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## Panel Data Analysis of Press Freedom and Women Empowerment

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## Panel Data Analysis of Press Freedom and Women Empowerment

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### Abstract

*More equal economic, social and political rights for women have long been part of civil and political right movements. It is widely believed that women's rights are important for greater economic prosperity, good governance and social equality. However, women are still being discriminated in many parts of the world. How women's rights can be protected? To answer this question, the literature has highlighted the importance of free media in promoting women's rights. The extant literature on media and women rights, however, is largely limited to descriptive analysis and theoretical arguments. Moreover, the available evidence is confined to few case studies and anecdotal stories, which cannot be generalized globally. This study contributes in the literature by empirically investigating the relationship of press freedom with women empowerment using a large panel of 160 countries from 1996 to 2011. For empirical analysis, the ordered logit method is used. The empirical finding confirms that press freedom is an effective tool to empower women's economic, political and social rights. Findings of the study are shown to be robust to different specifications, sub-samples, regional controls and different forms of women empowerment.*

**Keywords:** women empowerment; women rights; free media; panel data

**JEL Classification Codes:** C23, J16, Z10

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## 1. Introduction

Women empowerment can be defined as the participation of women in political, social, and economic decisions. In other words, women empowerment is referred to empowering women with skills, education and advance knowledge so that they can play a significant role in untangling the political, social, and economic issues of a country. The main objective behind women empowerment is to assure that women enjoy same rights that men enjoy in a society. The women empowerment contributes to economic growth of a country. It enhances the potential and talents of women to become a talented worker, perfect mother and responsible house manager (King & Mason, 2001; Sen, 1999; Goetz, 2008).

Women empowerment is also positively related with the betterment of a society. A powerful, educated and earning woman contributes a lot in improving health, education, and quality of life of a family (Majeed & Kiran, 2019). The betterment of families means betterment of a society that causes betterment of the whole nation. The discrimination against women in developing countries is higher than the developed countries.

One of the factors that play a key role in protecting women rights is press freedom. Media covers various human rights violation in the world and forces national and international organizations to take step against tyranny against humans. If media has full freedom then it can easily report any misconduct against society or an individual (Apodaca, 2007). Crocco (2007) emphasizes that women rights and human rights are not different things. Media plays a significant role in assuring social rights to women by reporting physical torture and abuses against women. It helps in protecting the rights of women by diffusion of information and providing knowledge in a society.

Dahal (2013) also emphasized that media plays an important role in spreading voice of any group, individual, or sects when they are threatened for their due rights. He showed that media in Nepal is contributing in development of women. Many experiments have been done on poor women, low caste group, uneducated people to empower them by delivering their message to policy makers and parliament. These experiments went successful implying that the right of

expression is an important factor in empowering weak and subjugated creatures (Kramer, 2008; Vishwakarma, 2002).

The rising importance of media in protecting human rights has given us insights to explore the role of press freedom in influencing women empowerment. The objective of this study is to provide empirical evidence of the relationship between press freedom and women empowerment. Moreover, the objective of this study is to test whether the effect of press freedom on women empowerment varies depending upon the different measures of women empowerment.

The extant literature on free media and women rights is largely limited to descriptive analysis and theoretical arguments. Moreover, the literature is confined to few case studies and anecdotal stories or examples. The empirical research on the contribution of media in women's economic, political and social empowerment is missing in the literature.

This study contributes in the literature by empirically investigating the relationship of women empowerment with freedom of press. Moreover, this study explores the impact of press freedom on different forms of women empowerment.

## **1. Literature Review**

Freedom of press is an important tool that protects women's socio-economic rights. It reports discrimination against the subjugated creatures of nature. It brings awareness among women to flourish their talents in order to participate in socio-economic decisions of life. Rostow (1963) underscored in his study that mass media assists development of societies. Media contributes in assuring human rights. Media promotes women empowerment and narrows the socio-economic gaps between genders by disseminating information.

Ceulemans and Fauconnier (1979) pointed out that female's participation in labor force has been increased since 1947. In 1973, half of the US's women were employed and had significant share in total labor force of America. The contribution of women in professional occupation has also increased significantly due to mass media that was bringing awareness among women about their abilities. They also proposed that women's earning above \$10,000 increased about sevenfold during 1960 because media was empowering women by

advocating their rights of education and rights of job, although the participation of women in profession of media did not increase.

Prabhash (2005) proposed in his study that the strategic purpose of media is to report and critique all illegitimate practices in a country. It is a liability of media to protect human rights. However, in reality it flops in protecting the rights of submissive creatures such as women. Gallagher (2005) also verified in his study that in early stage of international women movement, press had given as a secondary status in dealing with the problems related to women and protecting the rights of women. Now the conferences on women development emphasize on the role of media in promoting women empowerment.

Okello-Orlale (2006) emphasized that media has contributed significantly in promoting gender equality, development and peace. His study had surveyed the contribution of media in meeting the objectives of Nairobi Conference. The conference addressed various issues that were influencing women development in African countries. The issues taken into account were poverty, health care, injustice and gender equality. His study found that media has played a key role in setting agenda for meeting gender equality, transforming attitudes and mindsets and making space for women in different aspects of life. In his study he underscored that media has reinforced women empowerment in Africa. Accepting the significance of media in achieving the objectives of gender equality, different journalists along with the delegation of feminists emphasized on the role of media in achieving the goals Nairobi Conference.

Mourtada, Salem, Al-Dabbagh, and Gargani (2011) illustrated that due to social media, Arab women are more likely to contribute in political, economic and civil actions. The social media has brought historical change in the status of women of Arab countries. The social media like “Twitter and Facebook” have brought awareness among women about their rights. Social media is driving the campaign of Arab swing and awaking awareness in women about their rights. Women in Arab countries are now relatively in a better state of knowledge regarding their capabilities, opportunities and talents.

Media also contributes in political and social empowerment of women. Eslan-Ziya (2013) pointed out that new wave of political activism in Middle East called “Arab swing” is actually fostered by

social media. Social media has provoked political activism among women of Middle East. The women who got education in secular system have played an important role in rejecting male dominant society and led to the new wave of feminism.

Harish (2014) highlighted in his study that right of expression is an important tool to protect the rights of the submissive group of gender. There is no other important strategy to empower women than providing them equal access to education and economic opportunity. Free media is a platform through which one can express his thoughts and ideas. Women had been considered as a subjugated creature of nature by male dominant society and some orthodox traditions and culture. Now free media has empowered women in different aspects of life and they are carrying top positions of international corporations and organizations by the dint of their talent and the role of media.

As far as the link of media with women empowerment is concerned, Whitten-Woodring (2016) provided empirical evidence that the interactive effect of internet access and media freedom has favorable impact on women empowerment. Nord, Çetin, Atay, and Paliszkievicz,(2016) explored the favorable effects of social technologies on women empowerment using the results of studies conducted in Taiwan and Turkey.

Press freedom also improves accountability of government and thereby exerting favorable influences on human rights. Likewise, “the internet and social media are assumed to empower citizens by enabling them to document repression and thereby discourage future abuse (Whitten-Woodring, 2016).”

Cooray, Dutta, and Mallick (2017) argue that “in the context of women's rights, a free press can enhance positive rights by helping women raise voices and gain recognition, and thereby making the government create a more conducive environment for women's empowerment. Further, higher press freedom can reduce the infringement of negative rights by calling for greater public accountability.” Whereas, they acknowledge the role of press freedom in enhancing women empowerment, they also argue that press freedom is a necessary condition of women empowerment but not a sufficient condition. They suggest that the benefits of free press depend upon

other factors such as quality of institutions and access to information communication technologies.

