Determinants of Global Peace and Gender Equality as an Invisible Hand: A Cross Country Analysis

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Abstract

This study uses a cross sectional data for 115 countries in order to examine the relationship between global peace and gender equality, by using Global Peace Index (GPI) as a dependent variable, and Gender Inequality Index (GII) and Social Institutions and Gender Index (SIGI) as independent variables. We test whether the gender equality is related to peace and whether the impacts differ when other determinants of peace have taken into consideration. The results suggest that level of gender equality and cohesion are the most robust and significant variables affecting level of peace in a positive way among other control variables. Two indexes have been used as a measure of gender equality in order to check the robustness of the results and the same results and conclusions were obtained from the regressions. Interestingly, the study also finds that income level of the country, as a control variable, is insignificant in all regressions.

Keywords: global peace, gender inequality, cohesion.

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Küresel Barışın Belirleyicileri ve Görünmez Bir El Olarak Toplumsal Cinsiyet Eşitliği: Bir Kesit Veri Analizi

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Öz

Bu çalışmada, küresel barış ve cinsiyet eşitliği arasındaki ilişkiyi Küresel Barış İndeksini (GPI) bağımlı değişken olarak ve Toplumsal Cinsiyet Eşitsizliği Endeksi (GII) ve Sosyal Kurumlar ve Toplumsal Cinsiyet Endeksinin (SIGI) bağımsız değişkenler olarak incelemek amacıyla 115 ülke için kesitsel bir veri kullanılmıştır. Toplumsal cinsiyet eşitliğinin barışla ilgili olup olmadığı ve barışın diğer belirleyicileri dikkate alındığında etkilerin farklı olup olmadığı test edilmiştir. Sonuçlar, cinsiyet eşitliği ve uyum düzeyinin, diğer kontrol değişkenleri arasında olumlu bir şekilde barış düzeyini etkileyen en güçlü ve anlamlı değişkenler olduğunu göstermektedir. Sonuçların sağlamlığını kontrol etmek için cinsiyet eşitliğinin bir ölçütü olarak iki indeks kullanılmış ve regresyonlardan aynı sonuçlar ve çıkarımlar elde edilmiştir. İlginç bir şekilde, bu çalışma ayrıca, ülkedeki gelir düzeyinin bir kontrol değişkeni olarak tüm regresyonlarda önemsiz olduğunu ortaya koymaktadır.

Anahtar Kelimeler: küresel barış, cinsiyet eşitsizliği, birleşme.

Introduction

In recent years, gender equality has become a very popular policy action taken by governments and international organizations, especially since United Nation Security Council Resolution 1325 on Women, Peace and Security (WPS) in 2000. However, its link to peace was not taken into consideration in the relevant literature. Most commonly, women have been seen as a victim subject to the psychological and socioeconomic outcomes of war. Despite the active roles that women and men play during war and peace process, as supporter, especially women become invisible when peace occurs. For example, only 92 of the 585 peace agreements between the years 1990-2010 have been about women (Bell & O'Rourke, 2010). On this account, this study explores whether gender equality has an impact on the peace of the countries or communities as a topic, which has not been examined before by using cross sectional data rather than micro level.

Effects of gender equality on peace process receive less attention than effect of peace on gender equality in the literature. United Nations Security Council Resolution 1325, which was drafted in 2000, as an agenda putting women in conflict/war into center to maintain international peace, suggests implementing priority goals for the next years to achieve and keep long-term political stability and peace in the international system. These goals are defined in a way to integrate women in peace negotiations and processes and to ensure that no peace agreement to be signed without women's participation. Here, women have been accepted as an agent of peace in the post-conflict processes. According to Stewart (2010), women are not simply victims of war by being imposed on new roles as heads of households and as members of armies in conflict, but they are also agents of change that could play significant roles in peace movements and negotiations. She also claimed that although women could be active participants of war; they become invisible in peace processes. Stewart supports her argument by using estimation results of United Nations Development Fund for Women (UNIFEM) report in 2008. The report estimates that women account for less than 10% among the members of peace negotiations, and less than 2% of the signatories to peace agreements. It should here be underlined that while the Sustainable Development Goals (SDG) adopted by the United Nations (UN) in 2015 identify peace and governance as Goal 16, it puts forward gender equality as its fifth goal. Although, none of the targets under Goal 16 gives particular reference to gender equality, especially within the framework of women's participation in peace processes, UN Women (2012) still emphasizes the vital role of women in peace processes and attempts to establish democracy, as this would bring equal representation of all, including women, improved human development, and lasting peace in turn.

