

# The West Bank and Gaza 2013 Enterprise Surveys Data Set

## I. Introduction

1. This document provides additional information on the data collected in the West Bank and Gaza between June and September, 2013. The objective of the enterprise survey is to gain an understanding of what firms experience in the private sector.

The Enterprise Surveys, through interviews with firms in the manufacturing and service sectors, capture data covering measures of firm performance, firm structure as well as business perceptions on the biggest obstacles to enterprise growth, and the business environment in general. They are used to create statistically important business environment indicators that are comparable across countries.

The report outlines and describes the sampling design of the data, the data set structure as well as additional information that may be useful when using the data, such as information on non-response cases and the appropriate use of the weights.

## II. Sampling Structure

2. The sample for the West Bank and Gaza was selected using stratified random sampling, following the methodology explained in the *Sampling Manual*<sup>1</sup>. Stratified random sampling<sup>2</sup> was preferred over simple random sampling for several reasons<sup>3</sup>:

a. To obtain unbiased estimates for different subdivisions of the population with some known level of precision.

b. To obtain unbiased estimates for the whole population. The whole population, or universe of the study, is the non-agricultural economy. It comprises: all manufacturing sectors according to the group classification of ISIC Revision 3.1: (group D), construction sector (group F), services sector (groups G and H), and transport, storage, and communications sector (group I). Note that this definition excludes the following sectors: financial intermediation (group J), real estate and renting activities (group K, except sub-sector 72, IT, which was added to the population), and all public or utilities-sectors.

c. To ensure that the final total sample includes establishments from all different sectors and that it is not concentrated in one or two of industries/sizes/regions.

d. To exploit the benefits of stratified sampling where population estimates, in most cases, will be more precise than using a simple random sampling method (i.e., lower standard errors, other things being equal.)

e. Stratification may produce a smaller bound on the error of estimation than would be produced by a simple random sample of the same size. This result is particularly true if measurements within strata are homogeneous.

f. The cost per observation in the survey may be reduced by stratification of the population elements into convenient groupings.

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<sup>1</sup> The complete text can be found at <http://www.enterprisesurveys.org/Methodology>

<sup>2</sup> A stratified random sample is one obtained by separating the population elements into non-overlapping groups, called strata, and then selecting a simple random sample from each stratum. (Richard L. Scheaffer; Mendenhall, W.; Lyman, R., "Elementary Survey Sampling", Fifth Edition).

<sup>3</sup> Cochran, W., 1977, pp. 89; Lohr, Sharon, 1999, pp. 95

3. Three levels of stratification were used in this economy: industry, establishment size, and region. The original sample design with specific information of the industries and regions chosen is described in Appendix A.

4. Industry stratification was designed in the way that follows: the universe was stratified into one collective manufacturing industry, and two services industries (retail and other services).

5. Size stratification was defined following the standardized definition for the rollout: small (5 to 19 employees), medium (20 to 99 employees), and large (more than 100 employees). For stratification purposes, the number of employees was defined on the basis of reported permanent full-time workers. This seems to be an appropriate definition of the labor force since seasonal/casual/part-time employment is not common practice, apart from the construction and agriculture sectors which are not included in the survey.

6. Regional stratification was defined in two (the West Bank / Gaza) regions (city and the surrounding business area) throughout the West Bank and Gaza.

### **III. Sampling implementation**

7. Given the stratified design, sample frames containing a complete and updated list of establishments as well as information on all stratification variables (number of employees, industry, and region) are required to draw the sample. Great efforts were made to obtain the best source for these listings.

8. The Palestinian Central Bureau of Statistics (PCBS) was hired under the main implementing contractor, Gallup Europe, to implement the West Bank and Gaza 2013 enterprise survey.

9. The sample frame used for the survey in the West Bank and Gaza was from the PCBS Enterprise Census 2012 database. The database was selected based on the following criteria:

- Coverage;
- Up to datedness;
- Availability of detailed stratification variables;
- Electronic format availability;
- Contact name(s).

Counts from sample frame are shown below.

## Sample Frame

| Region                |                   | Manufacturing | Retail       | Other Services | Grand Total  |
|-----------------------|-------------------|---------------|--------------|----------------|--------------|
| <b>West Bank</b>      | Small (5 to 19)   | 2,242         | 1,109        | 1,259          | 4,180        |
|                       | Medium (20 to 99) | 200           | 34           | 97             | 308          |
|                       | Large (100+)      | 21            | 2            | 9              | 29           |
| <b>REGIONAL TOTAL</b> |                   | <b>2,463</b>  | <b>1,145</b> | <b>1,365</b>   | <b>4,973</b> |
| <b>Gaza</b>           | Small (5 to 19)   | 531           | 518          | 565            | 1,614        |
|                       | Medium (20 to 99) | 29            | 3            | 33             | 65           |
|                       | Large (100+)      | 3             | 0            | 1              | 4            |
| <b>REGIONAL TOTAL</b> |                   | <b>563</b>    | <b>521</b>   | <b>599</b>     | <b>1,683</b> |
| <b>GRAND TOTAL</b>    |                   | <b>3,026</b>  | <b>1,666</b> | <b>1,964</b>   | <b>6,656</b> |

Source: PCBS Establishment Census, 2012

### PANEL AVAILABLE (VERIFIED VIA CENSUS)

| Region                |                   | Manufacturing | Retail   | Other Services | Grand Total |
|-----------------------|-------------------|---------------|----------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 34            | 0        | 11             | 45          |
|                       | Medium (20 to 99) | 12            | 0        | 8              | 20          |
|                       | Large (100+)      | 9             | 0        | 1              | 10          |
| <b>REGIONAL TOTAL</b> |                   | <b>55</b>     | <b>0</b> | <b>20</b>      | <b>75</b>   |
| <b>Gaza</b>           | Small (5 to 19)   | 5             | 0        | 4              | 9           |
|                       | Medium (20 to 99) | 22            | 0        | 3              | 25          |
|                       | Large (100+)      | 7             | 0        | 0              | 7           |
| <b>REGIONAL TOTAL</b> |                   | <b>34</b>     | <b>0</b> | <b>7</b>       | <b>41</b>   |
| <b>GRAND TOTAL</b>    |                   | <b>89</b>     | <b>0</b> | <b>27</b>      | <b>116</b>  |

Source: WBG 2006 survey, available contacts were matched and verified against PCBS census (complete numbers of 2006 survey located in Appendix B).

