

Gender equality, good governance, and peace

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Introduction

Large bodies of literature on civil war deal with ethnic and religious polarization or economic inequality as sources of violence. Discrimination against and systematic exclusion of large parts of the population is considered to be the main cause of ethnically motivated violence. Another form of discrimination in society, gender inequality, is not on the forefront of studies of armed conflict. True, examples of direct military confrontation between women and men are hard to come about in history. The amazons so far belong to the realm of Greek myths as archeological evidence of their existence is still missing. However, some first empirical studies support the peacefulness of societies with less gender discrimination.

Why this is so still needs to be explored. Most explanations refer to the general pacifism of women as a result either of nature or socialization. Accordingly, women are less aggressive for biological reasons or because of the way they are raised and educated in society. The present study suggests an indirect link between the two concepts: Gender equality leads to peace through the promotion of development and good governance. The pacifying effect of gender equality is not the result of higher moral standards of women but is rather due to structural explanations. A higher participation of women in the formal labor market and more educational equality increases competition. As a result of the competitive environment corruption and rent-seeking is inhibited improving the quality of governance. And according to several studies good governance is an essential component for the creation of a peaceful environment.

The results of the present study support the notion that improving the situation for women with regard to more political representation, economic participation, better access to health and education improves state capacity and good governance. Through this channel gender equality has an indirect effect on peace. Some aspects of gender equality, in particular

equality in education and health are not just important factors for good governance but have a direct positive effect on peace.

Gender equality and peace

Armed conflict is much more damaging to women than to men in the sense that the gap between female and male life expectancy widens (Plümper and Neumayer 2006). A few studies link gender equality directly to more peace. For international conflicts Regan and Paskeviciute (2003) find that a pair of states that have low birthrates and a high percentage of women in parliament are less likely to become involved in a military dispute with each other. High fertility rates also contributed to the escalation of conflicts. Similarly, Caprioli (2003) using a gender index that combines the fertility rate and labor force participation attested less aggression in the international sphere of states with more gender equality. In a study of internal conflicts she also finds that a high fertility rate and low female labor force participation increase the risk of domestic conflict (Caprioli 2005).¹ Melander (2005a) detects that states with a higher percentage of women in parliament and a higher ratio of female-to-male school attainment experience lower levels of intrastate conflict. A study on human rights abuse also showed that states with more gender equality in terms of more political representation, i.e. the percentage of women in parliament, are more inclined to follow human rights (Melander 2005b).

The main theoretical explanation for this relationship argues that it is in the nature of women to be more peaceful. It is largely aggression theories that are applicable to the biological explanation. Quite some research supports the pattern that males are generally more aggressive than females. In particular inter-male aggression is relevant in this context with the competition between the males over resources, dominance, status etc. Accepting the genetic

¹ An interesting argument relating fertility rates and conflict has to do with the tolerance for casualties. Luttwak (1995) argues that in societies with high fertility rates where families have many children the loss of a child is more acceptable than in societies with few children per family.

explanation Francis Fukuyama (1998) writes that “The basic social problem that any society faces is to control the aggressive tendencies of its young men” (34). This is supported by the result that higher male secondary school enrollment is a conflict-reducing factor (Collier & Hoeffler 2000). The potential peacefulness of women is furthermore reflected in various studies on public opinion (citations). Consequently, if more women were in positions of power, the world would be more peaceful.

Whereas some rely on biological differences and the women’s reproductive role in explaining female pacifism, a constructivist version emphasizes the gender identity and more wide-spread norms about gender equality. Boys and men are socialized to be tough and warlike, whereas girls and women are socialized to empathy and subordination. F femininity is linked to nonviolence, emotion, and harmony and masculinity to aggression and reason (Caprioli 2003, Melander 2005). Caprioli (2005) sees structural violence, and its characteristics according to Galtung, namely exploitation, penetration, fragmentation, and marginalization, against women and gendered nationalism and the way it defines women’s role as caretaker as a force for intrastate violence. Both versions, however, conclude that with more female political representation states would be more peaceful regardless if women are more peaceful by nature or by socialization.

