

Does International Convention on Gender Equality

Increase Economic Growth?

– A Panel Analysis on the Effects of CEDAW

(Preliminary Version. Please Do Not Quote Without Permission)

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Abstract:

This paper analyzes empirically whether the membership of an international convention on gender equality affects the economic growth of a country. Despite a suggested positive linkage between gender equality and economic growth, gender policy may be arguably costly to implement in domestic politics, particularly if the respective society is conservative. A possible way to pursue the socially optimal goal of gender equality while avoiding possible domestic resistance is international delegation. We test (i) whether and to what extent the international delegation of gender policy increases economic growth; and (ii) whether the impact of international delegation on economic growth is greater in more conservative societies. Using panel data for 138 countries, we do not find statistically significant effects of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) on GDP per capita growth. We do however find positive impacts in 37 Muslim-majority countries, with the majority of the population being Muslim as our proxy for ‘more conservative society’. These findings are robust to the choice of control variables and the method of estimation. In particular, taking into account the potential endogeneity of CEDAW membership does not alter our main conclusions.

Key words: Gender Equality; Economic Growth; and International Delegation

JEL classification: F530, J160, O430

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1. Introduction

It is reasonable to assume that economic growth is a long-term goal of governments and politicians, regardless of the type of political regime. As many influential studies suggest the positive linkage between gender equality and economic growth, politicians could employ the empowerment of women as an instrument to promote the economic development of their country. However, pursuing gender equality could be costly in domestic politics because of potential resistance in traditionally male-dominant societies and possible budgetary concerns in implementing gender equality programs (e.g. expenses for building and operating more schools for girls).

Implementing (potentially) unpopular policies, even if they are fundamentally important to the long term development of a country, may be risky for politicians' career. Vaubel (1986) suggests in the principle of public choice theory that the objective of politicians be to maximize their personal utility just as everyone else. According to Frey and Lau (1968), the preservation of power is at the core of their utility functions. Thus, with an election ahead, politicians have incentives to renege on potentially unpopular fundamental policies that they previously deemed necessary. They will instead focus on rather populist, short-term policies in order to secure re-election. As a possible way to avoid this time-inconsistency problem in the pursuit of political goals, Voigt and Salzberger (2002) propose the delegation of certain responsibilities to a third body beyond the governments' control.

Gender policies are likely subject to the above time-inconsistency problem due to domestic resistance in male-oriented society. Politicians who want to pursue gender equality as part of the long-term economic development strategy may find it difficult to remain in office while implementing the necessary policies. As suggested above, one way to overcome this problem is to delegate gender policy to the international level by joining an international convention on gender equality. Incentives to the international delegation of gender policies are arguably greater in more conservative societies as domestic resistance towards such policies is expected to be larger.

In this paper, we use the membership of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) as a proxy for the international delegation of gender policies.

Given the positive impact of gender equality on economic growth suggested in the literature, we test (i) whether and to what extent the international delegation of gender policy increases

economic growth; and (ii) whether the effects of the international delegation on economic growth are greater in more conservative societies.

Based on panel data of 138 countries, our econometric tests show that there are positive effects of commitment to the CEDAW on economic growth in conservative societies, as proxied by being a ‘Muslim majority’ country. There is, however, no statistically significant evidence on the impact of CEDAW in other countries.

This paper is organized as follows: Section 2 discusses the linkages between economic growth and gender equality and also between gender policies and international delegation. In Section 3, we present our estimation approaches including the hypotheses for testing and the measurement of international delegation of gender policy. Section 4 presents the results of our econometric tests including robustness checks. Finally, Section 5 addresses our conclusions and further research issues.

2. Literature Review

2.1. Gender Equality and Economic Growth

Gender discrimination takes various forms in economic and social spheres all over the world, although the degrees of discrimination differ from country to country. Beyond its obvious negative impact on the lives and well-being of women, such discrimination arguably has a number of “instrumental impacts [...] on other development outcomes” (Klasen and Lamanna 2008). The importance of gender equality – in particular in education and employment – for economic growth has recently received increasing attention in the political-economy literature, bringing about a reversion of Barro and Lee’s (1994) early influential finding of a positive effect of gender inequality on economic growth.

Dollar and Gatti (1999) argue that unequal access to educational opportunities for girls is an inefficient choice for a society and that returns to education for girls are often substantially higher than those for boys in middle-income countries. In other words, neglecting girls’ education means the abandonment of highly profitable investments in human capital and therefore impedes economic growth. Knowles et al. (2002) devise a gender-specific neo-classical growth model with positive but diminishing marginal returns to education for both boys and girls. In this framework, a biased distribution of educational investment in favor of

boys causes additional inefficiencies, lowering economic growth (Blackden et al. 2006). Furthermore, Yamarik and Ghosh (2004) find that one additional year of female schooling is typically associated with an increase of GDP per capita growth by 0.2-0.7% per year.

