The DRC 2013 Enterprise Surveys Data Set

I. Introduction

1.   This document provides additional information on the data collected in DRC between August 2013 and May 2014 as part of the Africa Enterprise Survey 2013, an initiative of the World Bank. The document also provides information on the DRC micro firms survey carried out, in parallel to the Enterprise Survey, between August 2013 and May 2014.

As part of its strategic goal of building a climate for investment, job creation, and sustainable growth, the World Bank has promoted improving business environments as a key strategy for development, which has led to a systematic effort in collecting enterprise data across countries. The Enterprise Surveys (ES) are an ongoing World Bank project in collecting both objective data based on firms' experiences and enterprises' perception of the environment in which they operate.

The Enterprise Surveys currently cover over 130,000 firms in 135 countries, of which 121 have been surveyed following the standard methodology. This allows for better comparisons across countries and across time. Data 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 sampling[2] was preferred over simple random sampling for several reasons[3]:

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.

---

[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

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.)

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 four manufacturing industries (food, textiles and garments, chemicals and plastics, other manufacturing) and two service sectors (retail and other services).

5. For the DRC Enterprise Survey (ES), 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). The micro sample consists of firms with 1 to 4 employees.

6. Regional stratification for the DRC ES as well as the DRC micro surveys was defined in four regions:
- Center (Kananga and Mbuji Mayi),
- East (Bukavu, Butembo, Goma, Kisangani),
- South (LIkasi, Lubumbashi),
- North (Boma, Kikwit, Kinshasa, 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.

8. TNS Opinion was hired to implement the Africa 2013 enterprise surveys roll out. In DRC the local subcontractor was Centre d'Analyses et de Prospectives (CAP).

9. For the DRC ES, two sample frames were used. The first was supplied by the World Bank and consists of enterprises interviewed in DRC 2010. The World Bank required that attempts should be made to re-interview establishments responding to the DRC 2010 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 firms and firms located in the capital city in the 2010 sample the following convention was used. The presence of panel firms was limited to a

maximum of 50% of the achieved interviews in each cell. That sample is referred to as the Panel.

The second frame was built by undertaking block enumeration as a suitable sample frame from appropriate institutions in DRC was not available; but the lists that were obtained were deemed incomplete and potentially out of date. The block enumeration allowed to physically creating a list of establishments from which to sample from.

The list of Block were enumerated in all the 12 cities in the four region included in the project.The enumeration was conducted without major problems in the time planned. It took about 7 weeks to complete the full block enumeration, from the first day of enumeration to the delivery of the last city file with all units (economic or households) registered in electronic format. The full list of all units enumerated is composed of about 40,000 records. The list contains 26,000 records that cannot be included in the Enterprise Survey: firms active in sectors out of our target and also the "foyer" (private households) encountered during the enumeration exercise.In total, about 14,000 records are usable for the Enterprise Survey: 12,400 contacts are micro firms and about 1,600 are firms eligible for main Enterprise Survey Appendix G provides the contractor's block enumeration report.

Counts from the list of firms enumerated are shown below.

DRC Micro, Sample Frame

Source: Based on Block Enumeration Counts

	Manufacturing	Retail	Services	Grand Total
CENTER	**38**	**525**	**211**	**774**
KANANGA	14	175	128	317
MBUJI MAYI	24	350	83	457
EAST	**252**	**2,085**	**628**	**2,965**
BUKAVU	61	954	280	1,295
BUTEMBO	129	576	208	913
GOMA	38	413	96	547
KISANGANI	24	142	44	210
SUD	**69**	**1,800**	**418**	**2,287**
LIKASI	23	497	186	706
LUBUMBASHI	46	1,303	232	1,581
WEST	**352**	**4,804**	**1,244**	**6,400**
BOMA	28	249	59	336
KIKWIT	62	560	291	913
KINSHASA	212	2,541	564	3,317
MATADI	50	1,454	330	1,834
Grand Total	**711**	**9,214**	**2,501**	**12,426**

DRC MAIN ES, Sample Frame

Source: Based on Block Enumeration Counts

	Manufacturing	Retail	Services	Grand Total
CENTER	**21**	**61**	**82**	**164**
KANANGA	**11**	**27**	**34**	**72**
5-19	10	25	30	65
20-99		2	4	6
100+	1			1
MBUJI MAYI	**10**	**34**	**48**	**92**
5-19	4	30	37	71
20-99	6	4	11	21
EAST	**111**	**152**	**99**	**362**
BUKAVU	**18**	**51**	**25**	**94**
5-19	14	45	23	82
20-99	4	5	2	11
100+		1		1
BUTEMBO	**41**	**59**	**41**	**141**
5-19	35	55	38	128
20-99	4	3	3	10
100+	2	1		3
GOMA	**34**	**34**	**26**	**94**
5-19	25	29	25	79
20-99	7	3	1	11
100+	2	2		4
KISANGANI	**18**	**8**	**7**	**33**
5-19	15	7	6	28
20-99		1	1	2
100+	3			3
SUD	**31**	**125**	**96**	**252**
LIKASI	**13**	**27**	**49**	**89**
5-19	9	23	43	75
20-99	3	4	4	11
100+	1		2	3
LUBUMBASHI	**18**	**98**	**47**	**163**
5-19	16	94	38	148
20-99	1	3	8	12
100+	1	1	1	3
WEST	**197**	**343**	**310**	**850**
BOMA	**15**	**30**	**56**	**101**
5-19	11	27	52	90
20-99	3	3	4	10
100+	1			1
KIKWIT	**17**	**65**	**43**	**125**
5-19	17	60	40	117
20-99		5	3	8
KINSHASA	**157**	**158**	**141**	**456**
5-19	74	129	105	308
20-99	66	22	29	117
100+	17	7	7	31
MATADI	**8**	**90**	**70**	**168**
5-19	6	89	60	155
20-99	1	1	10	12
100+	1			1
Grand Total	**360**	**681**	**587**	**1628**

10. The enumerated establishments with 5 employees or more (fresh and panel) were then used as the sample frame for the DRC Enterprise Survey with the aim of obtaining interviews at 512 establishments. The enumerated establishments with less than five employees (micro establishments) were used as sample frame for the DRC micro survey with the aim of obtaining interviews at 400 establishments.

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. In addition, the sample frame contains no telephone/fax numbers so the local contractor had to screen the contacts by visiting them..

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% (54 out of 893 establishments)[4] for the main ES firms and 7.6% (96 out of 1269) for micro firms.

IV. Data Base Structure:

13.   The structure of the data base reflects the fact that 3 different versions of the survey instrument were used for all registered establishments. Questionnaires have common questions (*core* module) and respectfully additional manufacturing and retail specific questions. The eligible manufacturing industries have been surveyed using the ***Manufacturing*** questionnaire (includes the *core* module, plus manufacturing specific questions). Retail firms have been interviewed using the ***Retail*** questionnaire (includes the *core* module plus retail specific questions) and the residual eligible services have been covered using the core module only (***Other Services*** questionnaire). 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* (some exceptions apply due to comparability reasons). Variable names proceeded by a prefix *"DRC"* indicate questions specific to DRC, 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 alpha-numeric.

15.   There are 2 establishment identifiers, *idstd* and *id*. 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.

---

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

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 micro, 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.

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. 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.

19.   Note that there are variables for 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. 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.

20.   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.

21. Note that the fiscal years vary by firm as there is no standard for all firms in DRC. The start and end dates for the fiscal year for each firm can be found in the a20 variables in the dataset

V. Universe Estimates
21.   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.

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

23.   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.

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

25. 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*.

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

26. 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*.

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

27. 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

28. 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. The eligibility rates for micro firms are also provided below.

