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Parity Without Socialism: Economic Freedom and Opportunity for Women

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Abstract

In dealing with past illiberal practices, liberal societies can face a dilemma. On the one hand, members of groups that have faced past discrimination are at a disadvantage. On the other hand, active state intervention (in the form of quotas, for example) is illiberal, as it treats individuals as members of groups. How, then, does a liberal society rectify past injustices without losing itself? We examine one aspect of this question, by studying public and private female leadership across countries, as a proxy for female opportunity, regressed against economic freedom. The literature on economic freedom shows that greater economic freedom means more opportunity – for all, but especially for previously disfavored groups; it thus predicts that higher levels of economic freedom will be correlated with greater female leadership, without the unintended consequences of state interventionism.

Introduction

Classical liberalism – the philosophy of individual liberty and limited government – can find itself in a deep conundrum. A liberal society aspires to maximize opportunity and give voice to all – based on ability, work, and merit (economic considerations), rather than birth, gender, or race (non-economic, arbitrary considerations). Hayek (1960) explained that "the mark of a free man is to be dependent for his livelihood not on other peoples' views of his merit, but solely on what he has to offer them." It was 1960, so he was still using the customary generic "man" at which contemporary readers might balk; the whole point, of course, was to include women. Voltaire similarly described the leveling effect of markets: "Go into the London Stock Exchange… and you will see representatives of all nations gathered there for the service of mankind. There the Jew, the Mohammedan, and the Christian deal with each other as if they were of the same religion, and give the name of infidel only to those who go bankrupt." Similarly, Alchian and Kessel (1977) demonstrated that, because the price of racial and discrimination is lower in monopolies and subsidized firms, we can expect to see a greater quantity demanded of both in such firms, versus firms operating in a competitive market.

What can a liberal society do to correct the lingering effects of past illiberal policies? On the one hand, individuals who are members of groups that faced past discrimination are often at a disadvantage. On the other hand, a liberal society cannot, if it is to remain true to its fundamental principles, treat individuals as members of groups, rather than as individuals. Such

"reverse discrimination" – which is ultimately just discrimination – lies at the heart of today's identity politics and has no place in a free society (see, e.g. Whaples *et al*. 2023).

This paper studies the status of women and the lingering effects of past discrimination. We specifically examine two proxies for the status of women: gender parity on corporate boards, and gender parity in legislatures. Section One reviews the literature on gender parity. Section Two reviews the literature on economic freedom (hereinafter "EFW") and opportunities for women. Section Three presents our model and discussion. The final section concludes.

I. Gender Parity

Women, as a group, have faced illiberal discrimination in voting rights, property ownership, and more, even in societies with the most liberal of aspirations. The literature generally proposes two paths to advancing public and private gender parity: quotas, and welfare laws targeted at women (especially state-mandated maternity leave). A dozen countries have laws that guarantee quotas for women on corporate boards or legislatures, and most countries have mandatory maternity leave. The problem with both quotas and welfare, of course, is that they are illiberal. The former treat individuals as members of a class (rather than as individuals), and the latter expands the scope and size of the state.

The literature generally proposes an active role, direct or indirect, for the state in promoting parity. Terjesen *et al*. (2014) observe a correlation between gender parity and three institutional factors: (1) gendered welfare state provisions; (2) left-leaning government coalitions; and (3) path-dependent policy initiatives for gender equality. While they are generally positive, they ultimately seem to favor quotas, welfare, and equality of results (rather than equality of opportunity). Likewise, Thams *et al*. (2018) find a positive correlation between female board membership and (a) emergency contraception availability by state; and (b) public funding for abortion by the state. Griffith (2017) argues that gender parity is a public policy question (rather than private). Chizema et al. (2015) find that the representation of women in national political institutions positively affects the appointment of female directors; without quite calling for political quotas, they do imply a public policy role for the state.

