

Nigerian Manufacturing Enterprise Survey (NMES)

Firm, Worker and Apprentices Data: 1998-2003

Wave 1 (2001) & Wave 2 (2004)

Explanatory notes on dataset

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1. Background

The data files being made available by the CSAE are for data collected from Nigerian firms in 2001 and 2004. There has been a long delay in making the data publicly available due partly to the complexity involved in how the data was collected. It has now proved possible to present the data in a consistent way across the two waves of the data. As the data is a panel the user is advised to start with the second wave as the Stata do files combine data from both waves and as some of the time invariant data was not collected in wave 2 these Stata do files use data from the first wave. However all the primitive data for both waves is being made available.

In both waves of the data recall data was collected so that it is possible to construct a firm level panel over the period 1998 to 2003. In the first wave, carried out in July and August 2001, data for 2000 was collected as the current year and the recall questions covered 1998 and 1999. However capital stock data was not collected for 1998 so, if a production function is estimated, the maximum length of the panel is from 1999 to 2003.

Reports are available on both waves and included in the Reports folder.

Måns Söderbom and Francis Teal. *The Performance of Nigerian Manufacturing Firms: Report on the Nigerian Manufacturing Enterprise Survey 2001* REP/2002-01.

Adeel Malik, Francis Teal and Simon Baptist. *The Performance of Nigerian Manufacturing Firms: Report on the Nigerian Manufacturing Enterprise Survey 2004*.

At the same time as the firms were interviewed a sample of workers and apprentices from the firms were also interviewed. In the first wave (ie the 2001 survey) the questionnaire was a paper one and the excel version of the questionnaire is made available in the Questionnaire folder. In the second wave (ie the 2004 survey) the questionnaire for the worker (and for some part of the firm survey) was conducted using a program (pocket survey) on a handheld computer. The worker questionnaire in the Questionnaire folder is from that program.

2. The Firm Level Data

The basic data for the firms from the wave 2 can be found in the folder: `Firm_Data_Wave2`. This folder contains Sections 2 to 8 of the Wave 2 questionnaire. Note that Section 5 has a different numbering system as it is from the hand held computer. The question numbers are as in the excel version of the questionnaire.

To create the firm-level panel the following Stata do files need to be run.

1. 'Nigeria edit_rev_0.do' combines Sections 3, 4 and 5 of the Wave 2 primary data into a file called 'sections_3_4_5_2015.dta' which is stored in the Derived Data folder (in other words you can if you wish directly access this file but to understand some of the variable names you will need to read the Stata do file that creates this data file).
2. 'Nigeria edit_rev_1.do' combines firm level data from Waves 1 and 2 to create the key firm level variables needed to run a production function. The result is a data file 'production_function_1_2' which is also stored in the Derived Data folder.
3. 'Nigeria edit_rev_2.do' then combines 'production_function_1_2' with data necessary to create real values, the age of the firm and the aspects of the data that are treated as time invariant. One of these aspects is the human capital of the firm. While in principle it would be possible to generate time variation in this data by combining Waves 1 and 2 this has not been done. This is partly as the worker coverage in Wave 2 is smaller than that in Wave 1 and partly due to doubts that it is possible to capture time variation in the human capital stock of the firm. If the researcher wishes to extend the data that is possible but it has not been done in these files. In the Wave 1 firm folder you will find two Stata do files to create the data needed for the measure of the human capital sock at the firm level.
 - i. The first of these is:

'Labour Market for Human capital.do' which creates 'labmar_12' (stored in 'Firm_Derived_Data_Wave1') takes the data from 'nmla18extended_public.dta' and for both 1999 and 2000 creates the occupational breakdown of the firm in terms of the employment structure of the firm. The categories of employment identified are: management (man), administration staff (admin), commerce and sales (comm), supervisors (superv), maintenance (maint), production workers (prodw), masters (mast) and apprentices (appr).
 - ii. The second of these is:

'Labour Market for Human capital_1.do' which creates 'human_capital_wave1' (stored in 'Firm_Derived_Data_Wave1') takes the education, age and tenure by occupational categories from 'nga_worker_appren' (see next section for how this data is created) and creates a firm level variable and, where this is absent, imputes the average across the two years of the data. These are then weighted by the occupational categories available from 'labmar_12'. The result is a firm level weighted average of education (eduwgt), the age of workers in the firm (agewgt) and their tenure (tenwgt). The file also creates a weighted average of earnings in the firm (ernwgt). This data which is in 'human_capital_wave1' is merged into the pooled wave 1 and 2 data in the Stata data file 'production_function_1_2.dta'.