Moreover, gender equality in education and employment is positively related to economic growth through demographic channels. Lagerlöf (2003) suggests that women's advancement in educational achievements increase the opportunity costs of their time spent on child rearing, encouraging women to substitute quality for quantity in children. As a result, declining fertility rates give rise to higher rates of human capital accumulation and increasing income per capita. The negative impact of female education on fertility and mortality rates has also been found in an earlier study by Subbarao and Raney (1992). Galor and Weil (1996), explaining the same pattern of fertility choices with reference to increases in women's wages.

In addition, there are negative effects of gender discrimination in labor markets on economic growth suggested in the literature. Esteve-Volart (2004) points out the problem of the underutilization of women's "talent". Discriminatory practices in labor markets result in a lower average ability of managers, stimulating fewer innovations, as well as a reduced average productivity of workers³. Moreover, Klasen and Lamanna (2008) note that increased contributions of women to household income through employment and wages improve their bargaining position in the family, leading to increased savings, more investment in children's health and education as well as a more efficient use of credits.

Another aspect concerning the link between gender discrimination and economic growth comes from the literature on corruption. Swamy et al. (2001) find that women appear to have a more adverse attitude towards corruption than men and that female managers are less likely to engage in this sort of illegal activities. Taking into account that corruption is generally regarded as an obstacle to a country's development (see Mauro 1995; Gyimah-Brempong 2002), having more women in decision-making positions would generate positive effects on economic growth.

³ On the other hand, there exists evidence of a positive linkage between gender-based discrimination in labor markets and growth. Seguino (2000) finds that the concentration of women in certain export-oriented industries leads to low wage levels in these industries, thereby promoting exports, which should theoretically lead to increased economic growth. However, this theoretical conclusion is not confirmed by empirical studies.

2.2. Time-inconsistency and Credibility Issues in Gender Policy

Despite the positive linkage between gender equality and economic growth suggested above, politicians do not always appear to be sufficiently motivated to take more decisive measures promoting gender equality, given the fact that gender inequality and discrimination are still prevalent in many countries. One possible explanation for this phenomenon is offered by public choice theory.

Vaubel (1986) outlines one of the basic principles of public choice theory, namely the objective of politicians to maximize their personal utility. According to Frey and Lau (1968), one of the main factors for maximizing politicians' utility is the preservation of their political power, which is likely to become their overriding concern when elections approach. Although politicians may want to pursue long-term development goals, with an election ahead, they may find themselves in a situation where these goals are rather unpopular and therefore are not helpful to remain in office. Consequently, they will be inclined to renege on their long term goals in favor of popular short-term policies that maximize their expected vote share. However, this will threaten credibility of implementing long term policy.

In order to overcome the socially sub-optimal short-term focus before an election and the resulting lack of credibility, the responsibility for certain unpopular policies could be delegated to a third body beyond the national government's immediate control – such as an international organization (Voigt and Salzberger 2002). From the perspective of game theory, the delegation to an independent body amounts to changing the payoffs of the game, because interfering with international actions is more costly than a policy change within national government's discretion given possible international sanctions and country's reputation. Once the costs of interference have risen to a level above the potential gains – for instance more vote shares, politicians no longer have incentives to deviate from their preannounced (long-term) policies in favor of more populist ones and therefore these policies gain credibility (Dreher and Voigt 2008).

Drawing on the predictions of public choice theory as outlined above, politicians may be unable to credibly commit themselves to promoting gender policies in domestic settings because such policies are likely to face resistance in many societies.

Conservative or traditionalist groups in a society who are unwilling to grant women a higher degree of empowerment would resist gender-related policies. Dollar and Gatti (1999) note on the issue that religion variables, which are often interpreted as indicator for the prevalence of conservative attitudes in a society, are of high explanatory power with respect to gender-related discrimination, indicating social preferences for inequality. Dollar and Gatti further argue that more conservative societies are obviously willing to sacrifice economic growth in order to realize their (inefficient) preferences.

Consequently, it stands to reason that gender-related policies and their chances of success are prone to be constrained by a lack of policy credibility because governments have incentives to renege on policies promoting gender equality before an election in order to remain in office.

