Does Gender Inequality Lead to State Failure? A Global Perspective

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Abstract

The objective of this paper is to theoretically and empirically investigate the impact of gender inequality on state failure, taking to a global perspective. The ratio of female to male labor force participation has been used as a proxy for gender equality and the Fragile State Index of Fund for Peace has been used to classify state failure. This study has used panel data of 142 countries for the period 2006-2016 and employed the fixed effects method to reach the conclusion that gender inequality does indeed significantly lead to state failure in all regions of the globe. The crux of this study, however, is the negative effect of gender inequality on global order in the process of sustainable development. In addition to that, agricultural employment and children out of school too cause for the dwindling strength of states all over the world. All our findings reiterate the need for a comprehensive plan for the provision of economic opportunities to females for the prosperity of all developing regions of the globe. Gender inequality is one of the most significant factors that reflect their backwardness, and the expansion of opportunities, along with a feasible working environment, will bring positive change to the sustainability of their economies.

Keywords: Gender Inequality, State Fragility, Global Development

Introduction

Development economists and policymakers throughout the globe have long been trying to explore the leading factors behind why some nations are vulnerable or stagnant, while some are enjoying all the facilities of a decent life and higher growth rates. Although economists have moved from Solow's growth hypothesis to endogenous growth, they are still unable to answer the growth discrepancies which occurred in the quality of life among different nations. Weil (2005) explains how the richer group of nations has gone towards technological improvements, human capital formation, infrastructure development, a higher rate of saving and investment, and inclusive growth strategies. However, where these differences come from is left unanswered. The role of International Monetary Fund (hereafter IMF) and International Bank for Reconstruction and Development (hereafter IBRD) is significant in designing macroeconomic policies for developing nations towards their pro-poor growth. Leading scholars and a huge literature on the different aspects of development provide a detailed look at the various factors of growth differences among the stagnant and emerging economies. This includes factors such as culture and values (Weil 2005 and Guiso et al. 2002), political economy (Easterly, 2001 and Acemoglu, 2012), social overhead capital (Hall and Jones 1999), religion (Dollar and Gatti, 1999 and Barro, 2002), and trust (Knack and Keefer, 1997).

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Based on theoretical justifications of Millanium Development Goals (hereafter MDGs) and Sustainable Development Goals (hereafter SDGs), gender equality is considered one of the most important players in the better understanding of the above-stated growth discrepancies throughout the globe. Women are ignored but are the most important aspect of sustainable development in both the developed and the developing.

Leaders of G-7 met on June 2016 in Paris and concluded that the economies could only be sustained if able to enhance women empowerment by 25 percent. This indicates gender equality playing a decisive role in the development process. Besides, almost half the population of any nation is female and so any societal failure is either because of limited opportunities and resources they are given access to or freedom, which is reflected in the failure of macroeconomic indicators as well. This philosophy was developed by Sen (1999) with the argument that GDP growth should not be the only objective for pro-poor growth. It is a need of the day to enhance the freedom of choice for females associated with wealth in terms of labor exchange, health in life, education, etc., all of which will lead towards growth.

The relative status of men and women in any nation is an important predictor of change. In most developing regions of the world, the female is bound in decision making, business, property ownership, human capital formation, and unpaid family work. The development of any country is strongly linked to the opportunities, freedom and resource access given to a female in the society. Humana (1992) reports that all the top wealth quintile ranked nations provide equal social and economic opportunities to their females and none of those in the lowest quintile group do so.

On the basis of this debate regarding factors of pro-poor growth, this study is going to explore whether gender inequality leads to state failure and global disorder or not. Global development institutes have put a lot of effort in enhancing the female role in the process of development and now is the appropriate time to theoretically and empirically investigate the impact of gender inequality on state failure for comparative analysis.

Theoretical and Empirical Discussion

Equal educational opportunities for both males and females will positively contribute to the economic performance of any country and there are limited chances for any country to become developed with gender inequality by its side. Ignoring the oil rich middle east countries, such as Bahrain, Oman, and KSA, no country has still achieved a per capita income of US$10,000 and above with a less than 90% ratio of female to male in primary level schooling. Klasen and Lamanna (2008) empirically investigate that the loss in GDP growth due to educational gender inequality ranges from 0.38% in Sub-Saharan Africa to 0.81% in South Asia annually and that this accounts for 11% to 41% of the growth differences between these regions and East Asia.

