

Regional development through freeports: An evaluation of the local employment effects of the East Midlands Freeport¹

Abstract

Freeports have been reintroduced in the UK as part of the post-Brexit levelling up agenda. Although freeports have the potential to create jobs, the evidence is mixed. Using scenario analysis, this study assesses the employment effects associated with the East Midlands Freeport. The results for the core scenario suggest that the freeport increases the number of jobs in the D2N2 region with a high proportion of jobs created in the high-skilled occupation categories. In evaluating the sensitivity of the number of jobs created, changes to key parameters indicate that the freeport will create fewer jobs the lower the occupancy rate and the higher the displacement rate. In evaluating the sensitivity of the type of jobs created, modifications to the sectoral mix indicate that the number of high-skilled jobs is reduced if the site is logistics-oriented or is more broadly defined in line with an inclusive growth strategy. In showcasing the quantity and the quality of labour effects of freeports, the findings are informative of policy design and the tensions in striking a balance between maximising the occupancy rate versus greater selectivity towards higher-quality jobs; minimising displacement effects, whether regional or national; and targeting growth-driving priority sectors versus an inclusive industrial strategy that better matches the region's sectoral strengths.

JEL Classification: O18; R23; L52

O18 Urban, Rural, Regional, and Transportation Analysis; Housing; Infrastructure
R23 Regional Migration; Regional Labor Markets; Population; Neighbourhood
Characteristics L52 Industrial Policy; Sectoral Planning Methods

Keywords: Employment outcomes, East Midlands Freeport, Scenario analysis, Regional development

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¹ The views expressed in this paper are those of the authors and do not represent the views or policy of any employing organisation or stakeholder involved in the development of the East Midlands Freeport. The analysis presented in this paper is based wholly on documents and data available in the public domain.

Introduction

In March 2021, eight successful bids for freeport status in England were announced, having been selected from a pool of 18 applicants. As part of a strategy of stimulating economic activity including trade, investment and employment, freeports are typically located close to important transport such as major seaports and international airports. Seven of the freeport sites are located near ports while the only inland freeport is located in the East Midlands (see the Appendix Figure A1 for a map of the eight freeport locations).

Falling under the umbrella term of special economic zones (SEZs), a freeport is a designated geographical area within a country where different tariffs, taxes and regulations apply (HC, 2021).² An SEZ typically allows goods to be imported, manufactured, stored and re-exported using lower rates of tariffs (a tax on imports) and lower rates of taxes, for example, property taxes (on new buildings within the site), employment taxes (national insurance contributions) and consumption taxes (value added tax).

The concept of freeports is not new. Since the first modern free trade zone at Shannon Airport in Ireland in 1959, SEZs have proliferated across the globe, especially after China embraced them in the 1980s. Ranging from the global trade powerhouses of China's Shenzhen SEZ and Dubai's Jebel Ali Free Zone to the world's largest freeports of art collections at Geneva and Zurich, the number of SEZs in the world has grown rapidly to more than 5,000 with many more planned (UNCTAD, 2019).

Freeports have previously existed in the UK. Seven freeports were set up during the 1984-2012 period, but were phased out when the legislation that established them expired in

² See the Appendix Table A1 for a list of the different types of SEZs.

2012. The main incentives of the freeports included duty and value added tax (VAT) suspension and duty inversion for goods processed at the freeport sites for re-export to other countries.³ The effectiveness of the freeports, however, was limited by their narrow scope that was defined mainly in terms of customs benefits with few incentives in relation to taxes, spending, planning or innovation (HC, 2021; Webb et al., 2023). Other characteristics of the original freeport policy included the designation of port boundaries (rather than regeneration of an area), single sites (with no scope for multiple sites) and non-interaction between the sites (HC, 2021; Webb et al., 2023). Similar initiatives, known as enterprise zones, were also put in place during the periods 1981-1996 and 2012-2016 (see the Appendix Table A2 for the list of UK-based SEZ initiatives).

The previous rounds of freeports and enterprise zones were set up while the UK was a member of the EU. The trade-related benefits of industrial zones within the EU, however, are limited because EU rules on state aid do not allow imported goods to be processed free of duty for the home market.⁴ Therefore, the post-Brexit benefits of freeports are likely to be greater depending on the degree to which the UK diverges from EU rules on state aid.

As part of the post-Brexit levelling up agenda, freeports were reintroduced with the aim of attracting investment into deprived areas that have lower levels of income and employment.⁵ Specifically, the main objectives of freeports are to (1) promote regeneration

³ As some final goods incur lower tariffs than the components used to make them, tariff inversion refers to a situation in which the component parts can be imported into SEZs tariff-free and are then processed and sold as a finished product with a lower tariff rate (Serwicka and Homes, 2019).

⁴ Urban enterprise zones offering tax and social exemptions to revitalise the local economy are allowed under EU state aid rules on the grounds that they have limited effects on trade between member states (Corruble, 2021). In contrast, a broader set of incentives that combine logistical advantages with exemptions from taxes, social charges and customs duties are liable to induce unfair competition and affect international activity.

⁵ The UK is the most regionally unequal major economy in Europe (Forth, 2021) and performs poorly on many economic indicators including the labour market (wages and employment rates), health, education and productivity (IFS, 2020). There are also sharp divisions along social dimensions, including class, ethnicity, race and gender (Hudson, 2022; Martin et al., 2022). In an attempt to narrow the gap between rich and poor areas, the policy of levelling up is designed to address the UK's regional economic disparities with specific measures geared towards the left-behind places (Liddle et al., 2022; Cotton et al., 2024). Specifically, 12 strategic missions are set out covering living standards, research and development (R&D), transport infrastructure, digital connectivity, education, skills, health, well-being, pride in place, housing, crime and local leadership (HM Government, 2022). Of particular focus is employability and support for skills development.

and create high-skilled jobs; (2) establish national hubs of global trade and investment; and (3) create hotbeds of innovation (HM Treasury, 2020).

In contrast to the previous round of UK freeports that focused mainly on customs measures that were similar to other schemes, the new round of freeports comes with a substantial package of incentives (Adam and Phillips, 2023). These incentives include customs benefits (simplified procedures and exemptions from customs duties); tax incentives (stamp duty land tax relief; business rates relief; employer national insurance relief; capital allowances on qualifying investment in plant, machinery and buildings); and location-specific measures (seed capital for investment in infrastructure; enhanced trade promotion and support for innovation).

In practice, the operation of freeports and similar spatially targeted initiatives present a number of challenges. There can be tensions between commercial imperatives to maximise occupancy in the short-term and wider industrial and economic development policy objectives such as supporting the growth of priority sectors or promoting ‘inclusive growth’ in the long-term. In this context, the contributions of this study are two-fold. First, using scenario analysis, the employment effects associated with the East Midlands Freeport are assessed. Evidence from an individual freeport is important given the recency of the freeport policy. As the UK’s only inland freeport, the East Midlands Freeport consists of three sites situated across three counties (see the map in the Appendix Figure A2). Located in the heart of the UK with multimodal transport connections comprising road, rail and air linkages to the rest of the country and the rest of the world, the East Midlands Freeport is uniquely placed to maximise the region’s commercial strengths.⁶

⁶ Drawing on its geographic advantages and transport linkages, it is no surprise that the East Midland’s motto is ‘centrally located, globally connected’.

Second, employment is of particular interest in line with the leading policy objective of the current round of UK freeports and the key metric in determining the success of freeports (HC, 2021). The core scenario models the forecast number of jobs (the quantity of labour effect) and the breakdown of jobs by sectors and occupational categories (the quality of labour effect). Variations of the core scenario evaluate the number and type of jobs depending on the occupancy rate, the displacement rate and the sectoral mix (reflecting the logistical orientation of the site and an inclusive growth strategy). The employment outcomes are forecast at a local level, defined in terms of the East Midlands Combined County Authority (EMCCA) that encompasses the four local authority areas of Derby, Derbyshire, Nottingham and Nottinghamshire, also known as the D2N2 region.

The paper is structured as follows. The next section reviews the literature on the employment-related benefits and costs of freeports. The Methodology section provides an overview of scenario analysis and the assumptions underpinning the core scenario. In the Results section, the job-related outcomes are split between the core scenario and variations of the core scenario that evaluate the forecast employment outcomes depending on the occupancy rate, the displacement rate and the sectoral mix of the site (a logistical orientation of the site and a broader sectoral mix aligned with an inclusive growth strategy). The last section concludes and outlines some key policy implications.

Literature Review

Focusing on the employment consequences of freeports, this section provides an overview of the employment-related benefits of freeports and discusses the issue of whether the jobs are additional or are displaced from elsewhere. Moreover, creating jobs is not for free; jobs associated with freeports come with a variety of costs that protect their extraterritorial status. Several hypotheses relating to the number and type of jobs are then set out.

Employment benefits of freeports

In developing the policy of enterprise zones as a remedy to Britain's inner-city crisis, Hall (1982) conceptualised the link between enterprise zones and employment based on a free market approach to urban development. Accordingly, trimming business taxes and simplifying planning regulations in highly depressed areas can lure in firms to invest and create (low-wage) jobs. Although the relocation of firms can take activity from other places, in net terms the benefits of attracting unemployed inner-city residents into the labour market should outweigh the downside of displacing workers who find alternative jobs in more prosperous areas (Chaudhary and Potter, 2019). Opportunities for new jobs arise from two main sources (Granger, 2012; Chaudhary and Potter, 2019). First, the relocation of firms can promote the expansion of firms and hence, generate new jobs. Second, the enterprise zone can generate new activity by stimulating small business start-ups that evolve into more established firms over time.

While the traditional competitive edge of many SEZs is lower labour costs (UNCTAD, 2019), the target industries of more recent SEZs involve higher-skilled labour. Therefore, SEZs not only create new firms and new jobs, but also can facilitate the transfer of skills and technology (CIIP, 2017). Beyond the boundaries of SEZs, economic activity is also fostered by synergies, networks and knowledge spillovers (CIIP, 2017).

