Integration Costs and Missing Women in Firms around the World

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Online Appendix

Table A1—: Manufacturing Firms with Zero Female Employees and Workforce Composition, by Region

|	All-male share of firms (%), by size		Female share (%)	
	Medium (20 - 99)	Large (100+)	Surveyed firms	Labor force
Sub-Saharan Africa	10.5	2.3	27.0	47.5
East Asia and Pacific	1.8	0.5	41.2	42.8
Eastern and Central Europe	2.5	0.7	38.4	43.9
Latin America and Caribbean	3.0	0.8	32.8	41.1
Middle East and North Africa	48.1	22.7	16.9	21.1
South Asia	49.9	28.6	14.5	23.5

Note: Table reproduced from Miller, Peck and Seflek (2022). All-male share of firms calculated from World Bank Enterprise Survey, 2006 2018. Female share of labor force is derived from 2018 World Bank Development Indicators for the same countries and is not restricted to manufacturing.

Table A2—: List of World Bank Enterprise Surveys

| Country	Region	Year	# Firms	% Female	Country	Region	Year	# Firms	% Female
Argentina	LAC	2006	559	23.8	Lao	EAP	2018	119	34.5
Argentina	LAC	2010	703	18.9	Lebanon	MNA	2013	174	21.0
Argentina	LAC	2017	571	20.8	Madagascar	AFR	2009	185	50.5
Armenia	ECA	2009	108	35.3	Mexico	LAC	2006	1060	35.9
Azerbaijan	ECA	2009	118	39.2	Mexico	LAC	2010	1065	31.5
Azerbaijan	ECA	2013	107	31.8	Mongolia	EAP	2009	126	56.7
Bangladesh	SAR	2007	1160	46.1	Mongolia	EAP	2013	106	51.7
Bangladesh	SAR	2013	1073	46.1	Morocco	MNA	2013	120	45.8
Belarus	ECA	2013	110	44.0	Myanmar	EAP	2014	314	58.2
Bosnia-Herzegovina	ECA	2009	112	36.3	Nepal	SAR	2009	122	12.7
Bosnia-Herzegovina	ECA	2013	103	37.3	Nepal	SAR	2013	231	14.9
Bolivia	LAC	2006	340	28.0	Nicaragua	LAC	2006	292	19.0
Bolivia	LAC	2010	106	20.2	Pakistan	SAR	2007	640	1.5
Botswana	AFR	2006	101	45.3	Panama	LAC	2006	223	27.3
Brazil	LAC	2009	1205	34.3	Panama	LAC	2010	105	33.0
Bulgaria	ECA	2007	501	52.2	Paraguay	LAC	2006	351	28.3
Chile	LAC	2006	602	25.7	Paraguay	LAC	2010	107	33.8
