

Shortages, high-demand occupations, and the post-Brexit UK immigration system

Madeleine Sumption*

Abstract One of the key questions facing immigration policy-makers is which jobs should be eligible for work visas. This question has dominated discussions about the post-Brexit immigration system, which has focused in particular on the issue of shortages. While the UK government resisted calls to open labour migration routes in low-wage or low-skilled jobs with high demand for foreign workers, workers in middle- and high-skilled jobs that are deemed to face a labour market shortage can qualify with significantly lower wages. This paper examines the arguments for and against using immigration policy to prioritize labour migration in ‘shortage occupations’. It argues that the idea is politically appealing but problematic in practice. Shortages are more difficult to measure satisfactorily than policy-makers may imagine, and different methodologies produce different results. This makes it unwise to develop an immigration policy that depends too heavily on the notion that the shortage list is an accurate reflection of what is really happening in the labour market.

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JEL classification: F22, J61

I. Introduction

One of the flagship set of policies resulting from Brexit is the UK’s new immigration system. In January 2021, free movement of EU citizens ended and migrants coming to live or work in the UK have to apply for a visa under a new set of rules.

The new system follows several years of debate about what should replace free movement. Under free movement, EU citizens could work in any job without meeting skill criteria, and were overrepresented in low-wage positions where non-EU citizens were not eligible for visas (Sumption and Fernandez Reino, 2018). Policies towards non-EU workers had become more restrictive over time, following restrictions designed to cut net migration from 2010 onwards. Before the post-Brexit immigration system was introduced, non-EU citizens coming to work in the UK could get employer-sponsored work visas only if they were planning to take up graduate jobs earning at least £30,000 (with some exceptions, e.g. for nurses).

*The Migration Observatory, University of Oxford, UK e-mail: madeleine.sumption@compas.ox.ac.uk
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This left a big gulf between the roles that EU and non-EU labour migration were potentially able to play in the labour market, with a restrictive policy for non-EU citizens and a liberal one for EU citizens. One of the most important questions that the government therefore had to resolve when developing the new system was which jobs would be open to migrants on work visas under the new system that was no longer constrained by EU membership. (For a discussion of the broader issues facing the UK government in developing the post-Brexit immigration system, see [Sumption \(2017\)](#).)

The system the UK government ultimately chose brought EU and non-EU citizens newly arriving in the country under the same rules. While the system was widely branded as being an ‘Australian-style points-based system’, it is in fact structured as a relatively mainstream, employer-driven work permit system of the kind that exists in many countries around the world. Under this system, all work migrants must have a job offer that meets skill and salary requirements. These requirements are lower than they were for non-EU citizens under the pre-2021 immigration rules. In particular, the skills requirements were reduced to allow applicants in middle-skilled jobs (e.g. skilled trades and technicians), not just graduate jobs, and the salary threshold fell from £30,000 to £25,600. As a result, the new system represents a liberalization for non-EU citizens.

For EU citizens, on the other hand, the new system greatly reduces options for legal labour migration, effectively shutting out a large range of employers in low-wage industries from hiring EU citizens. Jobs classified as low-skilled are not eligible for employer-sponsored work visas, with the exception of one sector-specific scheme for seasonal agricultural workers. This does not mean that there can be no new migration of workers who will do low-wage jobs. There are some other work visa options, such as the Youth Mobility Scheme, which the government has said it will negotiate to expand to some EU countries; and many migrants in low-wage work are family members or refugees, not labour migrants. Nonetheless, pre-Brexit projections suggested that a majority of EU citizens who had arrived in the UK under free-movement rules would not have qualified for work visas in the new system ([Home Office, 2020a](#)). In some sectors, such as hospitality, food processing, and logistics/warehousing, some employers had built business models that were heavily reliant on the availability of EU citizens willing to work hard at relatively low wages.