It is also noted that gender equality leads to lower demographic pressures and conflict at all levels. Educated females are also likely to have a small family size which further leads towards economic prosperity. Secondly, lower fertility will lower the dependency burden and enhance

GDP per capita by providing a demographic dividend. Sometimes, such as in the Latin American region, it does not work as a decline in fertility fails to give a demographic dividend due to political instability and socio-economic distortions.

When the gap in educational inequality is narrowed down, employment opportunities are equally enhanced. Efficiency and productivity in the labor market shall also increase given the rise in competition. The loss of GDP in MENA in 1990 from gender discrimination was four times as large as that from educational inequality (Balatchandirane 2007). Overall, the labor market becomes more competitive if all employees can use their skill and talent optimally. In some developing countries, females are still treated differently with reference to their ability in doing business, access to financial resources, opportunities and freedom to choose, and access to all institutions. These social norms and discriminatory laws are an important restriction in the development of female entrepreneurship.

Theoretically speaking, the labor force becomes more productive with equal education and employment opportunities and there is a further increase in the expected rate of return. This, in turn, enhances GDP growth and also attracts domestic/foreign investment as advanced technology adoption is easy to manage. It is also observed that societal income equality by improving female wage can easily enhance savings and investment, pushing up the financial resources of companies to generate investment in both developing and developed countries. It is very important to discuss how the ratio of female to male wages and the share of female employment in the manufacturing sector has a significant and positive impact on the formal saving rate.

Making the move from a gender-based labor market outcome for the prosperity of any nation to natural resource utilization, the literature suggests that gender inequality is one of the main barriers in the way of improving the productivity of the agricultural sector and that most of the developing economies are stuck in a low productivity trap. Unequal distribution of resources, including access to credit, access to fertilizers and access to advanced/updated technologies are the source of agricultural inefficiencies. These lower income, output, and profit in countries where agriculture is considered a major source of GDP and a high number of females are involved in the sector, e.g. Sub-Saharan Africa and South Asia.

In most countries, limited skills and employment opportunities for females is considered a cause of low productivity and so gender equality in the labor market can boost GDP through trade openness and investment opportunities by greater human and physical capital. The female outcome will be enhanced by enrollment at the primary and secondary level, which will further encourage entrepreneurs to invest in export-oriented sectors. On the other hand, there are still barriers for females in small scale trading in terms of access to credit, collateral, land, and resources.

A lot of work has already been done on the factors of low and high productivity in different regions of the globe. As MDGs and SDGs are trendsetters for future policy design, their focus is on gender as a driving force in sustainable development and high growth. Gender inequality theoretically has a significant role in internal and external conflicts which will create political instability and state failure. Generally, countries characterized by gender discrimination are

more likely to be affected by violence and interstate clashes. Many studies focusing on the role of gender inequality and interstate disputes also highlight the association between the incidence of internal violence and gender inequality (Tessler and Warriner 1997; Caprioli and Boyer 2001 and Caprioli, 2003).

It is also observed that countries with gender equality are more sustained with control over corruption. A higher share of females in labor force participation and political participation as members of the parliament may lead to reduced corruption since female are less keen towards such illegal activities due to certain reasons. Statistical findings of the ICRG corruption rating suggest that an increase of 25% in the proportion of women in the parliament will bring a one-point increase (corruption index range is 0 to 6) in the index of the control of corruption and a 13% increase in female labor force participation (ICRG 2014).

Another aspect of internal conflict which focuses on group grievances is the generated motivation to use violence based on the perception of social injustice regarding gender and religion (Murshed 2002). Some of the group grievances and state fragility are based on ethnicity, political instability, religious divisions and societal inequality (Collier and Hoeffler 2001). One of the seminal works of Gurr (2001) highlights the multifarious association of discrimination, deprivation, inequality and societal instability. It is not only discrimination that leads to intrastate conflict but also systematic inequality and discrimination for economic participation targeting specific groups based on color, religion, and gender (Murshed 2001). Females are universally treated unequally in the social, economic and political spheres of life (Scott 1986) and this will indeed play an integral role in societal and cultural conflicts.

Intrastate conflict and violence are leading players in policy design in terms of economic decision making. Investors avoid spending money in the risky states which further lowers their economic potential since almost all sectors of the state are strongly interlinked. Macroeconomic stability is strongly associated with gender equality, as political and economic participation of females is associated with the provision of quality public goods.

