### 2. More vacancies – more unemployment

#### 2.1. What is new about unemployment?

The recent pattern of unemployment has differed from the downturn in the early 1990s. The last contraction was short and unemployment remained at a considerably lower level. Unemployment was much higher in the Greater Reykjavík Area than in regional Iceland from the outset, for both males and females, unlike the situation in the early 1990s when joblessness was initially greater in the regions.<sup>11</sup>

Lower regional unemployment today is primarily because the downturn in 2001-2002 was caused by a depreciation of the króna and subsequent adjustment of demand, while historically most contractions, including the one in the 1990s, have been catalysed by a depression in fisheries, resulting in more joblessness in regional Iceland. Job creation programmes launched in 2003 may also have had more impact on regional male employment. Statistics Iceland's surveys suggest furthermore that women in regional Iceland have simply withdrawn from the labour market. Urban drift during the upswing may have contributed to higher unemployment in and around Reykjavík as well. One of the most surprising features of the pattern, however, is that unemployment increased in 2003 at the same time as vacancies listed with employment agencies doubled.<sup>12</sup>

#### 2.2. Increase in long-term unemployment

Long-term unemployment also increased in 2003.<sup>13</sup> Chart 8 shows the correlation between long-term unemployment and total unemployment since 1990. Like total unemployment, long-term unemployment grew over the period 1991-95, then remained stagnant for the first two years after general joblessness began to decline. There was a similar correlation between long-term unemployment and total unemployment in 2001 and 2002. In 2003, longterm unemployment appears to have grown faster than at the end of the previous downswing. It also continued to grow in 2004 after total unemployment had begun to fall again, unlike the pattern in 1996.

Growth in both total and long-term unemployment concomitant with a substantial increase in vacancies indicates an increased mismatch between demand and supply in the labour market in 2003 and prompts the question whether the labour market has become less flexible.

#### 2.3. Is the Icelandic labour market becoming less flexible?

American economist R. Solow (1998) has proposed using the Beveridge curve as a summary indicator of changes in labour market flexibility. The Beveridge curve shows how the relation between demand (vacancies – the vertical axis) and supply (unemployment –

<sup>11.</sup> The rise in regional unemployment at the beginning of 2001 was the result of input shortages due to a fishermen's strike.

<sup>12.</sup> Even if vacancies in east Iceland are excluded, the increase in 2003 was more than 60%.

<sup>13.</sup> Long-term unemployed are defined as those who have been unemployed for more than six months.

the horizontal axis) in the labour market develops over time. In equilibrium, unemployment and vacancies move in opposite directions across the cycle along a negatively sloped curve (often called the u/v line or NW-SE line) in step with changes in labour demand. An outward (NE) shift in the curve implies a change affecting the match between labour supply and demand. The curve may shift due to changes in either labour demand or supply, or both at once. A shift to the right is probably caused by a change which makes labour market institutions more rigid in responding to shocks. New equilibrium between demand and supply (a new NW-SE line) is generally soon established, but if the shift is caused by greater rigidity, it will occur at a higher level of unemployment (equilibrium unemployment).

#### 2.4. The Icelandic Beveridge curve

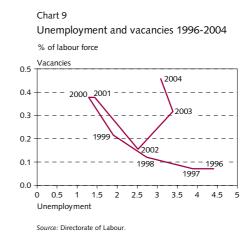
Chart 9 shows how unemployment and vacancies in the period 1996-2002 tracked the cycle as expected.<sup>14</sup> In 2003, however, unemployment and vacancies increased simultaneously, shifting the curve to the right. Last year the correlation between unemployment and vacancies apparently realigned with the cyclical trend: vacancies increased and unemployment declined, but at a higher rate of unemployment. The shift in the curve could indicate a greater mismatch between labour supply and demand, prompting us to look at changes in labour market institutions for a possible answer.

#### 2.5. Labour market institutions

Two institutions, the unemployment benefit system and labour unions, are considered to be the main labour market determinants of economic performance (Nickell and Layard, 1999). It is precisely these institutions that the OECD has pinpointed for reform in Iceland in order to enhance labour market flexibility. The OECD probably considers that Iceland has made little progress in this field, because its proposals this year – to shorten the benefits period and decentralise wage bargaining – are essentially the same as in its job study of 1994.<sup>15</sup> It has also sometimes recommended reducing the nondaylight hours premium (e.g. in 1998). These recommendations were not included in the latest OECD report, after the social partners have taken steps towards reducing these costs in recent wage agreements.