An expanding literature has assessed the employment effects of SEZ initiatives. According to FIAS (2008), SEZs account for over 68 million direct jobs globally. The evidence that SEZs create jobs, however, is not unambiguous. In evaluating the literature on area-based initiatives for the OECD countries (mostly US and French SEZs), the WWCLEG (2016) note that more than half the studies have found a positive effect on employment. In analysing enterprise zones for the UK, the US and France, similar findings were obtained by Chaudhary and Potter (2019).

In highlighting the influence of local geography on labour market outcomes, Briant et al. (2015) find in favour of more jobs in spatially integrated neighbourhoods and higher earnings in spatially isolated neighbourhoods using difference-in-difference estimation. Mayer et al. (2017) also find a positive effect on employment that is especially pronounced for low-wage jobs. For Polish SEZs, Ciżkowicz et al. (2017) find a strong positive effect on employment for the host county and neighbouring counties using firm-level panel data while Jensen (2018) also confirm a positive employment effect.

Neutral employment effects have also been found mainly in relation to US enterprise zones, implying that enterprise zones are ineffective in achieving their primary goal (Bondonio and Engberg, 2000; Greenbaum and Landers, 2009; and Neumark and Kolko, 2010).

For UK policy initiatives, the evidence on the job-related outcomes is underwhelming. While the first programme of enterprise zones (1981-1996) brought about the redevelopment of derelict areas, the goal of generating jobs was largely unsuccessful (Rubin and Richards, 1992). Although property-based subsidies can regenerate deprived areas, the main beneficiaries of the capital allowances and business rate exemptions were land and property owners rather than the local areas (Larkin and Wilcox, 2011; Wainright, 2012).

An evaluation by PA Cambridge Economic Consultants (1995) was more sanguine. At the end of the 10-year designation, up to 126,000 jobs were created across 5,000 firms. After allowing for deadweight and displacement as well as short-term multiplier effects, the net additional jobs in the local area amounted to 58,000.⁷ Larkin and Wilcox (2011),

⁷ Applying the definitions of HM Treasury (2022) to employment outcomes, additionality refers to an increase in jobs that would not have occurred without the intervention. Deadweight refers to jobs that would have occurred without the intervention. Displacement is the extent to which an increase in jobs associated with the intervention in a target area is offset by a decrease in jobs elsewhere.

however, argue that the actual number of additional jobs was much less owing to the relocation of firms from other UK areas.

In this vein, Ward (2023) distinguishes between firms that relocate from outside the area and create new jobs versus existing local firms that relocate to the enterprise zone to take advantage of financial incentives while keeping their existing workforce. Along these lines, Potter and Moore (2000) show that one-third of surveyed firms involved short-distance transfers, implying sizeable displacement of activity within the local area. On the whole, the main consequence of the programme was the relocation of existing firms from outside the zone area to inside it at the expense of substantial public sector investment (Rubin and Richards, 1992).

For the second round of enterprises (2012-2016), initially high expectations soon waned. At the time of the policy announcement, estimates put the overall number of jobs at 54,000, but the numbers were later revised down to between 6,000 and 18,000 jobs (NAO, 2013). The revised estimates were confirmed by Swinney (2019) who showed that there were 17,500 more jobs within the 24 enterprise zones in 2017 compared with 2012 (when they became operational). A breakdown of the jobs data by sector and skill-level indicated that the jobs were skewed heavily towards low-skilled activities in local services. Moreover, splitting the new firms within the enterprise zones into two groups (firms that did not exist before 2012 and firms that existed elsewhere) suggested that a third of the jobs created were displaced from the local area or from elsewhere in the UK.

In explaining weak job creation, Tyler (2015) notes that property-led development and regeneration takes time to deliver outcomes. Over time, the wider benefits of enterprise zones include improvements to infrastructure and transport linkages as well as raising the profile of the area so as to attract more activity (Swinney, 2019). In the long-term, the shift of enterprise zone policy from a demand-led approach to a more supply-side oriented model

bodes well for the role of enterprise zones as a strategic place-based policy (Hooton and Tyler, 2019).

For the latest round of UK freeports, ambitious employment estimates range from 86,000 (Sunak, 2016) to 150,000 new jobs (Mace, 2018).⁸ As pointed out by Serwicka and Holmes (2019), the (flawed) calculations for the former take the total number of jobs for the US enterprise zones and adjust them for the size of the UK labour force while the calculations for the latter represent an optimistic scenario. The assumption that all the jobs are additional is also highly questionable.

Employment projections are also available for individual policy initiatives. For example, survey evidence from the first round of enterprise zones concluded that Swansea achieved modest success in terms of the growth in the number of firms although its capacity to generate employment was limited (Bromley and Morgan, 1985). In contrast, London's Isle of Dogs was effective in attracting investment and jobs (Larkin and Wilcox, 2011).

Employment costs of freeports

Of course, enticing private-sector firms into freeports to create jobs is not for free; substantial amounts of public-sector money is required. Specifically, initial set-up costs typically involve considerable upfront capital investment on construction and machinery while ongoing costs include hefty forgone tax revenues on capital allowances, business rates relief and other tax breaks that protect the extraterritorial status of SEZ initiatives (Larkin and Wilcox, 2011; Barnard et al., 2021).

For the first programme of enterprise zones, the annual public sector cost for each additional job was estimated at £17,000 (PA Cambridge Economic Consultants, 1995). In an earlier study, Rubin and Richards (1992) note that the cost per job for UK enterprise zones was up to four times higher than the more successful programmes in the US, implying that

⁸ Note that employment objectives were not attached to the first round of UK freeports (1984-2012).

the UK enterprise zones are less cost-effective. Indeed, the cost per job of UK enterprise zones was much higher than other UK programmes in place at the time, for example, the Future Jobs Fund and the New Deal for Young People (Larkin and Wilcox, 2011). Nevertheless, Potter and Moore (2000) argue that the cost per job is acceptable on the grounds that the high costs of earlier programmes involved large capital expenditures on improving derelict land.

Looking ahead, the current round of freeports is expected to cost about £50 million a year, with the largest costs attributable to employer national insurance and business rates relief (OBR, 2021). The cost of freeports matters. So too do the benefits of freeports and the value for money principle that compares the two. High ongoing costs may well offset the economic benefits of local employment and regeneration (Barnard et al., 2021) and thereby undermine the value for money principle of the policy. Therefore, the expected benefits of freeports should be proportionately greater than the loss of tax revenues.

Naturally, the costs associated with different tax reliefs depend on their take-up rate. During the second round of UK enterprise zones, the low take-up rate meant that the actual cost was only one-quarter of the original estimated costs (OBR, 2021). The lower the take-up rate, the smaller the overall costs and the greater the dampening effect on the expected performance of freeports. Of course, the costings also depend on whether the take-up of incentives generates additional economic activity or otherwise (OBR, 2021).

On the whole, the latest round of UK freeports should be more cost-effective than earlier programmes because policy objectives have shifted away from expensive physical regeneration of derelict land and brownfield sites towards priorities of firm growth and job creation in urban areas (Larkin and Wilcox, 2011). At the same time, recent changes to the

tax system in the UK (including increased employer national insurance contributions)⁹ and greater uncertainty in the international trading system (emanating from the imposition of higher tariffs on imported goods by the US Administration) will likely increase the take-up rate and hence, the overall costs of freeports.

Freeports can incur additional costs in the form of tax evasion. They can also induce illegal activities, for example, money laundering and the trade of counterfeit goods. In contrast to traditional freeports that offer temporary tax-free and duty-free storage for merchandise goods in transit, luxury freeports offer highly secure and indefinite storage for art and high-value goods without the payment of taxes and duties (Helgadóttir, 2020).¹⁰ Opaque art markets (where works of art can be exchanged by offshore companies) and a high degree of secrecy (goods can be stored on behalf of someone else without disclosing the owner) expose luxury freeports to the risks of tax evasion and money laundering (Korver, 2018; Gilmour, 2022). Detecting trade-based money laundering schemes (that entail falsification of documents, for example, under- or over-invoicing that misrepresent the value or volume of goods shipped) or the laundering of proceeds from trade in illicit goods can be difficult. Therefore, greater transparency and fuller oversight of SEZs is required (FATF, 2010).

The new round of UK freeports has no provisions for high-value goods warehouses or the indefinite storage of high-end items, implying a reduced propensity for tax evasion risks. The motives for tax evasion are also weakened by the substantial package of incentives and tax breaks on offer. Nevertheless, tight regulation (to monitor tax evasion) and consistent

⁹ For the tax year starting in April 2025, employer national insurance contributions (NICs) will rise from 13.8 per cent to 15 per cent while the threshold for paying NICs will fall from £9,100 to £5,000, although a higher employment allowance (£10,500) will reduce the NIC liability for eligible employers (mainly small firms).

¹⁰ Geneva, Luxembourg, Singapore, Beijing, Monaco and Delaware are among some well-known freeports that complement their offshore financial centres with investment art (Korver, 2018).

customs checks on goods across different destinations (to reduce counterfeit risks) are necessary to mitigate additional risks associated with freeports.

Hypotheses

In summary, the literature suggests that freeports have the potential to create new jobs, but the evidence is mixed depending on the size, type and purpose of the SEZ, its location and connectivity and the package of incentives on offer. In line with the leading policy objective of the current round of UK freeports, the main hypothesis posits that the East Midlands Freeport will create high-skilled jobs. High-quality jobs are seen as essential to increase wages, improve productivity and endow the local economy with broader benefits.

H1. The East Midlands Freeport will increase the number of high-skilled jobs in the D2N2 region.

To examine the sensitivity of the number of jobs (the quantity of labour effect), variations of the core scenario are modelled by changing the parameters of the uptake of businesses at the site (the occupancy rate) and the displacement rate.

H2a. A lower occupancy rate in the East Midland Freeport will reduce the number of jobs in the D2N2 region.

