

Appendix 1

Perception Questions in the Investment Climate Survey Core Questionnaire

Q18. Please tell us if any of the following issues are a problem for the operation and growth of your business. If an issue poses a problem, please judge its severity as an obstacle on a four-point scale where:

0 = No obstacle 1 = Minor obstacle 2 = Moderate obstacle
3 = Major obstacle 4 = Very severe obstacle

	No Problem	Degree of Obstacle			
A. Telecommunications	0	1	2	3	4
B. Electricity	0	1	2	3	4
C. Transportation	0	1	2	3	4
D. Access to Land	0	1	2	3	4
E. Tax Rates	0	1	2	3	4
F. Tax Administration	0	1	2	3	4
G. Customs and Trade Regulations	0	1	2	3	4
H. Labor Regulations	0	1	2	3	4
I. Skills and Education of Available Workers	0	1	2	3	4
J. Business Licensing and Operating Permits	0	1	2	3	4
K. Access to Financing (e.g., collateral)	0	1	2	3	4
L. Cost of Financing (e.g., interest rates)	0	1	2	3	4
M. Economic and Regulatory Policy Uncertainty	0	1	2	3	4
N. Macroeconomic Instability (inflation, exchange rate)	0	1	2	3	4
O. Corruption	0	1	2	3	4
P. Crime, Theft, and Disorder	0	1	2	3	4
Q. Anticompetitive or Informal Practices	0	1	2	3	4
R. Legal System/Conflict Resolution	0	1	2	3	4

Appendix 2

Objective Questions Used for Parametric Estimation of Survey Firm Fixed Effect

Corruption

39. We've heard that establishments are sometimes required to make gifts or informal payments to public officials to "get things done" with regard to customs, taxes, licenses, regulations, services, etc. On average, what percent of annual sales value would such expenses cost a typical firm like yours? _____ %
43. When establishments in your industry do business with the government, how much of the contract value is typically expected in gifts or informal payments to secure the contract? _____ %
41. Recognizing the difficulties many enterprises face in fully complying with taxes and regulations, what percentage of total sales would you estimate the typical establishment in your area of activity reports for tax purposes? _____ %

Red Tape

38. In a typical week, what percentage of senior management's time is spent in dealing with requirements imposed by government regulations (e.g., taxes, customs, labor regulations, licensing, and registration), including dealings with officials, completing forms, etc.? _____ %
42. On average, how many days last year were spent in inspections and mandatory meetings with officials of each of the following agencies in the context of regulation of your business? And what were the costs associated with these interactions?
 - (a) Tax inspectorate: total days spent in inspections, required meetings with officials.

36. (a) If you import, what was the average and the longest number of days in the last year that it took from the time your goods arrived in their point of entry (e.g., port, airport) until the time you could claim them from customs?
_____ days on average NA (we don't import)
36. (b) If you export, what was the average and the longest number of days in the last year that it took from the time your goods arrived in their point of exit (e.g., port, airport) until the time they clear customs?
_____ days on average NA (we don't export)
37. If you could change the number of regular full-time workers you currently employ without any restrictions (i.e., without seeking permission, making severance payments, etc.), what would be your optimal level of employment as a percent of your existing workforce? _____ %
- (Note: 90% implies you would reduce your workforce by 10%, 110% means you want to expand by 10%.)

Infrastructure

19. During how many days last year did your establishment experience the following service interruptions, how long did they last, and what percent of your total sales value was lost last year due to:
- | | Days | Value
(% sales) | |
|---|-------|--------------------|----|
| (a) power outages or surges from the public grid? | _____ | _____ | NA |
| (b) insufficient water supply? | _____ | _____ | NA |
| (c) unavailable mainline telephone service? | _____ | _____ | NA |
22. What percentage of the value of your average cargo consignment is lost while in transit because of breakage, theft, or spoilage?
_____ % of consignment value

The full core questionnaire is available at <http://www.ifc.org/ifcext/economics.nsf/Content/IC-SurveyMethodology>.

Appendix 3

Parametric Results of Survey Firm Fixed Effects on Objective Questions

The results presented in this appendix are based on data from the Investment Climate Surveys from the following countries: Albania 2002, Algeria2002, Armenia2002, Azerbaijan2002, Bangladesh2002, Belarus2002, Bosnia Herzegovina2002, Bulgaria2002, Bulgaria2004, Cambodia2003, China2002, Croatia2002, Czech2002, Ecuador2003, Egypt2004, El Salvador2003, Eritrea2002, Estonia2002, FYROM 2002, Georgia2002, Guatemala2003, Honduras2003, Hungary2002, Indonesia2003, Kazakhstan2002, Kenya2003, Kosovo2003, Kyrgyzstan 2002, Kyrgyzstan2003, Latvia2002, Lithuania2002, Lithuania2004, Moldova2002, Moldova2003, Montenegro2003, Nicaragua2003, Pakistan2002, Philippines2003, Poland2002, Poland2003, Romania 2002, Russia2002, Serbia2001, Serbia2003, Slovakia2002, Slovenia 2002, South Africa2003, Sri Lanka2004, Tajikistan2002, Tajikistan 2003, Tanzania2003, Turkey2002, Uganda2003, Ukraine2002, Uzbekistan2002, Uzbekistan2003, Vietnam2005, Yugoslavia2002, Zambia2002.

See appendix 2 for the list of questions.

These data are available online at <http://iresearch.worldbank.org/ics/jsp/index.jsp>.

