

# Explanatory Note on ‘The vulnerability of different parliamentary constituencies to Brexit economic shocks’

10<sup>th</sup> December 2018

## Explanation and Detail

The approach and methodology to our study on the *Vulnerability of different parliamentary constituencies to Brexit economic shocks*<sup>1</sup> are described in detail in Serwicka, Yi and Winters (2018) and are not repeated here. It is important to note certain features of the results, however, in order to avoid misinterpreting them.

### **a) The results are not predictions**

As noted in our previous work, our results are estimates of the size of the Brexit shock, not predictions about job losses. Workers and firms may avoid the job losses resulting from lost international trade by accepting lower wages or shorter hours or dropping out of the labour market. We cannot forecast how each firm and worker will behave, but we note that all such responses are merely different ways of accommodating to the same negative shock. We are trying to measure the order of magnitude of this economic shock and are doing so by saying that the Brexit shock is *as if* it would eliminate a particular number of jobs.

### **b) Neither are they precise estimates**

Our estimates are not precise because they rely on a number of assumptions that, while correct on average, will inevitably not be precisely correct for any locality. In order to avoid an impression of unwarranted precision, therefore, we present the results only to the nearest fifty jobs lost.

### **c) They are conservative estimates**

Our results are based on 2017 estimates of the effects of Brexit by sector (Dhingra et al., 2017a, 2017b),<sup>2</sup> which imply losses of GDP of around 3% for a ‘no deal’ Brexit.

<sup>1</sup> Published by the UK Trade Policy Observatory: <https://blogs.sussex.ac.uk/uktpo/blog/>

<sup>2</sup> Also, a small part of the sectoral output effects of for manufacturing sectors come from Gasiorek et al. (2018).

Recent aggregate estimates, including the Government's own<sup>3</sup> are approximately twice as large.<sup>4, 5</sup>

#### d) Data issues

The 2016 data on employment by sector used in this exercise were revised by ONS in November 2018; we used the July 2018 version in our first analysis of the impact of Brexit on constituencies in Hampshire and Sussex. This means that there are very minor differences between the data presented in this blog and the earlier estimates for Sussex and Hampshire. Furthermore, detailed sectoral employment data are not available for the 18 parliamentary constituencies of Northern Ireland, while the commuting flows data are for the United Kingdom only (i.e. including Northern Ireland). This means that we can calculate the job losses only among workers in Great Britain, but in converting these shocks to places of residence, some of those job losses affect people who reside in Northern Ireland. The result is that the loss of jobs we report for people resident in Great Britain is marginally lower than the loss of jobs in terms of workplaces in Great Britain.

#### e) Terminology

To be as precise as possible, we use the following terms:

- a **'workplace'** or **'job'** (used interchangeably) is the work offered by an employer which is located in a specific constituency (workplaces within the geographical boundaries of a constituency are thus called **'constituency jobs'**, and the terms **'job losses'** or **'workplace shock'** refer to workplaces lost within a particular constituency);
- a **'resident'** is a worker (employee or self-employed person) who resides in a particular constituency, but whose job is located either within or outside the constituency. The terms **'resident job losses'** or **'residence shock'** thus refer to the workplaces lost by the workers resident in the constituency analysed, whether such jobs are located within the constituency or in another constituency;

'workplace' in our terminology does not refer to the physical space in which the worker is employed, and the term 'job losses' does not mean that the workers concerned are automatically unemployed – they may accept to work shorter hours, and/or for a lower salary, and their employer may also find alternative employment, at least temporarily, for the workers that it wishes to retain.

<sup>3</sup> See 'EU Exit Long-term economic analysis':

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/760484/28\\_November\\_EU\\_Exit\\_-\\_Long-term\\_economic\\_analysis\\_1\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760484/28_November_EU_Exit_-_Long-term_economic_analysis_1_.pdf)

<sup>4</sup> HM Government (2018) EU Exit. Long-Term Economic Analysis. Available at:

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/760484/28\\_November\\_EU\\_Exit\\_-\\_Long-term\\_economic\\_analysis\\_1\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/760484/28_November_EU_Exit_-_Long-term_economic_analysis_1_.pdf).

<sup>5</sup> Centre for Economic Performance and The UK in a Changing Europe (2018) The Economic Consequences of the Brexit Deal. Available at: <http://ukandeu.ac.uk/new-research-shows-economic-and-fiscal-consequences-of-the-brexit-deal/>.

## The main results: a ‘no deal’ Brexit shock

Table 1 shows the ten constituencies with the largest shocks by workplace in terms of potential job losses caused by a ‘no deal’ Brexit. We also highlight the main sector of job loss in each constituency analysed.

Table 2 reports the largest shocks by residence – all commuter locations close to large cities.

The results in both tables refer only to a ‘no deal’ Brexit, but the shock in the case of a ‘soft’ Brexit will be approximately half the reported levels.

