Access to Credit by Firms in Sub-Saharan Africa: How Relevant is Gender?

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Appendix

Figure A1: Percentage of Male and Female Firms that are Financially Constrained

Source: World Bank Enterprise Survey database (online)

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Table A1: Variable description and data sources

Variable Name	Description	Data Source
Female-owned	Dummy variable = 1 if at least one principal owner is a female, 0 otherwise	WBES
Small firm	5-19 employees	WBES
Medium firm	20-99 employees	WBES
Large firm	100 or more employees	WBES
Sole proprietorship	Sole proprietor	WBES
Publicly traded	Shareholding company with shares trade in the stock market	WBES
Private or non-traded	Shareholding company with non-traded shares or shares traded privately	WBES
Financial transparency	Dummy variable = 1 if the firm's annual financial statements were checked and certified by an external auditor the previous year, 0 otherwise.	WBES
Technological capability	Dummy variable = 1 if the firm has a website, 0 otherwise	WBES
Foreign-owned	Dummy variable = 1 if at least 10 percent of ownership is held by foreigners, 0 otherwise	WBES
Inflation	Inflation rate based on CPI	WDI
Credit/GDP	Credit to the private sector/GDP	WDI
Legal system	Legal rights and protection (index = 0 to 10)	WDI

WBES = World Bank Enterprise Survey database; WDI = World Development Indicators.

WBES and WDI are produced and published by The World Bank online at:

<http://www.enterprisesurveys.org> and <http://data.worldbank.org/data-catalog/world-development-indicators>

Table A2: Average Financing constraints Across Firms

	All Countries	Sub- Saharan Africa	Latin America & Caribbean	East Asia & Pacific	East & Central Asia
Number of Countries	90	25	22	10	30
Panel A: All Firms					
Total number of Firms	34994	8186	7170	4550	11974
% female- owned	37	29	40	52	40
<i>f_con</i>	1.66	1.94	1.76	1.21	1.51
<i>f_con1</i> (% constrained)	52	58	56	38	49
Female-owned firms					
Total number of Firms	13017	2376	2873	2350	4788
<i>f_con</i>	1.70	2.11	1.76	1.24	1.49
<i>f_con1</i> (% constrained)	54	65	55	38	49
Male-owned firms					
Total number of Firms	21977	5810	4297	2200	7186
<i>f_con</i>	1.65	1.89	1.75	1.21	1.53
<i>f_con1</i> (% constrained)	52	56	56	38	50

Source: World Bank Enterprise Survey (online)

Notes: *f_con* is the measure of financing constraint based on the response by firms to the question: “To what degree is access to finance an obstacle to the current operations of this establishment?” It takes on values 0-4, where a higher number implies that a firm is more constrained. *f_con1* takes on the value 1 if the firm is financially constrained and 0 otherwise.

Table A3. Summary Statistics for regression variables: Means

<i>Variable</i>	<i>All countri es</i>	<i>Sub- Saharan Africa</i>	<i>Latin America & Caribbean</i>	<i>East Asia & Pacific</i>	<i>East & Central Asia</i>
Financing constraint index	1.61	1.92	1.77	1.09	1.5
Financing constraint dummy	0.51	0.57	0.57	0.34	0.5
Female-owned	0.37	0.29	0.40	0.52	0.4
Small firm	0.49	0.67	0.41	0.46	0.4
Medium firm	0.31	0.24	0.37	0.32	0.3
Large firm	0.20	0.09	0.21	0.22	0.2
Sole Proprietorship	0.31	0.48	0.26	0.47	0.2
Publicly traded	0.07	0.01	0.07	0.04	0.1
Privately or non- traded	0.47	0.37	0.52	0.30	0.6
Partnership	0.14	0.13	0.13	0.17	0.1
Foreign ownership	0.12	0.16	0.12	0.16	0.1
Financial transparency	0.48	0.47	0.59	0.45	0.5
Technological Capability	0.40	0.17	0.51	0.33	0.5
Inflation	7.69	9.07	5.84	7.37	7.5
Private sector credit/GDP (%)	51.85	40.90	62.34	55.41	51.8
Efficiency of the legal system	5.79	6.18	5.27	4.85	6.2