10. The enumerated establishments were then used as the frame for the selection of a sample with the aim of obtaining interviews at 360 establishments with five or more employees.

11. The quality of the frame was assessed at the onset of the project through visits to a random subset of firms and local contractor knowledge. The sample frame was not immune from the typical problems found in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc.

12. Given the impact that non-eligible units included in the sample universe may have on the results, adjustments may be needed when computing the appropriate weights for individual observations. The percentage of confirmed non-eligible units as a proportion of the total number of sampled establishments contacted for the survey was 6.76% (40

out of 592 contacted establishments)<sup>4</sup>. Breaking down by stratified industries, the following sample targets were achieved (using a4a and a6a):

**REALIZED FRESH**

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 38            | 76     | 55             | 169         |
|                       | Medium (20 to 99) | 8             | 19     | 38             | 65          |
|                       | Large (100+)      | 9             | 6      | 5              | 20          |
| <b>REGIONAL TOTAL</b> |                   | 55            | 101    | 98             | 254         |
| <b>Gaza</b>           | Small (5 to 19)   | 10            | 32     | 20             | 62          |
|                       | Medium (20 to 99) | 19            | 6      | 23             | 48          |
|                       | Large (100+)      | 1             | 0      | 5              | 6           |
| <b>REGIONAL TOTAL</b> |                   | 30            | 38     | 48             | 116         |
| <b>GRAND TOTAL</b>    |                   | 85            | 139    | 146            | 370         |

**REALIZED PANEL**

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 16            | 0      | 5              | 21          |
|                       | Medium (20 to 99) | 8             | 0      | 5              | 13          |
|                       | Large (100+)      | 7             | 0      | 0              | 7           |
| <b>REGIONAL TOTAL</b> |                   | 31            | 0      | 10             | 41          |
| <b>Gaza</b>           | Small (5 to 19)   | 5             | 0      | 3              | 8           |
|                       | Medium (20 to 99) | 12            | 0      | 1              | 13          |
|                       | Large (100+)      | 2             | 0      | 0              | 2           |
| <b>REGIONAL TOTAL</b> |                   | 19            | 0      | 4              | 23          |
| <b>GRAND TOTAL</b>    |                   | 50            | 0      | 14             | 64          |

**IV. Data Base Structure:**

13. The structure of the data base reflects the fact that 3 different versions of the questionnaire were used. The basic questionnaire, the Core Module, includes all common questions asked to all establishments from all sectors. The second expanded variation, the Manufacturing Questionnaire, is built upon the Core Module and adds some specific questions relevant to manufacturing sectors. The third expanded variation, the Retail Questionnaire, is also built upon the Core Module and adds to the core specific questions relevant to retail firms. Each variation of the questionnaire is identified by the index variable, *a0*.

14. All variables are named using, first, the letter of each section and, second, the number of the variable within the section, i.e. *a1* denotes section A, question 1. Variable names preceded by a prefix “MNA” indicate questions specific to the Middle East and North Africa region, therefore, they may not be found in the implementation of the rollout in other countries. All other suffixed variables are global and are present in all economy surveys over the world. All variables are numeric with the exception of those

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4 Based on out of target contacts and impossible to contact establishments

variables with an “x” at the end of their names. The suffix “x” denotes that the variable is alpha-numeric.

15. There are 2 establishment identifiers, *idstd* and *phoneid*. The first is a global unique identifier. The second is a economy unique identifier. The variables *a2* (sampling region), *a6a* (sampling establishment’s size), and *a4a* (sampling sector) contain the establishment’s classification into the strata chosen for each economy using information from the sample frame. The strata were defined according to the guidelines described above.

16. There are three levels of stratification: industry, size and region. Different combinations of these variables generate the strata cells for each industry/region/size combination. A distinction should be made between the variable *a4a* and *d1a2* (industry expressed as ISIC rev. 3.1 code). The former gives the establishment’s classification into one of the chosen industry-strata, whereas the latter gives the actual establishment’s industry classification (four digit code) in the sample frame.

17. All of the following variables contain information from the sampling frame. They may not coincide with the reality of individual establishments as sample frames may contain inaccurate information. The variables containing the sample frame information are included in the data set for researchers who may want to further investigate statistical features of the survey and the effect of the survey design on their results.

- a2* is the variable describing sampling regions

- a6a*: coded using the same standard for small, medium, and large establishments as defined above. The code -9 was used to indicate units for which size was undetermined in the sample frame.

- a4a*: coded using ISIC Rev 3.1 codes for the chosen industries for stratification. These codes include most manufacturing industries (15 to 37), retail (52), and (45, 50, 51, 55, 60-64, 72) for other services.

18. The surveys were implemented following a 2 stage procedure. Typically first a screener questionnaire is applied over the phone to determine eligibility and to make appointments. Then a face-to-face interview takes place with the Manager/Owner/Director of each establishment. The variables *a4b* and *a6b* contain the industry and size of the establishment from the screener questionnaire. Variables *a8* to *a11* contain additional information and were also collected in the screening phase.

19. Note that there are additional variables for size (*11*, *16* and *18*) that reflect more accurately the reality of each establishment. Advanced users are advised to use these variables for analytical purposes.

20. Variables *11*, *16* and *18* were designed to obtain a more accurate measure of employment accounting for permanent and temporary employment. Special efforts were made to make sure that this information was not missing for most establishments.