More equal representation of women in economic and political life could thus be a constraint for the government to use force. The arguments about the peacefulness of women is not fully convincing as female heads of states are not necessarily more reluctant to use military force (e.g., Margaret Thatcher). Empirical tests of this claim look at female head of states and the percentage of women in the legislative. Detecting peacefulness of female leaders is somewhat problematic as female chief executives are a quite rare event and thus does not show a statistically significant impact (Caprioli 2003, Melander 2005a, b). Besides, it is argued that only female leaders that adapt to the male ways of doing politics can rise to the top in a world dominated by men. However, a non-significant finding could also be a sign that

female leaders are not more reluctant to use force than male leaders. Other studies focus on the percentage of women in parliament as a constraint.

Gender equality as an indirect cause of peace

Still, studies show that gender inequality is linked to conflict. The explanation could be structural instead of biological or psychological. Women might not be more peaceful per se but instead the discrimination they experience could be the reason. Thus political and economic participation of women might indirectly instead of directly contribute to peace. With a large minority group of women and their exclusion from political and economic life a state abandons a large pool of human resources and thus reduces competition for political and economic posts. This hurts economic development, leads to corruption and ultimately increases domestic conflict. Thus a fruitful avenue could be the exploration of indirect effects, specifically gender equality's impact on good governance and development. If gender equality contributes to a society's development and encourages its government to follow good practice, factors that in turn provide for more peaceful conflict resolutions, it indirectly promotes peace. The focus in this line of argument is less on women in positions of power but rather considers the political and economic involvement of women as a constraint to misuse power and increase transparency. Thus female participation in public life would constrain the government as the number of potential voters increases. Women who are more educated and are active in professional life are more likely to vote. The ruling elite will be more attentive to this public and to its preferences.

Gender equality, development, and peace

One avenue on how gender equality might contribute to peace is through the level of development. The positive effect of economic development on peace is one of the few robust statistical findings in the civil war literature (Hegre & Sambanis 2006). One explanation for

this link can be found in grievance, resentment and dissatisfaction in the population of poor countries. Recent studies point to state capacity as one major mechanism connecting development and peace. States with low levels of per capita income are unable to monopolize the use of force and are less successful in counter-insurgency (Fearon and Laitin 2003). As suggested by Melander (2005a) gender equality might be an intervening variable in the relationship between economic development and peace.

Whether gender inequality is good or bad for development is still somewhat disputed in the literature. Several studies find a growth reducing effect of gender inequality. Denying educational opportunities to girls reduces the average human capital and thus not just growth directly (Dollar & Gatti, 1999; Tzannatos, 1999) but also indirectly through lower investment and lower fertility rates. In the long run educated mothers can improve the quality of their children's human capital and thus contribute to growth in the future (Klasen, 2002). Dollar and Gatti (1999) found evidence that gender inequality in secondary education slows economic growth in middle and high income industrial countries where human capital is more important and it is less of a distortion in poor agricultural societies. In turn, increases in per capita income reduce gender inequality in education and health (Brown, 2004). Dollar and Gatti (1999) confirm in their empirical study that "good times are good for women" (21) as increasing income per capita is positively related to indicators of gender equality in education and health. However, with regard to gender inequality in secondary education, there is only minor improvement among very poor countries but the effect gets stronger when countries move from middle to high income levels. The explanation they offer points to a market failure in developing countries that leads to low investment in the education of girls. This market failure diminishes in more developed countries. Instead of being simply an efficient economic choice, they attribute a large share of the variance in gender inequality to religious preferences (see also Tzannatos, 1999). Klasen (2002) finds the female-male ratio of schooling to be positively related to economic growth directly and to higher investment rates in developed

and developing countries with even a stronger effect in sub-Saharan Africa. Whereas in Barro's (1997) study female primary and secondary school enrolment rates do not directly influence economic growth, he finds an indirect effect. Female primary education has a significant negative impact on fertility rates and infant mortality. Investing in women's education is thus particularly beneficial for the general health. A healthy population is a significant factor in attracting foreign investment inflows to developing countries (Alsan, Bloom, & Canning, 2006).