Source: World Bank Enterprise Survey; World Bank, *World Development Indicators* database (online)

Table A4. Financing constraint indicators by country

F_con is a measure of financing constraints based on the response by firms to the question: “To what degree is access to finance an obstacle to the current operations of this establishment?” The answers are: (0) not an obstacle; (1) minor obstacle; (2) moderate obstacle; (3) major obstacle (4) very severe obstacle. F_con equals 0 to 4 where a higher number implies a firm is more constrained. f_con1 equals 1 if a firm reported that access to finance was a “moderate”, “major” or “very severe” obstacle, and zero otherwise. F_con1 is the percentage of firms in each country that are financially constrained.

Country/Region	<i>All firms</i>				<i>Female-owned firms</i>		
	No. of Firms	% female-owned	F_con	F_con1	No. of Firms	F_con	F_con1
<i>All Countries (90 Countries)</i>	<i>34994</i>	<i>37</i>	<i>1.66</i>	<i>52</i>	<i>13017</i>	<i>1.70</i>	<i>54</i>
<i>Sub-Saharan Africa (25 Countries)</i>	<i>8186</i>	<i>29</i>	<i>1.94</i>	<i>58</i>	<i>2376</i>	<i>2.11</i>	<i>65</i>
Angola	422	24	2.29	66	103	2.25	65
Botswana	340	45	1.86	56	154	1.98	60
Burundi	268	33	2.30	70	88	2.56	80
Congo	27	26	2.00	74	7	2.00	71
DRC	340	18	2.52	71	62	2.95	84
Gabon	46	24	1.83	59	11	2.55	91
Gambia	174	21	1.79	56	37	1.78	59
Ghana	494	49	2.66	79	242	2.65	78
Guinea	223	26	2.55	74	57	2.68	77
Guinea Bissau	157	19	2.90	81	30	2.67	73
Kenya	654	36	1.95	58	237	2.05	62
Lesotho	66	21	1.38	45	14	2.00	71
Liberia	27	30	1.96	56	8	2.25	63
Mali	490	17	2.51	69	82	2.35	66
Mauritania	236	16	2.12	63	38	2.32	66
Mozambique	473	25	2.11	62	116	2.06	60
Namibia	322	30	1.12	32	98	1.15	33
Rwanda	209	41	1.50	47	86	1.43	41
Senegal	505	26	2.10	61	133	2.06	61
Sierra Leone	30	10	1.23	33	3	2.67	100
South Africa	925	22	0.74	23	207	1.00	30
Swaziland	304	28	1.57	49	86	1.72	53
Tanzania	413	26	1.84	56	106	1.83	59
Uganda	558	31	2.31	73	171	2.26	73
Zambia	483	41	1.33	41	200	1.41	44

