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Appendix: Opportunity Escalator Toolkit

This appendix provides a more detailed examination of the analysis and outcomes presented the Opportunity Escalator, which supports the analysis in Chapter 2 – The Opportunity. An interactive explanation of the Opportunity Escalator can be found at www.opportunity-escalator.com.

The Opportunity Escalator offers a bottom-up, place-based approach to the thinking through the interaction between jobs, skills, transport and housing. It can be used as a complement to a top-down industrial strategy exercise focused on sectors and technologies. For any given industry that a strategic authority might like to attract to a particular location, it asks which workers can get to that site; what skills they have; and how good a fit would those jobs be for them.

Baseline tool

The baseline Opportunity Escalator (OE) can be described as a series of steps, in which a local labour force for an area is matched to a potential new industry.

Understanding the local labour force

1. Pick a location of interest. This could be an urban centre or a specific employment site.
2. Establish a local labour force that can access the site. This typically involves understanding the population that can access the site by different modes of transport, such as public transport. Labour market data is then used to understand the current occupations of the local labour force.
3. Build a richer picture of the local labour force by matching occupations to O*NET data on the tasks typically undertaken in those occupations and the skills and qualifications required to do them.

Matching to a new industry

4. To match the local labour force to a new industry, the new industry is first broken down into proportions of occupations using labour market data. Occupations in the new industry are then matched to existing occupations in the local labour force according to the number of tasks they have in common and some constraints on the size of the skills gaps and pay gaps between the two jobs. This is inspired by an approach from an academic paper that takes a similar approach to modelling the labour market.[1]
5. The matching can be constrained to find existing jobs that are lower paid than the new jobs, but with zero or relatively modest skills gaps. Information on the success of finding matches and the resulting skills gaps can then be aggregated up to give a sense how good a fit an industry is for the local labour market and the sorts of training offerings that could help fill skills gaps from existing jobs. Furthermore, the wage increases that can be achieved by closing the skills gaps and helping people move into new jobs can be estimated, giving a sense of the first-round impact on the local income distribution that the new industry could have.

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Extensions

Alongside the core functionality described above, several extensions are used in Chapter 2 of the final report.

Transport

The toolkit is used to assess the impact of improving transport links. This is done by considering how the 'local' labour market would vary under new transport links and what knock-on impact that would have on matching new jobs to existing jobs.

For example, using the labour market for the Ratcliffe-on-Soar power station site, the labour market currently accessible within 60 minutes on public transport comprises 545,000 workers, predominantly those who live within easy reach of in the centre of Nottingham. Reducing the travel time between the Ratcliffe-on-Soar site and Ashfield and Mansfield to 30 minutes increases the 60-minute labour market by 100,000 and extends employment opportunities further north. It also changes the nature of the matches made to the existing labour force, reflecting the updated mix of workers in the extended labour market.

Housing analysis

The opportunity escalator is also used for a scenario analysis of the potential increase in demand for affordable housing from the new jobs that could be created in the 18 employment sites identified in EMCCA's spatial plan and associated investment prospectuses. Around 50,000 jobs are envisaged in the plans for the 18 sites, with specific industries targeted for most sites. Taking these numbers at face value, the OE can be used to match the projected new jobs to workers in the local labour force and to generate a distribution of wages for the new jobs. In this scenario, it is assumed that the new jobs create new demand for housing, with every two new jobs creating demand for one new home. This assumption can be adjusted as needed.

The wage distribution of the new jobs in the area is mapped to a house price demand distribution, based on what those workers are likely to be able to borrow for a mortgage. This assumed demand for housing is then compared to the actual distribution of housing accessible on public transport from the employment site. The actual house price distribution is calculated using house price estimates sourced from Treehouse Consultancy. To focus on 'affordable' housing, the map below shows the demand for housing in the bottom half of the house-price distribution as a proportion of the existing stock of housing in the bottom-half of the house price distribution.

Data sources

Data used for the opportunity escalator includes:

Office for National Statistics under the Open Government Licence v3.0.

Office for National Statistics containing OS data (C) Crown copyright database [2025].

ONET Online. US Dept of Labor, Employment and Training Administration. Creative Commons Licence.

Department for Transport.

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