Egalitarian Values and the Gender Gap in Political Knowledge: Exploring the effects of Gender Equality Values in the Gender Gap in Political Knowledge

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Exploring the effects of Gender Equality Values in the Gender Gap in Political Knowledge

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Bachelor's Thesis

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February 25, 2022

Word count: 7,447

Abstract

This paper theorises whether gender-egalitarian values could be a helpful indicator in the effort of political science to explain the gender gap in political knowledge. It first develops a theoretical framework based on the gendered political socialisation process. Based on country-level data from around the World Value Survey, it examines the relationship between gender-egalitarian values and the political knowledge of respondents in the CSES survey. Overall, it offers compelling insight into descriptive representation's potential and limitations to understand the discrepancies between men and women in political knowledge.

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Egalitarian Values and the Gender Gap in Political Knowledge: Exploring the effects of Gender Equality Values in the Gender Gap in Political Knowledge

Does the gender gap in political knowledge vary alongside the broader gender values of a country?

And such be al women, compared vnto man in bearing of authoritie.
For their sight in ciuile regiment, is but blindnes: their strength, weaknes: their counsel, foolishenes: and judgement, phrenesie, if it be rightlie considered.

John Knox (1558) in Dieppe, France

Women… are weaker, they are smaller, they are less intelligent.

Janusz Korwin-Mikke (2017) in Brussels, Belgium[1]

"An informed citizenry is a prerequisite to maintaining the social contract between the established government and those governed by it" (American Library Association, 2018). Democracy's quality and endurance depend on its constituency's ability to make informed decisions (Page & Shapiro 1992; Shaker, 2012). In theory, an informed electorate can offer grounds for a meaningful representation of the people's will (Dahl & Shapiro, 2020). Moreover, it can prevent elite manipulation and policy errors caused by political greed (Somin, 1998) through informed political accountability (Zaller, 1992).

However, it is hard to find voters versed in all aspects of their political systems, let alone define what an adequately informed electorate looks like. Social sciences have measured people's awareness about their political system through many methods, but the

[1] The juxtaposition of both quotes is meant to contrast rhetoric concerning women in the past and present, and to evoke thought on the saliency of the gender-equality cause today. However, it is by no means presented as representative of common political discourse.

political knowledge indicator stands as one of the oldest ones (Atkeson & Rapoport, 2003). Otherwise known as political information, it is closely correlated with higher levels of government accountability and participation in the electoral process (De Vries & Giger, 2014; Verba & Nie, 1972). This indicator measures individuals' cognisance of factual information about political figures, ideology and civil liberties (Verba et. al, 1997; Dow, 2009; Delli Carpini & Keeter, 1996).

In spite of its contribution in the study of electoral competency, research has found its inconsistent distribution across demographics (Dolan, 1998). In particular, a significant difference between men and women in political information is statistically robust and consistent across different methodologies, demographics and time (Verba et. al, 1997; Wagnerud, 2009; Barabas et. al, 2014).

In part, gender is theorised to influence political knowledge given different cognitive attributes among men and women, the measurement and configuration of surveys, and environmental and socio-economic factors (Verba et. al, 1997; Inglehart & Norris, 2003, Atkeson & Rapoport, 2003). Moreover, different societal and life experiences can manifest in women being less interested or enthusiastic about politics (Harrison & Huntington, 2000; Barabas et. al, 2014). These factors only partially explain the gender gap in political knowledge. Still, a significant portion of it remains a conundrum.

Recently, descriptive representation literature has also put forward a compelling argument to explain the gender gap in political knowledge (Fortin-Rittberger, 2016; Fraile & Gomez, 2017; Carroll, 1985). This new branch of research relies on how the depiction of women in politics encourages political engagement on their female constituencies through role model figures (Carroll, 1985; Sanbonmatsu, 2003; Wolbrecht & Campbell, 2007).

So far, applied research on the issue is still scarce and their findings are mixed at best. Scholars found promising results by looking at younger demographics and broader conceptions of political engagement, such as activism and volunteer work (Dassonneville & McAllister, 2018; Wolbrecht & Campbell, 2007). However, most cross-national research finds descriptive representation does not affect political knowledge scores among men and women differently, or at least not in any way this indicator can capture (Fortin-Rittberger, 2016; Dassonneville & McAllister, 2018). Therefore, it is critical to understand the factors conducive to female representation in government to gain a better understanding of its relation with gender differences in political knowledge.

