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ARTICLE

THE LABOUR MARKET IMPLICATIONS OF BREXIT: A BEVERIDGE CURVE ANALYSIS

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Abstract
That Brexit disrupted the UK economy is widely agreed. Studies refer to its impact on exports and imports and on food prices. Less work has been done with respect to the impact on the labour market. This article concentrates on the relationship between vacancies and unemployment, which serves as an indicator of labour market tightness. Post-Brexit, the number of vacancies relative to the number of people unemployed increased dramatically. Analysis is based upon difference-in-difference methods. It suggests that by mid 2022 the UK's V/U ratio might have been some 25% higher than it would have been without Brexit.

Keywords: Brexit; labour markets; Beveridge Curve; difference-in-difference; policy impact

Introduction

By 2022, the UK was experiencing the highest rate of inflation it had seen for over 40 years. Some of this has been ascribed to excessive monetary easing that was extended for too long after the global financial crisis of 2008 and into the COVID period, some to the release of savings that had been built up during the COVID-induced lockdown itself and some to the impact of supply disruption caused by geopolitical fragmentation and, more recently, by the war in Ukraine. Some of it has, however, been ascribed to supply shortages caused by Brexit. Moreover, whilst many initially thought that price surges would be temporary, the view that they could feed through into wage demands and, thus, into a spiral gained increasing traction. Those who subscribed to such a view also pointed to the unusually high level of vacancies relative to people unemployed—seeing this as a sign of a tight labour market that, in and of itself, could lead to demands for higher wages that, in turn, had to be passed on in prices.[1]

This article is concerned with the unemployment to vacancies (U/V) ratio—often referred to as the Beveridge curve.[2] Graphically, the curve implies a parabola whereby high levels of unemployment along the horizontal axis are matched by low levels of vacancies on the vertical axis, and vice versa. Over a cycle, an economy will move along the parabola, moving from right to left as overall demand, and thus, labour demand rises. However, more than one curve might exist. The Beveridge curve itself might shift inward, towards the origin, or outwards and away from it. Outward movements imply more vacancies for any given level of unemployment, and this is seen as an indicator of an inferior level of labour market matches. Reasons for such shifts are sometimes ascribed to an ageing labour force, whereby the skills of

[1]In 2016, the UK government was representing a record number of vacancies as a sign of the success of its economic policies and the resulting strength of the economy. See, for example, *Record high of 31.42 million people in work*, Press Release from Department for Work and Pensions and The Rt Hon Priti Patel MP, 16 March 2016 at https://www.gov.uk/government/news/record-high-of-3142-million-people-in-work.

[2]In fact, Beveridge, himself, never drew such a curve (Yashiv, 2008).

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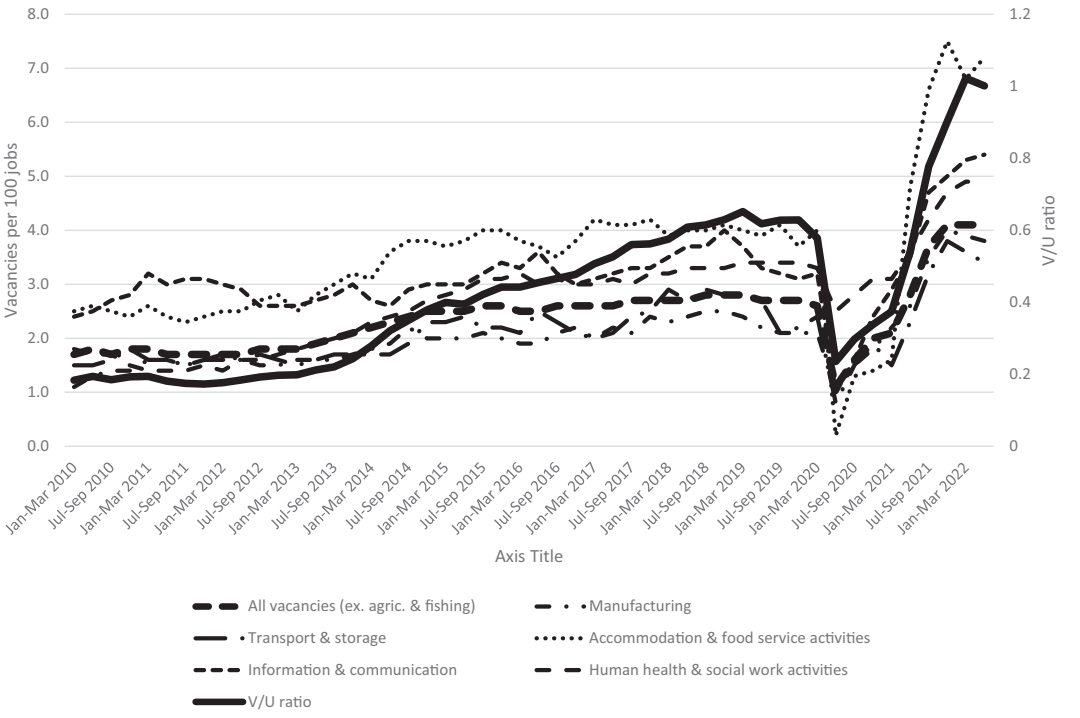


