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The Skills Imperative 2035: Essential skills for tomorrow's workforce: Revised long-run labour market and skills projections for the UK

Workbook User Guide

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EMPLOYMENT RESEARCH



Preface

The labour market projections at national and regional level form part of '*The Skills Imperative 2035: Essential skills for tomorrow's workforce*' research programme, which is being led by the National Foundation for Educational Research (NFER) – visit www.nfer.ac.uk.

This research programme is funded by the Nuffield Foundation – visit www.nuffieldfoundation.org.

The subregional analyses, which are an extension of these projections, have been funded by the Department for Education. Visit <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>.

This edition of the analysis contains revised projections. DfE previously published labour market and skills projections in 2023. These projections relied on data from the Labour Force Survey (LFS) up to 2021. Unfortunately, in July 2022 the Office for National Statistics (ONS) announced that they had made errors coding 2021 occupational data in the LFS. Subsequently, ONS published corrected data in the summer of 2023. This edition contains revised projections using the corrected data. More details about the impact of revisions can be found in a summary report produced by NFER, available at:

<https://www.nfer.ac.uk/media/dvbev0q/revised-employment-and-skills-projections-for-the-skills-imperative-2035.pdf>

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1. Introduction

The Skills Imperative 2035: Essential skills for tomorrow's workforce research programme

The global economy faces significant shifts in the coming decades. New technologies, coupled with major demographic and environmental change, are predicted to disrupt the economy and the labour market in various ways. This will have a significant impact in the next 10 to 15 years and beyond, both in terms of jobs and the skills needed to do them.

The impact of these drivers of change on the economy and labour market is expected to be one of the pre-eminent strategic challenges that the UK and wider global economy will face in the future. But the nature of the change in demand for jobs and skills in the future UK labour market is not currently well understood. Our research programme, *The Skills Imperative 2035: Essential skills for tomorrow's workforce*, aims to address this information gap.

As part of this research programme, there was a need to estimate what the future size and composition of the labour market would be in future. The Institute for Employment Research (IER) at the University of Warwick, working in collaboration with Cambridge Econometrics (CE), have produced such periodic assessments in their *Working Futures* series. As their most recent projections predated the pandemic and the UK's exit from the EU, the National Foundation for Educational Research (NFER), who are leading *The Skills Imperative 2035 research*, included an update of this assessment in the programme.

These new projections, which represent the latest in a series of quantitative assessments of the employment prospects in the UK labour market over a 10-15-year horizon, have been published under *The Skills Imperative 2035* banner. The previous results were published under the *Working Futures* banner.

The projections present historical trends and future prospects by sector for the UK and its constituent nations and the English regions, as well as selected results for some sub-regional areas. The prime focus of *The Skills Imperative 2035* projections is on the demand for skills as measured by employment by occupation and qualification, although the supply side is also considered. Their prime objective was to provide a sound quantitative foundation for the wider research programme.

They also provide an update to the labour market information (LMI) previously delivered by *Working Futures*. This LMI aims to inform policy development and strategy around skills, careers and employment, for both policy makers and a much wider audience. The results are intended to provide a sound statistical foundation for reflection and debate among all those with an interest in the demand for and supply of skills.

Future labour market scenarios

Due to the inherent uncertainty in predicting the future, IER and CE have produced projections for a range of scenarios. The Baseline projections assume existing technological trends and environmental transitions continue at a similar pace in the future. This represents a realistic assessment of what the labour market might look like in 2035 based on what we know now.

There are, however, other events which may become important in the future, but where the detail is not yet known. As one of the aims of *The Skills Imperative 2035* research programme is to explore a range of possible futures, we have produced some Alternative scenarios that build on the Baseline projections, but which consider other possible outcomes. These include factors such as a faster adoption of technology; a greater focus on the environment; and the provision of higher-quality education, improved healthcare provision, and better care services to support the ageing population.