21. Variables *a17x* gives interviewer comments, including problems that occurred during an interview and extraordinary circumstances which could influence results. Please note that sometimes this variable is removed due to privacy issues.

## **V. Universe Estimates**

22. Universe estimates for the number of establishments in each cell in the West Bank and Gaza were produced for the strict, median and weak eligibility definitions. The estimates were the multiple of the relative eligible proportions.

23. Appendix B shows the overall estimates of the numbers of establishments in the West Bank and Gaza based on the sample frame.

24. For some establishments where contact was not successfully completed during the screening process (because the firm has moved and it is not possible to locate the new location, for example), it is not possible to directly determine eligibility. Thus, different assumptions about the eligibility of establishments result in different adjustments to the universe cells and thus different sampling weights.

25. Three sets of assumptions on establishment eligibility are used to construct sample adjustments using the status code information.

26. Strict assumption: eligible establishments are only those for which it was possible to directly determine eligibility. The resulting weights are included in the variable *wstrict\_smoothed*.

$$\text{Strict eligibility} = (\text{Sum of the firms with codes } 1,2,3,4, \&16) / \text{Total}$$

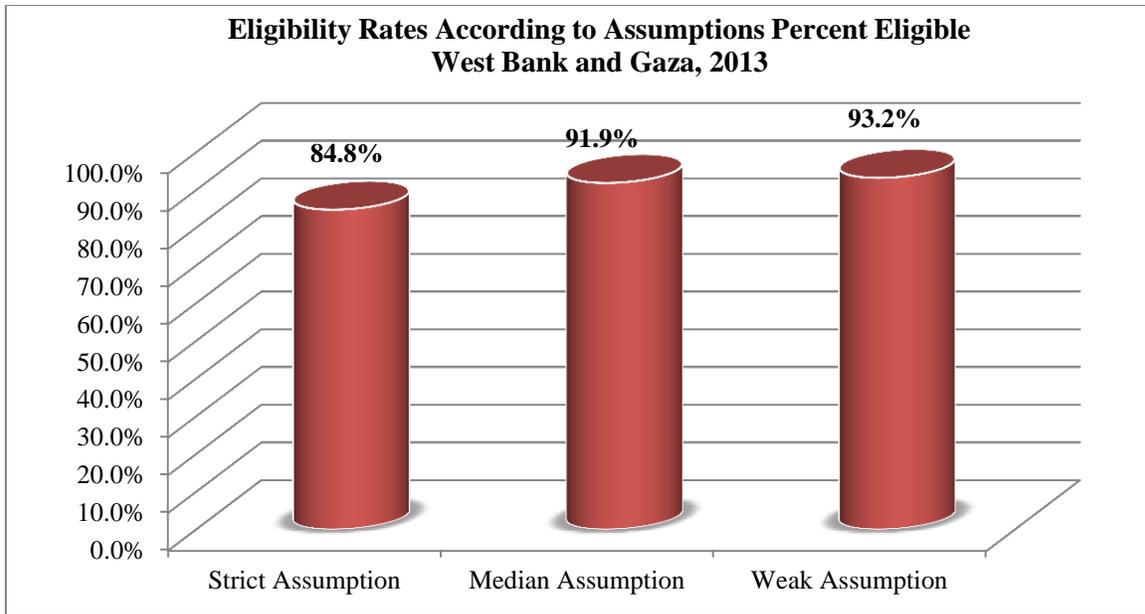
27. Median assumption: eligible establishments are those for which it was possible to directly determine eligibility and those that rejected the screener questionnaire or an answering machine or fax was the only response. The resulting weights are included in the variable *wmedian\_smoothed*.

$$\text{Median eligibility} = (\text{Sum of the firms with codes } 1,2,3,4,16,10,11, \& 13) / \text{Total}$$

28. Weak assumption: in addition to the establishments included in points a and b, all establishments for which it was not possible to contact or that refused the screening questionnaire are assumed eligible. This definition includes as eligible establishments with dead or out of service phone lines, establishments that never answered the phone, and establishments with incorrect addresses for which it was impossible to find a new address. Under the weak assumption only observed non-eligible units are excluded from universe projections. The resulting weights are included in the variable *wweak\_smoothed*.

$$\text{Weak eligibility} = (\text{Sum of the firms with codes } 1,2,3,4,16,91,92,93,10,11,12, \&13) / \text{Total}$$

29. The indicators computed for the Enterprise Survey website use the median weights. The following graph shows the different eligibility rates calculated for firms in the sample frame under each set of assumptions.



30. Universe estimates for the number of establishments in each industry-region-size cell in the West Bank and Gaza were produced for the strict, weak and median eligibility definitions. Appendix D shows the universe estimates of the numbers of registered establishments that fit the criteria of the Enterprise Surveys.

31. Once an accurate estimate of the universe cell projection was made, weights for the probability of selection were computed using the number of completed interviews for each cell.

## VI. Weights

32. Since the sampling design was stratified and employed differential sampling, individual observations should be properly weighted when making inferences about the population. Under stratified random sampling, unweighted estimates are biased unless sample sizes are proportional to the size of each stratum. With stratification the probability of selection of each unit is, in general, not the same. Consequently, individual observations must be weighted by the inverse of their probability of selection (probability weights or *pw* in Stata).<sup>5</sup>

33. Special care was given to the correct computation of the weights. It was imperative to accurately adjust the totals within each region/industry/size stratum to account for the presence of ineligible units (the firm discontinued businesses or was unattainable, education or government establishments, establishments with less than 5 employees, no reply after having called in different days of the week and in different business hours, no tone on the phone line, answering machine, or fax line<sup>6</sup>, wrong address

<sup>5</sup> This is equivalent to the weighted average of the estimates for each stratum, with weights equal to the population shares of each stratum.

