

The Democratic Republic of Congo (DRC) 2010 Enterprise Surveys Data Set

I. Introduction

1. This document provides additional information on the data collected in DRC between June 2010 and October 2010 as part of the Africa Enterprise Survey 2010, an initiative of the World Bank.

The Enterprise Surveys, through interviews with firms in the manufacturing and services sectors, capture business perceptions on the biggest obstacles to enterprise growth, the relative importance of various constraints to increasing employment and productivity, and the effects of a country's business environment on its international competitiveness. They are used to create statistically significant business environment indicators that are comparable across countries. The Enterprise Surveys are also used to build a panel of enterprise data that will make it possible to track changes in the business environment over time and allow, for example, impact assessments of reforms.

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 DRC was selected using stratified random sampling, following the methodology explained in the *Sampling Manual*¹. Stratified random sampling² was preferred over simple random sampling for several reasons³:

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 under study), and all public or utilities-sectors.

c. To make sure 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.)

¹ The complete text can be found at http://www.enterprisesurveys.org/documents/Implementation_note.pdf

² 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).

³ Cochran, W., 1977, pp. 89; Lohr, Sharon, 1999, pp. 95

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.

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

4. Industry stratification was designed in the way that follows: the universe was stratified into one manufacturing industry, one service industry -retail -, and one residual sector as defined in the sampling manual. The manufacturing industry, service industry, and residual sectors had a target each of 120 interviews.

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 99 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 a common practice, except in the sectors of construction and agriculture.

6. Regional stratification was defined in four regions (city and the surrounding business area): Kinshasa, Kisangani, Lubumbashi, and Matadi.

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. However, the quality of the sample frames was not optimal and, therefore, some adjustments were needed to correct for the presence of ineligible units. These adjustments are reflected in the weights computation (*see below*).

8. TNS Opinion was hired to implement the Africa 2010 enterprise surveys roll out. In DRC the local subcontractor was the University of Kinsasha.

9. For DRC, three sample frames were used. The first was supplied by the World Bank and consists of enterprises interviewed in DRC 2006. The World Bank required that attempts should be made to re-interview establishments responding to the DRC 2006 survey where they were within the selected geographical regions and met eligibility criteria. Due to the fact that the previous round of surveys seemed to have utilized different stratification criteria (or no stratification at all) and due to the prevalence of small firm in the 2006 sample the following convention was used. To avoid oversampling smaller firms and to limit the presence of Panel firms to a maximum of 50% of the achieved interviews, a decision was made to restrict the number of issued firms with less than 20 employees.

That sample is referred to as the Panel. The second and third sample frames were files produced by Fédération Entreprises du Congo (FEC) and Confédération des Petites et Moyennes Entreprises du Congo (COPEMECO). A copy of that frames was sent to the TNS statistical team in London to select the establishments for interview. Each database contained the following information:

- Coverage;
- Up to datedness;
- Availability of detailed stratification variables ;
- Location identifiers- address, phone number, email;
- Electronic format availability;
- Contact name(s).

10. Originally the companies in the FEC list have been classified as follow:

Grands cotisants	100+
Entreprises	20 to 99
Autres Catégories	20 to 99
Sociétés	20 to 99
PME	5 to 19

The firms recorded in the COPEMECO list have been classified as small.

During fieldwork it has been realized that the original classification did not respect the reality of the firms; this was true especially for ‘Grands cotisants’ in Lubumbashi that resulted to be mainly Small/Medium firms. Thus appropriate adjustments to the target sample was made. Furthermore, to avoid oversampling of small firms in the panel sample (around 77% of 2006 sample) a decision was made to only attempt re-interviewing around half of the small firms sample.

Counts from sample frames are shown below.