For other scholars, the assertion is exactly the opposite, that is to say that gender inequality leads to higher economic growth rates treating it thus as an efficient choice. In a study of semi-industrialized states with an export-orientation in female-dominated manufacturing industries, Seguino (2000) supports the hypothesis that wage differentials stimulate growth and investment. This could mean that states with an export-orientation might not be interested to advance a policy that invests in the human capital of women because the economy is interested in them as cheap workers. Seguino (2000) argues that the distribution of work cannot be exclusively explained by education but also by the structure of the economy. Due to the fact that women are crowded in low paying jobs in sectors that produce price elastic goods influences the trade pattern. Wage discrimination can boost investment in female-dominated industries and thus create a comparative advantage for export. Busse and Spielmann (2006) showed that gender inequality in wages could improve a country's comparative advantage in labor-intensive goods. On the other hand, the study revealed weak indication that a smaller gender inequality in the labor force participation and education enhance the comparative advantage. This means that whereas female education and labor force participation are advantageous for a country's economy (i.e., if women are better educated and more skilled), the downside is that for the economy it could also be beneficial to exploit cheap female labor.

In several middle-income countries, women's participation in the labor force has been increasing with more economic development (Horton, 1999). Tzannatos (1999) also detects that female labor force participation rises relatively to men's; the gap narrows even much faster in developing countries. This could be the result of a declining male participation because of more schooling and availability of pensions or the result of a rise in female participation rates. One reason for the rising participation in the labor force is also the higher demands of women for more bargaining power in the marriage and more financial independence, demands that are also enhanced by the feminist movement (Beneria, 2003). Labor force participation is an important component as an outside-option when it comes to bargaining the distribution of household work within a marriage (Iversen & Rosenbluth, 2006). Working women contribute to the household income. This reduces the pressure on the male bread winner who might turn to rebel movements or join the military as income source if alternative options are missing. The improved bargaining position of working women makes them more assertive and facilitates the enforcement of her position at home. In most cases, a woman will prefer a working and assisting husband at home than a fighting husband away.

On the other hand higher female labor force participation could leave young males unemployed, thus increasing the main source for rebel recruitment. With reference to developing countries, the literature speaks of a "feminization" of many jobs that were previously dominated by men (Standing, 1989). A key question in this context is whether the narrowing gender gap in employment and remuneration presents a "harmonizing down" or a "harmonizing up" (Elson, 1999), whether male employment and wages decrease while women win or whether both win in absolute terms and women just win a little more.

Interestingly, in Reagan and Paskeviciute's (2003) study the percentage of women in the workforce is positively related to the onset of a dyadic international dispute. This could be an indication also of reverse causality, that with a looming military conflict many jobs will be taken over by women. For example, in 1913 the workforce in Germany consisted to 35 % of

women and by 1918 this number was up to 55 % (Wurms 1990). World War II also gave a boost to female employment and once the war was over a higher share of women remained in the formal labor market than before the war. In Germany, rubble women were needed for reconstruction and entered typical male professions such as construction workers and lorry drivers.

Investment in human capital is important for women to compete for skilled jobs, especially as countries become more developed. Economic development also increases educational opportunities for girls and women. This reduces fertility rates (Barro 1997) in the first place but also educated mothers will have more educated children which reduce the pool of uneducated young males from which the rebels can recruit.

Gender equality, good governance, and peace

Alternatively to the level of development, states might be more peaceful if they have a strong government. Several studies link regime type to domestic peace, in particular revealing a curvilinear relationship where the risk of conflict is highest in states with inconsistent regimes (Hegre et al 2001). Others concentrate on the capacity of a state. For Fearon and Laitin the level of development is interpreted as the capacity of a state to generate income and thus a valid indicator for government's strength. States with a weak government are unable to monopolize the use of force allowing insurgency movements to exist. Using the ICRG index, a measure that better assesses good governance, Bussmann & de Soysa (2006) find it to be only significantly related to conflict onset when GDP per capita is excluded as the two are highly correlated.

Less work has been done relating female participation and the quality of governance. In addition to the advantages for development, studies point to a positive effect of female participation and gender equality for democracy. Primary school attainment of women is positive for democracy. Moreover, especially equal educational opportunities (i.e. a higher

ratio of female to male school attainment) are good for democracy (Barro, 1997). In democracies, women are better able to organize and express their preferences. Elections are important channels of communication. Politicians have an interest to assure electoral support of women, for example by providing the public goods education and health care. Furthermore, political systems with an open and competitive recruitment process allow access for more female politicians who in turn will champion more educational opportunities for women but who also serve as a role model to other women (Brown, 2004; Thomas, 1991).