Higher gender-proportionality in parliament is often found under proportional representation (PR) electoral systems and in countries where female participation is encouraged through subsidy or quotas (Slaughter & Binda, 2018). More notably, women have to overcome many socio-cultural barriers to engage in the political arena (Ahuja & Stinson, 1993; Inglehart & Norris, 2003; Kunze, 2008). The socialisation of gendered roles and expectations significantly put women at a disadvantage to both learn and participate in politics (Bos et. al, 2021; Slaughter & Binda, 2018). Therefore, one could argue that the election of more women into parliament is more likely a manifestation of a socio-economic and political environment that exhibit higher ratios of gender equality (Inglehart, 1981). Cultural values are often underestimated, but they have been shown to influence political knowledge and engagement significantly over time (Inglehart & Norris, 2003; Pfau-Effinger, 1998).

To investigate this train of thought, this paper will answer the following question: *Does the gender gap in political knowledge vary alongside the broader gender values of a country?* More concretely, it will first review how and to what extent do other factors

contribute to the gender gap in political information, and their implications in societal gender values. Following, it discusses how individuals are politically socialised, and the relevance of norms and values on such processes. Third, the linear regression model is performed to test this relationship on the wider population and a younger demographic group, relying on public opinion data from the World Value Survey (WVS). The statistical analysis was unable to provide meaningful results, but shed light on the persistence of the gender gap in political knowledge and generational changes. Finally, this paper concludes by pondering the implications of these findings on this sample and for future research.

This investigation builds upon previous literature, particularly one focused on the potential descriptive representation has to explain part of the political knowledge gender gap. By exploring gender-related norms and values, it deepens the understanding of how role model figures influence political engagement.

Conceptual Framework

Gender-Egalitarian Values

Culture —the values, attitudes, beliefs, orientations and underlying assumptions prevalent in the collective mindset— is socially transmitted information between generations (Harrison & Huntington, 2000; North, 1990). When it comes to political knowledge scales, societal values and attitudes act as facilitators or obstacles, and prove to be a stronger than education or class (Inglehart, 2020; Barnes et al., 1979).

Where a culture of gender equality predominates, women are more likely to seek more egalitarian socio-economic opportunities (Inglehart & Norris, 2003). The authors also stress that in countries with lower gender-egalitarian values, women tend to limit themselves in pursuing non-gender-conforming roles. Moreover, social expectations and experiences

help develop politically relevant skills (Bell,1976). Hence, cultural change is a crucial precondition for women to reinforce and consolidate their participation and presence in political and institutional spheres.

Political Knowledge

One can understand knowledge as the range of factual information stored in an individual's long-term memory (Delli Carpini & Keeter, 1996). This concept considers not only memory storage, but one's ability to use and apply those memories effectively (Delli Carpini & Keeter; Vonnahme, 2019). Political knowledge, in particular, evaluates individuals' memory about political content alongside general and issue-specific information (Dassonneville & McAllister, 2018; Kuklinsky & Quirk, 2001; Verba et. al, 1997).

In surveys, this conception is usually measured by indicators that examine individuals' retainment of information about national politics (Barabas et. al, 2014). Such questions often consider prominent political figures, party ideology and details about their electoral system and government (CSES, 2020). However, these measures tend to be highly sensitive to the type and environment of questioning (Miller & Orr, 2008; Mondak, 2001), and monetary and time incentives (Prior & Lupia, 2008). Recently, correct voting and incumbent accountability measures have surfaced as more sophisticated methods to explore democratic competence (De Vries & Giger, 2014; Lau et. al, 2014).

Regardless, political information remains a suitable measure to test people's political preferences and behaviour (Prior & Lupia, 2008; Barabas et. al, 2014). For one, it has a more established historical record in research than most measures (Atkeson & Rapoport, 2003; Verba et. al, 1997). Voter ignorance can impair the basic tenants of democratic representation and distort the function of an electoral process (Somin, 1998). Moreover, it is a crucial

measure for cognitive engagement in the political process (Fortin-Rittberger, 2016; Zaller, 1992).

