

Working owners discontinuity in the Business Register and Employment Survey (BRES)

Introduction

Changes in the treatment of working owners in the 2011 Business Register and Employment Survey (BRES) have led to a discontinuity between the 2010 and 2011 BRES results. This article gives background information on the changes that were made to the questionnaire, a high level analysis of the discontinuity, and details of what the Office for National Statistics (ONS) has done to estimate the size of the discontinuity for users, giving continuity between 2010 and 2011 results.

Background

What are working owners?

Working owners include sole traders, sole proprietors and partners. Cognitive testing carried out by ONS has shown that directors of limited companies often consider themselves to be in this category. However, it is clear from HMRC guidance that these should be classified as employees of the company.

What changes have been made to the 2011 BRES questionnaire?

In order to ensure that all limited companies (excluding limited liability partnerships) return the correct information for the 2011 survey, changes were made to the BRES questionnaire to route directors of limited companies around the working owners question, directly to the employees question. The questionnaire then makes it clear that directors of limited companies should be included in this category. The result of this change is that some of these directors who would have previously been classified as working owners will now be classified as employees. This has increased the BRES estimate of employees and caused a discontinuity in the 2011 results.

Is there a discontinuity in the employment figures?

Simply counting directors of limited companies as employees rather than working owners should not have any effect on employment estimates, as employment is the sum of employees plus working owners. However, measuring this discontinuity has been further complicated by the discovery of instances of double counting in the results. This double counting is a consequence of some directors of limited companies being included by those completing the questionnaire in both the employees' and the working owners' category. The ONS therefore conducted a separate survey which enabled an estimate to be made of the extent to which double counting took place. This enabled ONS to make an estimate of the size of the discontinuity between 2010 and 2011 and produce an adjusted version of 2010 results which attempts to remove the discontinuity.

Handling the discontinuity – Information for users

This document along with the 2011 BRES statistical bulletin gives users information on the discontinuity for high level estimates (region and broad industry group). To allow users to measure the full discontinuity caused by changes to the way that working owners are categorised in the BRES results, ONS will be releasing a full set of 2010 revised BRES estimates that have been adjusted for the working owners discontinuity before the end of the 2012 calendar year.

Analysis

The discontinuity in the 2011 BRES results brought about by the changes to the 2011 data can not be reversed. In other words, it is impossible to tell how many limited companies would have recorded their directors as working owners had the changes to the questionnaire not been made. Therefore the discontinuity analysis has been carried out on the 2010 data by moving directors of limited companies into the employees' category, while making an adjustment for the known double counting. Since information on whether a working owner is full or part time is not asked in the BRES questionnaire, they have been assigned to one of these categories based on the findings of a small pilot study carried out internally by ONS.

Caveat: All analysis shown below is at a Great Britain level only, as Northern Ireland collect and process their own data independently. The analysis also excludes farms data as this is supplied by the Department for Environment, Food and Rural Affairs (DEFRA) and so is unaffected by this issue.

Discontinuity by country

Employees 2010	Employees 2010	Employment 2010	Employees 2010 (with adjustment)	Employment 2010 (with adjustment)	Thousands			
					Employees change		Employment change	
					Count	%	Count	%
England	22,499	23,796	22,955	23,671	456	2.0	- 125	-0.5
Wales	1,136	1,198	1,151	1,193	15	1.3	- 5	-0.4
Scotland	2,277	2,374	2,302	2,364	25	1.2	- 10	-0.3
Great Britain	25,912	27,368	26,408	27,227	496	1.9	- 140	-0.5

The table above shows that the total discontinuity in the employee estimates caused by the changes to the 2011 BRES questionnaire stands at just under a half a million increase. However, for employment there has been a decrease of 140,000 caused by adjusting the data to remove the estimated double counting.

