

Ghanaian Firms and the Evolution of the Manufacturing Sector in Ghana

Authors: Andrew Kerr

As a result of this project the Ghanaian 2014 Integrated Business Establishment Survey (IBES) firm census microdata has been made publicly available through DataFirst, a microdata repository at the University of Cape Town. The research undertaken for the project used firm and population census data from Ghana and five other African countries to show that firm census coverage can vary dramatically within countries over time or across countries. This has important implications for research using firm census data.

Introduction

The main aim of this project was to make firm microdata from the 2014 Integrated Business Establishment Survey (IBES) conducted by the Ghana Statistical Service (GSS) publicly available through the Ghana Statistical Service and DataFirst, a microdata repository located at the University of Cape Town. Firm census data is being increasingly used by researchers to investigate a variety of issues in economic development, but such data are still scarce. As a result of this and a previous PEDL project¹, there is now publicly available microdata from three Ghanaian firm censuses, something that is extremely rare in developing countries.

Our research for the project also showed that firm census coverage differed dramatically in Ghana over time and across five other African economies. This means that the conclusions drawn about the scale of production in Ghanaian manufacturing when taking that data as is are very different from those when the data are made more comparable.

Policy Context

Ghana is a lower middle-income country in which agriculture is still dominant, but where manufacturing has stagnated and services are growing. Understanding enterprise development across services and manufacturing is important, and the availability of the IBES firm census data and two previous firm censuses allows researchers to investigate these and many other issues.

¹ PEDL project 'Making Forgotten Firm Data Available for Research in Ghana and Swaziland', <https://pedl.cepr.org/content/making-forgotten-firm-data-available-research-ghana-and-swaziland-2>

Methodology

To release the 2014 IBES data required cooperation between the PI and the Ghana Statistical Service. This cooperation generated useful knowledge about the census, over and above that from the official reports, which could then be disseminated with the public release of the data. IBES 2014 had two phases. Phase 1 was a short questionnaire in which roughly 635 000 firms were enumerated. This phase 1 data was released by GSS on their website. Phase 2 was a roughly 5% sample of the phase 1 firms, in which more detailed information on the firms was collected. The phase 2 data was released through DataFirst, a microdata repository at the University of Cape Town. DataFirst maintains the highest standards for curating microdata and as such is recognised with the Core Trust Seal of Approval. The public release of the data required a careful description of the data collection, sampling and data quality issues discovered, which has been collated in a guide to the data.

The second part of the project was to understand broad trends in the scale of Ghanaian manufacturing using the three publicly available censuses. To do so the project used microdata from three firm and three population censuses, as well as three representative household surveys and reports from the firm and population censuses conducted in the early 1960s, a few years after independence. By comparing the firm and population censuses we were able to show that firm census coverage varied dramatically over time and that a naïve comparison of the firm censuses generates incorrect conclusions about the changes in the Ghanaian manufacturing sector, which we discuss next.

Main Findings

The firm size distribution has increasingly been recognised as an important marker of economic development. A naïve comparison of the 1987, 2003 and 2014 shows that the average firm size in manufacturing declined from seventeen persons engaged in 1987 to nine in 2003 and then to four in 2014. This suggests that Ghanaian manufacturing became concentrated in small firms, the opposite of what would be expected of a country with rising GDP.

