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Evidence on Tightness in the Irish Labour Market

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1. Introduction

Over recent months, increasing attention has been focused on the extent to which the current phase of high economic growth in Ireland can be sustained. Concerns that the economy is in danger of overheating have been raised on almost a daily basis. Certainly the substantial rise in the price of accommodation, and with consumer price inflation expected to average 5.3 per cent this year¹, coupled with quite chronic traffic congestion in urban areas, would all point towards excess demand pressures and supply side shortages. In addition to these symptoms of an overheating economy, the market for labour is also showing signs of tightening with the unemployment rate in the second quarter of the year down to 4.3 per cent, indicating that the economy could be rapidly converging to a full employment situation.

The objective of this paper is to examine a variety of evidence on labour market tightening in Ireland. The paper was motivated by the need to bring together a variety of sources on how constrained the Irish labour market is becoming partly because of the mounting anecdotal evidence. The fact for example that firms and sectors (e.g. building and construction), are recruiting abroad indicates that the domestic supply of labour has become scarce. Furthermore recruitment fairs are being held in Europe and in North America in order to encourage people to migrate to Ireland so as to ease pressures on the labour supply front. The degree of tightness in the labour market is also highly visible in most urban areas, simply by the number of help wanted signs in shop windows, and by measures introduced by some large retailers to recruit older workers. The paper is structured as follow, section two reviews the performance of the labour market in recent years. Section three looks at the IBEC-ESRI monthly survey of industry, while section four examines other additional sources of information on a tightening labour market. Section five discusses the relationship between unemployment an vacancy rates and section six concludes.

2. Labour Market Supply and Demand

Before examining evidence on the degree of tightening in the labour market, it is appropriate to begin by briefly looking at labour supply and demand.

Labour Supply

One of the driving forces behind the above average rates of economic growth in Ireland has been the substantial growth in the supply of labour, driven by the natural increase in those of working age, rises in participation rates and educational attainment, and most recently by net

¹ D. McCoy, D. Duffy, and D. Smyth, 2000. *Quarterly Economic Commentary, September 2000*, Dublin: The Economic and Social Research Institute.

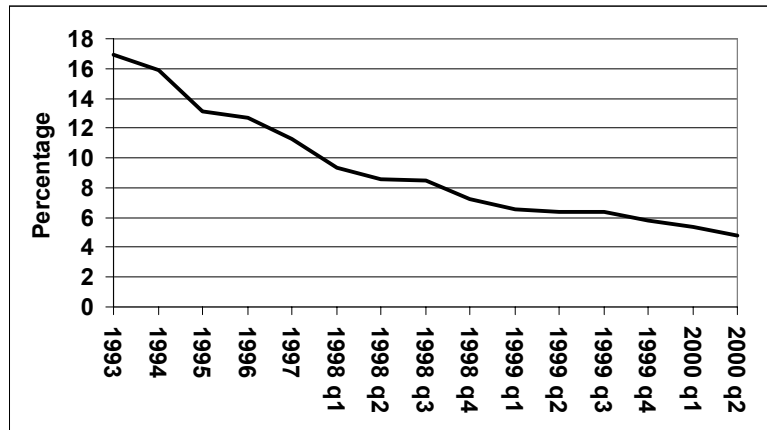
immigration. In the *Medium-Term Review 1999-2005 (MTR)*, by Duffy et al (1999), it was estimated that the labour force grew by approximately 3 per cent per annum on average between 1995 and 2000, which is exceptional by international standards. Furthermore, the new entrants to the labour market were on average, more skilled than those leaving the labour force, thus facilitating higher rates of productivity and keeping wages at competitive levels.

In the *Review*, the growth in the labour force is forecast to slow to 2 per cent per annum on average between 2000 and 2005 and to 1.5 per cent thereafter. This slowdown will be mainly driven by a decline in the number of young adults entering the labour market and by smaller increases in rates of labour force participation. In addition, the pool of unemployed workers is greatly reduced as compared with the early 1990s. Numbers unemployed have fallen from 223,000 in 1993 to 74,900 in the second quarter of this year (see Quarterly National Household Survey (QNHS), Central Statistics Office (CSO), September 2000). Furthermore, net immigration is not expected to remain at the high levels attained in recent years as the current high costs of accommodation act to deter potential migrants, and as the stock of Irish persons abroad declines.

A further piece of evidence pointing towards imminent pressures on the supply side is provided by the CSO. In the QNHS information is provided on indicators of potential labour supply, such as the number of unemployed persons and discouraged workers as a percentage of the labour force, inclusive of discouraged workers (see table 11 in the QNHS).² In 1993, approximately 17 per cent of the labour force consisted of unemployed and discouraged workers. By the fourth quarter of 1997, this had fallen to 11.1 per cent. Since then there has been an even more marked decline, with the number of unemployed persons and discouraged workers halving to reach just 4.8 per cent of the labour force by the second quarter of this year (see figure 1). This indicates that those with a marginal attachment to the labour force have increasingly been drawn into the labour market over the last few years.