Table A3.1

Survey Firm Fixed Effect on "Unofficial Payments to Get Things Done"

	Unofficial Payments to Get Things Done (% annual sales)				
Government Agency	-1.579 (12.77)**	-1.811 (13.84)**	-1.869 (14.19)**	-1.858 (14.02)**	-1.854 (13.90)**
Private Int'l. Survey Firm	-0.214 (1.74)	-0.176 (1.42)	-0.214 (1.73)	-0.221 (1.79)	-0.204 (1.65)
Europe & Central Asia	-1.703 (10.19)**	-2.076 (11.77)**	-2.094 (11.83)**	-2.164 (12.15)**	-2.177 (12.19)**
Latin America & Caribbean	2.560 (13.12)**	2.216 (10.93)**	2.188 (10.76)**	2.072 (10.10)**	2.075 (10.12)**
Middle East & North Africa	5.112 (21.54)**	4.976 (20.87)**	5.015 (20.97)**	4.883 (20.45)**	4.879 (20.42)**
South Asia	-0.666 (5.60)**	-0.903 (7.31)**	-0.851 (6.85)**	-0.836 (6.74)**	-0.870 (6.91)**
Sub-Saharan Africa	-2.222 (13.36)**	-2.524 (14.47)**	-2.627 (14.93)**	-2.570 (14.53)**	-2.643 (14.88)**
Foreign Firm		-0.324 (3.31)**			-0.102 (0.99)
Exporter			-0.391 (4.79)**		-0.124 (1.40)
Small				0.162 (1.75)	0.177 (1.90)
Medium				-0.561 (4.66)**	-0.519 (4.26)**
Large				-0.375 (3.00)**	-0.325 (2.54)*
Very large				-0.774 (6.93)**	-0.704 (5.93)**
Constant	3.398 (27.49)**	3.781 (27.74)**	3.864 (28.07)**	4.005 (26.17)**	4.019 (26.17)**
Observations	15153	14951	14790	14774	14635
R-squared	0.09	0.10	0.10	0.10	0.10

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.2

Survey Firm Fixed Effect on "Gifts Expected as Percent Value of Government Contracts"

Gifts Expected as Percent Value of Government Contracts					
Government Agency	-3.059 (14.41)**	-3.025 (12.66)**	-3.063 (12.85)**	-3.115 (12.81)**	-3.109 (12.78)**
Private Int'l. Survey Firm	-0.009 (0.04)	0.047 (0.22)	0.023 (0.11)	-0.021 (0.10)	0.029 (0.14)
Europe & Central Asia	-2.523 (8.93)**	-2.572 (8.36)**	-2.533 (8.27)**	-2.510 (8.16)**	-2.538 (8.25)**
Latin America & Caribbean	2.221 (9.90)**	2.196 (8.62)**	2.232 (8.79)**	2.043 (7.92)**	2.025 (7.85)**
Middle East & North Africa	-0.406 (2.28)*	-0.491 (2.72)**	-0.428 (2.37)*	-0.670 (3.69)**	-0.722 (3.95)**
South Asia	-0.364 (1.63)	-0.408 (1.69)	-0.244 (1.01)	-0.202 (0.82)	-0.227 (0.91)
Sub-Saharan Africa	-1.790 (6.97)**	-1.772 (6.24)**	-1.770 (6.22)**	-1.866 (6.50)**	-1.912 (6.63)**
Foreign Firm		-0.470 (3.63)**			-0.305 (2.26)*
Exporter			-0.488 (4.55)**		-0.262 (2.23)*
Small				0.968 (8.06)**	0.994 (8.25)**
Medium				0.469 (2.98)**	0.566 (3.54)**
Large				0.318 (1.98)*	0.450 (2.74)**
Very large				-0.288 (1.93)	-0.098 (0.62)
Constant	4.326 (21.79)**	4.391 (18.88)**	4.402 (18.97)**	3.954 (16.10)**	3.979 (16.19)**
Observations	15578	15371	15263	15124	15041
R-squared	0.11	0.11	0.12	0.12	0.12

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.3

Firm Survey Fixed Effect on "Estimated Percent of Total Sales Declared for Tax Purposes"

	Estimated Percent of Total Sales Declared for Tax Purposes				
Government Agency	-25.712 (18.58)**	-16.960 (11.09)**	-17.415 (11.38)**	-17.868 (11.31)**	-17.854 (11.27)**
Private Int'l. Survey Firm	-0.830 (0.76)	-0.870 (0.80)	-0.714 (0.65)	-0.790 (0.73)	-0.813 (0.74)
Europe & Central Asia	10.342 (7.04)**	19.375 (11.99)**	19.273 (11.99)**	18.927 (11.68)**	19.087 (11.72)**
Latin America & Caribbean	6.084 (5.01)**	15.110 (10.87)**	15.100 (10.93)**	13.903 (9.73)**	14.100 (9.81)**
Middle East & North Africa	27.113 (19.88)**	27.396 (20.12)**	27.685 (20.32)**	26.763 (19.30)**	26.831 (19.27)**
South Asia	51.922 (18.80)**	52.122 (18.98)**	53.023 (19.31)**	52.463 (18.45)**	52.661 (18.50)**
Sub-Saharan Africa	2.983 (1.88)	11.591 (6.78)**	11.939 (6.96)**	11.464 (6.59)**	11.273 (6.43)**
Foreign Firm		0.490 (0.50)			1.510 (1.44)
Exporter			-1.820 (2.33)*		-1.252 (1.44)
Small				3.409 (4.58)**	3.488 (4.66)**
Medium				2.877 (2.76)**	2.943 (2.78)**
Large				1.511 (1.32)	1.677 (1.43)
Very large				-3.040 (2.67)**	-2.836 (2.32)*
Constant	47.290 (42.92)**	38.240 (29.44)**	38.518 (29.90)**	37.325 (27.74)**	37.138 (27.46)**
Observations	7840	7694	7653	7402	7375
R-squared	0.16	0.17	0.17	0.18	0.18