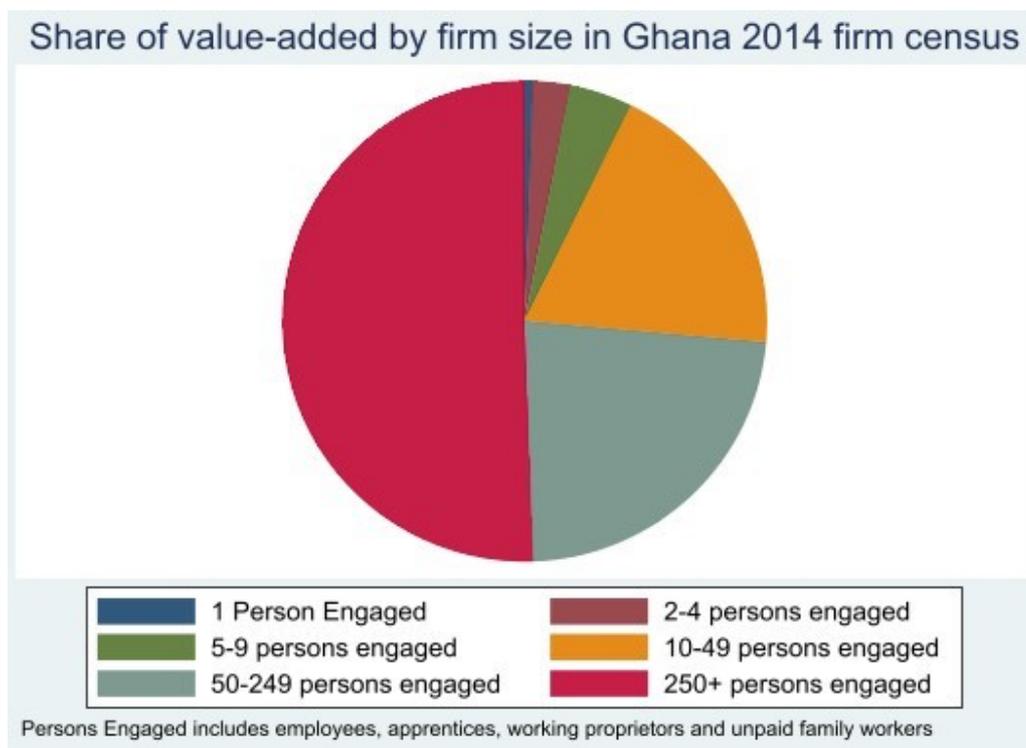
Our comparison of the firm and population censuses showed that the three firm censuses differed dramatically in their coverage of the smallest firms and own account workers. The 1987 firm census enumerated around 0.13% of the own account workers included in the population census conducted around the same time, whilst this was 0.56% for the 2003 firm census and 4% for the 2014 census. Since coverage of the smallest firms increased so dramatically, using the firm censuses without this context to describe changes in the Ghanaian firm size distribution results in an artificial and very large decline in average firm size and a very large and misleading increase in the share of overall employment in small firms.

When we used the population censuses to make the firm censuses more comparable, we find that there has been no decline in average firm size, a dramatically different conclusion from the naïve comparison. The key message of the research is that firm census coverage is an important but overlooked issue in research using such data. This is reinforced by our comparison of firm census coverage over five other African economies, which varied substantially.

We noted that the 2014 IBES had much broader coverage of the smallest firms and own account workers than the previous two firm censuses conducted in Ghana in 1987 and 2003. In IBES 2014, 80% of the firms enumerated in manufacturing had fewer than five persons engaged, whilst nearly 96% had fewer than 10. But Figure 1 shows that only around 3% of value added was created in firms with fewer than five persons engaged and around 6% in firms with fewer than 10 persons engaged. Conducting a firm census with only firms of ten persons or more would result in only 4% of the firms being enumerated but obtain 94% of value-added in the firms enumerated in IBES 2014.

Whilst coverage was greater than previous censuses, IBES 2014 still enumerated only 4% of the own account workers in manufacturing recorded in the population census. Considering that there is much better, almost 100%, coverage of such firms in representative household surveys, such as the Ghana Living Standards Surveys, our conclusion is that it does not make sense to also include some of the smallest firms in a firm census. Enumerating fewer firms, for example by using a simple size cut-off of five or ten persons engaged, would make conducting firm censuses much smaller and cheaper and thus enable National Statistical Offices (NSOs) to undertake them more regularly and with higher quality. Simple collaboration between household and economic statistics divisions of NSOs would easily allow for full coverage of the size distribution of firms with a combination of firm census and household survey data and the appropriate questions.

Figure 1: Share of value-added by firm size in Ghana 2014 firm census



Relevance

Firm data availability facilitates further policy-relevant research. The comparisons of the three censuses and the comparisons across African countries have clear policy relevance for National Statistics Offices (NSOs) and funders of firm census data such as the World Bank and FCDO (formerly DFID), who helped fund the 2014 IBES. For NSOs a key message is that better cooperation between household survey/social statistics and firm survey/industrial statistics departments could result in clearer coverage of firm censuses and household surveys, which would be important for GDP estimates.

Moving forward

We hope to use our research to persuade donors or NSOs to fund and undertake smaller but more regular and higher-quality firm censuses. We believe this will allow limited government revenue or donor funding to be spent more productively. For researchers, the project has made it possible to use the publicly available firm census data to study a wide variety of research topics. We are also writing another paper discussing the practical problems encountered in using the IBES data and how these speak to the question of what it is possible to know about firms in Africa using the data that have been made available.

This note is based on research conducted as a part of PEDL [ERG 5300](#).