² Discouraged workers are defined by the CSO as those “who are not looking for work as they believe they are not qualified or that no work is available” (see QNHS, September 2000, page 14).

**Figure 1: Potential Labour Supply:
Unemployed and Discouraged Workers as a Percentage of
the Labour Force Including Discouraged Workers**



Labour Demand

The demand for labour is a derived demand, in the sense that labour is hired for what it can produce, resulting from firms' efforts to maximise profits. Labour will be hired up to the point where the additional revenue attained from the last person employed (marginal revenue) is equated with the additional cost incurred from employing that person (wage rate). The marginal revenue obtained is dependent on the price received for the product/service and the productivity of labour³. In Ireland, many firms in the tradable sector cannot influence the price of their product and hence are price takers. Thus, the productivity and price of labour is all important. Over the course of the 1990s in Ireland, the profitability from hiring labour was exceptionally high for two reasons. Firstly, the increase in the skill levels of the workforce combined with a shift towards high productivity technologies largely fuelled by increased levels of foreign direct investment has meant that the demand for skilled labour has been high (see *MTR op. cit.*). Secondly, labour costs in Ireland were well below levels in other EU countries such as the UK, Germany and France. Consequently, the demand for labour remained buoyant as firms profited from relatively cheap and highly productive labour.

In the *MTR*, strong output growth and almost full employment was forecast over the medium-term. In particular, the marketed services sector⁴, which is known to be a highly labour intensive sector, is forecast to grow rapidly with output growth on average of 5.8 per cent per annum expected between 2000 and 2005. By 2005, it is envisaged

³ In microeconomic theory, firms hire inputs up to the point where the Marginal Revenue Product (MRP) of the factor is equated with its Marginal Cost (MC). The MRP can be derived by multiplying the Marginal Physical Product, that is the change in output as a result of hiring one more unit, by the extra revenue attained from that unit. The MC in the case of labour is the wage rate.

⁴ The market service sector includes, the distribution, transport and communications and other market services. See the Duffy et al (1999), Chapter 5, for a fuller explanation.

that there will be 782,000 persons employed in services as compared with 700,000 this year, a rise of 11.7 per cent. Employment in industry is expected to rise less rapidly by 15,000 persons (or by 3.2 per cent) over the same period.

In summary, aggregate demand levels in the economy and the demand for labour in particular, are expected to remain strong over the medium-term. In marked contrast, the supply of labour is forecast to become less abundant and it is envisaged that there will be far less scope for increases in the size of the labour force in the future than has been the case in the past. It is timely therefore, to determine the extent to which shortages of labour are emerging.

3. The IBEC/ESRI Monthly Industrial Survey

The IBEC/ESRI industrial survey is carried out in order to gain an up to the minute insight into the performance of manufacturing in Ireland, ahead of official statistics. The survey is undertaken and published on a monthly basis, using a statistically representative sample of manufacturing firms. The same firms are surveyed each month and are asked a series of questions relating to a number of key areas such as constraints in production, employment, stocks, selling prices, etc. as well as questions on future expectations. The questions posed are predominantly of a qualitative nature, with answers typically in the form of “higher than”, “lower than”, or “the same as”, the previous month. Furthermore, firms’ expectations are sought in certain key areas like employment, sales and selling prices. Responses are suitably weighted in order to ensure that the relative size and importance of each firm is allowed for, and then firms are aggregated according to industry type. Nearly all responses are weighted using turnover data, which the firms supply, the exceptions are exports and employment, which are weighted by exports and employment respectively. Finally, the process of aggregating industries into the three sectors (Consumer, Intermediate and Capital) and into overall manufacturing is conducted using national weights from published sources such as the Census of Industrial Production (for further information see Conniffe (1985), Scott (1985), and Kearney (1991)).

By July of this year, there were 207 firms in the survey as compared with 299 firms in July 1994, which indicates a high rate of attrition. The small size of the survey is a source of difficulty as is the fact that little account is taken of new firms entering the manufacturing sector. Such limitations necessitate a degree of caution and prudence in any analysis.

Of particular interest in the context of the labour market is the question on production constraints. Firms are asked whether production is being constrained, and if so, for what reason, with insufficient labour, skilled and unskilled, given as one possible cause⁵. The actual question takes the form:

⁵ Firms may give answers with more than one cause but most limit their responses to a single category.

Is Production by your firm being held up at present? Yes/No.

Causes Responsible:

(a) Demand: Insufficient Demand.