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.4

Firm Survey Fixed Effects on "Percent of Senior Management's Time Dealing With Government"

	Percent of Senior Management's Time Dealing With Government Regulations				
Government Agency	0.667 (2.88)**	-1.072 (3.98)**	-1.087 (4.01)**	-0.667 (2.40)*	-0.709 (2.53)*
Private Int'l. Survey Firm	-6.294 (19.06)**	-6.378 (19.17)**	-6.290 (18.99)**	-6.215 (19.08)**	-6.256 (19.18)**
Europe & Central Asia	1.693 (4.44)**	-1.189 (2.83)**	-1.167 (2.78)**	0.318 (0.75)	0.473 (1.11)
Latin America & Caribbean	-2.745 (8.66)**	-5.654 (15.64)**	-5.619 (15.52)**	-4.652 (12.65)**	-4.520 (12.19)**
Middle East & North Africa	-2.316 (4.42)**	-3.452 (6.44)**	-3.376 (6.32)**	-2.398 (4.54)**	-2.056 (3.81)**
South Asia	-3.321 (13.51)**	-5.576 (19.94)**	-5.763 (20.53)**	-5.316 (18.73)**	-5.261 (18.09)**
Sub-Saharan Africa	-3.408 (11.07)**	-6.032 (17.71)**	-5.911 (17.28)**	-4.642 (13.33)**	-4.659 (13.23)**
Foreign Firm		0.801 (3.57)**			0.582 (2.45)*
Exporter			0.176 (0.95)		-0.427 (2.10)*
Small				1.710 (8.00)**	1.721 (8.00)**
Medium				2.274 (8.34)**	2.347 (8.46)**
Large				2.382 (8.54)**	2.473 (8.65)**
Very large				1.848 (7.24)**	1.894 (7.01)**
Constant	11.634 (49.97)**	14.477 (49.55)**	14.464 (49.33)**	11.681 (34.24)**	11.543 (33.49)**
Observations	24163	22521	22190	21051	20703
R-squared	0.04	0.06	0.05	0.05	0.05

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.5

Firm Survey Fixed Effects on "Total Days Spent with Officials from Tax Inspectorate"

Total Days Spent with Officials from Tax Inspectorate					
Government Agency	3.736 (12.68)**	1.662 (4.31)**	1.923 (4.94)**	2.420 (6.24)**	2.307 (5.87)**
Private Int'l. Survey Firm	4.675 (7.69)**	4.622 (7.45)**	4.714 (7.58)**	4.872 (8.03)**	4.803 (7.90)**
Europe & Central Asia	-0.927 (2.19)*	-3.490 (6.75)**	-3.388 (6.53)**	-1.859 (3.55)**	-1.752 (3.30)**
Latin America & Caribbean	-0.550 (1.42)	-3.195 (6.59)**	-3.040 (6.25)**	-1.303 (2.61)**	-1.252 (2.48)*
Middle East & North Africa	-1.185 (2.86)**	-1.647 (3.83)**	-1.788 (4.16)**	-0.806 (1.88)	-0.628 (1.45)
South Asia	-3.927 (13.07)**	-5.229 (15.39)**	-5.283 (15.42)**	-4.646 (13.69)**	-4.368 (12.48)**
Sub-Saharan Africa	-0.065 (0.18)	-2.473 (5.66)**	-2.138 (4.87)**	-0.927 (2.06)*	-0.969 (2.13)*
Foreign Firm		1.533 (5.07)**			0.904 (2.77)**
Exporter			0.849 (3.41)**		-0.444 (1.63)
Small				0.819 (2.55)*	0.900 (2.77)**
Medium				2.006 (5.18)**	2.087 (5.27)**
Large				2.854 (7.32)**	2.904 (7.21)**
Very large				3.885 (10.52)**	3.913 (9.89)**
Constant	5.354 (18.19)**	7.829 (18.80)**	7.645 (18.16)**	4.863 (9.32)**	4.762 (9.02)**
Observations	15982	14740	14502	13895	13615
R-squared	0.04	0.04	0.04	0.05	0.05

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1%.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.6

Firm Survey Fixed Effects on "Days on Average to Claim Imports from Customs"

