

Ivory Coast Enterprise Surveys Data Set

1. Introduction

This document provides additional information on the data collected in Ivory Coast from 26 October 2008 to 20 February 2009 as part of the Enterprise Survey, an initiative of the World Bank.

The objective of the Enterprise Surveys is to obtain feedback from enterprises in client countries on the state of the private sector as well as 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.

Through interviews with firms in the manufacturing and services sectors, the Enterprise Survey data provides information on the constraints to private sector growth and is used to create statistically significant business environment indicators that are comparable across countries.

The report describes the sampling design of the survey, the structure of the dataset and additional information that may be useful when using the data, including information on non-response rates, the calculation of sample weights and country-specific factors that may have affected survey implementation.

2. Survey Target Population

The whole population, or the universe, covered in the Enterprise Surveys is the non-agricultural economy. It comprises: all manufacturing sectors according to the ISIC Revision 3.1 group classification (group D), construction sector (group F), services sector (groups G and H), and transport, storage, and communications sector (group I). Note that this population 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.

For Ivory Coast, the sectors included in the sample by two-digit ISIC code are as follows:

Manufactures: 15,16, 17, 18, 19, 20,21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37
Services: 52
Residual/ Remainder: 45, 50, 51, 55, 60, 61, 62, 63, 64, 72

The Enterprise Survey for Ivory Coast targeted 480 registered establishments with at least five employees, 120 registered establishments with one to four employees (micro), and 120 non-registered firms in the sectors defined above. The sampling for registered and non-registered establishments was implemented separately.

In the Enterprise Surveys, the requirements for registration are defined on a country-by-country basis using the information collected by Doing Business and information from the in-country contractors. In Ivory Coast, the requirement used was registration with the Chambre du

Commerce et de l'Industrie for firms with more than ten employees or with the Chambre des Metiers et de l'Artisanat for firms with less than ten employees.

3. Sampling for Registered Establishments

The sample for registered establishments in Ivory Coast was selected using stratified random sampling, following the methodology explained in the *Sampling Manual*.¹ As discussed in greater detail in the *Sampling Manual*, stratified random sampling was preferred over simple random sampling in the Enterprise Surveys for several reasons:^{2,3}

- a. To obtain unbiased estimates for different subpopulations within the economy with some known level of precision.
- b. To obtain unbiased estimates for the whole population.
- c. To ensure that the final sample includes establishments from all relevant sectors in the country 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 many cases, will be more precise than using a simple random sampling method (i.e., lower standard errors, other things being equal.)
- e. Stratification may also produce a smaller bound on the estimation errors 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 of collecting the survey data may be reduced by stratifying the population elements into convenient groupings.

Three levels of stratification were used in the Ivory Coast sample: firm sector, firm size, and geographic region. The original sample design, with specific targets for these strata, is included in Appendix A.

Industry stratification was designed as follows: the universe was stratified into three manufacturing industries (food, textiles, and other), one services industry (retail) and one residual sector as defined in the sampling manual. The initial sample design had a target of 240 interviews in manufacturing and 120 interviews each in the services and residual categories, though this sample design was later adjusted to reflect the low prevalence of manufacturing establishments in Ivory Coast. The initial sample design for micro targeted 120 establishments, 60 in manufacturing and 60 in services. The sample design for the informal survey was designed to mirror the micro sample.

Size stratification was defined following the standardized definition used for the Enterprise Surveys: micro (1 to 4 employees), small (5 to 19 employees), medium (20 to 99 employees),

¹ The complete text of the *Sampling Manual* 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 See Cochran, W., 1977, pp. 89; Lohr, Sharon, 1999, pp. 95.

and large (more than 99 employees). For stratification purposes, the number of employees was defined on the basis of reported permanent full-time workers.

Regional stratification was defined in terms of the geographic regions with the largest commercial presence in the country: Abidjan, San Pedro, and Yamoussoukro were the three metropolitan areas selected in Ivory Coast. (Bouake was initially included, but was determined to be too unsafe to conduct survey work and Yamoussoukro was substituted before enumeration began).