Variables, Data and Methodology

The main objective of this study is to investigate the impact of gender inequality on state failure globally and regionally too for the time period of 2006 to 2016. For this purpose, the State Fragility Index is taken as the dependent variable and gender inequality as the independent variable followed by some control variables for efficient and consistent findings. The detail of all the study variables is as follows:

State Failure: The State Fragility Index (hereafter SFI) of Fund for Peace is taken as a proxy for state failure. The Fund for Peace has designed this index by taking 12 indicators that are directly or indirectly causing states to fail. Indicators of this index are;

1. Demographic pressures,
2. Refugees and IDP's,
3. Group grievances,
4. Human flight,
5. Uneven development,
6. Poverty and economic decline,
7. Legitimacy of the state,
8. Public services,

9. Human rights,
10. Security apparatus,
11. Fractionalized elite and
12. External interventions.

In this study, the weighted average index of all 12 indicators has been used for analysis. This is also considered as one of the best indices for state performance because it covers a variety of aspects. The value of the index ranges from 0 to 10, where a lower value indicates state strength and a higher value indicates state failure.

Gender Inequality: There are three major types of gender inequality; social, political and economic. In this study, gender inequality is measured by female labor force participation as a ratio of male labor force participation. This helps determine the economic empowerment of females in the country. Because economic empowerment leads to social and political empowerment, this study is going to use the economic empowerment of females as a proxy for gender equality.

Information and Communication Technologies (ICT): Currently, ICT is a game changer in any society and is also used in the delivery of quality services for the community without any discrimination. ICT has been measured by the combination of the four variables;

1. Number of landline users per 100 of the population,
2. Number of cell phone subscribers per 100 of the population,
3. Internet users per 100 of the population and
4. Access to internet services per 100 of the population.

After the collection of data on all four indicators, the weighted average has been used as the ICT index and the value of this index ranges from 0 to 100, which indicates access to ICT.

Awareness/ Literacy Rate: The criteria for literacy rate vary from country to country. As per international standards, this study has taken children out of school as a percentage of the primary schooling age for both males and females. This indicator also shows the performance and efficiency of educational institutes.

Urbanization: The urban population in any country indicates that they have access to employment, training, opportunities, development, infrastructure, and information. The urban population as a percentage of the total population is used for the intensity of urbanization for each country.

Employment in Agriculture: The market structure is one of the indicators for market performance. Major employment in agriculture indicates lower efficiency and lesser primary products. The Lewis theory hypothesizes that developing countries are agriculture based and that they should transform their employment from agriculture to manufacturing for development and prosperity. This study has used employment in agriculture as a percentage of the total labor force for an investigation into the Lewis hypothesis.

Trade Openness: Trade openness indicates employment opportunities and market expansion. It is measured by trade (imports and exports) as a percentage of GDP.

Methodology

Panel data are considered more consistent and reliable because it observes the situation over multiple time periods for the same individuals or firms (Wooldridge, 2002). The panel data have become popular in microeconomics in the last few decades and are set where cross-sectional observation units (usually economic and individual units) are designated and explanatory variables are observed for each cross-section unit. So, in panel data, multiple phenomena are observed for multiple time periods. The random effects model was proposed and extended by Swamy (1971), Swamy and Arora (1972), and Swamy et al. (1988, 1989) as;

$y_{it} = \beta_i' x_{it}$, $\quad t = 1, \ldots . T(i), i = i, \ldots, N$

$\beta_i = \beta + v_i$,

Where $E[V] = 0$ and $Var[v_i] = \Omega$

This model simplifies a group-wise heteroskedastic model. The Hausman specification test and Wald (F) are used for the best model choice among three types of models.

Random Effects Model

The two-way random effects model is applied for estimation purpose.

Model-1

$$Y_{it} = \alpha_{1i} + \beta_1(X_{it}) + \beta_2 (Z_{it}) + \varepsilon_{it}$$

Model-2

$$Y_{it} = \alpha + \beta_1\left(FRAG_{t,i}\right) + \beta_2 \left(ICT_{t,i}\right) + \mu_{t,i}$$

Treating α_{1i} as fixed, it is supposed to be a random variable with a mean value of α_1. The intercept for an individual can be expressed as:

$$\alpha_{1i} = \alpha_1 + \varepsilon i \ \ where \ \ i = 1,2,3 \ldots\ldots, N$$

Where εi is the random error with a mean value of '0' and a variance of σ^2_ε.

Random or Fixed Effect Models?

