

Mauritius Enterprise Surveys Data Set

1. Introduction

This document provides additional information on the data collected in Mauritius from June 2008 and 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 Mauritius, the sectors included in the sample by two-digit ISIC code are as follows:

Manufacturing: 15, 18;

Other Manufacturing: 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37;

Services: 52;

Residual/Remainder/Other Services: 45, 50, 51, 55, 60, 61, 62, 63, 64, 72

The Enterprise Survey for Mauritius 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 Mauritius, the registration requirement used to differentiate the sample was registration with the Register of Companies.

3. Sampling for Registered Establishments

The sample for registered establishments in Mauritius 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.

Two levels of stratification were used in the Mauritius sample: firm sector and firm size. 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 Mauritius. 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), and large (more than 99 employees). For stratification purposes, the number of employees was defined on the basis of reported permanent full-time workers.

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.

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.

Two frames were used for the Mauritius Enterprise Survey. The first was a file of registered companies provided by the Central Statistical Office [CSO] in Mauritius updated to 2008. The second frame was supplied by the World Bank. It consisted of enterprises interviewed for Enterprise Survey (ES) in 2005. The World Bank required that attempts should be made to re-interview establishments responding to the 2005 survey where they were in the selected geographical regions and met eligibility criteria. That sample is referred to as the Panel.

Universe Figures for Mauritius

Source: Central Statistical Office (CSO) Mauritius 2008

Region	Employees	Sector					Grand Total
		15	18	Other Manufacturing	52	Remainder	
Mauritius	1-4	838	561	2267	7395	6511	17572
	5-19	271	133	719	984	1825	3932
	20-99	63	18	310	162	364	917
	100+	20	2	130	31	94	277
Grand Total		1192	714	3426	8572	8794	22698

Panel sample counts for Mauritius

Source: World Bank Enterprise Survey 2005

Region	Employees	Sector					Grand Total
		15	18	Other Manufacturing	52	Remainder	
Mauritius	1-4						
	5-19	8	6	23			37
	20-99	16	24	60			100
	100+	11	6	24			41
Grand Total		35	36	107			178

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 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 35.2% (1039 out of 2,950 establishments for the ES and micro samples, including panel establishments).⁴

For the informal sector, there were no sample lists of firms. 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. 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 “*MU*” indicate questions specific to the Mauritius 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 *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/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.

-*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

⁴ Appendix B shows the tabulations for the Mauritius sample of registered firms of response codes that are classified as eligible and non-eligible.

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.

-panel2005: identifies panel firms

-id: for panel firms the variable contains the same id used in 2005

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

Special care is given to the correct computation of universe estimates and weights in the Enterprise Surveys. Considering the varying quality of sample frames across countries, it is important to accurately adjust the universe totals within each region/industry/size stratum to account for the presence of ineligible units in the sampling frame.⁵ The information collected

⁵ For example, ineligible units could include: firms that discontinued businesses, education or government establishments, establishments with less than 5 employees in the ES sample, establishments where there was no reply after having called in different days of the week and in different business hours, the number was out of order,

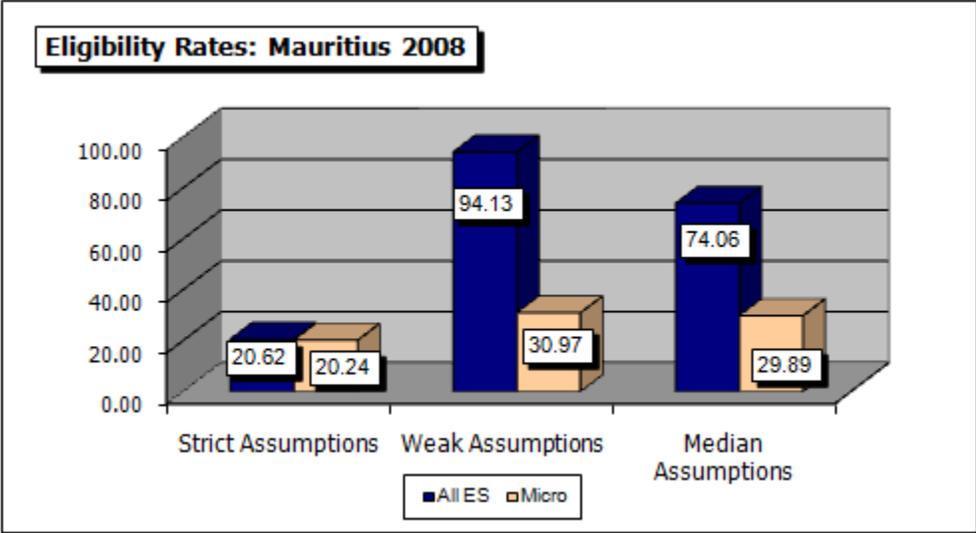
during the screening process is used to scale down the universe estimate for each cell by the observed proportion of ineligible units within the cell.

