

The Argentina 2010 Enterprise Surveys Data Set

I. Introduction

1. This document provides additional information on the data collected in Argentina between May 2010 and March 2011 as part of the Latin America and Caribbean (LAC) Enterprise Survey 2010, an initiative of the World Bank.

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

The report outlines and describes the sampling methodology, the sample 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 Argentina was selected using stratified random sampling, following the methodology explained in the *Sampling Note*¹. Stratified random sampling² was preferred over simple random sampling for several reasons³:

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

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

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

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

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

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

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

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

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

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

4. Industry stratification was designed in the way that follows: the universe was stratified into 5 manufacturing industries, 1 service industry -retail -, and 1 residual sector as defined in the sampling manual. Each of specified manufacturing stratum had a target of 175 interviews, with residual manufacturing having a target of 120 interviews. Retail and other services had targets each of 120 interviews.

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

6. Regional stratification was defined in five locations (city and the surrounding business area): Buenos Aires, Chaco, Cordoba, Mendoza, and Rosario.

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 location) are required to draw the sample. Great efforts were made to obtain the best source for these listings. However, the quality of the sample frames was not optimal and, therefore, some adjustments were needed to correct for the presence of ineligible units. These adjustments are reflected in the weights computation (*see below*).

8. TNS Opinion, Argentina (TNS) was hired to implement the LAC 2010 enterprise surveys roll out.

9. For Argentina, three sample frames were used. The first was supplied by the World Bank and consists of enterprises interviewed in Argentina 2006. The World Bank required that attempts should be made to re-interview establishments responding to the Argentina 2006 survey where they were within the selected geographical locations and met eligibility criteria. That sample is referred to as the Panel. The second sample frame was obtained from a private source of Dun and Bradstreet (D&B), which was supplemented with a third source comprised of firm information held by TNS. Each database contained the following information:

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

Counts from sample frames are shown below.

Panel sample counts

Source: 2006 ES in Argentina

Panel Firm Count (Panel sample frame)

Location		Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	6	78	18	54	34	22	43	255	
	Medium	17	74	19	58	17	10	41	236	
	Large	30	45	22	12	12	18	32	171	
Total			53	197	59	124	63	50	116	662
Rosario	Small	13	6	2	21	12	11	8	73	
	Medium	8	6	3	10	3	5	6	41	
	Large	7	2	0	4	6	2	8	29	
Total			28	14	5	35	21	18	22	143
Mendoza	Small	19	1	2	4	4	18	11	59	
	Medium	22	0	1	2	4	8	8	45	
	Large	11	0	0	2	2	0	9	24	
Total			52	1	3	8	10	26	28	128
Cordoba	Small	18	5	2	2	5	12	11	55	
	Medium	7	4	0	5	4	7	9	36	
	Large	8	0	2	3	8	7	8	36	
Total			33	9	4	10	17	26	28	127
Chaco	Small									
	Medium									
	Large									
Total										
Grand Total			166	221	71	177	111	120	194	1060

Sample Frames

Source: D&B and TNS

Fresh Sample Frame									
Region name	Emp. Size	15	17-18	24-25	27-29	Other Man	52	Other Serv	Grand Total
BUENOS AIRES	5-19	579	483	895	1058	1569	1481	5598	11663
	20-99	300	376	720	541	1146	566	2435	6084
	100+	106	89	225	83	260	126	691	1580
BUENOS AIRES Total		985	948	1840	1682	2975	2173	8724	19327
CHACO	5-19	13	11	9	6	30	129	135	333
	20-99	3	1	1	1	6	30	56	98
	100+	1	1			1	6	16	25
CHACO Total		17	13	10	7	37	165	207	456
CORDOBA	5-19	97	13	52	77	122	188	581	1130
	20-99	21	3	25	27	54	75	200	405
	100+	10	2	3	7	11	14	47	94
CORDOBA Total		128	18	80	111	187	277	828	1629
MENDOZA	5-19	85	2	20	23	31	93	260	514
	20-99	12	2	8	13	15	37	101	188
	100+	7				10	6	18	41
MENDOZA Total		104	4	28	36	56	136	379	743
ROSARIO	5-19	79	24	90	121	122	152	629	1217
	20-99	23	12	34	58	64	52	174	417
	100+	8	3	4	11	16	9	50	101
ROSARIO Total		110	39	128	190	202	213	853	1735
Grand Total		1344	1022	2086	2026	3457	2964	10991	23890

10. The enumerated establishments were then used as the frame for the selection of a sample with the aim of obtaining interviews at 1080 establishments with five or more employees.

