Women's Property Rights Equality and Entrepreneurial Activity

Colin O'Reilly Creighton University 2500 California Plaza Omaha, NE 68178 402-280-4804 colinoreilly@creighton.edu

Kathleen M. Sheehan Creighton University 2500 California Plaza Omaha, NE 68178 402-280-1193 kathleensheehan@creighton.edu

Abstract:

Entrepreneurial activity is shaped by institutions. However, past research has largely assumed that everyone has equal property rights even though women often operate under a different property rights structure than men. We fill a gap in the literature by examining how the property rights of women impacts the extent of entrepreneurship. We test these empirical relationships in a panel of 109 countries using data on property rights from the *Economic Freedom of the World* dataset and data on entrepreneurship from the *Global Entrepreneurship Monitor* dataset. We find that weaker property rights for women are associated with less female entrepreneurship.

Keywords: Economic Growth, Property Rights, Institutions, Gender, Economic Development JEL codes: O43, O47, P48, J16

I.

the relationship between women's property rights and early-stage female entrepreneurship using individual-level data across 104 countries between 2001 and 2019. In all cases we find evidence that more equal property rights protections between men and women is associated with more female entrepreneurship.

In section II we review the literature on both the institutional determinants of entrepreneurship and female entrepreneurship more generally. Section III describes the measures entrepreneurship and the measure of property rights, along with the empirical methods used to analyze the data. The results are presented in section IV and section V concludes.

II. Economic Institutions and Entrepreneurship

Baumol (1990) provides a framework to understand the allocation and productivity of entrepreneurship across time and place. He shows that the institutional environment, the rules of the game, determine the incentives faced by the entrepreneur. In his framework, there is no reason to believe that people in a given time or place are innately more or less entrepreneurial, but rather that the environment created by institutions shapes the style of entrepreneurship in significant ways. The economic institutions make the entrepreneurs more or less productive based on the incentives they provide and help determine whether the entrepreneur engages in productive or unproductive entrepreneurship. A substantial literature has found that the institutional environment influences the formation of entrepreneurship (Boudreaux and Nikolaev, 2019; Estrin, Korosteleva, and Mickiewicz, 2013

where either the formation of the entrepreneur differs slightly from expected theory or that only some economic institutions are important, perhaps because of other institutions like corruption.

While institutions are continuously discussed as important, few studies have examined how entrepreneurship and female entrepreneurship are determined by an institutional context that may differ substantially between men and women. In many countries, women are not guaranteed the same property rights as men; in these countries, women face a very different set of incentives to engage in entrepreneurship then men. As the institutional conditions change in countries, property rights improve for women and the gap between the rights of men and woman decrease, the incentives to engage in entrepreneurship increase. As property rights are expanded and greater equality is achieved, this provides an increased opportunity for women's involvement in the economy. This involvement can come through multiple channels.

The increase in access to markets that comes with greater equality in property rights will lower the transaction costs associated with this market engagement and lead to an increase in entrepreneurship (North, 1990; Williamson, 2000). The change in institutional quality will also alter the opportunity cost of staying out of the market and we believe lead to an increase in entrepreneurship. Goldin (2006) examines how changes in the economy of the United States over the last 100 years has encouraged women to enter the labor force. The economic and institutional development of the US causes a rightward shift in the labor supply curve in the early 1900s when the US was less developed and later, when the US became more developed, led to an increase in the substitution elasticity of the labor supply partnered with an increase in demand. Both the shift in supply and the change in elasticity lead to an increase in women's employment. Applying this logic more generally, a change in property rights would similarly affect the quantity of female entrepreneurs. In developing countries as rights expand and greater equality is reached, there will

be an increase in the supply of female entrepreneurs. In developed countries, this will likely result in an increase in quantity supplied. In all cases, we expect that an improvement in property rights will lead to higher levels of female entrepreneurship.