Days on Average to Claim Imports from Customs					
Government Agency	1.372 (3.31)**	0.513 (0.95)	0.406 (0.74)	-0.162 (0.29)	0.114 (0.20)
Private Int'l. Survey Firm	-5.077 (4.00)**	-4.526 (3.50)**	-4.770 (3.68)**	-4.702 (3.57)**	-4.150 (3.17)**
Europe & Central Asia	2.991 (2.27)*	0.444 (0.32)	0.724 (0.51)	-0.499 (0.34)	-0.735 (0.51)
Latin America & Caribbean	4.169 (8.08)**	1.925 (2.86)**	2.200 (3.24)**	1.422 (1.97)*	1.462 (2.01)*
Middle East & North Africa	2.842 (7.72)**	1.250 (3.12)**	1.903 (4.60)**	1.334 (3.09)**	1.071 (2.39)*
South Asia	3.292 (7.48)**	0.877 (1.54)	1.748 (3.05)**	1.527 (2.54)*	1.192 (1.95)
Sub-Saharan Africa	3.944 (8.03)**	1.938 (3.10)**	1.745 (2.76)**	1.456 (2.20)*	1.111 (1.66)
Foreign Firm		-2.583 (9.51)**			-2.341 (7.91)**
Exporter			-2.088 (8.54)**		-1.665 (6.19)**
Small				-0.654 (1.32)	-0.473 (0.95)
Medium				-1.621 (3.00)**	-1.089 (1.99)*
Large				-1.942 (3.68)**	-1.104 (2.06)*
Very large				-2.430 (4.85)**	-1.326 (2.56)*
Constant	5.845 (13.80)**	8.675 (14.30)**	8.655 (14.04)**	10.187 (13.03)**	10.810 (13.62)**
Observations	9735	9072	8726	8297	8003
R-squared	0.05	0.06	0.06	0.06	0.07

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.7

Firm Survey Fixed Effects on “Days on Average to Clear Customs for Exports”

Days on Average to Clear Customs for Exports					
Government Agency	2.054 (6.65)**	2.074 (4.97)**	1.939 (4.47)**	1.548 (3.56)**	1.815 (4.04)**
Private Int'l. Survey Firm	-1.462 (1.09)	-1.108 (0.81)	-1.444 (1.04)	-1.383 (1.01)	-1.080 (0.79)
Europe & Central Asia	0.630 (0.46)	-0.694 (0.48)	0.129 (0.09)	-0.689 (0.48)	-0.454 (0.31)
Latin America & Caribbean	1.634 (4.21)**	0.480 (0.93)	1.063 (1.98)*	0.503 (0.92)	0.740 (1.31)
Middle East & North Africa	-1.931 (6.28)**	-3.247 (9.78)**	-2.524 (7.18)**	-2.623 (7.57)**	-2.821 (7.67)**
South Asia	2.825 (9.11)**	1.355 (3.27)**	2.254 (5.22)**	2.286 (5.33)**	2.203 (4.92)**
Sub-Saharan Africa	1.452 (3.36)**	0.374 (0.69)	0.737 (1.31)	0.332 (0.59)	0.527 (0.91)
Foreign Firm		-2.135 (9.61)**			-2.023 (8.40)**
Exporter			-1.147 (5.54)**		-0.929 (4.25)**
Small				-0.184 (0.41)	-0.052 (0.11)
Medium				-0.254 (0.54)	-0.034 (0.07)
Large				-0.816 (1.77)	-0.473 (1.01)
Very large				-0.823 (1.87)	-0.311 (0.69)
Constant	3.570 (11.43)**	5.200 (11.26)**	4.989 (10.33)**	5.240 (8.39)**	5.821 (8.98)**
Observations	8499	7691	7313	6903	6583
R-squared	0.03	0.05	0.04	0.05	0.06

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.8

Firm Survey Fixed Effects on "Optimal Level of Employment Compared to Current Level (%)"

	Optimal Level of Employment Compared to Current Level (%)				
Government Agency	-4.406 (5.99)**	2.686 (3.19)**	1.761 (2.04)*	3.612 (4.04)**	2.769 (2.97)**
Private Int'l. Survey Firm	32.311 (33.66)**	32.397 (33.84)**	31.801 (33.11)**	30.693 (31.82)**	30.147 (30.99)**
Europe & Central Asia	-24.731 (21.74)**	-13.875 (11.00)**	-14.021 (11.01)**	-14.643 (11.32)**	-14.672 (11.11)**
Latin America & Caribbean	15.635 (17.42)**	26.532 (25.24)**	25.848 (24.31)**	25.416 (23.03)**	24.953 (22.06)**
Middle East & North Africa	23.763 (26.52)**	27.616 (29.41)**	28.695 (30.33)**	25.063 (26.14)**	26.626 (27.14)**
South Asia	-3.649 (4.66)**	4.838 (5.39)**	5.397 (5.94)**	3.487 (3.75)**	4.391 (4.55)**
Sub-Saharan Africa	8.207 (8.29)**	17.749 (16.20)**	17.191 (15.54)**	17.097 (15.03)**	16.764 (14.44)**
Foreign Firm		-0.678 (1.01)			2.234 (3.07)**
Exporter			-2.754 (5.06)**		0.531 (0.86)
Small				-5.119 (8.12)**	-5.064 (7.89)**
Medium				-9.683 (11.90)**	-9.826 (11.75)**
Large				-12.171 (14.44)**	-12.522 (14.30)**
Very large				-14.120 (17.99)**	-14.763 (17.51)**
Constant	97.630 (132.65)**	86.792 (93.78)**	87.952 (93.58)**	94.922 (88.49)**	95.165 (86.27)**
Observations	26657	24927	24262	23373	22634
R-squared	0.09	0.11	0.11	0.12	0.12

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.9

Firm Survey Fixed Effects on "Days of Power Outages/Surges from Public Grid"