Panel sample counts

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	81	47	101	229
	Medium	39	8	12	59
	Large	9	1		10
Kinshasa Total		129	56	113	298
Kisangani	Small	5	3	2	10
	Medium			1	1
	Large				
Kisangani Total		5	3	3	11
Lubumbashi	Small	4	1	2	7
	Medium	3		3	6
	Large				
Lubumbashi Total		7	1	5	13
Matadi	Small	7	4	6	17
	Medium				
	Large	1			1
Matadi Total		8	4	6	18
Grand Total		149	64	127	340

Sample Frames

Source: FEC & COPEMECO

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	149	179	324	652
	Medium	30	34	34	98
	Large	16	6	5	27
Kinshasa Total		195	219	363	777
Kisangani	Small	27	17	13	57
	Medium	0	0	0	0
	Large	0	0	0	0
Kisangani Total		27	17	13	57
Lubumbashi	Small	4	5	82	91
	Medium	0	0	0	0
	Large	12	54	15	81
Lubumbashi Total		16	59	97	172
Matadi	Small	0	51	9	60
	Medium	2	6	26	34
	Large	0	0	0	0
Matadi Total		2	57	35	94
Grand Total		240	352	508	1,100

11. 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

12. 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. In addition, the sample frame contains no telephone/fax numbers so the local contractor had to screen the contacts by visiting them. Due to response rate and ineligibility issues, additional sample had to be extracted by the World Bank in order to obtain enough eligible contacts and meet the sample targets.

13. 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 6.87% (43 out of 626 establishments)⁴. Breaking down by stratified industries, the following sample targets were achieved by questionnaire type (using a0 and a6a):

Empl's	Achieved Sample by Size and Sector			Grand Total
	Manufacturing	Retail	Other Services	
5 to 19	71	95	82	248
20 to 99	33	9	31	73
100+	16	11	11	38
Grand Total	120	115	124	359

IV. Data Base Structure:

14. 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 (manufacturing, services and IT). The second expanded variation, the Manufacturing Questionnaire, is built upon the Core Module and adds some specific questions relevant to the sector. The third expanded variation, the Services Questionnaire, is also built upon the Core Module and adds to the core specific questions relevant to either retail or IT. Each variation of the questionnaire is identified by the index variable, *a0*.

15. 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 "*DRC*" and "*AF*" indicate questions specific to DRC and Africa respectively, 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 country surveys over the world. All variables are numeric with the exception of those variables with an "x" at the end of their names. The suffix "x" denotes that the variable is alphanumeric.

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

16. There are 2 establishment identifiers, *idstd* and *ser*. The first is a global unique identifier. The second is a country 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 country using information from the sample frame. The strata were defined according to the guidelines described above.

17. 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.

18. 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 codes for the chosen industries for stratification. These codes include most manufacturing industries (15 to 37), other manufacturing (2), retail (52), and (45, 50, 51, 55, 60, 63, 72) for other Services.

19. 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. However, the phone numbers were unavailable in the sample frame, and thus the enumerators applied the screeners in person. 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.

20. Note that there are additional variables for location (*a3x*) and size (*l1*, *l6* and *l8*) that reflect more accurately the reality of each establishment. Advanced users are advised to use these variables for analytical purposes.

21. Variable *a3x* indicates the actual location of the establishment. There may be divergences between the location in the sampling frame and the actual location, as establishments may be listed in one place but the actual physical location is in another place.

22. Variables *l1*, *l6* and *l8* 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.

23. 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

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

25. Appendix B shows the overall estimates of the numbers of establishments in DRC based on the sample frame.

26. 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.

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

28. 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*.