*(b) Supply: Insufficient Capacity;
Insufficient Skilled Labour;
Insufficient Unskilled Labour;
Insufficient Raw Material Supply;
Insufficient Cash or Credit;
Any Other Reason.*

Figure 2 plots data for the fifteen year horizon up to July 2000, on the percentage of firms reporting that production is being constrained as a result of insufficient skilled and unskilled labour. The data are presented in twelve month moving average form⁶ in order to remove seasonal effects, as the questionnaire does not require firms to adjust for seasonality in their responses

The rise or spike in skilled labour shortages in and around the late 1980s/early 1990s can be partly accounted for by the pick up in economic activity after the recession years of the mid-1980s. For example, total employment grew very strongly in 1990 at approximately 4 per cent with the unemployment rate falling. In addition, in the early 1990s the labour force was growing at 1.5 per cent annually, as compared with nearly 3 per cent per annum between 1995 and 2000.

From the Figure, it is apparent that both skilled and unskilled labour shortages have become more and more binding since 1997. The fluctuation in the skilled labour shortages series is quite interesting and in particular the fact that constraints actually fell over some of the 1998/1999 period, arguably the result of quite high levels of immigration. Nevertheless, over the last year the percentage of firms reporting skilled labour shortages has risen again.

Perhaps the most noticeable feature in the Figure, is the rise since 1997 in the percentage of firms reporting unskilled labour shortages, something which was effectively non-existent prior to this date. Finally, the fact that both series have continued to climb upwards in recent months indicates that things have not yet stabilised with reported shortages on the increase.

⁶ The twelve month moving averages shown in the Figures are not centred.

Figure 2: Firms Reporting Labour Shortages: Total Manufacturing Twelve Month Moving Averages

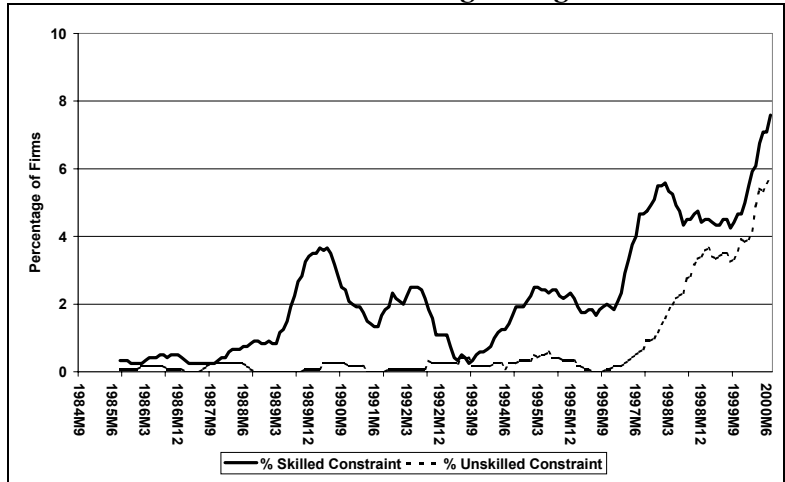
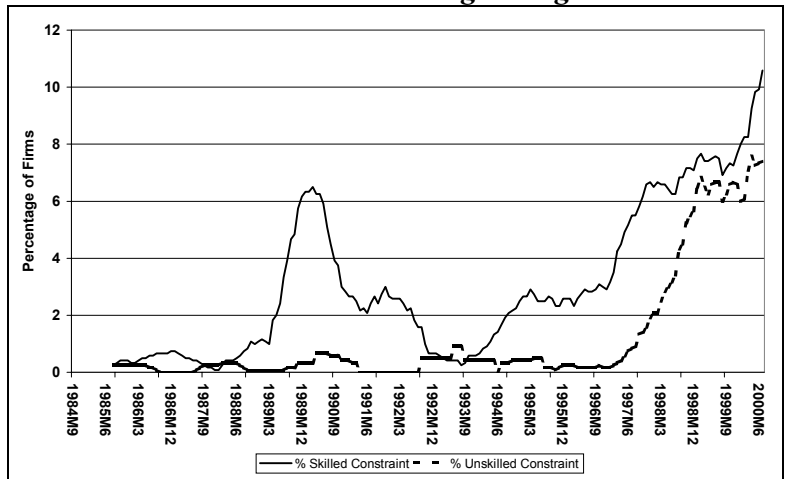


Figure 3 plots skilled and unskilled labour shortages for the Consumer goods sector⁷, a sector that includes many typically indigenous firms such as those in clothing and footwear and food industries. Over most of the period since 1984, reported shortages of skilled labour have arisen, most notably in the late 1980s and early 1990s. Since 1997 however, shortages of skilled labour have increased and particularly so, over the last year. Furthermore there has been quite a considerable escalation in the number of firms reporting a lack of unskilled labour since 1997.