Literature Review

The infamous gender gap in political knowledge was noted as early as 1974 (Flora & Lynn, 1974), and is consistent throughout different types of analysis, demographics and across geopolitical borders (Verba et. al, 1997; Wagnerud, 2009; Barabas et. al, 2014). Its magnitude and persistence throughout decades of cultural and political progress are hard to explain, but scholarship has found many contributing factors over time. For one, women were found to be significantly less interested and knowledgeable in politics than their male counterparts and less politically engaged in virtually all dimensions of political interaction (Verba et. al, 1997; Atkeson & Rapoport, 2003). In the same studies, female respondents were observed less productive in processing and retaining information, and limited to openly expressing political attitudes.

Bos et. al (2021) found that women seem less inclined to acquire and retain political information than men due to a lack of motivation and/or opportunity to do so. The OMA framework details how opportunity, motivation and ability facilitate the learning process (Luskin, 1990). In this scenario, the contribution of ability —the possession of appropriate cognitive competence— is difficult to measure in understanding the gender gap in political knowledge (Inglehart & Norris, 2003). Sherwin (2003) and Zaidi (2010) illustrate that women score lower in spatial and working memory but outperform men in verbal fluency, accuracy and perceptual speed. Nonetheless, it is uncertain whether these differences significantly serve in favour of men in political knowledge surveys and interviews.

Opportunity — the access to information and its framing— and motivation —the desire to learn— have been where most literature focused on explaining the gender gap in political knowledge. Kunze (2008) poses that socio-economic circumstances can indirectly affect women's access to information. After all, they are overwhelmingly the primary caregiver to children or elderly family members, which diminishes their economic means and narrows their political interest to specific fields (Ahuja & Stinson, 1993). Hence, female performance on gender-relevant topics is higher than men's (Barabas et. al, 2014).

In terms of motivation, Fox and Lawless (2014) argue that women are at a disadvantage in terms of parental encouragement, participation in competitive activities and a sense of self-confidence, particularly in tertiary education. Gender discrepancies in the accumulation of human capital, job mobility and occupational segregation are also expected to define the professional and issue-attentiveness differences between them (Kunze, 2008). As women show political interests qualitatively different to men, they perform differently when tested for political knowledge (Barabas et. al, 2014). For example, females were found to be keener to local rather than national news due to the proximity, immediate relevance and higher female representation (Delli Carpini & Keeter, 1996; Van der Pas & Aaldering, 2020). However, local politics are often not featured on country-wide or international surveys (Mondak, 2001; CSES, 2020).

Descriptive representation

More recently, the lack of descriptive representation has emerged as a motivation to explain the gender gap by implying that female representation in government can improve women's political participation and awareness (Carroll, 1985). Carroll follows the logic that female politicians serve to increase the engagement and participation of women in the wider population by being role models to other women and changing preconceived notions and

expectations on femininity. In turn, their example encourages them to become more politically knowledgeable (Sanbonmatsu, 2003; Wolbrecht & Campbell, 2007).

Given the recency of the field, research on the topic provided mixed results. Empirical evidence worldwide failed to find any correlation between parliamentary gender configurations and political knowledge overall, consistent with a bulk of previous research (Fortin-Rittberger, 2016; Dassonneville & McAllister, 2018; Wagnerud, 2009; Dow, 2009). However, there were encouraging indications that political engagement and knowledge increased alongside female representation in Latin America (Fraile & Gomez, 2017). This branch of research has found more favourable outcomes by investigating the correlation among younger demographics (Dassonneville & McAllister, 2018). In places with higher gender proportionality in parliament, young females are not outperformed by their male peers.

This has prompted the field to stress the importance of female representation to encourage young girls to engage in politics (Dassonneville & McAllister, 2018; Wolbrecht & Campbell, 2007). Nonetheless, one must take a step back and look at the more deep-rooted sources of gender inequality to understand the relationship between descriptive representation and political knowledge better before challenging what Dow (2009) once called “one of the most robust findings in the study of political behaviour” (p. 117).

Theory

Descriptive representation literature uses the political socialisation theory to explain its findings. At the early stages of an individual’s social and political development, evidence indicates higher levels of receptiveness towards new cultural norms, values and ideas (Jennings, 1996; Lee et. al, 2013). Political learning starts in childhood, but it is not until

early adolescence that most people develop political and electoral values and beliefs (Oxley et al., 2020; Gimpel et. al, 2003). As individuals grow, they are increasingly exposed to family discussions about politics, civics curricula, and political campaigns and media (Campbell & Niemi, 2016; Gimpel et. al, 2003).