Figure 1. UK: vacancy rates for selected industries (LH axis) and V/U ratio (RH axis).

older jobless people no longer match the skills demanded. Older job seekers might also be less mobile than those who are younger. Similar arguments, or the reverse of them, can be made for other groups on the labour market—younger workers and immigrant workers might be more mobile, female workers might be less mobile, whilst young workers might lack skills or experience (see, for example, Bova *et al.*, 2016). In the labour market as a whole, an outward shift might reflect an increase in skills mismatch, the supply of skills available failing to match the demand for particular types of skill.

The change in the U/V ratio observed immediately after Brexit might involve an outward shift of the curve away from the origin such that for a given level of unemployment the number of vacancies is unusually high. Trends in UK vacancy rates for selected sectors are shown in Figure 1. It was widely recognised that other countries, too, experienced similar, high levels of vacancies, which caused concerns about higher levels of inflation. The question, then becomes, whether the situation was worse in the UK than elsewhere and whether, if it was, this had been caused by Brexit. Certainly, there were anecdotal arguments that it might have been. Brexit has curtailed the supply of workers for particular jobs, and it is in these sectors that vacancy rates were particularly high and unemployment rates particularly low. Examples include agriculture, road transport, air services, food processing, and catering. These were sectors that recruited heavily from Europe. Many of the employees from there returned to their home countries—often during COVID—and did not return afterwards. Employers from some of these sectors have called for immigration restrictions preventing new hiring to be lifted—either temporarily or more permanently.[3]

[3]See, for example, Confederation of British Industry, 2021. Perhaps most interesting is the case of the CEO of Wetherspoons, Tim Martin, who had been a keen supporter of Brexit, but who, by summer 2021, was calling for a relaxation of rules on European migration in order to ensure a supply of workers to his pub and restaurant chain. See *Tim Martin needs more EU workers to staff his Wetherspoons pubs—or maybe it's time for Leave-voting Brits to step up* at https://www.independent.co.uk/voices/wetherspoons-tim-martin-brexit-eu-workers-b1858093.html.

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What is known so far?

Although there has been much comment upon the impact of Brexit on the labour market, little rigorous analysis has been undertaken. The most cited study is that which indicates that, at least in the period between spring 2019 and summer 2022, Brexit resulted in a reduction in labour supply of some 330,000 persons (Portes and Springford, 2023). The number of EU workers fell by about 460,000; the number of non-EU workers increased by 130,000. The largest shortfall of non-UK workers was mostly in sectors that disproportionately employ less-skilled workers. With respect to declines in the number of EU workers themselves, a sectoral breakdown suggested that it was made up as follows:

- in transportation and storage: around 128,000 (about 8% of sectoral employment)
- in wholesale and retail: 103,000 (about 3% of sectoral employment)
- in accommodation and food: 67,000 (about 4% of sectoral employment)
- in manufacturing: 47,000 (about 2% of sectoral employment)
- in construction: 46,000 (about 2% of sectoral employment)
- in administration and support (which covers activities such as building cleaning and maintenance): 32,000 (about 2% of sectoral employment).

The study arrived at its results by calculating the average growth rate in the workforce by region of origin (UK/EU/non-EU) for the 2014–19 period and, in the first instance, assuming that growth rates in the EU/non-EU born workforce would have followed a similar trajectory to that of the UK-born workforce. With respect to COVID-related developments, where UK-born workforce numbers fell, it was assumed that numbers of EU and non-EU workers would have declined at the same rate. This provided a counterfactual to what actually did happen—the 330,000 being the net difference for workers of all origins.[4]

Another study by the ECB, on the impact of Brexit on UK trade and labour markets, found a increase in UK post-pandemic labour market tightness that was mainly attributable to a smaller pool of available workers. A faster than expected recovery was responsible for a rise in labour demand once the economy had reopened, but the study suggested that labour supply played a particularly important role in explaining the tightness seen. By contrast, what that study termed 'aggregate supply constraints' and 'labour mismatches' were less important as an explanation. The analysis used the method of historical shock decomposition based on a Bayesian vector auto-regression (BVAR) (Forster van Aerssen and Spital, 2023).