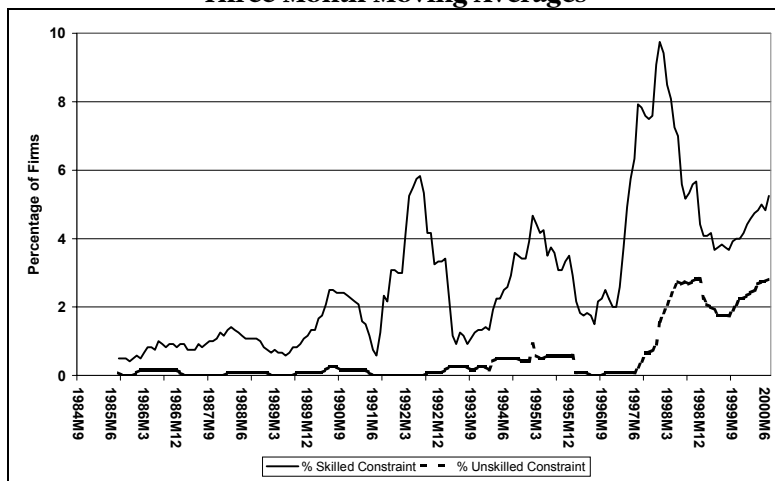
Figure 3: Firms Reporting Labour Shortages: Consumer Goods Twelve Month Moving Averages



⁷ The Consumer goods sector includes the following industries: Clothing Leather and Footwear, Wooden Furniture, Printing, Drink and Tobacco, Food, Ceramics and a number of other smaller industries.

The Capital goods sector⁸, has in the past shown the greatest degree of volatility in reported skilled labour shortages, for example, in 1991/1992 and in 1997 reported shortages of skilled labour reached quite high levels. Over the last couple of years skilled labour shortages have fluctuated widely as can be seen from Figure 4. In contrast, shortages of unskilled labour while they have emerged, do not appear to be much of a problem in the sector.

**Figure 4: Firms Reporting Labour Shortages: Capital Goods
Three Month Moving Averages**

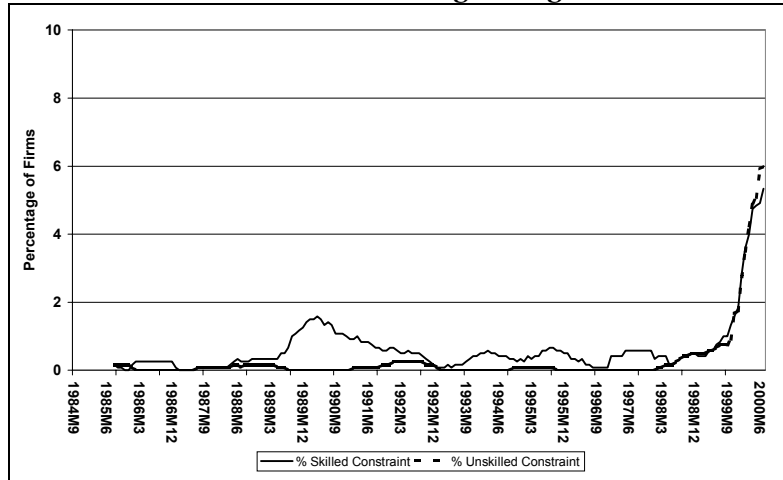


The picture emerging from the Intermediate goods sector⁹ until quite recently was different to that in the Consumer and Capital goods sectors, with no significant shortages of labour being reported. In recent months however, there was a large rise in the number of firms reporting difficulties in production as a result of skilled and unskilled shortages, as can be seen from figure 5.

⁸ The Capital goods sector includes the following industries: Manufacture of Metal Articles, Mechanical Equipment, Electrical Equipment, Commercial Vehicles, Shipbuilding and Marine Engineering, Precision Instruments and Office and Data Processing Equipment industries.

⁹ The Intermediate goods sector includes the following industries: Textiles, Wood, paper, Plastics, Oil refining, Processing of Metals, Building Materials, Basic Chemicals, Industrial and Agricultural Chemicals, Man Made Fibres and Rubber.

**Figure 5: Firms Reporting Labour Shortages: Intermediate Goods
Three Month Moving Averages**



It is evident that there are bottlenecks emerging in the labour market most notably in the Consumer goods sector which includes many indigenous industries.

The emergence of unskilled labour shortages is quite noticeable, with a fairly consistent pattern in the numbers reporting shortages over the last year. The Intermediate goods sector however seems to be the least affected by such shortages which is unsurprising as this sector includes many high-tech industries such as those in chemicals and in metals and engineering, typically the industries that have performed best in Ireland over the last decade.

One final point that needs to be mentioned is the possibility that reported shortages in the survey could be if anything understated. This is because the same firms tend to be surveyed each month, whereas newer firms, which often experience the greatest problems in recruiting labour, in contrast with more established companies, are somewhat underrepresented in the sample.