<sup>6</sup> For the surveys that implemented a screener over the phone.

or moved away and could not get the new references). The information required for the adjustment was collected in the first stage of the implementation: the screening process. Using this information, each stratum cell of the universe was scaled down by the observed proportion of ineligible units within the cell. Once an accurate estimate of the universe cell (projections) was available, weights were computed using the number of completed interviews.

34. Appendix C shows the cell weights for registered establishments in the West Bank and Gaza. Note that the weights presented are relative (or smoothed) weights.

## **VII. Appropriate use of the weights**

35. Under stratified random sampling weights should be used when making inferences about the population. Any estimate or indicator that aims at describing some feature of the population should take into account that individual observations may not represent equal shares of the population.

36. However, there is some discussion as to the use of weights in regressions (see Deaton, 1997, pp.67; Lohr, 1999, chapter 11, Cochran, 1953, pp.150). There is not a strong large sample econometric argument in favor of using weighted estimation for a common population coefficient if the underlying model varies per stratum (stratum-specific coefficient): both simple OLS and weighted OLS are inconsistent under regular conditions. However, weighted OLS has the advantage of providing an estimate that is independent of the sample design. This latter point may be quite relevant for the Enterprise Surveys as in most cases the objective is not only to obtain model-unbiased estimates but also design-unbiased estimates (see also Cochran, 1977, pp 200 who favors the used of weighted OLS for a common population coefficient.)<sup>7</sup>

37. From a more general approach, if the regressions are descriptive of the population then weights should be used. The estimated model can be thought of as the relationship that would be expected if the whole population were observed.<sup>8</sup> If the models are developed as structural relationships or behavioral models that may vary for different parts of the population, then, there is no reason to use weights.

38. The data set additionally includes a variable *strata*, determined by the number of strata by the survey design, which is available for use in the *svyset* command within Stata. The recommended use of these variables for analysis is then *svyset idstd [pw=wt], strata(strata)*. Users are free to utilize whichever weight assumptions they find appropriate. The *svyset* command includes further *singleunit* options for the treatment of single-unit observations in the calculation of standard errors.

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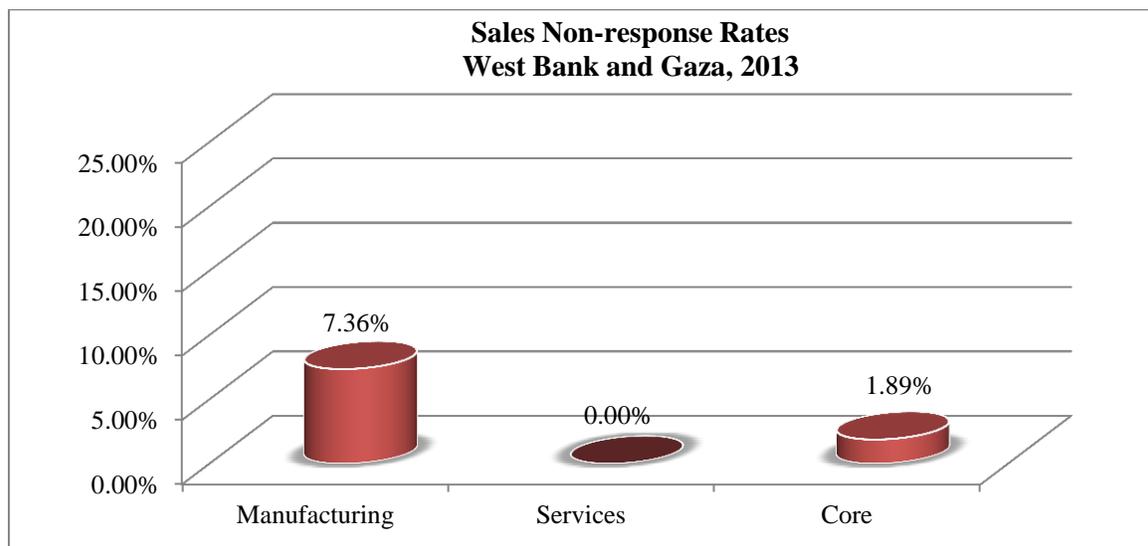
7 Note that weighted OLS in Stata using the command *regress* with the option of weights will estimate wrong standard errors. Using the Stata survey specific commands *svy* will provide appropriate standard errors.

8 The use of weights in most model-assisted estimations using survey data is strongly recommended by the statisticians specialized on survey methodology of the JPSM of the University of Michigan and the University of Maryland.

### VIII. Non-response

39. Survey non-response must be differentiated from item non-response. The former refers to refusals to participate in the survey altogether whereas the latter refers to the refusals to answer some specific questions. Enterprise Surveys suffer from both problems and different strategies were used to address these issues.

40. Item non-response was addressed by two strategies:
- a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond as a different option from don't know (-8).
  - b- Establishments with incomplete information were re-contacted in order to complete this information, whenever necessary. However, there were clear cases of low response. The following graph shows non-response rates for the sales variable, *d2*, by sector. Please, note that the coding utilized in this dataset does not allow us to differentiate between "Don't know" and "refuse to answer", thus the non-response in the chart below reflects both categories (DKs and NAs).