	Days of Power Outages/Surges from Public Grid				
Government Agency	-22.998 (24.25)**	-32.970 (25.21)**	-33.039 (25.10)**	-32.984 (24.69)**	-31.998 (23.86)**
Private Int'l. Survey Firm	-16.348 (18.49)**	-16.200 (17.75)**	-16.319 (17.92)**	-16.471 (17.98)**	-16.366 (17.84)**
Europe & Central Asia	5.191 (4.51)**	-5.488 (3.60)**	-5.307 (3.47)**	-5.673 (3.66)**	-5.009 (3.23)**
Latin America & Caribbean	-9.723 (10.34)**	-20.354 (14.95)**	-20.187 (14.79)**	-20.089 (14.34)**	-19.381 (13.80)**
Middle East & North Africa	22.942 (24.83)**	22.224 (20.86)**	22.364 (20.83)**	22.419 (20.66)**	22.046 (20.22)**
South Asia	31.075 (30.74)**	27.727 (23.97)**	28.925 (24.59)**	28.193 (24.02)**	28.412 (23.78)**
Sub-Saharan Africa	15.523 (13.64)**	5.547 (3.73)**	5.318 (3.55)**	5.490 (3.60)**	5.918 (3.87)**
Foreign Firms		-1.420 (2.00)*			-0.590 (0.78)
Exporter			-2.097 (3.72)**		-1.638 (2.64)**
Small				-2.364 (3.81)**	-2.245 (3.61)**
Medium				-3.313 (4.04)**	-3.072 (3.69)**
Large				-2.530 (2.91)**	-1.974 (2.23)*
Very large				-2.877 (3.57)**	-2.091 (2.44)*
Constant	20.774 (25.36)**	31.527 (24.60)**	31.667 (24.57)**	33.528 (24.56)**	32.966 (24.06)**
Observations	20343	18830	18650	18383	18229
R-squared	0.11	0.11	0.11	0.11	0.11

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.10

Firm Survey Fixed Effects on "Days of Insufficient Water Supply"

	Days of Insufficient Water Supply				
Government Agency	-0.713 (0.99)	-2.372 (2.40)*	-2.542 (2.55)*	-2.907 (2.89)**	-2.673 (2.64)**
Private Int'l. Survey Firm	1.255 (1.73)	1.466 (1.94)	1.267 (1.68)	1.106 (1.46)	1.264 (1.67)
Europe & Central Asia	1.610 (1.69)	-1.621 (1.24)	-1.372 (1.04)	-2.288 (1.72)	-2.242 (1.68)
Latin America & Caribbean	3.386 (4.32)**	0.228 (0.19)	0.417 (0.35)	-0.259 (0.21)	-0.144 (0.12)
Middle East & North Africa	15.652 (17.26)**	14.062 (13.71)**	14.606 (14.11)**	14.215 (13.67)**	14.253 (13.63)**
South Asia	5.883 (8.33)**	3.685 (4.09)**	4.172 (4.56)**	4.018 (4.39)**	3.839 (4.15)**
Sub-Saharan Africa	18.382 (18.12)**	15.486 (11.64)**	15.271 (11.37)**	15.113 (11.12)**	15.001 (10.97)**
Foreign Firm		-2.040 (3.48)**			-1.432 (2.31)*
Exporter			-1.035 (2.22)*		0.019 (0.04)
Small				-2.004 (3.79)**	-2.063 (3.90)**
Medium				-3.260 (4.74)**	-3.243 (4.67)**
Large				-3.020 (4.22)**	-3.047 (4.16)**
Very large				-3.606 (5.44)**	-3.359 (4.77)**
Constant	2.505 (3.67)**	5.843 (5.24)**	5.686 (5.02)**	8.339 (6.84)**	8.354 (6.82)**
Observations	19064	17670	17493	17365	17222
R-squared	0.03	0.03	0.03	0.03	0.03

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.11

Firm Survey Fixed Effects on “Days of Unavailable Mainline Telephone Service”

Days of Unavailable Mainline Telephone Service					
Government Agency	−4.001 (3.91)**	−3.671 (3.46)**	−3.557 (3.36)**	−3.855 (3.61)**	−3.690 (3.46)**
Private Int’l. Survey Firm	0.076 (0.15)	0.009 (0.02)	0.087 (0.16)	0.135 (0.26)	0.067 (0.13)
Europe & Central Asia	−1.497 (1.37)	−1.418 (1.27)	−1.426 (1.28)	−1.598 (1.43)	−1.383 (1.24)
Latin America & Caribbean	−2.038 (2.00)*	−1.982 (1.90)	−1.960 (1.89)	−2.261 (2.16)*	−2.067 (1.97)*
Middle East & North Africa	20.298 (24.37)**	20.143 (22.60)**	19.896 (22.14)**	20.322 (22.62)**	20.328 (22.44)**
South Asia	4.969 (8.17)**	4.710 (6.99)**	4.624 (6.77)**	4.277 (6.29)**	4.327 (6.29)**
Sub-Saharan Africa	12.854 (12.05)**	12.712 (11.67)**	12.290 (11.30)**	12.389 (11.30)**	12.222 (11.13)**
Foreign Firm		0.649 (1.57)			0.812 (1.87)
Exporter			−0.381 (1.12)		−0.725 (1.96)
Small				0.235 (0.64)	0.273 (0.74)
Medium				0.531 (1.09)	0.625 (1.27)
Large				1.045 (2.04)*	1.112 (2.12)*
Very large				0.363 (0.76)	0.496 (0.98)
Constant	5.165 (5.26)**	5.053 (5.02)**	5.169 (5.17)**	4.939 (4.81)**	4.772 (4.64)**
Observations	17355	16700	16516	16426	16295
R-squared	0.06	0.06	0.06	0.06	0.06

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.12

Firm Survey Fixed Effects on "Percent of Sales Lost Due to Power Outages/Surges"