Chile	LAC	2010	755	19.0	Peru	LAC	2006	337	45.0
China	EAP	2012	1597	39.8	Peru	LAC	2010	715	25.4
Colombia	LAC	2006	588	53.0	Peru	LAC	2017	508	29.9
Colombia	LAC	2010	665	50.4	Philippines	EAP	2009	846	44.3
Colombia	LAC	2017	481	43.3	Poland	ECA	2009	108	43.7
Costa Rica	LAC	2010	285	22.5	Poland	ECA	2013	123	24.7
Croatia	ECA	2007	303	40.5	Romania	ECA	2009	135	44.7
Croatia	ECA	2013	109	42.0	Romania	ECA	2013	157	24.0
Dominican Republic	LAC	2010	109	27.2	Russia	ECA	2009	540	45.3
DRC	AFR	2006	128	10.1	Russia	ECA	2012	1106	42.6
DRC	AFR	2010	100	11.0	Serbia	ECA	2009	119	33.7
Ecuador	LAC	2006	336	24.2	Serbia	ECA	2013	105	40.8
Ecuador	LAC	2010	114	25.8	South Africa	AFR	2007	619	30.1
Egypt	MNA	2013	1535	11.4	Sri Lanka	SAR	2011	345	42.5
Egypt	MNA	2016	1063	13.0	Sweden	ECA	2014	277	22.8
El Salvador	LAC	2006	384	48.2	Tajikistan	ECA	2008	102	39.3
El Salvador	LAC	2010	121	44.0	Trinidad & Tobago	LAC	2010	110	29.1
El Salvador	LAC	2016	336	39.1	Tunisia	MNA	2013	280	43.1
Ethiopia	AFR	2011	218	44.6	Turkey	ECA	2008	699	27.7
Ethiopia	AFR	2015	340	37.0	Turkey	ECA	2013	872	23.0
Georgia	ECA	2008	104	38.9	Uganda	AFR	2006	254	20.7
Guatemala	LAC	2006	266	32.1	Uganda	AFR	2013	267	24.1
Guatemala	LAC	2010	326	30.3	Ukraine	ECA	2008	381	47.0
Guatemala	LAC	2017	118	33.3	Ukraine	ECA	2013	537	43.4
Honduras	LAC	2006	221	29.0	Uruguay	LAC	2006	315	38.9
Honduras	LAC	2010	111	28.4	Uruguay	LAC	2010	303	31.4
India	SAR	2014	6282	11.6	Uzbekistan	ECA	2008	116	37.8
Indonesia	EAP	2015	978	39.4	Uzbekistan	ECA	2013	116	32.8
Iraq	MNA	2011	377	1.6	Vietnam	EAP	2009	716	47.5
Israel	MNA	2013	170	29.0	West Bank & Gaza	MNA	2013	123	4.1
Jordan	MNA	2013	238	13.2	Yemen	MNA	2010	191	3.4
Kazakhstan	ECA	2009	147	40.8	Zambia	AFR	2007	276	12.2
Kazakhstan	ECA	2013	153	28.5	Zambia	AFR	2013	283	13.9
Kenya	AFR	2007	373	15.5	Zimbabwe	AFR	2011	332	16.2
Kenya	AFR	2013	338	19.0	Zimbabwe	AFR	2016	262	21.1
Kenya	AFR	2018	269	15.5					