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

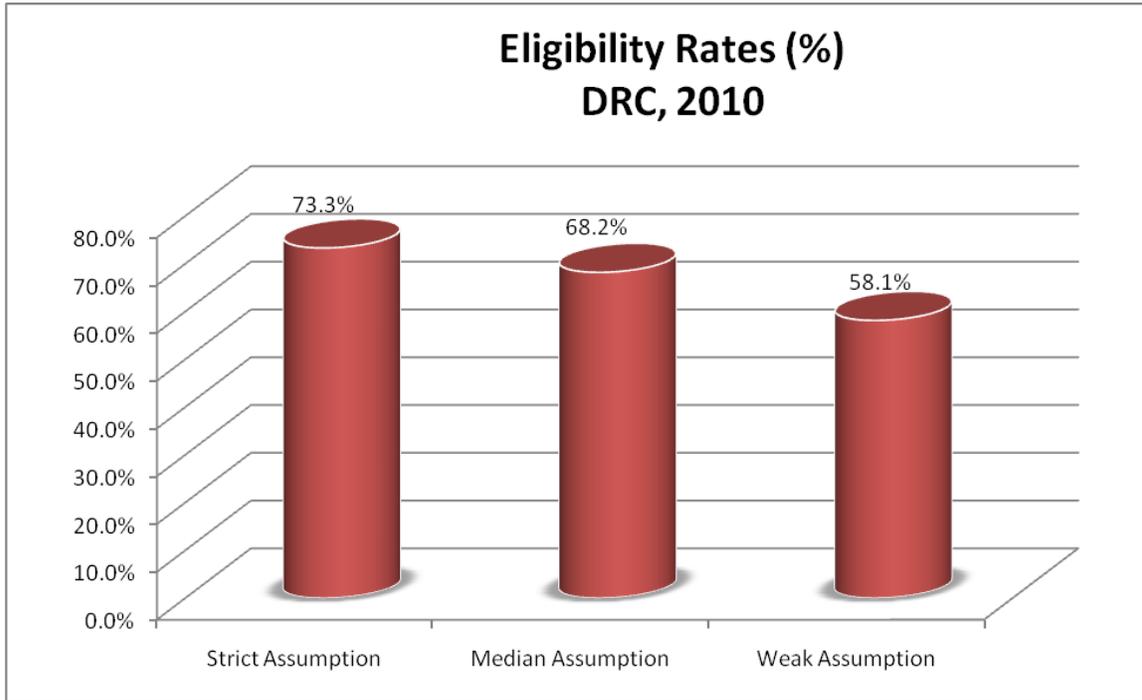
29. Median assumption: eligible establishments are those for which it was possible to directly determine eligibility and those that rejected the screener questionnaire or an answering machine or fax was the only response. The resulting weights are included in the variable *wmedian*.

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

30. 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*.

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

31. 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.



32. Universe estimates for the number of establishments in each industry-region-size cell in DRC 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.

33. 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

34. 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.)⁵

35. 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 in the phone line, answering machine, fax line⁶, wrong address 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.

36. Appendix C shows the cell weights for registered establishments in DRC.

VII. Appropriate use of the weights

37. 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.

38. 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 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.)⁷

39. 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

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

⁶ For the surveys that implemented a screener over the phone.