	Percent of Sales Lost Due to Power Outages/Surges				
Government Agency	-0.083 (1.09)	-0.212 (2.37)*	-0.213 (2.35)*	-0.242 (2.62)**	-0.229 (2.43)*
Private Int'l. Survey Firm	0.091 (0.39)	0.096 (0.41)	0.074 (0.32)	-0.004 (0.02)	-0.013 (0.06)
Europe & Central Asia	0.674 (5.57)**	0.492 (3.65)**	0.548 (4.08)**	0.350 (2.57)*	0.386 (2.80)**
Latin America & Caribbean	0.468 (4.83)**	0.292 (2.59)**	0.350 (3.11)**	0.162 (1.38)	0.200 (1.68)
Middle East & North Africa	1.464 (15.00)**	1.412 (14.08)**	1.440 (14.47)**	1.234 (12.04)**	1.260 (12.09)**
South Asia	1.984 (24.20)**	1.841 (19.55)**	1.917 (20.36)**	1.724 (17.99)**	1.783 (17.91)**
Sub-Saharan Africa	0.615 (5.98)**	0.485 (4.33)**	0.525 (4.67)**	0.341 (2.94)**	0.341 (2.90)**
Foreign Firm		-0.165 (1.91)			0.106 (1.11)
Exporter			-0.367 (5.38)**		-0.136 (1.75)
Small				-0.164 (1.94)	-0.173 (2.02)*
Medium				-0.631 (6.11)**	-0.639 (6.07)**
Large				-0.675 (6.51)**	-0.681 (6.38)**
Very large				-0.890 (9.01)**	-0.874 (8.36)**
Constant	1.390 (18.15)**	1.580 (16.38)**	1.585 (16.41)**	2.062 (17.34)**	2.049 (16.94)**
Observations	14413	13821	13587	12293	12019
R-squared	0.06	0.06	0.06	0.06	0.06

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.13

Firm Survey Fixed Effects on “Percent of Sales Lost Due to Insufficient Water Supply Last Year”

	Percent of Sales Lost Due to Insufficient Water Supply Last Year				
Government Agency	1.016 (4.96)**	0.575 (2.37)*	0.573 (2.34)*	0.665 (2.64)**	0.653 (2.59)**
Private Int'l. Survey Firm	0.191 (0.58)	0.173 (0.52)	0.197 (0.59)	0.140 (0.42)	0.149 (0.44)
Europe & Central Asia	-0.486 (2.73)**	-0.963 (4.37)**	-0.930 (4.25)**	-0.856 (3.83)**	-0.881 (3.91)**
Latin America & Caribbean	0.068 (0.38)	-0.407 (1.84)	-0.373 (1.70)	-0.383 (1.70)	-0.402 (1.77)
Middle East & North Africa	-0.986 (6.02)**	-1.030 (6.10)**	-0.968 (5.60)**	-1.073 (6.22)**	-1.046 (5.96)**
South Asia	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Sub-Saharan Africa	-0.861 (3.43)**	-1.307 (4.62)**	-1.315 (4.61)**	-1.194 (4.08)**	-1.243 (4.22)**
Foreign Firm		-0.295 (1.57)			-0.235 (1.15)
Exporter			0.044 (0.34)		0.264 (1.86)
Small				0.194 (1.38)	0.164 (1.15)
Medium				0.125 (0.71)	0.089 (0.50)
Large				-0.037 (0.20)	-0.098 (0.51)
Very large				-0.383 (2.05)*	-0.461 (2.27)*
Constant	0.987 (6.64)**	1.481 (7.49)**	1.421 (7.24)**	1.342 (6.42)**	1.361 (6.43)**
Observations	2281	2191	2172	2164	2153
R-squared	0.04	0.04	0.04	0.05	0.05

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.14

Firm Survey Fixed Effects on "Percent of Sales Lost Due to Unavailable Telephone Service Last Year"

	Percent of Sales Lost Due to Unavailable Telephone Service Last Year				
Government Agency	-1.068 (4.62)**	-1.081 (4.67)**	-1.029 (4.44)**	-0.852 (3.48)**	-0.844 (3.42)**
Private Int'l. Survey Firm	-0.157 (0.48)	-0.147 (0.46)	-0.158 (0.49)	-0.273 (0.84)	-0.276 (0.85)
Europe & Central Asia	-1.557 (9.09)**	-1.583 (9.13)**	-1.532 (8.92)**	-1.430 (7.99)**	-1.420 (7.75)**
Latin America & Caribbean	-0.768 (4.64)**	-0.793 (4.73)**	-0.754 (4.55)**	-0.699 (3.87)**	-0.691 (3.76)**
Middle East & North Africa	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
South Asia	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)	0.000 (.)
Sub-Saharan Africa	-1.798 (7.98)**	-1.805 (8.01)**	-1.725 (7.53)**	-1.519 (6.28)**	-1.511 (6.18)**
Foreign Firm		-0.162 (0.96)			0.043 (0.24)
Exporter			-0.216 (1.73)		-0.013 (0.09)
Small				0.187 (1.06)	0.186 (1.05)
Medium				-0.323 (1.58)	-0.325 (1.57)
Large				-0.383 (1.83)	-0.386 (1.80)
Very large				-0.456 (2.21)*	-0.463 (2.07)*
Constant	2.028 (14.36)**	2.065 (14.10)**	2.057 (14.47)**	2.035 (12.15)**	2.028 (11.93)**
Observations	1685	1685	1685	1677	1677
R-squared	0.06	0.07	0.07	0.08	0.08