Of course, different assumptions about the eligibility of establishments result in different adjustments to the universe cells and thus different sampling weights. For some establishments where contact was not successfully completed during the screening process it is not possible to directly determine eligibility. Three sets of assumptions on establishment eligibility are considered:

a- Strict assumption: eligible establishments are only those for which it was possible to directly determine eligibility. The resulting weights are included in the variable *w_strict*.

b- 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 *w_median*.

c- 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. The resulting weights are included in the variable *w_weak*. Under the weak assumption only observed non-eligible units are excluded from universe projections. The following graph shows the different eligibility rates under each set of assumptions.



Universe estimates for the number of establishments in each industry- -size cell in Mauritius were produced for the strict, weak and median eligibility definitions. Appendix C shows the

no tone in the phone line, answering machine, fax line, wrong address or moved away and could not obtain new contact information.

universe estimates of the numbers of registered establishments based on the strict, weak and median relative estimates.

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.

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

Two sets of weights for each cell were computed using the strict, weak, and median assumptions on establishment eligibility. The first set of estimates calculated proportions using the raw sample count for each cell. However, for many cells the sample numbers of interviewed establishments are small, and eligibility rates and adjusted universe cells projections for those cells are subject to relatively large sampling variations. Therefore a second set of more robust estimates (collapsed weights) that use the multiples of the relative eligibility rates for each industry, size, and region was also produced. The collapsed weights are based on larger samples than the individual cells and thus produce values with smaller sampling variations. The data sets include only the robust weights.

Appendix D shows the cell weights for registered establishments in Mauritius.

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

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

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 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.

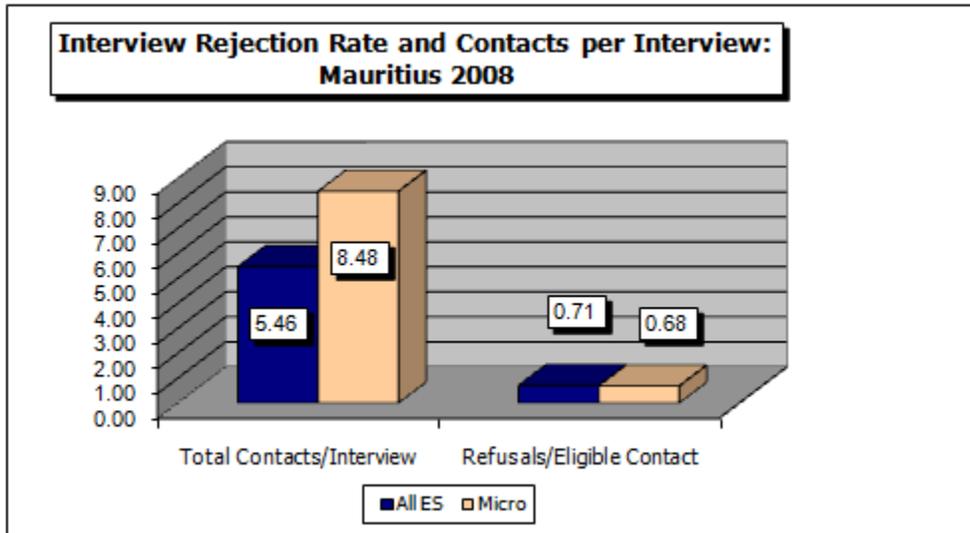
Further research is needed on survey non-response in the Enterprise Surveys regarding the potential introduction of bias through substitution and non-response.

As the following graph shows, the number of contacted establishments per realized interview was 5.46 for the Enterprise Survey and panel sample and 8.48 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

⁷ The use of weights in most model-assisted estimations using survey data is strongly recommended by the statisticians specialized on survey methodology of the JPSM of the University of Michigan and the University of Maryland.

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 Mauritius, 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.