A third study concentrated specifically on the Beveridge Curve relationship. However, what it considered was not the period after the UK had left the EU but rather the period after the Brexit referendum (from the summer of 2016 onward) and up to the point before leaving occurred (until the end of 2019). It focused on three industries—construction, transport and storage, and information and communication—on the grounds that they were likely to be particularly hard hit by higher trade barriers, reductions in foreign direct investment flows, and reduced EU net migration after Brexit. Difference-in-difference analysis was employed, with the number of comparator countries being almost 30, comprising other EU countries but also Turkey and Switzerland. Over the years 2016–19, an inward shift of the Beveridge Curve for each of the three sectors was found.[5] Robustness checks, which supported the results, were made using the Synthetic Cohort Method (Amuedo-Dorantes and Begen, 2023).

[4]Interestingly, the social care sector did not appear directly in the listing, even though it is a sector that has been heavily reliant on European and non-EU foreign workers. The broader health and social care sector did appear, and it experienced a net gain of over 72,000 persons or 1.6% of its workforce. The number of EU workers fell by under 2,000. Persistent shortfalls in the adult social care sector resulted in the UK government, in late 2021, lowering the wage threshold for adult social care workers below the level spelt out in the "points-based" immigration system introduced to replace the EU freedom of movement rules that applied previously (The Migration Observatory, 2023) In the year ending March 2023, nearly 60,000 additional care workers were recruited on this basis (ibid).

[5]Several explanations were offered—drawn from the wider literature. These included how firms might have addressed their job vacancies by hiring native born workers with specific, sought-after skills, and how the referendum might have induced long-

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Approaches to the analysis

The objective of this article is to test whether there has been a Brexit effect on the U/V ratio in the UK. The analysis used was difference-in-difference analysis (henceforth DiD).

DiD is commonly employed to assess whether an intervention has an impact. The sort of intervention can be very varied, and it can be in many fields. It can involve a medical treatment—for example, a vaccination. Here, the question for investigation is whether, after an appropriate time, those who receive the vaccine are less likely to experience an illness than those who do not.[6] It has been used most famously in labour economics to test whether a raising of the minimum wage had an impact upon employment—with special reference to the low-wage sector of employment in fast-food restaurants (Card and Krueger, 1994). More recently, it has been used to assess whether Brexit has had any effect on UK trade—both exports and imports (Freeman *et al.*, 2022)—and to help assess the impact Brexit had on UK food price inflation (Bakker *et al.*, 2023).

In all cases, the assumption is that the 'untreated' population—those not vaccinated, those fast food joints that were not subject to a rise in the minimum wage or those countries that did not experience the 'shock' of Brexit intervention—experienced the same broad developments as those that were 'treated'. So, all units of investigation changed in some, similar, ways. The question was whether those units which were 'treated' changed more than those who were not and, if so, in what direction.

What is the period to be studied?

The Brexit referendum took place in June 2016. Attempts to settle the process of leaving were fraught, but a leaving date was set for the end of January 2020. A transition period lasting until the end of December 2021 was also established. Freedom of movement under the rules governing the UK as a member of the EU ceased to be operative as of December 2020. A new, 'points-based immigration system' became operative thereafter that set a premium upon the level of wages and qualifications (HM Government, 2020). The UK, however, formally 'left' the EU at the end of January 2021, so that the period from the start to the end of 2020 was one of 'transition'.

Research has suggested that after the referendum and even before Brexit actually occurred, there were some Brexit-induced changes in the labour market. First, insofar as it was measured, net migration from the EU declined. It did not become negative, but it did decline by nearly 60% (Sumption and Walsh, 2022). Second, over the same period, and indeed since 2013, unemployment had also been falling. More importantly, the UK Beveridge Curve, as measured by the V/U relationship, had started to move inwards between 2016 and 2019. Not only an examination of graphics shows this, but other research supports it (Amuedo-Dorantes and Begen, op cit).