4. Sampling implementation

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 for the Enterprise Surveys. It was determined that such lists were not available for Ivory Coast, and the sample frame for registered firms was created through block enumeration.

The block enumeration exercise was conducted in September 2008 in the three regions selected for the stratified sample. First, detailed maps were obtained from aerial mappings projected to a usable scale for Abidjan, San Pedro, Bouake, and Yamoussoukro. The following multi-stage approach was then followed.

Using the maps each city was divided into ‘blocks’ and using local knowledge the blocks were classified into strata defined by the predominant spatial use of each block. The classifications used for the blocks included industrial, commercial, commercial/residential (mixed), and residential. The accuracy of the classification was then tested by site visits to pilot blocks randomly selected from among all blocks for each of the classification types. Twenty pilot blocks in the selected cities and an additional 10 blocks in Bouake (the city that was dropped from the sample due to safety concerns) were enumerated in the pilot.

After the classification system was determined to be accurate, another 304 blocks, stratified by classification type, were selected randomly from the list of blocks. Blocks classified as ‘residential’ were undersampled relative to industrial and commercial blocks.

The selected blocks were then enumerated. In the enumeration process for each block, each separate unit—either a whole building or a floor or suite within a building—was identified and its use was classified. For units classified as business establishments, further details were collected on employee numbers, activity, name of business and manager, and contact phone number.⁴ Counts of the establishments enumerated are given in the table below.

⁴ The registration status of establishments was not verified during the block enumeration.

Sample Frame Ivory Coast

Region	Employees	Sector			Grand Total
		Manufacturing	52	Remainder	
Abidjan	1-4	153	446	219	818
	5-19	113	101	176	390
	20-99	70	22	61	153
	100+	69	6	24	99
Abidjan Total		405	575	480	1460
San Pedro	1-4	28	85	63	176
	5-19	12	26	40	78
	20-99	7	5	14	26
	100+	12		5	17
San Pedro Total		59	116	122	297
Yamoussoukro	1-4	1	6	2	9
	5-19		1	4	5
	20-99				
	100+	1			1
Yamoussoukro Total		2	7	6	15
Grand Total		466	698	608	1772

Source: Block enumeration conducted by the local agency.
Year: 2008

The enumerated establishments were then used as the frame for the selection of a sample with the aim of obtaining interviews at 480 establishments with five or more employees and a further 120 with establishments with less than five employees (micro establishments). The results of this enumeration of a total of 324 blocks, including the 20 pilot blocks, were also used to project to universe totals for the sampling strata using the total number of blocks in each classification. These universe projections were then used in calculating sampling weights.

The quality of the frame was assessed at the onset of the project and was not immune from the typical problems found in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc. 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 9.4% (102 out of 1,080 establishments for the ES and micro samples).⁵

For the informal sector, there were also no sample lists of firms and block enumeration was not conducted to generate universe estimates. Instead, the sampling procedure was to survey a non-registered establishment similar to each registered establishment surveyed in the micro establishment. Because a formal sample frame was not used, it is not possible to calculate response rates, universe estimates, or sampling weights for the informal sector sample.

⁵ Appendix B shows the tabulations for the Ivory Coast sample of registered firms of response codes that are classified as eligible and non-eligible.

5. Database Structure

The database compiles four different versions of the Enterprise Survey questionnaire for all registered establishments (including micro). The basic questionnaire, the Core Module, includes all common questions asked to all establishments from all sectors (manufacturing, retail and residual) and this module is administered to establishments in the residual sector. Micro firms completed a module very similar to the Core Module. The Manufacturing Questionnaire is built upon the Core Module and adds some specific questions relevant to the sector. The Services Questionnaire is also built upon the Core Module and adds specific questions relevant to retail. Each version of the questionnaire is identified by the index variable, *a0*. The questionnaire for the informal sector is compiled separately.