Repeatedly the literature points to higher moral standards of women. Women are portrayed to act rather in the common interest and men in their own interest or pocket. More female participation in political and economic life increases competition and thus could reduce corruption and lead to good governance. Empirical studies did indeed detect that if women hold a larger share of seats in parliament and in government, and participate more in working life, there are lower levels of corruption in a country (Swamy, Knack, Lee, & Azfar, 2001; Dollar, Fisman, & Gatti, 2001). Swamy et al. (2001) present additional evidence based on the World Value Survey that more women than men reject the hypothetical acceptance of bribery. Furthermore, they analyze enterprises in Georgia where they find that firms headed by men give bribes more than twice as often that companies headed by women.

In sum, this article will explore whether gender equality contributes directly to peace but also if the effect might be indirect because it promotes good governance, a factor that is considered to be conflict-impeding. This is an alternative explanation to the direct relationship that sees the benefit of female political participation because women are more peaceful either by nature or by socialization.

Research design

The empirical tests will evaluate the effect of various indicators of gender equality first directly on the onset of armed conflict and then while holding good governance or development constant. It will also assess the effect of gender inequality on a measure of good governance. This way not only the direct effects but also indirect effects through good governance will be revealed. The data cover more than 100 countries over the years 1985 to 2000. Methods of estimation are the panel fixed-effects regression models in the model of good governance. The model of conflict onset is estimated with a pooled time-series cross-section logit model with White-corrected robust standard errors. Most independent variables are lagged by one year.

Gender aspects

The main independent variables are indicators for gender inequality. The various indicators will emphasize the importance of distinguishing among different channels of how the situation of women can impact peace. Separate indicators for political participation, professional participation, educational aspects, and health aspects are preferable to a composite index as they all might have different causal mechanisms. First, I analyze the effect of political representation of women. This is the most obvious channel on how women could influence a government's decision to become involved in armed conflict. The Inter-Parliamentary Union provides information on the percentage of parliamentary seats that are held by women in single or the lower chamber in case of bicameral assemblies. Data is available from the United Nations Statistics Division (2005) for the years 1995 and 1999 only. This data set also contains information on the date when the voting right for women was introduced. Based on this information, a variable is calculated that accounts for the number of years since women have the voting right. Besides of voting being a form of political participation in itself, presumably political participation on all levels will be more anchored the longer women have the right to vote.

Besides political participation women's activity in the economic sphere is important as well. With regard to the participation of women in professional life, this study examines the effect of female labor force participation, the number of women that are active in the labor force as a percentage of the total labor force.

The female life expectancy at birth reflects health aspect or the physical quality of life. Alternatively, the fertility rate is also an indication of how much time women have to devote for caretaking activities. Female life expectancy, and to assess inequality more directly, the ratio of female to male life expectancy will be tested.

In a similar way, inequality in education will be assessed. Education can be defined with a variety of operational definitions. Some tests use the adult literacy rate, the percentage of women that are older than 15 years who can read and write. As this variable does not undergo strong yearly fluctuations, the observations are inter- and extrapolated to reduce missing values. The data set does not provide information for several of the industrialized countries. Alternatively, the operational definition of education is the primary, secondary, or tertiary school enrollment rates of females, using the gross ratio which is the number of children enrolled in school. The school enrollment rates are also interpolated to reduce missing values. Again, the absolute level, but also the ratio between female and male education levels will be analyzed. Data on the various education variables, the labor force participation and life expectancy are available from World Development Indicators 2004.

The model of conflict onset: The onset of civil war is taken from the Uppsala/PRIO data set on armed conflict (Gleditsch et al. 2002). One central control in most studies is the level of economic development. It will be not included in the present model as it highly correlates with and captures similar mechanisms as the ICRG index. Instead, I include the yearly growth rate of GDP per capita to account for the notion that prosperous countries are less likely to become involved in a domestic conflict. Democracy and its square term (with

data from Polity IV) account for the curvilinear relationship as suggested by Hegre and colleagues (2001). Furthermore, the logarithm of population controls for the heterogeneity of large countries and thus an increased risk of civil war. Finally trade openness is expected to have a stabilizing effect (Bussmann & Schneider 2007). Data is taken from WDI 2004. Other variables are excluded for the moment, such as civil war in the neighborhood or years of peace as I do not expect them to be intervening variables.