As a result, the end of free movement should be expected to generate shortages, at least in the medium term before the labour market and industry composition of the economy are able to adjust—especially in industries that experience higher turnover of workers and rely significantly on newly arriving migrants rather than those already living in the UK. This, indeed, appeared to be the government’s plan. In its February 2020 policy statement, the Home Office said that it would not provide a route for low-skilled workers and said:

UK businesses will need to adapt and adjust to the end of free movement, and we will not seek to recreate the outcomes from free movement within the points-based system. As such, it is important that employers move away from a reliance on the UK’s immigration system as an alternative to investment in staff retention, productivity, and wider investment in technology and automation. ([Home Office, 2020b](#))

Despite pressure from many industries to provide work visas in some or all low-wage jobs, the UK government has to date stuck to this line. Discussing the UK’s post-Brexit

immigration system with cabinet colleagues in January 2020, the Home Secretary reportedly said that there would be ‘no carve-outs’ giving certain industries special treatment if their workers did not qualify under the skills-based selection system (Swinford, 2020).

At the high-skilled level, on the other hand, the situation is rather different, and there are quite a few ‘carve-outs’. In particular, the system puts much more emphasis on measures of shortage, to decide how high the bar (specifically, the salary threshold) should be for work visas. While most visa applicants face a salary threshold of £25,600 or the going rate for the occupation (which is defined as the 25th percentile), workers in shortage occupations can receive visas with salaries starting from £20,480. The government introduced this approach despite advice from its Migration Advisory Committee (MAC), which argued that salaries should not be lower for shortage occupations, as this would not help attract local workers into the occupation (MAC, 2020a).¹

In other words, one of the key questions at stake in the debate over post-Brexit immigration policy has been how much the immigration system should tailor eligibility to specific jobs or occupations (Sumption, 2017). Should governments be ‘picking winners’ in the immigration system, or putting in broad-based policies that treat most workers in the same way? This paper assesses this question. Section II discusses the appeal of occupation-specific policies and why governments might want to implement them. Section III examines the idea of shortage occupation lists, which are a key mechanism through which occupation-specific variation enters immigration systems. Section IV examines how information about shortage occupations can be used in work visa policies. Section V looks at alternatives to shortage lists, such as case-by-case assessment to identify recruiting difficulties at the firm level. Section VI concludes, arguing that while occupation-specific policies inevitably have some role in labour migration systems, they are less useful than it might on the surface appear.

II. What explains the appeal of occupation-specific work visa policies?

In theory, there are some ways in which we should expect the social and economic impacts of migration into different occupations to vary, and others in which we should not. For example, if we are interested in the fiscal impacts of migrant workers, the key factors affecting their impact will be their salary, age, and family structure, more than the occupation that they work in.² However, workers in some occupations may have larger positive externalities—the classic example being people working in R&D. Similarly, the perceived social benefits of some occupations will be greater—for example, there is a clear case to make in favour of the social benefits of workers involved in delivering public services.

¹ Note that the MAC recognized that there is a difference between lowering required salaries from, say, the 25th percentile to the 10th percentile (e.g. in the case of higher-paid occupations), and lowering them from the 90th percentile to the 60th percentile (e.g. in the case of lower-wage occupations). This is discussed further in section III.

² Note that workers in public-sector jobs may have fiscal impacts as a result of the job they are doing, if their presence reduces the cost of providing public services.

More broadly, if workers with certain skills are scarce in the local labour market, we might expect migrant workers with these skills to be more complementary with local workers and thus have more beneficial impacts on their labour market outcomes. Such complementarities may exist both within firms and between them, due to links between sectors within the supply chain. And some shortages may be more disruptive than others, if they have systemic effects on the rest of the economy, as discussions about a lack of heavy goods vehicle drivers in early 2021 illustrate (BBC, 2021).

In principle, this suggests that there could be a case for occupational variation in immigration policies, assuming that potential occupation-specific impacts like these can be accurately assessed (this is discussed in section III).

There are also some political reasons for the appeal of occupation-specific reasoning in the immigration system. First, the idea that immigration should be used to fill specific shortages or labour market needs is popular with the public. In a January 2020 poll, respondents were more likely to agree than disagree with the idea that ‘people willing to do low-skilled jobs where there is already a shortage of workers’ should receive priority under the new immigration rules (What EU Thinks, 2020a), even though survey respondents generally want to see ‘low-skilled’ migration decrease (see, for example, What EU Thinks, 2020b).

Second, opinion polling data suggest that people often feel differently about different occupations, even holding constant the skill classification. One reason for this is that members of the public may have different views from economists about what counts as skilled. Despite the general preference for low-skilled migration in generic terms to decrease, in a February 2020 poll most respondents said that ‘heavy goods vehicle driver’ was a skilled job (73 per cent), alongside farm workers (58 per cent) and care workers (67 per cent) (What EU Thinks, 2020c). None of these jobs are classified as skilled positions under the new immigration system, which is based primarily on Office for National Statistics skill classifications that assess the duration of training an occupation requires. The public may thus like to see special treatment for jobs that they perceive to be skilled while economists do not.