11. The quality of the frame was assessed at the onset of the project through visits to a random subset of firms and local contractor knowledge. The sample frame was not immune from the typical problems found in establishment surveys: positive rates of non-eligibility, repetition, non-existent units, etc. In addition, the sample frame contains no telephone/fax numbers so the local contractor had to screen the contacts by visiting them. Due to response rate and ineligibility issues, additional sample had to be extracted by the World Bank in order to obtain enough eligible contacts and meet the sample targets.

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 9.17% (319 out of 3480 establishments)⁴.

IV. Data Base Structure:

13. The structure of the data base reflects the fact that 3 different versions of the questionnaire were used. The basic questionnaire, the Core Module, includes all common questions asked to all establishments from all sectors (manufacturing, services and IT). The

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

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

14. All variables are named using, first, the letter of each section and, second, the number of the variable within the section, i.e. *a1* denotes section A, question 1. Variable names preceded by a prefix “*LAC*” indicate questions specific to LAC, 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 location), *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.

16. There are three levels of stratification: industry, size and location. Different combinations of these variables generate the strata cells for each industry/location/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 locations

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

- a4a*: coded using ISIC codes for the chosen industries for stratification. These codes include most manufacturing industries (15 to 37), other manufacturing (2), retail (52), and (45, 50, 51, 55, 60, 63, 72) for other Services.

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 additional variables for location size by population (*a3*) and firm size by no. of workers (*l1*, *l6* and *l8*) that reflect more accurately the reality of each establishment. Advanced users are advised to use these variables for analytical purposes.

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

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

V. Universe Estimates

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

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

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

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

28. Strict assumption: eligible establishments are only those for which it was possible to directly determine eligibility. The resulting weights, which include adjustments applied to panel firms (see below), are included in the variable *w_strict_panadj*.

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

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

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

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

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

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

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

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

VI. Weights

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

35. Special care was given to the correct computation of the weights. It was imperative to accurately adjust the totals within each location/industry/size stratum to account for the presence of ineligible units (the firm discontinued businesses or was unattainable, education or government establishments, establishments with less than 5 employees, no reply after having called in different days of the week and in different business hours, no tone in the phone line, answering machine, fax line⁶, wrong address or moved away and could not get the new references) The information required for the adjustment was collected in the first stage of the implementation: the screening process. Using this information, each stratum cell of the universe was scaled down by the observed proportion of ineligible units within the cell. Once an accurate estimate of the universe cell (projections) was available, weights were computed using the number of completed interviews.

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.

The selection of panel firms required additional adjustments to account for varying probabilities of selection between fresh and panel sample universes. For additional information on this methodology, please refer to Enterprise Survey documentation of weighting methodology.

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

VII. Appropriate use of the weights

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

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

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

VIII. Non-response

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

41. Item non-response was addressed by two strategies:

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.