The model of good governance:

The composite international country risk guide (ICRG) index as a measure of good governance is an overall index based on 22 components that rate political, financial, and economic risk. Ranging from 0 as highest risk to 100 as lowest risk high values are standing for good governance. Good governance should be influenced by a country's level of development, democracy, and integration into the world economy. With increasing economic development the capacity of states improve through more tax income which enables states to provide infrastructure and social services to its citizens. The tax collecting system needs an efficient bureaucracy. The level of development is measured as the logarithmic transformation of real GDP per capita on a purchasing power parity basis in constant 1995 international dollars with data from the Penn World Tables 6.1. Democracies are typically attributed for following the rule-of-law. The widely used measure from Polity IV accounts for regime type combining various institutional characteristics of a political system to an index ranging from -10 for autocracies to +10 for pure democracies (Jagger & Gurr, 1995). A frequently used measure for economic integration is trade openness. The operational definition of trade openness is the sum of exports and imports in relation to GDP with data from the Penn World Tables version 6.1. (Heston et al. 2002).

Results

The following tables show the effects of the various gender indicators on the onset of civil war. The results will provide us with information about whether a direct effect remains when controlling for economic development or good governance. If the gender variable ceases to be significant when good governance is added to the model can be taken as a hint that the effect might not be direct but rather indirect through this intervening variable. With regard to the other control variables, democracy and its square term are jointly highly significant and support the inverted u-curve of the relationship. Economic growth has largely the expected negative coefficient. Populous countries are more at risk of experiencing the outbreak of a civil war. Trade openness is negatively related to onset. Table 1 informs us of the importance of female political representation and participation for peace. Albeit with the expected negative coefficient the share of women in parliament is not significantly related to the onset of conflict regardless if we account for good governance or the level of development. Problematic with these tests is the small number of observations as data is available for only the years 1995 and 1999. Better conclusions can be drawn from the years of female suffrage. It is negative and statistically significant in the fourth column. However, once we control for the level of development or for good governance the years of suffrage are no longer significant. Instead it is the level of development and the ICRG index that turn out to be conflict-inhibiting factors. This implies that it is not political participation that directly influences conflict but rather its effect through good governance and development.

The female labor force participation in Table 2 shows also an insignificant result. However, once we control for a state's level of economic development, which is highly significantly related to less likely conflict outbreak, female labor force participation is also significant. Adding an interactive term of level of development and labor force participation has however an insignificant coefficient. Controlling for good governance has no impact on

the behavior of labor force participation. With the ICRG index in the model, labor force participation still has no significant influence.

In Table 3 female life expectancy has a conflict inhibiting effect, also when economic development or good governance are held constant. This can be taken as indication that the effect is direct and is not absorbed by economic development or good governance. Improving the health situation of women is thus one possible route to more peace. A similar conclusion can be drawn if we estimate the fertility rate which can also, at least partly taken as an indicator for the health situation of women. High fertility rates are associated with a higher risk of conflict onset.

In Table 4, female literacy has a conflict-reducing effect. Similar as in the tests of life expectancy, the literacy variable is the overriding variable. Economic development and good governance are not significant with literacy in the model. As data for literacy rates are missing for many developed countries, I additionally test the effect of school enrolment rates. Primary and tertiary school enrolment rates of females were significantly related to less conflict onset. The secondary enrolment rate was, albeit with a negative coefficient, statistically not significant. For all levels of schooling however, an improvement in the relative enrolment rates of girls was related to less conflict. Thus, in case of education, gender equality appears to have an effect on the risk of conflict onset, independent from its indirect effect on good governance.