Another reason is that, as John Curtice (2020) has pointed out, public views about which workers should be a priority for admission do not just reflect economic criteria but also the social benefit or desirability of the job. For example, 60 per cent of respondents in a 2017 poll supported the idea of ‘special visas’ for EU citizens coming as care workers, compared to only 42 per cent for waiters and waitresses and 41 per cent for ‘bankers’ (What EU Thinks, 2017). Similarly, 61 per cent of respondents in a May 2020 poll agreed that the ‘Government should make some exceptions for people moving to the UK to do important jobs that need doing, such as nurses and care workers’ (Hewlett *et al.*, 2020).

Finally, the idea of using immigration to fill shortages in specific areas where the labour market ‘needs’ more workers may also appeal because of the appearance of objective, scientific measurement. Examining the political appeal of quantitative targets for migration, Boswell (2018) documents how their use of ‘quantitative techniques invokes deep-seated notions of rationality, objectivity and precision’. It is possible that something similar is going on in the case of shortage occupation lists, which promise to identify the parts of the labour market where migration is most needed. As Chaloff (2014) notes, shortage lists ‘communicate to the public that a migration system is selective and focused on specific skills’.

Occupation-specific policies also have some drawbacks, however. First, some ways of designing occupation-specific policies may have the unintended consequence of constraining workers' mobility within the labour market in lower-wage positions. In high-skilled jobs, there is a reasonable expectation that workers will typically remain in the same occupation, as this is where their skills lie. In lower-skilled positions, workers should in principle be able to move more easily between occupations, as long periods of training are not required. However, where there is a 'carve-out' providing visas for just a few types of work, workers who want to leave their employer or occupation may have nowhere else to go.

Second, occupation-specific policies increase the complexity of the immigration system by creating different rules for different types of workers. This may or may not be justified by the benefits of having such variation. Which brings us to the third challenge, which is that it can be very difficult to identify which jobs are the most worthy targets for labour migration. The next section turns to this last issue.

III. How can we decide which occupations to prioritize?

Let us assume the government has decided that it would like to prioritize migration into occupations that face a shortage of workers. How can this be done? The first step is to identify where the shortages lie.

In some countries, governments single out a small number of occupations for special treatment, without necessarily applying any sort of 'methodology' to decide which jobs this should be. For example, workers in science, technology, engineering, and maths (STEM) jobs often get an easier ride through the immigration system. In other cases, governments conduct a broader assessment to identify jobs that are perceived to experience shortages, creating a shortage occupation list (SOL). Many countries now have SOLs of some kind, including the UK, Australia, Ireland, France, and Austria. This makes shortage lists one of the major instruments through which occupational variation is introduced into immigration systems.

Attempts to direct migration to specific occupations that face a shortage are messier and less satisfactory in practice than it may seem at first glance, however. There are several reasons for this.

First, shortages are very difficult to define and measure. On paper, the concept of shortage is relatively clear: a shortage arises where demand exceeds supply. Economic theory predicts that many shortages should be short-lived, since employers will raise wages to attract more workers to the occupation; although it suggests that some shortages may persist for longer if workers wanting to enter the occupation need to train for a long time. In practice, there are other reasons for shortages. For example, wages may remain low in public-sector jobs because of the desire to control the cost of public services or private-sector jobs in industries driven by government spending, such as social care.

There are no direct measures of shortage. As a result, efforts to measure them systematically must rely on indirect and relatively crude indicators. In its first shortage occupation list in 2009, for example, the UK's Migration Advisory Committee, which advises the government on migration policy, set out four types of indicators: price-based (e.g.

data showing that earnings were rising); volume-based (e.g. data showing rising employment numbers and falling unemployment by occupation sought); employer-based (e.g. the share of vacancies that were classified in employer surveys as ‘skill shortage’ vacancies); and indicators of labour market imbalance (e.g. rising duration of vacancies) (MAC, 2009).³ These ‘top-down’, data-driven indicators were supplemented with qualitative evidence from stakeholders. Over time, the MAC methodology has evolved (see, for example, MAC, 2010, 2017) but the basic approach of combining quantitative indicators with stakeholder evidence has remained in place.