Generally, the literature simply assumes (a) that greater representation of women *is ipso facto* good, without explaining why (although *some* of the literature explains why (*e.g*. better returns or better governance);[1] and (b) that because greater representation of women is good, then quotas must be good. A representative example is this, from the OECD: "In the political world, quotas ensure that parliament truly reflects the population it represents." Or "Quotas help rectify women's under-representation in prominent positions, and make it entirely normal for women to take up managerial roles in the political, economic and academic systems."[2] However, the literature also expresses some concerns about quotas. Caleo and Heilman (2019), while generally pro-quota, also point to some unintended consequences, such as undeserved advancement and tokenism; see also Post *et al*. 2021. Ahern and Dittmar (2012) find that quotas lead to younger and less experienced boards, increases in leverage and acquisitions, and deterioration in operating performance, consistent with less capable boards. Franceschet and Priscopo (2008) find that quotas generate mandates for female legislators to represent women's interests, while also reinforcing negative stereotypes about women's capacities as politicians. Karekurve-Ramachandra and Lee (2020) find that quotas to improve female representation can lead to increases in the representation of the elite and simultaneously lead to a reduction in the representation of people from historically marginalized groups; mandates to increase the representation of one group (such as female) through quotas can lead to a drop in the representation of other groups (such as social class, race, or religion). Archenti and Tula (2017) examine "five "broken promises" in the journey to quotas and parity, namely, (i) the adoption of quotas without clear placement mandates, (ii) the fallacy that gender quotas per se would guarantee women's equal access to decision-making, (iii) the limitation of quotas in achieving women's equal (proportional) representation in legislative bodies, (iv) the fallen assumption that women legislators would represent women's interests, and finally, (v) violence against women who reached political office as an unintended consequence of quota systems." In more theoretical terms, we are not surprised to see the unintended consequences of social engineering to remedy past wrongs; indeed, imposed rules (rather than enforcement of equal rights) tend not

[1] Morrison and Terjesen (2021) sound a note of caution about endogeneity: firms with better financial performance might tend to appoint more female directors, rather than female directors being responsible for better outcomes.
[2] https://www.oecd.org/gender/quotas-gender-equality.htm

to stick, in the way that emergent rules (which match the underlying culture) do (see Boettke *et al.* 2008).

All this, of course, in addition to the inherently illiberal nature of quotas, which treat individuals, not as individuals, but as members of groups.

II. Economic Freedom and Opportunity for Women

Since 1995, the Economic Freedom of the World (EFW) index has measured economic freedom around the world, using data gathered since 1970, and culminating in Gwartney *et al*. (2022).

Fike (2016 and 2017) has since explained the importance of adjusting the EFW rankings for gender disparity. Fike (2018), Loiselle and Déry (2016), and Stroup (2011) find a positive correlation between EFW and the status of women (as measured by work opportunities, health, banking access, and literacy). Russell *et al*. (2020) find that economic freedom is positively correlated with gender equality. Mansoor *et al*. (2021) find a positive correlation between percentage of female directors and social capital (within the US, by county).

III. Modelling Economic Freedom and Opportunity for Women

Alchian and Kessel (1977) famously showed that racial discrimination was more prevalent in public utilities than private companies, and more prevalent in regulated private companies than the unregulated. Indeed, discrimination is costly, as employers select workers along non-economic criteria, rather than efficiency. There is a cost to selecting employees based on preferred non-economic characteristics, rather than ability, and that cost is reflected in diminished revenues for public entities and regulated private businesses, which are shielded from the market discipline of profits. The same applies to the status of women. The literature shows a positive correlation between a country's economic freedom and the status of women. The mere presence of greater economic freedom – more opportunity for all – improves the status of women.

We now dig deeper by looking at the number of women in legislatures and within firms across countries, controlling for gender quotas, to assess whether economic freedom gives voice to women without the need for illiberal legislation.

1. Hypotheses

From the above literature, we conclude that liberal institutions perform at least three functions: (1) they create more opportunities generally, and more equivalent opportunities for all; (2) they offer rewards based on merit, rather than non-economic factors; and (3) they tend to generate moral systems in support of (1) and (2) (McCloskey 2006; Teague *et al*. 2020; Hirschman 2013). As such, we posit two hypotheses:

(1) *Increases in measures of economic freedom are associated with increases in female membership in government institutions.*
(2) *Increases in measures of economic freedom are associated with increases in female leadership in private markets.*

2. Model and Data

To find the association between opportunities for women and economic freedom, we test hypotheses (1) and (2) using a panel fixed effects regression model sequence.

$$FOppt_{it} = \alpha_0 + \beta EFW_{it} + X'_{it} + \delta_t + \upsilon_i + \varepsilon_{it} \quad (1)$$

where *i* denotes country and *t* denotes the year. Our dependent variables, denoted as $FOppt_{it}$, include measures of female membership in governing institutions, as well as measures of female leadership within private markets for each country and year. Our predictor variable, βEFW_{it}, includes our measures of EFW for each country and year, X' and the remaining regressors, δ_t and υ_i, include our time and within-country fixed effects.