This study contributes the literature in three ways. First, the main aim of this study is to check whether the presence of higher gender equality brings higher-level peace for countries or nations, which has not been examined before. Second, rather than considering a single dimension of gender equality or

peace; it uses Gender Inequality Index (GII), Social Institutions and Gender Index (SIGI), and Global Peace Index (GPI), which cover more than one dimension of gender equality and peace. And finally, while most of the studies in the literature examining the relationship between war and gender equality focus on only one country, this study uses data of 115 countries depending on data availability to provide a general view on this subject.

The following section of the study provides a theoretical assessment within the gender and peace framework. Then, data used and gathered in the study will be examined, and empirical section will be discussed separately. The final section ends with conclusion of results and policy implications.

Literature Review

Researches on peace and gender equality have been revolving around the feminist discourse and empirical research. At the beginning of 2000s, most of the studies in this field started to discuss the relations between peace and equality, and their contribution to each other, in return. However, there was a need to gender disaggregated data and a peace measure data as an analytical tool. At that point, the definition of peace plays a significant role in determining the right indicator for statistical analyses. According to Olsson and Gizelis (2014), while empirical studies define peace as a lack of armed conflict without a specific content, it refers only to situation causing deaths associated by organized people. Feminist studies see this definition as militaristic for not acknowledging women's role in the security and gender mainstreaming policies for peacekeeping. To argue for that this study prefers using indexes to cover more than one dimension of peace and gender equality and to integrate approaches of empirical practices and perspectives from feminist studies. Weber (2006) discusses gender and peace by referring to feminist peace and conflict theories. This theory indicates the visibility of women in war, conflict and security issues. While early feminist peace and conflict theorists define men as makers of war, and women as victims of war, current theorists put war as a process which excludes women from decision-making process (Weber 2006: 3).

In a review of the relevant literature, several studies which have focused on war, terrorist attacks, conflict and their impact comes to the fore as researches focusing on only one dimension of gender, such as education (Gerardino, 2014; Singh & Shemyakina, 2016). Same applies for the studies which have elaborated the relation between gender and peace. Majority of them have examined the effect of war or conflict on gender equality. Kecmanovic (2013), for example, analyzes the short run effect of war in Croatia on the educational level of women and men and concludes that males have lower education compared to women affected by war because of men's participation to war as soldiers. A similar result is concluded by Swee (2009) for Bosnia and Herzegovina. Swee finds males, compared to women, were negatively affected on completing secondary school education at the time of the war. Valente (2014) for Nepal, and Akresh and Walque (2010) for Rwanda, by using the survey data, have

reached to similar conclusions regarding the impact of wars on education by gender and they have concluded that the negative impact of war on educational attainment and achievement was bigger for boys rather than girls. Another study conducted by Singh and Shemyakina (2016) examines the long run effect of Punjab insurgency on the educational attainment by using the survey and finds negative significant effect of terrorism on female educational attainment. Like Mattocks et.al. (2012), some other studies focus on the women's experiences at war from the psychological point of view. Those studies analyze the peace and gender relation with a country-specific approach. Our study, however, aims to provide a global assessment of this relation rather than focusing on only one country.

The studies mentioned take as reference only one dimension of the equality indicators, such as education, fertility rate, and labor force participation rate, and, therefore, adopt a one-way direction from war to gender. Also, there is another group of studies, which scrutinize the effect of gender equality on armed conflict, again by implementing one-dimension equality analysis. Caprioli (2003; 2005), for example, has found that low female labor force participation and higher level of fertility rate raises the risk of domestic conflict. Bussmann (2007) and Jennings (2011) explain the gender and conflict relation by using biological hypothesis and mention that women are more peaceful than males because of the biological differences by nature. This is an answer to Porter's previous study (2003), which argued that the biological hypotheses were excuses for stereotyping women and excluding them from the peace processes. Similarly, Melander (2005) states that, more women in parliament, together with more women in school lead to lower levels of conflict. Among those studies, Pruitt (2014) has analyzed the relation between women, peace and security for the case of Australia but by using some global indicators and argued that women and girls are significant agents and stakeholders in building security and peace efforts. Pruitt has also emphasized that this is possible only in the case of active participation of women and girls in the peace processes and by understanding their capacity and roles for peace building policy actions. Nakaya's study (2003) has detailed women's role in peace-bulding process as such: First, women's participation should be formulated as a matter of equal representation for resolution, and second, women bring gender perspectives to the negotiating table through their experiences.