In tandem, people start socialising gender stereotypes, expectations and associations at early ages (Letendre, 2007). Girls manifest gender roles through toys and more care-oriented activities (Jaffee & Hyde, 2000; Lever, 1978), but later develop more complex notions on which traits and skills will assist them to fulfil those roles and other gender-related goals (Gilligan, 1982). Both these learning processes continue during most of adulthood, but they are particularly heightened at late adolescence (Sapiro, 1983; 2004).

‘Gender' alludes to the socially constructed roles and behavioural patterns associated with the different biological characteristics between men and women (Beckwith, 2000). These constructed ideas translate into societal perceptions, otherwise known as gender-related ‘culture values', on the appropriate roles in the home and workforce, paid employment and political action (Inglehart & Norris, 2003).

Gendered political socialisation is a complex and lifelong process, sensitive to changing media, culture, politics and context (Bos et. al, 2021). Therefore, descriptive representation in government —and its success in explaining the gender gap— may be mirroring a wider array of societal and cultural factors that are affecting the perceptions of gender roles. Therefore, this work builds on the findings of descriptive representation literature to further explain the gender gap in political knowledge.

Research finds that gender proportionality in parliament is usually found chronologically after a nation develops gender-equality norms in politics (Wangnerud, 2009), but correlates with the gender-equality scale (Inglehart & Norris, 2003). Therefore, societies

with higher levels of gender-egalitarian values often also exhibit higher descriptive representation in government (O'Brien & Rickne, 2016). Due to electoral systems, quotas and other structural incentives to encourage women into politics, one can find high descriptive representation in countries with both low gender-egalitarian values and a significant difference in men's and women's political knowledge (Slaughter & Binda, 2018). Therefore, values and norms may be a more adequate indicators to analyse the political information level among young men and women (Sapiro, 2004; Jennings, 1996).

However, some scholars are sceptical at best of the power culture has to change people's minds and societies' trajectories. For many, any policy will generate consistent results without reference to culture if effectively and uniformly executed regardless of the context (Harrison & Huntington, 2000). Still, evidence points to the fact that in spite of the homogeneous implementation of policy, some ethnic or social groups perform better than others in the same economic and political environment (De Pons, 2010; Pfaff, 1999).

Indeed, socio-economic and circumstantial factors such as survey protocol, socio-economic circumstances, attitudes and interests do partially explain the gender gap in political knowledge (Mondak & Anderson, 2004; McGlone et. al, 2006; Fox & Lawless, 2014; Barabas et. al, 2014; Verba et. al, 1997). Nonetheless, the motivation framework embedded in the political socialisation theory situates gender-equality values as a potential explanatory variable (Inglehart & Norris, 2003; Wangnerud, 2009). Culture and social attitudes influence people's political preferences and behaviour (Harrison & Huntington, 2000; Barnes et al., 1979), but do so impactfully at the beginning of the political socialisation process.

Similarly to previous research, this analysis uses country-level data to analyse the gender gap among respondents in a cross-national study (Fortin-Rittberger, 2016;

Dassonneville & McAllister, 2018). When analysing the wider population, their political socialisation process may not coincide with the current gender-egalitarian norms and values of their environment. If this reasoning is accurate, societal values ought to have a weak or indistinguishable effect in the gender gap in political knowledge of CSES respondents, under the assumption that the countries analysed here have become more egalitarian over time (Inglehart & Norris, 2003). Hence, the objective of this paper is to explore whether the gender gap in political information decreases alongside broader gender-egalitarian values in a country.

Hypothesis 1: The gender gap in political knowledge narrows as the gender-egalitarian values in countries increases.

As the process of political socialisation is particularly effective on younger demographics, this group is open to alterations in the political scene, new outlets of information and changing societal values and norms (Abramson & Inglehart, 1986; Dassonneville & McAllister, 2018; Sapiro, 2004). In particular, they are the most receptive between 18 and 21 years of age (Prior, 2005). Descriptive representation literature found this group exceptionally receptive to female representatives (Wolbrecht & Campbell, 2007; Dassonneville & McAllister, 2018). Hence, this research expects to see a heightened decrease in the gender gap in rather gender-egalitarian contexts.

Hypothesis 2: The gender gap in political knowledge among respondents between 18 and 21 years old in countries narrows as the gender-egalitarian values in countries increases.