This study next will analyze the impact of various indicators of gender inequality on the ICRG index, the measure for good governance. As reported in Table 5, the control variables, per capita income, democracy, and trade openness, all improve a state's quality of governance. In the first column the share of women in parliament has no significant impact. This variable is only available for the years 1995 and 1999; the results reflect thus rather a cross-sectional analysis. The variable has no significant impact in the 1995 sample but significantly increases the ICRG index in the 1999 sample. The years since women acquired

the right to vote is significantly contributing to good governance. The results support the claim that political participation of women reduces political and economic risk. The same is true for female labor force participation (column 3); a larger share of women in work life improves the quality of governance. Improving the life expectancy of women is also advantageous and higher female literacy rates increases good governance. However, not just the absolute rise in literacy is good but also if female literacy rises relative to men's. When substituting the literacy rates with primary, secondary, or tertiary school enrolment rates, the positive results for education hold up. Absolute and relative improvements in female school enrolment are highly significantly and positive related to the ICRG index. This is also the case for male primary and secondary school enrolment rates but not for male enrolment in higher education, where the coefficient is positive but not significant. Overall, the results clearly support the argument that gender equality is beneficial for good governance. This is consistent with findings from others (Dollar et al. 2001, Swamy et al. 2001).

In sum, the results of the present study support the notion that improving the situation for women with regard to more political representation, economic participation, better access to health and education improves state capacity and good governance. Through this channel gender equality has an indirect effect on peace. The indirect effect is particularly obvious for political representation, namely the years of female suffrage. The female labor force participation is only a conflict-inhibiting factor when the level of development is taken into account. Other aspects, in particular gender equality in education and health are not just important factors for good governance but have a direct positive effect on peace. These findings support the claim that various aspects of gender inequality need to be differentiated.

Conclusion

Besides an advocacy of gender equality in its own right, the advantages of gender equality are manifold. On the individual level, participation of women increases their bargaining position in the household and improves the welfare of children (Tzannatos, 1999). Women playing a more important role in economic and political life is not just advantageous to the female population but to society as a whole (Elson, 1999). The results of this analysis indicate that gender inequality does indeed improve good governance and through this channel promotes peace. However, gender equality in education appears to have, in addition, a direct effect. A next version needs to consider gender discrimination's effect on economic development and take potential reverse effects more appropriately into account, in particular with regard to female participation in the work force.

Whereas economic development and democracy can help to improve the situation of women and reduce the gender gap (Brown, 2004, Dollar & Gatti, 1999) additional efforts are required. Several studies point to cultural and religious country characteristics as explanation of gender inequality (Tzannatos 1999). For this reason and to speed up the process the state needs to actively pursue policies that provide public goods such as sufficient education not just to girls but also to adult women.

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Table 1. The effect of female political representation on the onset of civil war

	(1) onset	(2) onset	(3) onset	(4) onset	(5) onset	(6) onset
Democracy, $t-1$	1.737 (2.21)**	1.768 (1.76)*	1.737 (1.72)*	0.325 (3.92)***	0.276 (3.27)***	0.327 (1.76)*
Democracy sq., $t-1$	-0.068 (2.15)**	-0.070 (1.64)	-0.068 (1.72)*	-0.014 (3.97)***	-0.011 (3.05)***	-0.014 (1.66)*
Growth	4.306 (1.18)	4.143 (1.29)	1.477 (0.30)	-3.016 (1.86)*	-2.565 (1.66)*	-3.549 (1.38)
Log (population)	0.833 (1.98)**	0.819 (1.84)*	0.816 (3.04)***	0.207 (1.99)**	0.203 (1.90)*	-0.010 (0.08)
Trade open, $t-1$	-0.011 (1.44)	-0.012 (0.97)	-0.006 (0.51)	-0.006 (1.70)*	-0.006 (1.39)	-0.013 (1.70)*
GDP per capita, $t-1$		0.075 (0.11)			-0.411 (2.26)**	
ICRG, $t-1$			-0.045 (0.55)			-0.029 (1.73)*
Women in parliament	-0.114 (0.67)	-0.114 (0.67)	-0.123 (0.74)			
Years of female suffrage				-0.016 (2.47)**	-0.009 (1.13)	-0.014 (1.10)
Constant	-25.876 (2.88)***	-26.305 (2.45)**	-22.674 (2.30)**	-6.875 (4.29)***	-3.862 (1.79)*	-1.261 (0.59)
Observations	200	200	169	3706	3706	1270