2. Who is this guide for?

This guide is designed to assist new users of the Workbooks which have been generated as part of *The Skills Imperative 2035* programme funded by the Nuffield Foundation with additional support from the UK Department for Education.

Each Workbook contains historic and future employment projections by gender, status (full-time, part-time and self-employed), occupation, industrial sector and geographical area. There are also separate worksheets within the Workbooks covering qualifications data. The different Workbooks are distinguished by their spatial focus. The projections are available for the period 2010 to 2035 inclusive. They have been developed using the most up to date systems of classification available.

Consistent occupational (Standard Occupational Classification 2020, SOC2020) and industrial (Standard Industrial Classification 2007, SIC2007) classifications are used throughout the period covered by the Workbooks. The projections take account of the latest data published by the Office for National Statistics (ONS) from the Labour Force Survey (LFS), as well as the Business Register Employment Survey (BRES) and the Annual Business Inquiry (ABI).

It is envisaged that users will need to access the data in the Workbooks for a variety of purposes. These include:

- illustrating recent past, current and future trends in employment within their locus of responsibility (area or sector);
- comparative sectoral/spatial assessments;
- providing labour market information;
- deriving new employment projections based on their own additional information; and
- investigating future education and training needs.

Requirements and Pre-requisites

The workbooks are saved in Open Document format and can be accessed using Microsoft Excel or a range of other spreadsheet applications. Users need at least an elementary knowledge of and experience in using spreadsheet applications..

3. What is this guide for?

This guide is designed:

- to introduce new users to the Workbooks;
- to inform users about the Workbooks that are available and the information they contain;
- to help users to access the data contained in the Workbooks;
- to advise users about the appropriate use of the Workbook data, especially regarding publishing; and
- to guide users toward additional sources of information and help regarding the use of the Workbooks.

This guide is not intended to provide detailed accounts of the projections in the Workbooks. These are presented in *The Skills Imperative 2035: Baseline projections report*.¹ Similarly, details of the modelling procedures used to derive the historic and future employment projections can be found in *The Skills Imperative 2035: Technical report*.²

In order to generate the different Workbooks, *The Skills Imperative 2035* programme has required forecasting almost over a million individual time series (at the most detailed level. These comprise: sector (75) × occupation (26) × qualification (9 RQF levels) × gender (2) × status (3)).

The data are also further broken down by geographic area or spatial dimension as follows:

- UK nations - England, Scotland, Wales, Northern Ireland
- English regions
- Local Enterprise Partnership (LEP) areas
- Local Skills Improvement Plan (LSIP) areas and
- Mayoral Combined Authorities (MCA) in England.

¹ Wilson, R. A., et al, (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK, Baseline Projections, Working Paper 2a.* and related reports, NFER (See https://www.nfer.ac.uk/media/wukhabou/working_paper_2a_baseline-report.pdf)

² Wilson, R. A., et al, (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK, Working Paper 2c. Technical report on sources and methods.* NFER. (See https://www.nfer.ac.uk/media/jlzf5tq0/working_paper_2c_technical_report.pdf)

The workbooks are organised according to their spatial dimension. Each spatial workbook contains different levels of aggregation of the time series by sector/industry. This is a very detailed database - by far the most detailed available for the UK.

However, it is important to recognise that the data are not without limitations. These give rise to a number of considerations as to how the data should be used and reported. The limitations arise from two elements of the procedures which have been used to produce the projections: First, the projections are based upon survey data that were not originally designed or developed to produce precise estimates at this level of disaggregation. Second, the survey data have been used to calibrate an econometric forecasting model and a set of disaggregation procedures. Forecasting is as much an art as a science and requires considerable judgement on the part of the forecaster, especially when the forecast horizon is 10 years or greater. Any errors in the forecasters' ability to predict the future will be amplified the further into the future that the projections are considered, due to the inter-linkages between the sectors and regions, and the feedback mechanisms which permeate the model structure. The extent that the historical database is inaccurate due to the first data limitation further exacerbates this problem.