Our main explanatory variables used as proxies for market openness include the EFW summary index measure, as well as four of its area[3] measures (Gwartney *et al*. 2022 – Area 2: Legal Systems; Area 3: Sound Money; Area 4: Freedom to Trade Internationally; and Area 5: Regulation. The summary measure is an equally weighted composite variable; the areas are its subcomponents.

Predicted impacts for our subcomponents are listed in Table 1.

Economic Freedom of the World Subcomponents

Area	Anticipated Sign	Justification
Women in roles of leadership (both private and public)		
Area 2: Legal Systems	+	In both the private and public sphere, increases in legal rights should lower the opportunity costs for women to enter into leadership roles.
Area 3: Sound Money	+	Sound money is associated with financial stability and reduced economic uncertainty – both of which would indicate greater opportunity (for all, and for women) and more entrepreneurship. We would thus expect sound money to be correlated with more positions of private and public leadership for women.
Area 4: Freedom to Trade Internationally	+	Freedom to trade internationally expands financial opportunties and exposes individuals to different ideas and cultures. Increases in this improve outcomes and opportuntities for women as countries with higher ratings in *Area 4* are likely to be richer and have deeper exposure and understanding of the benefits of diversity.

[3] We do not include Area (Size of Government) in our analysis, as it is too broad for our purposes. While Gwartney *et al*. (2022) define it as "government spending, taxation, and the size of government-controlled enterprises," it is unclear where spending is distributed, and what short-term distortions might be hiding within long-term effects. While Gwartney *et al*. find that increases in Area 1 mean that "government decision-making takes the place of individual choice and economic freedom is reduced", there could also be short-term effects, such as artificial inflation of certain sectors that would skew our results. As such, we do not include this in our analysis. Ott (2018) shares these concerns and suggests removing Area 1 from EFW analyses altogether. We leave details to further research.

Area 5: Regulation	+	Fewer limitations to business creation and operation mean individuals spend less time on bureaucracy and red tape and more time on their business.

Table 1: Summary of predicted signs for the Areas of economic freedom.

The five dependent variables we include in our analysis are: (1) percentage of women in ministerial positions; (2) percentage of women in parliament; (3) percentage of firm female managers; (4) percentage of firm female ownership; and (5) percentage of female sole proprietors. The measures come from the World Bank's Gender Data database.[4]

Finally, in regressions (2) and (4), we include several controls. When we regress women in government leadership postions on EFW, we include (1) female labor force participation rates, to account for the working female population; (2) population; and (3) a dummy variable that denotes whether a nation imposes gender quotas for government positions. For our second set of regressions (women in leadership positions in the private market on EFW), we include (1) female labor force participation rates; (2) GDP per capita; and (3) population size.[5]

The sample sizes of our regressions vary based on the data available. While the EFW index has information on 165 countries from 1970 onwards, the World Bank Gender Database variables range in size from 38 comparable countries to 165. This latter data also varies in years available from 4-15 years of overlapping data. We discuss the limitations of this in the next section.

We present our summary statistics in Table 2.

[4] https://genderdata.worldbank.org/indicators/
[5] https://databank.worldbank.org/source/world-development-indicators

Summary Statistics

Varible	Observations	Mean	Std. Dev.	Min	Max
Independent Variables					
EFW Summary Measure	3567	6.605	1.144	2.349	9.109
Area 2	3570	5.238	1.693	1.698	9.091
Area 3	3569	7.751	1.784	0	9.922
Area 4	3494	6.793	1.675	0.007	10
Area 5	3548	6.724	1.217	1.143	9.429
Dependent Variables					
Percent of Women in Ministerial Positions	1417	19.008	12.846	0	66.67
Percent of Women in Parliament	3053	18.321	11.196	0	66.67
Percent of Female Managers (firm)	218	18.825	9.619	0.1	64.8
Percent of Female Ownership (firm)	308	33.469	13.867	4	70.4
Percent of Female Sole Proprietors	234	32.455	11.76	5.25	85.7
Control Variables					
Population	3284	4.11E+07	1.45E+08	81131	1.41E+09
GDP per capita	3265	12290.41	18058.4	111.93	123678.7
Female Labor Force Participation Rate	3263	70.362	19.806	9	106.24
Quotas on Governance	1636	0.287	0.452	0	1

Table 2 presents summary statistics for all variables used in our models.