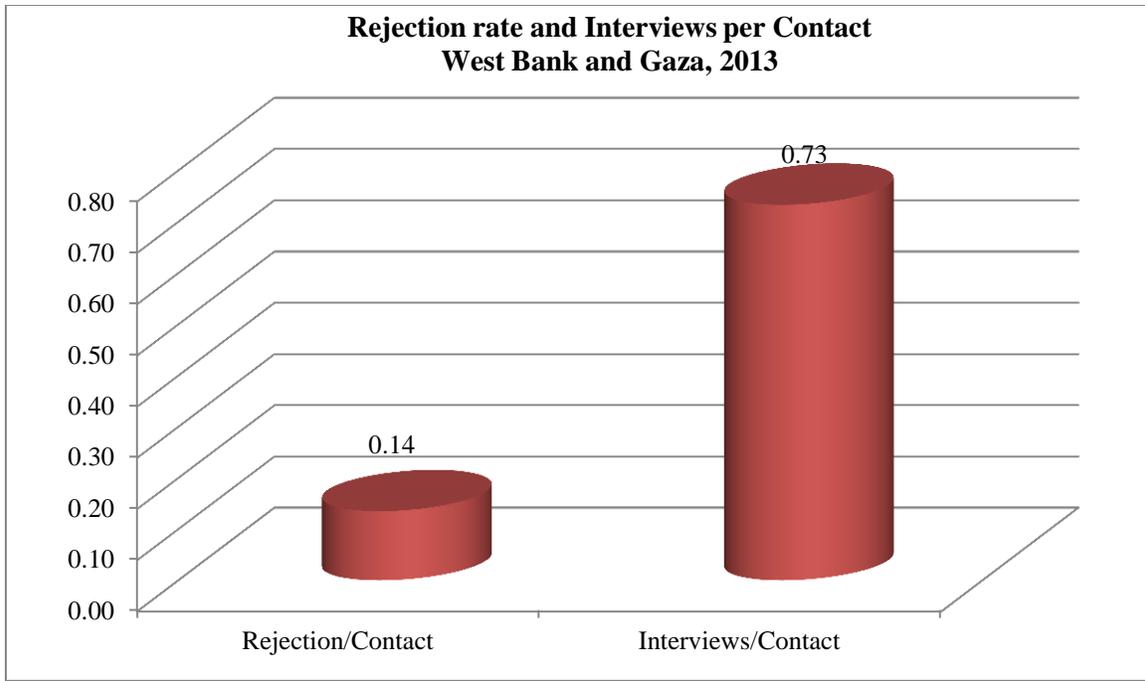


41. Survey non-response was addressed by maximizing efforts to contact establishments that were initially selected for interview. Attempts were made to contact the establishment for interview at different times/days of the week before a replacement establishment (with similar strata characteristics) was suggested for interview. Survey non-response did occur but substitutions were made in order to potentially achieve strata-specific goals. Further research is needed on survey non-response in the Enterprise Surveys regarding potential introduction of bias.

42. As the following graph shows, the number of realized interviews per contacted establishment was 0.73<sup>9</sup>. This number is the result of two factors: explicit refusals to

<sup>9</sup> The estimate is based on the total number of firms contacted including ineligible establishments.

participate in the survey, as reflected by the rate of rejection (which includes rejections of the screener and the main survey) and the quality of the sample frame, as represented by the presence of ineligible units. The number of rejections per contact was 0.14.



43. Details on the rejection rate, eligibility rate, and item non-response are available at the strata level. This report summarizes these numbers to alert researchers of these issues when using the data and when making inferences. Item non-response, selection bias, and faulty sampling frames are not unique to the West Bank and Gaza. All Enterprise Surveys suffer from these shortcomings, but in very few cases they have been made explicit.

**References:**

Cochran, William G., *Sampling Techniques*, 1977.

Deaton, Angus, *The Analysis of Household Surveys*, 1998.

Levy, Paul S. and Stanley Lemeshow, *Sampling of Populations: Methods and Applications*, 1999.

Lohr, Sharon L. *Sampling: Design and Techniques*, 1999.

Scheaffer, Richard L.; Mendenhall, W.; Lyman, R., *Elementary Survey Sampling*, Fifth Edition, 1996.

## Appendix A

### Status Codes Total:

#### ELIGIBLES

|   |            |
|---|------------|
| 1.Eligible establishment (Correct name and address)   | 481        |
| 2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment) | 0          |
| 3. Eligible establishment (Different name but same address - the firm/establishment changed its name)                           | 0          |
| 111. Eligible from Economic Census (not screened)   | 21         |
| 4. Eligible establishment (Wrong address - the firm/establishmen has changed address and the address could be found)            | 0          |
| 16. Panel firm - now less than five employees   | 0          |
| 5. The establishment has less than 5 permanent full time employees  | 16         |
| 616. The firm discontinued business - (Establishment went bankrupt)   | 3          |
| 618. The firm discontinued business - (Original establishment disappeared and is now a different firm)                          | 2          |
| 619. The firm discontinued business - (Establishment was bought out by another firm)  | 0          |
| 620. The firm discontinued business - (It was impossible to determine for whatever reason)                                      | 2          |
| 621. The firm discontinued business - (Other: SPECIFY in COMMENTS)  | 10         |
| 7. Not a business: private household  | 1          |
| 8. Ineligible activity: education, agriculture, finances, governments...  | 6          |
| 151. Out of target - outside the covered regions, firm moved abroad   | 0          |
| 152. Out of target - firm moved abroad  | 0          |
| 91. No reply ( <i>after having called in different days of the week and in different business hours</i> )                       | 0          |
| 92. Line out of order   | 0          |
| 93. No tone   | 0          |
| 94. Phone number does not exist   | 0          |
| 10. Answering machine   | 0          |
| 11. Fax line - data line  | 0          |
| 12. Wrong address/ moved away and could not get the new references  | 8          |
| 13. Refuses to answer the screener  | 42         |
| <b>14. In process</b> ( <i>the establishment is being called/ is being contacted - previous to ask the screener</i> )           | <b>0</b>   |
| <b>Total</b>  | <b>592</b> |

**Response Outcomes Total:**

|                                      |            |
|--------------------------------------|------------|
| Complete interviews ( <b>Total</b> ) | 434        |
| Incomplete interviews                | 9          |
| Elegible in process                  | 0          |
| Refusals                             | 38         |
| Out of target                        | 0          |
| Impossible to contact                | 8          |
| Ineligible - coop.                   | 40         |
| <b>(Screener) In Process</b>         | <b>0</b>   |
| Refusal to the Screener              | 42         |
| <b>Total</b>                         | <b>571</b> |