4. Additional Evidence on a Tightening Labour Market

In addition to the IBEC-ESRI survey, there are a number of other indicators that suggest that the Irish labour market is becoming increasingly tight. This section reviews recent evidence on vacancy and unemployment rates, earnings as well as trends in educational participation.

Vacancy Rates

A survey of approximately 1,100 firms in the private non-agricultural sector published by the ESRI (Williams & Hughes, 1999), found that one-sixth of firms reported problems in retaining staff, due to competition from other firms. Manufacturing appeared to be the sector worst affected by labour retention problems, with one third of firms affected. A significant number of firms, some 27 per cent, had

vacancies. The vacancy rate, which is the ratio of current vacancies to employment and vacancies, was measured at 6 per cent. When weighting is applied, this means that there are an estimated 53,700 unfilled jobs. Furthermore, all sectors of the economy were found to be encountering difficulties in recruitment.

When these numbers are compared with past surveys undertaken during the 1990s, the rise in vacancies is quite striking. For example in 1996, FAS measured the vacancy rate at 2 per cent. A national survey carried out in 1997, by both FAS and the ESRI found that the vacancy rate had risen to 5.1 per cent. Although these surveys are not directly comparable, it is possible for us to compare the manufacturing sector. The results from this revealed that the vacancy rate effectively trebled from 1.9 per cent in 1996, to 5.4 per cent in 1998.

Vacancy rates are highly sensitive to changes in employment. It is estimated that numbers employed increased by approximately 95,000 (or by 6.2 per cent) last year, and numbers employed are expected to grow by 68,000 this year¹⁰. In light of the ongoing strong output growth in the economy over the last year, it is not surprising that provisional figures from a vacancy survey for 1999 indicates a substantial rise in vacancy levels over 1998, as well as a continued rise in firms reporting problems with staff retention.

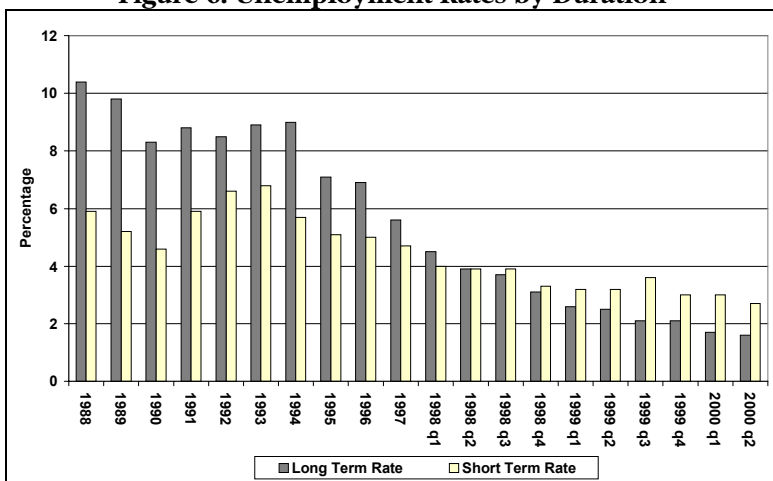
Unemployment Rates

In recent years, as unemployment has fallen, there has been a marked decline in long-term unemployment (those unemployed for at least one year¹¹). In contrast the decline in short-term unemployment (those unemployed for less than a year) has been less marked, as shown in figure 6. In the space of a decade from April 1988 to April 1997, the long-term unemployment rate (LTUR) effectively halved from 10.4 per cent to 5.6 per cent, with the short term rate (STUR) declining from 5.9 per cent to 4.7 per cent (see QNHS, September 2000). Over the last two years, the decline in the LTUR has been very striking, plummeting to just 1.6 per cent in the second quarter of this year. In contrast the STUR has declined much more slowly reaching 2.7 per cent in the second quarter. Consequently, the STUR is now greater than the LTUR something which would have been barely conceivable a decade ago, when the latter was double the former.

¹⁰ See McCoy, D., et al (2000), op. cit.

¹¹ Part of the decline in the LTUR can be explained by persons on government sponsored employment schemes.

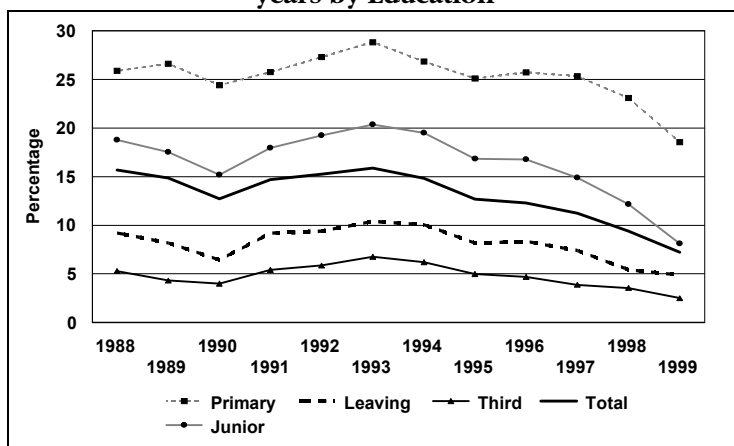
Figure 6: Unemployment Rates by Duration