Complicating matters was the fact that the start of 2020—the beginning of the transition period—was coterminous with the onset of the COVID pandemic. All countries were hit by that shock. In most, the pandemic resulted in severe restrictions to economic and social activities. In some countries, the response of governments was the introduction or extension of provisions enabling short-time working (*Kurzarbeit*/'furloughs', etc.); in others, it was to extend or improve unemployment compensation to provide for those who had been (temporarily) laid off (Casey and Mayhew, 2022). In some cases, workers who had come from abroad left and returned to their home countries. All this has potential implications for the V/U relationship.

The extent of COVID-induced restrictions across a selection of broadly similar countries is summarised in Figure 2. It is by no means clear that those in the UK were either more, or less, severe than in most of these.

term, foreign-born UK residents to naturalize and, as they assimilated, employers might have found them more attractive. Accordingly, the study concludes, Brexit would have led to fewer job vacancies and improved labour market efficiency.

[6]An introduction and explanation can be found in Gertler *et al.*, 2016. See also, Angrist and Pischke, 2008.

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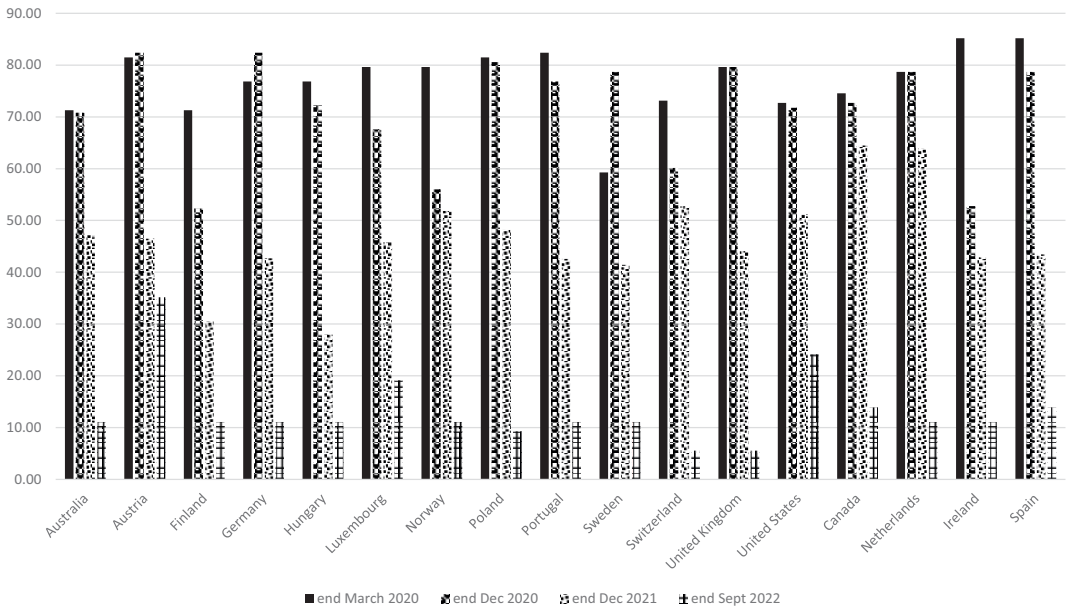


Figure 2. Lockdown intensity (weighted average of vaccinated and non-vaccinated).

The difference-in-difference analysis

For any given outcome variable, Y_{it}, the population difference-in-difference effect is given by the difference in the outcome variable for treated and control units before and after the intervention.

$$\begin{aligned} DiD = &\{E(Y_{it}=1|D_{it}=1=1,Z_i=1,X_i) - E(Y_{it}=1|D_{it}=1=0,Z_i=0,X_i)\} \\ &-\{E(Y_{it}=0|D_{it}=0=0,Z_i=1,X_i) - E(Y_{it}=0|D_{it}=1=0,Z_i=0,X_i)\} \end{aligned} \quad (1)$$

There are presumed to be two periods—a 'before treatment' period where $D_{i,t} = 0$ and a 'post treatment' period where $D_{i,t} = 1$. Units for investigation, i, are divided into two groups—a treated group, where $Z_i = 1$, and a control group to which the treatment is not delivered, where $Z_i = 0$. The treatment indicator requires the absence of any intervention in the baseline for either group ($D_{i,t} = 0 = 0|Z_i = 1, 0$) and a positive intervention for the treated group in the follow-up ($D_{i,t} = 1 = 1|Z_i = 1$). Any observable covariates can be added using the variable X_i, but their inclusion is not a necessity.