## Appendix B

### Universe Estimates, the West Bank and Gaza:

#### Fresh

Source: PCBS

| Region                |                   | Manufacturing | Retail       | Other Services | Grand Total  |
|-----------------------|-------------------|---------------|--------------|----------------|--------------|
| <b>West Bank</b>      | Small (5 to 19)   | 2,242         | 1,109        | 1,259          | 4,180        |
|                       | Medium (20 to 99) | 200           | 34           | 97             | 308          |
|                       | Large (100+)      | 21            | 2            | 9              | 29           |
| <b>REGIONAL TOTAL</b> |                   | <b>2,463</b>  | <b>1,145</b> | <b>1,365</b>   | <b>4,973</b> |
| <b>Gaza</b>           | Small (5 to 19)   | 531           | 518          | 565            | 1,614        |
|                       | Medium (20 to 99) | 29            | 3            | 33             | 65           |
|                       | Large (100+)      | 3             | 0            | 1              | 4            |
| <b>REGIONAL TOTAL</b> |                   | <b>563</b>    | <b>521</b>   | <b>599</b>     | <b>1,683</b> |
| <b>GRAND TOTAL</b>    |                   | <b>3,026</b>  | <b>1,666</b> | <b>1,964</b>   | <b>6,656</b> |

#### Panel

Source: WBG, verified contacts found in III.9 above

| Region                |                   | Manufacturing | Retail   | Other Services | Grand Total |
|-----------------------|-------------------|---------------|----------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 104           | 0        | 25             | 129         |
|                       | Medium (20 to 99) | 67            | 0        | 14             | 81          |
|                       | Large (100+)      | 14            | 0        | 4              | 18          |
| <b>REGIONAL TOTAL</b> |                   | <b>185</b>    | <b>0</b> | <b>43</b>      | <b>228</b>  |
| <b>Gaza</b>           | Small (5 to 19)   | 97            | 0        | 26             | 123         |
|                       | Medium (20 to 99) | 37            | 0        | 7              | 44          |
|                       | Large (100+)      | 6             | 0        | 0              | 6           |
| <b>REGIONAL TOTAL</b> |                   | <b>140</b>    | <b>0</b> | <b>33</b>      | <b>173</b>  |
| <b>GRAND TOTAL</b>    |                   | <b>325</b>    | <b>0</b> | <b>76</b>      | <b>401</b>  |

## Appendix C

### Strict Cell Weights West Bank and Gaza (relative weights shown):

#### STRICT WEIGHTS, FRESH

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 49.86         | 24.55  | 27.45          |
|                  | Medium (20 to 99) | 16.00         | 2.13   | 3.04           |
|                  | Large (100+)      | 1.17          | 1.04   | 1.19           |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 35.83         | 13.65  | 22.28          |
|                  | Medium (20 to 99) | 1.02          | 1.15   | 1.68           |
|                  | Large (100+)      | 1.62          |        | 1.14           |

#### STRICT WEIGHTS, PANEL

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 1.40          |        | 1.06           |
|                  | Medium (20 to 99) | 3.41          |        | 1.00           |
|                  | Large (100+)      | 1.65          |        |                |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 2.32          |        | 1.33           |
|                  | Medium (20 to 99) | 1.00          |        | 1.54           |
|                  | Large (100+)      | 1.00          |        |                |

**Median Cell Weights West Bank and Gaza (relative weights shown):**

**MEDIAN WEIGHTS, FRESH**

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 50.66         | 23.52  | 27.29          |
|                  | Medium (20 to 99) | 16.71         | 2.15   | 3.18           |
|                  | Large (100+)      | 1.24          | 1.05   | 1.23           |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 40.23         | 13.07  | 22.15          |
|                  | Medium (20 to 99) | 1.06          | 1.16   | 1.76           |
|                  | Large (100+)      | 1.72          |        | 1.21           |

**MEDIAN WEIGHTS, PANEL**

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 1.41          |        | 1.00           |
|                  | Medium (20 to 99) | 3.67          |        | 1.00           |
|                  | Large (100+)      | 2.01          |        |                |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 2.97          |        | 1.17           |
|                  | Medium (20 to 99) | 1.00          |        | 1.58           |
|                  | Large (100+)      | 1.00          |        |                |

**Weak Cell Weights West Bank and Gaza (relative weights shown):**

**WEAK WEIGHTS, FRESH**

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 51.28         | 23.69  | 28.15          |
|                  | Medium (20 to 99) | 16.83         | 2.16   | 3.28           |
|                  | Large (100+)      | 1.28          | 1.08   | 1.27           |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 40.53         | 13.17  | 22.85          |
|                  | Medium (20 to 99) | 1.07          | 1.16   | 1.82           |
|                  | Large (100+)      | 1.78          |        | 1.28           |

**WEAK WEIGHTS, PANEL**

| Region           |                   | Manufacturing | Retail | Other Services |
|------------------|-------------------|---------------|--------|----------------|
| <b>West Bank</b> | Small (5 to 19)   | 1.57          |        | 1.01           |
|                  | Medium (20 to 99) | 3.80          |        | 1.00           |
|                  | Large (100+)      | 2.41          |        |                |
| REGIONAL TOTAL   |                   |               |        |                |
| <b>Gaza</b>      | Small (5 to 19)   | 3.37          |        | 1.27           |
|                  | Medium (20 to 99) | 1.00          |        | 1.64           |
|                  | Large (100+)      | 1.04          |        |                |