These quantitative indicators of shortage have significant limitations. One is that the data on which they rely are often not very precise at the occupation level. Ideally, analysis should examine relatively small groups of jobs that represent a single, coherent occupation in which workers have similar skills and thus could be considered substitutes. In practice, occupational categories can be quite heterogeneous, even at the lowest level of aggregation (in the UK, the ‘four digit’ level of the Standard Occupational Classification or SOC, which divides the labour market into just over 400 occupations). For example, the four-digit occupation ‘medical practitioners’ includes job titles that it could take years of training to switch between, such as GPs, anaesthetists, and psychiatrists.

While it may be desirable to look at specific job titles rather than occupations that combine many types of jobs, there will often be no data to do so. And for smaller occupations, even relatively large survey datasets may have just a handful of observations, so indicators based on them will come with a lot of noise—especially if one is trying to measure change in a variable over time.

In addition, labour market data are necessarily backward looking. There is often a lag of several months or longer before official survey data are published and ready for use. Combined with the fact that a full year of data (or perhaps more) may be needed to generate a large enough sample, this means that data being analysed will often be more than a year old. On the other hand, forecasting labour market trends is notoriously difficult, requiring many assumptions that may prove to be unfounded.

Another issue is that, conceptually, some of the quantitative indicators are more convincing than others. For example, if employment numbers in an occupation are rising, this could indicate high demand for workers, but it could also show that employers have been able to meet that demand satisfactorily. Rising wages could indicate a shortage, or could show that the labour market is already adjusting to resolve it. The MAC’s own analysis has found that there is little correlation between the indicators: occupations that score highly against one indicator will often not do so against another. The same analysis found that few of the indicators had any statistical relationship with a more direct (but less widely available) measure of shortage—i.e. the rate of ‘hard to fill vacancies’ in an occupation from an employer survey. Among other things, this means that the outcome of the shortage analysis will depend on the number of indicators and how they are weighted (MAC analysis weights them equally).

Second, qualitative evidence from business or other stakeholders is difficult to assess. The MAC takes into account stakeholder feedback when compiling the SOL—an

³ Disclosure: the author is a member of the Migration Advisory Committee. The views in this paper are purely those of the author and can in no way be taken to reflect the position of the MAC. Note also that all the MAC-related information on which this paper draws is in the public domain.

approach also used in other countries, such as Australia. For example, the MAC looks for convincing evidence that shortages are beyond individual employers' control (MAC, 2009, p. 59). Employers may argue that they have found it difficult to recruit in particular occupations, providing reasons ranging from insufficient training of local workers to 'image problems' in certain occupations that local workers reportedly do not find desirable (MAC, 2018a). However, employers' reports cannot necessarily be taken at face value. This is not just because employers are lobbying for easier access to migrant workers and thus have an incentive to overstate the recruiting difficulties they face (although this is presumably also the case). Employers' assessment of what kind of applicant pool they should expect is also fundamentally subjective. As Martin Ruhs and Bridget Anderson (2010) argue, "'what employers want' can be critically influenced by what employers 'think they can get'". If employers believe there is a skills shortage, it may be that they need to lower their expectations (Cappelli, 2014). Indeed, there is evidence that employers raise their expectations of job candidates when unemployment is high and they have more choice (Modestino *et al.*, 2020). This creates limits to what we can expect from the process of asking employers whether they are finding it hard to recruit the workers they want.

Stakeholder evidence is often inconsistent with the quantitative data (MAC, 2010). This may be because stakeholders face shortages for specific job titles but not necessarily the occupation as a whole, or because employer claims are difficult to corroborate using available representative data sources (*ibid.*).

