Skills anticipation in the UK

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The UK has invested heavily in skills anticipation. It undertakes:

- Skill assessments (reviewing past trends at national and sectoral levels and assessing how various drivers of change will affect future skills demand);
- Skills forecasting (the *Working Futures* series of occupational projections);
- Skills foresight analysis (undertaken on an ad hoc basis to review particular aspects of future skill demand);
- Surveys of employers (to gauge their current level of skills demand and the extent to which they are experiencing skill shortages);
- Analysis of rates of return to qualifications (linked to administrative databases that allow for a high level of disaggregation by qualification in the reporting of employment and wage returns).

The general policy direction in the UK is geared towards a market-like system for skills and training, in which employers and individuals make rational economic decisions regarding the skills in which they want to invest. There is little statutory governance of the UK’s skills anticipation activities, with governance and funding resting with the various ministries responsible for skills in England and the devolved administrations (Scotland, Wales, and Northern Ireland). These ministries are engaged in a variety of skills anticipation exercises, but in recent years it has tended to be the UK Commission for Employment and Skills (UKCES) that has taken a leading role in many exercises. The commissioners of UKCES – effectively its Board of Directors – are drawn from social partners. The UKCES will be abolished in 2017, and responsibility for its activities will be distributed to ministries and devolved administrations.

The involvement of other stakeholders in skills anticipation is modest. To some extent the role of stakeholders – employers, trade unions, labour market intermediaries, etc. – is limited. In the past they have had a high level role through their through participation as Commissioners of the UKCES, their representation on Sector Skills Councils (SSCs) and their ad hoc participation in advisory groups related to, for instance, skills foresight exercises. With the UKCES’ planned closure in 2017 one the few forums in which stakeholders are represented will no longer exist.

A substantial amount of investment in skills anticipation has taken place over recent years. The aim is very much to increase the amount of information young people, jobseekers, and employers have in making decisions about skills to invest in. Dissemination of data from skills anticipation activities is seen as critical to the success of the policies outlined above. Much of the data collated in the above exercises has been brought together under the ‘Labour Market Information for All’ (*LMI for All*) online data portal, which connects and standardises existing sources of high quality, reliable labour market information – with the aim of informing individuals’ career decisions. But there will still be a role for labour market intermediaries (e.g. the careers service) to make sense of the data for the various target groups (i.e. young people, jobseekers, and employers).
At the time of writing there was some uncertainty about the future given the change in government following the Brexit Referendum, the decision to close the UKCES, and with continuing restriction of public expenditure in most government departments.

**Overview of the UK approach**

**Skills anticipation in the United Kingdom**

**Key actors**

**Governance**
- Department for Education (DfE)

**Stakeholders**
- Government (via DfE)
- Training providers
- Industry
- Local Enterprise Partnerships

**Target groups**
- Education institutions
- Young people
- Industry sector skills councils (SSCs)
- Adults

**Types of skills anticipation**

**Quantitative forecasting**
- Working Futures Projections (every 2-3 years)

**Skills assessments**
- Periodic national skill audits
- Periodic sector skills assessments

**Foresight**
- Ad-hoc exercises

**Other**
- Regular surveys of employer skill demand
- Rates of return analyses
- A variety of surveys of individuals
- LMI for All (collating data from a large range of sources)
Dissemination

Channels

- LMI for All portal
- Education institutions
- Careers and labour market intermediaries
- Industry via SSCs
- Local Enterprise Partnerships (LEPs)

Use

- To support individuals decide in which skills/qualifications to invest
- By policy makers to assess if skills supply is aligned with skills demand

Description

The core of the UK skills anticipation system are the Working Futures series of detailed employment projections, though other sectors and organisations (including the devolved administrations) have also produced forecasts of the labour market and skills on a more irregular basis. The Working Futures series have been undertaken for many years, building upon similar projections also funded by the UK government.

More recently, LMI for All, an online portal providing national-level data on LMI for use in application and websites, (1) has become a repository of a vast range of skills data incorporating many different labour market indicators and mapped to Standard Occupational Classification (SOC) categories at a detailed 4 digit level. The aim of LMI for All is to make skills and other labour market data available to a wide range of stakeholders. Developed by UKCES, LMI for All draws information and data from national sources on skills assessments (both national and sectoral), occupational and skills forecasts, and regular surveys of employers. Data are disaggregated to occupation, region, gender, age and employment status.

There is a number of other anticipation activities undertaken in the UK –though not all of which feed into LMI for All. These include skills assessments (both national and sectoral), skills forecasts, analysis of rates of return to studying various qualifications (increasingly making use of linked administrative data sets), regular surveys of employers, and skills foresight studies. The outputs of these different processes are aimed at different user groups: whereas LMI for All is designed for use by a wide range of users (but especially young people, jobseekers, and those concerned with career guidance and advice). Some of the other processes are designed more for use by policymakers (such as SkillsMatch London) and labour market intermediaries (such as the National Careers Service).