2.3. International Delegation of Gender Policy

Applying the above-mentioned prescription of public choice theory, international delegation of gender-related policies may help to make them more credible by overcoming the time-inconsistency issue. The United Nations Convention on the Elimination of All Forms of Discrimination against women (CEDAW), which aims at improving comprehensive rights for women including civil, political, economic, social and cultural rights, is an important example for the international delegation of gender policies. Until today, it has been ratified by 185 countries since its adoption by the UN General Assembly in 1979 and is therefore a nearly universal agreement on gender equality.

There are several channels, through which CEDAW can successfully promote gender-related policies. First, the process of ratification makes a United Nations convention legally binding in a member country and requires it to create appropriate domestic legislation. Second, the Committee on the Elimination of Discrimination against Women is equipped with monitoring systems on the compliance of member parties. Each member state is obliged to submit a report on its progress in reducing gender inequality in maximum intervals of four years to the Committee, which in turn annually reports to the UN General Assembly and makes recommendations based on the information received (OHCHR 2008a).

Through this mechanism, it will become public knowledge in the international community if an individual nation fails to comply with the provisions, which would lead to a negative

impact on the respective nation's international reputation. Dreher and Voigt (2008) suggest that the disapproval of the public with respect to governments reneging on their promises is particularly strong in the international sphere due to possible damages to the country's international reputation. Lastly, Dreher and Voigt furthermore explain that possible sanctions by other member states such as cuts in development aid can increase the costs for breaking promises and therefore improve the credibility of the preannounced policies.

3. Estimation Approach

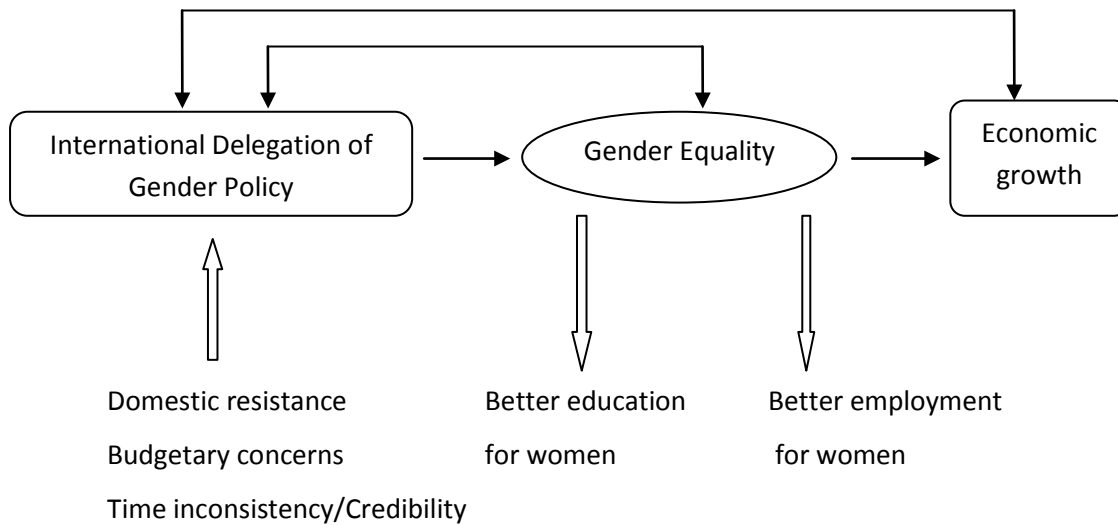
3.1. Hypotheses

In this paper, we attempt to establish a linkage between two important discussions in the development and political economy literature: gender equality as a driver of economic growth and the efficiency of international delegation of certain policy.

Based on the discussions in Section 2, we hypothesize that the international delegation of gender policy is positively correlated to economic growth. Furthermore, as resistance to gender policy in domestic settings is greater in conservative society, the international delegation of gender policy is likely more effective in these countries. Thus, we assume that the positive effects of international delegation are expected to be stronger in more conservative countries.

Figure 1 below shows the hypothesized transmission mechanism linking the international delegation, gender equality and economic growth. The straight lines with double arrows indicate possible endogeneity problems that a country with higher economic growth and/or gender equality may be more likely to delegate gender policy at the international level. We will check this endogeneity issue in our econometric testing in section 4-3.

Figure 1: Hypothesized Transmission Mechanism



More precisely, we will empirically test the following two hypotheses in the following section.

Hypothesis 1). The international delegation of gender policy increases economic growth

Hypothesis 2). The effects of international delegation on economic growth are greater in more conservative societies.