Eligibility Rates According to Assumptions Percent Eligible DRC Main ES, 2013

Assumption	Percent
Strict assumption	70.88%
Median assumption	76.48%
Weak assumption	87.46%

Eligibility Rates According to Assumptions Percent Eligible DRC Micro, 2013

Assumption	Percent
Strict assumption	47.75%
Median assumption	65.17%
Weak assumption	75.73%
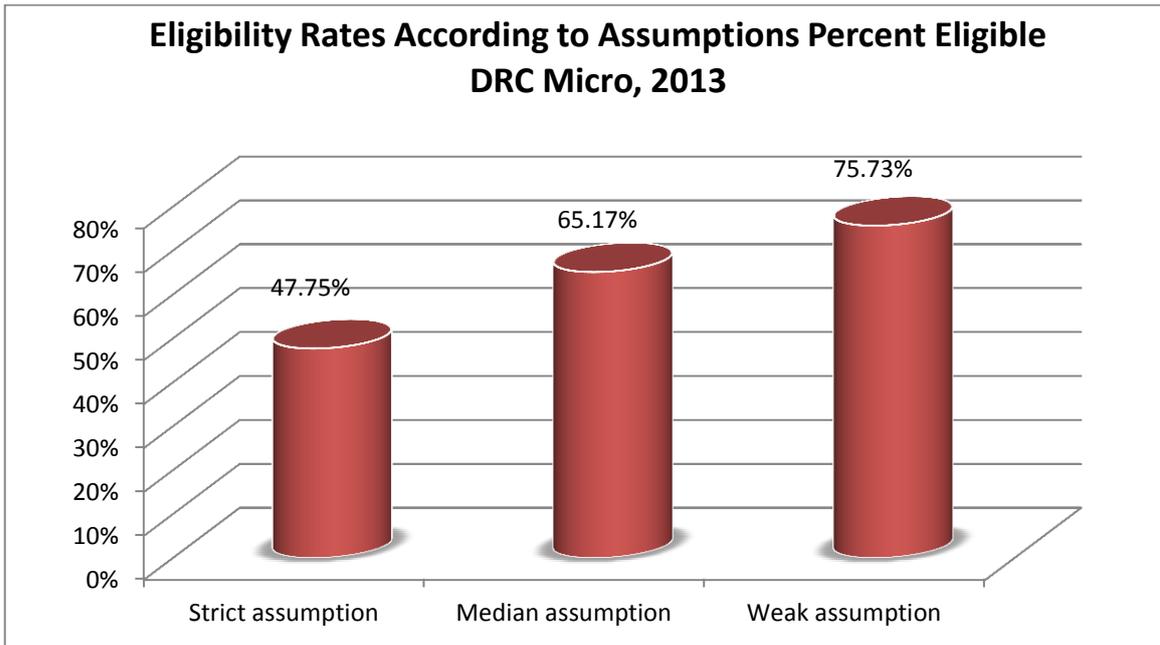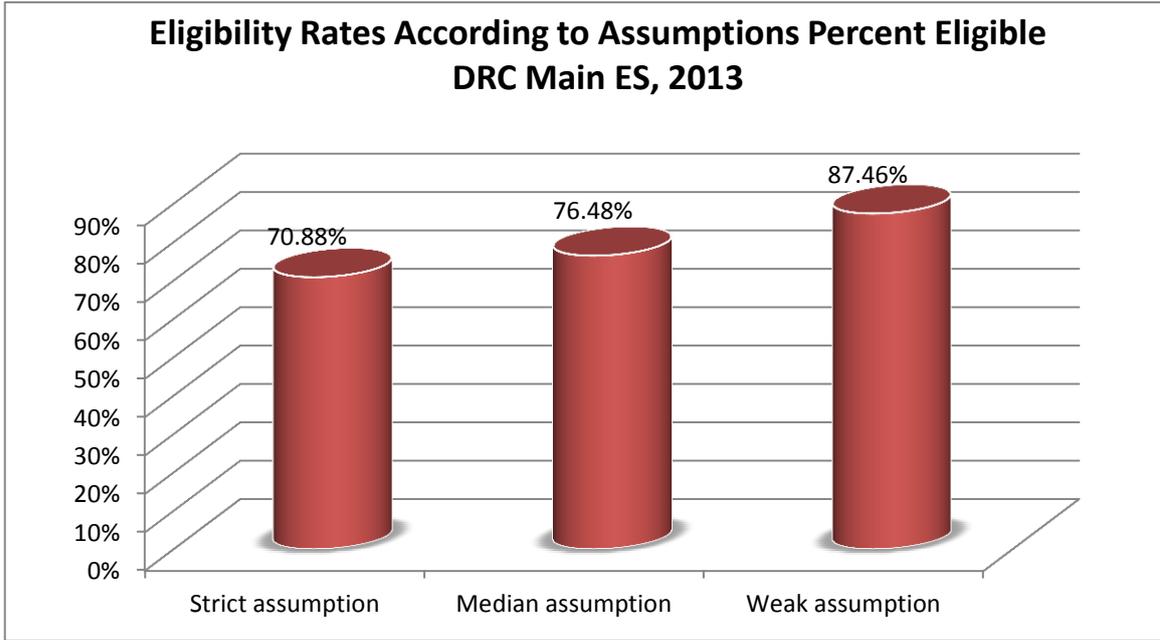
29. Universe estimates for the number of establishments in each industry-region-size cell in DRC were produced for the strict, weak and median eligibility definitions. Appendix D shows the universe estimates of the numbers of registered establishments that fit the criteria of the Enterprise Surveys.

30. 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

31.   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]

32.   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 line[6], 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.

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

VII. Appropriate use of the weights

34.   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.

35.   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

---

[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.

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]

36.   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.[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

37.   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.

38.   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 charts below for both enterprise surveys (ES) and micro firms reflect both categories (DKs and NAs).

---

[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 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.

Sales Non-response Rates
DRC Main ES, 2013

Manufacturing: 8%
Retail: 10%
Other Services: 10%
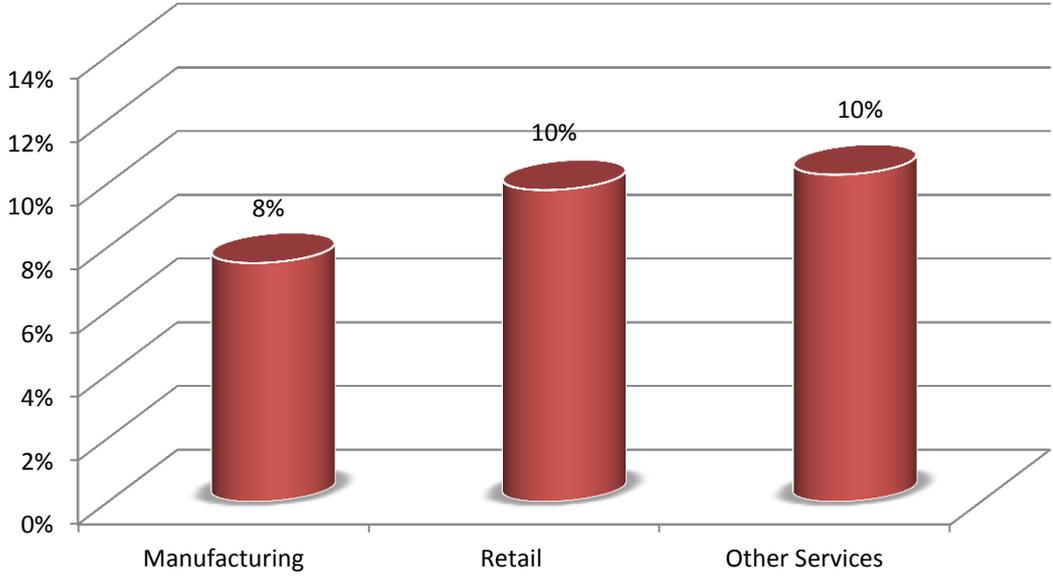
Sales Non-response Rates
DRC Micro, 2013

Manufacturing: 12%
Retail: 3%
Other Services: 6%
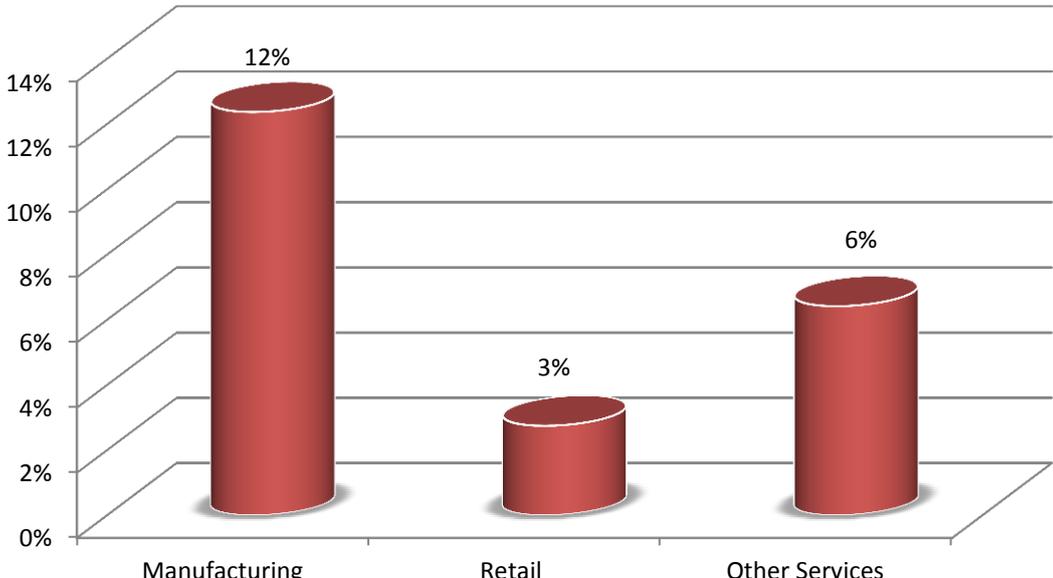
39.   Survey non-response was addressed by maximizing efforts to contact establishments that were initially selected for interview. Attempts were made to contact the establishment for interview at different times/days of the week before a replacement establishment (with similar strata characteristics) 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.