One of our contributions in this paper is adding economic institutions into the study of the determinants of female entrepreneurship. Overall, economic institutions and specifically the unequal application of property rights has been ignored in the discussion. The few studies that come close to addressing this topic include the following. In a recent paper, Fang et al. (2019) specifically examine how foreign direct investment is important for entrepreneurship but highlight the role of access to finance, education, previous labor force participation, and lower barriers to entry for woman as important too. Hyland and Islam (2021) demonstrate that laws that discriminate against women also encourage women to enter into the informal sector for entrepreneurship. Goltz et al. (2015) specifically examine women's entry into entrepreneurship controlling for the rule of law, but with an interest in political empowerment and find that the rule of law provides a moderating effect for political empowerment. Finally, Ashraf et al. (2019) study of how institutions influence female entrepreneurship in Zambia.

An increase in female entrepreneurship is desirable for several reasons, especially in developing countries. While female entrepreneurship in developed countries does not appear to be a strong determinaentr

emerging economies in terms of innovation. Entrepreneurship research largely assumes that entrepreneurship is an important mechanism for long term development and that institutional factors, while understudied, are a vital piece of the puzzle to reconcile the conflicted relationship found in the research (Naudé, 2011, 2010; Urbano et al., 2020). Improvements in the institutional environment for women allow women to increase their participation in the economy and help move the county closer to their production possibility frontier, improving the overall efficiency of the economy (for example, Saridakis et al., 2021). Through this channel, the country should see higher levels of economic growth and prosperity as more women enter into entrepreneurship.

- III. Methods and Data
 - a. Measuring Institutions

We analyze how institutional protection of property rights for women affects female entrepreneurship in two different models. In both models we use institutional measures from the Economic Freedom of the World (EFW) index published by the Fraser Institute. The EFW index is a measure of the extent to which the institutions of a country are consistent with the concept of economic freedom or self-ownership (Gwartney et al., 2022) and is often used as a measure of independent and unbiased judiciary, and impartial and effective enforcement of the law" (Gwartney et. al 2022: 3).

The current version of the EFW index includes an adjustment to the legal system and property rights component to account for the fact that women are not afforded the same institutional protections under the law as men. The gender legal adjustment index was originally constructed by (Fike, 2017) based on the Women, Business and the Law (WBL) dataset and has been updated since (Gwartney et al. 2022). The Fike index is bounded between zero and one and is constructed such that higher values indicate fewer legal disparities. The new adjusted legal system and property rights index is calculated as one-half times the unadjusted index times the gender adjustment index (measuring prope property rights (Hall and Lawson 2014) and the concentration on negative rights that we believe are a channel for additional entrepreneurship through institutional change.

b. Cross-Country Analysis of Entrepreneurship

We use the measures of entrepreneurship from the Global Entrepreneurship Monitor (GEM). GEM defines Total Early-

shown inconsistencies and unintended consequences in the relationship (for example, Bradley et al. 2021). The better inclusion of women in the research on institutions and entrepreneurship adds to this continuous conversation and can better inform policy considerations.

The nature of our measure of institutions allows for multiple tests of the importance of property rights for women. The measure of institutional quality (the quality of the legal system and property rights), , is available in a form that has been adjusted, , for the fact that women do not have the same institutional protections as men using the Fike gender adjustment index discussed above. In addition, we reconstruct the property rights index such that the measure does not account for this fact, an unadjusted measure, . Finally, we construct a measure of the gap between the quality of institutions for women and the quality of institutions for men, (a measure of equality of property rights). This measure is simply the gap measure of the difference between the legal system and property rights

=	+	+	+	+	(1)

= + + +

effects . Countries are indexed by i, individuals are indexed by j, and time is indexed by t. The dependent variable, female entrepreneurship, , is a binary variable. Therefore, regression analysis is conducted using a logit model, which produces coefficient estimates as odds ratios (an odds ratio greater than one is interpreted as a positive effect).

=

Table 1: Summary Statistics

Variable	Mean	SD	Min	Max	Ν
GEM Country-Level					
% of Pop. Total Early Stage Entrep.	11.555	7.628	1.480	49.600	973
Ratio % Female TEA/% Male TEA	0.636	0.218	0.050	1.690	973
Ratio % Female Opp. TEA/% Male					
Opp. TEA	0.931	0.111	0.510	1.360	360
Ln GDP per capita (ppp)	10.092	0.805	7.223	11.664	954
Private M 14.4 reW* nBT/F2 1(nID 8					

IV. Results

a. Cross-Country Estimates

In existing studies, t

effects. In all specifications, the adjusted measure of the legal system and property rights has a positive and significant effect on early-stage entrepreneurship. By contrast the coefficient on the unadjusted measure is not statistically significant in specifications that include only country fixed effects, and the unadjusted measure achieves a lower level of significance than the adjusted measure in specifications that include period effects. Using the measure of property rights that adjusts for how rights apply to women improves the explanatory power of the variable.