Thus, while the projections of employment are based on best practice, both the historic patterns of employment and the forecast projections have inbuilt uncertainties of differing kinds. These uncertainties need to be considered when utilising the Workbooks. They apply with particular force to the more detailed estimates produced for local areas.

In addition to the limitations of the data which require consideration when reporting and using the information, the projections for the relative short term need to be regarded critically. They were produced during a period of considerable economic uncertainty. *The Skills Imperative 2035* projections were developed in the second half of 2021/22, following UK's exit from the European Union (EU), as well as the Covid19 pandemic. They were produced as the economy was starting to recover from the impact of the pandemic but before the impact of the Russian invasion of Ukraine. In such circumstances, producing robust economic and labour market projections is particularly difficult.

Changing patterns of employment by sector and occupation are largely dominated by longer-term trends rather than the cyclical position of the economy. The results from the current set of projections can therefore be used as a robust guide to likely future developments in the structure of employment.

Details of the Workbooks available

All the Workbooks are made available via gov.uk at <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>.

A new Database has been developed for The Skills Imperative 2035 projections for the Baseline scenario. Workbooks have been produced for each of the main spatial areas (UK, GB, England and the devolved nations and the 9 English Regions).

There are in addition results for 38 LEP areas in England, 38 Local Skills Improvement Plan areas in England and 10 Mayoral Combined Authorities in England.

The UK and other spatial areas distinguish 75 industries (SIC2007 2-digit categories, except where these are too small to provide reliable data - in which case they have been aggregated together).

More aggregated information by sector is available for the local areas.

In each case there is a workbook which contains summary employment and Replacement Demand (RD) tables for different aggregations of industry and occupation.

The LEP, LSIP and MCA workbooks adopt a more aggregated picture for industry, going down to 22 sectors.

There is also a workbook containing more detailed occupational breakdowns (SOC2020 4-digit groups) and alternative scenario figures for the United Kingdom.

Naming convention for the Workbooks

The main set of Workbooks is labelled with the area name, and for spatial areas below region a suffix denoting that spatial area:

- LEP refers to Local Enterprise Partnership;
- LSIP refers to Local Skills Improvement Plan areas;
- MCA refers to Mayoral Combined Authorities.

The contents of the main set of 15 Workbooks at National and Regional level for the Baseline and each of the scenarios is detailed in Table 1.

There are 6 levels of sectoral/industry aggregation used in the Workbooks, ranging from all sectors aggregated together down to the 75 Detailed Industry classification. The Workbooks cover:

- All Industries/Sectors combined;
- 6 Broad Sectors;

- 22 Industries (as used for general reporting);
- 75 Detailed Industries.

Table 1: Workbooks by geographical area and sectoral coverage

Spatial area	Geographical area	All industries	6 Broad sectors	22 Industry groups	75 Detailed industries
Countries	United Kingdom	Y	Y	Y	Y
Countries	Great Britain	Y	Y	Y	Y
Countries	England	Y	Y	Y	Y
Countries	Wales	Y	Y	Y	Y
Countries	Scotland	Y	Y	Y	Y
Countries	Northern Ireland	Y	Y	Y	Y
English regions	London	Y	Y	Y	Y
English regions	South East	Y	Y	Y	Y
English regions	East of England	Y	Y	Y	Y
English regions	South West	Y	Y	Y	Y
English regions	West Midlands	Y	Y	Y	Y
English regions	East Midlands	Y	Y	Y	Y
English regions	Yorkshire and the Humber	Y	Y	Y	Y
English regions	North West	Y	Y	Y	Y
English regions	North East	Y	Y	Y	Y

Table 2: Workbooks by local area, sectoral coverage

Spatial area	Geographical area	All industries	6 Broad sectors	22 Industry groups	75 Detailed industries
LEP	Leeds City Region	Y	Y	Y	
LEP	Liverpool City Region	Y	Y	Y	
LEP	Stoke on Trent & Staffordshire	Y	Y	Y	
LSIP	Buckinghamshire Thames Valley	Y	Y	Y	
LSIP	Cumbria	Y	Y	Y	
LSIP	Leeds City Region	Y	Y	Y	
MCA	Cambridge and Peterborough	Y	Y	Y	
MCA	North East	Y	Y	Y	
MCA	West Yorkshire	Y	Y	Y	

See previous page for full list.