3. Results

The results presented in Tables 3-7 show findings for five regressions, using various independent measures. As the regressions progress, we add more information and constraints, which test the causal strength of hypotheses (1) and (2). The first regression is a random-effects GLS regression that shows us our initial correlation. The second regression adds controls to our original correlation. The third regression is our fixed-effects regression; the fourth regression includes fixed effects and controls. The final regression includes our strongest constraints, and adds time effects to our fixed-effects regression.

Panel fixed effects regression sequence of economic freedom on percent women in ministerial positions

	(1)	(2) Controls	(3) FE	(4) FE, Controls	(5) TE, FE
EFW	3.223***	2.191***	2.226***	-0.6619	-1.423
Robust Standard Errors	(.6441)	(.8219)	(1.3092)	(1.6619)	(1.1642)
Obs/Groups	1,333; 163	679;127	1,333;163	679;127	1,333; 163
Area 2	2.600***	1.867***	1.413	-0.052	-0.1464
Robust Standard Errors	(0.4188)	(0.5403)	(.9426)	(1.211)	(.9034)
Obs/Groups	1,333; 163	679;127	1,333;163	679;127	1,333; 163
Area 3	0.945***	0.618†	0.374	-0.66	-0.759**
Robust Standard Errors	(0.310)	(0.428)	(0.402)	(0.513)	(0.359)
Obs/Groups	1,333; 163	679;127	1,333;163	679;127	1,333; 163
Area 4	1.938***	1.506***	1.426***	0.8188	0.1288
Robust Standard Errors	(.4206)	(.5180)	(.6989)	(.8990)	(.6794)
Obs/Groups	1,333; 163	679;127	1,333;163	679; 127	1,333; 163
Area 5	1.771***	0.923	1.420**	-0.043	-0.096
Robust Standard Errors	(0.51)	(0.689)	(0.659)	(1.002)	(0.653)
Obs/Groups	1,333; 163	679;127	1,333;163	679; 127	1,333; 163

*Table 3: The symbol "***" indicates a high level of significance with a p-value < 1%, "**" indicates a p-value < 5%, "*" indicates a p-value < 10% and "†" indicates a p-value < 15%.*

Table 3 presents the results of our panel fixed-effects regression sequence for EFW on the percentage of women in ministerial positions. The regressions contain information over ten years (2008-2019), for 127 to 163 countries (based on available data). Results from our summary measure indicate that a one-unit increase in EFW increases the percentage of women in ministerial positions by a range of 2.1% to 3.2%, with a 2.2% increase in our fixed-effects regression. *Area 4* (Freedom to Trade Internationally) maintains statistical significance in our fixed-effects regression, with impacts ranging from 1.4% to 1.9%. *Area 2* (Legal Systems) passes the correlation regression hurdles; the results suggest that increasing *Area 2* increases the percentage of women in ministerial positions by 1.9% to 2.6%.

Area 3 (Sound Money) has unexpected results. As expected, our GLS regression is strong and *positive* (a one-unit increase in *Area 3* increases women in ministerial positions by 0.945%). But when we add fixed effects and time effects, our result becomes *negative* (a one-unit increase in Area 3 decreases women in ministerial positions by -.759%). It could be that women in areas of high monetary stability have more freedom to choose between various opportunities. For example, women may decide to opt out of government leadership positions and instead work in the private market where they can earn higher returns. They may also have enough financial freedom or confidence in the economy to devote more time and effort to domestic chores or responsibilities. We leave this unexpected result to future research.