3.2. CEDAW as a Proxy for International Delegation of Gender Policy

We use the membership of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) as a proxy for the international delegation of gender-related policies. There are several justifications for using this Convention as the proxy.

First, as mentioned in section 2.3, CEDAW, adopted by the UN General Assembly in 1979 and effective since 1981, is arguably one of the most important international agreements on gender equality with 185 member parties.

Second, CEDAW is an international agreement that has already been utilized effectively to improve the situation of women in several respects, for example in terms of life expectancy, illiteracy rates, employment share and proportion of seats in national parliaments. The effects of CEDAW on women’s status are mainly investigated in other disciplines in social sciences such as political science and law (Gray et al. 2004; Sweeney 2004) and their testing results –

although possible endogeneity issues are mostly ignored – show positive impact of CEDAW on gender equality.

Third, CEDAW focuses on the enhancement of female education and employment, which have been shown to be closely correlated to economic growth (Klasen and Lamanna 2008; Dollar and Gatti 1999). In particular, article 10 of the Convention calls for the elimination of gender-based discrimination in education, and article 11 for equality in employment including wages.

However, we assume that the process of international delegation unlikely has any positive effect if the government of a member country is not seriously committed to promoting gender equality. For example politicians might just be interested in improving their own prestige by joining international cooperation or gaining the recognition and approval of foreign governments (Vaubel 1986). Thus, in our paper, we explicitly measure each member's degree of commitment by applying the coding method on ratification and reservations of international conventions introduced by Landman (2005). In the following section, we will discuss the measurement of commitments in more detail.

3.3. Measuring the Commitments to CEDAW

As the membership of CEDAW may not automatically generate serious commitments and the degrees of commitments of member countries would vary, it is necessary to measure the commitment of each individual member in order to correctly identify possible effects of the utilization of the Convention.

Landman (2005) suggests a coding method weighting reservations on articles of international conventions, which penalizes countries for making reservations on important articles. In this paper, we modify this method and include states in our coding systems which signed but did not ratify because signing the Convention already shows some degrees of good will to promote gender equality. Furthermore, most countries sign the Convention but wait for some time before ratifying it in order to prepare domestic policies in accordance with the standards suggested by the Convention.

The Committee on the Elimination of Discrimination against Women defines articles 2 and 16 as the two core articles fundamental to the aims of CEDAW, although it is still possible to become a member of the Convention with reservations on these articles.

Article 2 requires the introduction of the equality between men and women before national constitutions, the ban of discrimination towards women by creating appropriate domestic legislation⁴ and an improved legal protection of women's rights by public institutions.

Article 16 particularly addresses the abolishment of inequalities relating to marriage and its dissolution and to family relations including women's rights and responsibilities with respect to parenthood. Also, this article aims at granting women comprehensive rights concerning ownership and acquisition of property independent from their marital status.

The degrees of commitments to CEDAW applied in this analysis are as follows:

0: No signature

1: Signed but not ratified

2: Ratified with reservations towards at least one of the two core articles

3: Ratified with reservations towards some articles other than the core articles

4: Fully ratified without any reservations

As Landman (2005) suggests, we double the scale of 0-4 in order to reward countries without reservations and therefore our final scale ranges from 0 to 8. In our testing below, we tested both single and double scales in order to double-check the validity of the scaling methods.

3.4. Estimation Strategies

We employ a panel analysis with 138 countries from 1984 to 2005. The basic equation we use for our estimation is given below.

$$y_{it} = \alpha + \beta_1 \text{CEDAW}_{it} + \beta_2 \text{Policy}_{it} + \beta_3 \text{TradeOpen}_{it} + \beta_4 \text{LogInfl}_{it} + \beta_5 \text{GovCons}_{it} + \delta_j \text{country} + \gamma_1 \text{time} + \varepsilon_{it} \quad (1)$$

⁴ Provisions that include penalties are explicitly mentioned.

where y_{it} represents annual growth rates of GDP per capita in a country, standing for the economic growth of a country, and $CEDAW_{it}$, our strategic variable, represents the scaled commitments to the Convention (scale: 0-8).

Control variables are policy quality, trade openness, inflation rates (log) and general government consumption⁵, as suggested in many influential studies on economic growth (Collier and Dollar 2002; Hansen and Tarp 2001; Burnside and Dollar 2000). We control for policy quality employing the index of political risk provided by the International Country Risk Guide (ICRG) published by the PRS group. The index of political risks consists of 13 variables measuring institutional quality related to the development of a country. Some other studies on international delegation – for instance, Dreher and Voigt (2008) – include an interaction term between policy quality and the strategic variable – e.g. membership of international organizations – in their estimation. However, we exclude this interaction component between the commitments to CEDAW and policy quality because our hypothesized mechanism proposes the linkage CEDAW and economic growth through gender equality instead of general policy quality.