The decline in the LTUR in effect constitutes a fall in structural unemployment. In the future there will be far less scope for decreases of the magnitude experienced recently in light of the fact that there were just 27,400 persons classified as long-term unemployed in the second quarter of this year, as compared with 41,600 one year previously and over 100,000 in 1996. The STUR can be viewed as predominantly frictional unemployment, as it has been fairly stable at about 3 per cent over the last couple of years.

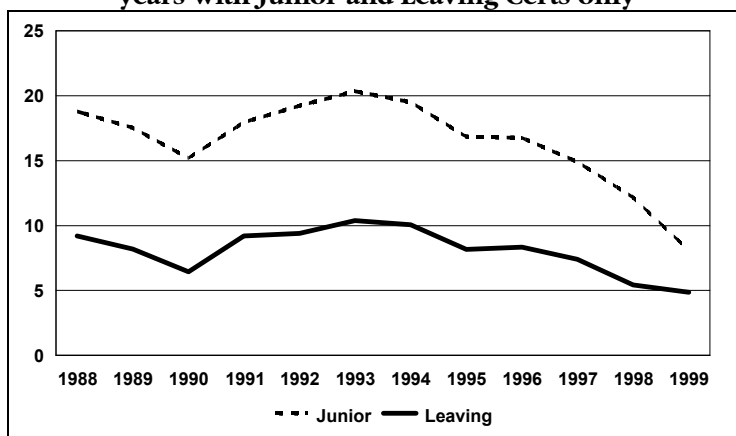
Figure 7 shows unemployment rates by educational attainment and it is evident that there has been a marked decline in unemployment rates for all classes of education since 1993. Interestingly though, over the last few years, the unemployment rate has fallen most steeply for the lesser skilled and unskilled, that is, those educated to a Junior certificate and Primary level only. In 1997, the unemployment rate for the latter was just over 25 per cent, whereas by 1999, it had fallen to 18.5 per cent. Similarly, the rate for those with Junior certs., fell from 15 per cent to 8 per cent over the same period.

Figure 7: Unemployment Rates for Population Aged 20 to 64 years by Education



In figure 8, the unemployment rates for those educated to a Junior and Leaving certificate level only are shown. Between 1988 and 1997, there was an average gap of 9 per cent between the two rates. Over the last couple of years however, the gap has narrowed significantly, and by 1999 the difference was just over 3 per cent, with the unemployment rate for Junior certs at 8.1 per cent compared to a rate of 4.9 per cent for Leaving certs.

Figure 8: Unemployment Rates for Population Aged 20 to 64 years with Junior and Leaving Certs only



In summary, the narrowing of the gap between skilled and unskilled unemployment rates indicates that the demand for unskilled labour has been very high in recent years, and presumably partly a consequence of a tightening labour market.

Earnings

As the economy approaches full employment with competition for scarce labour intensifying, wages have begun to rise quite rapidly. It is estimated that this year and next, average hourly earnings will rise on average by just under 8 per cent per annum in Ireland, more than twice as fast as the EU average¹². One sector which perhaps more than any other typifies the growth in the overall economy at present is building and construction, where labour demand exceeds supply, and where supply-side constraints are known to be a particular problem. Recent evidence on wage growth shows that hourly earnings increased by 37 per cent between 1994 and the third quarter of 1999¹³. In contrast, the deflator in building and construction increased by approximately 18 per cent over the same period.

Sexton et al. (1999) examined earnings trends across a broad range of occupations and sectors from 1987 to 1999. Their analysis highlighted the fact that wage inflation began to increase significantly from 1997

¹² See McCoy D., Duffy, D., and Smyth, D., 2000 *Quarterly Economic Commentary*, Dublin: The Economic and Social Research Institute.

¹³ Measured from 1994 to 1999 quarter three, based on CSO figures on average earnings in the Building and Construction sector.

onwards. In particular those employed in building and construction and in the public sector fared best, with the former receiving average pay increases between mid-1997 and 1999, of over 5 per cent per annum in real terms, and the latter receiving 3.5 per cent. This marked a considerable acceleration in rates of pay as compared with the past, between 1994 and 1997, real earnings for those employed in building rose by 3.5 per cent per annum on average and 1.7 per cent annually for those in the public sector.