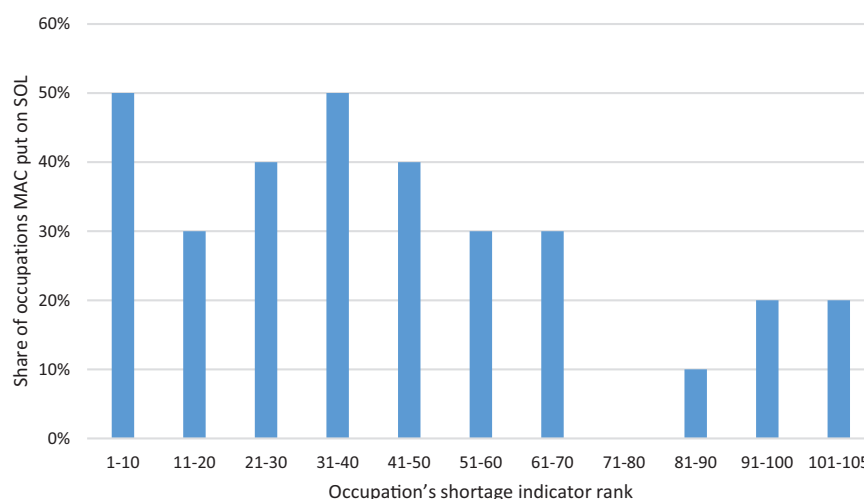
Third, there is no absolute threshold for determining where mild recruiting difficulties turn into severe ones, and at what point on this continuum one can say that there is a shortage. In principle, fewer occupations should be on a shortage occupation list during an economic downturn, but data-driven attempts to identify shortages implicitly rank occupations against each other (e.g. identifying whether wage growth is *higher* in occupation X than across the labour market as a whole). Ultimately, some subjective decisions will be required to determine roughly how many occupations should be on the list at any given point in time.

These and other factors mean that the process of determining where shortages exist is a subjective exercise—probably more so than politicians and members of the public appreciate, given that they do not see the inner workings of the proverbial sausage factory.

The fact that determining shortages is not a purely statistical exercise is illustrated by the substantial difference between what quantitative indicators say about an occupation and what the MAC actually decides to put on the shortage occupation list. Figure 1 shows data for 105 skilled occupations reviewed by the MAC in 2019. All occupations were assigned a shortage indicator 'rank', based on how highly they scored on the quantitative indicators of shortage, where 1 is the highest (most likely to face shortage) and 105 is the lowest (least likely).

There is some relationship between whether the quantitative indicators suggested there might be a shortage, and whether the MAC (taking into account both the data and other factors including stakeholder evidence) actually put it on the SOL. However, a majority of the top 20 occupations in the indicator ranking were not put on the list, while 20 per cent of those in the bottom 25 were included. This is consistent with previous MAC (2009) analysis showing a weak relationship between the statistical indicators and the outcome of the SOL review, which concluded that 'the quantitative

Figure 1: MAC decisions to put occupation on SOL, by quantitative shortage indicator rank (shortage list review 2019).



Source: MAC (2019).

evidence has little influence on whether a job title is recommended for inclusion on the SOL' (ibid, p. 363).

We cannot say from these figures alone whether the statistical indicators are inaccurate, nor whether the MAC does a better or worse job than the indicators in determining where shortages actually lie. Some of the discrepancy may result from the fact that the MAC not only considers whether the occupation is in shortage, but also whether it is 'sensible' to address the shortage using migration. What the data do show, however, is that there is substantial disagreement between a numbers-only approach and an expert-driven approach. At the very least, it should make us cautious about assuming that any shortage occupation list represents any sort of objective statistical 'truth' about what is happening in the labour market at any given point in time.

IV. What can we actually do with information about occupational shortages?

It is not clear exactly what one should do to immigration policy after determining which occupations appear to face a shortage.

First, there is a reasonable debate to be had about whether immigration policy should actually facilitate migration into areas of shortage in the labour market at all. On one hand, doing this could have benefits because if local workers are scarce, new workers joining the labour market may be more complementary to them. Shortages in certain occupations may also have damaging social consequences, particularly in the case of public-service workers in health and social care.

On the other hand, encouraging immigration in response to shortages may discourage natural adjustment in the labour market. For example, economic theory predicts that

employers faced with shortages will raise wages or improve job conditions to attract more workers, or adjust their production methods to rely less intensively on workers who are scarce (e.g. through automation or changing the output mix); these adjustments may be less efficient if shortages are immediately met with more migration. The UK approach requires the MAC to consider not just whether there is a shortage, but whether it would be ‘sensible’ to address that shortage by facilitating labour migration—although, again, this is a rather subjective judgment on which reasonable people may disagree.