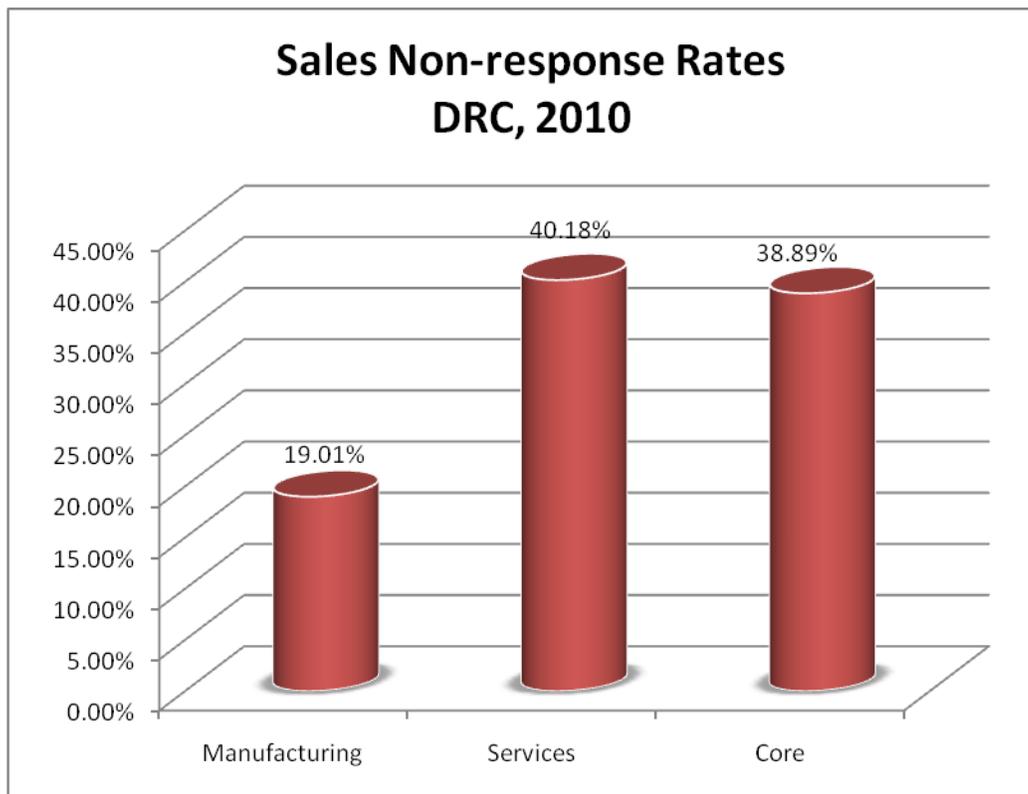
⁷ Note that weighted OLS in Stata using the command `regress` with the option of weights will estimate wrong standard errors. Using the Stata survey specific commands `svy` will provide appropriate standard errors.

that would be expected if the whole population were observed.⁸ 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.

VIII. Non-response

40. 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.

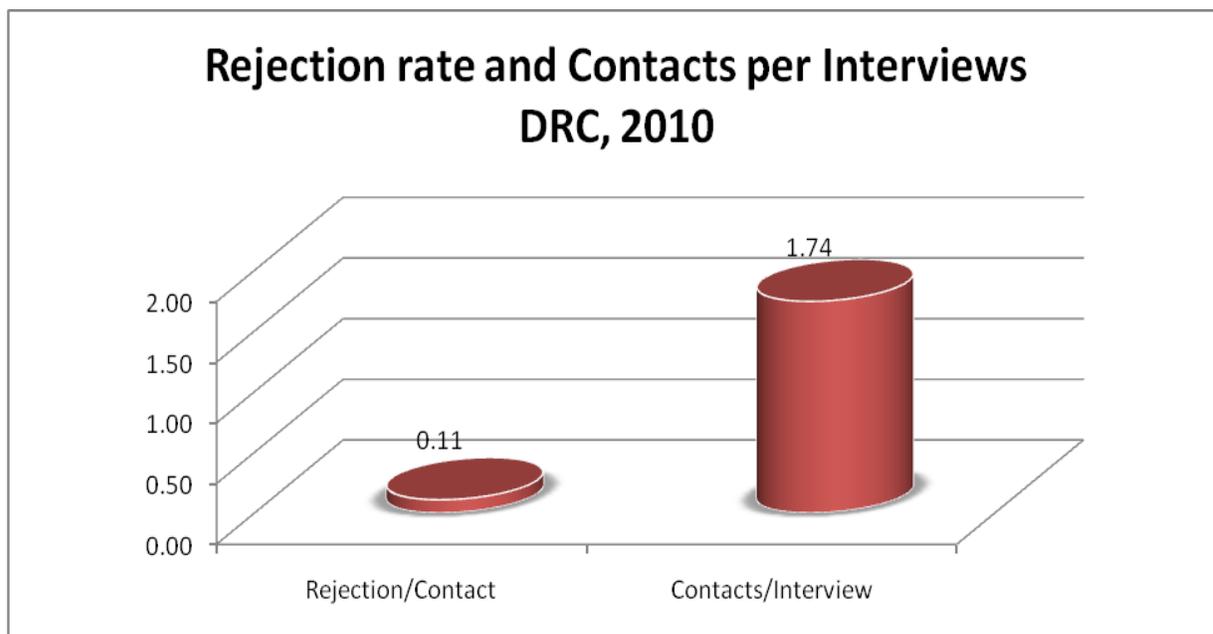
41. Item non-response was addressed by two strategies:
a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond as a different option from don't know (-7).
b- Establishments with 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).