40.   As the following graph shows, the number of interviews per contacted establishments was 0.83 for the main ES firms and 068 for micro firms[9]. 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 0.16 for main ES firms and 0.31 for micro firms.

Rejection rate and Interviews per Contact
DRC Main ES, 2013

Rejection rate and Interviews per Contact
DRC Micro, 2013

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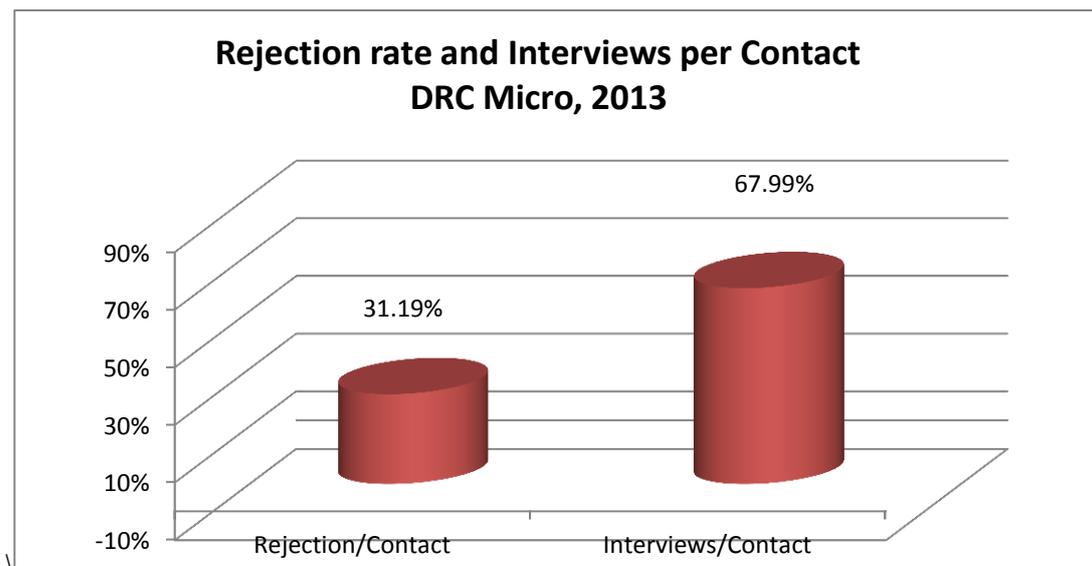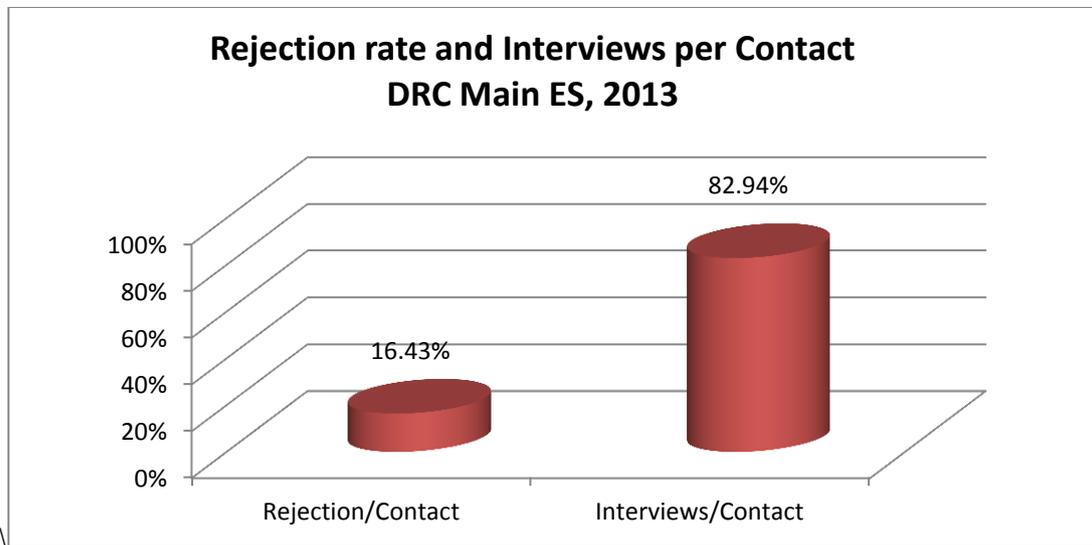
[9] The estimate is based on the total no. of firms contacted including ineligible establishments.

41.   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.

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

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

Lohr, Sharon L. Samping: Design and Techniques, 1999.

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

Appendix A

Status Codes Enterprise Survey (ES):

	DRC FRESH	DRC PANEL	DRC TOTAL
Complete interview s **(Total)**	437	92	529
Incomplete interview s	0	0	0
Elegible in process	0	0	0
Refusals	92	12	104
Ineligible	39	15	54
Impossible to contact	51	50	101
Ineligible - coop.	52	6	58
Refusal to the Screener	32	15	47

	DRC FRESH	DRC PANEL	DRC PANEL
1.Elegible establishment (Correct name and address)	486	85	571
2. Elegible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	24	6	30
3. Elegible establishment (Different name but same address - the firm/establishment changed its name)	8	5	13
4. Elegible establishment (Wrong address - the firm/establishmen has changed address and the address could be found)	11	8	19
16. Panel firm - now less than five employees	0	0	0
5. The establishment has less than 5 permanent full time employees	6	0	6
6. The firm discontinued businesses	14	14	28
7. Not a business: private household	1	0	1
8. Ineligible activity: education, agriculture, finances, governments…	18	1	19
91. No reply *(after having called in different days of the week and in different business hours)*	20	6	26
92. Line out of order	8	9	17
93. No tone	1	1	2
94. Phone number does not exist	6	8	14
10. Answ ering machine	3	0	3
11. Fax line - data line	0	0	0
12. Wrong address/ moved aw ay and could not get the new references	13	26	39
13. Refuses to answ er the screener	32	15	47
14. In process *(the establishment is being called/ is being contacted - previous to ask the screener)*	0	0	0
151. Out of target - outside the covered regions, firm moved abroad	1	0	1
152. Out of target - firm moved abroad	1	1	2
153. Out of target - Not registered w ith statistical agency	50	5	55
	703	190	893

Status Codes Micro:

	DRC MICRO
Sample target	400
Complete interviews **(Total)**	412
Incomplete interviews	3
Elegible in process	2
Refusals	189
Ineligible	96
Impossible to contact	134
Ineligible - coop.	212
Refusal to the Screener	221
	1269

	DRC MICRO
1.Elegible establishment (Correct name and address)	559
2. Elegible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	27
3. Elegible establishment (Different name but same address - the firm/establishment changed its name)	10
4. Elegible establishment (Wrong address - the firm/establishmen has changed address and the address could be found)	10
16. Panel firm - now less than five employees	0
5. The establishment has more than 5 permanent full time employees	1
6. The firm discontinued businesses	63
7. Not a business: private household	16
8. Ineligible activity: education, agriculture, finances, governments…	16
91. No reply *(after having called in different days of the week and in different business hours)*	22
92. Line out of order	26
93. No tone	1
94. Phone number does not exist	15
10. Answering machine	0
11. Fax line - data line	0
12. Wrong address/ moved away and could not get the new references	70
13. Refuses to answer the screener	221
14. In process *(the establishment is being called/ is being contacted - previous to ask the screener)*	**0**
151. Out of target - outside the covered regions, firm moved abroad	24
152. Out of target - firm moved abroad	14
153. Out of target - Not registered with statistical agency	174
	1269