Table 2: Percentage of Adult Population Engaged in Early-Stage Entrepreneurship

The main hypothesis that we aim to test at the country level is assessed in Table 3 and Table 4. In these tables t

specifications in Table 4 include both country and period effects. After controlling for income per capita, female unemployment, female working age population, female industry shares, and private sector credit, the measure of the equality in property rights is still positive and statistically significant at the five percent level of significance or better. In the specification that include gross female primary school enrollment (column 6), the point estimate on property rights equality is still positive though the estimate is only marginally significant (at the 10% level). The reduction in significance is due to the more than 10% reduction in the sample size.⁴ Taken together these cross-country results are evidence that the ratio of female to male entrepreneurs is influenced by the degree to which institutions protect women's property rights.⁵

(country-level)						
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES						
Legal Sys. & Property	0.142***			0.096**		
adjusted	(0.048)			(0.044)		
Legal Sys. & Property		0.064	0.067		0.065	0.066
unadjusted		(0.060)	(0.055)		(0.055)	(0.053)
Legal Sys. & Property			0.175***			0.090***
Equality			(0.033)			(0.028)
Constant	-1.409***	-0.935**	-0.862**	-1.258***	-1.092***	-1.035***
	(0.304)	(0.397)	(0.368)	(0.266)	(0.359)	(0.347)
Country Fixed Effects	Х	Х	Х	Х	Х	Х
Year Effects				X	X	X
Observations	970					

Table 3: Ratio of the Percentage Female to Male Engaged in Early-Stage Entrepreneurship (country-level)

Notes: Three Legal System and Property Rights variables are included in the table. The "adjusted" variables is a measure that has been adjusted for the rights of women. The "unadjusted" variable is a measure that has not been adjusted for the rights of women. The "gap" measure is a measure of equality of legal and property rights calculated as the difference between rights for women and rights for men. Standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

(1)(2)(3) (4) (5) (6)VARIABLES Legal Sys. & Property 0.084 0.085 0.071 0.079 0.081 0.092* unadjusted (0.056)(0.057)(0.052)(0.054)(0.055)(0.054)0.093** Legal Sys. & Property 0.101*** 0.097*** 0.085** 0.081** 0.059* Equality (0.029)(0.030)(0.037)(0.034)(0.035)(0.035)-0.175 Ln GDP per capita -0.239 -0.329 -0.069 -0.218 -0.333 (0.173)(0.204)(0.195)(0.255)(0.212)(0.251)(ppp) Unemployment (fem.) -0.004 -0.005 -0.005 -0.006 -0.000 (0.005)(0.005)(0.006)(0.005)(0.006)Population 15-64 (fem.) 0.482 0.412 0.388 -0.367* (0.402)(0.403)(0.420)(0.221)% in Agriculture (fem.) -0.002 -0.002 0.002 (0.007)(0.007)(0.006)% in Industry (fem.) 0.018* 0.018* 0.029*** (0.011)(0.011)(0.009)Private Credit -0.006 -0.014** (0.006)(0.007)**Primary Education** 0.000 (fem.) (0.002)Constant 0.582 1.044 -6.156 -4.450 -4.082 4.767 (1.627)(1.969)(5.459)(5.585)(3.850)(5.384)**Country Fixed Effects** Х Х Х Х Х Х Year Effects Х Х Х Х Х Х 952 952 952 Observations 952 952 852 R-squared 0.139 0.140 0.151 0.158 0.158 0.163106 Number of Countries 106 106 106 106 103

Table 4: Ratio of the Percentage Female to Male Engaged in Early-Stage Entrepreneurship with controls – Legal System & Property Rights Equality (country-level)

