

REPORT OF A BREACH OF THE CODE OF PRACTICE FOR STATISTICS

1. Core Information

Title and link to statistical output	Two publications for: Employee and Earnings, Labour Market UK Labour Market April 2020 UK Labour Market May 2020
Name of producer organisation	Office for National Statistics (ONS)
Name and contact details of person dealing with report	Debra Prestwood Statistical Head of Profession, Office for National Statistics, Government Buildings, Cardiff Road, Newport, NP10 8XG.
Link to published statement about the breach (if relevant)	
Date of breach report	20/5/2020

2. Circumstances of breach

Relevant principle(s) and practice(s)	Value: Principle V2 - Statistics and data should be equally available to all, not given to some people before others. They should be published at a sufficient level of detail and remain publicly available. Practice V2.1 - Statistics producers must provide free and equal access to regular and ad hoc statistics.
Date of occurrence of breach	21/04/2020 and 19/05/2020
<p>The ONS website service recently failed on two occasions at 7am which prevented normal service for a period of 4 minutes. During both incidents the Labour Market publication was being published at 7am, therefore it is likely that any members of public looking for Labour Market data for the months of April and May would have failed to access data until 7:04am.</p> <p>Our records show that the Labour Market bulletin and associated publications for each month were all released on time at 7am. However, there was a surge in traffic which caused our website service to go down and prevented access to this series of publications for 4 minutes between 7:00am and 7:04am.</p> <p>The main issue was that the one of the services handling ONS website traffic ran out of memory due to the extremely high load on the website. There were 17,000 requests per minute, which is 3 times our normal peak spikes.</p> <p>This resulted in a failure in service between 7:00 and 7:04. Users had a 'service temporarily unavailable error page' message. Only 8% of requests for access were successful, unfortunately 92% of requests failed during this time.</p> <p>Automated alarms alerted the ONS team as the website service dropped out. At 7am there were members of staff online supporting the early publishing, and they began investigating the issue immediately.</p> <p>The issue was identified by the team as soon as the event occurred. The platform recovered itself, resulting in the website service back within four minutes of the release time.</p>	

3. Impact of the breach

There was a failure in the ONS website service between 7:00 and 7:04. Users had a 'service temporarily unavailable error page' message. Only 8% of requests for access were successful and unfortunately 92% of requests failed during this time.

One stakeholder contacted our press team after the second incident on 19 May, enquiring why the ONS website had failed twice. The press team responded to that query and apologised for the loss of service.

4. Corrective actions (taken or planned) to prevent re-occurrence

After each incident we have run investigations and held two post-mortem meetings to analyse our results. After the incident in April;

- We have increased the memory (RAM) available to our website services, effectively spreading the burden on the website to manage demand.
- We have also run analysis on the spread of IP addresses to identify if there were any similar patterns of usage on the two occasions the website failed.
- We have improved internal communications within the division. All teams involved in investigating and reporting website issues now have a single dedicated channel on which to communicate about issues and can share plans for resolving them.

We still have further investigations to run and have a work plan to conduct this over the next few weeks. The additional work will cover:

- Monitoring the number of hits to our servers, increasing memory capacity of the website and careful monitoring of certain URL patterns after such incidents.
- Carrying out a review of the tools we use to test the performance of the website and exploring new tools to help test and improve the website's resilience.
- Investigate the possibility of amending the 'temporarily unavailable' warning message that appeared on the ONS website when it crashed, to something that will help direct users to alternative sources of the headline figures (such as via twitter or NOMIS).