Appendix B

Universe Estimates based on Block Enumeration Counts, DRC:

MAIN ES

	Manufacturing	Retail	Other Services	Grand Total
Center	21	61	82	**164**
Small (5 to 19)	14	55	67	136
Medium (20 to 99)	6	6	15	27
Large (100+)	1	0	0	1
East	111	152	99	**362**
Small (5 to 19)	89	136	92	317
Medium (20 to 99)	15	12	7	34
Large (100+)	7	4	0	11
South	31	125	96	**252**
Small (5 to 19)	25	117	81	223
Medium (20 to 99)	4	7	12	23
Large (100+)	2	1	3	6
West	197	343	310	**850**
Small (5 to 19)	108	305	257	670
Medium (20 to 99)	70	31	46	147
Large (100+)	19	7	7	33
Grand Total	**360**	**681**	**587**	**1628**

Micro

	Manufacturing	Retail	Other Services	Grand Total
Center	38	525	211	**774**
East	252	2085	628	**2965**
South	69	1800	418	**2287**
West	352	4804	1244	**6400**
Grand Total	**711**	**9214**	**2501**	**12426**

Appendix C

Strict Cell Weights DRC:

Fresh Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	3.01	3.82	4.90	**11.73**
Small (5 to 19)	1.00	2.78	3.78	7.56
Medium (20 to 99)	1.01	1.04	1.12	3.17
Large (100+)	1.00			1.00
East	3.44	7.95	7.66	**19.06**
Small (5 to 19)	1.04	5.20	6.66	12.90
Medium (20 to 99)	1.16	1.74	1.00	3.90
Large (100+)	1.25	1.01		2.26
South	1.00	16.04	7.10	**24.14**
Small (5 to 19)	1.00	13.76	4.95	19.71
Medium (20 to 99)	0.00	1.29	1.15	2.43
Large (100+)	0.00	1.00	1.00	2.00
West	3.00	5.28	5.08	**13.36**
Small (5 to 19)	1.00	3.39	2.98	7.37
Medium (20 to 99)	1.00	1.88	1.10	3.99
Large (100+)	1.00	0.00	1.00	2.00
Grand Total	**10.46**	**33.09**	**24.74**	**68.28**

Panel Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	0.00	0.00	0.00	**0.00**
Small (5 to 19)	0.00	0.00	0.00	0.00
Medium (20 to 99)	0.00	0.00	0.00	0.00
Large (100+)	0.00			0.00
East	1.04	2.11	1.00	**4.15**
Small (5 to 19)	1.04	1.11	1.00	3.15
Medium (20 to 99)	0.00	1.00	0.00	1.00
Large (100+)	0.00	0.00		0.00
South	3.00	1.00	5.81	**9.81**
Small (5 to 19)	1.00	1.00	3.81	5.81
Medium (20 to 99)	1.00	0.00	1.00	2.00
Large (100+)	1.00	0.00	1.00	2.00
West	3.85	4.19	3.25	**11.29**
Small (5 to 19)	1.17	2.10	1.17	4.44
Medium (20 to 99)	1.45	1.00	1.00	3.45
Large (100+)	1.24	1.09	1.08	3.41
Grand Total	**7.89**	**7.30**	**10.06**	**25.25**

Micro

	Manufacturing	Retail	Other Services	Grand Total
Central	1.00	23.30	2.73	**27.03**
East	3.02	25.56	12.83	**41.41**
South	1.26	39.86	10.49	**51.61**
West	3.50	37.50	14.91	**55.91**
Grand Total	**8.78**	**126.22**	**40.96**	**175.96**

Median Cell Weights DRC:

Fresh Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	3.07	4.03	5.12	**12.23**
Small (5 to 19)	1.00	2.94	3.95	7.89
Medium (20 to 99)	1.02	1.09	1.17	3.28
Large (100+)	1.05			1.05
East	3.62	8.57	8.11	**20.31**
Small (5 to 19)	1.07	5.57	7.07	13.71
Medium (20 to 99)	1.19	1.86	1.04	4.09
Large (100+)	1.36	1.15		2.52
South	1.00	16.85	7.37	**25.22**
Small (5 to 19)	1.00	14.50	5.17	20.66
Medium (20 to 99)	0.00	1.35	1.19	2.54
Large (100+)	0.00	1.00	1.02	2.02
West	3.06	5.83	5.47	**14.36**
Small (5 to 19)	1.00	3.75	3.26	8.02
Medium (20 to 99)	1.06	2.08	1.20	4.34
Large (100+)	1.00	0.00	1.00	2.00
Grand Total	**10.76**	**35.28**	**26.07**	**72.11**

Panel Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	0.00	0.00	0.00	**0.00**
Small (5 to 19)	0.00	0.00	0.00	0.00
Medium (20 to 99)	0.00	0.00	0.00	0.00
Large (100+)	0.00			0.00
East	1.13	2.15	1.00	**4.28**
Small (5 to 19)	1.13	1.15	1.00	3.28
Medium (20 to 99)	0.00	1.00	0.00	1.00
Large (100+)	0.00	0.00		0.00
South	3.00	1.00	6.48	**10.48**
Small (5 to 19)	1.00	1.00	4.46	6.46
Medium (20 to 99)	1.00	0.00	1.01	2.01
Large (100+)	1.00	0.00	1.00	2.00
West	4.51	4.57	3.83	**12.91**
Small (5 to 19)	1.40	2.41	1.53	5.34
Medium (20 to 99)	1.74	1.00	1.00	3.74
Large (100+)	1.38	1.16	1.30	3.84
Grand Total	**8.64**	**7.73**	**11.31**	**27.67**

Micro

	Manufacturing	Retail	Other Services	Grand Total
Central	1.00	31.45	3.60	**36.05**
East	3.65	40.87	20.05	**64.56**
South	1.30	54.37	13.98	**69.64**
West	4.24	60.00	23.30	**87.55**
Grand Total	**10.19**	**186.68**	**60.93**	**257.80**

Weak Cell Weights DRC:

Fresh Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	3.11	4.29	5.34	**12.74**
Small (5 to 19)	1.00	3.15	4.14	8.29
Medium (20 to 99)	1.06	1.14	1.20	3.40
Large (100+)	1.05			1.05
East	3.86	9.39	8.78	**22.03**
Small (5 to 19)	1.17	6.17	7.68	15.01
Medium (20 to 99)	1.27	2.01	1.11	4.39
Large (100+)	1.41	1.21		2.63
South	1.00	17.41	7.44	**25.85**
Small (5 to 19)	1.00	15.04	5.25	21.29
Medium (20 to 99)	0.00	1.37	1.19	2.56
Large (100+)	0.00	1.00	1.00	2.00
West	3.16	6.54	5.92	**15.62**
Small (5 to 19)	1.00	4.24	3.62	8.86
Medium (20 to 99)	1.16	2.30	1.30	4.76
Large (100+)	1.00	0.00	1.00	2.00
Grand Total	**11.13**	**37.63**	**27.48**	**76.24**

Panel Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	0.00	0.00	0.00	**0.00**
Small (5 to 19)	0.00	0.00	0.00	0.00
Medium (20 to 99)	0.00	0.00	0.00	0.00
Large (100+)	0.00			0.00
East	1.53	2.63	1.40	**5.56**
Small (5 to 19)	1.53	1.63	1.40	4.56
Medium (20 to 99)	0.00	1.00	0.00	1.00
Large (100+)	0.00	0.00		0.00
South	3.00	1.00	7.87	**11.87**
Small (5 to 19)	1.00	1.00	5.57	7.57
Medium (20 to 99)	1.00	0.00	1.29	2.29
Large (100+)	1.00	0.00	1.00	2.00
West	6.43	6.88	5.32	**18.64**
Small (5 to 19)	2.15	3.89	2.50	8.53
Medium (20 to 99)	2.74	1.64	1.27	5.64
Large (100+)	1.55	1.36	1.56	4.46
Grand Total	**10.96**	**10.52**	**14.59**	**36.07**