Discontinuity by industry

Thousands

Employees 2010	Employees 2010	Employment 2010	Employees 2010 (with adjustment)	Employment 2010 (with adjustment)	Employees change		Employment change	
					Count	%	Count	%
Agriculture; Forestry & Fishing	28	42	31	41	3	9.1	- 1	-1.8
Mining; Quarrying & Utilities	332	337	335	337	3	0.8	-	-0.1
Manufacturing	2,289	2,363	2,317	2,352	28	1.2	- 11	-0.5
Construction	1,149	1,355	1,230	1,331	80	7.1	- 23	-1.7
Motor Trades	459	509	468	504	9	2.0	- 4	-0.9
Wholesale	1,076	1,142	1,107	1,135	31	2.9	- 8	-0.7
Retail	2,699	2,869	2,733	2,857	33	1.2	- 12	-0.4
Transport & Storage (inc Postal)	1,195	1,243	1,205	1,240	10	0.9	- 3	-0.2
Accommodation & Food Services	1,731	1,833	1,752	1,823	21	1.2	- 10	-0.5
Information & Communication	976	1,058	1,026	1,046	50	5.2	- 13	-1.2
Finance & Insurance	1,000	1,030	1,016	1,025	16	1.8	- 5	-0.3
Property	360	446	397	441	37	10.4	- 5	-1.0
Professional; Scientific & Technical	1,808	2,054	1,901	2,030	93	5.2	- 24	-1.1
Business Administration and Support Services	2,094	2,175	2,131	2,165	37	1.8	- 11	-0.5
Education	2,515	2,537	2,526	2,535	10	0.4	- 2	-0.1
Health	3,488	3,567	3,497	3,564	9	0.3	- 3	-0.1
Public Admin	1,510	1,510	1,510	1,510	-	0.0	-	0.0
Other	1,204	1,298	1,229	1,291	25	2.0	- 7	-0.5
All Industries	25,912	27,368	26,408	27,227	496	1.9	- 140	-0.5

The broad industry group with the largest discontinuity in the number of employees is professional, scientific and technical (93 thousand increase) followed by construction (80 thousand increase). Property has the largest percentage increase with 10.4 per cent. The largest change in employment is in construction and professional, scientific and technical.

Discontinuity by region

Thousands

Employees 2010	Employees 2010	Employment 2010	Employees 2010 (with adjustment)	Employment 2010 (with adjustment)	Employees change		Employment change	
					Count	%	Count	%
North East	997	1,036	1,008	1,034	11	1.1	- 2	-0.2
North West	2,918	3,066	2,969	3,050	51	1.8	- 16	-0.5
Yorkshire and The Humber	2,157	2,264	2,190	2,256	34	1.6	- 9	-0.4
East Midlands	1,853	1,961	1,891	1,951	38	2.1	- 10	-0.5
West Midlands	2,255	2,372	2,293	2,358	39	1.7	- 14	-0.6
East of England	2,322	2,471	2,378	2,455	55	2.4	- 16	-0.7
London	4,103	4,346	4,206	4,323	103	2.6	- 23	-0.5
South East	3,674	3,910	3,756	3,886	82	2.2	- 24	-0.6
South West	2,220	2,370	2,263	2,359	43	2.0	- 12	-0.5
Wales	1,136	1,198	1,151	1,193	15	1.3	- 5	-0.4
Scotland	2,277	2,374	2,302	2,364	25	1.2	- 10	-0.3
Great Britain	25,912	27,368	26,408	27,227	496	1.9	- 140	-0.5

The discontinuity as a percentage of total employees is fairly even across the different regions with London having the largest increase both in terms of number of employees and percentage increase in employees. The least affected is the North East.

Affect on estimates by full/part time

Thousands

Employees 2010	Part-time employees 2010	Full-time employees 2010	Part-time employees 2010 (with adjustment)	Full-time employees 2010 (with adjustment)	Part-time employees change		Full-time employees change	
					Count	%	Count	%
Agriculture; Forestry & Fishing	6	22	7	23	1	12.8	2	8.0
Mining; Quarrying & Utilities	22	310	23	311	1	4.4	2	0.6
Manufacturing	193	2,096	202	2,116	9	4.6	19	0.9
Construction	115	1,034	136	1,094	21	19.0	59	5.7
Motor Trades	62	397	65	403	3	5.2	6	1.5
Wholesale	139	936	148	959	9	6.1	23	2.4
Retail	1,541	1,158	1,552	1,181	11	0.7	23	2.0
Transport & Storage (inc Postal)	183	1,012	186	1,019	4	2.1	7	0.7
Accommodation & Food Services	968	764	973	779	5	0.5	16	2.0
Information & Communication	132	844	150	877	18	13.8	32	3.8
Finance & Insurance	150	850	157	859	7	4.8	9	1.3
Property	94	266	104	294	9	10.1	28	10.5
Professional; Scientific & Technical	342	1,466	366	1,535	24	7.0	69	4.8
Business Administration and Support Services	722	1,372	732	1,399	10	1.4	26	1.9
Education	1,240	1,275	1,244	1,281	4	0.4	6	0.5
Health	1,530	1,958	1,532	1,965	3	0.2	7	0.3
Public Admin	376	1,134	376	1,134	-	0.0	-	0.0
Other	554	650	562	666	8	1.5	16	2.5
All Industries	8,368	17,545	8,515	17,894	147	1.8	349	2.0

The table above shows that the majority of directors of limited companies (excluding limited liability partnerships) are assigned to the full-time category. However part-time employees generally have a larger percentage increase due to the smaller number of part-time workers in most industries.