Aims

The long-running goal of policy in the UK has been to create a market-like system for training and skills (c.f. the 2006 Leitch Review of Skills). There has been a long running concern that the vocational education and training (VET) system has been delivering accredited training that is of limited economic value, as reported in the 2011 Wolf Report. This has resulted from an imbalance in the influence exerted, respectively, by the demand and supply sides of the labour market: if more influence could be granted to the demand side (by both employers and learners), policymakers have reasoned, then there will be a better match between the skills supplied and the skills the economy will need over the medium-term.
better match between the skills supplied and the skills the economy will need over the medium-term. In order for employers and learners to make more rational economic decisions about which skills and qualifications to invest in, they will need information about the returns associated with investments in skills of one kind or another.

Accordingly, investments have been made to provide individuals and employers with information about:

- The employment and earnings returns of studying of various courses and
- The future demand for skills (using occupation and qualification as proxies for skills).

**Legal framework**

There is little statutory regulation regarding skills anticipation. In England, the **Education Act (1997)** places a responsibility on schools to provide independent careers advice to pupils in the compulsory education system. The **Apprenticeships, Skills, Children and Learning Act (2009)** amended the Education Act 1997 to require careers education in schools to include a component on education or training options for 16-18 year olds and on apprenticeships. The UKCES was established by the government to provide guidance on employment and skills issues. It was strategically managed by Commissioners drawn mainly from industry but also including trade unions and representatives from VET institutions. It had a fairly broad remit in deciding what services it should deliver. The UKCES will be abolished in 2017.

(2)

**Governance**

Skills anticipation is the responsibility primarily of the following Government ministries:

- England – **Department for Education (DfE)**;
- Scotland – **Employability, Skills & Lifelong Learning Directorate** of the Scottish Government;
- Wales – **Education and Skills Department** of the Welsh Government;
- Northern Ireland – **Department for Employment and Learning**.

Other ministries are also involved from time to time. For example, and the Migration Advisory Committee (MAC) which comes under the remit of the Home Office, is responsible for assessing whether particular occupations are in shortage and therefore suitable candidates for supply from outside the UK.

The UKCES had a responsibility for providing information on a UK-wide basis and to this end undertook forecasting, skills assessments, and foresight exercises. Following its abolition in 2017, it is expected that some of these roles will be subsumed by the ministries, especially the Department for Education in England and the devolved administrations. It has now been confirmed that the management of the Employer Skills Survey (ESS), the Employer Perspectives Survey and the LMI for All Portal will be moved into the Department for Education.

Sector Skills Councils (SSCs), employer-led organisations, also have a role in skills anticipation. These are users of data produced by skills anticipation activities and also undertake their own skills assessments. They also have a role in disseminating LMI to the sectors they represent.
The role of stakeholders

The main stakeholders are employers, trade unions, representatives of education and training institutions and various third-party organisations with an interest in skills. (3) There is relatively little social partnership in the UK; these stakeholders have tended to be co-opted on an ad hoc basis to various government initiatives related to skills anticipation. More formally, these groups were represented as Commissioners at the UKCES where they were responsible for setting the strategic objectives of that organisation (although there tends to be more employers than other groups on the Board). (4) Their role over the detailed design of skills anticipation measures was minor.

There has been relatively little other stakeholder involvement. There is, for example, no other organisation or formal process by which social partners convene to consider issues relating to skills anticipation (e.g. in assessing how data collection can be better aligned with policy objectives). (5)

At the local level, the recently created Local Enterprise Partnerships (LEPs) have, amongst other things, an interest in skill demand for the localities they represent. Their Boards of Directors include employers, training providers, and local politicians. At the moment it is not clear what role LEPs will have in skills anticipation activities (e.g. whether they will commission anticipation exercises or be a target group for existing exercises).

SSCs represent employers in the sectors for which they are responsible, with employers being represented on the SSCs’ boards of directors. Foresight studies will sometimes have advisory groups that include social partners.