**Table 1: Parliamentary constituencies with the highest number of jobs losses among workers in case of a ‘no deal’ Brexit**

Constituency	Workplace shock	Residence shock	Difference	Sectors most at risk
Cities of London and Westminster	-42,400	-2,050	-40,350	6419 : Other monetary intermediation
Holborn and St Pancras	-10,050	-2,350	-7,700	6910 : Legal activities
Poplar and Limehouse	-7,950	-2,350	-5,600	6419 : Other monetary intermediation
Manchester Central	-7,100	-1,800	-5,300	7820 : Temporary employment agency activities
Glasgow Central	-6,950	-1,250	-5,700	6419 : Other monetary intermediation
Islington South and Finsbury	-6,700	-2,050	-4,650	7820 : Temporary employment agency activities
Bermondsey and Old Southwark	-6,200	-2,350	-3,850	6920 : Accounting, bookkeeping and auditing activities; tax consultancy
Birmingham, Ladywood	-6,200	-1,600	-4,600	6419 : Other monetary intermediation
Leeds Central	-5,950	-2,050	-3,900	6419 : Other monetary intermediation
Bristol West	-4,600	-2,050	-2,550	6419 : Other monetary intermediation

The large potential loss of jobs in the Cities of London and Westminster constituency is not surprising. It reflects the very high density of jobs within Central London, especially within the Square Mile, coupled with the likely adverse effects of Brexit on the financial sector as parts of it lose their passporting rights in the EU. The second most negatively affected constituency is Holborn and St Pancras, where many jobs in legal activities may be lost. Overall, the ten most negatively affected constituencies are either located in London or within

the central areas of some of the UK's largest cities – areas with many jobs which draw workers from wider surrounding areas.<sup>6</sup>

Turning to constituencies with the largest shocks on a residence basis (i.e. the largest number of potential job losses among residents), Watford comes top of the list – with some 2,650 residents losing their jobs as a result of a ‘no deal’ Brexit (see Table 2). All of the constituencies with the largest losses among residents are located either within or close to London. They all show significant job losses among workers who work outside the constituency (column 3), reflecting their dormitory/commuter roles. In some cases – e.g. Streatham and Battersea – the loss of jobs elsewhere is the dominant effect, but in most of these constituencies there are also significant local losses of jobs, at least some of which impact their own residents. For example, Bermondsey and Old Southwark loses around 6,200 jobs (column 1), of which approximately 5,750 are held by residents in other constituencies (column 2) and the rest (450) within the constituency.

**Table 2: Parliamentary constituencies with the highest number of job losses among residents in case of a ‘no deal’ Brexit**

Constituency	Workplace shock	Shock to workers who live elsewhere	Shock to residents who work elsewhere	Residence shock	Difference
Watford	-3,350	-2,100	-1,400	-2,650	-700
Bermondsey and Old Southwark	-6,200	-5,750	-1,900	-2,350	-3,850
Poplar and Limehouse	-7,950	-7,400	-1,800	-2,350	-5,600
Holborn and St Pancras	-10,050	-9,450	-1,750	-2,350	-7,700
Vauxhall	-2,550	-2,350	-2,100	-2,350	-200
Reading East	-2,650	-1,850	-1,500	-2,300	-350
Streatham	-650	-600	-2,200	-2,250	1,600
Battersea	-1,250	-1,150	-2,100	-2,250	1,000
Bethnal Green and Bow	-2,750	-2,600	-2,000	-2,200	-550
West Ham	-1,650	-1,350	-1,900	-2,200	550

The reason that the differences between constituencies are greater in terms of workplace shock than in terms of residence shock is that overall constituencies are far more similar in terms of the sectors in which their residents work than the same constituencies are in terms of the jobs they provide<sup>7</sup>. For example, some 62% of employment in the Liverpool West Derby constituency is in ‘public administration, education and health’. Looking at more detailed sectoral employment data reveals that a large share of this employment (some 5,000 out of 18,000 in that sector) is in the constituency’s various hospitals, including Alder Hey Children’s Hospital, Broadgreen Hospital, and Liverpool Heart and Chest Hospital. But while local