All variables in the database 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 “AF” indicate questions specific to the Africa region; these questions may not have been asked in Enterprise Surveys conducted in countries in other regions. Variable names preceded by a prefix “IC” indicate questions specific to the Ivory Coast surveys; these questions may not have been asked in Enterprise Surveys conducted in other countries. All other variables are global and are present in all country surveys conducted throughout the world. All variables are numeric with the exception of those variables with an “x” at the end of their names. The suffix “x” indicates that the variable is alpha-numeric.

The variable *idstd* uniquely identifies each establishment at the global level.

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. These variables generate the strata cells for each industry/region/size combination. 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 the sampling regions

- a6a*: coded using the definition for micro, small, medium, and large establishments as discussed 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 industries that comprise the manufacturing, services, and residual categories used in the stratification. These codes include most manufacturing industries (15 to 37), and retail, and IT for services (52, and 72 respectively). All establishments within the ‘other manufacturing’ stratum were coded with *a4a*=2.

Note that these variables may not coincide with reality for some establishments as sample frames may contain information that is later found to be inaccurate.

The surveys were implemented following a two stage procedure. In the first stage a screener questionnaire was administered over the phone to determine sampled establishment’s eligibility for the survey and to make appointments; in the second stage, a face-to-face interview took place

with the Manager/Owner/Director of each establishment. The variables *a4b* and *a6b* contain the industry and size of the establishment from the screener questionnaire. Variables *a8* to *a11* contain additional information that was collected in the screening phase.

The main questionnaire contains variables for location (*a3x*), industry (*d1a2*), and number of employees (*l1*, *l6* and *l8*) that more accurately reflect describe the characteristics of establishments than the information provided on these variables in the sample frame or the screener.

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 industry-strata based on information available from the sample frame, whereas variable *d1a2* indicates the actual ISIC code of the main output of the establishment as answered by the interviewee. This variable is probably the most accurate variable with which to classify establishments by activity.

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 on the sample frame but the actual physical location is in another place.

Variables *l1*, *l6* and *l8* provide a more accurate measure of employment and account for both permanent and temporary employment. Special efforts were made to make sure that this information was not missing for most establishments.

6. Universe Estimates

Universe estimates for the number of establishments in each industry-region-size cell in Ivory Coast were produced using the information from block enumeration exercise. The universe estimates for each cell are scaled up using the ratios of total block types in the sample and the enumerated totals of eligible establishments in each type of the enumerated blocks. Appendix C shows the universe estimates of the numbers of registered establishments.

7. Weights

Since the sampling design was stratified and employed differential sampling of the strata, 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 *pa* in Stata.)⁶

For block enumeration, the weights of registered establishments were calculated by dividing the universe estimates for each cell by the number of completed interviews in that cell. Because the

⁶ This is equivalent to the weighted average of the estimates for each stratum, with weights equal to the population shares of each stratum.

sample of blocks enumerated in the three regions was selected to be representative of the type of block and not region, sample weights are applied within type of block and region. This procedure has been applied in other countries where block enumeration has been used for the Enterprise Surveys.

Appendix D shows the cell weights for registered establishments in Ivory Coast.

8. Appropriate use of weights

As discussed above, 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.

However, there is some discussion on the proper 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 use of weighted OLS for a common population coefficient).

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.⁷ If the models are developed as structural relationships or behavioral models that may vary for different parts of the population, there is no reason to use weights.

9. Non-response

The Enterprise Surveys, along with all other surveys, suffer from both survey non-response and 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. Different strategies were used to address these issues.