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Table A3.15

Firm Survey Fixed Effects on "Percentage of Average Cargo Value Lost in Transit"

Percentage of Average Cargo Value Lost in Transit					
Government Agency	-0.080 (1.12)	-0.203 (2.85)**	-0.183 (2.56)*	-0.191 (2.59)**	-0.176 (2.37)*
Private Int'l. Survey Firm	-2.051 (14.06)**	-1.623 (12.77)**	-1.629 (12.80)**	-1.628 (12.71)**	-1.629 (12.71)**
Europe & Central Asia	1.477 (14.58)**	0.871 (8.92)**	0.908 (9.31)**	0.913 (9.16)**	0.905 (9.02)**
Latin America & Caribbean	0.194 (2.41)*	-0.091 (1.12)	-0.064 (0.79)	-0.040 (0.47)	-0.056 (0.66)
Middle East & North Africa	0.317 (4.29)**	0.075 (1.13)	0.098 (1.48)	0.093 (1.33)	0.066 (0.94)
South Asia	0.075 (0.84)	-0.107 (1.28)	-0.102 (1.21)	-0.075 (0.87)	-0.115 (1.30)
Sub-Saharan Africa	0.204 (2.47)*	0.000 (0.00)	-0.013 (0.17)	0.020 (0.24)	-0.008 (0.09)
Foreign Firm		-0.143 (2.45)*			-0.181 (2.77)**
Exporter			0.089 (1.88)		0.153 (2.86)**
Small				0.046 (0.75)	0.037 (0.60)
Medium				-0.003 (0.04)	-0.020 (0.27)
Large				0.064 (0.86)	0.041 (0.54)
Very large				0.003 (0.04)	-0.039 (0.52)
Constant	0.941 (13.55)**	1.132 (15.43)**	1.074 (14.66)**	1.060 (12.00)**	1.075 (12.09)**
Observations	17335	15924	15783	14712	14477
R-squared	0.02	0.02	0.02	0.02	0.02

Note: Absolute value of t statistics in parentheses.

*significant at 5 percent; **significant at 1 percent.

All independent variables are dummies. Private local survey company is the omitted category.

Appendix 4

Table of $z_{\alpha/2}$ Distribution Corresponding to
Different Levels of Confidence α

α	$z_{\alpha/2}$	α	$z_{\alpha/2}$	α	$z_{\alpha/2}$	α	$z_{\alpha/2}$
68.3%	1	86.4%	1.49	94.0%	1.88	97.7%	2.27
68.8%	1.01	86.6%	1.5	94.1%	1.89	97.7%	2.28
69.2%	1.02	86.9%	1.51	94.3%	1.90	97.8%	2.29
69.7%	1.03	87.1%	1.52	94.4%	1.91	97.9%	2.30
70.2%	1.04	87.4%	1.53	94.5%	1.92	97.9%	2.31
70.6%	1.05	87.6%	1.54	94.6%	1.93	98.0%	2.32
71.1%	1.06	87.9%	1.55	94.8%	1.94	98.0%	2.33
71.5%	1.07	88.1%	1.56	94.9%	1.95	98.1%	2.34
72.0%	1.08	88.4%	1.57	95.0%	1.96	98.1%	2.35
72.4%	1.09	88.6%	1.58	95.1%	1.97	98.2%	2.36
72.9%	1.1	88.8%	1.59	95.2%	1.98	98.2%	2.37
73.3%	1.11	89.0%	1.60	95.3%	1.99	98.3%	2.38
73.7%	1.12	89.3%	1.61	95.4%	2.00	98.3%	2.39
74.2%	1.13	89.5%	1.62	95.6%	2.01	98.4%	2.40
74.6%	1.14	89.7%	1.63	95.7%	2.02	98.4%	2.41
75.0%	1.15	89.9%	1.64	95.8%	2.03	98.4%	2.42
75.4%	1.16	90.1%	1.65	95.9%	2.04	98.5%	2.43
75.8%	1.17	90.3%	1.66	96.0%	2.05	98.5%	2.44
76.2%	1.18	90.5%	1.67	96.1%	2.06	98.6%	2.45
76.6%	1.19	90.7%	1.68	96.2%	2.07	98.6%	2.46
77.0%	1.2	90.9%	1.69	96.2%	2.08	98.6%	2.47
77.4%	1.21	91.1%	1.70	96.3%	2.09	98.7%	2.48
77.8%	1.22	91.3%	1.71	96.4%	2.10	98.7%	2.49
78.1%	1.23	91.5%	1.72	96.5%	2.11	98.8%	2.50
78.5%	1.24	91.6%	1.73	96.6%	2.12	98.8%	2.51

α	$Z_{\alpha/2}$	α	$Z_{\alpha/2}$	α	$Z_{\alpha/2}$	α	$Z_{\alpha/2}$
82.3%	1.35	91.8%	1.74	96.7%	2.13	98.8%	2.52
82.6%	1.36	92.0%	1.75	96.8%	2.14	98.9%	2.53
82.9%	1.37	92.2%	1.76	96.8%	2.15	98.9%	2.54
83.2%	1.38	92.3%	1.77	96.9%	2.16	98.9%	2.55
83.5%	1.39	92.5%	1.78	97.0%	2.17	99.0%	2.56
83.8%	1.4	92.7%	1.79	97.1%	2.18	99.0%	2.57
84.1%	1.41	92.8%	1.80	97.1%	2.19	99.0%	2.58
84.4%	1.42	93.0%	1.81	97.2%	2.20	99.0%	2.59
84.7%	1.43	93.1%	1.82	97.3%	2.21	99.1%	2.60
85.0%	1.44	93.3%	1.83	97.4%	2.22	99.1%	2.61
85.3%	1.45	93.4%	1.84	97.4%	2.23		
85.6%	1.46	93.6%	1.85	97.5%	2.24		
85.8%	1.47	93.7%	1.86	97.6%	2.25		
86.1%	1.48	93.9%	1.87	97.6%	2.26		

Source: Rea and Parker 1997.