Regardless of these debates, many countries do now take the position that migration into shortage occupations is a good thing. A typical approach is to remove administrative burdens or costs that would normally apply to work visas, such as fees, requirements to conduct a labour market test, or numerical restrictions (Chaloff, 2014). The more restrictive the overall work visa policy, the more meaningful these benefits will be. So, for example, in the UK the advantages of being on the shortage occupation list were relatively small for most of the 2010s, but increased a lot when the numerical cap on skilled work visas became binding in 2015 (Migration Observatory, 2015). It then decreased again when the government effectively abandoned the cap policy by exempting doctors and nurses in 2018 (Migration Observatory, 2018). At the extreme, the government could in theory require that *all* work visas are for occupations deemed to be in shortage. In practice, the share of workers migrating into ‘shortage occupations’ in OECD countries is often small (Chaloff, 2014), although Australia provides an outlier in which occupational lists are hugely important and some high-skilled workers in occupations that are not deemed to be ‘in demand’ are unable to get a permanent residence at all.

In theory, the less confident we are that the shortage list is an accurate reflection of employers’ actual need for foreign workers, the less weight we should give the shortage list in the immigration system. For example, saying that employers can *only* sponsor workers in shortage occupations may be problematic if the shortage list omits many occupations where employers do in face considerable difficulties recruiting from the local labour market.

(i) The UK shortage list

Being on the shortage list has quite a big impact in the post-Brexit immigration system, because the salary requirements—which are the main mechanism the UK uses to regulate work visa eligibility—are considerably lower in shortage occupations.

In jobs that are not on the shortage occupation list (SOL), employers must pay at least £25,600 or the 25th percentile for the occupation, whichever is higher. For occupations deemed to be in shortage, required pay is 20 per cent lower and the £25,600 threshold no longer applies. (Shortage occupations face an overall floor of £20,480 instead.) Salary thresholds for selected shortage and non-shortage occupations as of March 2021 are in Table 1.

A 20 per cent reduction in the salary requirement as a result of being on the shortage occupation list can push the required salary quite far down the distribution, from the 25th percentile where it would usually stand. For example, being on the SOL would lower the salary threshold for IT technicians to the 12th percentile for the occupation;

Table 1: Salary requirements for selected occupations under the Skilled Worker route, September 2021

	Going rate if not on SOL	Going rate if on SOL	Actual rate, April 2020
Occupations on the shortage list			
Civil engineers	£35,000	£28,000	£28,000
Veterinarians	£32,500	£26,000	£26,000
Web designers	£26,000	£20,800	£20,800
Senior care workers	£16,900	£13,520	£20,480
Lab technicians	£18,200	£14,560	£20,480
Occupations not on the shortage list			
Pilots	£60,800	£48,640	£60,800
University lecturers	£40,700	£32,560	£40,700
Accountants	£30,000	£24,000	£30,000
Electrical technicians	£28,100	£22,480	£28,100
Hotel managers	£21,800	£17,440	£25,600
Fitness instructors	£15,600	£12,480	£25,600

Source: Immigration Rules Appendix Skilled Occupations (<https://www.gov.uk/guidance/immigration-rules/immigration-rules-appendix-skilled-occupations>) and Appendix Shortage Occupation List (<https://www.gov.uk/guidance/immigration-rules/immigration-rules-appendix-shortage-occupation-list>).

for welders and electricians to the 13th percentile; and for bricklayers to the 15th percentile (MAC, 2020b). These are relatively high-paying occupations in which the £25,600 threshold is not binding.

In occupations where the £25,600 threshold is binding, however, it can be the case that only the very highest paid positions in the occupation would be eligible for visas if the occupation is not on the SOL. For example, for lab technicians the £25,600 general salary threshold is close to the 75th percentile (ONS, 2020), while the decision to add the occupation to the SOL in 2020 reduced the salary requirement to the 41st percentile (MAC, 2020a). Similarly, being on the SOL reduced the salary threshold for senior care workers from around the 75–80th percentile (ONS, 2020) to the 54th percentile (MAC, 2020b).

In other words, the post-Brexit immigration system puts a fair amount of emphasis on the shortage occupation list. For middle-skilled occupations that typically command salaries in the £20,000 to £25,000 range, whether the occupation is on the SOL can have a substantial impact on whether it is realistically feasible for most employers to use the work-visa route at all.