Sexton et al., also examined average hourly earnings across twelve occupational categories from 1987 to 1997. These categories ranged from highly skilled occupations such as “Professional occupations and Managers” to lesser skilled ones such as “Personal service workers and Labourers”. Over the full sample period, the most highly skilled and qualified fared best in terms of income growth, with the semi-skilled lagging behind. It was noted however, that between 1994 and 1997 on average, the earnings of semi-skilled and unskilled workers increased more rapidly than those of their skilled counterparts. For example, personal service workers hourly earnings increased by approximately 7 per cent per annum on average in real terms over the latter period as compared with 1.1 per cent between 1987 and 1994.

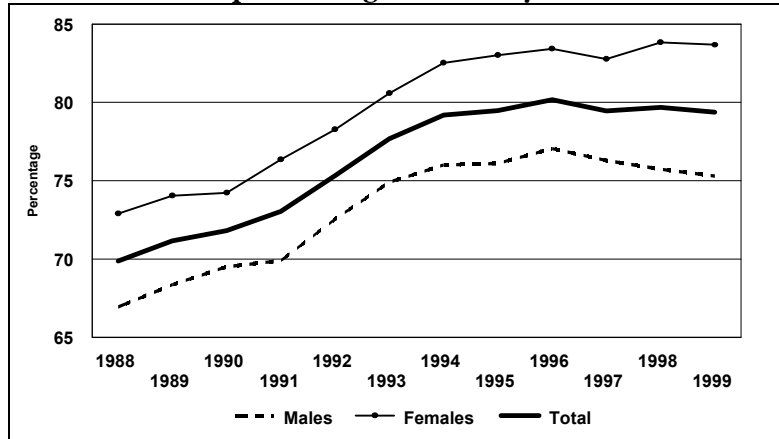
Educational Participation Rates

In recent months there has been quite a substantial rise in the numbers of young adults engaging in part-time employment, mainly in the services sector. This has been most noticeable for students. Latest information for the second quarter of 2000 reveals that student employment rose by a remarkable 21 per cent year on year, reaching 62,000, as compared with 51,200 one year previously (see QNHS, September 2000). This rise in student participation in the labour force is presumably partly being driven by a general shortage of labour and also by the rise in the costs of student accommodation in the major urban areas¹⁴.

With lesser skilled unemployment rates declining rapidly and with wage rates rising, younger people may have an increasing incentive to prematurely opt out of the education system because of the opportunity cost of remaining in school. Recent evidence compiled for 1998 and 1999 indicates that this is indeed occurring for young males as the percentage of males aged 15 to 19 years in education has fallen in successive years since 1996, as is shown in Figure 9. For females, in contrast, the percentage in education appears to have stabilised.

¹⁴ See “Box B: Contribution to Labour Force Growth” in *Quarterly Economic Commentary*, September 2000, *op. cit.*.

**Figure 9: Participation in Education:
Population Aged 15 to 19 years**



Source: CSO, Labour Force Survey, Micro-data.

5. Implications of Tighter Labour Market

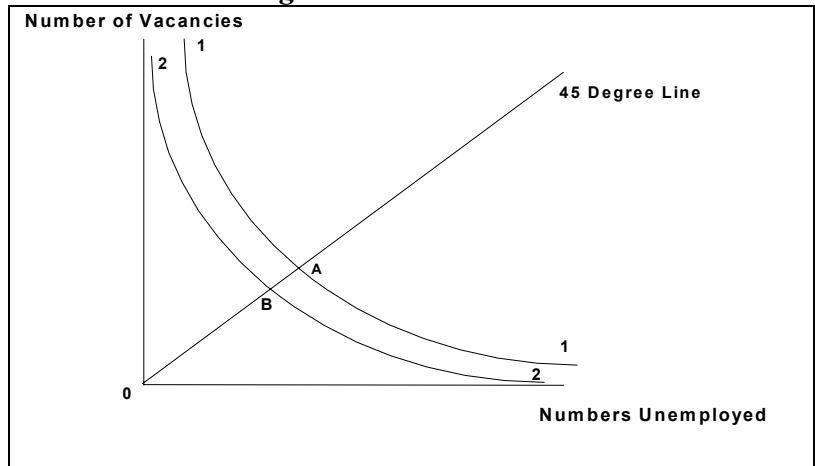
In this section we examine the relationship between unemployment and vacancies in order to interpret the tightening in the labour market.

Unemployment and Vacancies

As was shown above, the overall level of vacancies in the economy have been rising recently, and this has gathered momentum as unemployment has fallen. The relationship between unemployment and vacancy rates can be described by what is known as a 'U-V' curve as illustrated in Figure 10, with the numbers of unemployed persons (U) on the horizontal axis and with the number of vacancies (V) on the vertical axis. The curve slopes downwards from left to right indicating that as vacancies rise, unemployment falls, and vice versa. Furthermore, the curve never reaches either the horizontal or vertical axis, indicating that one cannot reach a situation of zero unemployment or zero vacancies, as there will always be some element of search/frictional unemployment in an economy, because most people take time to move from job to job. In addition, it is argued that as an economy nears full employment, more and more people will voluntarily leave jobs to take up better employment opportunities elsewhere, thus contributing towards frictional unemployment (see Sapsford 1981).