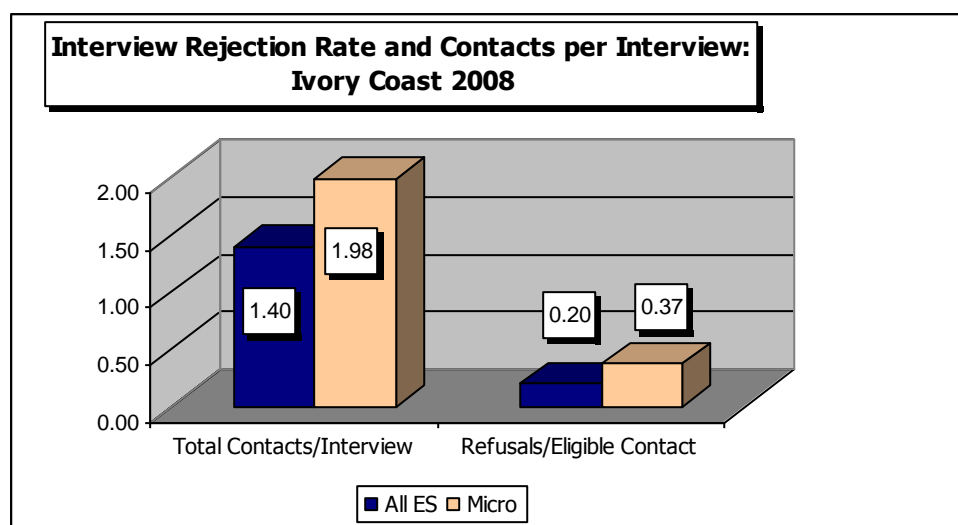
Survey non-response was addressed by maximizing efforts to contact establishments that were initially sampled. When the survey frame was extracted from the sampling frame, several establishments with the same strata characteristics were randomly selected for each interview

⁷ 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.

and each establishment was assigned a preference number.⁸ Substitutions of replacement establishments were made in order to help achieve targets on the number of interviews for each stratum. Extensive efforts were made to complete interviews with each first preference establishment before contact with a replacement establishment was allowed. At least four attempts were made to contact each sampled establishment for an interview at different times/days of the week before a replacement establishment was allowed to be contacted for an interview.

Further research is needed on survey non-response in the Enterprise Surveys regarding the potential introduction of bias through substitution and non-response.

As the following graph shows, the number of contacted establishments per realized interview was 1.40 for the Enterprise Survey sample and 1.98 for micro firms. 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 (e.g., establishments that closed or were in ineligible sectors). Refusal rates are also shown in the graph below. For each establishment eligible for an interview, 0.20 in the Enterprise Survey sample and 0.37 in the micro sample refused to participate.

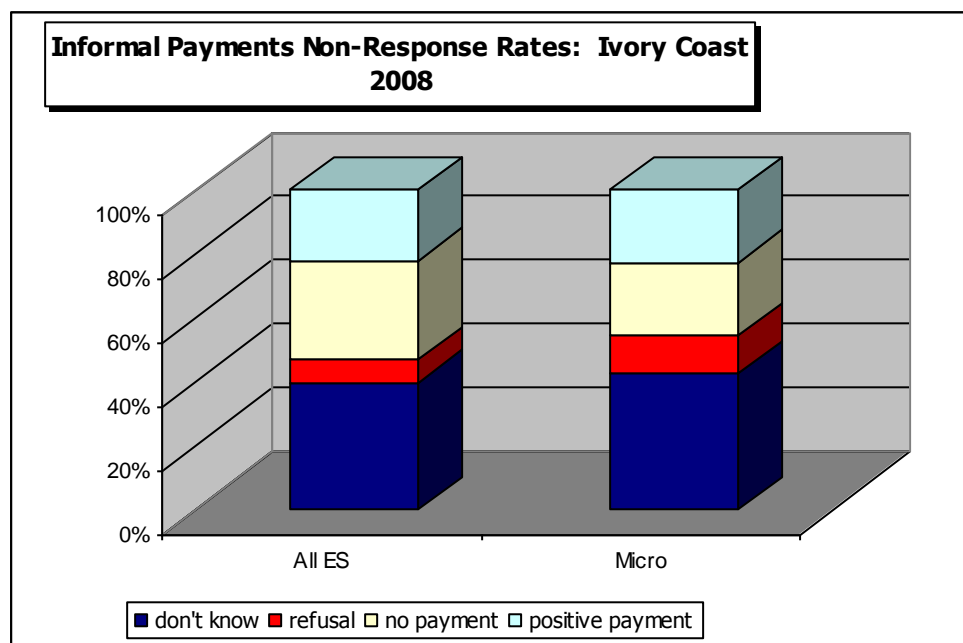


In completed surveys, item non-response was addressed by two strategies:

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 (-7) as a different option from don't know (-9).