⁸ The use 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.

42. 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.

43. As the following graph shows, the number of contacted establishments per realized interview was 1.74⁹. This number is the result of two factors: explicit refusals to 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 0.11.



44. Details on the rejection rate, eligibility rate, and item non-response are available at the level strata. 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 DRC. All enterprise surveys suffer from these shortcomings, but in very few cases they have been made explicit.

References:

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

⁹ The estimate is based on the total no. of firms contacted including ineligible establishments.

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 Fresh:

ELIGIBLES		
Eligible	1. Eligible establishment (<i>Correct name and address</i>)	231
	2. Eligible establishment (<i>Different name but same address - the new firm/establishment bought the original firm/establishment</i>)	1
	3. Eligible establishment (<i>Different name but same address - the firm/establishment changed its name</i>)	10
	4. Eligible establishment (<i>Wrong address - the firm/establishment has changed address and the address could be found</i>)	14
	16. Panel firm - now less than five employees	0
Ineligible	5. The establishment has less than 5 permanent full time employees	0
	6. The firm discontinued businesses	22
	7. Not a business: private household	5
	8. Ineligible activity: education, agriculture, finances, governments...	1
Unobtainable	91. No reply (<i>after having called in different days of the week and in different business hours</i>)	6
	92. Line out of order	14
	93. No tone	0
	10. Answering machine	0
	11. Fax line - data line	0
	12. Wrong address/ moved away and could not get the new references	3
	13. Refuses to answer the screener	43
	14. In process (<i>the establishment is being called/ is being contacted - previous to ask the screener</i>)	2
	151. Out of target - outside the covered regions, firm moved abroad	0
	152. Out of target - firm moved abroad	0
	153. Impossible to find	76
	Total	428

Response Outcomes Fresh:

Complete interviews (<i>Total</i>)	254
Incomplete interviews	0
Eligible in process	0
Refusals	2
Out of target	28
Impossible to contact	23
Ineligible - coop.	0
Refusal to the Screener	43
Total	350

Status Codes Panel:

ELIGIBLES	
1. Eligible establishment (<i>Correct name and address</i>)	96
2. Eligible establishment (<i>Different name but same address - the new firm/establishment bought the original firm/establishment</i>)	3
3. Eligible establishment (<i>Different name but same address - the firm/establishment changed its name</i>)	4
4. Eligible establishment (<i>Wrong address - the firm/establishment has changed address and the address could be found</i>)	5
16. Panel firm - now less than five employees	0
5. The establishment has less than 5 permanent full time employees	0
6. The firm discontinued businesses	10
7. Not a business: private household	3
8. Ineligible activity: education, agriculture, finances, governments...	2
91. No reply (<i>after having called in different days of the week and in different business hours</i>)	2
92. Line out of order	5
93. No tone	2
10. Answering machine	0
11. Fax line - data line	0
12. Wrong address/ moved away and could not get the new references	0
13. Refuses to answer the screener	20
14. In process (<i>the establishment is being called/ is being contacted - previous to ask the screener</i>)	0
151. Out of target - outside the covered regions, firm moved abroad	0
152. Out of target - firm moved abroad	0
153. Impossible to find	46
Total	198

Response Outcomes Panel:

Complete interviews (<i>Total</i>)	105
Incomplete interviews	0
Eligible in process	0
Refusals	3
Out of target	15
Impossible to contact	9
Ineligible - coop.	0
Refusal to the Screener	20
Total	152