According to Inter-Parliamentary Union and UN Security Council report (2015) seats held by women in parliaments in conflict-affected countries is 4% below of the global average, which is 22%. Within this framework, the study conducted by Salman (2015) uses cross national time series for 57 countries for the period of 1994-2002 and finds that parliamentary representation, level of economic participation, and educational attainment, as indicators of gender equality, have a significant negative impact on terrorism. As a follow-up to Salman's study, our research, too, argues that while controlling for other variables such as income per se and cohesion, gender equality is one of the

indicators of higher level of peace. It does that, however, without claiming a causal relationship between peace and gender equality for the nations.

Data

As this study aims to argue, gender equality improves peace by providing long-term sustainable mechanisms of negotiation, co-existence, education and welfare. The previous researches mentioned demonstrate that the higher gender equality brings higher level of peace for countries. The data, which is limited by the availability of data and cross-sectional estimation, covers the average of the years 2010-2014 to assess lead and lag effects for 115 countries. Within this framework, the research investigates i) the impact of gender equality on peace, ii) the impact of per capita income on peace, iii) the impact of cohesion on peace.

The econometric estimation uses Global Peace Index as the measure of the peace level of the country. Lower values of the index represent more peaceful countries. The Global Peace Index (GPI) (Institute for Economics and Peace, 2014), which measures relative positions of the peacefulness of the regions/countries, both internally and externally and covers more than one dimension of peace with three broad sections, which are i) degree of militarization by using 7 indicators, ii) level of safety and security in society by using 10 indicators, iii) the extent of domestic and international conflict by using 5 indicators. It is developed by the Institute for Economics and Peace with the collaboration with Economist Intelligence Unit. Its score is scaled between 1 and 5, of which lower values represent more peaceful nations or countries. Table 1 presents the indicators used in constructing the GPI.

As independent variables, Gender Inequality Index (GII) and Social Institutions and Gender Index (SIGI) have been used to check the consistency of the results. Higher scores of both GII and SIGI reflect worse situations in terms of gender equality. GII is developed by United Nations as a measure of gender equality. GII is a composite index reflecting inequalities in terms of achievement levels between men and women within three dimensions such as i) empowerment, which is measured by secondary and higher education attainment levels and the share of parliamentary seats held by each sex ii) reproductive health, which is measured by adolescent fertility rate and maternal mortality rate, and iii) labor market, which is measured by women's participation in the work force. Zero (0) is the minimum score reflecting the best situation where all genders are equal, while One (1) is the highest score reflecting the worse situation between men and women. In addition to these, there are also some other indices developed by different international organizations as a measure of gender equality in the literature, such as Gender Development Index (GDI) and Gender Empowerment Measure (GEM), also developed by the UN, and SIGI developed by Organization for Economic Cooperation and Development (OECD). However, in this study, GII and SIGI are used rather than other indices, because of the limitations of others and the

availability of more recent data offered by GII and SIGI, as they match the time span of the other variables used in this study. SIGI considers five dimensions of gender inequality, which are i) family code (early marriage, polygamy, parental authority, and inheritance) to measure decision power of men and women in the households, ii) physical integrity (violence against women and female genital mutilation), iii) civil liberties (restriction to freedom of dress, freedom of movement) to measure freedom of social participation of women, iv) son preference to measure economic valuation of women, v) ownership rights (access to land, bank loans and property other than land) by using 12 indicators. SIGI provides very useful information for policy makers demonstrating social institution problems and its dimensions for countries. Higher levels of SIGI indicate greater inequality. As with the GPI, all variables are averages over a time span covering the years 2010-2014 to incorporate the lagging impact of income per se and cohesion.