Trade openness is measured as the sum of exports and imports normalized by GDP. For inflation rates, we use the conventionally suggested GDP deflator (log). General government consumption is measured as percentage the government consumption takes part in GDP. Country and time (periods: 1984-1990; 1991-2000; 2001-2005) effects are also controlled.

The commitments to CEDAW are first measured in the present term (t). The justification for using the present term is that many countries already implement preparatory measures such as legal adjustments several years before ratifying the Convention in order to meet with the standards. Thus, we expect the effects of the commitment to arise when a country actually ratifies the Convention. In order to double-check the validity of this argument, a one-year lag variable (t-1) is also used for testing:

$$y_{it} = \alpha + \beta_1 CEDAW_{it-1} + \beta_2 Policy_{it} + \beta_3 TradeOpen_{it} + \beta_4 LogInfl_{it} + \beta_5 GovCons_{it} + \delta_j \text{ country} + \gamma_1 \text{ time} + \varepsilon_{it} \quad (2)$$

⁵ Descriptions of the variables used throughout the estimations are provided in the Appendix 1 together with their respective sources.

4. Results

4.1. Testing Hypothesis 1: Does International Delegation of Gender Policy Increase Economic Growth?

Table 1 summarizes the testing results on the first hypothesis. We employed OLS with fixed effects as a Hausman test shows that OLS with fixed effects is consistent while OLS with random effects are not. The results show that the effects of commitments to CEDAW on economic growth are statistically insignificant at present and one year lag terms. This result holds with both single and double scaling methods⁶.

We further checked the validity of this result with the sub-group of 108 non-OECD countries because developed countries may have already established institutions favorable to women and therefore joining CEDAW may not create additional effects on gender equality and economic growth to a significant extend.

Table 2 shows the results with the non-OECD countries. Neither $CEDAW_{it}$ nor $CEDAW_{it-1}$ is statistically significant, the identical conclusion to the results with 138 countries.

As above, we do not find any statistically significant evidence supporting hypothesis 1. There are a few possible explanations on this finding. First, there might be no real effects of such an international convention on either gender equality or economic growth, as international conventions may be merely a diplomatic instrument. Second, as women's status in many countries has been gradually improved, commitments to CEDAW, a universally recognized convention for the last thirty years, may not create significant effects any further. Third, as the effects of CEDAW on economic growth are generated through its effects on gender equality, it may take a longer time to seize any visible impact, which is not captured in our testing. Fourth, it might be the case that gender equality does not necessarily generate economic growth at least in the foreseeable future.

In this paper, we take the first three possibilities into account, as the last explanation requires another type of research beyond international delegation. Concerning the first and second points, we further check them by testing hypothesis 2. We argue that, although CEDAW may

⁶ In this paper, we report only the results with double-scaled commitments to CEDAW, but the results with single scaled commitments can be obtained from the authors upon request.

not promote significant effects in general, certain countries where the pursuit of gender equality is particularly challenged and, in parallel, women's status is low, the international delegation of gender policy could have greater effects in improving gender equality.

Regarding the third point that the effects of CEDAW on economic growth may require longer time, we first reject this argument with caution, as we do not find any statistical differences in testing with the present value of commitments to the CEDAW and lag values. However, this argument may need to be further checked with higher lag variables and we will discuss this issue in section 5.

4.2. Testing Hypothesis 2: Do the Effects of International Delegation on Economic Growth are Greater in More Conservative Societies

As discussed above, we test if commitments to CEDAW have any significant effects on economic growth in more conservative societies where gender inequality is severe and gender policy confronts stronger resistance. We proxy Muslim majority countries – where more than 50% of the total populations are Muslims – as ‘conservative society’, taking the discussions of Dollar and Gatti (1999) on religious influence.

In our datasets, 37 countries out of 138 are categorized as ‘Muslim majority countries’. The list of these countries is provided in Appendix 4.

We use OLS with fixed effects as above according to the result of Hausman test. The results show positive effects of (the double-scaled) commitments to CEDAW on economic growth. When we employ the current value of commitments to CEDAW, one additional commitment increases economic growth by 0.334 and it is significant at 5% level. One year lag-value, $CEDAW_{it-1}$, is also moderately significant at the 10% level with a higher coefficient of 0.48. Additionally, the results hold with the single-scaled commitments to CEDAW both at present and one year lag terms.