Notes: See the note to table 4 for a description of the legal system and property rights variables. All specifications include country and year fixed effects. Standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The estimates thus far find evidence that property rights for women influence the extent of female entrepreneurship relative to male entrepreneurship. These estimates do not tell us whether better protection of property rights for women increases female entrepreneurship in contexts where there is already a high ratio of female entrepreneurship or if the effect is due to increasing entrepreneurship in contexts where female entrepreneurship is low relative to male entrepreneurship. To better understand the context in which improvements in women's rights are increasing the ratio of female to male entrepreneurship we conduct a set of quantile regressions which are presented in Table 5 and Table 6. All estimates using quantile regression include country and period fixed effects.⁶

We study the effect of women's property rights at the following five quantiles of entrepreneurship, 0.1, 0.3, 0.5, 0.7 and 0.9. The results in Table 5 show that the adjusted measure of property rights is positive and statistically significant at the median and at the two quantiles below the median. Further, the effect is larger at lower quantiles. Similarly, effect of the property rights equality measure is larger at lower quantiles and is statistically significant at the median and quantiles below the median. These results indicate that improving property rights for women tends to increase female entrepreneurship in contexts where female entrepreneurship is low relative to male entrepreneurship.

The results in Table 6 estimate the same quantile regressions but include a set of control variables (those controls presented in Column 5 of Table 4).⁷ The adjusted measure of property rights is once again significant at the median and the two quantiles below the median. With controls included, the property rights equality measure is not statistically significant. But like the results in Table 5, the effect of the adjusted measure of property rights and the equality measure are smaller in magnitude for higher quantiles and larger for lower quantiles. Quantile estimates

⁶ Quantiles estimates are conducted using the xtqreg STATA commend as described by (Machado and Santos Silva, 2019).

⁷ Quantile estimates on the reduced sample that include the education control variable are presented in the appendix and show similar results to those in Table 6.

Population 15- 64 (fem.)	0.890	0.596	0.372	0.168	-0.069
-	(0.614)	(0.382)	(0.311)	(0.378)	(0.557)
% in Agriculture (fem.)	-0.014	-0.007	-0.002	0.003	0.009
-	(0.010)	(0.006)	(0.005)	(0.006)	(0.009)
% in Industry (fem.)	0.027	0.022**	0.019**	0.016	0.013
-	(0.017)	(0.011)	(0.009)	(0.011)	(0.016)
Private Sector Credit	-0.008	-0.006	-0.005	-0.004	-0.003
	(0.012)	(0.007)	(0.006)	(0.007)	(0.011)
Quantile Estimates of the	Unadjusted	Legal Syster	n & Property	y Rights Ind	ex
Legal Sys. & Property unadjusted	0.100	0.088	0.079*	0.070	0.060
	(0.088)	(0.055)	(0.044)	(0.053)	(0.080)
Ln GDP per capita (ppp)	-0.808**	-0.548***	-0.355**	-0.181	0.035
	(0.340)	(0.210)	(0.171)	(0.204)	(0.306)
Unemployment (fem.)	-0.016*	-0.010*	-0.006	-0.003	0.002
	(0.009)	(0.006)	(0.005)	(0.006)	(0.009)
Population 15- 64 (fem.)	0.903	0.609	0.391	0.194	-0.050
	(0.610)	(0.378)	(0.306)	(0.367)	(0.549)
% in Agriculture (fem.)	-0.015	-0.008	-0.002	0.003	0.009
	(0.010)	(0.006)	(0.005)	(0.006)	(0.009)
% in Industry (fem.)	0.028	0.023**	0.020**	0.017	0.014
	(0.018)	(0.011)	(0.009)	(0.011)	(0.016)
Private Sector Credit	-0.008	-0.006	-0.004	-0.003	-0.001
	(0.012)	(0.007)	(0.006)	(0.007)	(0.011)
Quantile Estimates of the Unadjust	ed and the I	Equality Leg	al System &	Property R	ights Index

Quantile Estimates of the Unadjusted and the Equality Legal System & Property Rights IndexLegal Sys. & Property unadjusted0.1010.089

b. Individual Level Estimates

To buttress the findings from cross-country estimates we now turn to individual level data. The measures of entrepreneurship at the country level are derived from harmonized individual level GEM data to construct a panel. We set aside the country-level panel and study decisions to engage in early-stage entrepreneurship using individual level data from GEM pooled across 104 countries.