4. What information do the Workbooks contain?

The workbooks present *The Skills Imperative 2035* projections, and the contents of these workbooks are summarised in Tables 3, 4 and 5. More information about the structure and contents of the workbooks is available in the workbooks themselves, within the Information and Contents sheets. Some worksheets available in the pre-revised version of this publication are not included in this version. These worksheets contained graphs of data already available elsewhere in the workbook and have been removed for simplicity.

All workbooks follow a common structure, containing the contents set out in Table 2, with the exception of the UK SOC 4-digit and alternative scenarios workbook. This workbook contains a more limited selection of tables, as detailed in the Contents sheet of the workbook.

Table 3: Main Tables Workbook contents

Sheet name	Description
Warning	Warning on who is entitled to access the data as shown in Section 1 above. By default, each Workbook opens with this worksheet.
Information	An overview of the data, description of the workbook coverage, definitions of metrics available within the workbook and links to further information.
Contents	List of sheets available in the workbook with details of the metrics, breakdowns and time periods available in each sheet.
Various worksheets	See Table 4 below, and the Contents sheet within the workbooks, for details of the various worksheets available.
Industry Aggregation	Details of the industry aggregation used in the workbooks.

Table 4: Contents of Workbooks, Tables and Figures

Sheet name	Contents
Ind T1	Employment by Industry Sector (6 industries)
Ind T2	Employment by Industry Group (22 industries)
Ind T4	Employment by Industry Group in Sector (6 + 22 industries)
Ind T5	Employment Status by Industry Group and Gender (22 industries)
Ind T6	Employment Status by Industry and Gender (22 industries)
Ind F2	Line Chart Employment by Industry (6 + 22 industries)
IndOcc T1	Occupation Composition by Gender (9 occupations by 22 industries)
IndOcc T2	Occupation Composition by Employment Status (9 occupations by 22 industries)
Occ T1	Employment Change by Occupation Group and Gender and Replacement Demand (9 occupations)
Occ T2	Employment Change by Occupation and Replacement Demand (26 occupations)
Occ T3	Employment Change by Occupation in Occupation Group (9 + 26 occupations)
Occ T4	Occupation Composition by Gender (26 occupations)
Occ T5	Employment Change by Occupation Group, Status and Gender (9 occupations)
Occ F2	Line Chart Employment by Occupation (9 + 26 occupations)
Qual T1	Employment by Qualification (9 qualifications)
Qual F1	Line chart Employment by Qualification (9 qualifications)
ShiftShare T1	Shift-Share by Occupation (26 occupations)
RD T1	Replacement Demand by Occupation and Qualification (26 occupations by 9 qualifications)
Basic T1	Employment by Industry Sector, Occupation Group and Qualification (9 occupations by 6 industries by 9 qualifications)
Basic T2	Employment Change by Occupation and Replacement Demand (26 occupations by 9 qualifications)
Basic T3	Occupation by Qualification (26 occupations by 9 qualifications)