⁸ In cases where the number of contacts initially drawn from the sample frame are insufficient to obtain an interview with the targeted number of establishments in a given strata, additional contacts for that strata may be drawn from the sampling frame. If all establishments in that strata have already been contacted and the sample target has not been reached, the sample design may be adjusted to allow additional interviews in other strata. In Ivory Coast, the sample design was readjusted from the original design to reflect the small numbers of manufacturing establishments in the country. Additionally, more contacts were issued near the end of fieldwork to compensate for lower than expected response rates in several strata.

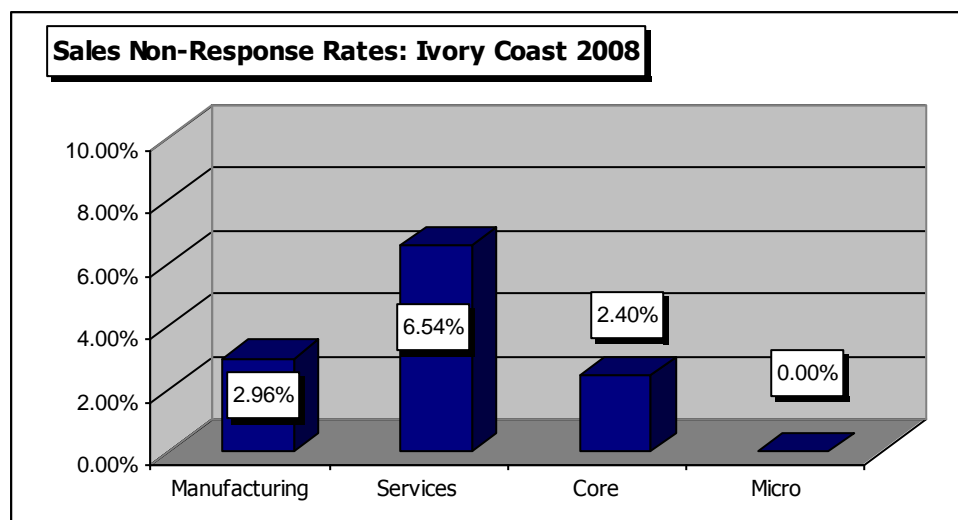
The following graph shows the breakdown of answers about the total amount of informal payments made annually (variable *j7b*) by questionnaire type.



b- Establishments with incomplete information on important questions including total sales, cost figures and employment levels were re-contacted in order to complete this information. However, re-contacts did not fully eliminate low response rates for some items.

The following graph shows non-response rates for the sales variable, *d2*, by type of questionnaire.⁹

⁹ Please note that the question on total sales does not have a “refuse to answer” option, thus the non-response rates in the graph above reflect DKs and NAs as well as any missing values.



This report summarizes statistics on rejection rates, eligibility rates, and item non-response to alert researchers of these issues when using the data and when making inferences. Item non-response, selection bias, and imperfect sampling frames are not unique to Ivory Coast or the Enterprise Surveys. All surveys suffer from these issues although they may not be made explicit.

10. Country specific comments

Local Agency team involved in the study:

Local Agency	Name: Kiram Consulting Country: Ivory Coast Membership of international Organization: Steadman Group Activities since: 2004
Enumerators involved:	Enumerators: 25 Recruiters: 3
Other staff involved:	Fieldwork Coordinators: 6 Editing: 1 Data Entry: 3 Data Processing: 1

Comments on sample frame:

Characteristic of sample frame used:	Sample frame is based on block enumeration.
Source:	Block enumeration conducted in September 2008.
Comments on the quality of sample frame:	Quality of sample frame depending on the accuracy of the different methods used by enumerators during the block enumerator exercise.
Year and organization that conducted the last economic census:	Ivorian statistics institute in 1998.