Micro

Row Labels	Manufacturing	Retail	Other Services	Grand Total
Central	1.01	36.84	4.20	**42.05**
East	4.10	52.70	25.71	**82.51**
South	1.28	61.68	15.77	**78.74**
West	4.47	72.58	28.03	**105.08**
Grand Total	**10.87**	**223.80**	**73.71**	**308.38**

Appendix D
Strict Universe Estimates

Fresh Enterprise Survey

	Manufacturing	Retail	Other Services	Grand Total
Central	21	47	66	**134**
Small (5 to 19)	14	42	53	109
Medium (20 to 99)	6	5	13	25
Large (100+)	1			1
East	77	100	65	**242**
Small (5 to 19)	57	88	60	205
Medium (20 to 99)	14	9	5	28
Large (100+)	6	3		9
South	21	76	52	**149**
Small (5 to 19)	21	69	45	134
Medium (20 to 99)	0	6	6	12
Large (100+)	0	1	2	3
West	92	173	153	**418**
Small (5 to 19)	53	156	131	340
Medium (20 to 99)	33	17	20	70
Large (100+)	6	0	2	8
Grand Total	**211**	**396**	**336**	**944**

Panel Main ES

	Manufacturing	Retail	Other Services	Grand Total
Central	0	0	0	**0**
Small (5 to 19)	0	0	0	0
Medium (20 to 99)	0	0	0	0
Large (100+)	0			0
East	11	7	5	**23**
Small (5 to 19)	11	6	5	22
Medium (20 to 99)	0	1	0	1
Large (100+)	0	0		0
South	4	15	11	**30**
Small (5 to 19)	2	15	8	25
Medium (20 to 99)	1	0	2	3
Large (100+)	1	0	1	2
West	24	18	18	**59**
Small (5 to 19)	12	13	9	34
Medium (20 to 99)	7	2	6	15
Large (100+)	5	3	2	10
Grand Total	**39**	**39**	**33**	**112**

Micro

	Manufacturing	Retail	Other Services	Grand Total
Central	33	256	107	**396**
East	154	741	231	**1126**
South	60	917	220	**1197**
West	217	1725	462	**2404**
Grand Total	**464**	**3639**	**1020**	**5124**

Median Universe Estimates

Fresh Main ES

	Manufacturing	Retail	Other Services	Grand Total
Central	21	50	69	**140**
Small (5 to 19)	14	44	55	113
Medium (20 to 99)	6	5	14	26
Large (100+)	1			1
East	80	107	69	**256**
Small (5 to 19)	59	95	64	217
Medium (20 to 99)	14	9	5	29
Large (100+)	7	3		10
South	21	80	54	**156**
Small (5 to 19)	21	72	46	140
Medium (20 to 99)	0	7	6	13
Large (100+)	0	1	2	3
West	94	191	167	**453**
Small (5 to 19)	53	173	144	369
Medium (20 to 99)	35	19	22	75
Large (100+)	6	0	2	8
Grand Total	**216**	**429**	**360**	**1005**

Panel Main ES

Row Labels	Manufacturing	Retail	Other Services	Grand Total
Central	0	0	0	**0**
Small (5 to 19)	0	0	0	0
Medium (20 to 99)	0	0	0	0
Large (100+)	0			0
East	12	7	5	**24**
Small (5 to 19)	12	6	5	23
Medium (20 to 99)	0	1	0	1
Large (100+)	0	0		0
South	4	15	12	**31**
Small (5 to 19)	2	15	9	26
Medium (20 to 99)	1	0	2	3
Large (100+)	1	0	1	2
West	28	20	21	**69**
Small (5 to 19)	14	14	12	41
Medium (20 to 99)	9	2	6	17
Large (100+)	6	3	3	12
Grand Total	**45**	**42**	**38**	**124**

Micro

Row Labels	Manufacturing	Retail	Other Services	Grand Total
Central	33	346	141	**519**
East	186	1185	361	**1732**
South	62	1250	294	**1606**
West	263	2760	722	**3745**
Grand Total	**544**	**5542**	**1517**	**7603**

Weak Universe Estimates

Fresh Main ES

	Manufacturing	Retail	Other Services	Grand Total
Central	21	53	72	**147**
Small (5 to 19)	14	47	58	119
Medium (20 to 99)	6	6	14	26
Large (100+)	1			1
East	87	119	75	**280**
Small (5 to 19)	64	105	69	238
Medium (20 to 99)	15	10	6	31
Large (100+)	7	4		11
South	21	83	55	**159**
Small (5 to 19)	21	75	47	143
Medium (20 to 99)	0	7	6	13
Large (100+)	0	1	2	3
West	97	216	185	**498**
Small (5 to 19)	53	195	159	407
Medium (20 to 99)	38	21	23	82
Large (100+)	6	0	2	8
Grand Total	**226**	**470**	**387**	**1083**

Panel Main ES

	Manufacturing	Retail	Other Services	Grand Total
Central	0	0	0	**0**
Small (5 to 19)	0	0	0	0
Medium (20 to 99)	0	0	0	0
Large (100+)	0			0
East	17	9	7	**33**
Small (5 to 19)	17	8	7	32
Medium (20 to 99)	0	1	0	1
Large (100+)	0	0		0
South	4	15	15	**34**
Small (5 to 19)	2	15	11	28
Medium (20 to 99)	1	0	3	4
Large (100+)	1	0	1	2
West	41	31	31	**103**
Small (5 to 19)	21	23	20	65
Medium (20 to 99)	14	3	8	25
Large (100+)	6	4	3	13
Grand Total	**62**	**55**	**52**	**169**

Micro

Row Labels	Manufacturing	Retail	Other Services	Grand Total
Central	33	405	164	**602**
East	209	1528	463	**2200**
South	62	1419	331	**1812**
West	277	3338	869	**4485**
Grand Total	**581**	**6691**	**1827**	**9099**

Appendix E

Original Sample Design, DRC (panel+fresh):

	Manufacturing	Retail	Other Services	Grand Total
Center	18	19	20	**57**
Small (5 to 19)	12	14	10	36
Medium (20 to 99)	5	5	10	20
Large (100+)	1	0	0	1
East	80	25	15	**120**
Small (5 to 19)	60	15	8	83
Medium (20 to 99)	14	7	7	28
Large (100+)	6	3	0	9
South	29	22	21	**72**
Small (5 to 19)	23	16	10	49
Medium (20 to 99)	4	5	8	17
Large (100+)	2	1	3	6
West	137	58	68	**263**
Small (5 to 19)	60	44	42	146
Medium (20 to 99)	60	12	20	92
Large (100+)	17	2	6	25
Grand Total	**264**	**124**	**124**	**512**

Sample Design, DRC (panel):

	Manufacturing	Retail	Services	Grand Total
EAST	**10**	**6**	**6**	**22**
5-19	10	5	5	20
20-99		1	1	2
SOUTH	**4**	**16**	**14**	**34**
5-19	2	16	10	28
20-99	1		3	4
100+	1		1	2
WEST	**46**	**32**	**38**	**116**
5-19	24	25	24	73
20-99	15	5	10	30
100+	7	2	4	13
Grand Total	**60**	**54**	**58**	**172**

* Panel firms are located in Kisangani (EAST), Lubumbashi (SOUTH), Kinshasa and Matadi (WEST)

Micro Survey

	Manufacturing	Retail	Services	Grand Total
CENTER	35	15	40	90
EAST	48	24	18	90
SUD	49	23	18	90
WEST	50	47	33	130
Grand Total	182	109	109	400

Completed Interviews, DRC (panel+fresh):

	Manufacturing	Retail	Other Services	Grand Total
Central	21	20	27	**68**
Small (5 to 19)	13	17	19	49
Medium (20 to 99)	7	3	8	18
Large (100+)	1			1
East	83	31	19	**133**
Small (5 to 19)	64	24	13	101
Medium (20 to 99)	14	3	6	23
Large (100+)	5	4		9
South	25	26	21	**72**
Small (5 to 19)	22	21	17	60
Medium (20 to 99)	2	5	3	10
Large (100+)	1		1	2
West	111	66	79	**256**
Small (5 to 19)	69	54	53	176
Medium (20 to 99)	33	11	22	66
Large (100+)	9	1	4	14
Grand Total	**240**	**143**	**146**	**529**

Completed Interviews, DRC (panel):