The OLS results confirm that there exist statistically significant effects of commitments to CEDAW on economic growth in Muslim majority countries, our proxy to ‘more conservative society’, in contrast to no significant effect in all other countries.

However, the OLS test does not necessarily confirm causality between the independent variable, commitments to CEDAW, and the dependent variable, annual growth rates of GDP per capita. In the following section, we check the possible endogeneity problem that countries with high economic growth may more likely commit to CEDAW.

4.3. Robustness Check

To tackle the possible endogeneity problem, we employ the instrumental variable (IV) method. Our instruments for commitments to CEDAW are commitments to other conventions, which are not directly related to economic growth of a country. Our justifications are that, if a country commits to one international convention, it is also likely to have membership of another convention, and thus covariance between the instrumented variable and the instrumental variables is expected to be non-zero.

We select two international conventions as our instruments: the International Convention against Apartheid in Sports (since 1988, 72 signatories and 60 parties) and the Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the Abolition of the Death Penalty (since 1991, 35 signatories and 70 parties). The validity of the instrumental variables, including the possible endogeneity problem, is checked and confirmed through 2SLS regression and test of overidentifying restrictions. Commitments to the two conventions are measured as: 0 with no signature; 1 with signature; 2 with ratification with reservations; and 3 with full ratification. As in the case of CEDAW, the measured scales are doubled in order to reward full ratification and the final scales of these two conventions are from 0 to 6. As for commitments to CEDAW, we tested with both single and double scaled commitments to these two conventions in order to check the validity of the doubling method⁷.

Table 4 and 5 show the testing results of all countries and non-OECD countries, respectively. The results basically confirm the findings of the OLS testing that there is no statistically significant effect of CEDAW on annual growth rates of GDP per capita in all countries and non-OECD countries.

⁷ The results with the single scaled commitments are not presented in the tables but can be obtained from the authors upon request.

On the other hand, table 6 shows the testing results of 37 Muslim countries, supporting the previous finding of positive effects of CEDAW on economic growth.

5. Concluding Remark: Further Issues and Discussions

We hypothesized the positive linkage and causality between the international delegation of gender policy and economic growth. Our results show that there are statistically significant positive effects of international delegation of gender policy, proxied with commitments to CEDAW, on economic growth in conservative societies – proxied with Muslim majority countries – where domestic gender policy is more likely challenged. However, we couldn't find a significant effect in other countries including developing (non-OECD) countries. Our findings are robust against possible endogeneity problems and choices of different strategic variables –present and lag values of commitments to CEDAW.

There are a few further issues to be checked in our studies. We constructed the linkage between commitments to CEDAW and economic growth through improvement in gender equality (see Figure 1 in Section 3.1). This linkage needs to be more specified in order to answer which areas of women's status – e.g. education, social institution, employment and political empowerment – CEDAW channels to improve and how they contribute to economic growth. To address this question, interaction between commitments to CEDAW and appropriate measurements in women's economic, social and political status is worthwhile investigating.

In addition, as mentioned in Section 4.1, possible long-term effects of commitments to CEDAW on economic growth, which are not captured by present or short-term lag effects, should be double-checked with time series approaches.

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Table 1. Effects of the CEDAW in All Countries
(OLS, Panel Regression, Fixed Effects)

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef./Se	Coef./Se
CEDAW	0.03527 (0.0555674)	0.0155895 (0.0558737)
Policy	0.0609493 (0.012692)***	0.056373 (0.0131603)***
TradeOpen	0.0376189 (0.0062343)***	0.0367801 (0.0065098)***
LogInfl	-0.7430842 (0.0891416)***	-0.7465186 (0.0911921)***
GovCon	-0.2977084 (0.0315158)***	-0.3057609 (0.032662)***
Constant	1.945572 (1.072346)*	2.394077 (1.114609)**
Observations	2,368	2,284
Number of countries	138	138
R-sq (within)	0.1121	0.1095

Note:

Commitments to the CEDAW are measured by the doubling method.

All regressions include fixed country and time (period 1984-1990; 1991-2000; 2001-2005) dummies.

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

Table 2. Effects of the CEDAW in non-OECD Countries

(OLS, Panel Regression, Fixed Effects)

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef./Se	Coef./Se
CEDAW	0.0805967 (0.0697628)	0.0356432 (0.0698611)
Policy	0.0381284 (0.0155629)**	0.0362165 (0.0159893)**
TradeOpen	0.0367088 (0.0077537)***	0.0352959 (0.0081454)***
LogInfl	-0.7270737 (0.105527)***	-0.7240295 (0.1078952)***
GovCon	-.2739783 (0.0363463)***	-0.2784224 (0.0375813)***
Constant	1.887907 (1.178364)	2.217151 (1.225085)*
Observations	1,741	1,682
Number of countries	108	108
R-sq (within)	0.1088	0.1054

Note:

Commitments to the CEDAW are measured by the doubling method.