## Appendix D

### Strict Universe Estimates (panel + fresh shown)

#### STRICT WEIGHTS, UNIVERSE ESTIMATES

| Region                |                   | Manufacturing | Retail       | Other Services | Grand Total  |
|-----------------------|-------------------|---------------|--------------|----------------|--------------|
| <b>West Bank</b>      | Small (5 to 19)   | 1,901         | 994          | 1,090          | 3,986        |
|                       | Medium (20 to 99) | 140           | 40           | 96             | 276          |
|                       | Large (100+)      | 19            | 6            | 6              | 31           |
| <b>REGIONAL TOTAL</b> |                   | <b>2,061</b>  | <b>1,041</b> | <b>1,191</b>   | <b>4,292</b> |
| <b>Gaza</b>           | Small (5 to 19)   | 370           | 437          | 450            | 1,256        |
|                       | Medium (20 to 99) | 31            | 7            | 40             | 79           |
|                       | Large (100+)      | 4             |              | 6              | 9            |
| <b>REGIONAL TOTAL</b> |                   | <b>405</b>    | <b>444</b>   | <b>496</b>     | <b>1,344</b> |
| <b>GRAND TOTAL</b>    |                   | <b>2,465</b>  | <b>1,484</b> | <b>1,686</b>   | <b>5,636</b> |

### Median Universe Estimates (panel + fresh shown)

#### MEDIAN WEIGHTS, UNIVERSE ESTIMATES

| Region                |                   | Manufacturing | Retail       | Other Services | Grand Total  |
|-----------------------|-------------------|---------------|--------------|----------------|--------------|
| <b>West Bank</b>      | Small (5 to 19)   | 1,931         | 952          | 1,083          | 3,966        |
|                       | Medium (20 to 99) | 147           | 41           | 100            | 287          |
|                       | Large (100+)      | 21            | 6            | 6              | 33           |
| <b>REGIONAL TOTAL</b> |                   | <b>2,098</b>  | <b>999</b>   | <b>1,189</b>   | <b>4,286</b> |
| <b>Gaza</b>           | Small (5 to 19)   | 417           | 418          | 447            | 1,282        |
|                       | Medium (20 to 99) | 32            | 7            | 42             | 81           |
|                       | Large (100+)      | 4             |              | 6              | 10           |
| <b>REGIONAL TOTAL</b> |                   | <b>453</b>    | <b>425</b>   | <b>495</b>     | <b>1,373</b> |
| <b>GRAND TOTAL</b>    |                   | <b>2,551</b>  | <b>1,425</b> | <b>1,683</b>   | <b>5,659</b> |

### Weak Universe Estimates (panel + fresh shown)

#### WEAK WEIGHTS, UNIVERSE ESTIMATES

| Region                |                   | Manufacturing | Retail       | Other Services | Grand Total  |
|-----------------------|-------------------|---------------|--------------|----------------|--------------|
| <b>West Bank</b>      | Small (5 to 19)   | 1,952         | 960          | 1,117          | 4,029        |
|                       | Medium (20 to 99) | 148           | 41           | 103            | 292          |
|                       | Large (100+)      | 22            | 6            | 6              | 34           |
| <b>REGIONAL TOTAL</b> |                   | <b>2,123</b>  | <b>1,007</b> | <b>1,226</b>   | <b>4,355</b> |
| <b>Gaza</b>           | Small (5 to 19)   | 422           | 422          | 461            | 1,304        |
|                       | Medium (20 to 99) | 32            | 7            | 43             | 83           |
|                       | Large (100+)      | 4             |              | 6              | 10           |
| <b>REGIONAL TOTAL</b> |                   | <b>458</b>    | <b>429</b>   | <b>511</b>     | <b>1,398</b> |
| <b>GRAND TOTAL</b>    |                   | <b>2,581</b>  | <b>1,435</b> | <b>1,736</b>   | <b>5,753</b> |

## Appendix E

### Original Sample Design, West Bank and Gaza:

#### FRESH SAMPLE DESIGN

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 18            | 54     | 30             | 102         |
|                       | Medium (20 to 99) | 10            | 34     | 17             | 61          |
|                       | Large (100+)      | 8             | 2      | 5              | 15          |
| <b>REGIONAL TOTAL</b> |                   | 36            | 90     | 52             | 178         |
| <b>Gaza</b>           | Small (5 to 19)   | 5             | 27     | 4              | 36          |
|                       | Medium (20 to 99) | 16            | 3      | 26             | 45          |
|                       | Large (100+)      | 3             | 0      | 1              | 4           |
| <b>REGIONAL TOTAL</b> |                   | 24            | 30     | 31             | 85          |
| <b>GRAND TOTAL</b>    |                   | 60            | 120    | 83             | 263         |

#### PANEL SAMPLE DESIGN

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 18            | 0      | 10             | 28          |
|                       | Medium (20 to 99) | 9             | 0      | 12             | 21          |
|                       | Large (100+)      | 9             | 0      | 4              | 13          |
| <b>REGIONAL TOTAL</b> |                   | 36            | 0      | 26             | 62          |
| <b>Gaza</b>           | Small (5 to 19)   | 5             | 0      | 4              | 9           |
|                       | Medium (20 to 99) | 16            | 0      | 7              | 23          |
|                       | Large (100+)      | 3             | 0      | 0              | 3           |
| <b>REGIONAL TOTAL</b> |                   | 24            | 0      | 11             | 35          |
| <b>GRAND TOTAL</b>    |                   | 60            | 0      | 37             | 97          |

**Completed Interviews, West Bank and Gaza:**

**REALIZED FRESH**

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 38            | 76     | 55             | 169         |
|                       | Medium (20 to 99) | 8             | 19     | 38             | 65          |
|                       | Large (100+)      | 9             | 6      | 5              | 20          |
| <b>REGIONAL TOTAL</b> |                   | 55            | 101    | 98             | 254         |
| <b>Gaza</b>           | Small (5 to 19)   | 10            | 32     | 20             | 62          |
|                       | Medium (20 to 99) | 19            | 6      | 23             | 48          |
|                       | Large (100+)      | 1             | 0      | 5              | 6           |
| <b>REGIONAL TOTAL</b> |                   | 30            | 38     | 48             | 116         |
| <b>GRAND TOTAL</b>    |                   | 85            | 139    | 146            | 370         |