Nguyen, Chib and Mahalingam (2017) argue that mobile phones cause positive impact on women empowerment. Suwana (2017) emphasizes the role of digital media literacy for the empowerment of Indonesian women. She argued “Indonesian women need digital media literacy skills to effectively use the internet and to raise their quality of life”. In contrast, Majeed and Malik (2017) argue that free media and newspapers facilitate human traffickers to reach the victims and cause negative effects on women rights.

Press freedom can influence women’s political knowledge and opinions, thereby improving their empowerment. For example, Bleck and Michelitch (2018) found that women’s empowerment is positively associated with rural women’s political knowledge and opinions in Mali. In a recent study, Dasgupta (2019) found favorable impact of exposure to mass media on female empowerment using household survey data.

Press freedom is considered as an important tool that protects the rights of women. It plays a significant role in empowering women economically, politically and socially. However, the investigation of women empowerment and press freedom relationship is based on anecdotal stories and case studies. To the best of our knowledge, no one has empirically examined the impact of press freedom on women empowerment. This study fills this research gap using a large sample of 160 countries.

## 2. Methodology

In order to empirically explore the relationship between press freedom and women empowerment, this study uses the data of 160 countries across the world ranges from 1996 to 2011. We have followed empirical studies of the literature that have also employed women rights, gender equality or gender discrimination as dependent variables (Neumeyar and de Soysa, 2007 & 2011; Oostendorp, 2009; Kucera and Milberg, 2000).

$$WR_{it} = \beta_1 + \beta_2 Y_{it} + \beta_3 DEM_{it} + \beta_4 PF_{it} + \beta_5 FER_{it} + \beta_6 FPLF_{it} + \beta_7 FPOP_{it} + \beta_8 X_i + \varepsilon_{it} \quad (1)$$

where

*WR stands for women's rights*

*Y stands GDP per capita*

*DEM stands for democracy*

*PF stands for press freedom*

*FER stands for fertility*

*FPL stands for female participation in labor force*

*FPOP stands for share of females in total population*

*X stands for Matrix of Regional dummy variables*

*$\mathcal{E}$  stands for error term*

In equation 1 dependent variable is women's rights while independent variables are per capita GDP, democracy and press freedom. The control variables are fertility, female labor force and female share in total population. The regional dummies are introduced in empirical model in order to capture heterogeneity in the panel data.

In developed countries, the discrimination against women is lower as compared to developing countries. According to the modernization theory, high economic development mitigates the probability of discriminated attitude of employers against women (Forsythe et al. 2000). The relationship between economic opportunities for women and per capita GDP is likely to be non-linear. The reason is that in initial stage of economic development men will be preferred to women but after the threshold level of economic development, women will also be employed as paid workers. On the other hand few feminist proposed that high economic development may reinforce discrimination against women (Charlton, 1997). In a recent study, Cooray et al., (2017) argue that "as income or level of development increases, women's rights will expand due to greater employment opportunities and/or lower discrimination against women. One would therefore expect a positive relationship between per capita income as an indicator of development and women's rights. Hence, it is important to consider GDP per capita as a key control variable across countries." To test it empirically, we have taken into account of per capita GDP as a cause of women empowerment.

Democracy is also a main determinant of women empowerment. In a full democratic country there will be less chance of poor economic, political and social rights provided to women. The literature suggests that "democracies provide the essential checks and

balances and ensure transparency of government actions. Thus, the media sector is allowed to produce its desired functions without much interference” (Cooray et al., 2017). Although in parliament, most of the policy makers are men, yet there is a low chance of discrimination against women in democratic regimes than dictatorial regimes. Democratic country protects human rights and has low prevalence of forced labor (Poe, Tate, & Keith, 1999). To test the relationship between women rights and democracy we have employed it as independent variable.

Press freedom is a variable of our main concern in this study. The empirical investigation of women rights and press freedom nexus in the literature is missing. The linkage between press freedom and women empowerment is built on the basis of case studies and hearsay stories. We have employed press freedom as a determinant of women empowerment.

According to Morrisson and Jütting (2005), different geographical regions of the world bear sharp differences in long standing norms such as religion, tradition culture, dress code, movement rights, marriages, genital mutilation, inheritance rights and ownership rights. In order to take into account of these dissimilarities, we have employed regional dummies for European and Central Asian countries (ECA), Middle East and North African countries (MENA), Latin America and Caribbean countries (LAAC), South Asian countries(SA), Sub-Saharan African countries(SSA), European Union (EU) and East Asian Pacific counties(EAP) following World Bank (2014) classification.

Fertility, female labor force participation and female population can also influence the deliverance of women rights. The high fertility of women increases the chance of discrimination against women while participation of female in labor force and female population assist to protect women’s rights. We employed three dimensions of women rights that are women economic rights, women political rights and women social rights. The empirical model to measure these dimensions of women’s rights are:

$$WER_{it} = \beta_1 + \beta_2 Y_{it} + \beta_3 DEM_{it} + \beta_4 PF_{it} + \beta_5 FER_{it} + \beta_6 FPLF_{it} + \beta_7 FPOP_{it} + \beta_8 X_i + \varepsilon_{it} \quad (2)$$

$$WPR_{it} = \beta_1 + \beta_2 Y_{it} + \beta_3 DEM_{it} + \beta_4 PF_{it} + \beta_5 FER_{it} + \beta_6 FPLF_{it} + \beta_7 FPOP_{it} + \beta_8 X_i + \varepsilon_{it} \tag{3}$$

$$WSR_{it} = \beta_1 + \beta_2 Y_{it} + \beta_3 DEM_{it} + \beta_4 PF_{it} + \beta_5 FER_{it} + \beta_6 FPLF_{it} + \beta_7 FPOP_{it} + \beta_8 X_i + \varepsilon_{it} \tag{4}$$

where

*WER* stands for Women Economic Rights

*WPR* stands for Women Political Rights

*WSR* stands for Women Social Rights

Ordered logit model is used to estimate the model because outcome variable assumes categorical orders.

### 3. Data Description

The data of women’s economic, political and social right is taken from Cingranelli, Richards, & Clay(2014) Human Rights Database. Women’s rights indexes are based on discrete data and have ordinal ordering ranges from 0 to 3. The complete description of ranking of women rights is provided in Table 1. Table 2 presents complete description of variables and different aspects of variables covered in the index.

**Table 1: The Description of the Ordinal Ranking of the Index**

Index Ranking	Women Economic Rights
0	No rights are provided to women in relevant dimension. There is no law that assures women rights and women endure high level of discrimination.
1	Women rights are assured in law but it is not enforced in a country. They tolerate significant level of discrimination in relevant dimensions (economic, political and social).
2	Women rights are assured in law and also enforced in a country but still women tolerate some discrimination in relevant dimensions.
3	Women rights are guaranteed in law and also enforced effectively in a country. There is no discrimination against women and they enjoy full economic, political and social rights.

The data of democracy is taken from the polity IV (2014). The data is given for countries since their existence on the world map. The Index of democracy lies in the range of -10 and 10. Where 10 refers to complete democracy and -10 refers to complete autocracy in a country.

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**Table 2: Full Description of the Women Rights Index**


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**Women Economic rights index**


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Equal pay for equal work, equality in hiring and promotion practices and no discrimination by employers.