Panel fixed effects regression sequence of economic freedom on percent of women in parliament

	(1)	(2) Controls	(3) FE	(4) FE, Controls	(5) TE, FE
EFW					
Robust Standard Errors	4.432***	3.567***	4.834***	3.999***	-0.1418
Obs/Groups	(.3352)	(.495679)	(.9947)	(1.3077)	(.7952)

	2,740; 163	1,357; 127	2,740; 163	1,357; 127	2,740;163
Area 2	3.076***	2.496***	3.430***	2.857***	-0.1731
Robust Standard Errors	(.2697)	(.3765)	(.9173)	(1.119)	(.7170)
Obs/Groups	2,740; 163	1,357; 127	2,740; 163	1,357; 127	2,740;163
Area 3	1.602***	.9272***	1.612***	.8482***	0.2657
Robust Standard Errors	(.1404)	(.2201)	(.3338)	(.4471)	(.2639)
Obs/Groups	2,738; 163	1,356; 127	2,738;163	1,356;127	2,738;163
Area 4	1.155***	1.092***	1.137**	1.398*	0.019
Robust Standard Errors	(.2230)	(.2908)	(.5729)	(.6234)	(.4266)
Obs/Groups	2,740; 163	1,357; 127	2,740; 163	1,357; 127	2,740;163
Area 5	3.432***	3.05***	3.580***	3.099***	0.2853
Robust Standard Errors	(.2334)	(.3388)	(.6025)	(.9558)	(.2854)
Obs/Groups	2,740; 163	1,357; 127	2,740; 163	1,357; 127	2,740;163

*Table 4: The symbol "***" indicates a high level of significance with a p-value < 1%, "**" indicates a p-value <5%, "*" indicates a p-value < 10% and "†" indicates a p-value < 15%.*

Table 4 shows the results of our panel fixed-effects regression sequence for EFW on the percentage of women in parliament; this regression contains our largest sample size of comparable data, covering 2001 to 2019 and up to 163 countries[6]. This model sequence also has the most consistent statistical significance from regressions 1 to 4 and contains information on all subcomponents mentioned above. Across four out of five regressions, EFW's impact on the percentage of women in parliament is positive and significant. Our summary measure includes largest impacts, suggesting a one unit-increase in our composite measure leads to increases in the percentage of women in parliament, ranging from 3.5% to 4.8%. The major contributors to this increase are *Area 2* (Sound Money) and Area 5 (Regulation), which increase these leadership roles for women by as much as 3.5%.

[6] Our controls decreased the sample size by 36, from 163 countries to 127 countries. Despite this, regressions 1 through 4 maintained statistical significance.

Panel fixed effects regression sequence of economic freedom on percentage of firm female managers

	(1)	(2) Controls	(3) FE	(4) FE, Controls	(5) TE, FE
EFW	2.127**	2.820***	3.009	3.355	2.44
Robust Standard Errors	(0.994)	(1.082)	(2.660)	(2.940)	(2.422)
Obs/Groups	208;119	208;119	208;119	208;119	208;119
Area 2	1.291*	1.570*	2.92	2.962	1.451
Robust Standard Errors	(.698(	(0.839)	(2.384)	(2.511)	(2.014)
Obs/Groups	208;119	208;119	208;119	208;119	208;119
Area 3	0.661	0.856†	0.281	0.455	-0.104
Robust Standard Errors	(0.540)	(0.558)	(1.056)	(1.043)	(0.848)
Obs/Groups	208;119	208;119	208;119	208;119	208;119
Area 4	0.888	1.317*	1.239	1.13	0.64
Robust Standard Errors	(0.678)	(0.739)	(1.214)	(1.297)	(1.400)
Obs/Groups	208;119	208;119	208;119	208;119	208;119
Area 5	1.247†	1.161	0.152	-0.19	-0.842
Robust Standard Errors	(0.818)	(0.872)	(1.376)	(1.263)	(1.375)
Obs/Groups	208;119	208;119	208;119	208;119	208;119

*Table 5: The symbol "***" indicates a high level of significance with a p-value < 1%, "**" indicates a p-value <5%, "*" indicates a p-value < 10% and "†" indicates a p-value < 15%.*

Tables 5 to 7 present information on EFW's impact on private leadership. One might expect the strongest results here, as the subcomponent areas of EFW, along with the summary measure itself, are measures of *market* institutions. Indeed, they specifically measure characteristics of the market that make it easier to engage in trade, start businesses, or have confidence in the

economy. However, this is where we have the least amount of information available – with a maximum of only 289 observations, 129 countries, and only four years of comparable data (2015-2018) in some regressions. With the low sample size, we heed the results with some caution.