It must here be underlined that some control variables are also incorporated into the model. These variables are the level of cohesion and GDP per capita (constant US$). GDP per capita data, as a proxy of the basic socioeconomic level of the country, is gathered from the World Bank records. It is commonly expected that the less developed countries tend to have a lower level of peace (Collier et al. 2000; Nafziger & Auvinen, 2000; Elbadawi & Sambanis, 2001). Also, the (in)ability to co-exist among the different identity groups within a society is another important variable to assess the peace level of the countries. These groups may have different socioeconomic inequalities between or among them due to the differences in identities and their consequential depravity of resources rather than monetary or financial based differences. Additionally, during political conflicts groups of different national identities may be involved in various international terrorist networks or criminal groups, because of inequalities, fundamentalism and nationalism. Therefore, cohesion plays a very crucial role in implementing and preserving a long-lasting peace in a society and refers to the respect and cooperation between different groups in a heterogeneous culture. Conflicted participation and lack of respect for all identities may result in aggression, which would harm the nations' well-being.

According to the Institute for Economics and Peace (2013), level of cohesion must be considered as one of the relevant factors of measuring the relation between peace and gender, and, as it demonstrates   a strong significant link between the people's acceptance of others' fundamental rights and the level of peace –the division within the society is likely to destroy nations. Global Terrorism Index (The Institute for Economics and Peace, 2014: 41), attributes significant importance to the lack of intergroup cohesion between different religious and ethnics groups especially in the countries with higher levels of terrorism. Cohesion data as Indices of Social Development collected and organized by the International Institute of Social Studies. They take various variables into account while measuring cohesion such as intergroup disparities, feelings and perceptions of being discriminated, political instability, strikes, agency ratings, level of civil disorder, and level of ethnic minority in country.

The correlation coefficients for this study are provided in Table 2. There is positive correlation between GPI as an indicator of peace and GII as an indicator of gender inequality, which are our main concern, with the value of 50%. It is the same for GPI and SIGI, which is the other indicator of gender inequality used in this study to check the robustness of the results. The highest correlation has seen between cohesion and GPI with the value of 77% in negative linear relationship. Another negative linear relationship has seen between GPI and LGDPPC with the value of 42%.

Methodology

This study uses cross sectional data for 115 countries to examine the impact of gender equality on peace by using Generalized Least Squares (GLS) using White's method to obtain consistent results. It is assumed that the error term is independent and identically distributed. One of the main reasons of using GLS with White method is to eliminate heteroskedasticity (presence of covariance across the variables), which provides the best unbiased linear estimators from the model (Hausman & Kuersteiner, 2004). It is because, heteroscedasticity often arises in volatile high frequency time series data and cross section data, as used in this study, where the scale of the explained variable and explanatory power of the model tend to vary across variables. However, the number of observations in the models varies depending on data availability. The main concern of choosing 115 countries as a sample in the investigation depends on the data availability rather than their geographic localization or any other feature.   The functional forms of the estimations are defined as below:

$$GPI_i = f(GII_i, Cohesion_i, GDPPC_i)$$

(1) where i denotes the country.

GPI=Global Peace Index (range between 1-5, lower is more peaceful)
GII= Gender Inequality Index (range between 0-1, Higher: greater inequality)
Cohesion= (range between 0-1, higher is better)
GDPPC= GDP per capita (constant US$).
The second specification uses the Social Institutions and Gender Index as independent variable to check the robustness of the results. The second regression is specified as below:

$$GPI_i = f(SIGI_i, Cohesion_i, GDPPC_i)$$

(2) where;

SIGI= Social Institutions and Gender Index (range between 0-1, Higher: greater inequality)

In this study, using indexes is preferred to make more comprehensive analyses and incorporate more dimensions of the complex structure of the variables into the research. The benefit of using more than one index, instead of using a one single variable, has been emphasized in the recent studies partaking in the relevant literature. For example, O'Hare and Gutierrez (2012) have listed the advantages of using indexes as being able to shrink large data into a single number and capturing a broader perspective that cannot be captured by only

one indicator. Krishnan (2010) also suggests the use of multiple indexes rather than using single indicator for producing more conceptual framework and comparisons across groups.

This study estimates constant elasticity model relating peace level to gender inequality, cohesion and income for the countries, as below;

$$LGPI_i = \beta_0 + \beta_1 LGII_i + \beta_2 LCohesion + \beta_3 LGDPPC + u_i \qquad (3)$$

L indicates the log form of the variables. β_1 is the estimated elasticity of GPI with respect to GII. It implies that 1% in GII increases the level of peace by about β_1 percent. The coefficient of LCohesion, β_2, is the estimated elasticity of GPI with respect to Cohesion that a 1% increase in level of cohesion increases the level of peace by about β_2 percent. β_3 indicate the elasticity of peace level with respect to income level of countries as well.