Over the last few years, the Irish economy has moved upwards along its U-V curve, as unemployment has fallen and vacancies have risen. The sharp fall in long-term unemployment over the recent past would indicate a better functioning labour market. This would cause the U-V curve to shift inwards towards the origin (from curve 1 to curve 2), at which point one would have a lower rate of unemployment for a given level of vacancies, or in other words a reduced level of structural unemployment.

Figure 10: The U-V Curve



From the U-V curve one can define full employment as the (static) point where the 45 degree line and the curve intersect (point A). At such a point, the number of vacancies would coincide with numbers unemployed, which would mean that all remaining unemployment would either be frictional, or else due to a mismatch of skills, rather than being due to an excess supply of labour (see Sapsford & Tzanntos, 1993).

In an Irish context, the economy may have already reached such an outcome, given that there were an estimated 53,700 vacancies in the private Non-Agricultural sector in 1998, and assuming that vacancies have risen since then in light of rapid ongoing economic growth (numbers employed rose by 95,600 in the last year). Thus, with unemployment falling very significantly since 1998 from 127,000, to approximately 81,500 by the first quarter of this year, it is not implausible that a full employment situation may have been reached. It is important however to exercise caution at this juncture, as such analysis is based on a static definition of full employment, and any change in the labour force (or supply and demand in general) would quickly move an economy away from such a point.

Nevertheless one of the most important features of a tighter labour market, is that the overall level of unemployment tends to become more and more dominated by frictional elements, as structural unemployment declines. This would seem to be the case in Ireland given the recent downward trends in long-term and short term unemployment rates, as demonstrated in figure 6.

6. Conclusions

The analysis and evidence above points towards a labour market that has become increasingly tight over the last few years as the economy has expanded. The rise in wages and the actual unemployment rate are the best indicators of the imbalance between demand and supply in the labour market, but as we have seen there are a number of other sources which would confirm supply-side shortages.

Firstly, the IBEC-ESRI monthly industrial survey, provides strong evidence of shortages of labour. The consistency in the numbers reporting shortages in general, and unskilled labour shortages in particular, is noteworthy.

The second source drawn upon, looked at vacancy levels in 1998 in the private Non-Agricultural sector. This revealed a considerable rise in vacancy levels and job turnover rates in all sectors, with manufacturing worst affected. Furthermore, latest estimates for 1999 from a revised survey, indicate that a further substantial rise in vacancies throughout the economy has taken place. Such evidence clearly demonstrates the difficulty that not just firms, but entire sectors are having in recruiting labour.

The third source pointing towards mounting pressures on the supply side was provided by evidence on earnings trends in the economy. Over the last couple of years, wages have begun to increase rapidly throughout the economy and most notably in the public sector, building and construction and elements of the financial services. Furthermore, unskilled wage rates, as Sexton *et al.* (1999) show, have picked up quite considerably in recent times.

Latest information on education trends indicates that the participation rate of young males in education has been declining since 1996. It would seem that young males are choosing to leave the education system because of the strong demand for (unskilled) labour and rising (unskilled) wage rates. Furthermore, data on unemployment rates by education also showed that the sharpest declines in rates of unemployment had occurred for the lesser skilled, that is, those educated to a Primary and Junior certificate level only. Furthermore, the rise in the number of students in part-time employment was noted again presumably the consequence of an increasing shortage of labour.

The changing nature of Irish unemployment as evidenced by the large decline in long-term unemployment was discussed. Frictional as opposed to more structural unemployment now probably accounts for a much bigger share of total unemployment. When one compares current unemployment numbers with vacancies, it could be argued from the U-V curve, that the economy has converged on a situation of full employment, something which would have been inconceivable a few years ago.

In light of the evidence listed above on a tightening labour market, it is unsurprising to see wages and salaries rising quite rapidly of late. Indeed, if one analyses shares of output going to capital and labour in Ireland over the last decade, the ongoing decline in labour's share of value added, particularly in industry, is very evident (Lane 1998 and McCoy *et al.*, 2000). This decline however, cannot continue indefinitely and as wage levels rise in Ireland, the labour share of value added should at a very minimum, begin to stabilise.

In conclusion, the large decline in Irish unemployment as a result of exceptional rates of economic growth has been extremely beneficial for the overall economy in helping to raise living standards. As a result

however, the labour market has tightened considerably with full employment a reality. The main danger for the future as labour becomes increasingly scarce is that wages may rise too rapidly leading to an overly large loss in competitiveness and a costly rise in unemployment.

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