H2b. A higher displacement rate in the East Midland Freeport will reduce the number of jobs in the D2N2 region.

To examine the sensitivity of the type of jobs (the quality of labour effect), the sectoral mix of the freeport site is modified in line with an increased logistical orientation and a broader sectoral mix aligned with an inclusive growth strategy.

H2c. An increase in the logistical orientation of the East Midlands Freeport will reduce the number of high-skilled jobs in the D2N2 region.

H2d. A broader sectoral mix of the East Midlands Freeport will reduce the number of high-skilled jobs in the D2N2 region.

Methodology

Ex-ante appraisal techniques such as scenario analysis can be used to forecast the effects of a given policy on the local economy. By altering the values of contributing factors, scenario analysis is an appropriate analytical tool to assess how the local economy can achieve a particular outcome.

Using the Oxford Economics/Midlands Engine (2025) scenario modelling tool, the employment effects associated with the East Midlands Freeport are assessed. Specifically, the core scenario models the forecast employment effects in the D2N2 region (the total number of jobs and the breakdown of jobs by sectors and occupational categories) associated with the East Midlands Freeport over the appraisal period 2023-2040.¹¹ Forecasting the local employment effects involves generating counterfactual changes to employment in response to hypothetical changes of various assumptions underpinning the implementation of the East Midlands Freeport. The forecast employment outcomes of the core scenario are then compared with the ‘no change’ baseline forecast, which provides an expected forecast of employment based on the current economic outlook. (Oxford Economics, 2025).

Variations of the core scenario relating to the implementation of the freeport policy (a lower occupancy rate, a higher displacement rate and changes to the sectoral mix of the site reflecting an increased logistical orientation and a broader sectoral mix aligned with an inclusive growth strategy) are also compared with the baseline forecast. The assumptions underpinning the core scenario (1) are as follows.

¹¹ The start date coincides with the year the East Midlands Freeport became operational. Due to the limited bounds of the model, we will only be considering a seventeen-year appraisal period; a more usual appraisal period for a commercial development project of this type would be of thirty and up to sixty years (HMT, 2022) – THE GREEN BOOK.

- Combined use site: To capture the commercial and logistics elements of the freeport site, the core scenario models the establishment of a combined use site in the local area comprising a B2 mixed use development (75 per cent) and a B8 national distribution centre (25 per cent).¹²
- Plot ratio: Across the three sites, the East Midlands Freeport offers 5.26 million square metres of manufacturing and distribution space (EM Freeport, 2024). In keeping with standard building practices, a plot ratio of 37.5 per cent is assumed (Basingstoke and Deane, 2018).
- Employment density: Estimates for the employment density (the average floorspace in square metres per full-time equivalent employee) are built-in to the model in line with national guidance on mixed-use sites (Oxford Economics, 2025).
- Occupancy: The occupancy rates of previous UK enterprise zones vary considerably between 24-84 per cent (Ward, 2023). Therefore, the average value (54 per cent) is taken.
- Sectoral weights: Building on the region's existing strengths in food and beverages manufacturing, motor vehicle manufacturing and aerospace, the target sectors for the East Midlands Freeport are primarily geared towards advanced manufacturing and engineering, advanced logistics, life sciences as well as clean energy and low carbon technology (EM Freeport, 2024). Without more information on the expected

¹² The UK classifies the use of different types of property and land into classes according to the (amended) Town and Country Planning (Use Classes) Order 1987. For more information on Commercial Property Use Codes, see Savills (2024).

proportion of investment of each target sector within the site, equal weights are applied across the sectoral categories.^{13, 14}

- Regional displacement: The mean sub-regional displacement rate of 21.5 per cent comes from BIS (2009).
- Multiplier effects: The Oxford Economics (2025) scenario modelling tool models the direct employment effects of the freeport policy; indirect employment stemming from multiplier effects are not included in the forecasts.

Scenario Results

In presenting the scenario results, the job-related outcomes associated with the East Midlands Freeport are discussed in relation to the core scenario, which models the forecast number of jobs (the quantity of labour effect) and the breakdown of jobs by sectors and occupational categories (the quality of labour effect). Next, variations of the core scenario evaluate the employment outcomes depending on the occupancy rate, the displacement rate and the sectoral mix of the site (an increased logistical orientation and a broader sectoral mix aligned with an inclusive growth strategy). First, in order to gain an insight into the breakdown of employment in the local economy, an overview of the industry employment numbers for the D2N2 region is presented.

¹³ Using the United Nations (2024) international standard industrial classification (ISIC) of economic activities, equal weights (25 per cent) are applied across four broad sectoral categories as follows. (1) Advanced manufacturing of motor vehicles, innovative aircraft and other electrical equipment is split evenly across four categories (weighted 6.25 per cent each), namely ISIC 27 (manufacture of electrical equipment), ISIC 28 (manufacture of machinery and equipment), ISIC 29 (manufacture of motor vehicles, trailers and semi-trailers) and ISIC 30 (manufacture of other transport equipment). (2) Advanced logistics and warehousing is split evenly across four categories (weighted 6.25 per cent each), namely ISIC 43 (specialised construction activities), ISIC 51 (air transport), ISIC 52 (warehousing and support activities for transportation) and ISIC 68 (real estate activities). (3) R&D refers to ISIC 72 (scientific R&D) and (4) low carbon and renewable energy production and transmission refer to ISIC 35 (electricity, gas, steam and air conditioning supply).

¹⁴ There is no ISIC code that corresponds directly with clean energy, hence the broader category for energy (ISIC 35) is used.

A snapshot of industry employment in the EMCCA region

Figure 1 presents a snapshot of the industry employment numbers for the EMCCA region.¹⁵ Employing almost 300,000 people, the top-two industries in the D2N2 region consist of services, namely industry Q (human health and social work) and industry G (wholesale and retail trade). Third in line is manufacturing (industry C). Employing 124,000 people, manufacturing jobs account for one-eighth of all jobs in the region, making it an important target sector for regional policy. Other big employers include education (industry P) and other services (industries N, I and M representing administrative, catering and professional services respectively). Transportation and storage (industry H) is also important, employing over 50,000 people. In short, while services dominate employment in the region, manufacturing and transport are also vital for the regional economy.

[Insert Figure 1 here]

In total, the EMCCA region employs about 1million people. It has a population of 2.2 million and generates £61 billion of gross value added (ONS, Regional GVA 2023 (nominal/balanced) 2025). The centrally located region has good transport and digital linkages that connect the urban conurbations of Derby and Nottingham with the rest of the region and the regions beyond . As an export-oriented economy with strengths in manufacturing, it depends on international gateways.

Despite its sectoral strengths, the EMCCA region underperforms in many economic indicators. According to ONS/APS (2025), the employment rate for the region (73.8per cent) lagged behind the national average (75.5 per cent) in 2025 while the job density (the ratio of total jobs to the working age population of 16-64) was 0.77, trailing both the East Midlands (0.79) and the wider UK economy (0.86). In using a broad package of incentives to attract

¹⁵ Statistical data for 19 broad sectors defined according to economic activity are available from the ONS (2025).

firms into a target area with the aim of boosting jobs and growth, it is hoped the freeport policy can help address weaknesses in the local economy.

Employment effects of the East Midlands Freeport: Core Scenario

Over the appraisal period, the East Midlands Freeport is associated with a substantial increase in the total employment numbers, as shown in Figure 2a. Specifically, the core scenario predicts that 32,000 additional jobs are created by 2040 relative to the baseline forecast, consistent with hypothesis H1.¹⁶ The predicted increase in the number of jobs compares favourably with other estimates, for example, the EM Freeport (2024) expects that 28,000 jobs will be created. The additional number of jobs would reduce the (baseline forecast) unemployment rate of 3.5 per cent by 0.6 per centage points and increase the size of the economy by **10.6 per cent**. The higher number of jobs in the D2N2 region also helps counter the employment decline in the baseline estimate ~~that is~~ expected from 2027 onwards.

[Insert Figure 2a here]

Figure 2b provides the breakdown of the employment effects at a sectoral level and thereby provides information on the quality of the jobs created from the freeport initiative. The predicted employment effects vary depending on the sector. Specifically, the number of jobs increase by 7,700 for industry M (professional, scientific and technical activities), industry C (manufacturing) and industry D (utilities). For industry H (transportation and storage), the numbers employed increase by 4,400. A smaller increase in employment (2,200) is forecast for industry F (construction) and industry L (real estate). In other words, jobs are created within a broad set of sectors in line with the target sectors of the East Midlands Freeport and the diverse nature of the D2N2 region.

[Insert Figure 2b here]

¹⁶ The additional number of direct jobs includes jobs by those who would otherwise be economically active (employed and unemployed) and migrants of working-age who move to the area because of improved employment opportunities. The employment numbers do not include jobs that have relocated from outside the freeport site.

As the third-largest employer in the EMCCA region (see Figure 1), the freeport initiative helps protect jobs and the associated skillset in the manufacturing sector. At the same time, relatively high employment rates in the high-skilled activities encompassing professional, scientific and technical services will require an upskilling of the local workforce that in the long-run will improve the region's overall skillset in line with the aims of the last D2N2 strategic economic plan (D2N2LEP, 2022) and the EMCCA Local Growth Plan (2025). In providing essential public services (the production, distribution and supply of electricity, natural gas and water), a high number of jobs in the utilities sector is also welcome.

Using the standard occupational classification 2010 (SOC2010), Figure 2c shows the employment effects disaggregated into the major groups of occupations.¹⁷ Focusing on the high-skilled occupational group categories 1-3, the forecast estimates suggest that the number of jobs increase by 3,100, 4,700 and 5,800 for the categories 1 (managers, directors and senior officials), 2 (professional occupations) and 3 (associate professional and technical occupations) respectively. In other words, a high proportion (two-fifths) of the jobs created by the East Midlands Freeport are classified as high-skilled labour, thereby complementing the D2N2 strategy of skills advancement and regional development.