We study which factors predict whether women chose to be entrepreneurs by estimating a logit model where coefficients are expressed as odds ratios. Coefficients greater than one indicate greater than even odds (a positive effect) whereas an odds ratio less than one indicates less than even odds (a negative effect). Whether a women chose to engage in early-stage entrepreneurship is regressed on measures of property rights, a set of country level control variables, as well as country and year fixed effects. Estimates in the first column of Table 7 show that the adjusted measure of the quality of the legal system and property rights has highly significant effect on female entrepreneurship with an odds ratio greater than one (1.147). The coefficient on the unadjusted measure in Column 2 is also highly significant and greater than one (1.122), though the odds ratio is slightly smalle

(column 1) and the education of the individual (column 2). Further, the results are robust to controlling for whether the individual knows other entrepreneurs, reports having the necessary skills to be an entrepreneur, and reports fear of failing in their entrepreneurial venture. However, including all of the aforementioned control variables as well as an indicator variable for whether the individual reports seeing opportunities for entrepreneurship in the next 6-months leads to a statistically insignificant coefficient on the property rights equality measure. The loss of significance after controlling for perceived opportunities for entrepreneurship is not surprising. If being able to sign contracts, protect one's assets, and seek legal recourse to resolve business disputes is a necessary condition for entrepreneurship, one would expect an entrepreneur to have a dim view of entrepreneurial opportunities if operating in an environment that lacks this foundational institutional framework.

Table 7: Early-Stage Female Entrepreneurship – Logit Model with Country Controls							
	(1)	(2)	(3)				
VARIABLES	odds ratio	odds ratio	odds ratio				
Legal Sys. & Property adjusted	1.147***						
	(0.0206)						
Legal Sys. & Property unadjusted		1.122***	1.131***				
		(0.0213)	(0.0215)				
Legal Sys. & Property Equality			1.121***				
			(0.0247)				
Ln GDP per capita	0.609***	0.613***	0.613***				
	(0.0240)	(0.0242)	(0.0242)				
Ln Population	1.015	1.010	1.035				
	(0.0999)	(0.0995)	(0.102)				
Constant	22.97*	25.13*	16.36				
	(39.57)	(43.34)					

V. Conclusion

The relationship between the institutional environment and entrepreneurship has been studied extensively. In contrast, few have studied how the unique institutional framework that women operate in influences female entrepreneurship. This study contributes to filling this gap in the literature by conducting an empirical analysis of three measures of entrepreneurship.

We revisit the question of whether institutionu9phnsJET00.00onu9p1 nentre(r)-6(e)4(ne)4(urshiu9ph-11)

Works Cited:

- Angulo-Guerrero, M.J., Pérez-Moreno, S., Abad-Guerrero, I.M., 2017. How economic freedom affects opportunity and necessity entrepreneurship in the OECD countries. J. Bus. Res. 73, 30–37. https://doi.org/10.1016/j.jbusres.2016.11.017
- Ashraf, N., Delfino, A., Glaeser, E.L., 2019. Rule of Law and Female Entrepreneurship. Working Paper Series. https://doi.org/10.3386/w26366
- Baumol, W.J., 1990. Entrepreneurship: Productive, Unproductive, and Destructive. J. Polit. Econ. 98, 893–921.
- Bjørnskov, C., Foss, N.J., 2016. Institutions, Entrepreneurship, and Economic Growth: What Do We Know and What Do We Still Need to Know? Acad. Manag. Perspect. 30, 292–315.
- Bjørnskov, C., Foss, N.J., 2008. Economic freedom and entrepreneurial activity: Some crosscountry evidence. Public Choice 134, 307–328. https://doi.org/10.1007/s11127-007-9229-y
- Boudreaux, C.J., Nikolaev, B., 2019. Capital Is Not Enough: Opportunity Entrepreneurship and Formal Institutions. Small Bus. Econ. 53, 709–738.
- Chowdhury, F., Audretsch, D.B., Belitski, M., 2019. Institutions and Entrepreneurship Quality. Entrep. Theory Pract. 43, 51–81. https://doi.org/10.1177/1042258718780431
- Cuberes, D., Priyanka, S., Teignier, M., 2019. The determinants of entrepreneurship gender gaps: A cross country analysis. Rev. Dev. Econ. 23, 72–101. https://doi.org/10.1111/rode.12537
- D'Espallier, B., Guérin, I., Mersland, R., 2011. Women and Repayment in Microfinance: A Global Analysis,. World Dev. 39, 758–772. https://doi.org/10.1016/j.worlddev.2010.10.008.
- Duflo, E., 2012. Women Empowerment and Economic Development. J. Econ. Lit. 50, 1051– 1079. https://doi.org/10.1257/jel.50.4.1051
- Dutta, N., Giddings, L., Roy, S., n.d. Can Greater Attention to Women's Rights Help Address Income Inequality? Contemp. Econ. Policy 0. https://doi.org/10.1111/coep.12406
- Fang, S., Shamseldin, H.M.M., Xu, L.C., 2019. Foreign Direct Investment and Female Entrepreneurship. Policy Res. Work. Pap. World Bank Group.
- Fike, R., 2017. Adjusting for Gender Disparity in Economic Freedom and Why It Matters., in: Economic Freedom of the World: 2017 Annual Report. Fraser Institute, pp. 189–211.
- Goldin, C., 2006. The Quiet Revolution That Transformed Women's Employment, Education, and Family. Am. Econ. Rev. 96, 1–21. https://doi.org/DOI: 10.1257/000282806777212350
- Goltz, S., Buche, M.W., Pathak, S., 2015. Political Empowerment, Rule of Law, and Women's Entry into Entrepreneurship. J. Small Bus. Manag. 53, 605–626. https://doi.org/DOI: 10.1111/jsbm.12177
- Gwartney, J., Lawson, R., Hall, J., Murphy, R., 2022. Economic Freedom of the World: 2022 Annual Report. Fraser Institute.
- Hyland, M., Djankov, S., Goldberg, P.K., 2020. Gendered Laws and Women in the Workforce. Am. Econ. Rev. Insights 2, 475–490. https://doi.org/10.1257/aeri.20190542
- Hyland, M., Islam, A., 2021. Gendered Laws, Informal Origins, and Subsequent Performance. Policy Res. Work. Pap. World Bank Group. https://doi.org/10.1596/1813-9450-9766

Urbano, D., Audretsch, D., Aparicio, S., Noguera, M., 2020. Does entrepreneurial activity matter

Appendix:

Table A1: Questions Used to Construct Gender Legal Rights Indices

Table A1: Questions Used to Construct Gender	6 6
Fike (2017) – Adjustment Index for EFW	Iqbal et al. (2018)
Can a woman apply for a passport in the same way as a man?	Can an unmarried woman apply for a passport in the same way as an unmarried man?
Can a woman travel outside the country in the same	Can a married woman apply for a passport in the
way as a man?	same way as a married man?
Can a woman travel outside her home in the same	Can an unmarried woman obtain a national ID
way as a man?	card in the same way as an unmarried man?
Can a woman choose where to live in the same way	Can a married woman obtain a national ID card
as a man?	in the same way as a married man?
	Can an unmarried woman travel outside the
Can a woman get a job in the same way as a man?	country in the same way as an unmarried man?
Can a woman work at night in the same way as a man?	Can a married woman travel outside the country in the same way as a married man?
Can a woman work in a job deemed dangerous in the	Can an unmarried woman travel outside her home
same way as a man?	in the same way as an unmarried man?
Can a woman work in an industrial job in the same	Can a married woman travel outside her home in
way as a man?	the same way as a married man?
	Can an unmarried woman get a job or pursue a
Is there no legal provision that requires a married	trade or profession in the same way as an
woman to obey her husband?	unmarried man?
Can a woman be head of household in the same way	Can a married woman get a job or pursue a trade
as a man?	or profession in the same way as a married man?
Can a woman sign a contract in the same way as a	Can an unmarried woman sign a contract in the
man?	same way as an unmarried man?
Can a woman register a business in the same way as	Can a married woman sign a contract in the same
a man?	way as a married man?
Can a woman open a bank account in the same way	Can an unmarried woman register a business in
as a man?	the same way as an unmarried man?
Do men and women have equal ownership rights to immovable property?	Can a married woman register a business in the same way as a married man?
Do sons and daughters have equal rights to inherit assets from their parents?	Can an unmarried woman open a bank account in the same way as an unmarried man?
Do male and female surviving spouses have equal	Can a married woman open a bank account in the
rights to inherit assets?	same way as a married man?
Does the law grant spouses equal administrative	Can an unmarried woman choose where to live in
authority over assets during marriage?	the same way as an unmarried man?
	Can a married woman choose where to live in the same way as a married man?
	Can an unmarried woman confer citizenship on
	her children in the same way as an unmarried
	man?
	Can a married woman confer citizenship on her
	children in the same way as a married man?
	Can an unmarried woman be head of household
	or head of family in the same way as an unmarried man?
	Can a married woman be head of household or
	head of family in the same way as a married
	man?
	Can a married woman confer citizenship to a non- national spouse in the same way as a man?