This means that despite claims there would be ‘no carve-outs’ for particular occupations under the new system, there are in fact quite a few. The SOL in one sense brings in occupation-specific carve-outs though the back door. Before discussing the implications of this, it is worth reviewing the alternative options for making decisions about which jobs should be eligible for work visas. First, I discuss options for case-by-case, rather than data-driven, assessment. Then I discuss the option of ditching the concept of shortage altogether.

V. Alternatives to the shortage occupation approach: labour market testing and visa fees

A completely different way of assessing whether an employer who wants to hire a migrant worker faces a shortage is to do so case by case.

One such approach is the ‘labour market test’ (see [Ruhs \(2013\)](#) for a discussion). Labour market tests require employers to attempt to hire local workers, and then issue a work visa for a specific position only if that attempt fails. The idea behind the policy is that rather than relying on high-level analysis of where shortages lie, we can examine the circumstances facing the specific employer and see whether they actually faced difficulties recruiting locally. This avoids the problem of shortage lists failing to capture the heterogeneity within occupations, as well as possible local and regional variation in the availability of workers.

However, employers have an incentive to fail the labour market test that they themselves conduct. If they can show that no local workers were available, they gain the right to bring workers from abroad. The government is not likely to have the expertise to know whether specific workers were in fact qualified for a given role, and in any case cannot force employers to hire any specific local worker. As a result, employers may simply claim that applicants were unqualified. Some countries have tried to address this information asymmetry with quite intrusive, hands-on government oversight of the recruitment process. For example, employers in Canada are required to offer an interview to all job-seekers on the government jobs database that its algorithm deems match the requirements; certain US employers of low-wage workers are subjected to ‘supervised recruitment’ in which a government officer can decide where jobs postings should be placed, and the employer must name each US applicant and justify why there were not hired. Other countries such as Sweden, by contrast, implicitly accept the limits of attempting to direct employers’ recruitment processes, and instead simply require the employer to show that they advertised the job.

There is essentially no empirical evidence on whether labour market tests work. While it is possible that labour market tests ‘nudge’ some employers towards hiring domestic workers by slightly, or in some cases significantly, increasing the hassle and time associated with hiring foreign workers, it is also plausible that they have little impact at all.

An alternative way to encourage employers to hire local workers is to increase the costs of work visas. Rather than putting in place a labour market test that may or may not work, governments can simply charge a fee. This strategy is already in place in the UK, where employers pay £1,000 per year for each worker on a skilled work visa, and also shoulder the significant administrative burden associated with being a sponsor. Some other countries have made extensive use of fees, such as Singapore which has a complex system of ‘foreign worker levies’ that are highest for the workers the government least wants to attract (e.g. the lowest skilled or workers in particular industries).

In theory, increasing the cost of the visa should deter employers from hiring foreign workers in cases where they could have hired locally. In practice, this effect may not be particularly ‘clean’. Some employers will be able to pass on the cost to employees by paying a lower salary (if they are paying above the minimum salary required for the occupation). Some employers will be unable to afford the fees and thus not sponsor foreign workers even if they face a shortage. Companies’ ability to pay the fee might vary with factors such as their size, regardless of whether they actually face recruiting difficulties.

In other words, there are case-by-case approaches that can be used instead of shortage lists to attempt to identify employers facing recruiting difficulties, but they too are likely to provide a relatively inaccurate indication of the real labour market situation an employer faces.

VI. Conclusion: should governments abandon the quest to fill shortage occupations?

Both shortage occupation lists and case-by-case assessments using labour market tests or visa fees are premised on the idea that immigration should be targeted towards areas of ‘need’ or ‘deficit’ in the labour market. These approaches assume that, in most cases, employers should prioritize local workers but that where there are ‘not enough’ local workers (however defined), foreign workers should be recruited instead.

In theory, foreign workers entering occupations where there are shortages should be more complementary to local workers and thus less likely to displace them in the labour market, as noted earlier. However, there is little empirical evidence that migrant workers do reduce labour market opportunities for local workers (for a review, see [MAC \(2018b\)](#)). And some of the potential economic benefits of migration, such as fiscal contributions, broadly speaking do not depend on whether the occupation meets a strict definition of shortage. As long as we assume no displacement of local workers, migration of sufficiently highly skilled people may have net benefits regardless of whether the occupation faces a shortage.

An alternative to conceptualizing labour migration as a way to fill shortages is thus to look more broadly at the potential *benefit* of admitting foreign workers, rather than focusing narrowly on whether there appears to be a shortage.