**REALIZED PANEL**

| Region                |                   | Manufacturing | Retail | Other Services | Grand Total |
|-----------------------|-------------------|---------------|--------|----------------|-------------|
| <b>West Bank</b>      | Small (5 to 19)   | 16            | 0      | 5              | 21          |
|                       | Medium (20 to 99) | 8             | 0      | 5              | 13          |
|                       | Large (100+)      | 7             | 0      | 0              | 7           |
| <b>REGIONAL TOTAL</b> |                   | 31            | 0      | 10             | 41          |
| <b>Gaza</b>           | Small (5 to 19)   | 5             | 0      | 3              | 8           |
|                       | Medium (20 to 99) | 12            | 0      | 1              | 13          |
|                       | Large (100+)      | 2             | 0      | 0              | 2           |
| <b>REGIONAL TOTAL</b> |                   | 19            | 0      | 4              | 23          |
| <b>GRAND TOTAL</b>    |                   | 50            | 0      | 14             | 64          |

*Note: sample was over-achieved in certain cells to meet overall precision/design targets*

**Local Agency team involved in the study:**

|                       |  |
|-----------------------|--|
| Local Agency          | Name: Palestinian Central Bureau of Statistics,            |
| Enumerators involved: | Enumerators: 16 (West Bank) 9 (Gaza strip)                 |
| Other staff involved: | Fieldwork Coordinators: 2<br>Editing: ~3<br>Data Entry: ~1 |

**Sample Frame:**

|  |   |
|--|---|
| Characteristic of sample frame used:                     | Variables: Name of establishment, address, activity (ISIC Rev. 4 converted to 3.1), telephone number, number of employees |
| Source:  | PCBS Establishment Census   |
| Year:  | 2012  |
| Comments on the quality of sample frame:                 | Very good quality as source was the most recent establishment census and this was finalized in 2013 (dated 2012)          |
| Year and organism who conducted the last economic census | PCBS, 2012  |
| Other sources for companies statistics                   | None  |

**Sample Frame West Bank and Gaza:****Sectors included in the sample:**

|                  |   |
|------------------|---|
| Original Sectors | Manufacturing:<br>15 - 37<br><br>Retail:<br>52<br><br>Services:<br>45,50,51,52,55,60,61,62,63,64,72 |
|------------------|---|

**Mode of implementation:**

|                             |   |
|-----------------------------|---|
| Use of CAPI/CATI technology | All interviews were administered face-to-face by enumerators.<br><br>A portion of the interviews were conducted using 12 electronic tablet devices (CAPI). In data collection phase, IT coordinator(s) were available firsthand to implement updates of the application on PC-Tablets and data entry application.<br><br>All verifications and consistency checks (for tablet-based interviews) were applied on PC-tablet |
|-----------------------------|---|

|                     |   |
|---------------------|---|
|                     | <p>applications. An error message pops up when entering a wrong value and some error messages show up in red for sensitive questions.</p> <p>Project coordinator in PCBS and committee members as well, tested the CAPI application by entering pilot questionnaires.</p> <p>In general, PC-Tablets were friendly user and easy to be familiar with.</p> <p>The remaining portion of the survey sample was completed using paper questionnaires.</p> <p>The questionnaire contains Main Questionnaire and Innovation ones, for both <i>Manufacturing</i> and <i>Services Activities</i>. PCBS staff redesigned paper Questionnaire to be 30 papers out of 100 papers. In order to be compatible and friendly user for Gaza team, PCBS staff and interviewers as well, and to make it easier to be used in training, and to increase response.</p> |
| Additional comments | In addition to the main body of the questionnaire, an ‘innovation module’ was administered to selected, eligible establishments.  |

**Sample:**

|   |   |
|---|---|
| Comments/ problems on sectors and regions selected in the sample: | <p><b>Sample size:</b><br/>The sample size is estimated from the World Bank to be about 360 completed questionnaires. Moreover, PCBS added a random sample to compensate the non-response enterprise, so the total sample size after the addition is 857 projects.</p> <p><b>Sample Design Strata:</b><br/>Besides, projects classification enterprise, there was another classification according to the region and the economical activity(ISIC2), this classification improves the representation of the sample.</p> |
| Comments on the response rate                                     | As <i>Gallup</i> do need 360 completed interviews of required Enterprises, and as high number of non-response and in-complete is expected , an additional samples were prepared and uploaded more than once   |
| Comments on the sample  | <b>Sample Design Strata:</b>  |

|         |  |
|---------|--|
| design: | Besides, projects classification enterprise, there was another classification according to the region and the economical activity (ISIC 2-digit), this classification improves the representation of the sample. |
|---------|--|

**Fieldwork:**

|                                  |   |
|----------------------------------|---|
| Date of Fieldwork                | June 12, 2013 – August 20, 2013 (validation period afterward closed in September)   |
| Economy                          | West Bank and Gaza  |
| Problems found during fieldwork: | <ol style="list-style-type: none"> <li>1. Long period of interview since the questionnaire is long; entrepreneurs are used to PCBS questionnaires that do not exceed 13 pages in most cases. Interviewers had to wait for long periods in order to complete questionnaires while respondents had to do other things.</li> <li>2. Committee Members of PCBS had in many cases to visit non-responding enterprises accompanied by interviewers to convince them in completing the questionnaire.</li> <li>3. Filling in the data on financial issues cause the delay for the interview, that mostly cause rejection.</li> <li>4. Because of high rate of incomplete and rejection we had to upload additional sample.</li> <li>5. Some enterprises refused to disclose financial data, which made it necessary for supervisors and fieldwork coordinator to intervene to convince entrepreneurs to disclose such data.</li> <li>6. Entrepreneurs were unavailable in some cases, despite making appointments beforehand, which made interviewer revisit enterprises.</li> </ol> |