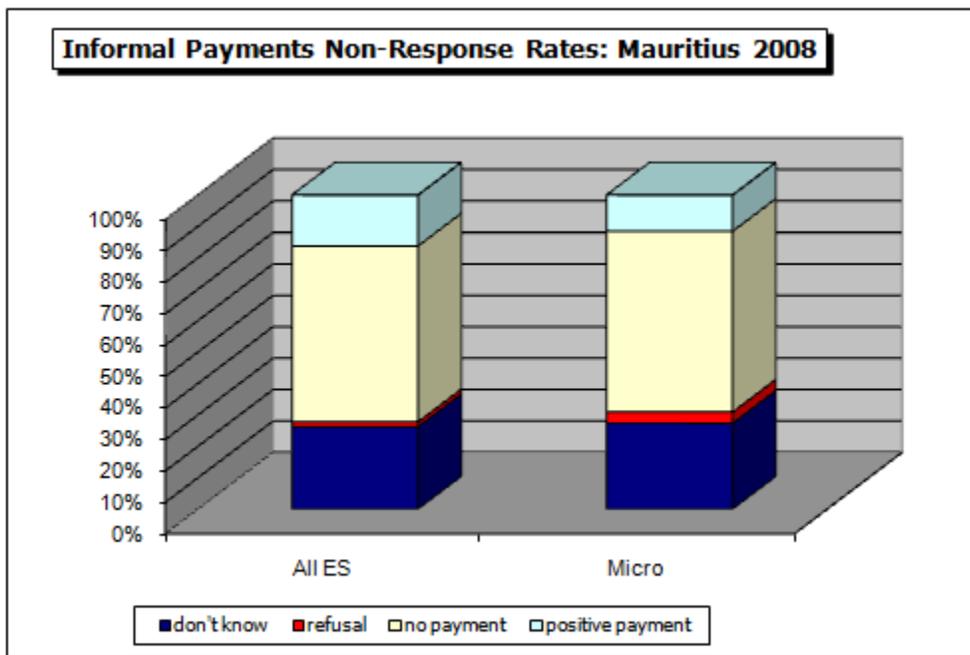
establishment eligible for an interview, 0.71 in the Enterprise Survey sample and 0.68 in the micro sample refused to participate.



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

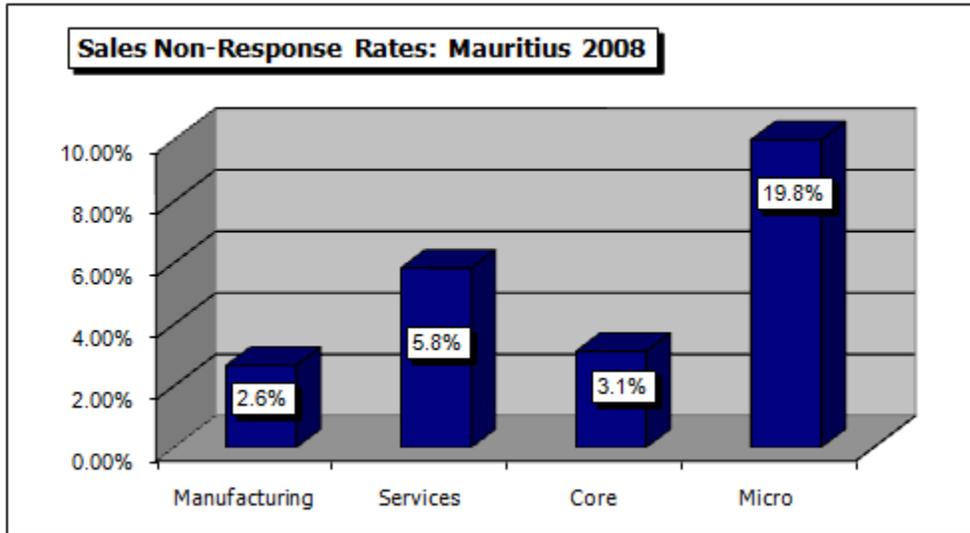
a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond (-7) as a different option from don't know (-9).

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



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 Mauritius 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: ANALYSIS Country: MAURITIUS Membership of international organization: ESOMAR Activities since: 1995
Name of Project Manager:	Bilkiss Jownally
Name and position of other key persons of the project:	Cindy Savarymootoo – Fieldwork Coordinator
Enumerators involved:	Enumerators/Recruiters: 24
Other staff involved:	Fieldwork Coordinators: 4 Editing: 10 Data Entry: 10 Data Processing: 2

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.