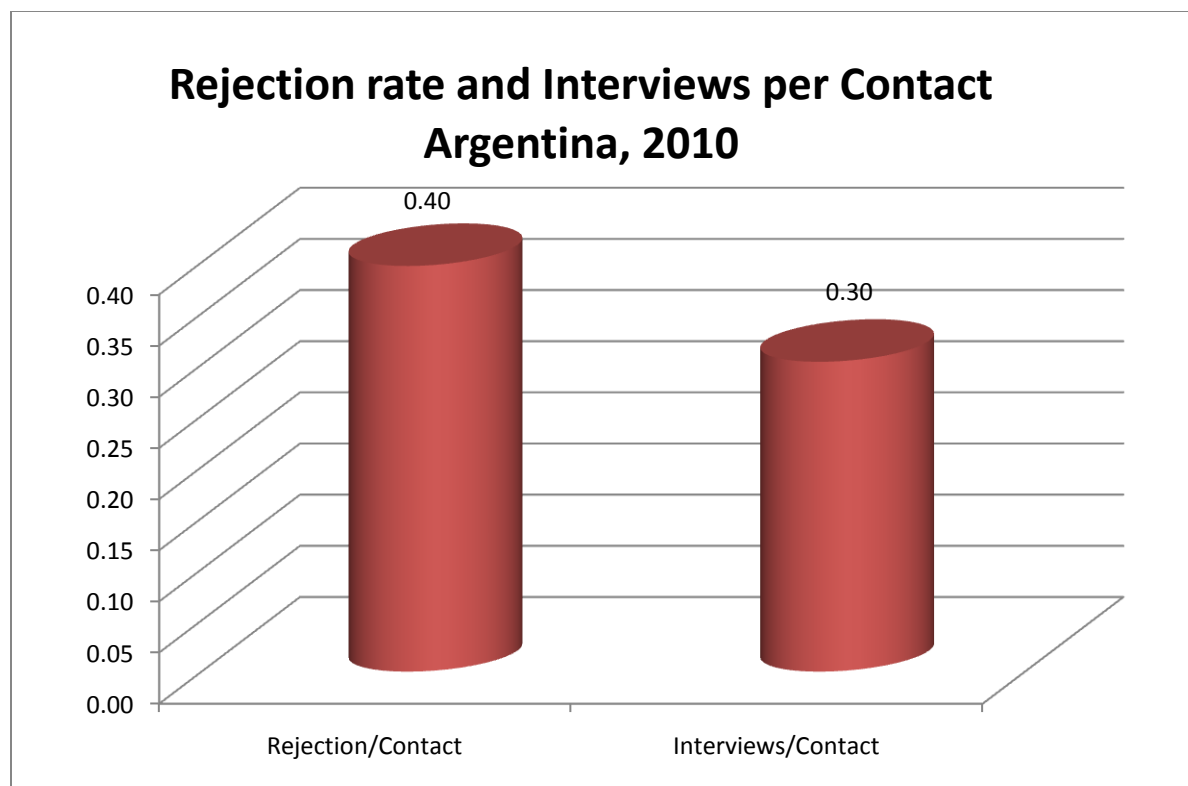
⁸ The use weights in most model-assisted estimations using survey data is strongly recommended by the statisticians specialized on survey methodology of the JPSM of the University of Michigan and the University of Maryland.

- a- For sensitive questions that may generate negative reactions from the respondent, such as corruption or tax evasion, enumerators were instructed to collect the refusal to respond as a different option from don't know (-7).
- b- Establishments with incomplete information were re-contacted in order to complete this information, whenever necessary. However, there were clear cases of low response. The following graph shows non-response rates for the sales variable, *d2*, by sector. Please, note that the coding utilized in this dataset does not allow us to differentiate between "Don't know" and "refuse to answer", thus the non-response in the chart below reflects both categories (DKs and NAs).

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

43. As the following graph shows, the number of realized interviews per contacted establishment was 0.30⁹. 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 0.40.

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



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

References:

Cochran, William G., Sampling Techniques, 1977.

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

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

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

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

Appendix A

Status Codes Fresh:

	ELIGIBLES	
Eligible	1. Eligible establishment (Correct name and address)	524
Eligible	2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	6
Eligible	3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	14
Eligible	4. Eligible establishment (Moved and traced)	54
		0
Ineligible	5. The establishment has less than 5 permanent full time employees	40
Ineligible	6 The firm discontinued businesses	114
Ineligible	7. Not a business: Private household	97
Ineligible	8. Ineligible activity: Education, Agriculture, Finances, Government, etc.	6
Ineligible	151 Out of target - outside the covered locations	18
Ineligible	152. Out of target - moved abroad	6
Unobtainable	91. No reply after having called in different days of the week and in different business hours	54
Unobtainable	92. Line out of order	4
Unobtainable	93. No tone	0
Unobtainable	10. Answering machine	2
Unobtainable	11. Fax line- data line	2
Unobtainable	12. Wrong address/ moved away and could not get the new references	260
	13. Refuses to answer the screener	1058
	14. In process (the establishment is being called/ is being contacted - previous to ask the screener)	261
	Total	2520

Response Outcomes Fresh:

Target	
Complete interviews	556
Incomplete interviews	0
Elegible in process	22
Refusals	20
Out of target	281
Impossible to contact	322
Refusal to the Screener	1058
Total	2259

Status Codes Panel:

	ELIGIBLES	
Eligible	1. Eligible establishment (Correct name and address)	478
Eligible	2. Eligible establishment (Different name but same address - the new firm/establishment bought the original firm/establishment)	5
Eligible	3. Eligible establishment (Different name but same address - the firm/establishment changed its name)	22
Eligible	4. Eligible establishment (Moved and traced)	49
Eligible	16. Panel firm - now less than five employees	13
Ineligible	5. The establishment has less than 5 permanent full time employees	0
Ineligible	616 The firm discontinued businesses - (Establishment went bankrupt)	9
Ineligible	618 The firm discontinued businesses - (Original establishment disappeared and is now a different firm)	10
Ineligible	619 The firm discontinued businesses - (Establishment was bought out by another firm)	3
Ineligible	620 The firm discontinued businesses - (It was impossible to determine for what reason)	4
Ineligible	621 The firm discontinued businesses - (Other: SPECIFY in COMMENTS)	1
Ineligible	7. Not a business: Private household	10
Ineligible	8. Ineligible activity: Education, Agriculture, Finances, Government, etc.	0
Ineligible	151 Out of target - outside the covered locations	0
Ineligible	152. Out of target - moved abroad	1
Unobtainable	91. No reply after having called in different days of the week and in different business hours	22
Unobtainable	92. Line out of order	1
Unobtainable	93. No tone	0
Unobtainable	10. Answering machine	1
Unobtainable	11. Fax line- data line	0
Unobtainable	12. Wrong address/ moved away and could not get the new references	39
	13. Refuses to answer the screener	292
	14. In process (the establishment is being called/ is being contacted - previous to ask the screener)	0
	Total	960

Response Outcomes Panel:

Panel	
Complete interviews	498
Incomplete interviews	0
Elegible in process	59
Refusals	10
Out of target	38
Impossible to contact	63
Refusal to the Screener	292
Total	960

Appendix B

Universe Estimate, Argentina:

		15	17-18	24-25	27-29	Other Manufacturing	52	Other Services	Total
Buenos Aires	5-19	2,326	442	1,060	1,267	1,928	5,363	8,424	20,810
	20-99	652	347	961	876	766	573	3,129	7,305
	100+	147	82	367	132	127	138	574	1,567
Buenos Aires	Sub total	3,125	871	2,389	2,274	2,822	6,074	12,127	29,682
Chaco	5-19	80	3	48	6	146	306	541	1,131
	20-99	15	2	21	3	43	45	117	246
	100+	6	0	0	0	3	11	13	33
Chaco	Sub total	101	5	69	10	192	362	671	1,410
Cordoba	5-19	312	49	103	189	312	834	1,180	2,979
	20-99	73	23	46	154	9	77	353	735
	100+	16	1	7	24	7	6	57	118
Cordoba	Sub total	401	73	156	367	328	917	1,590	3,832
Mendoza	5-19	252	51	115	115	259	633	945	2,371
	20-99	75	10	63	45	42	86	283	604
	100+	20	3	6	19	7	15	45	116
Mendoza	Sub total	347	65	185	180	308	734	1,273	3,091
Rosario	5-19	301	56	126	263	165	750	1,071	2,732
	20-99	93	10	36	158	46	80	349	772
	100+	29	4	7	31	10	10	68	158
Rosario	Sub total	423	69	169	452	220	840	1,488	3,662
TOTAL		4,397	1,083	2,968	3,282	3,870	8,927	17,149	41,677

Appendix C

Strict Cell Weights Argentina:

Panel								
Average Strict Cell Weights, Panel firms								
Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	1.00	1.00	1.00	1.19	1.16	1.13	1.00
	Medium	1.13	1.06	1.01	1.77	1.48	1.75	2.28
	Large	1.13	1.00	1.11	1.00	1.16	1.00	1.00
Total								
Rosario	Small	1.00	1.20	1.02	1.24	1.29	1.00	1.43
	Medium	1.08	1.00	1.00	1.49	1.32	1.30	1.00
	Large	1.00	1.02		1.06	1.22	1.00	2.83
Total								
Mendoza	Small	1.00		1.00	1.16	1.00	1.00	1.00
	Medium	1.01		1.00	1.00	1.13	1.34	1.38
	Large	1.00			1.00	3.23		1.16
Total								
Cordoba	Small	1.02	1.00	1.00		1.00	1.01	1.05
	Medium	1.17	1.55		1.00	1.00	1.06	1.29
	Large	1.12		1.00	1.44	1.18	1.13	2.00
Total								
Chaco	Small							
	Medium							
	Large							