[Insert Figure 2c here]

In assessing the effect of the freeport programme and its contribution to the local economy, it is also useful to consider GVA, which is a key measure of economic performance.¹⁸ Over the appraisal period, the industries D (utilities), C (manufacturing) and M (professional, scientific and technical activities) produce the largest increases in GVA,

¹⁷ The SOC2010 classifies occupations according to similarities of qualifications, training and experience. For more information, see <https://www.ons.gov.uk/methodology/classificationsandstandards/standardoccupationalclassificationoc>.

¹⁸ Representing the value created during the production process, GVA is calculated as the total value of goods and services produced less the cost of all inputs used in the production process.

valued at £2.16 billion, £1.65 billion and £1.61 billion respectively compared with the baseline, as shown in Figure 2d. The model also predicts an increase in average productivity of 7.3 per cent. Taken together and consistent with hypothesis H1, the core scenario (1) suggests that the East Midlands Freeport leads to more job opportunities of disproportionately higher quality while also improving productivity and GVA, thereby contributing to increased growth and better living standards within the D2N2 region.

[Insert Figure 2d here]

Employment effects of the East Midlands Freeport: Variations of the Core Scenario

Scenario (2): A lower occupancy rate

Considerable differences in the vacancy rate of buildings exist (HCA, 2015). To evaluate the efficient utilisation of the site and whether the East Midlands Freeport can secure a sufficiently high number of jobs, the occupancy rate is reset at a lower rate of 39 per cent while keeping all other assumptions of the core scenario constant.¹⁹

In absolute numbers, Figure 3 indicates an increase in employment numbers of 23,100, implying that the lower occupancy rate proportionately reduces the number of jobs when compared with the core scenario (32,000), consistent with hypothesis H2a. In terms of the wider economy, the cut to job numbers translates into a smaller increase in average productivity (from 7.3 per cent to 5.3 per cent) and a smaller increase in the size of the local economy (from 10.6 per cent to 7.7 per cent).

[Insert Figure 3 here]

Scenario (3): A higher displacement rate

As previously highlighted in the literature, a high share of the employment numbers attributed to SEZs are a consequence of the displacement of jobs when existing firms from

¹⁹ Based on the occupancy rates ranging from 24 to 84 per cent (Ward, 2023), 39 per cent represents the 25th percentile.

outside the zone relocate within it (Potter and Moore, 2000; Larkin and Wilcox, 2011; and Swinney, 2019). Therefore, the job-related benefits of freeports can be overstated if the total number of jobs includes jobs that have been displaced from elsewhere. To test for the effect of a higher displacement rate, the mean sub-regional rate of 21.5 per cent is increased to the mean regional rate of 26.9 per cent, both taken from BIS (2009). All other assumptions are the same as before.

Figure 4 suggests that 28,700 jobs are created over the appraisal period compared with 32,000 jobs under the core scenario, consistent with hypothesis H2b. In reducing the number of jobs by 10 per cent, the scenario results suggest that the higher displacement rate (of 5 per cent) has a disproportionate effect on employment. Potter and Moore (2000) have previously shown that there is sizeable displacement of activity within a local area, although they note that displacement effects tend to disproportionately affect smaller firms located in urban areas and operating within the services and distribution sectors.

[Insert Figure 4 here]

Scenario (4): Increased logistical orientation

The previous rounds of SEZs in the UK have contributed to relatively high growth rates of employment in logistics and warehousing. Transportation and storage (industry H) already employs 50,000 people in the EMCCA region (see Figure 1). With the expansion of the ‘golden logistics triangle’ in the UK Midlands (an area that contains a high number of logistics and warehousing facilities), employment in the logistics sector looks set to increase. Given the proximity of the East Midlands Freeport to the UK’s largest air cargo hub and a major express freight centre, it is likely that it too will induce a high proportion of logistics-based employment in tandem with the broader pattern.

To model the increased logistical orientation of the East Midlands Freeport, the weightings allocated to the B8 national distribution centre and the advanced logistics and

warehousing sector are doubled (from 25 per cent to 50 per cent) while keeping all other assumptions of the core scenario constant.^{20, 21}

The reallocation of weightings has no material consequences in terms of the total employment effect (32,000 jobs) or the wider economy (the unemployment rate, average productivity and the size of the economy). There is, however, a notable difference in terms of the type (and quality) of jobs. As shown in Figure 5, the number of jobs increase by 11,700 for industry C (manufacturing) and 11,600 for industry D (utilities), representing an increase of 3,000 and 2,900 respectively when compared with the core scenario. Comprising the industries F, H and L (construction, transportation and storage and real estate respectively), the number of jobs for the combined logistics and warehousing sector increases by 8,800. This time, there are no jobs created in the high-skilled industry M (professional, scientific and technical activities), which goes against the aims of job creation in the target sectors of the East Midlands Freeport.²² In summary, increasing the logistical orientation of the split-use site generates similar employment numbers as the core scenario, but reduces the number of high-quality jobs, consistent with hypothesis H2c.

[Insert Figure 5 here]

Scenario (5): Inclusive growth

²⁰ The combined use freeport site is now equally split between the two types of development with 50 per cent allocated to both the B2 mixed use development and the B8 national distribution centre.

²¹ The sectoral weighting applied to advanced logistics and warehousing is doubled from 25 per cent to 50 per cent while equal weights (16.6 per cent) apply to the remaining three sectoral categories (advanced manufacturing, R&D and low carbon and renewable energy). Therefore, the weighting for each of the four advanced logistics categories increase (from 6.25 per cent to 12.5 per cent) and the weighting for each of the four advanced manufacturing categories decrease (from 6.25 per cent to 4.2 per cent).

²² The eight priority sectors that are already strong in the D2N2 region or have the capacity to grow are (1) food and beverages manufacturing; (2) motor vehicles and other transport equipment manufacturing; (3) life sciences including the manufacture of medical instruments and basic pharmaceutical products; (4) transport and logistics including land transport, air transport, water transport, warehousing activities and courier services; (5) construction; (6) a low carbon economy; (7) the visitor economy, including hotels, food services, travel agency activity, entertainment activities, libraries, museums and sports activities; and (8) the creative industries including motion picture activities, sound and radio, photographic and design services, advertising, media activities, printing and publishing activities and computer programming (D2N2LEP, 2022).

As part of an inclusive growth strategy that will benefit the residents of the East Midlands, the final scenario is informed by the IGC (2025). In setting out the current stance of the region's strengths, challenges and opportunities, the IGC (2025) explores how the region can leverage its economic assets to deliver long-term improvements for its communities. Specifically, the long-term strategy of inclusive growth seeks to match the existing skillset of the region's residents with the sectors that matter for growth and job-creation. Therefore, in using a broader sectoral mix reflecting the wider range of skills on offer from the region's workforce, the final scenario (5) of inclusive growth extends the sectoral breakdown of the core scenario by additionally including standardised manufacturing subcategories.²³

Testing for the effect of a broader sectoral mix, the employment outcomes are shown in Figure 6. For manufacturing (industry C), the number of jobs increase by 15,500 (double the amount of the core scenario), which is not surprising as it combines both standardised and advanced manufacturing categories that mirror the sectoral strengths of the EMCCA region. Consistent with both the core scenario and the logistics-oriented scenario, 8,800 jobs are created within the combined logistics and warehousing sector (industries F, H and L representing construction, transportation and storage and real estate respectively). The industries M (professional, scientific and technical) and D (utilities) gain 3,900 jobs each, implying that fewer jobs (roughly half) are created in these industries when compared with the core scenario (7,700). Insofar as fewer jobs are created in the high-skilled professional services sector (industry M), the findings for the inclusive growth scenario are consistent with hypothesis 2d.

[Insert Figure 6 here]

²³ Keeping the four broad sectoral categories of the core scenario (advanced manufacturing, advanced logistics and warehousing, R&D and low carbon and renewable energy), but reducing the weighting for the latter two (from 25 per cent to 12.5 per cent), the fifth category (weighted 25 per cent) comprises four standardised manufacturing subcategories (weighted 6.25 per cent each), namely ISIC 10 (manufacture of food products), ISIC 22 (manufacture of rubber and plastic products), ISIC 23 (manufacture of other non-metallic products) and ISIC 31 (manufacture of furniture).

The analysis comes with the main limitation that job creation need not be confined to the EMCCA region. Given that the three sites for the East Midlands Freeport are straddled across several local authority boundaries (see Figure A2), it is possible that jobs will leak out into neighbouring areas, implying that Leicestershire (and other adjacent regions) will likely experience spillover effects.

Conclusions

The reintroduction of UK freeports is aimed at boosting employment and other economic activities including trade, investment and innovation. Although freeports have the potential to create jobs, the evidence is mixed. As the UK's only inland freeport, the East Midlands Freeport is well-placed to reap the benefits of the post-Brexit freeport policy that lowers the costs of doing business within a designated zone area.

Using scenario analysis, this study assesses the employment effects associated with the East Midlands Freeport. Under the core scenario of targeting key sectors, the employment projections indicate that 32,000 additional jobs are created by 2040. At a sectoral level, jobs are created within a broad range of industries in line with the diverse nature of the D2N2 region with a relatively high proportion of jobs created for professional, scientific and technical activities (a highly skilled sector), manufacturing (a major employer in the EMCCA region) and utilities (an important provider of essential public services). Breaking down the employment effects into the major groups of occupations, two-fifths of the jobs created are classified as high-skilled labour.

On the whole, the core scenario (1) suggests that the East Midlands Freeport brings about more jobs of disproportionately higher quality while also improving productivity and GVA, thereby contributing to increased growth and better living standards that complements the broader strategy of regional development within the EMCCA region. Put another way, the numbers suggest that the priority of the East Midlands Freeport is the creation of additional

high-skilled jobs in line with the leading policy objective of the freeport initiative. However, as shown by the scenario analysis conducted, realisation of these outcomes is far from guaranteed: changes to any of the underpinning assumptions of the core scenario has a direct impact on the quantity and quality of labour outcomes.