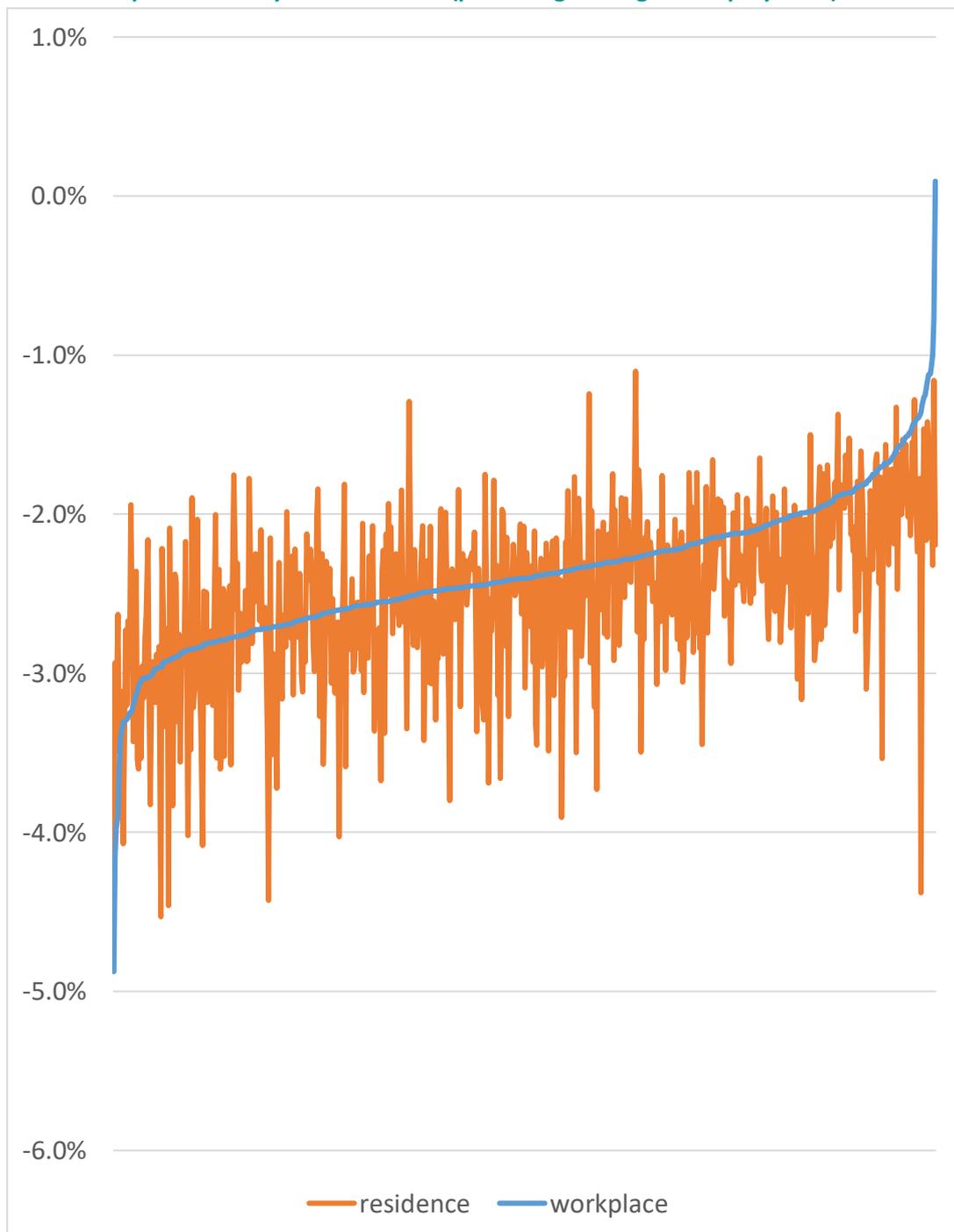
<sup>6</sup> Some cities are split evenly across two (or more) constituencies. They may well experience the same size shocks as the ones in Tables 1 and 2, but they will not show up so obviously in our constituency analysis.

<sup>7</sup> In quantitative terms the standard deviation of shocks across constituencies is 1850 for workplace estimates but 400 for residence estimates.

employment in the constituency is largely in hospital activities, the composition of the jobs held by the residents of Liverpool West Derby – some of whom work elsewhere – will be closer to the national average.

This averaging effect is illustrated in Figure 1. This positions constituencies in order of decreasing (negative) shocks by residence (in blue) and gives the corresponding shock by residence (in red). The results in the Figure are in terms of percentage shocks, but the story is similar if we look at absolute shocks.

**Figure 1: The impact of a 'no deal' Brexit shock on workers and residents of different parliamentary constituencies (percentage change in employment)**



It is evident from Figure 1 that for any given shock in workplace terms, there is a wide range of possible outcomes by residence. That is, knowing a constituency's workplace shock is a poor guide to its residence shock.<sup>8</sup> The residence estimates clearly derive partly from local employment losses (because some people work within the constituency where they reside), but, overall, commuting patterns are a more important determinant of Brexit shocks at a constituency level than are constituency job losses. Knowing the geographical location of the jobs lost is, in itself, not sufficient to identify where the shock of Brexit will land: many workers commute, so knowing their place of residence is more relevant.

In summary, given that the differences we are analysing stem from the different effects of Brexit across sectors, moving to a residence basis essentially has the effect of averaging out the Brexit shock across space. As a result, many more constituencies will suffer significant residence-based shocks than workplace-based shocks in the case of a 'no deal' Brexit, resulting in negative economic impact. While 269 constituencies will suffer shocks equivalent to losing more than one thousand jobs on a workplace-basis, 398 will do so on a residence-basis.

<sup>8</sup> Technically, the variance in workplace estimates explains only 28% of the variance in residence estimates. The share is only 11% in for the absolute estimates.