Fresh

Strict Cell Weights*

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	34.37	1.70	9.89	13.35	44.82	98.32	180.15
	Medium	21.62	2.43	7.39	8.22	21.02	11.05	66.05
	Large	1.35	1.04	2.18	3.14	1.47	3.60	31.47
Rosario	Small	34.37	2.48	3.65	16.03			180.15
	Medium	6.11	2.18	1.87	5.69	21.02	7.12	66.05
	Large	2.45		2.23	5.54	2.02	2.98	14.71
Mendoza	Small	34.37		7.66	5.86	44.82	98.32	180.15
	Medium	3.76		5.60	3.07	21.02	4.38	66.05
	Large					2.50		9.20
Cordoba	Small	34.37	7.52	5.97	6.32	44.82	98.32	180.15
	Medium	4.29		2.90	20.13	21.02	7.51	66.05
	Large	1.00			10.37	1.74	1.52	8.81
Chaco	Small	34.37	1.13	6.79	1.00	44.82	98.32	180.15
	Medium	5.92				21.02	1.60	66.05
	Large	2.76				2.08	1.67	3.59

*Collapsed cells used in certain cases

Weak Cell Weights Argentina:

Panel								
Average Weak Cell Weights, Panel firms								
Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	1.76	2.27	2.22	2.18	1.73	2.50	1.00
	Medium	1.88	2.05	1.67	3.12	2.67	4.58	3.78
	Large	1.42	2.09	1.61	1.00	1.60	1.00	1.28
Rosario	Small	1.73	1.56	1.03	2.41	1.92	1.55	1.84
	Medium	1.16	1.50	1.43	2.33	1.32	2.69	1.00
	Large	2.74	1.01		1.42	1.22	1.00	2.81
Mendoza	Small	1.22		2.00	1.17	1.15	1.37	1.12
	Medium	1.54		1.00	1.08	2.28	2.15	2.49
	Large	1.50			2.00	3.24		2.67
Cordoba	Small	1.91	1.25	2.00		7.40	2.63	1.41
	Medium	1.93	2.24		1.80	2.24	1.95	1.50
	Large	1.48		1.00	1.74	1.29	2.18	2.44
Chaco	Small							
	Medium							
	Large							

Fresh

Weak Cell Weights*

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	130.07	11.31	48.51	52.33	126.60	377.15	485.00
	Medium	78.90	13.54	30.34	26.96	49.71	40.87	148.86
	Large	4.43	5.22	8.05	9.23	3.52	11.96	73.46
Rosario	Small	130.07	13.64	14.77	51.88			485.00
	Medium	18.41	10.04	6.33	15.42	49.71	21.73	148.86
	Large	6.64		6.81	13.50	4.00	8.18	28.35
Mendoza	Small	130.07		29.40	17.98	126.60	377.15	485.00
	Medium	10.75		18.00	7.88	49.71	12.69	148.86
	Large					4.78		16.81
Cordoba	Small	130.07	34.94	20.43	17.29	126.60	377.15	485.00
	Medium	10.93		8.31	46.12	49.71	19.40	148.86
	Large	2.20			21.36	2.98	3.53	14.37
Chaco	Small	130.07	4.23	18.80	1.61	126.60	377.15	485.00
	Medium	12.21				49.71	3.34	148.86
	Large	5.11				2.88	3.13	4.73

*Collapsed cells used in certain cases

Median Cell Weights Argentina:

Panel								
Average Median Cell Weights, Panel firms								
Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	1.30	1.69	1.75	1.92	1.65	2.50	1.00
	Medium	1.87	1.79	1.48	2.93	1.91	2.90	3.33
	Large	1.36	1.64	1.60	1.00	1.59	1.00	1.13
Total								
Rosario	Small	1.47	1.61	1.02	2.36	1.93	1.43	1.84
	Medium	1.08	1.00	1.46	2.31	1.32	1.90	1.00
	Large	2.73	1.02		1.42	1.22	1.00	2.80
Total								
Mendoza	Small	1.22		2.00	1.16	1.14	1.37	1.11
	Medium	1.40		1.00	1.05	2.24	2.22	2.45
	Large	1.22			2.00	3.24		1.78
Total								
Cordoba	Small	1.92	1.25	2.00		4.72	2.63	1.32
	Medium	1.95	2.23		1.79	2.25	1.94	1.49
	Large	1.49		1.00	1.74	1.30	2.14	2.41
Total								
Chaco	Small							
	Medium							
	Large							