The Hausman specification test is quite frequently used, checking the null hypothesis that the coefficients estimated by the random effects model are the same as the ones estimated by the fixed effects model. If the P- value is small (typically less than 0.05), the fixed effects model is used and if we obtain a large P-value, the random effects model. The Hausman specification test is a kind of Wald χ^2 test, in which *k-1* is the degree of freedom and (here) *k* is the number of regressors on the change matrix between the variance-covariance of the least square dummy variable (LSDV) and that of the Random effects model. The Wald statistic is

$$W = (\beta_{FE} - \beta_{RE})'(V_{FE-}V_{RE})^{-1}(\beta_{FE} - \beta_{RE})$$

Descriptive and Empirical Analysis

In this section, a descriptive and empirical analysis of all the study variables has been critically and theoretically analyzed. The first portion includes a descriptive analysis of all the variables with detail shown in Table 1;

Table 1: Descriptive Analysis of Overall Globe

	State Fragility Index	Gender Inequality	ICT	Trade Openness	Urbanization	Employment in Agriculture	Out of School Children
Mean	5.94	71.15	37.22	82.59	56.45	25.83	10.87
Median	6.41	77.09	77.09	74.43	56.90	21.27	4.17
Maximum	9.58	99.89	90.82	322.05	100	90.30	90.56
Minimum	1.40	17.64	4.61	11.45	3.50	1.33	1.97
Std. Dev	2.03	20.36	21.92	42.25	22.25	21.23	14.97
Skewness	-0.54	-0.93	0.14	2.57	-0.16	0.63	2.16
Kurtosis	2.37	3.15	1.86	16.47	16.47	2.32	7.48

Table 1 shows a comprehensive picture of all the variables along with their deviations and ranges. The State Fragility Index (SFI) is our dependent variable and the values lie from 0 to 10, where a lower value indicates a lower level of fragility and threats, and vice versa. In the sample of 142 countries, the SFI moves from 1.40 to 9.58 and indicates that we have enough countries at each point of the index. Gender inequality indicates the ratio of females as a percentage of males participating in the labor force, where a higher value indicates that more females are participating in the labor market in comparison to their male counterparts. A higher value also indicates greater gender equality. ICT, as previously discussed, is considered an important game changer of the 21st century and is a combination of landline users, fixed broadband users, internet subscribers, and mobile phone subscribers. This is also used as a proxy for technological development and access to information. The ICT index lies from 0 to 100, referring to the level of ICT access in the population. Trade openness has been measured by import and export as a percentage of GDP. Employment in agriculture is used as a proxy for dependency on agriculture. Educational outcome and performance are measured by children out of school as a percentage of children of schooling age in the country. These descriptive analyses help the reader in understanding the behavior of each variable and also help in empirical analysis.

After a methodological and descriptive discussion on the variables and data, panel econometric techniques have been applied for reliable findings. Panel fixed effects and panel random effects models have been estimated and on the basis of the Hausman specification test, it is concluded

that the panel fixed effects model is the most appropriate model for consistent findings. Some diagnostics have also been shared after the empirical analysis and details of the empirical investigation are shown in Table 2.

Table 2: Empirical Analysis of Overall Globe and Regions

Variables	Overall Globe	South Asia	Africa	Latin America	Arab	Europe
Gender Inequality	-2.26*	-4.82*	-0.056*	0.351	-3.67*	-3.28*
Information and Communication Technologies (ICT Index)	-3.89*	-0.53*	-6.45	-2.44*	-1.67*	-5.84*
Trade Openness	-0.24*	-0.22	-0.21*	-0.85*	-1.75*	-0.41*
Urbanization	-1.32*	-0.45	0.823*	-4.61*	0.35	-0.77
Employment in Agriculture	2.29*	6.19*	1.37*	-0.81	1.45*	-1.57*
Children out of school (Education)	1.57*	-2.35*	1.39*	0.94	4.22*	1.76*
Constant	9.17	8.32	7.46	10.40	9.17	10.65
R^2	0.71	0.88	0.61	0.58	0.71	0.55
F-Statistics	62.57	88.05	34.53	57.43	68.19	80.15
Countries (Sample)	142	07	35	23	16	37

Note: Statistically significant (5% level of significance) results are marked with an asterisk.

Table 2 shows a comprehensive empirical analysis of all the objectives of this study and also makes a comparison between different regions of the globe for efficient and reliable findings. In the sample of 142 countries of the world, empirical findings indicate that gender inequality leads towards state fragility and more females participating in the labor market leads to a lower level of state fragility. In the world, all the countries are fragile where females have limited access to the labor market and other opportunities. These results are consistent with existing

literature (Klasen and Lamanna 2008; Tessler and Warriner 1997; Caprioli and Boyer 2001; and Caprioli, 2003). Expansion of opportunities and employment in the labor market is considered an important tool for sustainable development. It is much needed to provide such a working and competitive environment for females to explore their potential.