The data

Data on vacancies and unemployment (seasonally adjusted) were drawn from OECD Labour Force Statistics, Eurostat Labour Force Statistics (Ireland, the Netherlands, Norway, and Spain), Statistics Canada and the Australian Bureau of Statistics. This gave a dataset of a maximum of 18 countries. Quarterly data were available for the period 2010q1 onwards. The termination date for analysis was 2022q2—so, effectively, 18 months after the UK had formally left the EU. At this point, the number of vacancies per unemployed person in the UK was one.

Czechia was included in the initial data set. However, for much of the period from the early 2010 to the late 2010s, that country had an extremely high vacancy rate—higher than that of any other countries examined—and also very low unemployment. This was remarked upon by many observers, but no good

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explanation was given.[7] For this reason, Czechia was dropped from the analysis. This left 17 countries, of which all but five were members of the EU (at least prior to Brexit). Of the remainder, two were members of the EEA (Norway and Switzerland) and three were non-European (Australia, Canada and the US).

The estimation

Different versions of the V/U relationship were constructed, each of which has been used for analysis of Beveridge Curves. These were

1) V/U, where V is the absolute number of vacancies and U is the absolute number of unemployed people[8];
2) Vacancy rate/Unemployment rate, where the vacancy rate is the number of vacancies divided by the number of jobs, and the unemployment rate is the number of unemployed people divided by workers plus the unemployed; and
3) (V/U)/Unemployment rate, where V/U is defined as in 1, and unemployment rate is defined as in 2.

These three variables are highly correlated.[9] They serve as the dependent variables in the various models tested. The UK is the 'treated group' (Z = 1 in Eq (1)), and the point of treatment (D = 1 in Eq (1)) was chosen to be either date of the treaty setting leaving or that date when Brexit actually occurred.

Covariates selected were three. The first was the share of workers aged 50–64—intended to take account of the recognised large drop in the number of older workers post the pandemic. As well as losing over a third of a million workers as a result of Brexit (Portes and Springford, *op cit*), many had commented upon the loss of a further third of a million older people from the labour force in the period following the onset of COVID (for example, Boileau and Cribb, 2022). The second was the share of selected industries (manufacturing, transport and hotels and restaurants) within total output. These were chosen to take account of the fact that some industries might be particularly dependent upon non-domestic labour.[10] The third was the share of business investment as a percentage of GDP. Its level relative to other countries has been much commented upon (Resolution Foundation, 2023). A reduced inability to employ capital rather than labour might mean that, faced with increases in demand, employers are more likely to try to hire more staff. For each of these covariates, values were averages taken across the period 2010 to 2019—i.e., in the pre-treatment period.

Two breakpoints were used for the analysis. The first was after 2019q4—i.e., from 2020q1 onwards. This was used because this was the date set in the initial withdrawal treaty that confirmed that leaving would occur. The second was after 2020q4—i.e., from 2021q1 onwards. The withdrawal treaty set leaving to take place as of the end of January 2021. After that, new rules about worker movement and the new points-based system became operative. It is to be noted that the first of the breakpoints closely overlapped the onset of COVID—many lockdown measures in many countries commenced at the end of 2020q1 or at the very start of 2020q2.

[7]See, for example, Czech Republic has EU's highest rate of job vacancies, in *Emerging Europe* March 18, 2019.

[8]This is the value that, inter alia, is used in the statistics published by the UK Office of National Statistics in the series VACS01, Vacancies and Unemployment. It is also used in publications such as Blanchard and Summers, 1989 and Elsby *et al.*, 2015.

[9]For the entire dataset, excluding Czechia, the correlation between any pair was never lower than 0.96. For the data set for Europe, excluding Czechia, it was never below 0.97, and for the UK, it was 0.99.

[10]Share of output, rather than share of employment, was used. It is not dependent upon the variables used in the construction of any V/U relationship. It was also chosen because some employment, particularly low hours employment in sectors such as hotels, restaurants and bars might fall below recognition for tax and social insurance purposes and might be excluded from total employment numbers.

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The results

Models were constructed for each of the two breakpoints—after the date of leaving had been formally settled and after the UK had left the EU. The data set was also split, whereby one data set included all 17 countries, the second only European (but not necessarily EU) countries, and a third only EU countries (UK included).[11]

Models using the formal settlement of a leaving date generated few positive results. This was regardless of the inclusion, or otherwise, of non-European countries and regardless of which of the three dependent variables was used. Introducing the covariates of age structure, industry composition or business investment investment had no impact.