Other sources for company statistics:	None.
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Comments on sample:

Comments/ problems on sectors and regions selected in the sample:	On sectors: none On regions: none
Comments on the response rate:	Kiram Consulting made all its efforts to reach most of the firms targeted but it encountered difficulties because: -It was the first time that this kind of studies was undertaken in Ivory Coast - The quality of accreditation letters furnished to justify Kiram Consulting intervention in the survey was not satisfactory for the respondents -Firm managers were very suspicious because they suspected Kiram Consulting was working for the Tax administration -The timing of the fieldwork (during the last trimester of year 2008 and the beginning of 2009) made it difficult to reach certain companies which were busy updating their financial statements
Comments on the sample design:	-In terms of quantity and earnings, the Ivorian economy is dominated by services (not really retail service, but telecommunications, distribution, transports...),so it should be more judicious to give more importance to these sectors in future survey waves -Except for Abidjan San Pedro and Bouaké, Yamoussoukro and the remaining towns of Ivory Coast have their industrial sector not really active
Other comments:	A second list of companies was issued in Jan 2009 to help in reaching the target.

Comments on Fieldwork:

Date of Fieldwork	27 th October 2008 – 20 th February 2009
Country	Ivory Coast
Interview number	Manufactures: 240 Services (52):176 Core (Residual): 202
Problems found during fieldwork:	- Top managers did not find any worthwhile interests to partake in the survey - Some of them contested the credibility of the survey, arguing that accreditations of Kiram Consulting could have been created by anyone or could be fake. - Most of the respondents hesitated to give financial information about their activities - Lebanese owners and managers were hard to interview because they suspected an investigation financed by the Ivorian tax administration

	<ul style="list-style-type: none"> - Some of the respondents refused to participate when the interviewer went to the appointment - Some companies wanted Kiram Consulting before any appointment to get the agreement of their head office; and the answer was generally "no" - Getting an appointment with the manager of a big firm required a long procedure that began by addressing an administrative letter to be deposited at the company mail service, and many call backs, faxes and e-mails afterwards. This process demanded a lot of time and did not guarantee interviews - It was difficult to reach big firms at the end of year 2008 and early in 2009 because they were busy updating their financial statements
Other observations:	In San Pedro, the survey was laborious because in 2007, an NGO had already undertaken a similar survey, promising funds to companies targeted that never came and collecting confidential data.

Questionnaires:

Problems for the understanding of questions	<ul style="list-style-type: none"> - Interviewers encountered difficulties face to illiterate respondents - Many owners or managers of small-scale companies did not consult their books, so it was hard to have accurate figures for section K and N of the questionnaires.
Problems found in the navigability of – questionnaires (for example, skip patterns).	None.
Comments on questionnaires length:	Most of the respondents found the questionnaire too long. Some of them interrupted the interview because of its length.
Suggestions or other comments on the questionnaire:	None.

Database:

Comments on the data map	<p>Data entry program chosen: PERTS</p> <p>Comments:</p> <ul style="list-style-type: none"> - difficult to use because in English - required many updates - Difficult to make compatible with Kiram Consulting computer network
Comments on the data processing	Some of the respondents that were already called back were mentioned in all the DVR.

Country situation:

General aspects of economic, political or social situation of the country that could affect the results of the survey:	Ivory Coast is enduring a serious political crisis that started 10 years ago. So there is a general atmosphere of hostility that makes it difficult to undertake surveys like that of the World Bank.
Relevant country events occurred during fieldwork:	None in particular.
Other aspects:	None.