Free choice of profession or employment without the need to obtain a husband or male relative's consent.

The right to gainful employment without the need to obtain a husband or male relative's consent.

Job security (maternity leave, unemployment benefits, no arbitrary firing or layoffs, etc.).

The right to be free from sexual harassment in the workplace and to work at night.

The right to work in occupations classified as dangerous such as military and police force.

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**Women social rights index**


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The right to equal inheritance and education.

The right to enter into marriage on a basis of equality with men.

The right to travel abroad and obtain a passport.

The right to confer citizenship to children or a husband.

The right to initiate a divorce and own, acquire, manage, and retain property brought into marriage.

The right to participate in social, cultural, and community activities.

The freedom to choose a residence/domicile.

Freedom from female genital mutilation of children and of adults without their consent.

Freedom from forced sterilization.

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**Women political rights index**


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The right to vote, run office, hold election and appointed government position.

The right to join political parties.

The right of petition of government parties.

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Data of press freedom is extracted from Freedom House (2014). It ranges from 0 to 100 where index values between 1-30 indicate press freedom, value between 30-60 indicates partial freedom of press, and values between 61-100 indicate no press freedom. In order to arrange press freedom in ascending order we have transformed index by subtracting it from 100. The values of transformed index between 0-40 denote no press freedom; values in the range of 41-70 denote partial freedom of press and values in the range of 71-100

denote full press freedom. The data of Freedom House covers the following dimensions.

**Table 3: Depiction of Press Freedom Dataset**

Dimensions covered in Press Freedom Data set	
<i>Data of press freedom from 1994 to 2001 cover following aspects</i>	
A.	Law and principles which affect media content
B.	Political influence on media
C.	Economic impact on media
D.	Oppressive action on journalists (killing, physical violence, harassments, facilities, and censorship of journalists)
<i>Data of press freedom from 2001 to 2013 cover following aspects</i>	
A.	Law and principles which effect media content
B.	Political influence on media
C.	Economic impact on media

Data of per capita GDP at constant 2005, female education, fertility, female share in population and female participation in labor

**Table 4: Correlation Matrix**

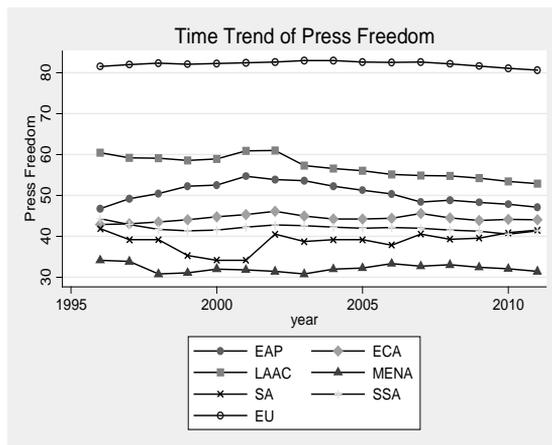
Variables	1	2	3	4	5	6	7	8	9
WER	1.000								
WPL	0.3019	1.000							
WSR	0.6996	0.4758	1.0000						
Per Capita income	0.5040	0.1864	0.5440	1.0000					
Press Freedom	0.4305	0.3407	0.5782	0.5923	1.000				
Democracy	0.2266	0.1595	0.2582	0.2075	0.3727	1.0000			
Fertility	-0.431	-0.185	-0.5008	-0.4500	-0.4654	-0.2450	1.0000		
Female Labor	0.0673	0.2924	0.1892	0.1306	0.1039	0.0245	0.2386	1.000	
Female Population	0.1122	0.4907	0.3027	-0.1475	0.2408	0.1129	-0.1494	0.1909	1.0000

force is extracted from World Development Indicators (2014). Female education is proxied by “female gross enrollment in secondary school”.

Table 4 indicates that women economic rights have positive correlation with per capita income, press freedom, democracy, female population and female participation in labor force. Women economic, political and social rights have negative relationship with fertility of women. The positive correlation of women rights with women political and social rights implies that women economic rights will be assured if political and social rights of women are protected.

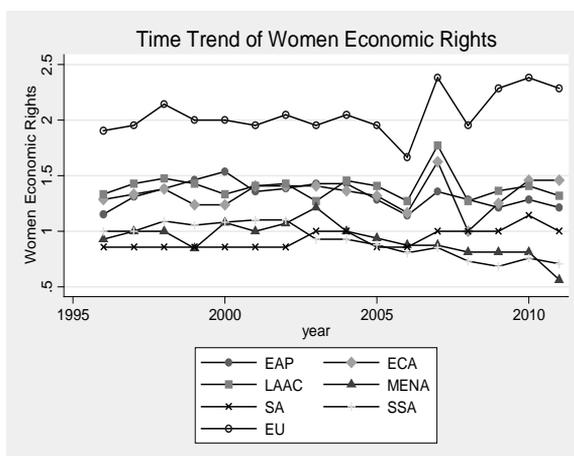
Figure 1 indicates that in European Union media is totally free while in other geographical regions of the world media is partially free. The media is not free in the MENA countries while in the South Asian countries it became free in 2010. While in other regions of the world such as LAAC, ECA, EAP and SSA, the media is partially free. Figure

1 indicates that overall freedom of press in different geographical regions of the world has increased in 2001.



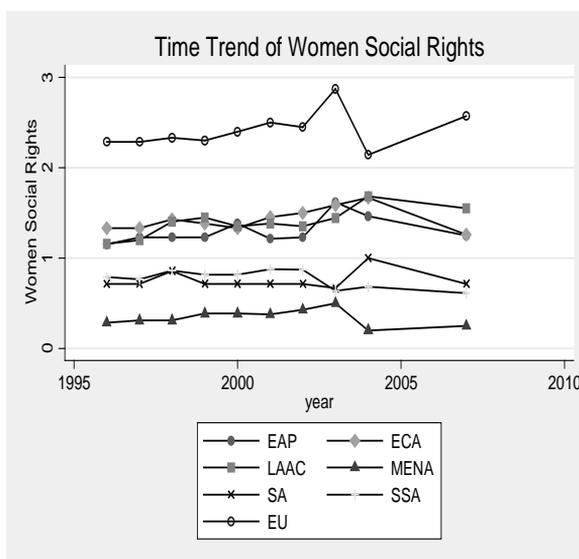
**Figure 1: Time Trend of Press Freedom**

Figure 2 denotes that women economic rights are highest in the European Union countries. European Union countries deliver wide range of economic rights to women. The countries across the world provide economic rights to women; however except European Union, it is not efficiently enforced. In 2010, women belonging from MENA region were the most deprived economically.



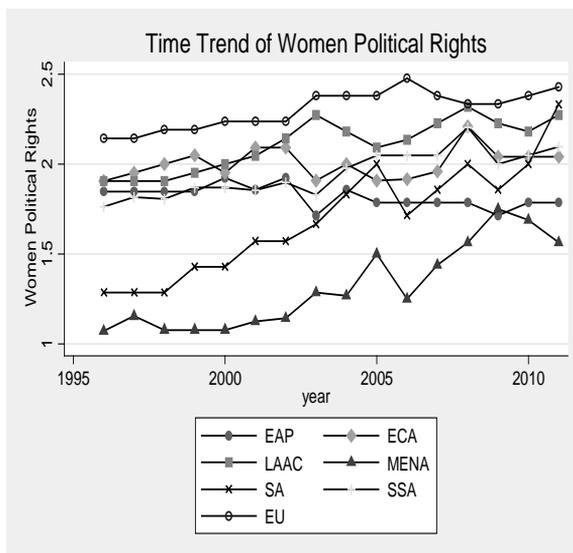
**Figure 2: Time Trend of Women Economic Rights**

Figure 3 presents that women social rights are most protected in European Union and least protected in MENA regions. In European countries there are social rights for women and they are also enforced but still women tolerate minor degree of social discrimination. While in MENA countries, there is no law for women social rights such as rights to marry, divorce, and forced sterilization.