Models using the actual date of leaving did generate significant results—and they did so for each of the dependent variables employed. Including the share of the labour force aged 50–64 was found to be

Table 1a. Regression results for V/U (absolute values)

		Treaty concluded		Brexit occurs			
		EU only	Europe only	EU only	Europe only	EU only	Europe only
Baseline							
Control (C)	B0	0.182	0.178	0.187	0.183	−0.013	0.191
Treated (T)	B0 + B2	0.376	0.376	0.375	0.375	0.1	0.269
Diff (T-C)		0.194	0.198	0.188	0.192	0.113	0.079
(s.e.)	B2	(0.031)	(0.029)	(0.029)	(0.028)	(0.031)	(0.033)
Follow up							
Control (C)	B0 + B1	0.318	0.306	0.372	0.361	0.172	0.375
Treated (T)	B0 + B1 + B2 + B3	0.607	0.607	0.77	0.77	0.495	0.664
Diff (T-C)		0.289	0.301	0.398	0.409	0.323	0.289
(s.e.)	B2 + B3	(0.062)	(0.059)	(0.079)	(0.075)	(0.077)	(0.086)
Diff-in-Diff		*0.095*	*0.103*	0.210	0.217	0.210	0.210
(s.e.)	B3	*(0.070)*	*(0.066)*	(0.084)	(0.080)	(0.081)	(0.091)
R^2		0.16	0.16	0.19	0.19		
Covariates: agestructure, manufshare and businvest							
Businv							−0.406
(s.e.)						*0.004*	(0.163)
Manufshare							−0.006
(s.e.)						−0.006	(0.001)
Agestruct							0.009
(s.e.)						0.013	(0.003)
R^2						0.26	0.22

Non-significant coefficient in italics.

[11]The use of two break periods, and the separating off of non-European countries was used in the exercises assessing the impact of Brexit on UK trade (Freeman *et al.*, *op cit*).

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relevant—the variable was positively signed, so that countries with a higher proportion of older workers experienced a higher V/U ratio than others at the end of the observation period. This was a result that was expected. Including the importance of manufacturing within the economy was also relevant—the variable was negatively signed, so that countries where manufacturing was more important experienced a lower V/U ratio than others. Including the level of business investment as a share of GDP was also significant and, as expected, the coefficient was also negatively signed. Results are shown in Table 1a-c.

According to Tables 2a-c, the models including the covariates explain about one-fifth of the variance in the dependent variable. Two of the three models suggest that the V/U ratio was about a quarter higher than it would have been in the absence of Brexit; one that it was a third higher. If the recorded level at the end of the observation period was one vacancy for every unemployed person, the suggestion is that the level would have been between 0.8 and 0.75 vacancies per person unemployed. This would have been lower than the equivalent ratio of the Netherlands (nearly 1.4) and Norway (1.2) by the end of the follow-up period but would still have been above Germany and Austria (both under 0.7).

Table 1b. Regression results for Vrate/Urate (vacancy rate/unemployment rate)

		Treaty concluded		Brexit occurs			
		EU only	Europe only	EU only	Europe only	EU only	Europe only
Baseline							
Control (C)	B0	0.194	0.189	0.199	0.194	−0.012	0.203
Treated (T)	B0 + B2	0.397	0.397	0.396	0.396	0.105	0.287
Diff (T-C)		0.204	0.208	0.197	0.202	0.117	0.084
(s.e.)	B2	(0.032)	(0.030)	(0.030)	(0.029)	(0.032)	(0.035)
Follow-up							
Control (C)	B0 + B1	0.335	0.322	0.391	0.379	0.18	0.395
Treated (T)	B0 + B1 + B2 + B3	0.633	0.633	0.803	0.803	0.512	0.694
Diff (T-C)		0.298	0.311	0.412	0.423	0.332	0.299
(s.e.)	B2 + B3	(0.064)	(0.061)	(0.083)	(0.078)	(0.080)	(0.089)
Diff-in-Diff		*0.095*	*0.103*	0.215	0.222	0.215	0.214
(s.e)	B3	*(0.072)*	*(0.068)*	(0.087)	(0.083)	(0.084)	(0.049)
R^2		0.16	0.16	0.19	0.19		
Covariates: agestructure, manufshare and businvest							
Businv						*0.021*	−0.426
(s.e.)						*(0.180)*	(0.169)
Manufshare						−0.007	−0.007
(s.e.)						(0.001)	(0.001)
Agestruct						0.014	0.009
(s.e.)						(0.003)	(0.003)
R^2						0.26	0.22

Non-significant coefficient in italics.