In all the regions of the world, gender inequality leads to state failure with strong significance, except the Latin American region, where the gender inequality coefficient is insignificant. The intensity of the coefficient varies from country to country and region to region. Gender inequality is highly significant in South Asia, Arab and the European region but the intensity is very low in the African region. Today, ICT is considered an important indicator of state performance and this study empirically shows that ICT is significantly and efficiently contributing to it. Only African region results are insignificant with an opposite sign indicating that this region is lagging in technological diffusion and unable to reap the benefits of ICT expansion. The minimum threshold is desired to observe the benefits of ICT intervention and Africa is behind the minimum level. Access to ICT leads affects the quality of services and easy access to information regarding any aspect of individuals and groups.

Expansion in trade is the third important contributor to state performance and countries with limited trade expansion are stuck in failure because the expansion of trade leads to employment generation and technological diffusion. Overall, the results show that lower trade leads toward state failure, except for in the South Asian region where imports are greater than exports. Such heavy amounts of imports are not effectively contributing to state development. The South Asian region has to change the trade trend from import to import substitution and export promotion which will lead to foreign exchange earnings and foreign reserves.

Urban population is taken as the potential portion of the population with access to training, employment, education, infrastructure and a better quality of life. This study indicates that urbanization is important for state performance in all of the African and Latin American region but the value is insignificant in South Asia, Arab and Europe. Basically, developing regions are unable to extract the benefits of urbanization because of rushed roads and little planning, which further leads to pollution, lawlessness, population density, noise pollution, and mismanagement. In many developing countries of South Asia, urbanization is not attractive, and people are avoiding unnecessary migration because it is not beneficial. Secondly, European countries are providing equal opportunities to their rural areas with employment, non-farming markets, education and better quality of life. There is no major difference in urban areas regarding facilities and incentives.

The agriculture sector is one of the threats in the development process because it leads to instabilities, lower output, outdated use of technologies and non-economic holdings. Empirical findings are in favor of the theory that countries with major employment in agriculture are at risk of state failure and vice versa. These results are generally consistent except that Latin America has an insignificant coefficient and Europe has an opposite sign. Development economists hypothesize that structural transformation from a low productivity agriculture sector to a modern industrial sector is desired for development.

Another cause of state failure is a lower level of education measured by children out of school. The empirical investigation indicates that it is positively associated with the fragility index and the more children out of school the more the chances of state failure overall. However, these findings are the opposite in the case of South Asia. An in-depth analysis of this region is desired to understand the causes and theoretical justifications. There are some structural and technical issues in this region that might change the direction of these results.

Concluding Remarks

The main theme of this study is to empirically investigate the impact of gender inequality on state failure in the panel of the globe and all the regions of the world. Many studies are available in existing literature that highlight the different determinants of state failure. However, only a few focus on the gender perspective of state performance. All public and private organizations are working for gender equality in all aspects of life and consider it an important tool for sustainable development. So, this study highlights a detailed empirical analysis of the impact of gender inequality on state performance in the era of globalization.

After the collection of data on desired variables, panel econometric techniques have been applied for empirical analysis and it has been found that gender equality is indeed important for sustainable development and state performance overall in the world followed by all regions. Equal opportunities and economic participation will enhance the labor force through expansion for the development of the countries. This indicator will also be favorable for human development and inclusive growth because quality health and education are the top priority of working women, as compared to male members of the household. Equal job opportunities for females will also lower demographic pressure, followed by the fertility rate and a reduction in intrastate conflict and violence.

Findings of trade expansion and urbanization indicate that both contribute positively to state performance with a significant coefficient, but the intensity may differ within regions which depend on the structure of the state. Access to ICT is another contributor and is the need of the 21st century for access to information and technology for future development. ICT is considered an indicator of awareness and will further enhance female participation in almost all areas of life.

Theoretically and empirically speaking, employment in agriculture and children out of school are considered barriers in the way of prosperity and policymakers of developing countries should focus on structural transformation from a low productivity agriculture sector to an advanced manufacturing sector followed by educational policies for a market-oriented educational outcome of sustainability.

On the basis of the empirical findings of this study, it is suggested that gender inequality is the main cause of state failure and global disorder. States can overcome this disorder by increasing access to ICT for an easy flow of information and improved quality of services followed by trade expansion and urbanization for human capital formation and employment generation for both males and females in the society. Global leaders should sit together and design some concrete policy decisions for the provision of opportunities for females followed by ICT access, trade expansion, and planned urbanization. Educational policies should be redesigned for equal and quality schooling with, as aforementioned, a structural transformation from a low

productivity agriculture sector to a high productivity manufacturing sector for sustainable development in the era of globalization.

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