<i>Latin America & Caribbean</i> <i>(22 Countries)</i>	<i>7170</i>	<i>40</i>	<i>1.76</i>	<i>56</i>	<i>2873</i>	<i>1.76</i>	<i>55</i>
Antigua & Barbuda	147	18	2.01	64	27	1.96	56
Bahamas	139	55	1.07	34	77	1.12	34
Barbados	143	40	1.82	57	57	1.96	60
Belize	150	27	2.59	81	40	2.80	90
Brazil	1161	55	2.30	76	637	2.25	75
Costa Rica	510	37	2.11	69	188	2.17	68
Dominica	150	38	2.61	77	57	2.74	81
Dominican Republic	335	35	1.49	49	117	1.35	39
El Salvador	342	42	1.80	63	143	1.77	61
Grenada	141	57	1.50	50	80	1.55	53
Guatemala	568	33	1.49	51	188	1.45	48
Guyana	161	58	1.31	40	94	1.32	40
Honduras	324	38	1.64	52	123	1.67	51
Jamaica	327	39	1.72	54	126	1.39	46
Mexico	1008	28	1.56	53	280	1.50	53
Nicaragua	312	49	1.27	42	154	1.27	44
Panama	343	22	0.90	22	77	1.00	25
St. Kitts & Nevis	139	58	1.96	61	81	1.81	57
St. Lucia	150	33	2.21	68	49	2.41	76
St. Vincent & Grenadines	138	76	1.45	38	105	1.53	42
Suriname	152	18	1.99	63	28	1.96	57
Trinidad & Tobago	330	44	1.80	60	145	1.66	51
<i>East Asia & Pacific</i> <i>(10 Countries)</i>	<i>4550</i>	<i>52</i>	<i>1.21</i>	<i>38</i>	<i>2350</i>	<i>1.24</i>	<i>38</i>
Fiji	142	49	0.88	25	69	0.91	26
Indonesia	1276	37	1.13	36	468	1.21	38
Lao PDR	356	37	1.31	37	131	1.23	31
Micronesia	60	87	1.42	48	52	1.35	46
Philippines	1207	66	0.89	27	798	0.93	28
Samoa	94	82	1.33	41	77	1.38	44
Timor Leste	146	43	1.03	32	63	1.37	41
Tonga	145	66	1.46	48	96	1.41	44
Vanuatu	126	52	1.59	48	65	1.58	46
Vietnam	998	53	1.06	35	531	1.05	35
<i>East & Central Asia</i> <i>(30 Countries)</i>	<i>11974</i>	<i>40</i>	<i>1.51</i>	<i>49</i>	<i>4788</i>	<i>1.49</i>	<i>49</i>

Albania	260	15	1.36	47	38	1.42	50
Armenia	362	36	1.72	58	130	1.75	58
Azerbaijan	351	14	1.60	52	49	1.67	57
Belarus	231	50	1.84	61	116	1.68	55
Bosnia and Herzegovina	336	38	1.64	54	128	1.92	62
Bulgaria	1235	38	1.29	43	473	1.31	45
Croatia	561	35	1.28	40	198	1.33	40
Czech Republic	213	30	1.65	57	63	1.44	48
Estonia	239	41	0.60	21	98	0.47	17
Fyr Macedonia	347	41	1.61	55	141	1.58	55
Georgia	330	40	1.62	53	133	1.55	51
Hungary	276	42	0.67	20	117	0.76	24
Kazakhstan	516	32	1.76	54	163	1.67	56
Kosovo	169	12	1.39	39	20	1.35	45
Kyrgyz Republic	222	63	1.67	59	139	1.73	61
Latvia	251	51	1.49	51	127	1.29	44
Lithuania	256	38	1.55	52	97	1.46	49
Moldova	327	56	1.81	57	184	1.70	54
Mongolia	343	55	2.04	65	187	2.12	64
Montenegro	100	24	0.92	32	24	0.88	33
Poland	351	48	1.61	53	169	1.51	47
Romania	411	47	1.76	60	192	1.79	58
Russia	918	40	2.03	64	365	2.09	65
Serbia	366	39	1.72	58	141	1.80	61
Slovak Republic	224	32	1.44	50	71	1.39	48
Slovenia	268	48	1.25	38	128	1.15	34
Tajikistan	331	32	1.49	47	105	1.63	52
Turkey	1074	44	0.96	28	477	1.00	30
Ukraine	750	47	1.95	62	350	1.87	60
Uzbekistan	356	46	1.54		165	1.40	
<i>South Asia (3 Countries)</i>	2538	19	1.57	51	488	1.62	53
Bangladesh	1498	22	1.70	52	324	1.67	55
Bhutan	219	33	1.72	59	72	1.69	57
Pakistan	821	11	1.30	42	92	1.49	47

Source: World Bank Enterprise Survey database (online)