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 2. The effect of female labor force participation on the onset of civil war

	(1) onset	(2) onset	(3) onset
Democracy, $t-1$	0.333 (3.98)***	0.249 (2.93)***	0.336 (1.83)*
Democracy sq., $t-1$	-0.015 (4.41)***	-0.010 (2.78)***	-0.015 (1.84)*
Growth	-2.918 (1.64)	-2.697 (1.64)	-3.538 (1.30)
Log (population)	0.132 (1.38)	0.174 (1.78)*	-0.034 (0.29)
Trade open, $t-1$	-0.009 (2.31)**	-0.006 (1.48)	-0.012 (1.54)
GDP per capita, $t-1$		-0.603 (4.43)***	
ICRG, $t-1$			-0.032 (1.75)*
Labor force participation, $t-1$	-0.008 (0.61)	-0.029 (2.41)**	-0.016 (0.67)
Constant	-5.677 (3.75)***	-0.978 (0.54)	-0.671 (0.31)
Observations	3654	3654	1280

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3. The effect of female life expectancy on the onset of civil war

	(1) onset	(2) onset	(3) onset
Democracy, $t-1$	0.279 (3.29)***	0.273 (3.30)***	0.269 (1.42)
Democracy sq., $t-1$	-0.011 (3.15)***	-0.011 (3.10)***	-0.011 (1.26)
Growth	-1.991 (1.21)	-2.003 (1.24)	-3.269 (1.26)
Log (population)	0.277 (2.71)***	0.269 (2.55)**	0.051 (0.38)
Trade open, $t-1$	-0.004 (0.88)	-0.004 (0.90)	-0.010 (1.29)
GDP per capita, $t-1$		-0.076 (0.35)	
ICRG, $t-1$			-0.022 (1.34)
Female life expectancy, $t-1$	-0.047 (4.49)***	-0.043 (3.06)***	-0.039 (1.94)*
Constant	-5.944 (3.82)***	-5.467 (2.58)**	-0.922 (0.39)
Observations	3746	3746	1280

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4. The effect of female literacy on the onset of civil war

	(1) onset	(2) onset	(3) onset
Democracy, $t-1$	0.326 (2.81)***	0.327 (2.97)***	0.301 (1.66)*
Democracy sq., $t-1$	-0.013 (2.65)***	-0.013 (2.80)***	-0.012 (1.59)
Growth	-0.101 (0.05)	-0.094 (0.05)	-1.720 (0.74)
Log (population)	0.073 (0.66)	0.073 (0.66)	-0.084 (0.58)
Trade open, $t-1$	-0.011 (1.97)**	-0.011 (1.97)**	-0.015 (1.52)
GDP per capita, $t-1$		0.012 (0.04)	
ICRG, $t-1$			0.001 (0.06)
Female literacy, $t-1$	-0.012 (2.97)***	-0.012 (1.61)	-0.023 (2.66)***
Constant	-4.416 (2.40)**	-4.497 (1.56)	-0.866 (0.30)
Observations	1971	1971	863

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 5. The effect of gender aspects on good governance

	(1) ICRG	(2) ICRG	(3) ICRG	(4) ICRG	(5) ICRG
GDP per capita, t-1	8.986 (1.85)*	2.571 (2.02)**	6.562 (5.21)***	9.836 (8.05)***	12.049 (8.20)***
Democracy, t-1	-0.603 (1.64)	0.405 (8.49)***	0.611 (13.36)***	0.660 (14.17)***	0.364 (6.43)***
Trade open, t-1	-0.032 (0.83)	0.049 (4.09)***	0.072 (5.83)***	0.087 (6.91)***	0.059 (3.90)***
Women in parliament	-0.138 (0.98)				
Years of female suffrage		0.614 (15.04)***			
Labor force participation, t-1			1.558 (10.78)***		
Female life expectancy, t-1				0.614 (7.03)***	
Female literacy, t-1					0.707 (13.54)***
Constant	6.907 (0.17)	4.392 (0.43)	-64.058 (6.56)***	-75.046 (7.19)***	-93.478 (7.99)***
Observations	171	1376	1385	1385	939
Number of state	98	111	113	113	82
R-squared	0.08	0.39	0.34	0.31	0.43

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%