Results

Firstly, simple regressions are estimated to see the significance of all variables used in the study and results are given in Table 3. Then, other control variables are added one by one into equation by keeping the explanatory variable in all regressions to see the robustness of variables. Estimation results of simple regression models are as given below;

$$ModelA01: LGPI = 0.983 + 0.222LGII \qquad (4)$$
$$ModelA02: LGPI = 0.985 + 0.095LSIGI \qquad (5)$$
$$ModelA03: LGPI = 1.479 - 0.091LGDPPC \qquad (6)$$
$$ModelA04: LGPI = 0.420 - 0.660LCOHESION \qquad (7)$$

Number of the observations is different in each regression due to the availability of related variables. According to the results, all variables are highly significant at the 1% level. The estimates imply that the level of peace is lower in countries with higher level of gender inequality. The table also shows regressions of GPI against LGDPPC, and cohesion. These results imply that a higher level of cohesion and income per capita has a positive impact on peace level of the countries. However, these results could be misleading when there are other significant variables affecting the peace level of the countries. Therefore, in Table 4, we have considered all variables affecting our dependent variable by using the GII and SIGI as independent variables. ModelB01, ModelB02 and ModelB03 uses GII as an explanatory variable, while others use SIGI as given below:

$$ModelB01: LGPI = 1.098 + 0.189LGII\text{-}0.019LGDPPC \qquad (8)$$
$$ModelB02: LGPI = 0.675 + 0.158LGII\text{-}0.533LCOHESION \qquad (9)$$
$$ModelB03: LGPI = 0.739 + 0.134LGII\text{-}0.011LGDPPC\text{-}0.541LCOHESION \qquad (10)$$

Regression estimation results for when GII is used as a proxy implies that the GII is highly significant in all regressions. It means that gender equality is positively associated with the peace level of the countries. Although, GDPPC is a highly

significant variable in simple regression model (ModelA03), it becomes insignificant when it is used with GII and other control variable, while keeping its sign still as negative. As can be seen in simple regression model as well, cohesion is still significant and has negative sign in ModelB02, which shows 1% increase in cohesion and the value of GPI is decreased by 0.53% on average. Based on the most comprehensive regression results including GII as an independent variable, which is ModelB03, we see that while 1% increase in gender inequality leads to 0.13% increase in the value of Global Peace Index, 1% increase in Cohesion decreases the value of GPI by 0.54%. Here, we should keep in mind that, the higher values of GPI represent the worse situations for the countries. This point suggests that the countries or communities with higher level of gender equality improve their peace level. Similar conclusion can be drawn from the estimation results including SIGI, as another indicator of gender equality to check the robustness of the results. Estimation results of ModelB04, ModelB05 and ModelB06 are given below and also represented in Table 4.

$$ModelB04: LGPI = 0.985 + 0.087LSIGI\text{-}0.003LGDPPC \qquad (11)$$
$$ModelB05: LGPI = 0.732 + 0.061LSIGI\text{-}0.367LCOHESION \qquad (12)$$
$$ModelB06: LGPI = 0.815 + 0.042LSIGI\text{-}0.018LGDPPC\text{-}0.394LCOHESION \qquad (13)$$

While ModelB04 and ModelB05 use GDPPC and cohesion separately in each regression as a control variable, ModelB06 provides more comprehensive results by using them together in the same model. As discussed in GII including models, GDPPC becomes insignificant in multiple regression models, again with a negative sign in both ModelB04 and ModelB06. When we have a closer look at the cohesion, it is still significant and has a negative sign in ModelB05 and ModelB06 with lower value of coefficient when compared to ModelB02 and ModelB03. Most importantly, in line with the aim of this study, SIGI, as another indicator of gender equality, is highly significant in all regressions with its positive sign. According to the results of the most comprehensive model, which is ModelB06, 1% increase in index value of SIGI increases the value of GPI by 0.04%, on average. The objective of this study is to test whether gender equality is related to peace when other determinant of peace has taken into consideration. The results confirm that gender equality is positively related to peace and also highly significant. And, interestingly, the results are unexpected from the aspect of LGDPPC as a proxy of the socioeconomic development of the country. It has negative sign but not statistically significant in all regression and, therefore, the message here is clear that the LGDPPC does not have an impact on the peace level. However, cohesion always has a negative sign and highly significant in all regressions. 1% increase in level of cohesion leads to 0.54% and 0.39% decrease in the value of GPI, respectively at ModelB03 and ModelB06. It means that there is a strong significant link between people's acceptance of the rights of others and the level of peace. All these results suggest that gender equality with intergroup cohesion is a main factor, which influences the peace level of the countries or nations. As mentioned in the literature review, most of the studies in this field (for instances