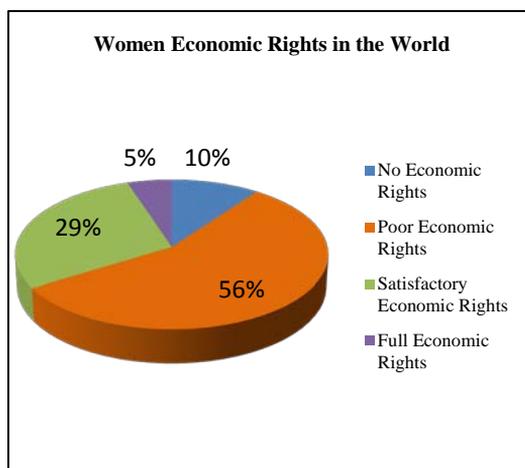


**Figure 3: Time Trend of Women Social Rights**

Figure 4 indicates that there is an upward trend in the provision of political rights to women all over the world. Women are becoming more politically strong in all regions of the world. The women enjoy more political rights in European countries and least in MENA countries. Nevertheless, political rights for women have been increasing in MENA countries since 2005. In 1995, there was law to protect women political rights in MENA countries but that was not enforced but in 2011, the law for women political rights was enforced, yet they tolerate political discrimination. In South Asian countries the law to protect women political rights was not enforced in 1995 but it has been enforced since 2000 and women endure only minor level of political discrimination in South Asian countries.



**Figure 4: Time Trend of Women Political Rights**



**Figure 5: Women Economic Rights**

Figure 5 presents that only 5% economic rights provided to women are fully protected and assured, whereas 10% regions of the world provide no economic rights to women. Figure 6 presents that in 76% regions of the world women enjoy satisfactory political rights which implies that law that protects women political rights is enforced

and women endures only minor level of political discrimination. While 11% women political rights are fully protected and women do not tolerate any political discrimination. Only 2% regions of the world do not provide any political rights to women. Figure 7 denotes that in 10% regions of the world women enjoy full social rights. They have full rights to marriage, divorce, having kids, and forced sterilization. While in 18% regions of the world, women have no social right, and they have no rights to take any decision about their social life. Women in 51% regions of the world tolerate high level of discrimination and have poor social right. In 21% regions of the world, women enjoy satisfactory social rights.

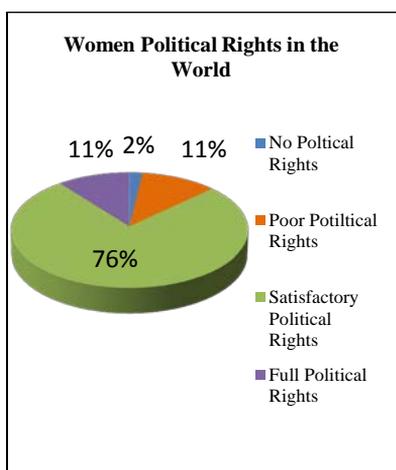


Figure 6: Women Political Rights

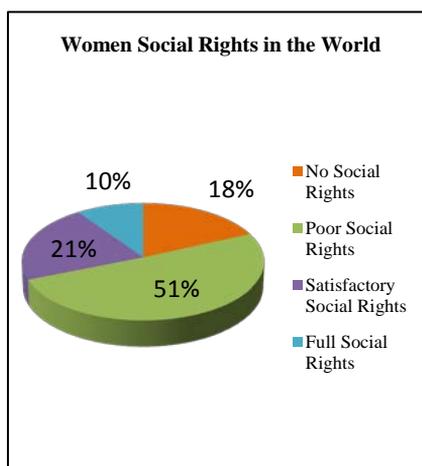
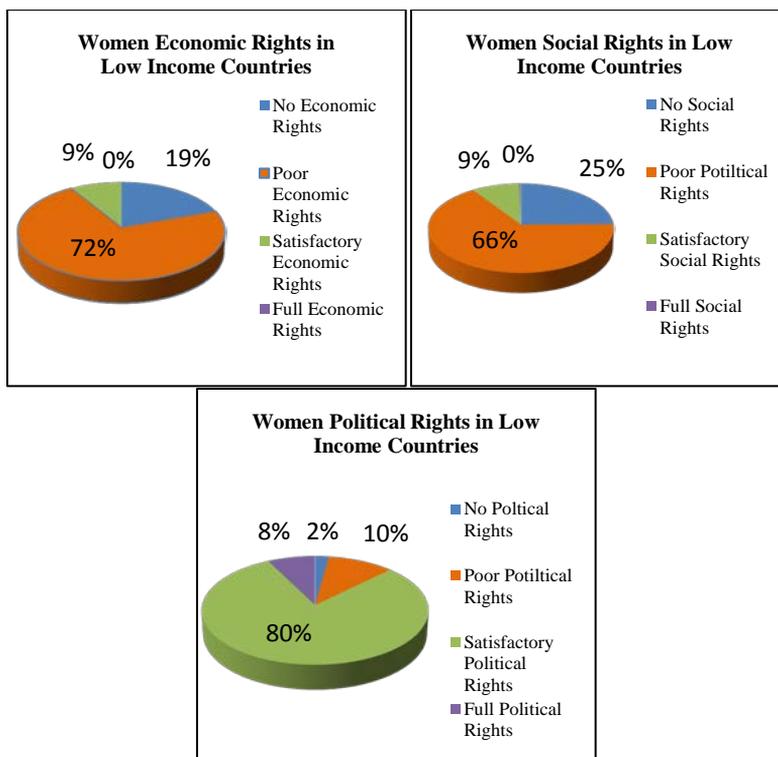