In evaluating the sensitivity of the quantity of labour outcomes, changes to the occupancy rate and the displacement rate are modelled. Scenario (2) suggests that a lower occupancy rate creates proportionately fewer jobs on site. Conversely, a higher occupancy rate will induce a proportionately higher number of jobs. Not surprisingly, maximising the occupancy rate in order to boost the number of jobs will be a crucial indicator of the success of the freeport. Consisting of customs benefits, tax incentives and location-specific measures, the broad package of incentives made available during the current round of freeports should work in favour of a higher occupancy rate. Nevertheless, the payoffs will likely be greater if commercial pressures to maximise the occupancy rate are tempered with greater selectivity towards higher-skilled jobs.

Scenario (3) indicates that a higher displacement rate disproportionately reduces the number of jobs on site. In combination, scenarios (2) and (3) suggest that the East Midlands Freeport will create fewer jobs the lower the occupancy rate and the higher the displacement rate. If more firms relocate to the freeport to take advantage of financial incentives, the higher displacement effect calls into question the additionality of jobs and whether the freeport policy fits with the levelling up policy.

To minimise the regional displacement of jobs, freeports will reap higher employment benefits if national firms or foreign firms (rather than local firms) locate within the site. Attracting firms from elsewhere in the UK, however, can lead to the national displacement of jobs. Arguably, if displacement is national, the policy of levelling up can be justified on the ground that economic activity is transferred from richer to poorer regions within the UK.

Nevertheless, in weakening the economies of affluent areas through the outward movement of firms, jobs and investment, a policy of levelling up through displacement is questionable from an economic growth perspective, where the aim is to grow the economy rather than to slice it up. Irrespective of the geography of displacement (regional or national), job displacement should be minimal under the (post-Brexit) Subsidy Control Act 2022 on investment and competitiveness, which prohibits relocation subsidies unless they either increase economic activities or reduce social and economic disadvantages of a specific area.

In evaluating the sensitivity of the quality of labour outcomes, changes to the sectoral mix (a logistics-oriented site and a broader sectoral mix reflecting a wider skills base) are also modelled. The results for Scenario (4) suggest that increasing the logistical orientation of the split-use site generates similar employment numbers as the core scenario, but reduces the number of high-quality jobs. In other words, while the freeport creates jobs, the jobs are not necessarily created within the desired higher-skilled industries. More specifically, an absence of job creation in the professional-based activities runs counter to the aims of job creation in the target sectors of the East Midlands Freeport and the priority sectors of the EMCCA local growth plan (EMCCA, 2025). Moreover, creating jobs within a narrower range of industries inconsistent with the skills profile of the existing labour force may increase the likelihood of these jobs being taken by workers from outside the region (a form of leakage).

The inclusive growth scenario (5) also yields the same number of jobs as the core scenario, but the spread of jobs across the sectors differs with manufacturing coming out on top, no change for logistics and fewer jobs for professional services and utilities. On the downside, the broader sectoral mix aligned with inclusive growth leads to fewer high-skilled professional-based jobs. Nevertheless, the disadvantage of fewer high-skilled jobs is compensated, to some extent, by more jobs in the manufacturing sector where a range of different skills are required. In this context, the broader sectoral mix is better matched with

the region's sectoral strengths and the greater variety of skills offered by local communities, reducing the leakage effect from highly skilled jobs attracting talent from outside the D2N2 region. With Freeports initially introduced to 'level up' the chosen regions, a high leakage effect will compromise progress towards this objective.

The broader sectoral mix should also contribute to a higher occupancy rate as the wider range of skills on offer from a sizeable pool of labour can better meet the needs of employers and the demand for labour inputs of variable quality ranging from manual tasks to intermediate, semi-skilled work through to the professional jobs of highly-qualified personnel.

In this vein, forging local partnerships between employers, educators and (devolved) government can make a difference in addressing the weaknesses of the local economy. By connecting the major cities of Nottingham and Derby via a Trent Arc of innovation and harnessing the polycentric nature of the D2N2 region that is endowed with a diverse network of cities, towns and rural areas, the existing skillset of the region's workforce can be matched with the sectors that matter for growth and job creation (IGC, 2025). A strategy of inclusive growth can support the region's communities to secure well-paid and rewarding work in a broad array of sectors irrespective of age (younger or older), skills level (entry-level or highly-qualified) or location (rural or urban areas). Furthermore, the new Mayoral Combined County Authority can ameliorate local decision-making and enhance growth and investment in the region via pan-regional collaborations. **In combination, the role of freeports within a regional development strategy can be established but requires the right balance between the competing policy choices of targeting priority sectors as defined in the UK Government's Industrial Strategy versus an inclusive industrial strategy that better matches the region's existing sectoral strengths and skills profile of residents.**

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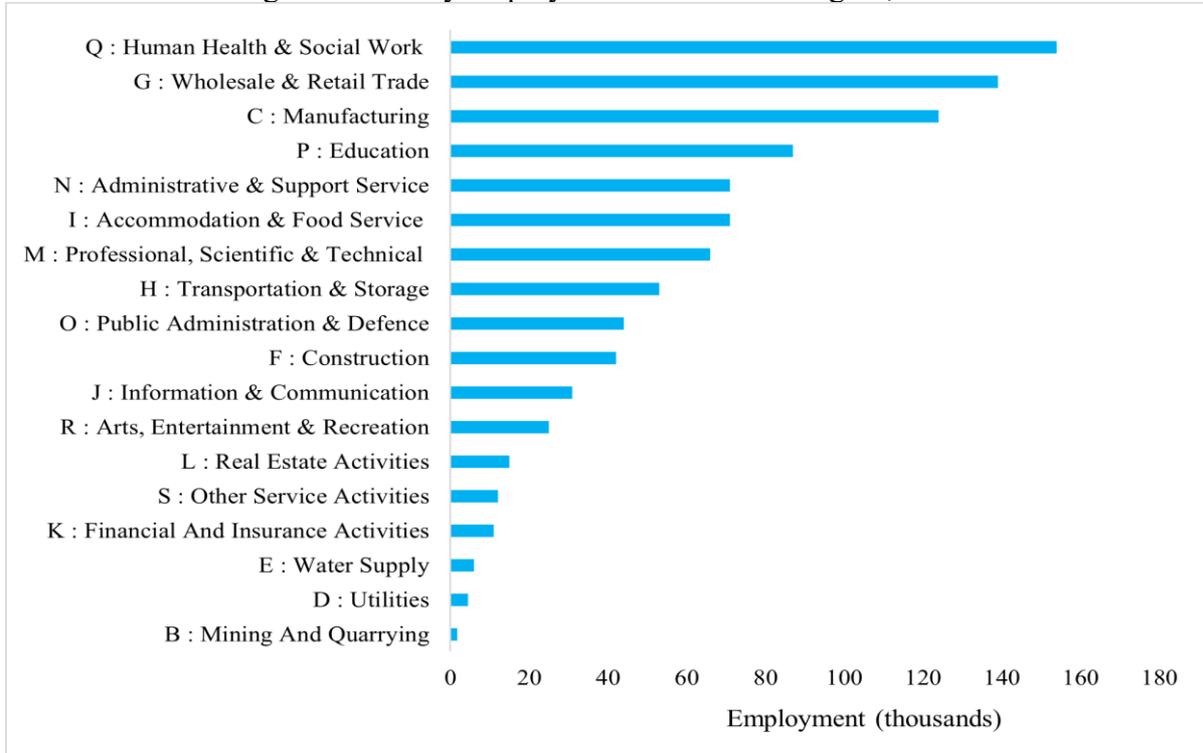
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Figures

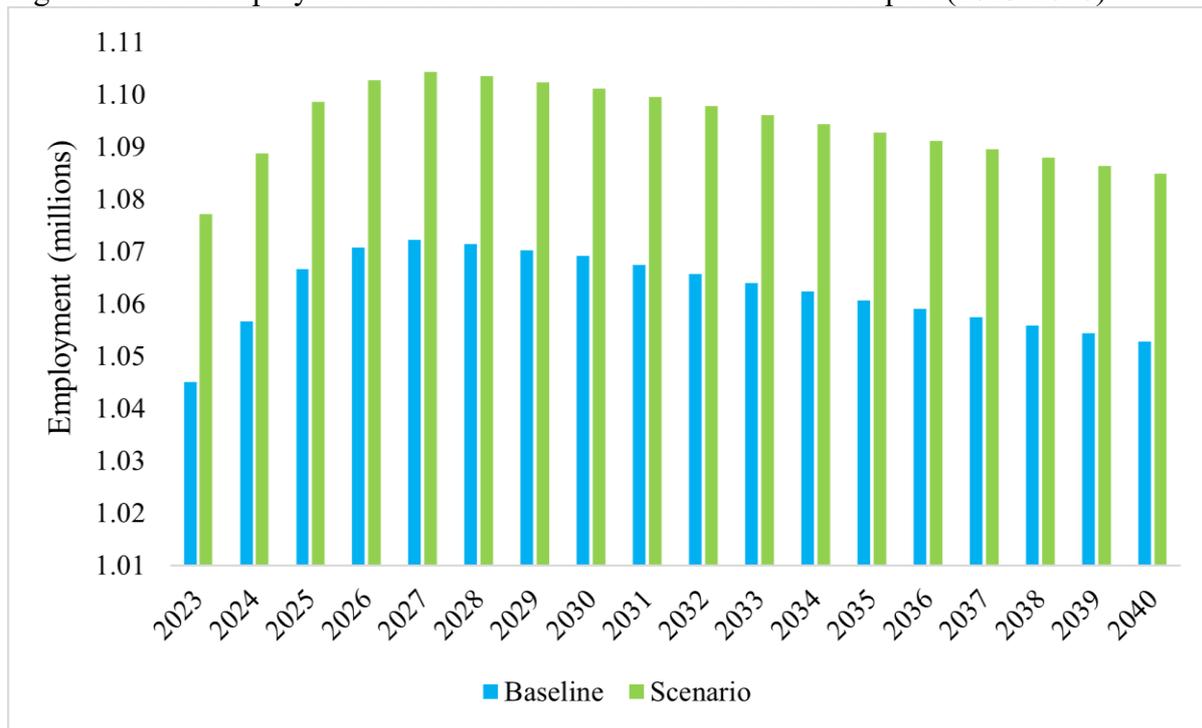
Figure 1 Industry employment in the D2N2 region, 2023^a



Source: ONS (2025).