Kecmanovis, 2013 for Croatia; Swee, 2014 for Bosnia & Herzegovina, Akresh & Walque, 2010 for Rwanda, Singh & Shemyakina, 2016 for Punjab) focus on the impact of the war on males and females by using the education dimension of gender equality for a single country. Most common conclusion reached by these studies is that the war has negative impact on educational attainment and achievement of boys and girls. However, gender equality does not consist of only one dimension and war is not the single factor that destroys the peace of nations. This study, therefore, aims to make a contribution to the literature by providing a broader view on the relation between peace and gender equality relation by using global scale indexes that are constructed by prominent institutions. The other studies (Caprioli, 2003, 2005; Bussmann, 2007; Jennings, & Melander, 2005) focus on the role of women in conflict. As mentioned before, conflict is the only one dimension of peace and it can emerge in different forms such as internal, external or organized. The variable used in this study as the measure of peace, that is GPI, covers all forms of conflict, in addition to other indicators. On this account, in terms of the variables used to assess the relationship between gender equality and peace, this study offers a more comprehensive approach. What is more, the outcome of this research is in line with the findings of Pruitt (2014) and Nakaya (2003), who emphasize the importance of active participation of women in peace processes by defining them as agents and stakeholders in peace efforts. This study, however, additionally argues the importance of gender equality from a multi-dimensional perspective required by the attempts at improving the peace level of nations. The findings of the study are also in line with the UN Security Council Report (2015), which estimates higher level conflict in the countries with lower women share in parliament. Although, the study conducted by Salman (2015) has similarities with this study, this study differs from Salman's study in various ways. First of all, she has used time series data for 57 countries, while this study uses cross section data by taking the average of five years for 115 countries. Second, dependent variable used in Salman's study was the number of terrorist incidents. As mentioned before, this is the only dimension or indicator of peace and there are many others. Similar comment could be made for the independent variables used in her study as well. Nevertheless, what is important here, both studies testify that the overall outcomes of the studies suggest that more equal opportunities for women lead to more peaceful environments for the nations.

Conclusion

The evidence presented here concludes that gender equality improves the level of peace in the countries. Based on the results, we can suggest that women may play a crucial role in the long lasting peace in communities through building peace groups or networks, implementing strategies, participating in justice systems, advocating for accountability of conflicts, or addressing rules and regulations against crimes etc. These results support the *Women, Peace and*

Security (WPS) agenda adopted by the UN Security Council and underline the importance of incorporating gender strategies into peace strategies and activities by recognizing and addressing the role of women.

In the light of these results, there is a need to revisit the policy actions taken by both governmental and nongovernmental organizations that tend to ignore the importance of gender equality. Of course, in doing that it is important to analyze country specific factors influencing peace processes and the role of gender equality, especially for women. At that point, one of the main obstacles comes to fore as the availability of data on how women affect peace process. More gender-disaggregated data is needed, therefore, to make analyses on individual and country level. Further research should be made also to focus on the different dimensions of peace such as internal and external peace. Also women's participation in peace on both national and international level may have different forms and all these forms, too, must have been taken into account. As mentioned in one of the reports written by International Peace Institute (2015:13), women's direct and indirect participation in peacemaking is crucial for nations, and this can be done through many different ways such as direct participation at the negotiation table, observer status, consultations, inclusive commissions, problem solving workshops, public decision making and mass action. This study suggests taking cost effective policy actions to include women for long lasting peace processes and encourage women's participation on all levels of decision-making from local to global actions.