Table 5: Metrics available within workbooks

Metric	Definition
Employment levels (000s)	The estimated number of employees required. Data up to 2020 are based on historical estimates. Data from 2021 onwards are projections.
Employment shares (%)	The estimated number of employees required, as a percentage of the total number of employees required.
Employment growth per annum / net change growth per annum (%)	The percentage growth in the estimated number of employees relative to the previous year. Where the time period for this metric spans multiple years the figure presented is the estimated average percentage growth per annum during this time period.
Employment change / net change (000s)	The difference between the estimated number of employees required in two given years.
Net change shares (%)	The difference between the estimated number of employees required in two given years, as a percentage of the number of employees required at the beginning of the period.
Replacement demand (000s)	The estimated number of employees required to replace those who leave the labour force on a permanent or semi-permanent basis during the given time period, because of retirement, family formation, mortality or other reasons.
Replacement demand rate / growth per annum (%)	The rate at which the labour force would need to grow each year in order to replace those who leave the labour force on a permanent or semi-permanent basis (for reasons as above). This is labelled as replacement demand rate in RD_T1 and as replacement demand growth per annum in Basic_T2.
Replacement demand shares (%)	Replacement demand as a percentage of the number of employees required at the beginning of the period.
Employment total requirement (000s)	The estimated additional number of employees required between two given years, as a result of both employment growth and replacement demand.
Employment total requirement shares (%)	Employment total requirement as a percentage of the estimated number of employees required at the beginning of the period.
Employment total requirement growth per annum (%)	The rate at which the labour force would need to grow each year in order to meet the total requirement for new workers as a result of both employment growth and replacement demand.

Shift-share analysis: scale effect (000s and %)	Shift-share analysis estimates the contribution of different components to the change in employment levels between two time periods. Scale effect is the estimated contribution of the total employment change within the geographic area.
Shift-share analysis: industry mix effect (000s and %)	Shift-share analysis estimates the contribution of different components to the change in employment levels between two time periods. Industry mix effect is the estimated contribution of changes in the industrial mix within the geographic area.
Shift-share analysis: occupation effect (000s and %)	Shift-share analysis estimates the contribution of different components to the change in employment levels between two time periods. Occupation effect is the estimated contribution of changes in occupational structure within industries due to organisational and technological change. This is calculated as the residual change after accounting for scale effect and industry mix effect.
Qualification levels (000s)	The estimated number of people in the labour force with different qualification levels.
Qualification shares (%)	The estimated number of people in the labour force with different qualification levels, as a percentage of all people in the labour force or all qualifications.

Most figures are available for the years 2015, 2019, 2020, 2025 and 2035, or a selection of these years, in line with analysis published by NFER. Some headline figures are available for all years from 2010 to 2035 inclusive.

In all Workbooks, the data are provided on consistent occupational and industrial classification bases for all years. For *The Skills Imperative 2035* projections these use the latest Standard Occupational Classification 2020 (SOC2020) and the Standard Industrial Classification 2007 (SIC2007) respectively. The basic dataset by industry and employment status is constrained by the BRES/ABI sectoral information, so it is 'workplace-based'.³

³ Note that no account is taken of BRES/ABI inconsistencies from one year to the next (e.g. categorising the retailer Boots as 'pharmaceuticals' in one year and then 'retailing' in another, or the recoding of the same employer to different geographical areas. Users should therefore be aware of 'surprising' results at a detailed local or sectoral level and refer back to the base data order to see if the explanation lies therein.

In contrast, the occupational information relates to responses from households (from the LFS or Census of Population) and is therefore 'residence-based'. However, the LFS/Census information is converted to occupational shares within the industry of employment. These shares are then applied to the BRES/ABI-based sectoral data. The final occupational employment estimates are therefore effectively also workplace based. There is little or no information on how occupational structures within industries vary between residence and workplace, but the differences are probably generally small.

The estimates take account of the latest BRES/ABI as well as the most recent data published by ONS based on the LFS. The LFS information has been used to constrain the estimates of occupational structure, both at a sectoral and spatial level. The LFS data are only used to determine occupational shares rather than employment levels (which are based on BRES/ABI).

5. How can I access and use the information in the Workbooks?

Tables and charts

A set of standard tables and figures has been prepared in the UK-level Workbooks. These have then been replicated for all of the other Workbooks. Many of these tables and figures appear in the various *The Skills Imperative 2035* publications.⁴ Full details of what appears, where, are provided in *The Skills Imperative 2035: General Guidelines*.⁵ Note that while the historical data are available from 2010, the tables and charts tend to illustrate patterns and trends over the decades from 2015-2035.