	Manufacturing	Retail	Other Services	Grand Total
East	11	6	5	**22**
Small (5 to 19)	10	6	4	20
Medium (20 to 99)	1		1	2
South	4	15	5	**24**
Small (5 to 19)	2	14	3	19
Medium (20 to 99)	1	1	2	4
Large (100+)	1			1
West	19	11	16	**46**
Small (5 to 19)	12	7	9	28
Medium (20 to 99)	4	3	5	12
Large (100+)	3	1	2	6
Grand Total	**34**	**32**	**26**	**92**

Completed Interviews, DRC Micro

	Manufacturing	Retail	Other Services	Grand Total
Central	33	11	39	**83**
East	51	29	18	**98**
South	48	23	20	**91**
West	62	46	32	**140**
Grand Total	**194**	**109**	**109**	**412**

Appendix F

Local Agency team involved in the study:

Local Agency	**Name:** Centre d'Analyses et de Prospectives (CAP) **Country:** DRC **Activities since:** 2002
Enumerators involved:	**Enumerators:** 22 **Recruiters:** 16
Other staff involved:	**Fieldwork Coordinators:** 4 **Data Entry:** 5 **Data Processing:** 1

Sample Frame:

Characteristic of sample frame used:	The sample frame came from the block enumeration conducted by the CAP agency in the month of April 2013
Source:	Block enumeration counts
Year:	2013
Additional list	

Sectors included in the Sample:

Original Sectors	The manufacturing sector comprises all manufacturing establishments as mentioned in group D The service sector includes Group F (construction), Groups G, Group H (hotels and restaurants), Group I (transport, storage, and communications) and subsector 72 from Group K
Added (top up) Sectors	None

Fieldwork and country situation:

Date of Fieldwork	August 2013 to May 2014
Country	DRC
Use of CAPI	• NO
Problems found during fieldwork:	▪ Several interviews were completed in more than one visit. ▪ Respondents were in general inclined to think the study aimed to get tax and social security defaulters. This might have affected the reliability of answers related to revenue and costs.
Country specific situation	▪ The insecurity in some parts of the East of the country (Goma) and the internal displacement of the population created some additional challenges to effective execution of the study due to a broader situation of mistrust. The team was well-prepared to face and mitigate those challenges.

Appendix G- block enumeration report from the contractor

The goal of the project is to make the DRC ES 2013 fully compatible with the approach of the Enterprise Surveys that the Enterprise Analysis Unit of the WB has been implementing in other regions of the world.

The DRC ES 2013 aims to achieve the following objectives:

- To provide feedback from enterprises on the state of the private sector in client countries;
- To provide statistically significant business environment indicators that are comparable across countries;
- To assess the constraints to private sector growth and enterprise performance;
- To build a panel of enterprise data that will make it possible to track changes in the business environment over time; and
- To stimulate systematic policy dialogue on the business environment and to help shape the agenda for reform.

The project will be comprised of two main activities:

A.   Block enumeration in the following areas
•   Western DRC: Boma, Kinshasa, Kikwit, Matadi
•   Eastern DRC: Kisangani, Butembo, Goma, Bukavu
•   Center DRC: Kananga, Mbuji-Mayi
•   Southern DRC: Lubumbashi, Linkasi
B.   Enterprise Survey, Micro Survey and Informal survey in the same areas.

1. BLOCK ENUMERATION OBJECTIVES

The block enumeration objective is to enumerate the economic units of the principal cities in Democratic republic of Congo:

- Western DRC: Boma, Kinshasa, Kikwit, Matadi
- Eastern DRC: Kisangani, Butembo, Goma, Bukavu
- Center DRC: Kananga, Mbuji-Mayi
- Southern DRC: Lubumbashi, Linkasi

A block enumeration exercise has been conducted in order to get the information required to build the sample frame for the Enterprise Survey and the Micro Survey. The block enumeration of establishments has been carried out taking into consideration sectors and size of establishments as defined in the ToR.

A sufficient number of blocks have been enumerated in order to have enough relevant establishments entered into the data base per each stratum of the sample design, after verification and cross checks.

To reach this objective we have enumerated every existing building in the selected blocks where we have done the enumeration.

The information collected will be used to make the projection for the Universe.

2. BLOCK ENUMERATION DEFINITION

3.1 The block

The block is the geographical area in which an enumerator has worked

3.2 The Census Grid

The Census Grid is the tool that will allow enumerating every single building and recording every address in the block.

3.3 The Building

We will consider as a BUILDING all constructions, finished or not, used as a housing unit – for example a house, an apartment- OR that is used as a business (e.g. warehouse, a factory, a shop, a garage,) etc. OR both residential and business use. A BUILDING can contain several ECONOMIC UNITS if there is more than one business based at this address.

Each address has to be recorded using one line of the Census Grid. In the case of a multi-storey building or a shopping centre, you will need to use **a different line for each apartment (household) or shop**.

3.4 The Economic Unit

We will consider as an ECONOMIC UNIT all of the establishments where business is conducted and/or services are provided. Some examples would be shops, factories, offices, etc.

4. HOW TO CENSUS THE ADDRESSES

To enumerate the addresses in a block the enumerator should start from the starting point signaled by the fieldwork supervisor. Starting from this first address, he/she will have to enumerate all of the subsequent addresses, following a **clockwise route.**

Absolutely ALL addresses have to be recorded – *i.e.* enumerated – including households, shops, factories, schools, and any other kind of buildings or terrains – for example a wasteland – found on the block.

It is very important to clearly identify the starting address (or starting point), so the Fieldwork Office can make a correct supervision of the work done.
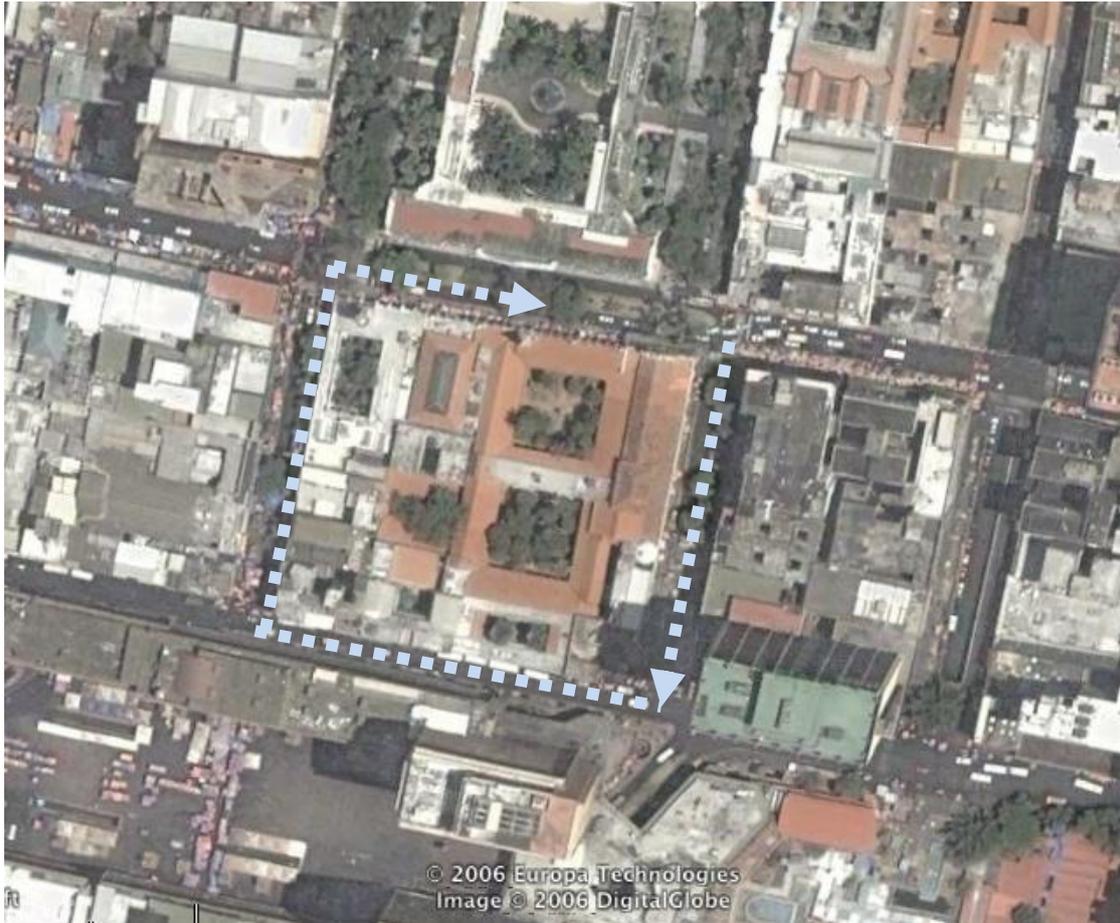
In the case of a multi-storey building or a shopping centre or mall, each apartment or shop will be considered as a unique separate address.