Target groups

The Working Futures projections have been aimed at a wide range of different users including policymakers. (6) The emphasis in recent years has focused much more on providing general LMI rather than for specific policy requirements. The Working Futures employment results are a key cornerstone of the LMI for All portal. LMI for All is intended for use by a wide range of users who, by using the Application Programming Interface (API), can create applications and web interfaces for their particular audiences. Audiences can include, for example, young people making the transition from school to work or deciding what to study; careers service staff; education and training institutions; and jobseekers. (7)

A widget, Careerometer, is also available for third parties to embed in their own websites. This enables users to compare data on up to three occupations. A wide range of other outputs is possible, aiming at different users. For examples, outputs could be targeted at those responsible for collating information on likely future skills needs and translating this into policy or messages for the members of the groups they represent. SkillsMatch London is a good example of how data in LMI for All can be linked to administrative data - such as National Pupil Database (NPD), the Individualised Learner Record (ILR), Greater London Authority Economics (GLA) data and the 2011 Census - to create a more detailed picture of local skills needs and forecasts. Data are available and visualised for different users including labour market intermediaries, schools and colleges, planners, policymakers and employers.
**Funding and resources**

There has been no budget specifically dedicated to skills anticipation exercises. Organisations such as the UKCES have undertaken such work, including regular and detailed projections loosely set as one of their targets, but it has been left to determine the scale of resources and effort to be devoted to particular elements such as Working Futures or LMI for All. In 2014/15, UKCES had a budget of £36m but this includes expenditure on many activities unrelated to skills anticipation. Its Futures Programme had a budget of £1.4m over the same period, but this will exclude many activities related to skills anticipation. No information is available on the exact expenditure on skills anticipation in England and the devolved administrations.

**Methods and tools**

There are various tools used in undertaking skills anticipation in the UK.

**Skills assessment**

There is a long history of undertaking skills assessments in the UK. Skills in England (SiE) was produced by the National Learning and Skills Council (LSC) between 2002 and 2008. It comprised an annual report on skills supply, skills demand, skill mismatches, and future skills demand. SiE was based on producing a common set of tables each year derived from various surveys and employment projections alongside a synthesis of the literature. With the abolition of the LSC, the UKCES took over this role and, in 2010, produced a skills audit for England – similar though separate exercises were conducted in Scotland and Wales. In 2013, UKCES produced the UK-wide Labour Market Story. The general approach was basically the same as set out in the SiE series.

As well as conducting national assessments, there have also been a series of sectoral skills assessments. Until 2012, each licensed SSC periodically produced a Sector Skills Assessment each including separate sections on skills mismatches, skills demand, the drivers of skills demand, as well as expected future trends in the demand for skills. The UKCES has tended to commission sectoral reports on a more ad hoc basis and published them in its Sector Insights Series. Again, there is a strong emphasis on understanding what future skills demand might look like and the factors driving future demand.

In general these reports provided a core set of tables that summarised information on the supply of, and the demand for, skills, the degree of skills mismatch, and expected future demand. The literature synthesis provided an explanation of what was driving the demand for skills, why mismatches might be occurring, and how skills demand might be expected to develop in the future. These studies were very much aimed at assisting policymakers to understand the current state of play and provide labour market intermediaries (e.g. SSCs, education and training institutions, and careers services) with information relevant to their particular interests.

The strength of the sector skills assessments was in their capacity to provide national and sectoral data on the extent to which current skills supply was meeting demand, and how this was likely to develop in the future.
the future. The main relative weakness was that the degree of sectoral coverage became increasingly piecemeal and tended to increasingly concentrate on those sectors that were considered a policy priority. Hence skill assessments no longer comprehensively cover skill demand in the UK. With the abolition of the UKCES, the future for skills assessments of a type outlined above is uncertain.

**Skills forecasts**

Since the mid-1970s a series of occupational projections has been produced for the UK economy. These have been produced by the University of Warwick Institute for Employment Research working in collaboration with Cambridge Econometrics. This work was undertaken for various government departments and agencies. Since the early 2000s, the projections have been funded by the UKCES under the Working Futures banner. The key indicators produced are measures of future skills demand by occupation and qualification (projections are usually produced for ten years ahead). They also include the level of replacement demand by occupation to account for the fact that people might be leaving an occupation (e.g. retirement).

The projections of occupational demand are produced using econometric and other statistical techniques. Data on future levels of employment by sector are derived from a macroeconomic model of the UK economy. Occupational projections are then produced on a sector-by-sector basis and summed to provide occupational estimates for the UK. The results are disaggregated by region, and more recently estimates have also been produced at the local level (e.g. Local Enterprise Partnership [LEP] areas).

The forecasts are produced, on average, every two years. The strength of the projections is that they provide a quantitative estimate of future skills demand that can be used to frame other discussions about the future demand for skills. They have become a common source of data for a variety of users (e.g. careers advisors, education and training institutions). The fact that the Working Futures projections have been routinely re-commissioned over many decades testifies to the value various stakeholders attach to them. The weakness of the projections is that they reveal relatively little about the changing nature of skill demand within an occupation. For instance, the number of people may be projected to grow within an occupation over the next ten years, but the projections provide no indication of the way in which the skill content of that occupation might change.

With the abolition of the UKCES, the future of the Working Futures projections is, for the moment, uncertain.