There are different ways of implementing this approach in practice. One option is to have no occupation-specific prioritization at all, but choose broad-based criteria such as salary or overall skill level and otherwise apply the same policy to all occupations.

Another option is to introduce occupational variation but use a different concept to identify occupations that should receive special treatment. This would be a subjective exercise and not one that could easily be branded as ‘scientific’ in the way that shortage lists tend to be. Many countries already have this kind of approach. For example, it is quite common for STEM workers to get special treatment in the immigration system on the assumption that these individuals are particularly beneficial from an economic perspective. Similarly, some countries have special routes for care workers, reflecting the social importance of this work ([Desiderio, 2021](#)). When occupations are prioritized in this way, it is often relatively narrow (i.e. just a few occupations) rather than the dozens of jobs that appear on shortage lists such as the one in the UK.

Would this be preferable to using the shortage list approach? In part this depends on whether we think that shortage lists are actively damaging, rather than simply unnecessary. One cost that shortage lists have is unpredictability. Shortage lists are based on an assessment of the labour market at a given point in time, and the expectation is that this should change on a relatively regular basis (even if in practice many occupations remain on shortage lists for long periods). Indeed, being frequently updated and thus reflecting the most recent data will generally be seen as a virtue by people who trust shortage lists’ content. However, it also means that occupations may come on and off the list, making it harder for employers to plan ahead and understand their eligibility.

Beyond that, whether implementing a shortage list that may be inaccurate is economically costly may depend on how important the list is in immigration policy. In a worst case scenario (e.g. Australia), some occupations may become entirely ineligible for certain visa types. This would have economic costs if it means that workers who would have brought economic value despite not facing a shortage—or, at least, not being perceived

to face a shortage based on the imperfect tools available to governments—are excluded. On the other hand, if the value of being on the list is relatively small (e.g. exemption from a labour market test or a slightly lower fee), having a shortage list may make little difference and may perhaps be worth it purely for the symbolic or political benefits.

At least for some lower-paid skilled jobs (with salaries in the £20,480 to £25,599 range), the UK post-Brexit system is quite consequential: that is, the reduction in the salary for shortage occupations is so significant that occupations essentially *need* to be on the list if employers can reasonably hope to hire foreign workers. At least in the short term, the likely policy counterfactual in the absence of a shortage list would be that all occupations would have to meet the £25,600 threshold.⁴ The practical consequence of having a shortage list in the UK's post-Brexit immigration system is thus to have more immigration of workers in the £20,000 to £25,000 salary range. The impacts of this may be important for employers recruiting for those jobs, although at the aggregate level they are likely to be relatively small. A second consequence is to lower salary thresholds by 20 per cent for higher-paid positions that already meet the £25,600 requirement and instead face a 'going rate' at the 25th percentile for the occupation. If employers actually reduce salaries in response to this lower threshold (this is an empirical question), the impact would be a slight reduction in the fiscal benefits of admitting the worker.

Finally, whether to use shortage lists—as opposed to broader-based approaches that treat most occupations the same but perhaps single out a few occupations for special treatment—has implications for who takes decisions and how. Shortage lists arguably encourage a more technocratic, data-driven approach to determining which occupations to prioritize. In the UK, this is done by relying on the independent Migration Advisory Committee; the government decides whether to accept the recommendations but usually does so in full.⁵ In other countries (e.g. Australia), shortage lists are produced by government departments, based on data analysis and stakeholder evidence. By contrast, decisions about which occupations to prioritize (be it STEM workers, carers, or others) are more likely to take place at the political level. This does not necessarily mean that the decisions will be less valid or reasonable especially if they are informed by expert advice and evidence-gathering. Indeed, this approach may be politically less appealing than having a shortage list, but perhaps intellectually more honest. After all, the decision what is really a 'priority' is as much about values as it is about labour market data, and this reality cannot be wished away by getting experts to crunch numbers.

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⁴ Unless a different exemption applies, such as being a public-service occupation with agreed pay scales; this includes teachers and various NHS positions.

⁵ In 2020, the government decided not to implement MAC recommendations to add a significant number of middle-skilled jobs to the shortage list, because of the uncertainty resulting from the Covid-19 pandemic. In most cases, however, the recommended list has been accepted in full.

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