The route for the block enumeration has to be strictly followed.

5. CENSUS GRID: INFORMATION TO BE RECORDED

A Census Grid, the form to be filled during the block enumeration activity, has been developed.

In the next pages, we are listing the information that has to be recorded in the Census Grid.

General Information

Block Number
The block number is the number designated to the block in the numerated maps. It is provided by the Fieldwork Office.

Block Sector or Neighbourhood
This is the address that will enable to find the designated block. This will also be provided by the fieldwork office.

Block Strata
a. Industrial (manufacturing)
b. Commercial (retail/services)
c. Offices
d. Hotels/Restaurants
e. Mixed without Residential (Industrial/Commercial/Office/Hotels)
f. Mixed with Residential (Industrial/Commercial/Office/Hotels/Residential)
g. Residential
h. Other (Government/Education/Nature/Park)

This will also be provided by the fieldwork office.

City
The city in which the enumeration is taking place

Start – End time
The time that the enumeration started and the time it finished.

Name of the enumerator

Sheet number
Number of Census Grids used for the same block.
The enumerator should record the number in the following way:
If only one Census Grid was used: 1/1
If three Census Grids were used: 1/3, 2/3, 3/3

Compulsory information to be recorded for all the addresses

Order number
The order number is the consecutive number from 1 to n (where n is the total number of addresses in a block). Number 1 is the first address (household or shop or another building), number 2 is the second one, and so on. The order number will allow you to make notes on the address in a separate sheet more easily.

Address
- The company name that can be seen on the entrance door, door phone.
- The address: the exact address number for each building in the block
- In the case of a multi-storey building or shopping mall, it should be recorded the apartment number or the shop number, accordingly.
- The floor number should be recorded each time for each different apartment (where there is more than one apartment or shop per floor).

Types of building/premises
In this column it should be recorded the characteristics of the building, for example, House, Apartment, Shop, Factory, Warehouse, etc.

Activity/Sector Description:

If it is a firm

This is a very important category in this survey. To record this, you will first have to ask the clerk, security guard or employee of the firm what is the firm's main activity.

Main activity should be described in the most detailed possible way.

To find out the firm's activity:
1- ask an employee
2- ask a neighbour, for example
3- observe the place and read the signs

Households
If it is a household, write down 'household'.

How did you know the firm's activity?
If it's a firm, describe the source of information used to record the activity in the previous column.

Required information for multiple occupancy buildings

Multiple occupancy
This is the case for the buildings where, in one single address, there is more than one economic unit, household or shop.
A shopping centre is NOT multi occupancy, because the shop number would allow identifying each shop address separately. The same goes for a building with multiple stores or offices and several apartments per floor. For each case, the shop or apartment number allows you to identify each address separately.

Information required for the firms

Working
If the firm or establishment is still working or if it has stopped working and ceased production/Selling activities.
Type of firm
- If it's a unique firm: it's a firm on its own
- If it's a branch: it's an establishment that belongs to a larger firm.
- If it's a headquarters: it's an establishment which takes care of the whole firm administration or of other firm's establishments.

How many other business structures belong to the company in this neighborhood?
The number of other establishments that belongs to the same company in the neighborhood (within the same area of the city)
Ownership
- A firm is of private ownership if the owner is one private individual, or a group of private individuals or a private company (or group of companies)
- A government owned firm is a firm which belongs to the Government.
- A mixed firm is one that has private and government owners.

Employee number
Number of people working in the establishment.

How did you know the employee number?
The source of information used to fill in the employee information.
Telephone
If possible, both landlines and mobile numbers
E-mail

number:	Block Sector or Neighborhood :			Block Strata				City		Sheet number:
	Time start			Time end				Enumerator name:		

Address	Type of building/premises 1. House 2. Apartment 3. Shop 4. Factory 5. Warehouse 6. Farm 7. Office block 8. Others - record	Activity / Sector Description	How did you know the firm's activity? 1- asked an employee 2- Other 3- Observing building & surroundings	Multiple occupancy 1 – Yes 2 – No 9 – DK	Working? 1 – Yes 2 – No 9 – DK	Type of firm: 1 – a firm on its own 2 – a branch 3 – Headquarters DK	How many other business structures belong to the company in this neighborhood?	Ownership: 1- State owned 2- Private 3- Mixed	Employee number	How did you know the employee number? 1- asked an employee 2- Other 3- By observing the building and surroundings	Telephone Number(s) e-mail address
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											
COMPANY NAME											
Street / Av.											
House/Building											
Number of App./Office											

6. BLOCK ENUMERATION PROCESS

In the table hereafter we summarize the activities that have been performed to complete the block enumeration:

	To do	Document available	Responsible	Description
1	Training for Block Enumeration	Blocks enumeration Manual and PPT presentation	TNS opinion	TNS will be using an implementation manual prepared for ES DRC 2013
2	Maps gathering		Local institute	
3	Maps checking	Local paper maps or maps downloaded via Google Maps	Local institute + TNS opinion	Checking of scales, availability, accuracy, up to datedness
4	Blocks stratification preparation and checking	Excel Template available	Local institute to insert the blocks stratification in the template	TNS will be using templates customised for the ES DRC 2013
5	Pilot for blocks enumeration	Template for block enumeration form, template for pilot results. Blocks enumeration manual	Local institutes + TNS opinion	TNS will be using templates customised for the ES DRC 2013
6	Blocks enumeration - all selected blocks checking	Template for block enumeration form, Blocks enumeration manual	TNS opinion Sampling Coordinator	Sampling Coordinator will select the blocks to enumerate based on the pilot results. The local institutes will check that the selected blocks are in line with the survey objectives and start the enumeration
7	Blocks enumeration - sample frame construction	Excel template to fill with the enumeration outcome	Local institute + TNS opinion supervision	Sample frame building
8	Blocks enumeration - sample frame delivery to TNS opinion to select sample	Blocks enumeration manual + sample frame template	Local institutes + TNS opinion supervision	Blocks enumeration exercise + sample frame building
9	Sample selection	Sample spread sheet	WB	

1.1. Training for Block Enumeration

A training session has been held in Kinshasa from 24 to 26 March 2013.

41

During these days the full process of the block enumeration methodology has been presented by TNS opinion to Centre d'Anailyses at de Prospectives (CAP) staff (Project director, Project Managers, Supervisors and Enumerators).
A field enumeration pilot on real scale has been implemented during the 3rd day to verify the comprehension of the methodology and to experience the challenges of this approach.

1.2. Maps Gathering and Checking

CAP got the maps of the cities to be covered in this project by the Geographic Institute of the University of Kinshasa.

These paper maps have been integrated with maps downloaded from Google Hearth to be able to go in more in details for the definition of the block strata.

1.3. Blocks stratification preparation and checking

Using the local knowledge of the different cities enumerate CAP prepared the stratification of blocks.

The different blocks identified have been listed on an excel file (one per city) and delivered to TNS opinion for the selection of blocks to enumerate.

The preparation of the maps took place during the first week of April 2013

In the table here after we summarize the number of blocks identified in each city.

