How to address skills shortages at the intermediate skills level

ReWAGE Policy Briefing

1. Introduction

Intermediate level skills, of a type held by the modern technician, have long been regarded as a driver of productivity and national competitive advantage. They provide the skills that are seen to be key constituent part of a high skill, high value economy. Historically both the demand for, and supply of, intermediate level skills has been regarded as deficient compared with relatively high productivity countries such as Germany. Constrained supply has also meant that companies looking to enter high value product markets have struggled to obtain the intermediate level skills they require. The evidence to support the statements above is considered below, alongside how the supply of intermediate level skills might better meet demand.

2. The role of intermediate level skills

The National Institute's matched plants series of studies, conducted between the 1970s and the early 2000s, revealed that establishments in countries such as Germany and the Netherlands were more efficient or productive because of their relative reliance upon skilled workers in the middle of the occupational hierarchy. Why they needed more people with intermediate level skills stemmed in large measure from differing product market strategies. High productivity was driven by the production of relatively high value-added goods, typically using batch production techniques in medium-sized companies that relied heavily upon artisans. In contrast, the UK was more reliant upon the production of lower value-added goods, and increasingly services, which relied upon a relatively large cadre of management supervising the undertaking of relatively low skilled work by low skilled workers. This strategy was seen to lie at the root of the UK's low skills equilibrium problem.

Increasing the supply of skills is sometimes seen as a magic bullet which will stimulate productivity and employment growth and in doing so solve many longstanding weaknesses in the economy. If skills supply, however, is to contribute to growth then there needs to be a demand for productivity-enhancing skills in the first instance and, in the second, a skills system that can readily respond to the signals from the labour market about its demand for skills.

Arguably over time the skills system in England has become increasingly adept at responding to the various signals it receives about skill demand. This response has been achieved in large measure through the skills funding system whereby providers involved in the delivery of vocational education have become increasingly dependent upon learner numbers for their income. This demand-led system may be efficient in

the way it matches supply to demand, but it also has the potential to reinforce a low skills equilibrium if skill demand is weak.

3. The demand for intermediate level skills

There is no generally accepted definition of what constitutes intermediate level skills. From an occupational perspective, this might include Technicians and Associate Professional jobs but it will also include Craft and Related Workers, and Plant and Machine Operatives.[1] There may also be clerical jobs which might constitute as intermediate level ones. Table 1 indicates that the Technician and Associate Professional jobs have grown substantially over recent decades, whilst the number of people employed in the other intermediate level occupations has shrunk.

Table 1: The Changing Occupational structure of Employment in the UK, 1992 to 2019

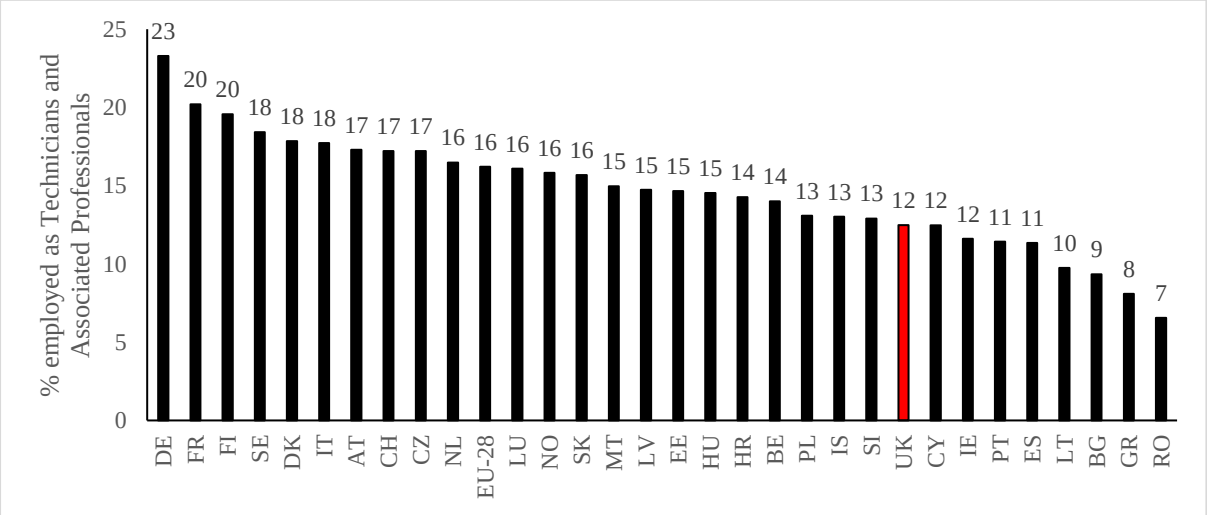
	Share of employment 1992	Share of employment 2019	Percentage point change 1992- 2019	Employment growth 1992-2019 (000s)
Managers	14.0	11.7	-2.3	167
Professionals	14.8	26.8	11.9	4,674
Technicians and associate professionals	8.1	12.5	4.4	1,899
Clerical support workers	17.2	9.3	-7.9	-1,370
Service and sales workers	13.3	17.6	4.3	2,185
Skilled agricultural workers	1.2	1.1	-0.1	29
Craft and related trades workers	14.1	8.0	-6.1	-1,006
Plant and machine operators and assemblers	8.5	4.8	-3.7	-610
Elementary occupations	8.8	8.2	-0.6	371
All employment	100.0	100.0		6,339

Source: European Labour Force Survey

The demand for intermediate level skills has increased over time in the UK at least for people working in Technician and Associate Professional level jobs. From an international perspective, the share of the overall workforce working in these jobs is still relatively modest compared with other European economies (see Figure 1).