Comments on sample frame:

Characteristic of sample frame used:	The panel list received by The World Bank contains the following characteristics : - Establishment name - Address, telephone number, fax number etc - Region and sector - ISIC Code - Activity description - Number of employees The sample frame used for the fresh sample also contained all relevant stratification variables and contact information.
Only Sources:	The sample frame source for fresh and micro sample is from registered companies provided by the Central Statistical Office [CSO] in Mauritius. The World Bank 2005 database was used to interview panel firms.
Year of publication:	2008 for Fresh Sample, 2005 for Panel
Comments on the quality of sample frame:	<ul style="list-style-type: none"> - About 1/3 of the lists used for sampling had wrong details and made impossible to contact establishments (telephone and fax number, repeated contacts, private numbers, line busy, not in service and wrong numbers). - Many of the organisations were holding companies and did not have any real operational activities. - Also many of the companies were not operational under the ISIC code under which they were registered with the Registrar of Companies.
Year and organism who conducted the last economic census	Central Statistical Office [CSO]- 2008.

Comments on sample:

Comments/ problems on sectors and regions selected in the sample:	<p>On sectors: In some sectors it was very difficult to obtain appointments as the director, financial director, financial controller, marketing manager and the accountant were very busy with meetings, financial year auditing or were abroad.</p> <p>On regions: None.</p>
Comments on the response rate:	<ol style="list-style-type: none"> 1) The target group for this survey (i.e. directors, top managers, accountant, etc.) is very difficult to reach and to convince to participate in the survey. 2) The length of questionnaire is too long - the survey can last for 1 to 1.5 hours. 3) Part of the survey fieldwork coincided with Christmas and New Years holidays season, making the respondent even more difficult to reach. Fieldwork practically halted during that time. 4) We had rainy weather and cyclone in January, which made fieldwork complex

Comments on the sample design:	The rigid sampling process (by using a limited number of preferences) caused some bottlenecks to reach the deadline
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Comments on Fieldwork:

Date of Fieldwork	15 June 2008 through 18 February 2009
Country	Mauritius
Interview number	Main ES Survey + Micro Entreprises Sector 15: 84 (72 ES + 12 Micro) Sector 18: 56 (45 ES + 11 Micro) Other Manufacturing: 101 (82 ES + 19 Micro) Sector 52: 135 (108 ES + 27 Micro) Other Services: 108 (89 ES + 19 Micro) Informal: 135
Problems found during fieldwork:	<ul style="list-style-type: none"> - It was hard to conduct the survey with the directors and top managers. - Some of the respondents cancelled the appointments due to other engagements. - Some of the respondents refused to participate in the survey when the interviewer went to the appointment. - As the interview is too long some respondents refused to go further and ended the survey half questionnaire. - The respondent hesitated or categorically refused to give information pertaining to their financial info. - The field enumerators had difficulties in convincing the respondents for both large and small establishment to participate in the survey. - Secretaries and other administrative staff gave excuses about the unavailability of the people in charge and directed us towards other people who led to loss of time and several call backs. - Some directors did not give us access to their employees, refusing categorically to give us permission to interview them
Other observations:	None

Questionnaires:

Problems for the understanding of questions (write question number)	Comments during pre-test were reported.
Problems found in the navigability of –	- D16 (days of inventory, measured in days of production): this notion could be understood only by very large firm