Are married women required by law to obey their husbands?
Who legally administers marital property? Does the law provide for the valuation of nonmonetary contributions?
Do unmarried men and unmarried women have
equal ownership rights to property? Do married men and married women have equal
ownership rights to property?
Do sons and daughters have equal rights to inherit
assets from their parents?
Do female and male surviving spouses have equal
rights to inherit assets? Does a woman's testimony carry the same
evidentiary weight in court as a man's?
Are there tax deductions or credits specific to men?
Does the law prohibit discrimination by creditors
on the basis of gender in access to credit?
Does the law prohibit discrimination by creditors on the basis of marital status in access to credit?
Is there a difference in the age at which a man
and a women can retire and receive full benefits?
Can non-pregnant and non-nursing women work
the same night hours as men?
Does the law mandate equal remuneration for
work of equal value? Does the law mandate nondiscrimination based
on gender in hiring?
Is it prohibited for prospective employers to ask about family status?
Is dismissal of pregnant workers prohibited? Are employers required to provide break time for
nursing mothers?
Is there a difference in the age at which a man
and a woman can retire and receive partial benefits?
Is there a difference in the mandatory retirement
age for men and women?
Can non-pregnant and non-nursing women do the
same jobs as men?
Is there a difference in the length of paid maternity and paternity leave?*
Is there domestic violence legislation?
Is there legislation that specifically addresses
sexual harassment?
Does legislation explicitly criminalize marital rape?



Figure A1: Histogram of Female to Male Total Early-Stage Entrepreneurship

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES						
Legal Sys. & Property	-0.015			-0.008		
adjusted	(0.041)			(0.043)		
Legal Sys. & Property		-0.028	-0.016		-0.025	-0.009
unadjusted		(0.041)	(0.042)		(0.044)	(0.044)
Legal Sys. & Property			0.076			
Equality						

Table A2: Ratio of the Percentage Female to Male Engaged in Early-Stage Opportunity Entrepreneurship (country-level)

(1)	(2)	(3)	(4)	(5)
0.1	0.3	0.5	0.7	0.9
e Adjusted L	egal System	n & Property	Rights Inde	X
0.111	0.104**	0.099***	0.094**	0.087
(0.071)	(0.045)	(0.038)	(0.047)	(0.071)
-0.145	-0.106	-0.075	-0.047	-0.011
(0.270)	(0.173)	(0.144)	(0.178)	(0.271)
-0.003	-0.001	-0.000	0.001	0.002
(0.003.8 1	•			
	0.1 Adjusted L 0.111 (0.071) -0.145 (0.270) -0.003	0.1 0.3 Adjusted Legal System 0.111 0.104** (0.071) (0.045) -0.145 -0.145 -0.106 (0.270) (0.173)	0.1 0.3 0.5 Adjusted Legal System & Property 0.111 0.104** 0.099*** (0.071) (0.045) (0.038) -0.145 -0.106 -0.075 (0.270) (0.173) (0.144) -0.003 -0.001 -0.000	0.1 0.3 0.5 0.7 Adjusted Legal System & Property Rights Inde 0.111 0.104** 0.099*** 0.094** 0.071) (0.045) (0.038) (0.047) -0.145 -0.106 -0.075 -0.047 (0.270) (0.173) (0.144) (0.178) -0.003 -0.001 -0.000 0.001

Table A4: Quantile Regressions - Country and Year Effects with Controls