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Table 1c. Regression results for V/U over Urate (vacancies/unemployment all over unemployment rate)

		Treaty concluded		Brexit occurs			
		EU only	Europe only	EU only	Europe only	EU only	Europe only
Baseline							
Control (C)	B0	0.354	0.363	0.368	0.375	−0.206	0.232
Treated (T)	B0 + B2	0.761	0.761	0.766	0.766	0.078	0.333
Diff (T-C)		0.407	0.398	0.398	0.392	0.283	0.102
(s.e.)	B2	(0087)	(0.083)	(0.082)	(0.078)	(0.088)	(0.099)
Follow-up							
Control (C)	B0 + B1	0.713	0.685	0.849	0.821	0.275	0.705
Treated (T)	B0 + B1 + B2 + B3	1.462	1.462	1.891	1.891	1.202	1.458
Diff (T-C)		0.749	0.778	1.042	1.070	0.927	0.753
(s.e.)	B2 + B3	(0.174)	(0.165)	(0.222)	(0.211)	(0.220)	(0.255)
Diff-in-Diff		0.342	0.379	0.644	0.679	0.644	0.651
(s.e.)	B3	(0.195)	(0.185)	(0.236)	(0.224)	(0.231)	(0.270)
R^2		0.13	0.12	0.16	0.16		
Covariates: agestructure, manufshare and businvest							
Businv						*−0.56*	−0.951
(s.e.)						*(0.497)*	(0.484)
Manufshare						−0.008	−0.017
(s.e.)						(0.003)	(0.003)
Agestruct						0.031	0.028
(s.e.)						(0.008)	(0.009)
R^2						0.20	0.17

Non-significant coefficients are in italics.

Table 2a. Impact of Brexit on V/U rates after Brexit occurs

V/U at end period = q50	0.995	0.995	0.995	0.995
in absence of Brexit	0.785	0.785	0.785	0.785
increased by	27%	27%	27%	27%

Derived from Table 1a. Row 2 is rate minus diff-in-diff coefficient

Table 2b. Impact of Brexit on V/U rates after Brexit occurs

RoverR at end period = q50	1.034	1.034	1.034	1.034
In the absence of Brexit	0.819	0.820	0.819	0.820
Increased by	26%	26%	26%	26%

Derived from Table 1b. Row 2 is rate minus diff-in-diff coefficient.

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Table 2c. Impact of Brexit on V/U rates after Brexit occurs

	No covariates		With covariates	
	EU only	Europe only	EU only	Europe only
V/U over U rate at end period = q50	2.621	2.621	2.621	2.621
In the absence of Brexit	1.977	1.970	1.977	1.970
Increased by	33%	33%	33%	33%

Derived from Table 1c. Row 2 is rate minus diff-in-diff coefficient.

Conclusions

This paper was motivated by a recognition of record levels of vacancies—record in relation to the number of people registered as seeking work—in the UK labour market in the early years of the 2020s. This high level of vacancies was seen as a symptom of excess demand and was associated with high levels of inflation—even if wage inflation was not keeping up with price inflation. Responses to experienced and expected inflation led monetary policy authorities to raise interest rates sharply—this despite fears by some that this would threaten what was widely perceived to be a relatively weak UK economy. The article was also motivated by an interest in what factors might have caused the rise in vacancies. That much of this rise occurred after Brexit had taken place meant that investigating whether that development had contributed to the rise was of interest. Other researchers had been concerned with the UK's post-Brexit trade performance and with Brexit's effect on food prices. In this respect, the paper sought to emulate these exercises. Moreover, it adopted similar tools of analysis.

The study showed there was, indeed, a Brexit effect. The ratio of vacancies to number unemployed was over a quarter and possibly as much as one-third higher than it might have been had there been no Brexit. The question is open as to whether this effect was temporary or is likely to be more permanent. Because good data over a longer period are not yet available, all that can be done is to remark upon what happened to the V/U ratio in the year after it reached its peak of one-to-one in summer 2022. This can be seen in Figure 3.

Figure 3 shows that in the year following mid 2022 the V/U ratio did fall. It did so largely because the number of vacancies reported dropped. Accordingly, the ratio might be reverting closer to the levels recorded in the past and before the disturbances to it that had been observed first in the COVID period and then by Brexit. It could have been that the post-Brexit observations represented more a shift to the left along a Beveridge Curve that was curved sharply upward on the vertical (V) axis as it reached a low point on the horizontal (U) axis rather than an outward shift of the Beveridge Curve. The latter would have indicated a substantially higher level of labour market mismatch than had prevailed before.