Appendix 5

Table of Random Numbers

7766	8840	8661	9670	7875	2977	2194	1237	6611	5342
7481	5371	1661	5913	3302	2595	9237	0318	4626	3786
0588	2012	1045	8022	3870	9411	2202	0837	7487	4904
0579	7695	6900	4870	6014	5311	0657	0626	6031	0674
7998	7098	9794	5599	4404	7589	6950	6403	9668	1789
5509	7915	1156	6588	0816	9695	3317	6045	8131	5046
7919	1649	9908	8001	5635	4142	7258	2039	3353	8526
2870	1206	7102	3450	3016	8358	3998	8401	2785	1735
5444	5359	3444	4993	6175	1987	3493	8516	1879	6594
9369	3143	9393	7739	7240	6632	9086	6588	4119	3686
2494	6541	6464	9513	4697	4312	8602	7950	6790	1419
0407	6701	5903	2737	8320	1782	1180	4608	3268	6026
6724	6338	7653	2914	0247	7031	2088	2431	1465	2335
6906	9051	4894	8977	4166	5460	6695	4673	7659	2005
6656	2091	6148	9173	9880	9694	4509	9321	9040	0301
3648	0201	8894	2008	0764	0884	2641	2554	4365	8224
6293	8557	1206	0788	2237	0384	8069	9329	2234	6788
9401	557	7198	4726	5899	7211	6993	2246	7252	7562
5294	1897	8249	7684	8683	0527	5327	1640	9434	8186
2743	7839	7117	1672	4337	6073	8341	3132	6105	3789
4600	1971	6306	7527	0157	5961	8670	3335	5477	8138
2958	0144	3962	8316	9746	3127	2743	6766	3508	8634
1931	8079	6347	8056	0071	0617	4970	2675	5543	4684
0252	3123	7412	1662	2119	7663	3343	1716	9600	4250
0600	1363	5737	5183	4558	2101	0289	8807	7432	2187
7184	7511	6759	5868	5882	3186	572	6780	0717	2777
5303	1777	7720	3326	1776	3497	2738	9829	4887	9410

4694	3749	8090	7967	6811	505	4648	8041	9757	6185
8419	1226	6768	2864	3548	3254	8389	5906	2664	4831
7148	5893	906	1180	1738	4855	8443	1915	7249	2935
8950	2714	2008	8494	1097	4638	6323	8662	4332	1552
7931	1476	3638	4119	1930	5546	4686	5007	1026	6696
5050	4902	7768	5939	2570	5703	6062	6720	5565	8794
2456	9038	3484	8709	2590	4033	8477	0657	7875	0600
2116	5291	9382	8136	4527	7955	4223	6178	7026	0420
0193	8067	9122	7735	1245	2806	0333	8267	1504	4244
3838	2705	9429	3924	9273	1294	9710	1580	4041	0520
9087	6103	9635	9027	1197	3679	9198	4046	1803	7159
4849	8586	6334	892	3783	8668	0896	3808	2683	7869
4503	3955	5137	8928	4668	4722	0701	5000	0536	7813
1471	6670	3756	6138	5505	2347	9451	8565	9249	8731
0210	5175	242	4484	5118	1807	1996	9551	6277	1873
3893	889	7898	7729	5549	5555	2251	4253	2664	8323
1756	9782	0237	2753	6799	9267	3463	8867	8475	2270
3095	8249	0420	0891	1146	6260	9657	2475	4158	4325
9616	7652	8895	4913	2182	8584	1901	0364	7491	5092
0122	0438	4559	9192	5320	8675	1812	3015	4428	2273
4411	3822	8231	0146	0589	3644	1407	2580	8004	0677
2687	1533	9055	7113	9331	0730	2159	7141	7703	4704
4910	3376	7024	3533	1969	4117	6048	7872	2123	4424

Source: Kish 1965.

Appendix 6

Information Disclosed in Survey Introductions

	Percent
1 Research organization	85.9
2 Study director's name	82.1
3 Research topic	80.8
4 Sponsor	44.9
5 Confidentiality	42.3
6 Anonymity	25.6
7 Purpose	25.6
8 Future data use	24.4
9 Sampling technique	20.5
10 Survey length	12.8
11 Participation voluntary	10.3
12 Sample size	3.8
13 Consent signature	3.8
<i>Source:</i> Sobal 1984.	

Appendix 7
Minimum Field Work Log Data

ID	Strata	Super-visor	Visits	Non Response	Response	Post Stratification
			1st	REF = Refuse	AGR=agree to participate	(final strata)
			2nd	OOS = Out of scope	F1 = Form partially completed	
			3rd	NC = No Contact	FF = Form fully completed	
					FV = Form validated	
					FE = Form entered	
1	A	JM	12–Dec	OOS		A
2	A	JM	13–Dec		AGR	C
3	B	JM	14–Dec		AGR	B
4	B	GI	13–Dec	REF	AGR	B
5	C	GI	14–Dec		F1	A
6	C	GI	14–Dec		FF	C
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