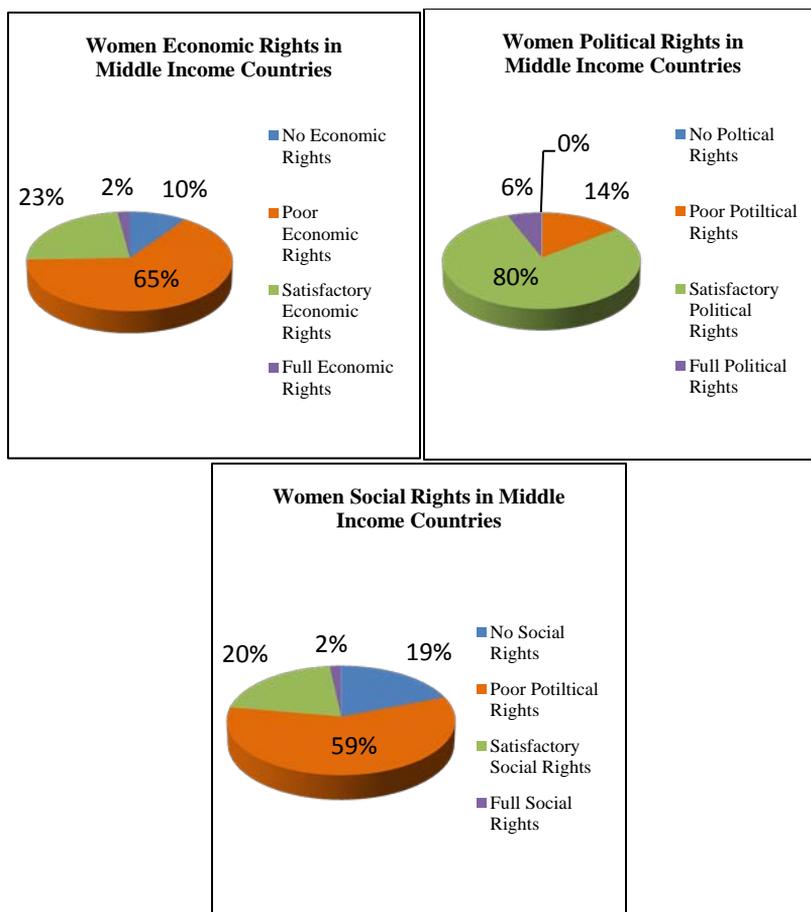
Figure 7: Social Economic Rights

Figure 8 indicates that in low income countries, 72% rights assured to women are poor. In 19% of low income countries, there are no economic rights for women. Women of low income countries also endure high level of discrimination in social life. Only 9% low income countries protect the women economic rights up to the satisfactory level. The picture of women political rights is better than women economic and social rights. In low income countries, 80% of women political rights are satisfactory. The law that protects women political rights is enforced in 80% of low income countries; however women still tolerate political discrimination in low income countries. Only in 8% regions of low income countries women political rights are fully protected.



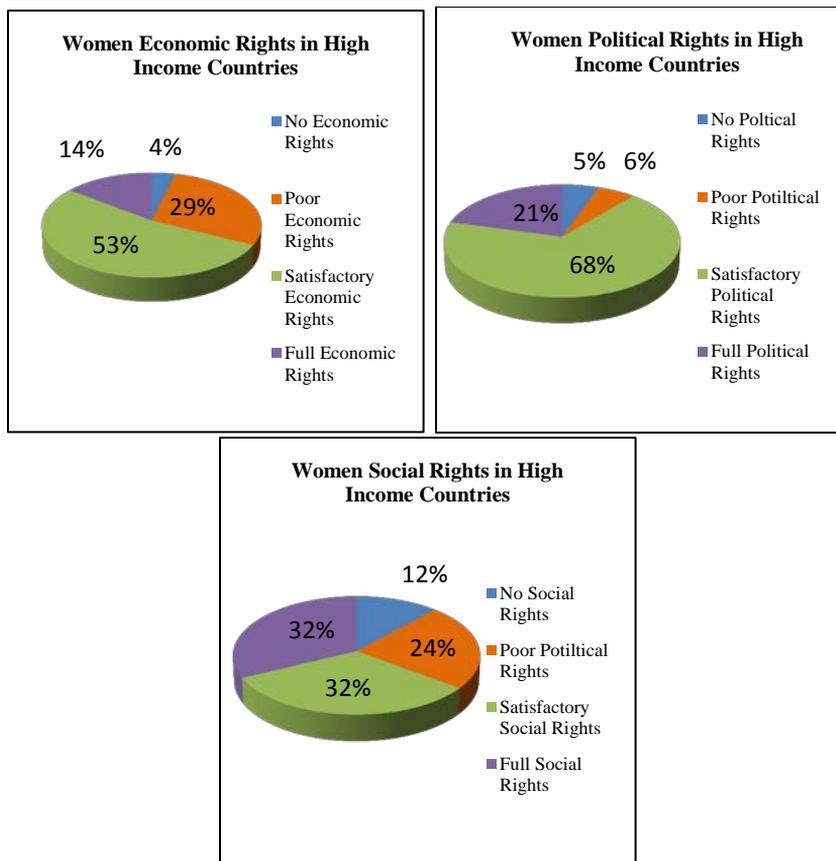
**Figure 8: Women Economic, Political and Social Right in Low Income Countries**

Figure 9 shows that women are economically and socially highly discriminated even in middle income countries. In the middle income or developing countries, 65% women economic rights are poor and 59% women social rights are poor. This implies that there are economic and social rights for women in law but these are not enforced. Only 2% of women economic and social rights in the middle income countries are fully assured and protected. Women political rights are relatively protected than economic and social rights. The 80% of political rights are satisfactory and 6% are fully assured and protected in the middle income countries.



**Figure 9: Women Economic, political and Social Right in Middle Income Countries**

Picture of women’s political, economic and social rights is quite satisfactory in high income countries. Figure 10 presents that 53% of women economic rights are quite satisfactory while 14% of economic rights provide full freedom to women to participate in any economic activity in a country. In high income countries, 32% women social rights are fully protected and there is zero discrimination against women. The political rights of women are more protected in low income and middle income countries as compared to high income countries. In high income countries, 68% of women political rights are satisfactory while in low and middle income countries 80% of women political rights are satisfactory.



**Figure 10: Women Economic, Political and Social Right in Middle Income Countries**

#### 4. Empirical Results

The data of women rights is not continuous; it has ordinal ordering from 0 to 3 that ranks women rights from no right to full rights. Since our dependent variable is a categorical variable, we have employed ordered logit model. We have individually explored the impact of press freedom on women economic, political and social rights.

The empirical results of Table 5 indicate that press freedom has positive and significant impact on women economic rights. The coefficients of ordered logit model are the log odds of getting full economic rights vs. combined no, poor and satisfactory women economic rights.

**Table 5: Empirical Results of Ordered Logit Models**

<b>Dependent Variable is Women Economic Rights</b>				
<b>Variables</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<b>Per capita GDP</b>	0.574*** (0.0479)	0.515*** (0.0537)	0.514*** (0.0538)	0.492*** (0.0578)
<b>Democracy</b>	0.00476 (0.00317)	0.00416 (0.00318)	0.00217 (0.00321)	0.00226 (0.00321)
<b>Press freedom</b>	0.00770*** (0.00268)	0.00764*** (0.00269)	0.00748*** (0.00270)	0.00797*** (0.00274)
<b>EAP</b>	2.220*** (0.222)	2.104*** (0.228)	1.520*** (0.245)	1.583*** (0.252)
<b>ECA</b>	1.958*** (0.192)	1.765*** (0.209)	1.390*** (0.215)	1.489*** (0.235)
<b>LAAC</b>	2.113*** (0.206)	2.053*** (0.209)	1.710*** (0.214)	1.784*** (0.225)
<b>SA</b>	1.447*** (0.290)	1.339*** (0.294)	0.948*** (0.295)	0.970*** (0.296)
<b>SSA</b>	1.277*** (0.200)	1.432*** (0.211)	0.885*** (0.227)	0.958*** (0.237)
<b>EU</b>	2.860*** (0.225)	2.745*** (0.230)	2.302*** (0.239)	2.423*** (0.265)
<b>Others</b>	2.108*** (0.227)	2.048*** (0.229)	1.580*** (0.239)	1.686*** (0.260)
<b>Fertility</b>		-0.130** (0.0546)	-0.178*** (0.0553)	-0.189*** (0.0562)
<b>Labor force (Female)</b>			0.0204*** (0.00324)	0.0202*** (0.00324)
<b>Female population</b>				-0.0232 (0.0218)
<b>Constant cut1</b>	3.729*** (0.398)	2.802*** (0.555)	3.048*** (0.560)	1.758 (1.333)
<b>Constant cut2</b>	7.571*** (0.429)	6.668*** (0.570)	6.926*** (0.573)	5.644*** (1.331)
<b>Constant cut3</b>	10.64*** (0.463)	9.713*** (0.599)	10.06*** (0.609)	8.776*** (1.350)
<b>Observations</b>	2,334	2,333	2,333	2,333
<b>LR chi2(13)</b>	1034.50	1038.81	1078.83	1079.96
<b>P-value</b>	0.000	0.000	0.000	0.000
<b>Pseudo R2</b>	0.2076	0.2086	0.2166	0.2168

*Note:* \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (Standard errors in parentheses)

The coefficient of press freedom in 1<sup>st</sup> column of table 5 implies that one unit increase in press freedom increases the log odds of getting full women economic rights up to 0.0077 units. It indicates that

press freedom plays a significant role in protecting women economic rights. This finding is consistent with the arguments given by the studies of Whitten-Woodring (2016) and Cooray et al. (2017).

