Bulletin

Institute for Employment Research

LOCAL LABOUR MARKET FORECASTING

This Bulletin examines the issues involved in producing forecasts at local level. It covers a number of issues such as: the reasons forecasts are needed; the type of variables that can be forecast; the problems and limitations of forecasts particularly at local level; and finally, alternative approaches to local forecasting.

Increasing Demand for Local Level Forecasts

Changing systems for delivery of training in the UK, in particular, the introduction of the TECs and LECs, have focused attention on the need for economic forecasts at a local level. Those responsible for setting policy within such organisations are becoming increasingly aware of the need to take a forward look if past mistakes are to be avoided and resources are to be allocated efficiently. Therefore, although it may no longer be a legal obligation for such bodies to publish a full labour market assessment for their localities after this year, forecasting is likely to remain a key element in any development plan.

Of course some bodies, such as local authorities, have been engaged in forward planning for many years. In some minds planning is still a 'dirty' word, conjuring up images of inflexible bureaucracies and misallocation of resources. Yet even the present government, and indeed its predecessor under Mrs Thatcher, recognised that some form of long-term planning is necessary, particularly where large investment programmes in either physical or human capital are involved. This is reflected in the detailed analysis conducted in Government White Papers, etc.

Why Forecast?

The world is an uncertain place, with the only real certainty (apart from death and taxes!) being that it will not stand still. In this context, almost everyone is involved in planning and forecasting, even if this amounts, in practice, to assuming 'no change' or 'steady as she goes'. Thus forecasts may be of value to a broad range of potential users within the general labour market area. At one end are policy makers charged with the responsibility of setting the institutional framework. At another level are those concerned with designing education and training programmes and the scale of delivery. Employers, educationalists and, of course, individual students and workers themselves, all have an interest in trying to peer into the future and to ensure that their own decisions result in the best possible outcomes (however these might be defined).

Forecasts can therefore be seen as having two prime roles: first to guide policy decisions made by the government and its representatives; and second, as a general aid to the individual actors operating within the labour market, providing them with information which can aid their own decision making.

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The Information Revolution and Local Forecasting

As the perceived need for information at local level has grown, so the capacity of the databases and the power of equipment required to process data have increased. The information revolution has gathered pace over the 1980s and early 1990s and analysts and policy makers now face the prospect of an enormous increase in the amount of information available. Data are becoming more easily available in many ways, with the introduction of on line databases such as NOMIS, the increasing ease with which large survey databases such as the Labour Force Survey and the Censuses can be accessed and the growing power of computers to process this information. However, in some respects, there is a danger of being overwhelmed by the mass of data available and a key problem is to avoid information overload and to sort out the key messages. Forecasts are intended to identify the key trends and to highlight the main issues that will be important in the future.

What to Forecast?

TECs and LECs obviously have a direct interest in the labour market. Other bodies have a broader remit and require information of a more general economic and social nature. It can be argued that forecasts which focus too narrowly on the labour market, or indeed on just industrial employment, lack the depth of understanding necessary for useful policy analysis. In order to gain a more complete understanding of the forces influencing the labour market it is therefore necessary to forecast more than just employment. A complete forecast should cover various other key economic indicators. The Institute has always taken the view that proper labour market forecasts require the use of a detailed multi-sectoral macroeconomic model.

The fact that forecasts have, in practice, often been very narrowly focussed is, of course, no accident. It reflects the availability of data which is such a binding constraint on model building and forecasting, especially at local level. However, with the increasing availability of regional and sub-regional information these limitations are becoming less important and a new generation of models are beginning to appear which exploit this resource and can provide users with a much richer picture of developments in a particular locality. Thus, as well as industrial employment levels, analyses by occupation, gender and status (full-time, part-time, self employed) are now feasible. Other aspects of the labour market such as demographic change, labour supply, and unemployment can also be covered. In addition the possibility of building more complete economic models of particular localities, based around an input-output analysis which takes proper account of the interlinkages between sectors and the behavioural relationships between the various actors in the economy (individuals, companies, public institutions etc) is now becoming a reality.

Accuracy of Forecasts

It is important to have a clear appreciation of the limitations of any forecast. Forecasters do not have a crystal ball and cannot foresee the future precisely. Rather they try to map out the consequences of a series of assumptions about patterns of behaviour and policy stances for likely future developments.

Some have drawn a distinction between a projection and a forecast. The former has been defined as a conditional statement about the future 'if X then Y'. In contrast, a forecast is defined as attaching a likelihood or probability of this state of affairs actually coming about. In practice, attaching such probabilities to a particular point forecast is very difficult, as most people who have placed a bet on a horse can testify! Predicting the future path of the economy is considerably more complex than predicting the outcome of a race. Unlike simple statistical exercises such as conducting an opinion poll, it is not straightforward to attach margins of error or confidence intervals to projections of the economic variables which are dependent on an enormous range of different factors.