⁴ For details see footnotes 3 and 4 above.

⁵ Wilson, R. A, (2024). *The Skills Imperative 2035: General Guidelines for using the workbooks*. Department for Education. <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>.

6. What data can I use?

This section provides some guidelines to assist in interpreting and utilising The Skills Imperative 2035 historic and forecast data.

Statistical precision/robustness

In *The Skills Imperative 2035: General Guidelines* (section 8)⁶ and, in further detail, in *The Skills Imperative 2035: Technical Report* (sections 12 and 13)⁷, some guidelines for data analysis are suggested. These indicate the degree of precision with which the employment projections can be regarded.

First, it should be emphasised that any recommended guidelines for use of the Workbook data can only ever be ‘rules of thumb’, rather than based on robust statistical analysis, given the modelling complexity and range of data sources used. The employment estimates make use of a wide variety of sources. As a consequence, it is not possible to calculate precise margins of error even for the historical estimates. From an analysis of previous projections, it is clear that the differences between projected employment levels and observed outcomes can be quite large.

Industry employment levels are typically projected within ± 10 per cent over a 5-10 year horizon. The directions of change are projected correctly in around 90 per cent of cases. The errors in terms of annual percentage growth rates are usually of the same order of magnitude as the observed changes.

Occupational employment levels are typically projected with ± 7 per cent over a 5-10 year horizon. The direction of change is correctly projected in about 80 per cent of all cases. Occupational shares are usually projected within ± 2 percentage points. (The typical share is around 4 percentage points).

Historical revisions to the data account for a very large part of the forecast errors. It is also important to recognise that making predictions in the social sciences is not the same as in science or engineering. A key objective of such projections is often to influence and change behaviour and therefore outcomes. Forecasting accuracy is in this sense a chimera. It is important to appreciate that the purpose of the projections is not to make precise forecasts of employment **levels**. Rather, the aim is to provide policy analysts and

⁶ Wilson, R. A., (2024). *The Skills Imperative 2035: General Guidelines for using the workbooks*. Department for Education.

⁷ Wilson, R. A., et al, (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK, Working Paper 2c. Technical report on sources and methods*. NFER. (See https://www.nfer.ac.uk/media/jlzf5tq0/working_paper_2c_technical_report.pdf).

other interested parties with useful information about the general nature of **changing employment patterns** and their possible implications for skill requirements.

Thus, the results provide a useful benchmark for debate and policy deliberations about underlying employment trends. However, they should not be regarded as more precise than the general statements in the text of the accompanying reports and publications. Many years of international research have demonstrated that detailed manpower planning is not a practicable proposition. The results presented in the workbooks should be regarded as indicative of general trends and orders of magnitude, given the assumptions adopted, rather than precise forecasts of what will necessarily happen. For further details, see *The Skills Imperative 2035: Technical Report*.⁸

ONS recommend using minimum cell sizes of 10,000 (grossed-up) when presenting data based on the LFS.⁹ This therefore seems to be a sensible ‘rule of thumb’ to adopt when reporting data from the Workbooks. Given that there are 25 SOC sub-major group occupations to be distinguished in each sector, this suggests a minimum grossed up cell size for a sector of at least 250,000. The sectors chosen as the basis for reporting in *The Skills Imperative 2035*¹⁰ meet this criterion.

However, users of the Workbooks have access to estimates of employment at a much greater level of detail than this criterion would imply. These have been constructed by using the information that ONS publish, including the raw BRES/ABI data (which are subject to frequent revision). Such estimates can provide useful information and intelligence to users about detailed employment levels and trends. However, some caution is required when using such data and there are strict limitations on what can be published by the user due to concerns about confidentiality (see below).

For cases between 1,000 and 10,000 individuals, it is difficult to prescribe general rules, and an element of judgement by the user is needed. At an industry level, and focusing just on employees, the limits set by ONS in publishing BRES/ABI data can be used as a general guide. If ONS do not regard estimates as publishable then the equivalent figures

⁸ Wilson, R. A., et al, A (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK*, Working Paper 2c. Technical report on sources and methods. NFER. (See https://www.nfer.ac.uk/media/jlzf5tq0/working_paper_2c_technical_report.pdf).