The coefficient of democracy denotes that one unit increase in democracy will increase the log odds of assuring full economic rights to women about 0.0047; however the impact of democracy is not significant. The relationship between democracy and women empowerment is not yet conclusive. On the one hand, Cooray et al. (2017) argue that “democracies provide the essential checks and balances and ensure transparency of government actions. On the other hand, Högström (2015) argues that the overall positive correlation between democracy and gender equality disappears when one looks at nations at different income levels separately. Per capita GDP and women school enrollment also have positive significant impact on women economic rights.

The coefficient of per capita income implies that one unit increase in per capita income, the log odd of full economic right to women increases about 0.574 units. This finding is consistent with Cooray et al., (2017) who argue that “as income or level of development increases, women’s rights will expand due to greater employment opportunities and/or lower discrimination against women.” We have also introduced regional dummies in order to capture socio-economic difference in the countries. MENA region is an omitted dummy in order to avoid dummy variable trap. The empirical findings infer that women economic rights in all the geographical regions are greater than the women economic rights in MENA countries. The European Union countries provided highest level of economic right to women and women in European countries tolerate lower discrimination than other regions of the world.

In 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> column of table 5, fertility, female participation in labor force and female population are successively incorporated as control variables to check the robustness of our results. The coefficient of press freedom remains positive and significant which implies that increase in press freedom will increase the log odds full economic rights to women. The P-value of likelihood ratios indicates that model is better than the empty model, which implies that our model is correct. The cuts are also significant in all the specification of equation 2 that infer that ordered logit is more efficient than OLS

because there is significant difference in the intercept of different categories of women rights.

**Table 6: Empirical Results of Ordered Logit Models**

<b>Dependent Variable is Women Political Rights</b>				
<b>Variables</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
Per capita GDP	0.0694 (0.0537)	-0.0246 (0.0609)	-0.0618 (0.0612)	0.190*** (0.0695)
Democracy	-0.000340 (0.00394)	-0.00148 (0.00394)	-0.00483 (0.00405)	-0.00559 (0.00407)
Press freedom	0.0161*** (0.00336)	0.0164*** (0.00336)	0.0151*** (0.00341)	0.00957*** (0.00348)
EAP	1.685*** (0.228)	1.494*** (0.236)	0.396 (0.261)	0.0516 (0.270)
ECA	2.910*** (0.217)	2.614*** (0.235)	1.969*** (0.244)	1.336*** (0.258)
LAAC	3.497*** (0.242)	3.408*** (0.244)	2.908*** (0.251)	2.525*** (0.260)
SA	1.663*** (0.292)	1.532*** (0.295)	0.916*** (0.307)	0.961*** (0.311)
SSA	2.615*** (0.218)	2.911*** (0.237)	1.977*** (0.253)	1.589*** (0.263)
EU	4.004*** (0.252)	3.841*** (0.255)	3.185*** (0.267)	2.317*** (0.291)
Others	3.697*** (0.270)	3.621*** (0.270)	2.824*** (0.288)	2.062*** (0.307)
Fertility		-0.216*** (0.0649)	-0.310*** (0.0666)	-0.225*** (0.0678)
Labor force (female)			0.0383*** (0.00398)	0.0416*** (0.00404)
Female population				0.190*** (0.0245)
Constant cut1	-1.073** (0.465)	-2.558*** (0.649)	-2.488*** (0.652)	8.441*** (1.539)
Constant cut2	1.459*** (0.442)	-0.00186 (0.626)	0.132 (0.627)	11.25*** (1.564)
Constant cut3	6.752*** (0.475)	5.325*** (0.639)	5.665*** (0.639)	16.88*** (1.590)
Observations	2,341	2,340	2,340	2,340
LR chi2(13)	651.27	662.14	759.60	825.85
P-value	0.000	0.000	0.000	0.000
Pseudo R2	0.1849	0.1880	0.2156	0.2344

**Note:** \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (Standard errors in parentheses)

Table 6 presents empirical findings of equation 3. The empirical results in 1<sup>st</sup> column of table 2 indicate that press freedom

contributes in assuring political rights to women. The coefficient of press freedom implies that one unit increase in press freedom increases log odds of being in full women's political rights category about 0.016 units. The coefficients of per capita income in 4<sup>th</sup> column of table 6 depicts that a unit increase in per capita income increases the order log odds of high political rights about 0.190. It indicates that in developed countries, women enjoy more political rights than in developing countries. The coefficient of democracy is negative but insignificant. We have treated MENA as a base category and women political rights in all the regions of the world is higher than MENA regions. Women political rights are highest in EU countries and lowest in MENA countries.

In order to test the robustness of results we incorporated fertility, female participation in labor force and female population as control variables in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> columns of table 6. Our results remained intact. The impact of fertility on women political rights is negative and significant while the impact of female population and female labor force are positive on women's political rights. It implies that if fertility rate in a country will increase then women will be less politically empowered. The p-value of likelihood ratio is less than 0.05 that implies our model is better than empty model.

Table 7 presents the empirical results of women social rights and press freedom nexus. In 1<sup>st</sup> column of table 7 the coefficient of press freedom indicates that one unit increase in press freedom will increase the order log odds of being in category of full women's social rights about 0.02 units. The results confirm that press freedom is very efficient to protect women's social rights. The coefficient of per capita GDP depicts that one unit increase in per capita income will increase the order log odds of getting full social rights for women about 0.338 units. The regional dummies are also introduced to control the differences in norms, cultures, traditions and religions in countries. Women of European countries enjoy highest social rights than other regions of the world where in MENA region women's social rights are lowest across the world. In south Asian countries, women social rights are 2.565 units higher than MENA countries.