Fresh

Median Cell Weights*

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services
Buenos Aires	Small	100.50	8.10	39.11	42.29	98.49	277.52	339.19
	Medium	69.14	10.99	27.69	24.66	43.77	34.11	117.83
	Large	4.10	4.46	7.74	8.94	3.36	10.53	61.45
Rosario	Small	100.50	9.56	11.65	41.01			339.19
	Medium	15.78	7.97	5.65	13.79	43.77	17.74	117.83
	Large	6.01		6.41	12.74	3.72	7.04	23.20
Mendoza	Small	100.50		23.80	14.59	98.49	277.52	339.19
	Medium	9.46		16.49	7.24	43.77	10.64	117.83
	Large					4.47		14.12
Cordoba	Small	100.50	25.69	16.90	14.33	98.49	277.52	339.19
	Medium	9.83		7.78	43.27	43.77	16.61	117.83
	Large	2.08			21.14	2.84	3.19	12.33
Chaco	Small	100.50	2.92	14.61	1.26	98.49	277.52	339.19
	Medium	10.31				43.77	2.69	117.83
	Large	4.55				2.58	2.66	3.82

*Collapsed cells used in certain cases

Appendix D

Strict Universe Estimates

Strict Universe Estimates (Fresh + Panel)

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	313.29	72.53	174.13	299.29	234.57	122.38	911.73	2127.91
	Medium	141.00	80.93	220.50	293.33	88.53	230.45	621.85	1676.58
	Large	74.34	30.85	115.59	45.85	56.40	36.78	294.33	654.14
Total		528.63	184.31	510.21	638.47	379.50	389.60	1827.91	4458.63
Rosario	Small	41.37	10.76	20.28	61.77	7.52	4.00	184.42	330.13
	Medium	27.74	6.48	19.22	60.14	65.70	39.97	183.15	402.41
	Large	10.36	2.04	2.23	14.26	9.34	3.98	101.13	143.34
Total		79.46	19.29	41.74	136.18	82.56	47.95	468.69	875.87
Mendoza	Small	151.46	0.00	16.32	33.95	91.65	115.09	197.34	605.80
	Medium	25.47	0.00	17.80	24.00	107.36	12.77	269.72	457.12
	Large	6.00	0.00	0.00	1.00	5.73	4.38	15.18	32.29
Total		182.93	0.00	34.12	58.95	204.74	132.24	482.24	1095.21
Cordoba	Small	42.54	11.52	24.86	50.53	45.82	102.35	546.75	824.37
	Medium	29.90	4.66	14.49	69.69	88.87	26.76	139.81	374.17
	Large	9.74	0.00	2.00	13.26	30.39	6.44	36.46	98.29
Total		82.18	16.18	41.35	133.48	165.08	135.54	723.02	1296.83
Chaco	Small	137.46	2.25	13.57	3.00	450.31	984.85	1719.63	3311.08
	Medium	5.92	0.00	0.00	0.00	42.04	115.91	462.34	626.21
	Large	2.76	0.00	0.00	0.00	0.00	3.33	76.82	82.91
Total		146.14	2.25	13.57	3.00	492.36	1104.09	2258.78	4020.20
Grand Total		1019.35	222.03	640.99	970.07	1324.24	1809.43	5760.65	11746.75

Weak Universe Estimates

Weak Universe Estimates (Fresh + Panel)

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	1177.68	343.95	837.95	1105.48	648.54	454.35	2435.98	7003.93
	Medium	492.18	322.51	886.08	896.45	206.83	857.01	1385.18	5046.25
	Large	210.88	92.25	392.41	125.00	125.30	103.71	673.28	1722.84
Total		1880.75	758.72	2116.44	2126.93	980.68	1415.06	4494.44	13773.03
Rosario	Small	142.16	42.01	75.93	182.16	20.52	6.21	490.53	959.52
	Medium	69.69	19.64	61.37	152.72	151.76	122.46	488.00	1065.64
	Large	27.60	2.01	6.81	31.27	11.32	9.18	211.20	299.40
Total		239.45	63.66	144.11	366.15	183.61	137.86	1189.72	2324.56
Mendoza	Small	537.35	0.00	60.80	94.57	255.49	413.47	510.73	1872.41
	Medium	53.73	0.00	55.00	69.88	253.09	31.85	605.40	1068.95
	Large	9.02	0.00	0.00	2.00	8.02	12.69	29.61	61.34
Total		600.10	0.00	115.80	166.45	516.61	458.01	1145.74	3002.70
Cordoba	Small	145.35	39.93	83.73	138.31	134.00	387.67	1463.43	2392.44
	Medium	73.13	6.72	41.54	161.03	230.48	66.00	306.74	885.64
	Large	15.50	0.00	2.00	24.83	62.13	13.58	55.31	173.36
Total		233.98	46.65	127.27	324.18	426.61	467.25	1825.48	3451.44
Chaco	Small	520.28	8.45	37.60	4.83	1268.85	3774.61	4742.12	10356.74
	Medium	12.21	0.00	0.00	0.00	99.41	413.89	1042.05	1567.56
	Large	5.11	0.00	0.00	0.00	0.00	6.26	163.07	174.43
Total		537.59	8.45	37.60	4.83	1368.26	4194.77	5947.24	12098.74
Grand Total		3491.87	877.48	2541.22	2988.55	3475.76	6672.95	14602.63	34650.46