⁹ Strictly, this applies to an individual quarter – and reduces the more quarters are aggregated. This amounts to a figure of around 6000 after aggregating four quarters into data for a year. The 10,000 figure therefore is a conservative estimate of the sample/cell size need for robust estimates.

¹⁰ Wilson, R. A., et al, (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK*, Baseline Projections, Working Paper 2a. and related reports, NFER. (See <https://www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035/publications/>).

in the workbooks should not be treated with caution. Where the focus is on self-employment or on occupations, a more stringent cut-off should be applied.

Special care is also required regarding use of any short-term projections. For the reasons discussed in Section 2 of this User Guide, and as explored further in the main *The Skills Imperative 2035 Technical Report* (section 2) report, short-term projections may be especially unreliable and care should be exercised in using them.

Finally, all the estimates presented in the tables within the Workbooks and in *The Skills Imperative 2035* reports are rounded to the nearest 1,000. Any estimates of levels or changes below this level should be treated with considerable caution. When focussing on changes over *time* this may result in some estimates being rounded down to 0 in the tables (more detailed figures can be viewed by clicking the increase decimal points icon on the formatting toolbar in Excel). While such changes may be quite large as a proportion of the starting levels, they should still be treated with considerable caution.

7. Status of the projections for LEP and other local areas

Although concerns about statistical reliability mean that there are significant restrictions on the detailed data that can be reported, this should not be seen as a major constraint on using the material in the Workbooks to develop useful labour market intelligence for local areas and individual sectors. Often, developments at local level will mirror those at a broader national level. Robust statements can be developed along the lines that there are general national trends (that can be described in detail, based upon *The Skills Imperative 2035* projections¹¹), which are mirrored at a local level (which can be described in more qualitative terms). Where local patterns diverge from the broad national picture more care and judgement are required. In some cases, these will reflect differences in local economic and labour market structures. Other supportive evidence can be used to complement the Workbook material. In other cases, the results may simply reflect statistical error and variation, in which case it is inappropriate to read anything into local, regional or UK differences from the 'norm'.

The local level projections are intended as a benchmark, which sets out the implications of local areas maintaining the same patterns of employment change (at a detailed sectoral level), relative to the broader national and regional picture. The local projections do not include any specific local knowledge about how the future may differ from the past. They are essentially static outputs from the Cambridge Econometrics (CE)/Institute for Employment Research (IER) Regional Multi-sectoral Dynamic Macroeconomic Model (RMDM) and related modules. In order to build in information on locally specific factors a more complete and dynamic economic model is required such as CE/IER's [Local Economy Forecasting Model](#) (LEFM). In particular, users interested in performing more comprehensive impact analyses than those accommodated by the Replacement Demand module in *The Skills Imperative 2035* Workbooks will need to use the more comprehensive options available in the LEFM or similar.¹²

The results from different sets of projections will vary for a whole host of reasons. Most important are the vintage of historical data used, the models adopted and the exogenous assumptions imposed. The cross-sectoral and cross-regional consistency in *The Skills Imperative 2035* projections is an important advantage in that the local, regional and national pictures are coherent and consistent with each other. However, *The Skills Imperative 2035* projections will necessarily differ from any alternative projections

¹¹ Wilson, R. A., et al, (2022a). *The Skills Imperative 2035: Occupational Outlook - Long-run employment prospects for the UK, Baseline Projections*, Working Paper 2a. and related reports, NFER.

¹² For example, there is no attempt to incorporate major developments such as large inward investments, or major developments. Individual users will always have more up-to-date, and local, information that they can build into the benchmark projections in the Working Futures Workbooks.

commissioned from commercial forecasting and consultancy organisations which are likely to be produced using different model assumptions and forecasts.