For this reason forecasters often present a range of scenarios intended to encompass the most likely outcomes. Whether or not this is done, all 'point' forecasts should be regarded with appropriate scepticism. No forecasters would argue that such projections are more than a broad brush picture of how the future might look. The one certainty is that the precise point forecast will be wrong! To expect anything else is to misunderstand what the forecaster is trying to achieve. Forecasts are not precise estimates of the future but should provide an indication of the direction, scale and pace of change. Having said that, most forecasters regard their latest forecast as the most likely outcome, given the information then in their possession. They may hedge this with some alternative but less likely scenarios around the central view. At the end of the day, they should be regarded as intelligent guesses rather than accurate predictions.

Limitations of Forecasting

There are severe limitations in our ability to forecast. These include:

- Data problems – there is often some difficulty in establishing the current position let alone forecasting the future. These difficulties may be especially acute at local level.

- Limits to understanding – although the social sciences have made considerable strides over recent years there are still major gaps in our knowledge about how systems and individuals behave.

- Moreover, past behaviour may not always be a good guide as to how things will develop in the future.

- In addition there are technical difficulties in forecasting which are often ignored due to data limitations.

- A final set of problems relates to the fact that many events are inherently unpredictable (such as earth-quakes or other acts of god, political events etc.)

The Benefits of Conducting Local Forecasts

The production of a forecast or set forecasts for a particular locality should not be seen as an end in itself. Rather it is best regarded as part of a process of improving under-standing about what is going on in the local economy. This understanding can then guide policy makers and other actors operating within the local economy (such as individual workers, students and employers) to better decisions. The main benefits can therefore be summarised as follows:

- The aims and objectives of intervention can be made clearer and the ability to evaluate policy can help to establish a virtuous circle.

- Forecasts can provide a focus for discussion and co-operation and may help to breakdown old mispercep-tions about local markets.

- Forecasts should enable those involved to take a more strategic, rather than a fire-fighting, approach to problems as the implications of current trends and outcomes for the future are explicitly explored.

- Finally, forecasts can also provide guidance to individual actors enabling them to make better decisions about their own futures.

Approaches to Local Forecasting

Probably the most common approach to local level forecasting is to use a national or regional forecast as a basis for predicting local trends. However, local circum-stances are invariably very different from the broader national or even regional picture. Every locality has its own unique characteristics. This means that general national or regional forecasts are often not appropriate for local needs. However, the lack of adequate data at local level often constrains what can be achieved.

Typically, such forecasts can be done in such a manner as to take into account the current economic and labour market structure of the locality. Rarely, however are local differences taken into account in a more fundamental fashion. The forecasts developed are therefore generally quite mechanistic, with little attempt to recognise inter-linkages between sectors within the locality, relationships between the locality and the wider economy or to understand the behavioural patterns which have resulted in the current position. Nevertheless they do have the advantage of being linked to a national forecast which has been developed in a consistent and systematic fashion.

The FORTEC Approach

The Institute has been involved in a number of projects which have included the development of a set of local forecasts or projections. Most of these have been based on a combination of a mechanistic methodological approach to producing quantitative forecasts, combined with the use of qualitative information based on local knowledge. The former has now been codified in the form of a computer software package, **FORTEC**, which enables users to produce their own local employment projections.

An example of such work is a project conducted for Milton Keynes and North Buckinghamshire TEC which was concerned with examining the prospects for employment growth in the TEC area over the remainder of the 1990s. The FORTEC package was used to develop projections at detail industry and occupational level. Milton Keynes has been an area of exceptional growth in the 1970s and 1980s and a key question is whether future employment increases will match the expected increases in population.

Tables 1 and 2 illustrate the kind of information that can be produced using this approach. Two projections were produced. The more pessimistic one was based on an assumption of growth in line with regional projections for the Rest of the South East. The second, optimistic variant, was based on the assumption that the TEC area manages to achieve the same differential in performance in terms of job creation as was achieved during the 1980s.