Table 1. Indicators of GPI

Ongoing Domestic and International Conflict	Number of external and internal conflicts fought
	Number of deaths from organized conflict (external)
	Number of deaths from organized conflict (internal)
	Level of organized conflict (internal)
	Relations with neighboring countries
Societal Safety and Security	Level of perceived criminality in society
	Number of refugees and displaced people as a percentage of the population
	Political instability
	Political Terror Scale
	Terrorist activity
	Number of homicides per 100,000 people
	Level of violent crime
	Likelihood of violent demonstrations
	Number of jailed population per 100,000 people
	Number of internal security officers and police per 100,000 people
Militarisation	Military expenditure as a percentage of GDP
	Number of armed-services personnel per 100,000 people
	Volume of transfers of major conventional weapons as recipient (imports) per 100,000 people
	Volume of transfers of major conventional weapons as supplier (exports) per 100,000 people
	Financial contribution to UN peacekeeping missions
	Nuclear and heavy weapons capability
	Ease of access to small arms and light weapons

Source: Institute for Economics and Peace, 2014.

Table 2. Pearson Correlations among Variables

	GPI	GII	SIGI	STABILITY	MUSRATIO	COHESION	LGDPPC
GPI	1.0000						
GII	0.5035	1.0000					
SIGI	0.5050	0.6589	1.0000				
COHESION	-0.7766	-0.4172	-0.4988	0.8111	-0.3344	1.0000	
LGDPPC	-0.4216	-0.7245	-0.6301	0.5189	-0.1946	0.3266	1.0000

Table 3. Simple Regression Estimations with GPI and Other Variables

Eq Name:	MODELA01	MODELA02	MODELA03	MODELA04
Dep. Var:	LGPI	LGPI	LGPI	LGPI
C	0.983389	0.984542	1.478919	0.420258
	(0.0287)***	(0.0326)***	(0.0932)***	(0.0544)***
LGII	0.221830			
	(0.0197)***			
LSIGI		0.095257		
		(0.0116)***		
LGDPPC			-0.091346	
			(0.0113)***	
LCOHESION				-0.660282
				(0.1183)***
Observations:	108	87	113	115
R-squared:	0.5321	0.3747	0.3838	0.4515
Log Likelihood:	45.6283	45.5481	34.8154	39.2133
S.E.R:	0.1601	0.1450	0.1794	0.1736
SBC:	-0.7583	-0.9444	-0.5325	-0.5994
F-statistic:	120.5437	50.9332	69.1440	93.0046
WhiteTest:	0.0060	2.5176	1.9972	8.5508***
BPG Test:	0.0001	3.3956*	1.9402	2.3145
Jarque Bera Test:	3.7046	0.1066	4.4575	5.0539*

Note: *, **, and *** denote significance at 10%, 5% and 1% levels, respectively. Standard errors are also given in parenthesis.

Table 4. Regression Results for GPI and Using GII and SIGI as an Independent Variable

Eq Name:	MODELB01	MODELB02	MODELB03	MODELB04	MODELB05	MODELB06
Dep. Var:	LGPI	LGPI	LGPI	LGPI	LGPI	LGPI
C	1.097563	0.675059	0.739263	0.985279	0.732744	0.815255
	(0.1060)***	(0.0742)***	(0.1341)***	(0.1195)***	(0.0509)***	(0.1059)***
LGII	0.188598	0.158404	0.134282			
	(0.0288)***	(0.0221)***	(0.0252)***			
LGDPPC	-0.018652		-0.011975	-0.003174		-0.018033
	(0.0154)		(0.0137)	(0.0186)		(0.0142)
LCOHESION		-0.532562	-0.541743		-0.366606	-0.394134
		(0.1244)***	(0.1243)***		(0.0681)***	(0.0822)***
LSIGI				0.086945	0.060984	0.041671
				(0.0174)***	(0.0113)***	(0.0138)***
Observations:	106	107	105	84	86	83
R-squared:	0.5351	0.6903	0.7014	0.3550	0.5938	0.5839
Log Likelihood:	45.7408	66.8729	68.1320	45.7502	63.5275	63.3359
S.E.R.:	0.1594	0.1314	0.1289	0.1429	0.1177	0.1156
SBC:	-0.7310	-1.1189	-1.1205	-0.9310	-1.3220	-1.3132
F-statistic:	59.2782	115.9032	79.0788	22.2869	60.6638	36.9602
WhiteTest:	0.3964	1.5143	2.0876	1.2894	0.3627	0.8508
BPG Test:	0.3568	1.4471	1.8523	1.6930	0.2372	0.5617
Jarque Bera Test:	6.3097**	6.9764**	8.7453**	0.0077	1.2836	1.7935

Note: *, **, and *** denote significance at 10%, 5% and 1% levels, respectively. Standard errors are also given in parenthesis.

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