All regressions include fixed country and time (period 1984-1990; 1991-2000; 2001-2005) dummies.

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

Table 3. Effects of the CEDAW in Muslim Countries

(OLS, Panel Regression, Fixed Effects)

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef./Se	Coef./Se
CEDAW	0.3367733 (.1380216) **	0.4784903 (0.2743634)*
Policy	0.0666823 (.0302996) **	0 .0660332 (0.0310282)**
TradeOpen	0.026569 (0.0163371)	0.0232152 (0.01725)
LogInfl	-0.3382758 (0.2317209)	-0.2920691 (0.2381197)
GovCon	-0.183348 (0.0863705)**	-0.1847916 (0.0888326)**
Constant	-2.075443 (2.439994)	-1.784604 (2.518258)
Observations	598	579
Number of countries	37	37
R-sq (within)	0.0779	0.0688

Note:

Commitments to the CEDAW are measured by the doubling method.

All regressions include fixed country and time (period 1984-1990; 1991-2000; 2001-2005) dummies.

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

**Table 4. Effects of the CEDAW in All Countries
(Instrumental Variables 2SLS Regression for Robustness)**

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef. / Se	Coef./Se
CEDAW	-0.1448532 (0.2084291)	-0.1117975 (0.1946097)
Policy	0.0412448 (0.0130349)**	0.037699 (0.0122855)**
TradeOpen	0.0115701 (0.0024823)***	0.0115435 (0.0024645)***
LogInfl	-0.5540855 (0.0877307)***	-0.5481199 (0.0870725)***
GovCon	-0.0870576 (0.0236389)***	-0.0853198 (0.023559)***
Observations	1,821	1,819
Number of countries	138	138

Note:

Commitments to the CEDAW are measured by the doubling method.

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

Table 5. Effects of the CEDAW in non-OECD Countries
(Instrumental Variables 2SLS Regression for Robustness)

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef./Se	Coef./Se
CEDAW	0.0734721 (0.3041572)	0.0848688 (0.2848461)
Policy	0.0482042 (0.0134102)***	0.0457418 (0.0133702)***
TradeOpen	0.0070541 (0.0046905)	0.0070727 (0.0045698)
LogInfl	-0.6109823 (0.1140269)***	-0.602601 (0.11272)
GovCon	-0.0650767 (0.0364032)*	-0.0639 (0.0357519)*
Observations	1,355	1,353
Number of countries	108	108

Note:

Commitments to the CEDAW are measured by the doubling method.

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

**Table 6. Effects of the CEDAW in Muslim Countries
(Instrumental Variables 2SLS Regression for Robustness)**

Dependent Variable: Annual growth rate of GDP per capita

	(1)	(2)
	CEDAW (t)	CEDAW (t-1)
	Coef./Se	Coef./Se
CEDAW	0.7783495 (0.4223972)*	0.8210413 (0.4127711)**
Policy	-0.0261264 (0.0281485)	-0.0266654 (0.0277536)
TradeOpen	0.0130246 (0.0074178)*	0.0139473 (0.0075164)*
LogInfl	-0.1464153 (0.2111486)	-0.1030829 (0.2143971)
GovCon	-0.0527495 (0.054126)	-0.0496189 (0.0544972)
Observations	467	466
Number of countries	37	37

Note:

Commitments to the CEDAW are measured by the doubling method.

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

Appendix 1: Sources and Definitions of Variables

Variable	Definition	Source
Commitments to the CEDAW	<p>Weighted scales that capture each country's degrees of commitments to the Convention:</p> <p>0 (0): no signature</p> <p>1 (2): signed but not ratified</p> <p>2 (4): ratified but with reservations towards at least one of the two core articles</p> <p>3 (6): ratified but with reservations towards some articles other than the two core articles</p> <p>4 (8): fully ratified without any reservations</p> <p>Values in parentheses represent a doubled ratification scale that rewards countries with more serious commitment.</p>	Landman (2005)
Annual growth rates of GDP per capita (annual %)	Annual percentage growth rates of GDP per capita based on constant local currency.	World Bank, World Development Indicators (2008)
Government Consumption (% of GDP)	General government final consumption expenditure (formerly general government consumption)	World Bank, World Development Indicators (2008)