Table 1
Actual and Forecast Change in the Levels of Employment by Broad Industrial Groups, Milton Keynes and North Buckinghamshire TEC, 1981-2000

thousands

	Observed		Forecast 1993-2000	
	1981-91	1991-93	Pessimistic Scenario	Optimistic Scenario
Primary & utilities	0.2	–0.1	–0.2	0.1
Manufacturing	3.2	–1.2	–2.5	1.3
Construction	2.9	–0.8	–0.2	1.8
Distribution & transport	17.3	–2.5	1.7	11.6
Business & miscellaneous	16.4	–0.1	4.5	10.9
All industries	40.1	–4.8	3.7	25.6
Non-marketed Service	1.3	0.3	2.2	0.6
Whole economy	41.3	–4.5	5.9	26.3

Source: Census of Employment and IER FORTEC estimates

These projections are based on a combination of detailed data on employment structure in the local area taken from the Census of Population or Census of Employment, plus forecasts of employment change at national or regional level from an Institute forecast. Such projections can form a useful benchmark for thinking about possible future developments. The importance of local knowledge, however, is crucial, and such forecasts can only provide one ingredient in a recipe for developing a strategic view about possible future scenarios.

Development of a Local Economy Forecasting Model

In collaboration with Cambridge Econometrics, the Institute is also developing a more sophisticated approach to local level forecasting, which attempts to address some of the limitations of more mechanistic methods. The **Local Economy Forecasting Model**, is built around an input output structure which explicitly recognises links between sectors at the local level and also allows for the various behavioural links which are accepted as standard in most national macroeconomic models. This model has already been used to provide forecasts for a number of localities and will be available for more general use in 1994.

The great advantage of this approach is that it adopts a transparent, consistent and systematic methodology which applies at national, regional and local level. This enables local level projections to be placed in a proper perspective.

Table 2
Projections by Occupation: Levels and Growth Rates, Milton Keynes and North Buckinghamshire TEC, 1991-2000

		Levels in thousands Projection				Rate of growth in per cent Projections			
				2000	1991-93		1993-2000		
		1991	1993						
				Pessimistic Scenario	Optimistic Scenario		Pessimistic Scenario	Optimistic Scenario	
1.	Managers & administrators	18.7	18.4	21.7	26.0	–1.3	17.7	41.3	
2.	Professional occupations	9.5	9.5	11.2	13.4	–0.1	18.3	41.3	
3.	Associate professional and technical occupations	9.6	9.5	11.1	13.2	–0.8	16.6	38.8	
4.	Clerical & secretarial occupations	20.0	18.9	18.6	21.6	–5.3	–1.7	14.3	
5.	Craft & related occupations	13.7	12.4	11.9	14.6	–9.7	–4.1	17.8	
6.	Personal & projections service occupations	8.0	7.8	8.6	10.1	–1.7	10.1	28.5	
7.	Sales occupations	7.6	7.5	6.9	10.1	–0.8	15.6	34.7	
8.	Plant & machine occupations	11.0	10.0	8.6	10.4	–9.0	–13.9	3.8	
9.	Other occupations	8.3	7.8	7.4	8.7	–6.8	–5.1	11.6	
Total		106.3	101.8	107.8	128.0	–4.2	5.8	25.8	

Source: Census of Population and IER FORTEC estimates

Using a prototype version of the model, projections have been produced for the Dudley TEC area. These include forecasts of GDP, employment, population and the labour force to the turn of the century. The Dudley TEC area is a very open economy, both in terms of its trading relationships with other parts of the country (and indeed the rest of the world) and its patterns of commuting flows. The LEFM model highlights the main developments in population, the labour force and employment over the remainder of the decade, contrasting them with the broader changes expected for the West Midlands generally and for the UK as a whole. The Dudley area has been hard hit by the recession, reflecting its concentration on manufacturing industry. Significant growth in GDP is expected from 1993 onwards but employment is not predicted to recover the levels achieved in 1990 before the end of the decade.