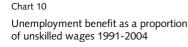
#### 2.5.1. Unemployment benefits

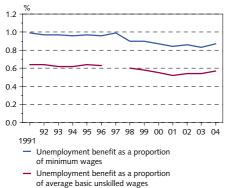
The unemployment benefit system can act as a disincentive to taking available jobs and thereby increase unemployment, especially longterm unemployment. Besides the nominal benefit sum, important factors may be the scope and length of eligibility and implementation



<sup>14.</sup> The data used here are from the Directorate of Labour, compiled from employment agencies (from 1996). No reliable data are available for vacancies in Iceland before that time. Not all vacancies are advertised with agencies, but the relationship between agency vacancies and unemployment should nonetheless serve as a good gauge of labour market matching.

<sup>15.</sup> As mentioned later, the length of the eligibility period was changed in 1997, but the OECD considers this insufficient and in its latest report still recommends shortening the benefit period.





1. Break in data series due to change in Institute of Labour Market Research survey methodology in 1997. Sources: Confederation of Industry, Directorate of Labour, Institute of Labour Market Research. of rules. The question is whether any of the recent reforms to the benefit system have discouraged the unemployed from filling vacancies.

#### 2.5.2. Length and eligibility

Two changes have been made to the unemployment benefit system over the past decade that are relevant in this respect. In 1993, eligibility was extended to the self-employed and non-unionised labour.<sup>16</sup> In 1997 the length of entitlement was shortened to five years, after being in effect unlimited.<sup>17</sup> The shortening of the benefit period hardly explains the increase in long-term unemployment. If anything it should reduce it. <sup>18</sup> A reform of eligibility made ten years ago is also unlikely to have an effect now, but could have had an impact on long-term unemployment in the downswing at the beginning of the last decade.

#### 2.5.3. Benefit amounts

Generous benefits may influence whether the unemployed accept work as soon as it is offered, or whether they opt to wait for a better offer or even remain out of work longer. As Chart 10 shows, unemployment benefits have been steadily falling as a proportion of minimum wages since 1997.<sup>19</sup> Unemployment benefit has not kept pace with the rise in minimum wages since indexation was discontinued in 1998; a substantial increase in the lowest wage rates over and above general wage rises was agreed in settlements made in 1997 and 2000.<sup>20,21</sup> Benefits were equivalent to 97% of minimum wages on average over the period 1991-1997, but are now 87%. Unemployment benefits also decreased as a proportion of the average basic unskilled wage, but not so sharply – from 63% to 56%. Thus the interaction of wages and benefits in recent years seems unlikely to give the unemployed more disincentive to accept work now than in the last downswing.

Nor is there any indication that benefit rules have been implemented differently recently. Reforms to the unemployment benefit system therefore do not appear to explain the mismatch between supply and demand in the labour market. The question remains whether a change in union influence recently could have reduced wage flexibility, which will be examined in the following section.

<sup>16.</sup> Previously, the right to unemployment benefit was confined to members of labour unions.

<sup>17.</sup> Benefits were paid for 52 weeks, then suspended for 16 weeks after which the unemployed person became eligible for them again. Recipients undergoing training or taking part in labour market action programmes, on the other hand, remained eligible for benefits for as long as they were unemployed.

<sup>18.</sup> OECD still considers that the benefit period needs to be shortened.

<sup>19.</sup> The gap between benefits and wages in the first and second halves of the period is actually even greater, because until 1996 a one-off supplement was paid to those who had been unemployed for 87 days.

<sup>20.</sup> The reference used was wages paid to unskilled fish processing workers after five years' employment.

<sup>21.</sup> The rise agreed specially for lowest wages in the 1997 settlements was effective from January 1, 1998.

# 3. Little wage drift - labour shortages

Wage drift has been unexpectedly modest in sectors where excess demand for labour has formed or been building up. Does unemployment in other sectors generate wage pressures, or are there other explanations?