Note: This table lists the World Bank Enterprise Surveys that we include in our analysis. We limit our samples to manufacturing firms, where surveys include questions on the gender composition of employees by occupation. Next, we drop surveys where information on gender composition is missing for more than 20% of firms. In remaining surveys, we drop firms with missing data on gender composition or fewer than 5 employees. We then drop surveys with fewer than 100 remaining firms. This leaves us with 105 surveys in 65 countries. The six regions are: sub-Saharan Africa (AFR), East Asia and Pacific (EAP), Eastern and Central Europe (ECA), Latin America and Caribbean, Middle East and North Africa (MENA), and South Asia (SAR). '# of Firms refers to the number of firms remaining in the survey following our sample restrictions. '% Female is the female share of workers in these firms, weighted by firm sample weights.

Figure A1. : Distribution of Female Employment across Firms, by Country
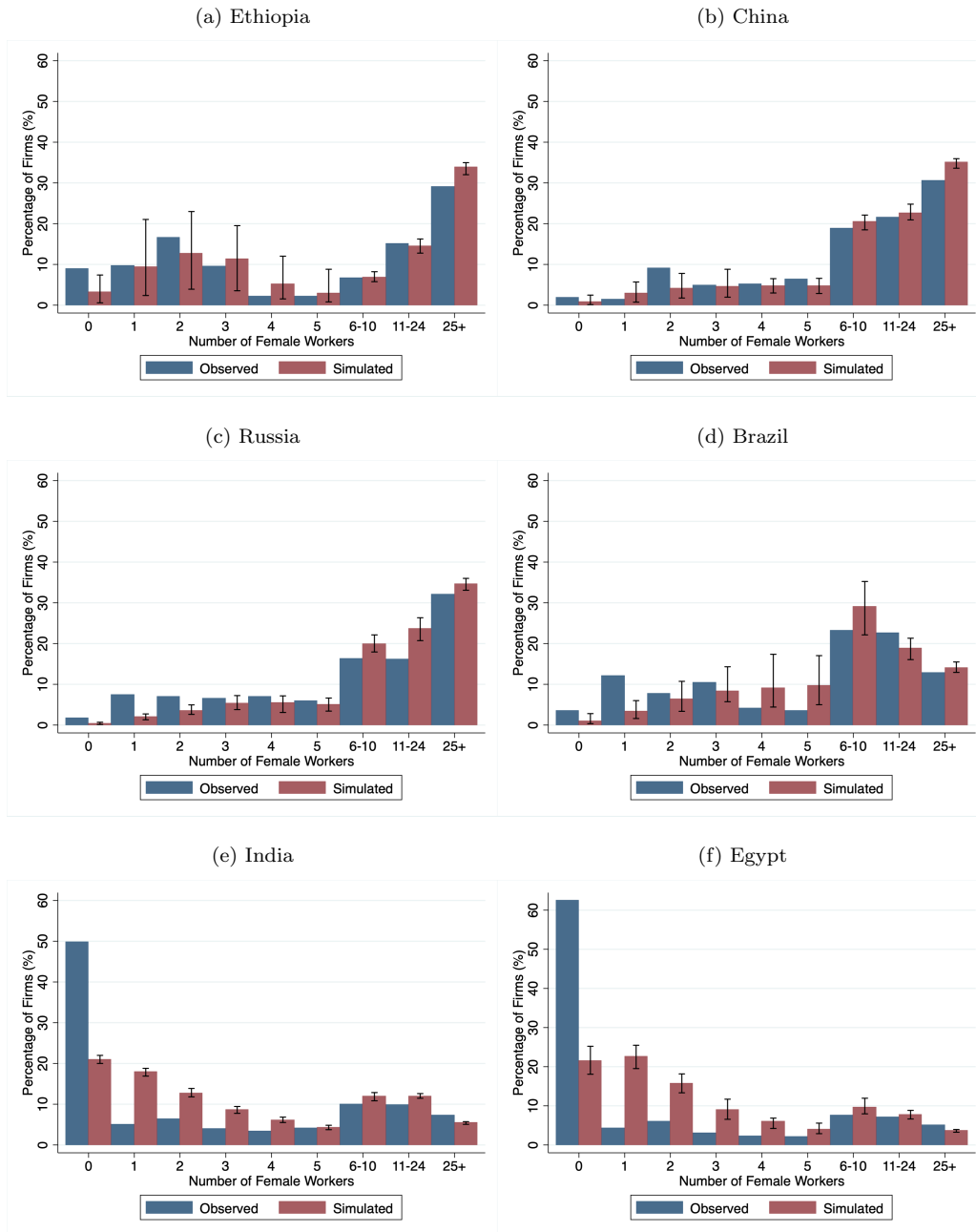
(a) Ethiopia

(b) China

(c) Russia

(d) Brazil

(e) India

(f) Egypt

Note: This set of figures compares observed and simulated distributions of female employment across firms for six countries: Ethiopia, China, Russia, Brazil, Egypt, and India. The simulated distributions are simulated under the null hypothesis that no firm in that country faces binding integration costs. Sample selection and simulation details are described in Sections I and II.A.