References

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Appendix A

Original Sample Design

Ivory Coast - Original sample design					
<i>VILLE</i>	<i>Size</i>	<i>Manufacturing</i>	<i>Retail</i>	<i>Remainder</i>	<i>Grand Total</i>
Abidjan	5-19	68	60	20	148
	20-99	70	22	28	120
	100+	70	6	24	100
Abidjan Total		208	88	72	368
San Pedro	5-19	12	26	25	63
	20-99	7	5	14	26
	100+	12		5	17
San Pedro Total		31	31	44	106
Yamoussoukro	5-19	0	1	4	5
	20-99	0			0
	100+	1			1
Yamoussoukro Total		1	1	4	6
Grand Total		240	120	120	480

Original sample design for micro firms

	<i>Manufacturing</i>	<i>Retail</i>	<i>Residual</i>	<i>Total</i>
Abidjan	37	17	17	71
San Pedro	14	13	13	40
Yamoussoukro	1	6	2	9
Grand Total	52	36	32	120

Appendix B

Enterprise Survey Sample

Status Codes

ELIGIBLES		
Eligible	1. Eligible establishment (Correct name and address)	509
	2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	5
	3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	3
	4. Eligible establishment (Wrong address - the firm/establishment has changed address and the address could be found)	0
	16. Panel firm - now less than five employees	0
Ineligible	5. The establishment has less than 5 permanent full time employees	2
	6. The firm discontinued businesses	4
	7. Not a business: private household	5
	8. Ineligible activity: education, agriculture, finances, governments...	7
Unobtainable	91. No reply (after having called in different days of the week and in different business hours)	13
	92. Line out of order	18
	93. No tone	3
	10. Answering machine	9
	11. Fax line - data line	1
	12. Wrong address/ moved away and could not get the new references	6
	13. Refuses to answer the screener	105
	14. In process (the establishment is being called/ is being contacted - previous to ask the screener)	33
	151. Out of target - outside the covered regions, firm moved abroad	0
	152. Out of target - firm moved abroad	0
Total		723

Response Outcomes

Complete interviews (Total)	495
Incomplete interviews	3
Eligible in process	1
Refusals	20
Out of target	18
Impossible to contact	50
Ineligible - coop.	0
Refusal to the Screener	105
Total	692

Micro Sample

Status Codes

ELIGIBLES		
Eligible	1. Eligible establishment (Correct name and address)	150
	2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	1
	3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	0
	4. Eligible establishment (Wrong address - the firm/establishment has changed address and the address could be found)	0
	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	1
	7. Not a business: private household	11
	8. Ineligible activity: education, agriculture, finances, governments...	1
Unobtainable	91. No reply (after having called in different days of the week and in different business hours)	2
	92. Line out of order	9
	93. No tone	1
	10. Answering machine	3
	11. Fax line - data line	0
	12. Wrong address/ moved away and could not get the new references	6
	13. Refuses to answer the screener	59
	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	0
	152. Out of target - firm moved abroad	0
Total		244

Response Outcomes

Complete interviews (Total)	123
Incomplete interviews	9
Eligible in process	0
Refusals	19
Out of target	13
Impossible to contact	21
Ineligible - coop.	0
Refusal to the Screener	59
Total	244

Appendix C

Universe Estimates for Ivory Coast

Region	Employees	Sector			Grand Total
		Manufacturing	52	Remainder	
Abidjan	1-4	2863	6662	2438	11963
	5-19	1231	751	1396	3379
	20-99	162	95	217	474
	100+	91	6	64	161
Abidjan Total		4346	7515	4116	15977
San Pedro	1-4	205	1665	1365	3235
	5-19	103	206	285	593
	20-99	12	7	28	46
	100+				
San Pedro Total		319	1878	1678	3875
Yamoussoukro	1-4	68	476	98	642
	5-19			14	14
	20-99				
	100+	3			3
Yamoussoukro Total		71	476	112	659
Grand Total		4736	9868	5906	20510

Appendix D

Ivory Coast Cell Weights

Employees	Sector		
	Manufacturing	52	Remainder
1-4	68	238	98
5-19	11	8	14
20-99	4	7	7
100+	3	2	8