#### 3.1. Competition in the product market and labour market

Structural flaws in the labour market are a time-honoured topic of discussion among economists.<sup>22</sup> For example, the disparity in economic performance between Europe and the US over the past few decades has been explained by structural flaws in the European labour market.<sup>23</sup> For most of the time the focus was on the impact of different labour market institutions on unemployment and GDP growth. Towards the end of the 1990s, the interaction of structural flaws in the labour and product markets came increasingly under scrutiny. Changes in the product market were even regarded as a precondition for successful structural reforms in the labour market. The findings of this research are aptly summed up as follows in Nicoletti et al. (2001):

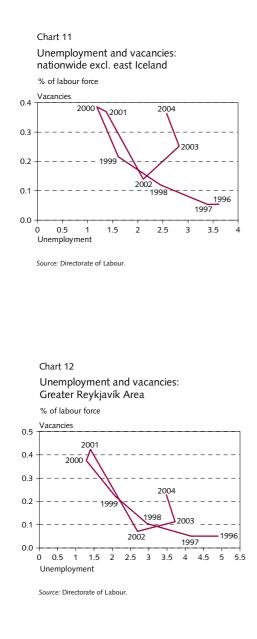
"Regulatory reforms aimed at lowering trade barriers, the stringency of state control and firms' entry cost can stimulate output and employment by raising the elasticity of product demand, reducing thereby price mark-ups and lessening labour-market segmentation. Progress in reforming such regulation may have boosted employment rates by between 1/2 and 21/2 percentage points across OECD countries over the past two decades. Clearly, an increase in product market competition puts downward pressures on wages in the short run, especially in highly protected sectors where the scope for rentseeking behaviour by workers is largest. Indeed, one of the reasons why reforming labour market policies has proved difficult in many countries is the associated rent enjoyed by specific groups that are well positioned to resist (Blancard and Givazzi, 2001). In the longer run, however, stronger competition tends to boost real wages via its favourable impact on productivity."<sup>24</sup>

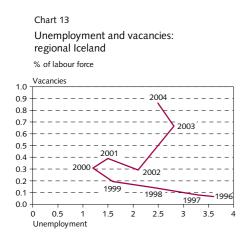
Fundamental changes have taken place in the Icelandic economy over the past decade. Competition has increased, businesses have been privatised and the Icelandic economy, including the labour market, has become more open. Indeed, the OECD's latest country report on Iceland found that the economic improvement since the middle of the last decade is primarily driven by increased competition in the product market. The question is whether this stronger competition has had an impact on wage formation.

<sup>22.</sup> Including various reports by the OECD, EU and IMF.

<sup>23.</sup> See e.g. Chapter VII, Recent labour-market performance and structural reforms, in OECD Economic Outlook, No. 67.

<sup>24.</sup> OECD 2003, 12-13.





Source: Directorate of Labour.

In Iceland, competition has largely taken the twin forms of price competition between imports and domestic production, and competition by exports in foreign markets. Direct foreign entrants in the domestic market have provided little competition. The manufacturing sector and international transport sectors have faced considerable competition, but it has been less marked elsewhere. Due to the small size of the market, the only source of competition is often directly from abroad.<sup>25</sup> A study by Jóhannesson and Jónsson (2002) found that the level of competition is important for wage increases. During the downswing in the last decade, wages rose by much less in the traded goods sector than in protected sectors and nominal decreases were also greater there for both basic wages and average hourly rates.

Increased competition could therefore explain the low degree of wage drift, even in sectors that have experienced excess demand for labour recently. Construction and contracting is a particularly interesting sector – competition has toughened among domestic companies and direct foreign competition has also been present in tenders for major projects.<sup>26</sup> There has been considerable excess demand for craftsmen and other skilled labour for projects for the aluminium and power sectors and other construction work. The same happened in the last upswing. Companies in these sectors appear to be increasingly importing labour to meet temporary peaks in activity instead of bidding to win employees from rival firms.

#### **3.2.** More cooperation between the social partners

It has been pointed out that increased competition in the labour market can contribute to more efficient wage settlements between employers and unions, since both sides benefit from bargaining on the basis of what the company is able to pay (Nickell and Layard, 1999). The outcome of recent private sector wage settlements indicates that competition has had a positive effect on these labour market institutions. In the last national wage settlements, for example, more flexible working hours and shift arrangements were agreed which ought to enable reductions in wage costs, improve rationalisation and boost productivity, if companies make use of them.

#### 3.3. Advertised vacancies

Neither reforms to the benefit system nor relations between the social partners appear to have reduced labour market flexibility. On the contrary, it would seem to have increased. So what caused the shift in the Beveridge curve in 2003?

<sup>25.</sup> See e.g. OECD Economic Surveys, Iceland, 1995, 1997, 1998 and 2005.

<sup>26.</sup> Involvement by foreign contractors is not new. For instance, Technopromexport was commissioned to lay the transmission line from Búrfell power station for Landsvirkjun (the National Power Company) in 1998.

<sup>27.</sup> Due to the lack of data on the share of vacancies in east Iceland connected with the Kárahnjúkar project, an attempt was made to eliminate its impact. It was assumed that the increase in vacancies in east Iceland followed the general nationwide pattern and the regional pattern. The correlation between vacancies and unemployment excluding east Iceland was also examined and is shown in Chart 11.