Appendix B

Universe Estimates, DRC:

Source: FEC & COPEMECO

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	230	224	425	879
	Medium	69	42	46	157
	Large	21	7	5	33
Kinshasa Total		320	273	476	1,069
Kisangani	Small	32	20	15	67
	Medium			1	1
	Large				
Kisangani Total		32	20	16	68
Lubumbashi	Small	8	6	84	98
	Medium	3		3	6
	Large	12	54	15	81
Lubumbashi Total		23	60	102	185
Matadi	Small	7	52	15	74
	Medium	2	6	26	34
	Large	1			1
Matadi Total		10	58	41	109
Grand Total		385	411	635	1,431

Appendix C

Strict Cell Weights DRC:

Region Name	Employees	Manufacturing	Retail	Other Services
Kinshasa	Small	2.83	6.77	6.92
	Medium	1.24	1.66	1.35
	Large	1.15	1.00	2.62
Kisangani	Small	1.03	1.31	1.00
	Medium			
	Large			
Lubumbashi	Small	1.40	1.14	1.68
	Medium	1.00		1.00
	Large	5.59	1.16	1.89
Matadi	Small	1.20	1.22	1.56
	Medium	1.50	1.48	1.50
	Large	1.00		

Median Cell Weights DRC:

Region Name	Employees	Manufacturing	Retail	Other Services
Kinshasa	Small	3.33	8.07	7.61
	Medium	1.56	2.25	1.68
	Large	1.53	1.28	3.67
Kisangani	Small	1.03	1.31	1.00
	Medium			
	Large			
Lubumbashi	Small	1.50	1.14	1.68
	Medium	1.04		1.04
	Large	7.61	1.41	2.38
Matadi	Small	1.26	1.30	1.56
	Medium	1.66	1.80	1.67
	Large	1.00		

Weak Cell Weights DRC:

Region Name	Employees	Manufacturing	Retail	Other Services
Kinshasa	Small	3.35	8.76	8.49
	Medium	1.57	2.27	1.75
	Large	1.54	1.31	3.86
Kisangani	Small	1.10	1.58	1.09
	Medium			
	Large			
Lubumbashi	Small	1.72	1.23	2.16
	Medium	1.12		1.26
	Large	8.24	1.63	2.90
Matadi	Small	1.26	1.41	1.73
	Medium	1.66	1.81	1.74
	Large	1.00		

Appendix D

Strict Universe Estimates

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	130	122	242	495
	Medium	43	25	30	98
	Large	13	4	3	19
Kinshasa Total		186	151	275	612
Kisangani	Small	21	12	10	43
	Medium				
	Large				
Kisangani Total		21	12	10	43
Lubumbashi	Small	4	6	47	57
	Medium	2		2	4
	Large	6	34	8	47
Lubumbashi Total		12	39	56	108
Matadi	Small	5	35	11	51
	Medium	1	4	21	27
	Large	1			1
Matadi Total		7	40	32	79
Grand Total		226	242	373	841

Weak Universe Estimates

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	154	158	297	609
	Medium	55	34	39	128
	Large	17	5	4	26
Kinshasa Total		226	197	339	762
Kisangani	Small	22	14	11	47
	Medium				
	Large				
Kisangani Total		22	14	11	47
Lubumbashi	Small	5	6	60	72
	Medium	2		3	5
	Large	8	47	12	67
Lubumbashi Total		16	53	75	144
Matadi	Small	5	41	12	58
	Medium	2	5	24	31
	Large	1			1
Matadi Total		8	46	36	90
Grand Total		271	311	461	1,043