	<p>includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation.</p>	
Log Inflation (GDP deflator, annual %)	<p>Inflation as measured by the annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole. The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency.</p>	World Bank, World Development Indicators (2008)
Policy Quality	<p>Composite index of annual political risk calculated as the average of the following 13 sub-indices: bureaucracy quality; corruption; democratic accountability; ethnic tensions; external conflict; government stability; internal conflict; investment profile; law & order; military in politics; religious tensions; socioeconomic conditions; and political risk rating</p>	Political Risk Index (ICRG) by the PRS Group (1984-2005)
Trade Openness	<p>Trade openness as represented by the sum of the shares of exports and imports in GDP.</p>	World Bank, World Development Indicators (2008)

Appendix 2: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Growth rate GDP pc	2819	1.480972	5.679936	-50.48989	90.06702
(Double-scaled) CEDAW	2948	5.345319	3.05478	0	8
(Double-scaled) DeathPenalty	2204	1.328494	2.354641	0	6
(Double-scaled) Sports	2717	2.251748	2.614943	0	6
Policy (ICRG)	2830	62.75861	15.99968	9.58	97
TradeOpenness	2741	74.32997	42.64549	1.530677	459.1184
Log(Inflation+1)	2656	2.300347	1.433503	-3.322319	10.19478
GovConsumption	2726	16.12833	6.459289	2.9	76.22212

Appendix 3: Core Articles of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)

Article 2 Policy Measure

States Parties condemn discrimination against women in all its forms, agree to pursue by all appropriate means and without delay a policy of eliminating discrimination against women and, to this end, undertake:

- (a) To embody the principle of the equality of men and women in their national constitutions or other appropriate legislation if not yet incorporated therein and to ensure, through law and other appropriate means, the practical realization of this principle;
- (b) To adopt appropriate legislative and other measures, including sanctions where appropriate, prohibiting all discrimination against women;
- (c) To establish legal protection of the rights of women on an equal basis with men and to ensure through competent national tribunals and other public institutions the effective protection of women against any act of discrimination;
- (d) To refrain from engaging in any act or practice of discrimination against women and to ensure that public authorities and institutions shall act in conformity with this obligation;
- (e) To take all appropriate measures to eliminate discrimination against women by any person, organization or enterprise;
- (f) To take all appropriate measures, including legislation, to modify or abolish existing laws, regulations, customs and practices which constitute discrimination against women;
- (g) To repeal all national penal provisions which constitute discrimination against women.

Article 16 Marriage and Family Life

1. States Parties shall take all appropriate measures to eliminate discrimination against women in all matters relating to marriage and family relations and in particular shall ensure, on a basis of equality of men and women:

- (a) The same right to enter into marriage;
- (b) The same right freely to choose a spouse and to enter into marriage only with their free and full consent;
- (c) The same rights and responsibilities during marriage and at its dissolution;
- (d) The same rights and responsibilities as parents, irrespective of their marital status, in matters relating to their children; in all cases the interests of the children shall be paramount;
- (e) The same rights to decide freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights;
- (f) The same rights and responsibilities with regard to guardianship, wardship, trusteeship and adoption of children, or similar institutions where these concepts exist in national legislation; in all cases the interests of the children shall be paramount;
- (g) The same personal rights as husband and wife, including the right to choose a family name, a profession and an occupation;
- (h) The same rights for both spouses in respect of the ownership, acquisition, management, administration, enjoyment and disposition of property, whether free of charge or for a valuable consideration.

2. The betrothal and the marriage of a child shall have no legal effect, and all necessary action, including legislation, shall be taken to specify a minimum age for marriage and to make the registration of marriages in an official registry compulsory.

Appendix 4: List of Muslim Majority Countries

Definition of 'Muslim Majority Countries':

Countries where more than 50% of the total populations are Muslim based on the information provided by the World Fact Book by CIA (<https://www.cia.gov/library/publications/the-world-factbook/>)

Albania	Malaysia
Algeria	Mali
Azerbaijan	Morocco
Bahrain	Niger
Bangladesh	Nigeria
Brunei	Oman
Burkina Faso	Pakistan
Egypt	Qatar
Gambia	Saudi Arabia
Guinea	Senegal
Guinea-Bissau	Sierra Leone
Indonesia	Somalia
Iran	Sudan
Iraq	Syria
Jordan	Tunisia
Kazakhstan	Turkey
Kuwait	UAE
Lebanon	Yemen
Libya	