^a The data for the employment category A (agriculture) are not available.

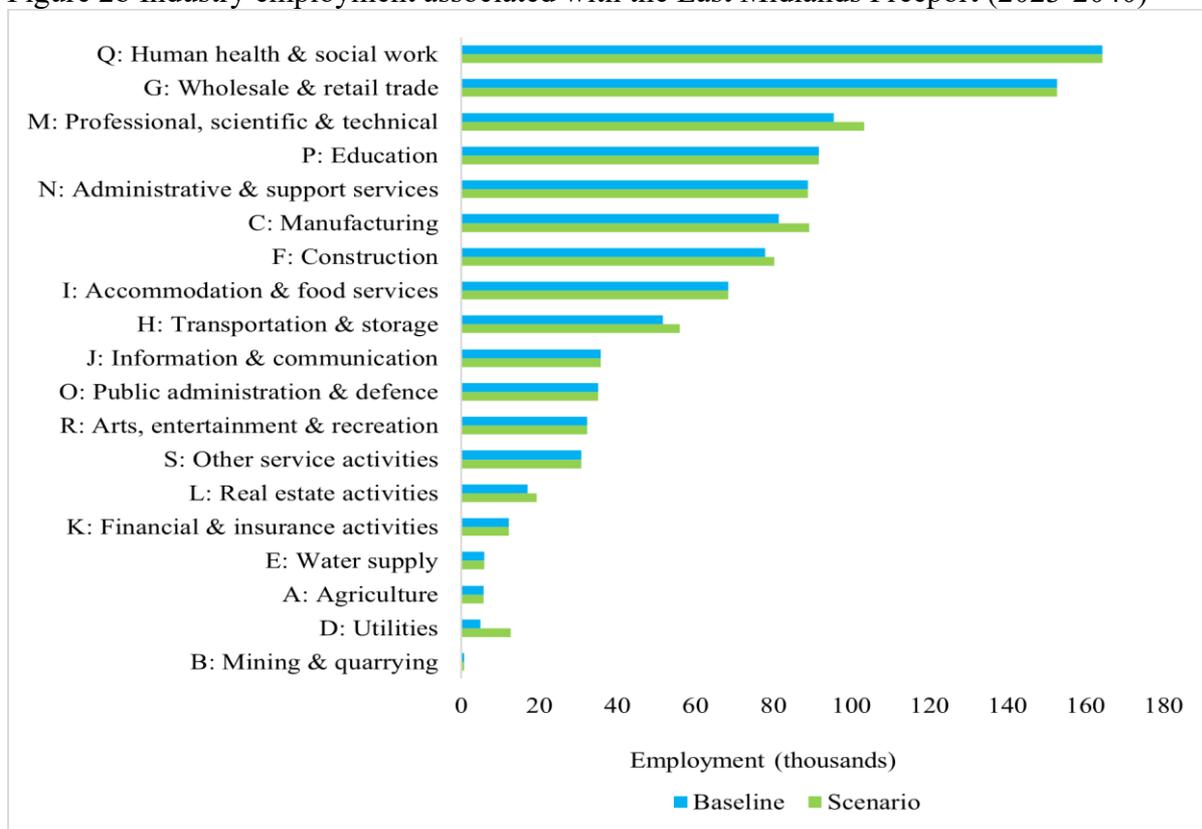
Figure 2a Total employment associated with the East Midlands Freeport (2023-2040)^a



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

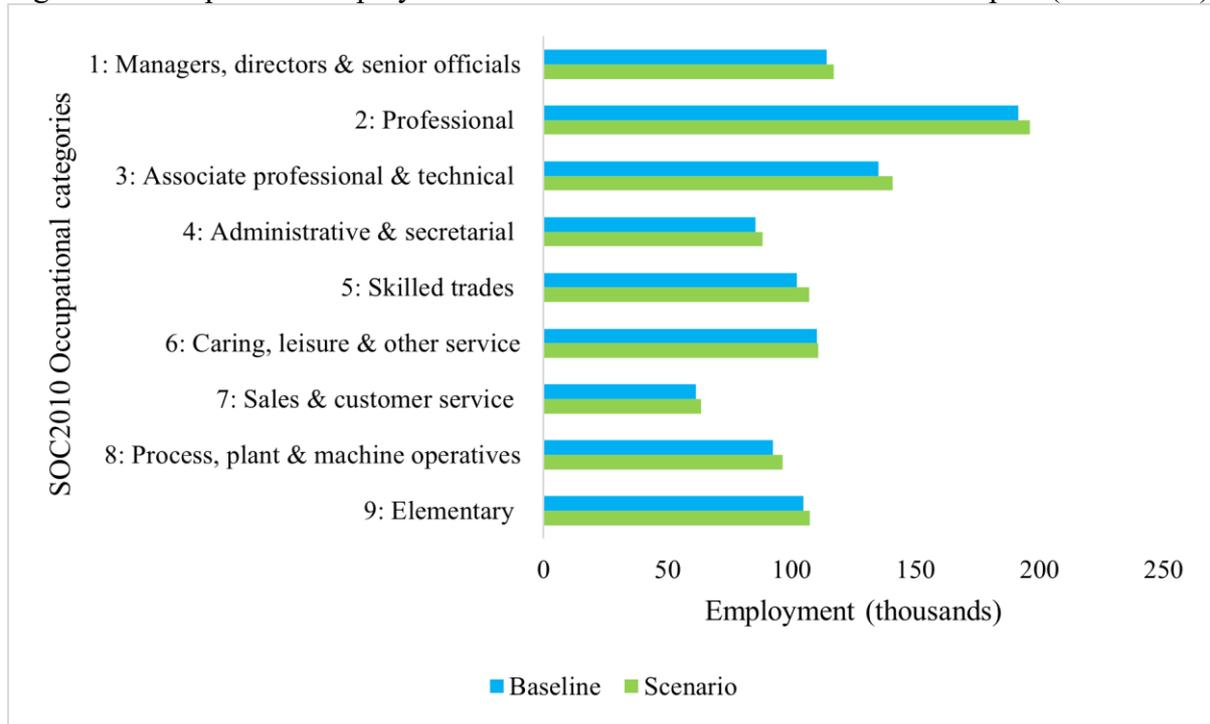
^a The baseline and scenario employment numbers diverge from 2023 when the freeport became operational.

Figure 2b Industry employment associated with the East Midlands Freeport (2023-2040)



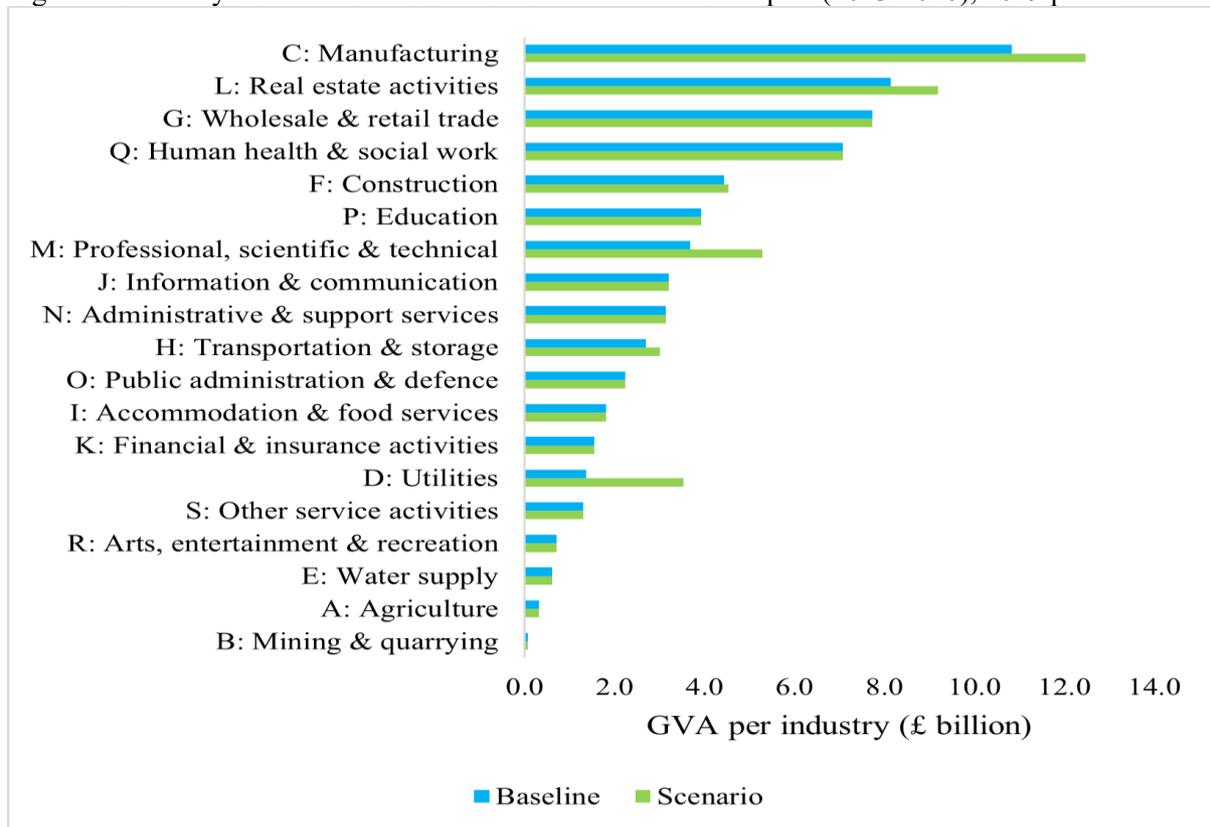
Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