**Table 7: Empirical Results of Ordered Logit Models**

<b>Dependent Variable is Women Social Rights</b>				
<b>Variables</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
Per capita GDP	0.338*** (0.0594)	0.269*** (0.0671)	0.279*** (0.0675)	0.306*** (0.0737)
Democracy	-0.00112 (0.00398)	-0.00161 (0.00400)	-0.00272 (0.00406)	-0.00277 (0.00405)
Press Freedom	0.0200*** (0.00356)	0.0199*** (0.00356)	0.0183*** (0.00358)	0.0177*** (0.00364)
EAP	3.852*** (0.310)	3.709*** (0.317)	3.057*** (0.339)	2.992*** (0.346)
ECA	4.297*** (0.279)	4.036*** (0.301)	3.600*** (0.311)	3.488*** (0.333)
LAAC	4.033*** (0.297)	3.968*** (0.299)	3.641*** (0.305)	3.562*** (0.316)
SA	2.565*** (0.380)	2.431*** (0.384)	2.066*** (0.392)	2.047*** (0.392)
SSA	2.391*** (0.270)	2.613*** (0.288)	2.053*** (0.307)	1.955*** (0.324)
EU	5.672*** (0.317)	5.499*** (0.325)	5.068*** (0.335)	4.936*** (0.365)
Others	3.834*** (0.317)	3.745*** (0.320)	3.237*** (0.333)	3.121*** (0.356)
Fertility		-0.164** (0.0722)	-0.217*** (0.0738)	-0.201*** (0.0756)
Labor Force (female)			0.0234*** (0.00421)	0.0234*** (0.00421)
Female Population				0.0294 (0.0330)
Constant cut1	4.434*** (0.522)	3.298*** (0.725)	3.662*** (0.733)	5.273*** (1.951)
Constant cut2	8.260*** (0.560)	7.158*** (0.741)	7.523*** (0.747)	9.136*** (1.959)
Constant cut3	10.67*** (0.594)	9.551*** (0.771)	9.997*** (0.782)	11.61*** (1.976)
Observations	1,396	1,395	1,395	1,395
LR chi2(13)	998.80	1003.79	1035.23	1036.03
P-value	0.000	0.000	0.000	0.000
Pseudo R2	0.2952	0.2968	0.3061	0.3061

**Note:** \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (Standard errors in parentheses)

The sensitivity of results is tested by adding control variables but results remain same. Female population and female labor force have positive impact on women social rights. If women have high participation in labor force then their social rights will be protected. The

p-value of likelihood ratio implies that empirical model is correct and better than the empty model. Our study through empirical investigation confirms that press freedom is an important tool that mitigates economic, political and social discrimination against women. It helps to protect economic, social and political right of women and promote women empowerment.

Table 8 presents the marginal impacts of explanatory variables on different categories of women rights. The marginal effect of press freedom on zero and poor economic rights of women is negative. The coefficient of press freedom in 1<sup>st</sup> column of table 8 can be interpreted as one Standard Deviation (S.D) increase in press freedom will decrease the probability of no economic right for women about 0.12%. Where impact of press freedom on satisfactory and full economic rights of women is positive. The coefficient of press freedom in third column indicates that one S.D increase in freedom of press will increase the probability of satisfactory provision of economic rights to women about 0.4%. The marginal impact of press freedom on complete economic rights to women is positive but insignificant. The marginal effect of per capita GDP, female education and democracy on the probability of zero and poor women's economic rights are negative while it is positive on the probability of providing satisfactory and full economic rights to women.

In table 8 we have also estimated marginal effects of press freedom on women's political rights. The empirical results depict that marginal effect of press freedom on the probability of being in the category of zero political rights provided to women and poor political rights provided to women is negative. While marginal effect of press freedom is positive on the probability of being in the category of satisfactory and full political rights of women. The coefficient of press freedom in 1<sup>st</sup> column of table 8 implies that one S.D increase in the press freedom will decrease the probability of no political rights for women about 0.044%.

Where coefficient of press freedom in 4<sup>th</sup> column indicates that one S.D increase in press freedom will improve the probability of providing full political rights to women about 0.39%. The marginal effect of high per capita income on the probability of being in the category of no and poor women's political rights is

positive and negative on the probability of being in the category of satisfactory and full women's political rights. It implies that women in developed countries are politically discriminated and a country having high per capita income provides poor political rights to women. The marginal effect of democracy and female education on probability of full political rights for women is positive while negative for other categories of women political rights.

**Table 8: Marginal Effects of Ordered Logit Models**

Variables	No Rights	Poor Rights	Satisfactory Rights	Full Rights
<b>Women Economic Rights</b>				
Sample frequency	234	1,306	673	121
Mean probability	0.0599	0.6395	0.2768	0.0237
Income per-capita	-0.0328*** (0.0026)	-0.0897*** (0.0066)	0.1091*** (0.0071)	0.0135*** (0.0014)
Democracy	-0.0004** (0.0002)	-0.0009** (0.0005)	0.0119** (0.001)	0.0002** (0.0001)
Press Freedom	-0.0012 *** (0.0002)	-0.0033*** (0.0004)	0.0040*** (0.0001)	0.0005*** (0.0001)
<b>Women Political Rights</b>				
Sample frequency	38	257	1,795	251
Mean probability	0.0117	0.0874	0.8179	0.0829
Income per-capita	0.00001 (0.0004 )	0.0001 (0.0029)	-0.00001 (0.0005)	-0.0001 (0.0029)
Democracy	-5.83e-06 (0.0001)	-0.0001 (0.0003)	6.70e-06 (0.0001)	0.0001 (0.0003)
Press Freedom	-0.00044*** (0.0001)	-0.0029*** (0.0002)	0.0005** (0.0003)	0.0029*** (0.0002)
<b>Women Social Rights</b>				
Sample frequency	253	707	299	137
Mean probability	0.1203	0.6062	0.2664	0.0497
Income per-capita	-0.0393*** (0.0047)	-0.0345*** (0.0055)	0.0562*** (0.0071)	0.0175*** (0.0023)
Democracy	-0.0002 (0.0004)	-0.0002 (0.0004 )	0.0003 (0.0006)	0.0001 (0.0002)
Press Freedom	-0.0043*** (0.0004)	-0.0037*** (0.0005)	0.0061*** (0.0005)	0.0019*** (0.0002)

**Note:** Standard errors in parentheses and \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

We also empirically checked that how press freedom influences the probability for women to enjoy full social rights. The results show that marginal effects of press freedom on the probabilities of zero and poor social rights for women are negative while they are positive on the probability of providing satisfactory and full social rights for women. In 1<sup>st</sup> column of table 8, the coefficient of press freedom can be interpreted as one S.D increase in press freedom will decrease the probability of no social right for women about 0.425%. The marginal effect of press freedom on full social right of women implies that one S.D increase in freedom of press will increase about 0.19% probability of full social rights for women. The marginal effects of per capita GDP and democracy on the probability of zero and poor women's social rights are negative while they are positive on the probability of providing satisfactory and full social rights to women.

## 5. Conclusion

The relationship of press freedom and women empowerment has attracted the attention of researcher in the recent decades. Media plays a significant role in assuring social rights to women by reporting physical torture and abuses against women. It helps in protecting the rights of women by diffusion of information and providing knowledge in a society. The available evidence on press freedom and women empowerment are largely country specific and descriptive, which cannot be generalized globally.

This study investigates the impact of press freedom on women economic, political and social rights by employing the data of 160 countries from 1996 to 2011. The empirical results of ordered logit model suggest that press freedom is an efficient tool that helps in protecting economic, political and social rights of women. The increase in freedom of press will enhance the log odds of getting full rights for women vs. zero, poor and satisfactory women's rights.

A comparative analysis of the regions suggests that the women of European Union enjoy complete economic, social and political rights because media is free in European Union. On the other hand in MENA region, women are discriminated because press is not free. The graphical and statistical analysis also supports the positive relationship between press freedom and women rights.

This study concludes that the economic, social and legal status of women can be improved in the low income countries in following ways. First, press freedom plays a central role in improving the economic, social and legal status of women. Second, findings of the study suggest that females' participation in labor force is a significant contributor of improving the economic, social and legal status of women.