Figure A2. : Distribution of Female Employment Across *Large* Firms, by Country
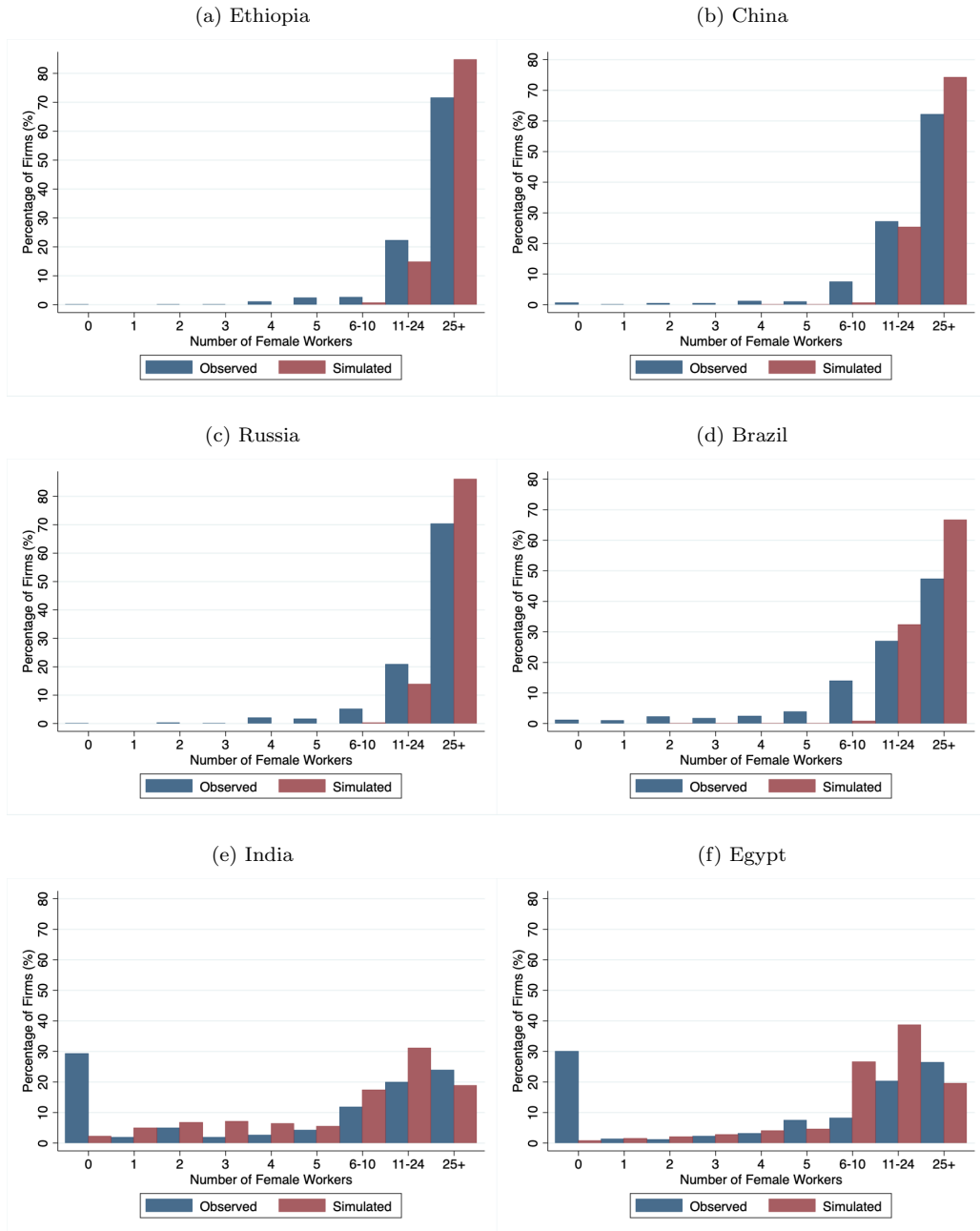
(a) Ethiopia

(b) China

(c) Russia

(d) Brazil

(e) India

(f) Egypt

Note: This set of figures compares observed and simulated distributions of female employment across firms for six countries: Ethiopia, China, Russia, Brazil, Egypt, and India. We limit to firms with at least 50 employees. The simulated distributions are simulated under the null hypothesis that no firm in that country faces binding integration costs. Sample selection and simulation details are described in Sections I and II.A.

Table A3—: Female Employment and Integration Rates Across Countries

	EMP_F		$EMP_F - EMP_M$	
	(1)	(2)	(3)	(4)
Ex-ante integration rate:				
Overall ($\hat{\theta}^{EP}$)	0.388**	0.243**	0.420**	0.264**
	(0.083)	(0.097)	(0.065)	(0.073)
Overall ($\hat{\theta}^{S}$)	0.572**	0.262˜	0.582**	0.237˜
	(0.137)	(0.152)	(0.113)	(0.119)
Representative firm ($\theta_j^{EP} \cdot n_j = 10$)	0.461**	0.321**	0.459**	0.324**
	(0.085)	(0.101)	(0.069)	(0.075)
Region FEs		✓		✓
Observations	65	65	65	65

Note: Table reports OLS estimates of regressions of female employment measures on ex-ante integration rates. EMP_F is the average percentage of women age 15+ that are employed in the years the manufacturing surveys were conducted, averaged across years, and $EMP_F - EMP_M$ is the difference between female and male employment rates. Robust standard errors are in parentheses. ˜ p<0.1; * p<0.05; ** p <0.01.