Reducing indicators of excess demand on the labour market simply by lowering the number of vacancies would seem superior to achieving such an outcome by depressing economic activity and increasing unemployment. However, this outcome could be achieved only if the number of vacancies being reported was unusually high. The possibility that more vacancies were being posted than normal had been commented upon in the US where, by summer 2022, the V/U ratio had reached two to one. There, the extraordinarily high level was used to argue that more monetary (or fiscal) tightening might not be necessary to dampen the rate of price increases being experienced (Figura and Waller, 2022). Many vacancies were being recorded in the US because of 'purple squirrel seeking'. Purple squirrels were initially described as 'candidates with the perfect, but often impossible, combination of skills for a given job' (Mandloi, 2020). Post-COVID, as American employers became anxious to rehire to meet a rapid upturn, they advertised for workers to meet their needs regardless of whether they thought they would be able to find them. According to one Federal Reserve Governor, this was purple squirrel hunting and many of the vacancies were, in fact, 'fakes' (Rogers, 2022). It is possible in post-COVID, post-Brexit Britain, employers were behaving in a similar fashion. They were aware that a source of labour had been cut off. They thought that, at least in the short to medium term, the economy was, or was likely, to

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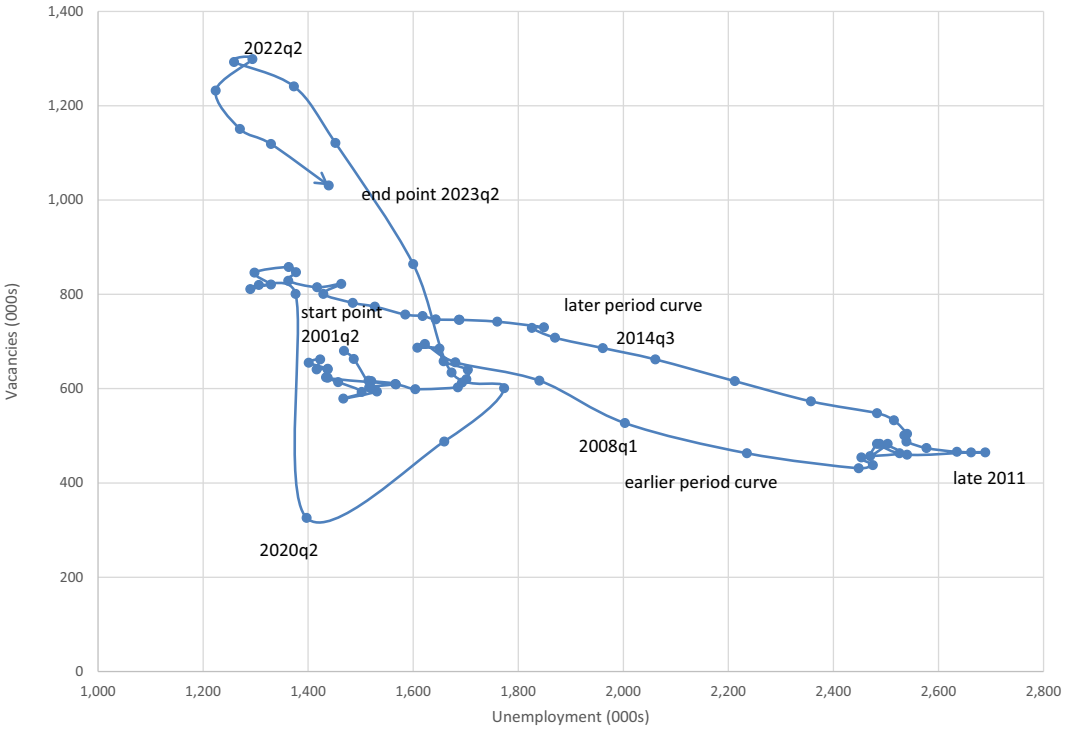


Figure 3. V/U 2001q2 to 2023q2.

improve, and they wanted to be certain that they had the employees to meet the demand they were experiencing or anticipating. Accordingly, they advertised jobs knowing that many were unlikely to produce suitable applicants but hoping that they would pick up at least some additional employees—possibly enough to meet their actual needs. Once the labour market had settled down somewhat, employers could relax. Accordingly, they reduced the intensity of their trawls of the labour market and, so, reduced the number of vacancies they were posting.

This, in turn, has implications for UK monetary policy. It might provide succour for those who argue that monetary tightening has perhaps run its course and further rate increases are not needed.

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