<p>questionnaires (for example, skip patterns).</p>	<ul style="list-style-type: none"> - F1 (capacity utilization): this notion was very difficult to understand for small firms - J1: The two last sentences ("Government officials' interpretations of the laws being consistent and predictable" and "confidence in the legal system") are misunderstood most of the time, we had to repeat the sentences many times, and after that the respondent still didn't catch their meaning. Yet, they give an answer, without understanding the real meaning of the question - N6 (net book value): this notion could be understood only by very large firms. Apart from this, some questions were understood but very difficult to answer, because most of the firms didn't have a clear idea about the answer: - C9 (losses resulted from power outages): majority of firms cannot assess this loss - J2 (time spent on dealing with requirements imposed by government regulations): majority of respondents had difficulty to assess this time and gave a figure at random - L4, L5, L6, etc (split of skilled/ unskilled employees, permanent full-time production/ non production employees, seasonal/temporary workers...): only few firms had this kind of information directly available in their books - L9 (average educational attainment of a typical production worker): respondents usually are not able to answer directly in number of years, but give an average class (such as "3rd grade class") - MAL17 (total compensation for each category) : this is very difficult to calculate because firms do not have this kind of figure. - AFn2k (depreciation): a lot of firms do not apply depreciation or even do not know how to calculate it. We would say that generally speaking, the questionnaire in his whole is adapted for large firms, but less relevant as far as little firms are concerned, and even more to informal firms
<p>Comments on questionnaires length:</p>	<p>Questionnaire length has considerably been shortened compared to the one used in 2005. Nevertheless, it's still very time demanding for top managers who are always very busy.</p>
<p>Suggestions or other comments on the questionnaire:</p>	<ul style="list-style-type: none"> - An introduction part, to be read by the interviewer should be added at the beginning. Making it easier for the interviewer to introduce the survey and making it homogenous for all interviewers. - Questionnaire layout still should be improved to make the questionnaire look shorter (thinner): top managers are

	discouraged just at view of the size of the questionnaire.
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Database:

Comments on the data entry program	<p>Data entry program chosen: PERTS</p> <p>Comments:</p> <p>Globally, the program is not very practical to use:</p> <ul style="list-style-type: none"> - It took a lot of time to understand how to use correctly the data entry program and make all skips work correctly. - Correction of the value of only one variable required the validation of all variables from the one modified until the end of the questionnaire; so with the length of the questionnaire modifications were very time demanding - The program didn't allow us to delete questionnaires - The program didn't allow us to check inconsistency as we usually do. - Some scales in the program are different from the scales available in the questionnaire (questions about obstacles in each part), and couldn't be changed: then the operators have to think about the scale equivalent while punching, which may cause some mistakes.
Non response rate	<ul style="list-style-type: none"> - When the questionnaire appeared to have too many "non response", our supervisors asked for additional appointment to try to collect more data. Nevertheless, we are still a context in which firms are very reluctant to provide financial data
Comments on the data cleaning	<ul style="list-style-type: none"> - The Data Validation Report focused especially on Don't Know and Refuse answer. But as we said below, in some cases we cannot avoid this kind of answers. - Short time for data cleaning

Country situation:

General aspects of economic, political or social situation of the country that could affect the results of the survey:	None
Relevant country events occurred during fieldwork:	Trouble in the country by the end of January, considerably affecting the fieldwork.

References

Cochran, William G., Sampling Techniques, 1977.

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

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

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

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

Appendix A

Original Sample Design

Employee size	Sector					
				Other Manuf	Remainder	Grand Total
<5	20	20	30	20	30	120
5-19	35	67	51	20	30	203
20-99	30	12	54	30	50	176
100+	15	1	15	30	40	101
Total	80	80	120	80	120	480

Appendix B

Enterprise Survey Sample

Status Codes

ELIGIBLES		
Eligible	1. Eligible establishment (<i>Correct name and address</i>)	354
	2. Eligible establishment (<i>Different name but same address - the new firm/establishment bought the original firm/establishment</i>)	7
	3. Eligible establishment (<i>Different name but same address - the firm/establishment changed its name</i>)	0
	4. Eligible establishment (<i>Wrong address - the firm/establishment has changed address and the address could be found</i>)	2
	16. Panel firm - now less than five employees	1
Ineligible	5. The establishment has less than 5 permanent full time employees	13
	6. The firm discontinued businesses	20
	7. Not a business: private household	75
	8. Ineligible activity: education, agriculture, finances, governments...	7
Unobtainable	91. No reply (<i>after having called in different days of the week and in different business hours</i>)	353
	92. Line out of order	2
	93. No tone	75
	10. Answering machine	0
	11. Fax line - data line	13
	12. Wrong address/ moved away and could not get the new references	80
	13. Refuses to answer the screener	981
	14. In process (<i>the establishment is being called/ is being contacted - previous to ask the screener</i>)	0
	151. Out of target - outside the covered regions, firm moved abroad	1
	152. Out of target - firm moved abroad	0
	Total	1,984

Response Outcomes

Complete interviews (<i>Total</i>)	419
Incomplete interviews	7
Eligible in process	34
Refusals	4
Out of target	115
Impossible to contact	523
Ineligible - coop.	1
Refusal to the Screener	981
Total	1,984