^a The target sectors for the East Midlands Freeport are mainly geared towards advanced manufacturing and engineering, advanced logistics, life sciences and clean energy and low carbon technology (EM Freeport, 2024).
 Figure 2c Occupational employment associated with the East Midlands Freeport (2023-2040)



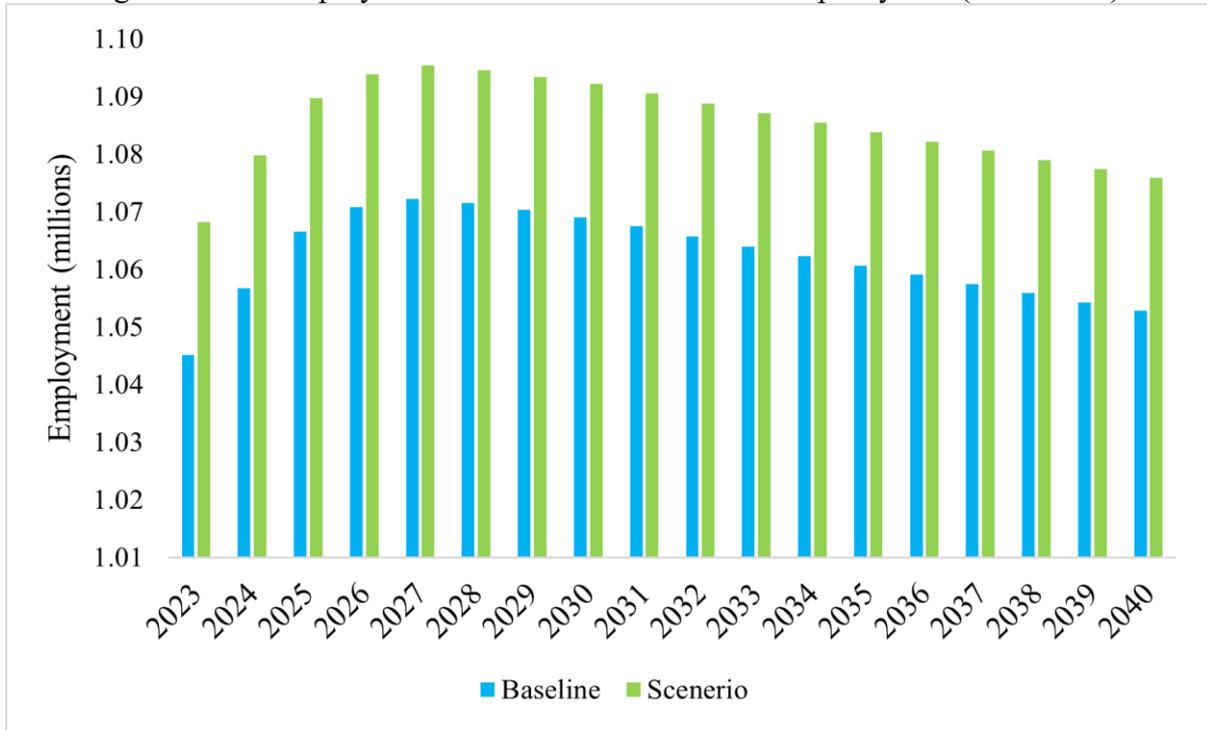
Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

Figure 2d Industry GVA associated with the East Midlands Freeport (2023-2040), 2019 prices



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

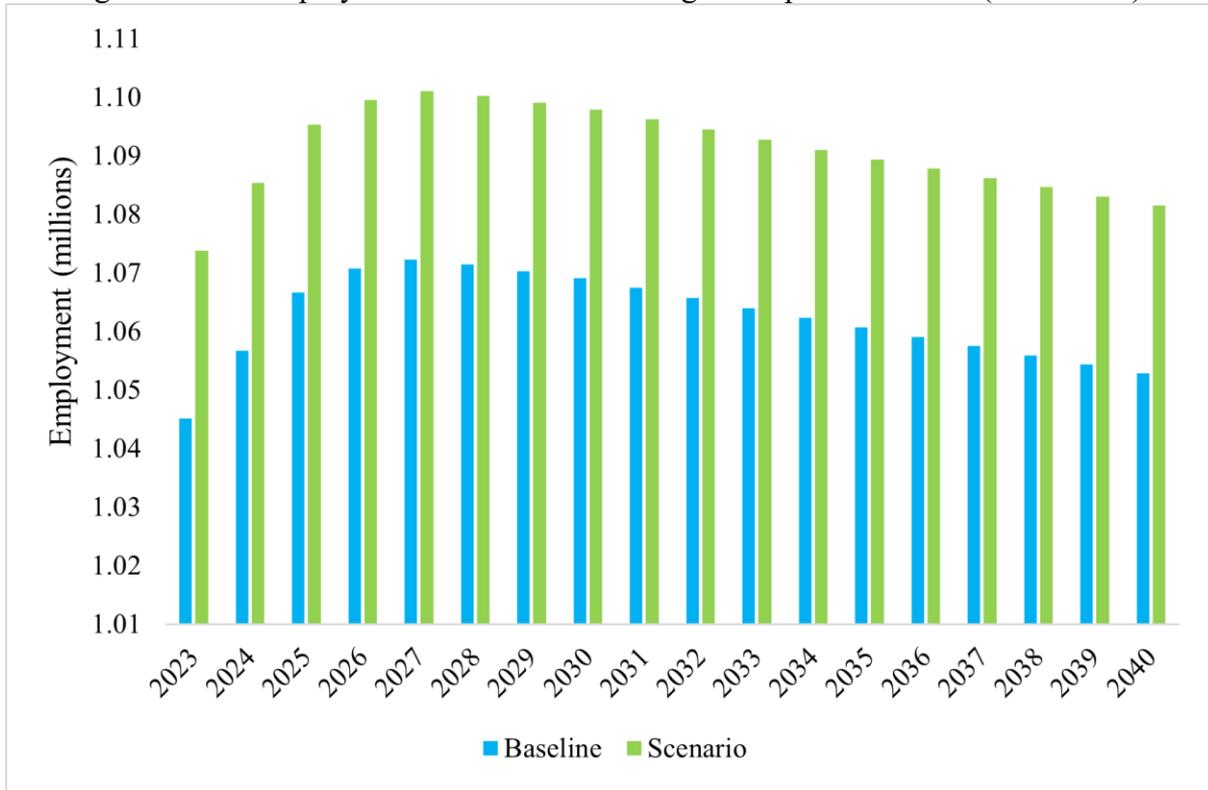
Figure 3 Total employment associated with a lower occupancy rate (2023-2040)^a



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

^a The occupancy rate is reduced from 54 per cent to 39 per cent.

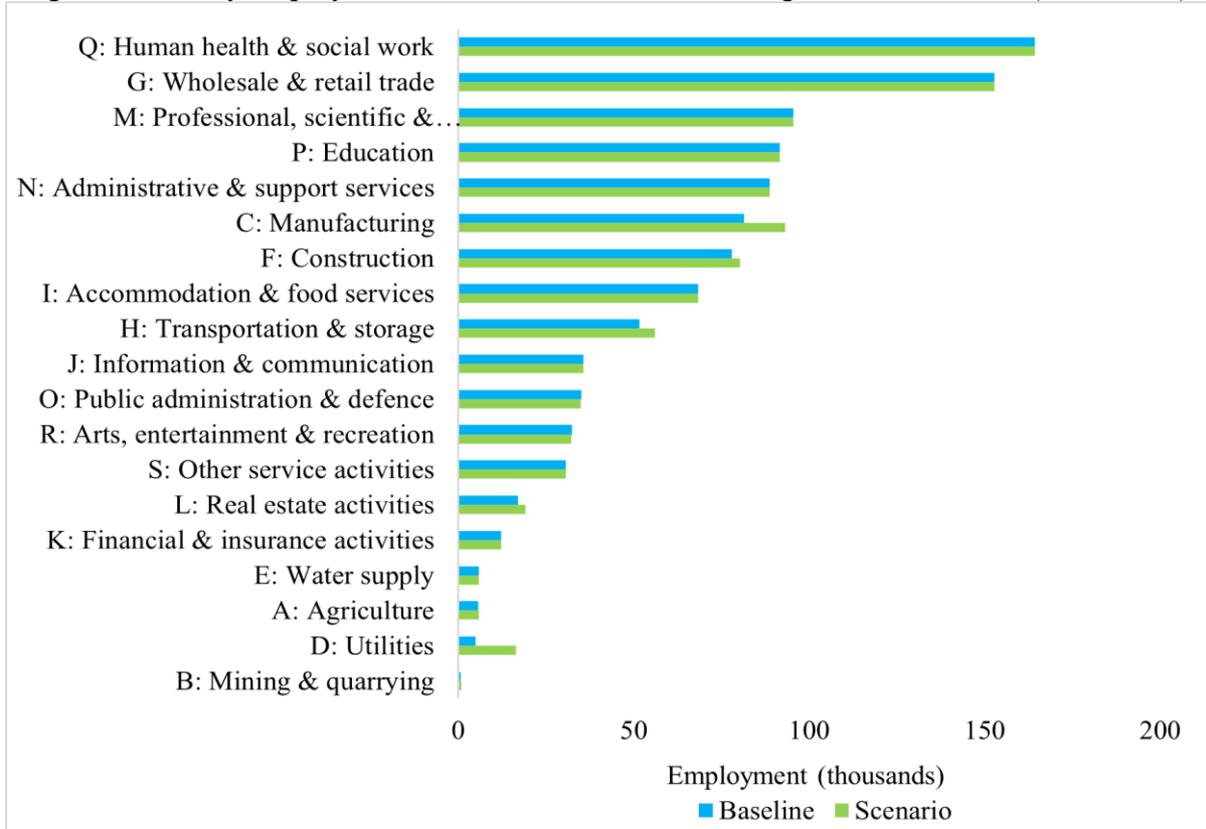
Figure 4 Total employment associated with a higher displacement rate (2023-2040)^a



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

^a The displacement rate is increased from 21.5 per cent to 26.9 per cent.

