

The 2015 Ghana Manufacturing Innovation Capability Survey (the 2015 Ghana ICS)

The 2015 Ghana Manufacturing Innovation Capability Survey (**the 2015 Ghana ICS**) is a collaboration between the Tilburg University and the Enterprise Analysis Unit (DECEA) of the Development Economics Group of the World Bank. This is part of a wider project undertaken by the Tilburg University to study the innovative capability of manufacturing firms in nine countries selected from three regions- Ethiopia, Kenya, Ghana, Uganda and Tanzania from Africa; India and Bangladesh from South Asia; and Indonesia and Vietnam from East Asia and Pacific.

The 2015 Ghana ICS aims at studying the innovative activities and innovative capabilities of manufacturing firms in Ghana, by collecting firm-level data using a suitably designed questionnaire and following the DECEA's global methodology of survey design. This survey is a follow-up to and complements the 2013 Ghana Innovation Follow-up Survey undertaken by the World Bank Group. The data can be linked to the 2013 Ghana Innovation Follow-up Survey (and the 2013 Ghana Enterprise Survey (ES)) using the "idstd" variable, enabling a richer analysis of the links between innovative capabilities, innovation and the performances of manufacturing firms in the country.

The **main objective** of the project is to collect firm-level data from manufacturing firms in the country to better understand:

- Sources of information and motivation for innovative activities by manufacturing firms;
- Key factors constraining innovative capability of the manufacturing firms;
- The ability of firms to locate, acquire and utilize knowledge for innovation.
- Access to foreign markets and firms' innovative capability.

The **Sampling Strategy** follows the standard ES global methodology of stratified random sampling¹. However, sample is drawn from manufacturing firms covered in the 2013 Ghana Innovation Follow-up Survey (itself a sub-set of manufacturing firms covered in the 2013 Ghana Enterprise Survey (ES))².

¹ Information on DECEA's global survey methodology can be found at the Unit's website (<http://www.enterprisesurveys.org/methodology>).

²Please see the World Bank's Enterprise Survey website (<http://www.enterprisesurveys.org/data/survey-datasets>) for detailed information on the 2013 Ghana Innovation Follow-up survey and the 2013 Ghana ES. In particular, the implementation reports of the respective surveys contain useful information on the design and implementation of the surveys. Access to the raw data and the implementation reports requires having a log-in account.

Therefore, sample is stratified based on firm size and location, unlike the standard ES sampling methodology which includes sector as one of the three stratifying variables.

The universe consists a total of 284 manufacturing firms, out of which 201 firms were randomly selected and interviewed. Firms are selected from all the regions covered in the 2013 Ghana Innovation Follow-up Survey, and distributed across small (5 to 19 employees), medium (20 to 99 employees) and large (100+ employees) firms. Table-1 provides distribution of the realized sample by region and firm size. Overall, the survey response rate is fairly good, with about 90% of the contacted interviews turned into completed interviews.

Table 1: Realized Sample for the 2015 Ghana ICS

	Small	Medium	Large	Total
Accra	70	25	8	<i>103</i>
North	32	11	1	<i>44</i>
Takoradi	9	2	1	<i>12</i>
Tema	34	7	1	<i>42</i>
Total	145	45	11	201

TNS Opinion was hired to implement the fieldwork and data collection was undertaken through its local branch, the TNS RMS Ghana. This was the same survey firm that implemented the fieldworks for the Ghana 2013 Enterprise Survey and the 2013 ES Innovation Survey. The fieldwork for the 2015 Ghana ICS was conducted during the period January to March 2015.

The **Sampling weighs** for this survey are calculated from the 2013 Ghana ES weights. More specifically, the 2013 Ghana ES weights are multiplied by a cell-specific factor, which equals the proportion of total completed interview in the cell during the 2013 Ghana ES to the completed interviews in the corresponding cell in the 2015 Ghana ICS.