

Quantitative financial data in WERS 2004

Update on the situation as of 27th July 2006

1. Data availability:

The WERS Financial Performance Questionnaire data and linked WERS-ABI data are now available in the ONS Virtual Micro-data Laboratory (VML). The VML can be accessed at all ONS sites (Pimlico, Newport, Southport and Titchfield). Applications to use the WERS data in the VML are now being processed and the first few successful applications have now been approved. However, there are still some issues to be resolved in respect of the WERS-ABI dataset which are likely to delay productive use of that dataset – see below.

2. Financial Performance Questionnaire data:

- a. **Availability:** This was deposited with its associated documentation and is ready and available for use.
- b. **Nature of the data:** The FPQ dataset contains data on the performance of the workplace (or in a minority of cases, the wider organisation) for a single accounting year. In most cases, this is the calendar year Jan-Dec 2003. This follows the explicit practice followed in respect of other quantitative data items (such as labour turnover, absence etc), and the implicit practice in respect of the subjective measures of performance, whereby data is collected on behaviour in the period immediately preceding the interview. It assumes that workplaces practices have not changed to any substantive degree since that time. It reflects the difficulties of trying to return to the workplace at a later point in time to collect performance data for the accounting period that includes the interview date: bundling all of the data collection in one visit is considered to maximise response.
- c. **Numbers of observations:** Some 1,070 of the 2,295 workplaces in the WERS 2004 Cross-Section Survey have FPQ data. Weights have been devised to account for observable response biases (see Section 7 of the WERS 2004 Technical Report). Most of the 1,070 observations (834, or 78%) are at workplace level.
- d. **Individual data items:** The FPQ contains questions on: turnover; employment; value of assets; capital expenditure; purchases of goods, materials and services; employment costs; and R&D. The numbers of responses given to each item are provided in Table 1 below. The table also gives the numbers of observations available for some key derived variables (such as labour productivity), which we will be adding to the data file in August.
- e. **Data quality:** An initial investigation of the integrity of the data is presented in Chapter 10 of the WERS sourcebook (pp. 286-301). This concludes that the FPQ data on output per worker and value-added per worker corresponded well with ABI aggregates, and that the FPQ measures demonstrated reasonable degrees of convergent validity

(when compared with the subjective labour productivity question in WERS) and good degrees of construct validity (when regressed upon a small number of independent variables such as union recognition and foreign ownership). In due course, we will be comparing the FPQ values for individual workplaces with those obtained in the ABI.

3. WERS-ABI linked data:

- a. **Availability:** The WERS 2004 Cross-Section and 1998-2004 Panel Surveys have each been linked to the ABIs for each year between 1998 and 2004. These linked datasets are available in the VML. However, the documentation for the ABI data items has yet to be made available in the VML. Derived variables for the ABI are also available in ONS but have yet to be added to the linked data files.
- b. **Nature of the data:** The ABI provides data on performance, primarily at organisation level, for a single accounting year. The most common reporting period in the 2004 ABI is the calendar year Jan-Dec 2004. Organisations can be traced over time to provide a longitudinal perspective, although smaller organisations are not surveyed each year.
- c. **Numbers of observations:**
 - i. **Cross-Section:** Some 882 of the 2,295 workplaces in the WERS 2004 Cross-Section Survey have data from the 2004 ABI. In 149 of these cases, the ABI data is for the WERS workplace alone. In the remaining 733 cases, it is for a wider unit (usually the whole organisation). In 60% of the 733 cases, the ABI return covers 10 or more workplaces.
 - ii. **Panel:** Some 569 of the 938 continuing workplaces have been matched to the 1998 ABI, and 586 have been matched to the 2004 ABI. A total of 435 have a match in both years. But see (d) on data availability at item level.
- d. **Individual data items:** The ABI contains similar data to the WERS FPQ, with two principal exceptions: (i) it does not contain detail on capital stocks; (ii) it provides much more detail on the components of items such as turnover (e.g. separating sales of goods from rental receipts etc). We do not yet have details of the numbers of responses given to each item in the ABI. But a quick investigation of the ABI data matched to the 2004 Cross-Section suggests that item-level response rates are high (90%+). In contrast, there appears to be a large amount of missing ABI data in the linked Panel data file. We have yet to discover why; there could well be some error in the matching process and we will be investigating this with ONS in due course.
- e. **Data quality:** Will be conducting an investigation of the integrity of the data once the documentation and derived variables are in place (hopefully in the next couple of weeks). We will also be seeking to derive weights to account for observable selection biases arising through partial matching.
- f. **Other issues:** It is worth reiterating the ‘units of analysis’ problem, whereby most WERS workplaces are matched to ABI returns for much larger units. One approach – taken by Jonathan Haskel in his analysis

of the linked ABI-Employer Skills Survey dataset – is to estimate separate regressions on single-plant and multi-plant firms.

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Table 1 Numbers of observations in the WERS 2004 Financial Performance Questionnaire

Data item	Number of observations
Turnover	994
Employment – full-time	1040
Employment – part-time	998
Value of assets	585
Capital acquisitions	861
Capital disposals	974
Purchases	974
Employment costs	1039
Any R&D	1047
% of total expenditure on R&D	1008
<i>Derived variables (to be added in Aug):</i>	
Output per full-time equivalent	892
Value-added per full-time equivalent	829
Profit (value added – costs) per full-time equivalent	725
Capital/labour ratio (value of capital assets per full-time equivalent)	537