8. Website and documentation

The main source for the Workbooks containing The *Skills Imperative 2035* projections is gov.uk at <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>.

This site also contains links to a number of supporting documents, as follows:

- **User guide** – This document, which is a guide to assist new users of the Workbooks. This is the best place to start when using the Workbooks.
- **General guidelines** – A guide which provides more detail about the strengths and limitations of the employment projections. This is probably the best place to start when seeking further information on the Workbooks.
- **Workbooks** – Detailed tables showing standard breakdowns by gender, industry, occupation and qualifications for different geographies including UK nations, English regions, Local Enterprise Partnerships (LEPs), Local Skills Improvement Plan (LSIP) areas and Mayoral Combined Authorities (MCA) in England.

Users may also want to refer to the following *The Skills Imperative 2035* UK reports¹³:

- **Headline report:** This summarises the main findings from the Baseline projections and Alternative scenarios and brings together the scenarios to consider overall implications for occupations and skills.
- **Baseline projections report:** A detailed report which describes the Baseline projections, which includes an overview of macroeconomic and sectoral employment prospects as well as the implications for skills as measured by qualifications and occupations.
- **Alternative scenarios report:** A detailed report which presents the results for the Alternative scenarios considered, which consider other possible outcomes including factors such as a faster adoption of technology; a greater focus on the environment; and the provision of higher-quality education, improved healthcare provision, and better care services to support the ageing population.
- **Technical report:** A report which provides a technical description of the sources and methods used to generate the set of employment projections.
- **Revised projections report:** A report which details the impact of the coding error in LFS data on 2035 employment and skills projections.

¹³ See footnote 11.

Other locations

Users can also access the national and regional employment Workbooks and associated documentation through the NFER and Nuffield websites.

These provide links from their *Skills Imperative 2035* webpages to the material on the main DfE webpage.

The Baseline projections will also be made available via the LMI for All portal (<https://www.lmiforall.org.uk/>)

Other outputs available from *The Skills Imperative 2035* research programme include:

- *The Skills Imperative 2035, Main report* and associated technical reports. Full details on sources and methods are to be found in the *Technical report*.

The full length evidence report and associated Annexes contain:

- More detailed results for both sectors and occupations in the UK;
- Results for the various devolved administrations with the UK and the English regions;
- Methodological details relating to the projections, including the macroeconomic model, methods used to derive implications for the demand for and supply of skills and the spatial analysis.
- Excel workbooks containing analysis for the UK, nations and English regions.

References and referencing

When making reference to the Workbooks, you should use the following form:

“Source: *The Skills Imperative 2035* (2024), NFER/Nuffield/DfE/IER/CE, <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>.”

Other relevant references describing the previous round of projections are as follows:

Wilson, R. A., S-A. Barnes, M. May-Gillings, H. Bui and S. Patel, (2019). Working Futures 2017-2027: Main report. Department for Education.

Wilson, R. A., M. May-Gillings, S. Patel and H Bui, (2019). Working Futures 2017-2027: Technical report on sources and methods. Department for Education.

Wilson, R. A., D. Owen, S-A. Barnes, M. May-Gillings, S. Patel and H. Bui, (2019). Working Futures 2017-2027: Annexes. Department for Education.

Wilson, R. A., D. Owen, D Bosworth, S-A. Barnes, M. May-Gillings and S. Patel, (2019). Working Futures 2017-2027: Headline report (presentation). Department for Education.

Wilson, R. A., D. Owen, D. Bosworth, S-A. Barnes, M. May-Gillings and S. Patel, (2019). Working Futures 2017-2027: Interim headline report. Department for Education.

Wilson, R. A., (2019). Working Futures 2017-2027: Workbook User Guide. Department for Education.

Wilson, R. A, (2019). Working Futures 2017-2027: General Guidelines for using the workbooks. Department for Education.

Wilson, R. A. and D. Bosworth (2019). Working Futures 2017-2027 - Qualifications Projections. Department for Education.



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