**Skills foresight**

There are two main skills foresight activities:

- The foresight programme run by the former Department for Business Innovation and Skills\(^9\) that uses the latest scientific evidence and futures analysis to provide strategic options for policy; and
- The futures programme run by the UKCES that addresses how specific issues facing the UK labour market – productivity, low skills, and mobility – might be addressed in the future. UKCES have also developed futures scenarios.
The foresight programme addresses – in a one-off way – specific issues relating to the future supply of, and demand for, skills. The foresight exercises tend to use a mix of methodologies (econometric analyses, qualitative research, futurology, syntheses of existing research, etc.). Some of them are nationally oriented, whilst others have a sectoral or geographical focus. The strength of the foresight approach is that it has the potential to reveal much more about the way in which the tasks that comprise a job are changing or are likely to change in the future. The foresight activities draw upon a wide range of expertise and typically have stakeholders from industry on their advisory boards. Their relative weakness is that the results regarding the future can be highly speculative, though they often provide robust evidence on the current state of play.

**Other skills anticipation practices**

As well as the types of activity outlined above, there are also two other important areas of activity:

- Regular surveys of employer demand for skills (most of them do not include an anticipation/future-looking element) and
- Use of linked administrative data.

Several employer surveys on skills take place in the UK, but the most important is the **Employers Skills Survey (ESS)** as it provides a comprehensive insight into skills needs, vacancies, skills shortages and skills gaps. The ESS collects data from establishments with one or more employees across sectors and the UK. The survey is conducted every two years. It is funded by the UKCES, and in future will be taken over by the DfE. The 2015 survey collected data from over 91,000 establishments. Data are collected about employers’ recruitment activities, the occupations they have been recruiting to, and whether they have experienced difficulties recruiting people with the desired skills. This provides an indication of skills mismatch at the occupational level. The strength of the survey is that it provides information about those skills employers find difficult to recruit, but it is not always clear whether difficulties recruiting staff are due to, for instance, relatively poor working conditions or a genuine shortage of skills in the external labour market, though advances have been made over the years in addressing this issue.

Government ministries are increasingly launching and/or using **linked administrative databases** to estimate the relative returns to gaining a specific qualification. These data are used by a range of labour market intermediaries such as training providers, as well as policymakers. Linking of data on pupil performance in compulsory schooling, qualifications obtained at the education system, and progression through the labour market (by linking to tax records), allows to assess the returns of acquiring a particular qualification. The use of these databases is considered to be an increasingly important tool for identification of qualifications that yield the highest returns. The use of linked administrative data is considered to have great potential, but some weaknesses can be identified. There is a degree of uncertainty about the matching process in linking the databases given that the same unique identifier is not used in every database, and information is not available on an individual’s occupation (or sector) or weekly hours worked.
Use of skills anticipation in policy

The projections of future skills demand by occupation have perhaps the most influence on policy. Initially they were used for planning purposes, i.e. when the government was involved directly in determining the courses and number of places to be funded in post-compulsory education. Now that there is less emphasis on planning as a result of the move to an increasingly market-like system, the projections have been used as an important source of information in helping people to decide which skills/qualifications to pursue.

The data produced by the National Employers Skills Survey (NESS) – along with the rates of return of analysis – have been used in policy circles to gauge the extent to which skills supply is aligned with skills demand.

Target groups’ uses of skills anticipation outputs

Ultimately, the target groups of the skills anticipation exercises are: policymakers at sectoral, national, regional, and local levels; young people (making the transition from school to work or choosing which courses to study), jobseekers, and employers. Labour market intermediaries, such as the careers service the public employment service (PES) and education/training institutions, have access to the wide range of skills anticipation data described above. Whilst information is readily available for anyone to use, labour market intermediaries are well placed to guide people through information and help them make sense of the information as it relates to their personal circumstances. The primary dissemination route seems likely to increasingly become LMI for All, and this is aimed at the widest possible number of users. Other skills anticipation activities (such as the skills foresight activities and skills surveys) are aimed more at intermediaries and policymakers.

Much of the other outputs from the skills anticipation system – such as Working Futures — are aimed at policymakers and labour market intermediaries.

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**Endnotes**

(1) LMI. n.d.b.


(3) Other interested parties include Local Enterprise Partnerships (LEPs) and further education colleges.

(4) UKCES. n.d.c.

(5) Between 1962 and 1992 the National Economic Development Office – comprised of representatives of the social partners – had a remit to consider skill needs alongside other factors affecting the UK’s economic performance. But since 1992, there has been no permanent body of this type.

(6) https://data.gov.uk/dataset/working-futures

(7) LMI for All. n.d.b.; Examples of users of LMI for All data include iCould and plotr.

(8) In July 2016 the Department for Business Innovation and Skills became the Department for Business, Energy and Industry Strategy (BEIS) with its skills remit being transferred to the Department for Education. The Foresight programme will remain with BEIS.

(9) Vivian et al. (2016).