Panel fixed effects regression sequence of economic freedom on percentage of firm female ownership

	(1)	(2) Controls	(3) FE	(4) FE, Controls	(5) TE, FE
EFW	2.781**	2.169†	4	0.063	0.297
Robust Standard Errors	(1.290)	(1.437)	(2.947)	(3.181)	(3.370)
Obs/Groups	289;129	289;129	289;129	289;129	289;129
Area 2	1.555*	0.207	-0.783	-2.638	-2.788
Robust Standard Errors	(0.859)	(1.058)	(2.956)	(3.165)	(2.443)
Obs/Groups	289;129	289;129	289;129	289;129	289;129
Area 3	1.777***	1.500**	2.704**	1.886†	0.933
Robust Standard Errors	(0.696)	(0.734)	(1.156)	(1.240)	(1.03)
Obs/Groups	289;129	289;129	289;129	289;129	289;129
Area 4	1.720**	1.637*	1.281	0.678	0.208
Robust Standard Errors	(0.895)	(0.988)	(1.786)	(1.840)	(2.552)
Obs/Groups	289;129	289;129	289;129	289;129	289;129
Area 5	2.091*	1.045	2.25	-0.29	-0.644
Robust Standard Errors	(1.101)	(1.162)	(1.861)	(1.145)	(1.415)
Obs/Groups	289;129	289;129	289;129	289;129	289;129

*Table 6: The symbol "***" indicates a high level of significance with a p-value < 1%, "**" indicates a p-value <5%, "*" indicates a p-value < 10% and "†" indicates a p-value < 15%.*

All significant results for firm female ownership (Table 6) are positive as anticipated. This indicates that increases in EFW (in both composite form and sucomponents) lead to increases in percentage of female managers (at firms), percentage of female owners (at firms), and percentage of female sole proprietors. As mentioned above, poor observation counts mean we likely won't see significance in the more complicated models. However, there are a few worth noting.

We see other results in Table 6, after regressing percentage of female owners (at firms) on *Area 3* (Sound Money) (although results are only signifant at a p-value of .15). This regression has signs that we anticipate and are significant for our fourth regression sequence, which includes fixed effects and controls. For *Area 3* (Sound Money), a one-unit increase in *sound money* increases the percentage of female ownership at firms by as much as 2.74%. This suggests that stable, low-inflation economies allow for greater financial freedom and confidence for women, providing incentives for entrepreneurship and other work in the private sector.

Panel fixed effects regression sequence of economic freedom on percentage of female sole proprietorship

	(1)	(2) Controls	(3) FE	(4) FE, Controls	(5) TE, FE
EFW	5.202***	5.151***	-0.166	-0.461	-0.532
Robust Standard Errors	(1.352)	(1.437)	(2.215)	(2.288)	(2.487)
Obs/Groups	230; 51	230; 51	230; 51	230; 51	230; 51
Area 2	3.270***	3.710***	-0.382	-0.354	-0.105
Robust Standard Errors	(0.810)	(0.963)	(1.225)	(1.173)	(1.096)
Obs/Groups	230; 51	230; 51	230; 51	230; 51	230; 51
Area 3	1.108†	1.097†	-0.015	-0.045	0.006
Robust Standard Errors	(1.108)	(0.740)	(0.459)	(0.476)	(0.477)
Obs/Groups	230; 51	230; 51	230; 51	230; 51	230; 51

Area 4	2.481***	2.528***	0.606	0.421	0.217
Robust Standard Errors	(0.903)	(0.953)	(0.813)	(0.710)	(0.689)
Obs/Groups	230; 51	230; 51	230; 51	230; 51	230; 51
Area 5	2.174**	1.864*	-0.851	-1.008	-0.787
Robust Standard Errors	(1.045)	(1.068)	(1.358)	(1.316)	(1.430)
Obs/Groups	230; 51	230; 51	230; 51	230; 51	230; 51

*Table 7: The symbol "***" indicates a high level of significance with a p-value < 1%, "**" indicates a p-value <5%, "*" indicates a p-value < 10% and "†" indicates a p-value < 15%.*