Region	City	Autre	bureaux	Zone commerciale	Zone industrielle	Zone Mixte	Zone residentielle	Grand Total
center	Kananga	26		14		79	100	219
	Mbuji mayi			66	29	83	32	210
center Total		26		80	29	162	132	429
Ea stern	Bukavu	9		14	9	14	15	61
	Butembo	7		3	3	4	10	27
	Goma	3		11	5	38	12	69
	Kisangani	33		5	21	116	122	297
Estern Total		52		33	38	172	159	454
Souther	Likasi	20		22	15	32	37	126
	Lubumbashi	27		86	30	140	80	363
Souther Total		47		108	45	172	117	489
Western	Boma	10		5	10	3	18	46
	Kikwit	10		16	3	13	11	53
	Kinshasa	20	1	70	43	135	286	555
	Matadi	7		20		14	4	45
Western Total		47	1	111	56	165	319	699
Grand Total		172	1	332	168	671	727	2071

Based on the distribution of the block identified, it has been decided to enumerate the following numbers of blocks in each city for the pilot phase:

Region	City	Autre	bureaux	Zone commerciale	Zone industrielle	Zone Mixte	Zone residentielle	Total
center	Kananga	1	0	1	0	2	1	5
	Mbuji mayi	0	0	1	2	1	1	5
center Total		1	0	2	2	3	2	10
Ea stern	Bukavu	1	0	1	1	1	1	5
	Butembo	1	0	1	1	1	1	5
	Goma	0	0	1	2	1	1	5
	Kisangani	1	0	1	1	1	1	5
Estern Total		3	0	4	5	4	4	20
Souther	Likasi	1	0	1	1	1	1	5
	Lubumbashi	1	0	1	1	1	1	5
Souther Total		2	0	2	2	2	2	10
Western	Boma	1	0	1	1	1	1	5
	Kikwit	1	0	1	1	1	1	5
	Kinshasa	1	0	4	4	3	3	15
	Matadi	1	0	2	0	1	1	5
Western Total		4	0	8	6	6	6	30
Grand Total		10	0	16	15	15	14	70

The pilot blocks where selected so that we had a spread across the different towns (5 per town except Kinshasa which had 15) and within town a selection of different block types. The intention here was to get an idea of the number of enumerated establishments of each type we could expect from each type of block. The blocks were selected at random within each town and block type using a random start and sampling interval having sorted within town by block type and Block ID.

After having selected the number of blocks to be enumerated in each city, TNS opinion provided CAP with the list of block selected from the original list.

The list of blocks to be enumerated for the pilot phase was delivered to CAP on Thursday 11 April 2013

1.4. Pilot for blocks enumeration

The pilot was conducted in the 12 cities covered from 15 to 26 April. The results were delivered to TNS opinion one week later.

The tables here after presents the results of the pilot (enumerated establishment)

Enumerated Establishments by Block Type, Employee Size and Sector

Count of City2		Original Block Type					
Sector	Employee Size	Autre	Zone commerciale	Zone industrielle	Zone Mixte	Zone residentielle	Grand Total
Manufacturing	1-4	7	68	23	48	27	173
	5-19	4	14	12	16		46
	20-99	1		11	1	2	15
	100+			4	1		5
Manufacturing Total		12	82	50	66	29	239
Other Services	1-4	51	217	110	137	78	593
	5-19	17	22	23	32	4	98
	20-99	4		2	5	1	12
Other Services Total		72	239	135	174	83	703
Retail	1-4	113	801	301	484	234	1933
	5-19	4	53	22	17	4	100
	20-99	1	3	6	1		11
	100+			1	1		2
Retail Total		118	857	330	503	238	2046
Grand Total		202	1178	515	743	350	2988

Enumerated Establishments by Block Type, Survey and Sector

Count of City2		Original Block Type					
Sector	Employee Size2	Autre	Zone commerciale	Zone industrielle	Zone Mixte	Zone residentielle	Grand Total
Manufacturing	Micro	7	68	23	48	27	173
	Establishment	5	14	27	18	2	66
Manufacturing Total		12	82	50	66	29	239
Other Services	Micro	51	217	110	137	78	593
	Establishment	21	22	25	37	5	110
Other Services Total		72	239	135	174	83	703
Retail	Micro	113	801	301	484	234	1933
	Establishment	5	56	29	19	4	113
Retail Total		118	857	330	503	238	2046
Grand Total		202	1178	515	743	350	2988

Average Enumerated Establishments by Block Type, Survey and Sector

Count of City2		Original Block Type				
Sector	Employee Size2	Autre	Zone commerciale	Zone industrielle	Zone Mixte	Zone residentielle
Manufacturing	Micro	0.875	4.25	1.352941176	3	2.076923077
	Establishment	0.625	0.875	1.588235294	1.125	0.153846154
Manufacturing Total						
Other Services	Micro	6.375	13.5625	6.470588235	8.5625	6
	Establishment	2.625	1.375	1.470588235	2.3125	0.384615385
Other Services Total						
Retail	Micro	14.125	50.0625	17.70588235	30.25	18
	Establishment	0.625	3.5	1.705882353	1.1875	0.307692308
Retail Total						

Enumerated Establishments by City, Survey and Sector

Count of City2		Employee Size2		
CITY	Sector	Micro	Establishment	Grand Total
BOMA	Manufacturing	11	5	16
	Other Services	29	28	57
	Retail	83	8	91
BOMA Total		123	41	164
BUKAVU	Manufacturing	11	9	20
	Other Services	106	11	117
	Retail	166	3	169
BUKAVU Total		283	23	306
BUTEMBO	Manufacturing	15	10	25
	Other Services	16	8	24
	Retail	206	27	233
BUTEMBO Total		237	45	282
GOMA	Manufacturing	2	7	9
	Other Services	4	1	5
	Retail	49	3	52
GOMA Total		55	11	66
KANANGA	Manufacturing	7	6	13
	Other Services	17	9	26
	Retail	34	4	38
KANANGA Total		58	19	77
KIKWIT	Manufacturing	20	9	29
	Other Services	89	15	104
	Retail	194	14	208
KIKWIT Total		303	38	341
KINSHASA	Manufacturing	76	16	92
	Other Services	218	19	237
	Retail	854	46	900
KINSHASA Total		1148	81	1229
KISANGANI	Manufacturing	4		4
	Other Services	9		9
	Retail	16	1	17
KISANGANI Total		29	1	30
LIKASI	Manufacturing	2		2
	Other Services	8	2	10
	Retail	13		13
LIKASI Total		23	2	25
LUBUMBASHI	Manufacturing	6		6
	Other Services	32	1	33
	Retail	88	2	90
LUBUMBASHI Total		126	3	129
MATADI	Manufacturing	2		2
	Other Services	51	11	62
	Retail	145		145
MATADI Total		198	11	209
MBIJI- MAYI	Manufacturing	17	4	21
	Other Services	14	5	19
	Retail	85	5	90
MBIJI- MAYI Total		116	14	130
Grand Total		2699	289	2988

1.5. Blocks enumeration - all selected blocks checking

The results of the pilot blocks were analysed to give an average number of Establishments by Sector for each block type. The proposed design was then used as a comparison and given Manufacturing required the most interviews (more than half) and for all block types had the lowest or same average number of establishments this would be the constricting factor. The target from the block analysis was to get a 3 to 1 ratio of sample.

In order to achieve this, the blocks needed to be skewed towards those with a higher average number of Manufacturing Establishments. Given the low level of all types of establishments Residential blocks were excluded from further enumeration.

It was assumed that all Industrial blocks would be enumerated and that a third of Commercial and Mixed and a fifth of other.

As a result all but 2 towns were estimated to have a 2 to 1 ratio for Manufacturing (and these 2 towns all none residential blocks were being used). Blocks were then selected using the same process as for the pilot.

Blocks selected for final enumeration						
Region	City	Autre	Zone commerciale	Zone industrielle	Zone Mixte	Grand Total
center	Kananga	5	5		15	25
	Mbuji mayi		5	6	6	17
center Total		5	10	6	21	42
Eastern	Bukavu	3	5	6	5	19
	Butembo	6	2	2	3	13
	Goma	1	4	3	13	21
	Kisangani	6	2	17	16	41
Eastern Total		16	13	28	37	94
Souther	Likasi	4	6	10	6	26
	Lubumbashi	9	20	22	20	71
Souther Total		13	26	32	26	97
Western	Boma	3	2	8	1	14
	Kikwit	3	9	2	7	21
	Kinshasa	6	29	38	30	103
	Matadi	6	18		13	37
Western Total		18	58	48	51	175
Grand Total		52	107	114	135	408

The selection of blocks to be enumerated was conducted between 6th and 10th May 2013.

1.6. Blocks enumeration - sample frame construction

The list of block to be enumerated was given to CAP that started the enumeration in all the 12 cities.

The enumeration was conducted without major problems in the time planned and the list of addresses collected was delivered to TNS opinion on 28th June.

It took about 7 weeks to complete the full block enumeration, from the first day of enumeration to the delivery of the last city file with all units (economic or households) registered in electronic format.

The full list of all units enumerated is composed by about 40000 records.

The list contains also 25000 records that cannot be included in our survey: firms active in sectors out of our target and also the "foyer" (private households) encountered during the enumeration exercise.

About 2,000 records are usable for our study: 13500 rows are micro firms, 675 are firms eligible for main.