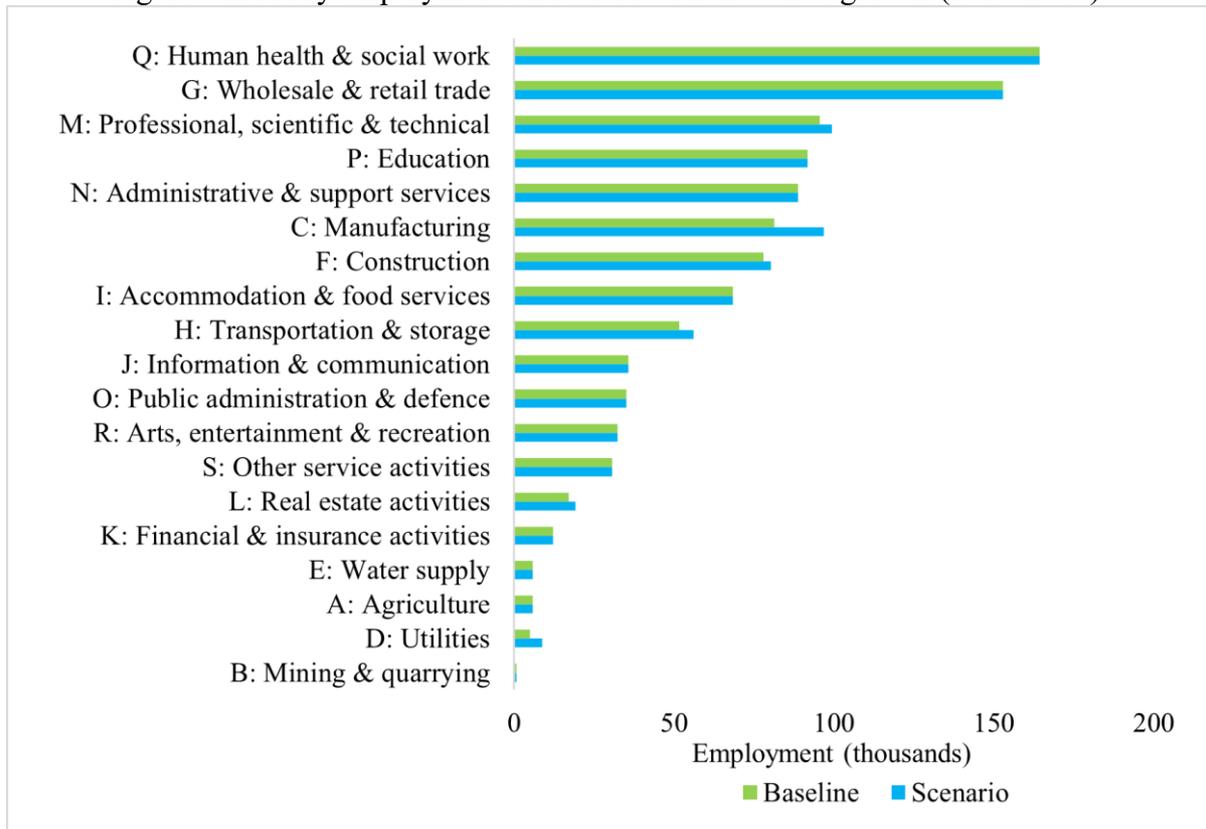
Figure 5 Industry employment associated with increased logistical orientation (2023-2040)^a



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

^a For the logistics-oriented scenario, the weightings allocated to the B8 national distribution centre and the advanced logistics and warehousing sector are doubled (from 25 per cent to 50 per cent).

Figure 6 Industry employment associated with inclusive growth (2023-2040)^a



Source: Author calculations using the Oxford Economics (2025) scenario forecasting model.

^a For the inclusive growth scenario, the sectoral mix of the core scenario is broadened to include standardised manufacturing subcategories.

Appendix

Figure A1 Freeport locations in England, announced in 2021



Source: DLUHC (2022).

Figure A2 East Midlands Freeport sites^a



Source: EM Freeport (2024).

^a The East Midlands Freeport consists of three sites.

(1) The East Midlands Airport and Gateway Industrial Cluster (EMAGIC) in Northwest Leicestershire includes two sites with a combined area of 160 hectares located next to the UK's largest air cargo hub and a major logistics park. (2) The East Midlands Intermodal Park (EMIP) in South Derbyshire is a business park offering 173 hectares of manufacturing and distribution space. (3) The Ratcliffe-on-Soar Power Station site in Nottinghamshire is a 273-hectare site undergoing transformation from a coal-fired power station into a zero-carbon energy and technology hub (EM Freeport, 2024; IGC, 2025).

Table A1 Types of Special Economic Zones

Type of SEZ	Purpose	Policy objectives
Free trade zone (FTZ)	A small, physically secured duty-free area, offering warehousing, storage and distribution facilities for trade, transshipment and re-export operations.	Entrepôt and trade-related activities
Export processing zone (EPZ)	An industrial area offering special incentives and facilities for manufacturing and related activities for export markets.	Export processing and manufacturing
Enterprise zone (EZ)	An economically deprived area with tax incentives and financial grants for multi-use purposes.	Urban revitalisation
Freeport	A typically larger area with a broad set of incentives and benefits for multi-use purposes.	Integrated development
Bonded warehouse	An individual enterprise offered incentives for storage or manufacturing.	Export processing and manufacturing
Specialised zone	A zone designated for a particular purpose, for example, a science and technology park, a logistics park, information communications technology or financial services.	Promote a specific industry
Eco-Industrial zone	A zone designated for ecological improvements towards reducing waste and improving environmental performance.	Promote green technologies

Source: FIAS (2008); FATF (2010).

Table A2 UK SEZ Initiatives (1981-present)

Type of SEZ	Dates	No. of SEZs	Incentives	Policy objectives
Enterprise Zones ^a	1981–1996	38	Capital allowances Business rates exemptions Simplified planning Reduced bureaucracy	Stimulate private sector economic activity and employment Regenerate deprived areas
Freeports ^b	1984–2012	7	Customs duty and VAT suspension Customs duty inversion Customs duty exemption Simplified customs procedures	Enhance trade and supply chain processing
Enterprise Zones ^c	2012–2016	24	Capital allowances Business rates discounts Simplified planning Location-specific measures	Increase employment Regenerate cities
Freeports ^d	2021–present	8	Customs benefits Time-limited tax incentives Location-specific measures	Promote regeneration and create high-skilled jobs Establish national hubs of global trade and investment Create hotbeds of innovation

Source: Adapted from various sources (Adam and Phillips, 2023; Barnard et al., 2021; Jones, 2006; HC, 2021; Swinney, 2019; and Webb et al. 2023).

^a During the first round (1981-1982), 11 enterprise zones were announced in the UK (Belfast; Clydebank; Corby, Middlesbrough; Dudley; Hartlepool; Isle of Dogs, London; Salford / Trafford; Speke, Liverpool; Swansea; Tyneside; and Wakefield). In the second round (1983-1984), 15 additional enterprise zones were announced (Allerdale / Workington; Chatham, North West Kent; Delyn; Glanford; Invergordon; Lancashire; Londonderry; Middlesbrough; Milford Haven; North East; Rotherham; Scunthorpe; Tayside; Telford; and Wellingborough). Extensions were also granted to two EZs (Speke, Liverpool; and Wakefield). In a later round (1989-1996), 10 enterprise zones were designated under exceptional circumstances (Inverclyde; Sunderland; Lanarkshire; Crown Farm, East Midlands; Holmewood, East Midland; Manton Wood, East Midlands; Sherwood Business Park, East Midlands; Dearne Valley; East Durham; and Tyne Riverside). Each enterprise zone had a fixed life of 10 years with the expectation that protection would no longer be needed after the term limit. The EZ programme ended in 2006 with the closure of Tyne Riverside (Jones, 2006).

^b Comprising a mix of geographically dispersed airports and seaports, seven freeports were designated during the period 1984-2012 (Belfast; Birmingham; Liverpool; Port of Sheerness; Port of Tilbury; Prestwick Airport; and Southampton).

^c During the period 2012-2013, 24 enterprise zones were allocated according to a different rationale (Swinney, 2019). Eleven enterprise zones were allocated to regenerate core cities and increase employment (Birmingham City Centre; Black Country, Stoke-on-Trent; Bristol Temple Quarter; Derby and Nottingham; Leeds City Region; Liverpool City Region; London Royal Docks; Manchester City Airport; North East, Newcastle; Sheffield City Region; and Tees Valley). An additional 11 enterprise zones were allocated through a competitive bidding process to demonstrate value for money (Alconbury Airfield, Huntingdon; Discovery Park, Sandwich; Great Yarmouth and Lowestoft, East Anglia; Harlow; MIRA Technology Park, Hinckley; Newquay Aerohub; Northampton Waterside; Rotherwas, Hereford; Science Vale, Oxfordshire; Sci-

Tech Daresbury, Warrington and Runcorn; and Solent Daedalus Airfield, Gosport). The remaining two enterprise zones were allocated in response to large job losses (Humber Waterside; and Lancashire).

^d In March 2021, eight freeport sites in England were announced (East Midlands Airport; Freeport East encompassing Felixstowe and Harwich; Humber; Liverpool City Region; Plymouth and South Devon; Solent; Teeside; and Thames). Elsewhere in the UK, additional freeports have advanced from the planning stage, including two sites in Wales (Anglesey Freeport and the Celtic Freeport encompassing Port Talbot and Milford Haven) and two sites in Scotland (Forth Green and Cromarty Firth Green).