Vacancies increased noticeably more in regional Iceland than in the Greater Reykjavík Area in 2003. One explanation may be increased imports of labour in connection with the Kárahnjúkar power station project, for which vacancies were first advertised around mid-2003. As Chart 11 shows, however, developments in east Iceland have little effect on the overall picture.<sup>27</sup> Growth in regional vacancies is therefore not only connected with power station construction because they increase in spring every year (see Chart 7).

The Beveridge curve for the respective regions shows a shift in 2003, but of varying intensity. Vacancies increased most sharply in the northwest, northeast and West Fjords. According to information from local employment agencies, part of the explanation for this surge could lie in a trend among employers to advertise for recruits some time before they need to take them on. Jobs can therefore be on the agencies' books for several months. Vacancies may have been advertised longer in advance in 2003 than before and been registered for longer, since the rate of unemployment was relatively high then and labour unions were more likely to reject applications for work permits if the formalities were not strictly observed.<sup>28</sup>

#### 3.4. Skills and mismatching

It has been pointed out that the mismatch between demand and supply in the Icelandic labour market has increased (Mósesdóttir, 2004). The labour force consists of a large group of unskilled workers and a smaller group with high levels of education and training.

An examination of unemployment by occupation since 2000 shows a marked increase in the share of management, professionals and skilled workers. This group accounted for just under 13% of the unemployed in 2001 but its share rose to 17% in 2002 and 2003 and to 19% in 2004. Interestingly, this was the only group for which unemployment did not fall in 2004. A similar pattern can be seen from educational background. The share of university graduates among the unemployed increased from  $7\frac{1}{2}$ % in 2001 to almost 10% in 2004. Graduates are also the only group of unemployed whose number increased in 2004.

Jobs and skills therefore appear to have been mismatched recently, as shown by rising graduate unemployment, especially in 2004, at the same time as unemployment dropped among other groups. Nonetheless, unemployment is still highest among unskilled workers – Icelandic manufacturers have transferred some of their activities abroad in recent years. Labour imports are also a clear sign of an insufficient pool of domestic labour with the skills that industry requires.

<sup>28.</sup> We should therefore be wary of reading economic indicators in the same way when conditions alter as rapidly as in this case. Figures for vacancies today may present a different picture from several years ago when a vacancy registered with an agency meant that staff were needed immediately, not several months later. We also see that official statistics on labour use do not tell the whole story. Data are needed on the respective shares of the domestic and imported labour force, because the open labour market has become firmly established.

# 4. Conclusions

Stronger competition in the product market is directly or indirectly the key to the paradoxical developments in the labour market recently. Part of the explanation for falling labour use in spite of sizeable GDP growth most likely lies in structural changes in the Icelandic economy. Fiercer competition in the product market has changed the labour market environment. Employers need to keep costs down since they are unable to pass them on to prices as much as they have been able to in the past. They prefer labour imports to wage bidding against other companies.

But more factors have been at work. Economic overheating at the end of the last upswing, which included a high wage ratio, acted as an incentive for rationalisation and has reduced domestic labour use. Changes in recent wage settlements should also have contributed to improved labour utilisation. Moreover, the introduction of information technology should have yielded economies and cut back on labour use in Iceland, as it has done elsewhere. However, labour use has probably not fallen by as much as official data would suggest, because imported labour is not reflected clearly enough in statistics.

Nothing suggests that changes in the unemployment benefit system or relations between the social partners have exacerbated labour market rigidities in recent years. The trend appears rather to have been towards greater flexibility.

Other factors explain the mismatch between supply and demand in the labour market, such as the educational composition of the labour force and longer notice in advertisements of vacancies. Changes in the registration of vacancies ought to cause the relationship between unemployment and job supply to move closer to the position before 2003, and in the long run the mismatch between demand and labour force skills ought to diminish.

So far, labour imports have prevented wage drift in sectors where labour is in short supply. If employers in general apply the principle of avoiding wage bidding but import labour instead to cover temporary demand in excess of domestic supply, this will reduce the risk that wage costs will spiral, as happened during the previous upswing. Tighter and more credible monetary policy after Iceland moved on to an inflation target may also cause businesses – even in sectors of limited competition – to realise that they can no longer compete for labour through wage bidding, then pass the extra wage costs on to prices and rely on a devaluation to level out their competitive playing field with abroad. The two options they face will be to rationalise operations or import labour. References:

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