[1] These are the occupational titles used in the International Classification of Occupations 2008 (ISCO-08). ISCO has been used instead of the UK's Standard Occupational Classification (SOC) because international comparisons are provided in the paper.

Figure 1: Share of employment accounted for by Technicians and Associate Professionals in Europe, 2019



Source: European Labour Force Survey

4. Skill shortages and intermediate level skills

Skills shortages tend to be relatively high for intermediate level jobs. Table 2 presents information on the share of hard-to-fill vacancies and skill shortage vacancies by occupation. Skill shortage vacancies are defined as ones that have proved hard to fill because applicants lack the skills, experience, or qualifications the employer requires. Technicians and Associate Professionals and Craft and Related occupations stand out because the share of vacancies, hard-to-fill vacancies, and skill shortage vacancies is greater than the share of employment accounted for by each occupation. In the case of Technicians and Associate Professionals, the relatively high number of skill shortage vacancies is driven in large measure by the relatively high number of vacancies. The extent to which vacancies prove either hard to fill or result in skill-shortage vacancies is around about the average for all occupations. In contrast, employment in Craft and Related occupations has been in decline and the extent to which vacancies prove hard to fill or result in skill shortage vacancies is much higher than for all other occupations.

Table 2: Share of employment and skill shortages by occupation, 2019 (%)

	Occupation									
	Managers	Professionals	Technicians and Associate Professionals	Administrative/clerical staff	Craft and related Workers	Caring, leisure and other services staff	Sales/customer service staff	Machine operatives	Elementary staff	Total
Employment	17.6	13.2	6.8	12.7	7.4	8.7	12.5	8.5	12.5	100
Number of vacancies	3.0	14.8	15.5	9.1	10.2	14.0	10.8	7.6	15.1	100
Number of hard-to-fill vacancies	2.4	17.7	13.0	4.2	16.2	17.1	6.2	9.8	13.5	100
Number of skill shortage vacancies	2.7	19.6	12.4	4.3	19.1	15.9	5.8	9.3	10.9	100
Number of staff with skills gaps	8.5	9.0	6.5	11.0	8.3	7.1	17.7	9.3	22.6	100

Source: Employer Skills Survey 2019
Note: Employment numbers are different to those in Table 1 as they are drawn from different sources using slightly different occupational classifications.

5. How to stimulate demand and better match supply

From an international perspective, the demand for intermediate level skills in the UK is relatively modest compared with other countries. It is also evident that employers struggle to meet their demand for intermediate level skills currently. If demand for intermediate level skills were to be stimulated, it stands to reason that skill shortages will increase unless measures are taken to improve supply.

Over the past 30 or so years policy makers in the UK have been innovative in trialling a number of initiatives to stimulate the demand for skills and find the means for the supply side to suitably respond. Some of these provide a basis for thinking about how to both increase the demand for skills and simultaneously match supply to it. Looking to the future and the actions which might stimulate both the demand for, and supply of, intermediate level skills, there is scope for assessing how previous attempts to stimulate demand and improve supply might be built upon. With this in mind, the following need to be considered.

- How to incentivise employers to invest in the skills of intermediate level skills. Increasing the cost to the employer of providing intermediate level skills is unlikely to stimulate demand (as evidenced by the introduction of the Apprenticeship Levy) so there needs to be some way of minimising the risk

employers face when investing in training vis-à-vis appropriating the returns of the training they have funded.

- It is not all about employers. Individuals need to be empowered to invest in their skills (both those making the transition from education to work ad adult workers) so that they can make decisions about the skills they need. Individual Learning Accounts have the potential to fill this role, but it needs to be supported by careers guidance.
- Intermediate level skills demand cannot simply be left to the market to determine. This will result in supply meeting short-term goals at the national or local labour market levels and, in so doing, run the risk of doing little to ensure supply is better matched to demand over the longer-term and may well contribute to skills obsolescence. To avoid this occurring, there needs to be:
    - an industrial policy that seeks to stimulate the demand for certain kinds of skill and fund it; and
    - curricula need to be broad based to ensure that individuals possess the skills which allow them to acquire new skills and make labour market transitions where required (cf. T-shaped skill sets).

There are relatively easy changes which can be made over the short-term to remedy some of the problems mentioned above.

1. Empower individual workers to undertake training to update and reskill as necessary. Initiatives such as Individual Learning Accounts provide a means of achieving this goal.
2. Empowering individuals to undertake training will need to be supported by adult careers guidance available to people in work as well as those out of work.
3. Providing guidance to employers about the skills their workforces need to acquire to meet future changes in the demand for skills.
4. Encouraging employers to engage in training of a type which confers benefits on businesses and individual workers through incentives such as tax credits.
5. Reducing the net cost of apprenticeship training to employers to make them less risk averse when it comes to investing in this form of training.

The irony, perhaps, is that many of the building blocks are already in place or have been tested in the past (such as Individual Learning Accounts), it is just that their application to date has not necessarily resulted in the desired policy goals being met. The current danger is that a prolonged period of the economy being in the doldrums means that key investments in skills will not be made which will slow the pace of any recovery because skill shortages will constrain the productive capacity of businesses.

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