In terms of policy implications, the findings suggest that press freedom in general can help central governments to achieve greater gender development and equality through increased awareness of female rights in economic, social and political spheres of life. The role of government is central in promoting press freedom. The government may not interfere with the independence of press given that people do not break the law by misusing the press freedom. Moreover government can allocate funds for the trainings of professionals associated with press. Finally labor force participation of females need to be encouraged through creating equal job opportunities irrespective of the gender. The developing economies need to improve the business environment for women by simplifying and shortening all the paperwork that women face to open a business.

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## Annexure

**Table A1: Empirical Results of Ordered Logit Models: The Coefficients are Odd ratio**

Dependent Variable is Women Economic Rights				
Variables	(1)	(2)	(3)	(4)
Per capita GDP	0.574*** (0.0479)	0.515*** (0.0537)	0.514*** (0.0538)	0.492*** (0.0578)
Democracy	0.00476 (0.00317)	0.00416 (0.00318)	0.00217 (0.00321)	0.00226 (0.00321)
Press Freedom	0.00770*** (0.00268)	0.00764*** (0.00269)	0.00748*** (0.00270)	0.00797*** (0.00274)
EAP	2.220*** (0.222)	2.104*** (0.228)	1.520*** (0.245)	1.583*** (0.252)
ECA	1.958*** (0.192)	1.765*** (0.209)	1.390*** (0.215)	1.489*** (0.235)
LAAC	2.113*** (0.206)	2.053*** (0.209)	1.710*** (0.214)	1.784*** (0.225)
SA	1.447*** (0.290)	1.339*** (0.294)	0.948*** (0.295)	0.970*** (0.296)
SSA	1.277*** (0.200)	1.432*** (0.211)	0.885*** (0.227)	0.958*** (0.237)
U	2.860*** (0.225)	2.745*** (0.230)	2.302*** (0.239)	2.423*** (0.265)
Others	2.108*** (0.227)	2.048*** (0.229)	1.580*** (0.239)	1.686*** (0.260)
Fertility		-0.130** (0.0546)	-0.178*** (0.0553)	-0.189*** (0.0562)
Labor Force (Female)			0.0204*** (0.00324)	0.0202*** (0.00324)
Female Population				-0.0232 (0.0218)
Constant cut1	3.729*** (0.398)	2.802*** (0.555)	3.048*** (0.560)	1.758 (1.333)
Constant cut2	7.571*** (0.429)	6.668*** (0.570)	6.926*** (0.573)	5.644*** (1.331)
Constant cut3	10.64*** (0.463)	9.713*** (0.599)	10.06*** (0.609)	8.776*** (1.350)
Observations	2,334	2,333	2,333	2,333
LR chi2(13)	1034.50	1038.81	1078.83	1079.96
P-value	0.000	0.000	0.000	0.000
Pseudo R2	0.2076	0.2086	0.2166	0.2168

**Note:** Standard errors in parentheses and \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A2: Empirical Results of Ordered Logit Models: The coefficients are Odd Ratio**

<b>Dependent Variable is Women Political Rights</b>				
<b>Variables</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
Per capita GDP	0.0694 (0.0537)	-0.0246 (0.0609)	-0.0618 (0.0612)	0.190*** (0.0695)
Democracy	-0.000340 (0.00394)	-0.00148 (0.00394)	-0.00483 (0.00405)	-0.00559 (0.00407)
Press freedom	0.0161*** (0.00336)	0.0164*** (0.00336)	0.0151*** (0.00341)	0.00957*** (0.00348)
EAP	1.685*** (0.228)	1.494*** (0.236)	0.396 (0.261)	0.0516 (0.270)
ECA	2.910*** (0.217)	2.614*** (0.235)	1.969*** (0.244)	1.336*** (0.258)
LAAC	3.497*** (0.242)	3.408*** (0.244)	2.908*** (0.251)	2.525*** (0.260)
SA	1.663*** (0.292)	1.532*** (0.295)	0.916*** (0.307)	0.961*** (0.311)
SSA	2.615*** (0.218)	2.911*** (0.237)	1.977*** (0.253)	1.589*** (0.263)
EU	4.004*** (0.252)	3.841*** (0.255)	3.185*** (0.267)	2.317*** (0.291)
Others	3.697*** (0.270)	3.621*** (0.270)	2.824*** (0.288)	2.062*** (0.307)
Fertility		-0.216*** (0.0649)	-0.310*** (0.0666)	-0.225*** (0.0678)
Labor force (female)			0.0383*** (0.00398)	0.0416*** (0.00404)
Female population				0.190*** (0.0245)
Constant cut1	-1.073** (0.465)	-2.558*** (0.649)	-2.488*** (0.652)	8.441*** (1.539)
Constant cut2	1.459*** (0.442)	-0.00186 (0.626)	0.132 (0.627)	11.25*** (1.564)
Constant cut3	6.752*** (0.475)	5.325*** (0.639)	5.665*** (0.639)	16.88*** (1.590)
Observations	2,341	2,340	2,340	2,340
LR chi2(13)	651.27	662.14	759.60	825.85
P-value	0.000	0.000	0.0000	0.000
Pseudo R2	651.27	0.1880	0.2156	0.2344

**Note:** Standard errors in parentheses and \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table A3: Empirical Results of Ordered Logit Models: The coefficients are Odd Ratio**

Dependent Variable is Women Social Rights				
Variables	(1)	(2)	(3)	(4)
Per capita GDP	0.338*** (0.0594)	0.269*** (0.0671)	0.279*** (0.0675)	0.306*** (0.0737)
Democracy	-0.00112 (0.00398)	-0.00161 (0.00400)	-0.00272 (0.00406)	-0.00277 (0.00405)
Press freedom	0.0200*** (0.00356)	0.0199*** (0.00356)	0.0183*** (0.00358)	0.0177*** (0.00364)
EAP	3.852*** (0.310)	3.709*** (0.317)	3.057*** (0.339)	2.992*** (0.346)
ECA	4.297*** (0.279)	4.036*** (0.301)	3.600*** (0.311)	3.488*** (0.333)
LAAC	4.033*** (0.297)	3.968*** (0.299)	3.641*** (0.305)	3.562*** (0.316)
SA	2.565*** (0.380)	2.431*** (0.384)	2.066*** (0.392)	2.047*** (0.392)
SSA	2.391*** (0.270)	2.613*** (0.288)	2.053*** (0.307)	1.955*** (0.324)
EU	5.672*** (0.317)	5.499*** (0.325)	5.068*** (0.335)	4.936*** (0.365)
Others	3.834*** (0.317)	3.745*** (0.320)	3.237*** (0.333)	3.121*** (0.356)
Fertility		-0.164** (0.0722)	-0.217*** (0.0738)	-0.201*** (0.0756)
Labor force (female)			0.0234*** (0.00421)	0.0234*** (0.00421)
Female population				0.0294 (0.0330)
Constant cut1	4.434*** (0.522)	3.298*** (0.725)	3.662*** (0.733)	5.273*** (1.951)
Constant cut2	8.260*** (0.560)	7.158*** (0.741)	7.523*** (0.747)	9.136*** (1.959)
Constant cut3	10.67*** (0.594)	9.551*** (0.771)	9.997*** (0.782)	11.61*** (1.976)
Observations	1,396	1,395	1,395	1,395
LR chi2(13)	998.80	1003.79	1035.23	1036.03
P-value	0.000	0.000	0.000	0.000
Pseudo R2	0.2952	0.2968	0.3061	0.3063

**Note:** Standard errors in parentheses and \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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