To repeat, this is only possible in this way, as no attempt has been made to create a time varying variables for the human capital stock of the firm.

In addition to the measure of the human capital of the firm 'Nigeria edit_rev_2.do' also merges data for the Consumer Prices Index (which is our only measure for deflating the revenues and costs), firm age, sector and location and the degree of unionisation of the firm. The data files are all in the Derived Data folder but the Stata Do files to create these data sets are also available. The four Stata Do files and the data sets they create are:

'Nigeria_Cpi.do' which creates 'cpi.dta'
 'Nigeria_Firm_Age.do' which creates 'firm_age.dta'
 'Nigeria_Sector_Location' which creates 'sector_town.dta'
 'Nigeria_Unionisation' which creates 'union_wave1_wave2'

The data for wave 1 can be found in the `Firm_Data_Wave1` folder. The Do files which create the data which is used by 'Nigeria edit_rev_1.do' can be found in `Firm_Do_Files_Wave1`. Note that these Stata Do files correct some of the wave 1 data in the light of information created when wave 2 was carried out.

The file 'Nigeria edit_rev_2.do' reports some basic production function and highlights possible problems with the capital stock variable.

3. The Individual Worker and Apprentice Data

3.1 Wave 1 Data

There is a different organisation of the data between Waves 1 and 2 for the individual based data for workers and apprentices. In Wave 1 the data for workers and for apprentices were collected in separate questionnaires while in Wave 2 there was a single questionnaire. That means that for the first Wave of data it is necessary to combine the data for workers and for apprentices.

To create a single data file the following programs, which can be found in the Worker Do file folder under `Wave1_2001` folder, need to be run:

```
'Earnings_workers_1.do' creates 'ngawork.dta'  
'Earnings_apprentices_1.do' creates 'ngaappren.dta'
```

These files extract the basic data for workers and apprentices respectively. They are then combined in:

```
'Earnings_workers_apprentices_1.do' which creates 'nga_worker_appren.dta'
```

As recall data was collected 'nga_worker_appren.dta' has been organised to have data for both 2000 and 2001.

At the end of 'Earnings_workers_apprentices_1.do' it is possible to run a basic earnings function with the data.

3.2 Wave 2 Data

The basic data for the workers and apprentices from wave 2 can be found in the folder: `Worker_Data_Wave2`. There are two primitive files. One is 'all_single.dta' is the individual based data for all variables except their activities. The survey then asked about the history of activities for the individual and the answer to these questions are in the 'all_multi.dta' file.

To creating the Nigerian worker data for Wave 2 you need to run the following do files all of which are in the directory `Worker_Do_files`. (These Stata Do files were written by Neil Rankin now of the University of Stellenbosch):

1. Run 'merge.do'
This takes Stata files from created from Pocket Survey and puts the individual Information (single) together with the job information (multiple). Output is 'all_merge.dta'
2. Then run 'nig_org_1' which creates activities and then saves as 'all_merge_1.dta'.
3. Then run 'nig_org_2' which combines activity level information with the characteristics of the individual and saves as 'all_merge_2.dta'

4. Then run `'nig_real_earns'` which calculates real earnings and saves two data files. One is as `'earn_baserun.dta'` which is organized by spells of activity. The dataset is then reshaped to create a panel of data from 2002 to 2004. This is saved as `'2002_2004data.dta'`.

This final run shows basic earnings functions. These can be greatly extended by exploiting the panel and the amount of background information given in the activity part of the questionnaires.

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