Median Universe Estimates

Median Universe Estimates (Fresh + Panel)

Location	Firm Size	15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	909.66	249.88	675.32	897.79	507.31	344.74	1706.94	5291.64
	Medium	433.48	263.82	802.92	821.94	180.79	674.87	1100.38	4278.19
	Large	191.96	76.26	376.97	121.25	120.17	92.24	557.01	1535.86
Total		1535.10	589.97	1855.20	1840.97	808.27	1111.85	3364.33	11105.68
Rosario	Small	110.80	31.93	60.30	148.96	17.45	5.74	344.70	719.87
	Medium	60.54	13.56	52.94	138.02	133.93	98.04	342.19	839.21
	Large	25.57	2.03	6.41	29.74	11.03	8.04	169.83	252.66
Total		196.91	47.52	119.65	316.72	162.41	111.82	856.72	1811.74
Mendoza	Small	419.04	0.00	49.60	77.59	199.25	309.73	362.23	1417.44
	Medium	47.98	0.00	50.48	61.04	223.32	27.92	481.13	891.87
	Large	7.32	0.00	0.00	2.00	7.71	10.64	23.94	51.60
Total		474.34	0.00	100.08	140.63	430.28	348.29	867.29	2360.91
Cordoba	Small	115.86	30.67	69.60	114.67	103.21	288.04	1025.51	1747.57
	Medium	66.38	6.69	38.88	149.52	190.52	57.60	244.61	754.20
	Large	15.21	0.00	2.00	24.61	55.92	12.78	49.07	159.60
Total		197.45	37.36	110.49	288.80	349.66	358.43	1319.19	2661.36
Chaco	Small	401.99	5.84	29.23	3.77	987.49	2777.89	3330.22	7536.42
	Medium	10.31	0.00	0.00	0.00	87.53	307.09	824.81	1229.75
	Large	4.55	0.00	0.00	0.00	0.00	5.31	129.29	139.15
Total		416.85	5.84	29.23	3.77	1075.02	3090.30	4284.32	8905.32
Grand Total		2820.65	680.69	2214.64	2590.88	2825.63	5020.67	10691.85	26845.01

Appendix E

Original Sample Design, Argentina:

SAMPLE DESIGN

Firm Size		15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	17	53	35	46	11	14	19	195
	Medium	17	61	37	52	15	19	18	219
	Large	44	31	65	19	33	25	16	233
Total		78	145	137	117	59	58	53	647
Rosario	Small	10	8	8	11	3	4	4	48
	Medium	10	7	7	13	4	4	4	49
	Large	6	2	1	6	4	3	4	26
Total		26	17	16	30	11	11	12	123
Mendoza	Small	13	0	5	7	5	8	7	45
	Medium	16	0	5	4	6	8	8	47
	Large	9	0	0	0	4	2	5	20
Total		38	0	10	11	15	18	20	112
Cordoba	Small	10	6	5	7	5	6	6	45
	Medium	9	3	4	6	6	6	6	40
	Large	9	0	1	2	8	6	7	33
Total		28	9	10	15	19	18	19	118
Chaco	Small	4	4	2	2	11	10	10	43
	Medium	1	0	0	0	4	14	10	29
	Large	0	0	0	0	1	1	6	8
Total		5	4	2	2	16	25	26	80
Grand Total		175	175	175	175	120	130	130	1080

Completed Interviews (by a4b, a6b & a3a), Argentina:

Firm Size		15	17-18	24-25	27-29	Manuf.	Retail	Services	Grand Total
Buenos Aires	Small	10	48	20	36	12	14	17	157
	Medium	17	53	40	57	15	15	24	221
	Large	46	31	61	20	37	18	19	232
Total		73	132	121	113	64	47	60	610
Rosario	Small	7	5	5	14	4	7	4	46
	Medium	14	5	9	14	4	5	5	56
	Large	4	3	2	8	5	2	3	27
Total		25	13	16	36	13	14	12	129
Mendoza	Small	17	0	4	11	3	13	8	56
	Medium	18	0	2	6	6	4	9	45
	Large	6	0	0	2	3	1	5	17
Total		41	0	6	19	12	18	22	118
Cordoba	Small	10	6	5	7	2	4	9	43
	Medium	7	3	2	10	5	8	6	41
	Large	13	0	3	5	7	3	10	41
Total		30	9	10	22	14	15	25	125
Chaco	Small	4	2	1	2	8	11	12	40
	Medium	1	0	2	1	3	11	9	27
	Large	0	0	0	0	0	2	3	5
Total		5	2	3	3	11	24	24	72
Grand Total		174	156	156	193	114	118	143	1054

Appendix F

Local Agency team involved in the study:

Local Agency	TNS Gallup Argentina
Enumerators involved:	Enumerators: 42 Recruiters: 15

Sample Frame:

Source:	Based on D & B. This database was improved with database from TNS Gallup and previous sample frame
Year:	2008
Comments on the quality of sample frame:	The 2010 sample frame was better quality than 2006 and reached over 24300 registers (vs. 17.000 in 2006)
Year and organism who conducted the last economic census	CNE 2004-2005, National Economic Census, Indec 2004

Sectors included in the Sample:

Original Sectors	Manufacturing (Cod. 15, 18, 24, 29, Others), Retail and Others services
Added Sectors	17-18, 24-25, 27-20

Sample:

Comments/problems on sectors and locations selected in the sample:	In the city of Chaco, included in this wave, it was particularly difficult to contact potential interviewees.
Comments on the response rate:	In the 2010-2011 wave, there has been more reluctance on the part of potential respondents to respond to the request of the recruiters, despite multiple attempts.

	There was some skepticism about the collection of economic and financial data and its subsequent application in future benefits.
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Fieldwork:

Date of Fieldwork	210 working days
Problems found during fieldwork:	During the 2010-2011 wave, a greater reluctance to participate in this type of studies was perceived from Argentine businessmen. This feature appeared especially among SME's, and in the textile and garment manufacturing.
Other observations:	Influence in fieldwork development: Soccer World Cup, Winter and summer holidays; end of the year holidays (Christmas and New Year).

Questionnaires:

Problems found in the navigability of questionnaires.	In all versions, mostly in the interior establishments, in Section G: Land and Permits, in "G.2" and "G.3", the questionnaires flow was affected because the information required in the questions was not dominated by all respondent profiles. In the interior establishments in Section P: BUSINESS DEVELOPMENT SERVICES " LAC.P3"to "LAC.P15" the implementation of the questionnaire was slowed down because in some cases, the topic was not provided by all respondents. This was seen in all three versions of questionnaires. In all versions, Section L: Labor, from "L.5"a "LAC.9c" affects the flow, given that respondents take the time to think about the answers, or in some cases, they did not know all the required information. This was seen in small, medium and large companies within the interior of the country. In general, in "LAC.L15"to "LAC.L17, respondents were noted to stop to estimate the required averages.
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Suggestions or other comments on the questionnaire:	In CORE version, Section D Sales & Supplies in "D.4", some respondents from software companies said they do not export goods directly, but use a service which is sent via the Internet and does not go through customs. In the interior stablishments, Section G: Land and Permits, in "G.30", some respondents asked what the phrase "access to land" meant. In all versions, in Section J - BUSINESS-GOVERNMENT RELATIONS in "J.13", in general, respondents asked what the phrase "license to operate" meant. Section N - PERFORMANCE there has been more reluctancy to give out figures. This feature was accentuated in SME's. It was noted that some respondents reached that Section a little tired to be looking for data on balances and estimate calculations. And in terms of administration of the questionnaire, it would be more comfortable if "D2", corresponding to the section "Sales and Supplies", was included in the section N - Performance. On the operative level, in order to speed up and avoid errors, the number of filter questions (telephone) should match Section A: "Control Information" of the questionnaire. The promise of receiving the World Bank "Report" was not particularly perceived as an incentive to participate. Also, most of the respondents requested it.
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Country situation

General aspects of economic, political or social situation of the country that could affect the results of the survey:	The country has experienced an average GDP growth of 9% during the last past years. . However, inflation has increased in the last years to an average of 25% according to private sources.
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