Forecasts for Dudley TEC

GDP

1985=100

Employment

1985=100
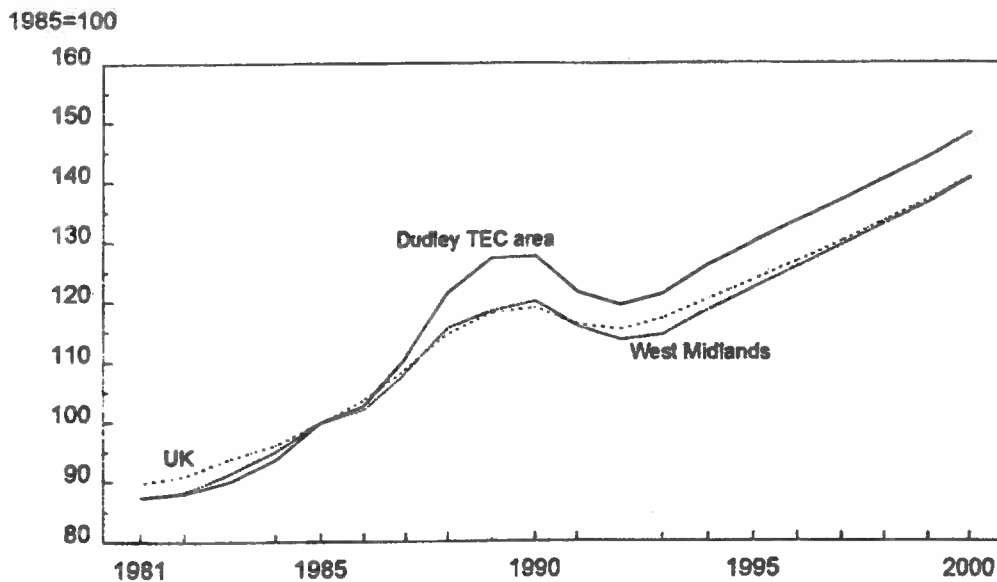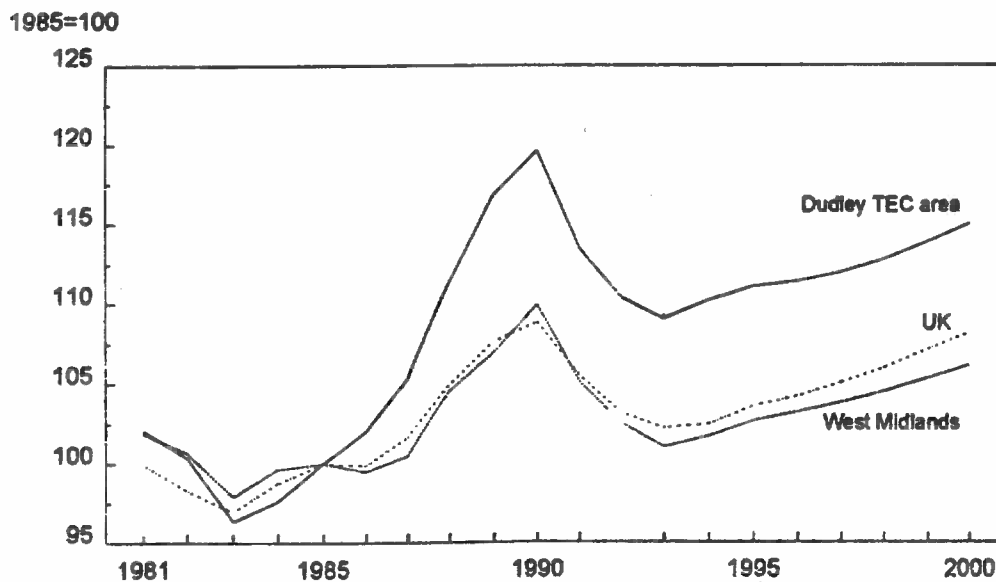
Source: CE/IER estimates using LEFM

For more information about IER forecasts at national and local level,
including information about FORTEC and LEFM contact:
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LABOUR MARKET ANALYSTS DEVELOPMENT PROGRAMME

A Flexible Programme of Specialist Training for Professionals with
Responsibility for Labour Market Intelligence and Assessment

Contact: Chris Hasluck – Tel. 0203 523287

Are you engaged in the monitoring and assessment of your local labour markets? Are you evaluating local training needs and provision? Do you have to provide briefings on the impact of national and international events on jobs, redundancies? Are you seeking to quantify future changes in occupational and industrial job prospects in your local economy? If so, you are part of a growing number of professionals with the Training and Enterprise Councils (TECs), Employment Service (ES), Employment Department (ED), Local Authorities and similar organisations, concerned with local labour market analysis.

The expansion in the demand for labour market analysis has taken place at the same time as shifts in policy needs and priorities, institutional changes, rapid economic and social changes as well as major developments in the theory and methodology of local labour market evaluation. The aim of the Labour Market Analysts Development Programme is to create and strengthen your capacity to undertake rigorous and relevant analysis with due regard to the limitations imposed by finite resources, the quality and availability of data, and the current state of knowledge.

The IER's Programme has been running since 1991, and provides high quality training in both the principles and practice of labour market analysis for practitioners working in the field and has rapidly established itself as the market leader in such professional training. The Programme is designed through its adaptable and participant oriented approach to meet your needs and offers a flexible programme of 9 months part-time study involving:

- a half-day Preparatory Meeting;

- 5 two-day Residential Workshops. The residential periods are held in Radcliffe House, the postgraduate teaching centre at the University of Warwick;

- 4 home-based course work assignments;

- a project, undertaken in the final 3 months of the course.

Successful completion of the programme leads to the award of the University of Warwick *Post-Experience Certificate in Labour Market Analysis*.