Panel Sample

Status Codes

ELIGIBLES		
Eligible	1. Eligible establishment (<i>Correct name and address</i>)	76
	2. Eligible establishment (<i>Different name but same address - the new firm/establishment bought the original firm/establishment</i>)	5
	3. Eligible establishment (<i>Different name but same address - the firm/establishment changed its name</i>)	1
	4. Eligible establishment (<i>Wrong address - the firm/establishment has changed address and the address could be found</i>)	0
	16. Panel firm - now less than five employees	0
Ineligible	5. The establishment has less than 5 permanent full time employees	1
	6. The firm discontinued businesses	8
	7. Not a business: private household	0
	8. Ineligible activity: education, agriculture, finances, governments...	0
Unobtainable	91. No reply (<i>after having called in different days of the week and in different business hours</i>)	1
	92. Line out of order	0
	93. No tone	0
	10. Answering machine	0
	11. Fax line - data line	0
	12. Wrong address/ moved away and could not get the new references	0
	13. Refuses to answer the screener	85
	14. In process (<i>the establishment is being called/ is being contacted - previous to ask the screener</i>)	0
	151. Out of target - outside the covered regions, firm moved abroad	0
	152. Out of target - firm moved abroad	1
	Total	178

Response Outcomes

Complete interviews (<i>Total</i>)	77
Incomplete interviews	4
Eligible in process	1
Refusals	0
Out of target	9
Impossible to contact	1
Ineligible - coop.	1
Refusal to the Screener	85
Total	178

Micro Sample

Status Codes

ELIGIBLES		
Eligible	1. Eligible establishment (Correct name and address)	109
	2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	4
	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	2
	6. The firm discontinued businesses	10
	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)	187
	92. Line out of order	8
	93. No tone	40
	10. Answering machine	0
	11. Fax line - data line	6
	12. Wrong address/ moved away and could not get the new references	120
	13. Refuses to answer the screener	245
	14. In process (the establishment is being called/ is being contacted - previous to ask the screener)	41
	151. Out of target - outside the covered regions, firm moved abroad	3
	152. Out of target - firm moved abroad	0
	Total	787

Response Outcomes

Complete interviews (Total)	88
Incomplete interviews	1
Eligible in process	24
Refusals	0
Out of target	24
Impossible to contact	363
Ineligible - coop.	3
Refusal to the Screener	245
Total	746

Appendix C

Mauritius Strict Universe Estimates

Region	Employees	Sector					Grand Total
		15	18	Other Manufacturing	52	Remainder	
Mauritius	1-4	146	87	440	1,159	726	2,558
	5-19	62	32	182	201	265	741
	20-99	21	13	84	36	57	211
	100+	10		40	8	17	75
Grand Total		239	132	746	1,403	1,065	3,585

Mauritius Weak Universe Estimates

Region	Employees	Sector					Grand Total
		15	18	Other Manufacturing	52	Remainder	
Mauritius	1-4	811	512	2,253	7,331	6,209	17,117
	5-19	258	119	701	957	1,708	3,743
	20-99	58	16	294	153	331	851
	100+	19		129	31	89	268
Grand Total		1,146	647	3,376	8,472	8,337	21,979

Mauritius Median Universe Estimates

Region	Employees	Sector					Grand Total
		15	18	Other Manufacturing	52	Remainder	
Mauritius	1-4	383	224	1,327	3,299	3,450	8,682
	5-19	148	64	504	526	1,159	2,401
	20-99	51	13	310	129	345	848
	100+	18		130	27	94	268
Grand Total		600	300	2,272	3,981	5,047	12,200

Appendix D

Mauritius Strict Cell Weights

Region	Employees	Sector				
		15	18	Other Manufacturing	52	Remainder
Mauritius	1-4	12	8	23	43	38
	5-19	2	1	6	2	8
	20-99	1	1	2	1	1
	100+	1		3	8	1

Mauritius Weak Cell Weights

Region	Employees	Sector				
		15	18	Other Manufacturing	52	Remainder
Mauritius	1-4	68	47	119	272	327
	5-19	6	4	23	12	49
	20-99	3	1	8	6	9
	100+	2		9	31	6

Mauritius Median Cell Weights

Region	Employees	Sector				
		15	18	Other Manufacturing	52	Remainder
Mauritius	1-4	32	20	70	122	182
	5-19	4	2	16	6	33
	20-99	2	1	8	5	9
	100+	2		9	27	6