Our final table has one of our lowest numbers of observations, countries, and compatible, comparable years (four). It also has the largest impacts for our associative regressions (1) and (2). A one-unit increase in *EFW* (*summary measure*), is associated with an increase in the percentage of female sole proprietorship of 5.1% to 5.2%; a one-unit increase in *Area 2* (*Legal Systems*) is associated with an increase in the percentage of female sole proprietorship of 3.2% to 3.7%; and, finally, a one-unit increase in *Area 4* (*Freedom to Trade Internationally*) is associated with an increase in female sole proprietorship of 2.4% to 2.5%. *Area 3* (*Sound Money*) and *Area 5* (*Regulation*) also are positive and significant for regressions (1) and (2), if less so.

4. Implications

Results from our fixed-effects regressions unequivocally show strong correlations between EFW and women's outcomes within the public and private spheres. There is also some good support that these impacts may be causal, where we have significant results in regressions (3), (4), or (5), but further investigation is warranted.

Data limitations and cross-country analysis give us some pause on causality for some models and may invite concern regarding reverse causality – *i.e.* women in leadership positions might promote laws and institutions in favor of higher levels of EFW, rather than EFW leading to more women in positions of leadership. However, we believe that there is little empicial evidence in favor of this. For one, we have relatively strong empirical results through regressions (3) and

(4), when regressing women in public leadership and our EFW summary measure. These strong results indicate an empirical relationship stronger than an association. Women in positions of public leadership also have the most authority and ability to alter the system in their favor, but our results for these regressions shouldn't be statistically significant – if the model describing the world were the opposite, the model would break down.

We do not have many statistically significant results for the non-associative regressions for private market female leaders. We believe this is due predominantly to the lack of observations, countries, and years of data. It also would require more time and resources for private market leaders – firm managers, firm owners, and sole proprietors – to advocate for and change formal institutions than it would for female government leaders. While we cannot definitely say that this isn't the case, it seems a more unlikely possibility.

In addition to questions concerning causality, our results may also seem to indicate too small of an impact. The literature shows that increases in EFW have many benefits, from economic growth to increased indicators of human development; but is a 4% increase in female parliament positions enough of an increase for a country to rely on EFW over quotas? For several reasons, this is actually a reasonable number to anticipate. First, EFW does not directly impact the number of women in these positions—that is, EFW does not include laws and regulations that directly increase the number of females in leadership positions, public or private. Unlike quotas, which dictate a specific quantity of female leaders, EFW increases female participation via big-picture, institutional changes that provide improved incentives, opportunities, and motivations for women to enter into leadership positions. Second, increasing EFW not only increases the incentives and motivations for *women* to take on leadership roles, but it also increases it for *everyone* regardless of gender, race, or ethnicity, including individual members of groups that have faces past illiberal discrimination.

The empirical goal of *this paper* was to establish an association between EFW and opportunities for women. Future work might investigate why EFW plays a larger role in the public market than the private market. Additional studies could further investigate reasons (psychological or cultural) women decide to pursue leadership positions (or not pursue them). While the female

labor force participation rate we include in all of our regressions arguably represents a proxy for women's preferences to engage in the public or private spheres, it does not entirely capture the *reasons* why women choose between different types of careers or lifestyles.

Conclusion

Perhaps we should have pointed out earlier that – as classical liberals – it is not clear to us whether it is necessarily good to have more women on boards and legislatures. Indeed, individual women may or may not choose to pursue such opportunities, depending on their individual circumstances. It *is* clear to us that it is good for women to have more opportunity, and bad that women (as a group) have been discriminated against; and the percentage of women in positions of legislative and corporate leadership is a proxy for the opportunities presented to women. EFW increases that opportunity, without the need for illiberal interventions, whether through quotas that treat individuals as members of classes or through the further expansion of the welfare state. Ironically, quotas ultimately hurt the cause of women, who are treated as members of a class, rather than as individuals. And a further expansion of the welfare state will, paradoxically, end up diminishing opportunities for women, as it erodes economic freedom and its increased opportunity.

There appears to be a simple policy solution for expanding opportunity for women and giving voice to them: increased economic freedom. Markets solve, as we discovered in undergraduate microeconomics… and without the unintended consequences of illiberal intervention.

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