Median Universe Estimates

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	153	145	266	565
	Medium	55	34	37	125
	Large	17	5	4	26
Kinshasa Total		225	184	307	716
Kisangani	Small	21	12	10	42
	Medium				
	Large				
Kisangani Total		21	12	10	42
Lubumbashi	Small	4	6	47	57
	Medium	2		2	4
	Large	8	41	10	58
Lubumbashi Total		14	46	59	119
Matadi	Small	5	38	11	54
	Medium	2	5	23	30
	Large	1			1
Matadi Total		8	43	34	85
Grand Total		267	285	410	962

Appendix E

Original Sample Design, DRC:

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	38	21	28	87
	Medium	37	21	23	81
	Large	11	4	3	18
Kinshasa Total		86	46	54	186
Kisangani	Small	19	11	8	38
	Medium			1	1
	Large				
Kisangani Total		19	11	9	39
Lubumbashi	Small	4	30	32	66
	Medium	3	1	4	8
	Large		1		1
Lubumbashi Total		7	32	36	75
Matadi	Small	5	28	8	41
	Medium	2	3	13	18
	Large	1			1
Matadi Total		8	31	21	60
Grand Total		120	120	120	360

Completed Interviews, DRC:

Region name	Employees	Manufacturing	Retail	Other Services	Grand Total
Kinshasa	Small	46	18	35	99
	Medium	35	15	22	72
	Large	11	4	1	16
Kinshasa Total		92	37	58	187
Kisangani	Small	20	9	10	39
	Medium				
	Large				
Kisangani Total		20	9	10	39
Lubumbashi	Small	3	5	28	36
	Medium	2		2	4
	Large	1	29	4	34
Lubumbashi Total		6	34	34	74
Matadi	Small	4	29	7	40
	Medium	1	3	14	18
	Large	1			1
Matadi Total		6	32	21	59
Grand Total		124	112	123	359

Appendix F

Local Agency team involved in the study:

Link	Country	Local Agency	Organisation	Activities Since
Your relation with TNS opinion	DRC	CAP/UNIKIN	CAP/UNIKIN	2002

Local Agency	Name: CENTRE D'ANALYSES ET DE PROSPECTIVES DE L'UNIVERSITE DE KINSHASA Country: DEMOCRATIC REPUBLIC OF CONGO Membership of international organisation: Activities since: 2002
Name of Project Manager	GUY MAMBUENE
Name and position of other key persons of the project:	PROF.MUKOKO(DIRECTOR),ROBERT BUSSY(SUPERVISOR),ODILON MBOMBILA,BIBICHE AMBA,HONORE KAYEMBE,OLIVIER TSHIKALA (TEAM LEADERS)
Enumerators involved:	Enumerators: 15 Recruiters: 13
Other staff involved:	Fieldwork Coordinators: 3

Sample Frame:

Characteristic of sample frame used:	Panel list used in 2006 ; Repertoire of companies operating in DRC
Source:	FEC , and COPEMECO report
Year:	2009
Comments on the quality of sample frame:	No quality issues
Other sources for companies statistics	None

Sectors included in the Sample:

Original Sectors	MANUFACTURES: ALL MANUFACTURING SECTORS (GROUP D) SERVICES: CONSTRUCTION (GROUP F), SERVICES (GROUPS G AND H), AND TRANSPORT, STORAGE AND COMMUNICATIONS (GROUP I).
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Fieldwork:

No major issues with the questionnaire. Some firms claimed that the questionnaire size is too long.

Appendix G: Subcontractors

	Country	Local team	Survey coordinator name	Since	# F2F int.	Experience F2F int. (years)
Kenya local coordination team	Kenya	TNS Research International	Liston Njoroge	1972	360	10
Indicator Survey	Central African Republic	University of Bangui-Head of geosciences.	Dr Moloto Gaetan Roch	2008	50	2
Enterprise Survey	Angola	HFC	Henrique Freitas	2006	25	3
	Botswana	PROBE	Florence J A Onyango	2001	300	10
	Democratic Republic of Congo	University of Kinshasa	Prof Mukoko Samba	2000	25	5
	Mali	PSI	Dominic Kpanja	2005	45	3