Methodology and Statistical Analysis

Data

This analysis uses two large-N quantitative cross-sectional surveys: the Comparative Study of Electoral Systems (CSES) and the World Value Survey (WVS). Both projects represent formidable efforts to gather insightful and representative data points from a large and diverse sample of countries (Fortin-Rittberger, 2016; Haerpfer et. al., 2020). In combining CSES' Module 2 and 3 and WVS (2020) dataset, the analysis validated thirty-three countries, with over ninety-seven thousand respondents.

The primary data source for this investigation is the CSES survey, which collects information based on nationally representative post-election surveys. This analysis draws from it to assess individual-level political knowledge from respondents, their gender, age, educational level and survey protocol details. It is performed and organised by "a program of election study teams from around the world" (CSES, 2020). Most studies comprised in the database come from countries with free or partly free elections, but data from states marked as not free is included in the database as well, as it is considered of sufficient reliability by the CSES survey protocol. The CSES was mostly conducted through telephone interviews, alongside Mail-back surveys, ensuring a level of representativeness within each country's subsample (Grönlund & Milner, 2006). They test the interviewees in different levels of difficulty and in accordance with their political context to construct the political knowledge indicator (CSES, 2020). Hence, some of the wording and answers of the questions vary across regions. The lack of standardisation among the items' questions across countries means that the overall consistency of results under similar survey conditions is hard to measure; a point observed in the concluding remarks.

The WVS conducts one of the largest databases over public opinion data (Haerpfer et. al., 2020). The analysis uses five question-items from the database to measure gender-egalitarian values in a country, further described below. The WVS survey is a worldwide representative set of 48 countries. According to the WVS Association (2020), they select individuals "based on a multi-stage territorial stratified selection", with a minimum of 1200 respondents per country, but ones with greater population size and diversity account for minimums of 1500 to 5000 interviewees. Such a standard is aimed to ensure a sufficient level of content validity within the country subsamples (WVS, 2020). They use in-person interviews for the vast majority of data collection, but they also employ methods of a postal survey, telephone interviews and self-administered online questionnaires (WVS, 2020). This could raise an issue of external reliability in the measure, but the survey is tailored to perform consistently across different contexts by controlling for external factors detailed in the survey implementation protocol of the Scientific Advisory Committee of WVS Association.

Operationalisation

Dependent Variable: Political knowledge. The CSES project covers a wide range of states, mostly in the aftermath of an electoral process. Its Modules 2 and 3 represent the timeframes from 2001 and 2006, and from 2007 to 2011 respectively, and were performed very similarly in terms of format and questioning. Each module contained three questions referring to 'Political Knowledge items', which are coded and specifically intended to measure the level of political knowledge and mark such in a correct/incorrect format. In combination, both modules amount to 144,420 cases. The items measured respondents in country-specific issues and through different levels of complexity.

This indicator has several limitations. Gender disparities can be seen in survey mode and protocol. Two predispositions significantly differentiate male and female interviewees:

the 'don't know' (DK) and guessing effect. Women are more likely to answer DK when they are hesitant or unsure of the answer or even given a stressful interview environment (Miller & Orr, 2008). This tendency shows in the high degrees of DKs in political surveys (Mondak, 2001). This difference tends to manifest in better performance by men in multiple-choice questions, who advantage of a scoring system that does not penalise wrong answers and rewards right ones (Kenski & Jamieson, 2000). Therefore, there is no penalisation for 'Don't know' and 'Refused' answers in the coding of the variable. They are coded alongside the 'Incorrect' answer label with a score of 0 while correct answers had a score of 1 (see Appendix 2 and Appendix 3).

Furthermore, the gender of the interviewer or the setting of the testing can potentially change the reactions of female respondents (McGlone et. al, 2006). The authors suggest that "…implicit cues reminding women of the possibility that they might confirm negative gender stereotypes can impair their retrieval of political knowledge" (McGlone et. al., p. 1). Hence, the regression analysis controls for the gender of the interviewer**.**

Each item was valued the same. By aggregating the three items, the scale is measured in an ordinal scale, coded as follows: 'No questions correct' as 0, 'Low score' as 1, 'Medium score' as 2 and 'High score' as 3. All individual-level control variables also correspond to this database.

Independent Variable: Gender and Gender Equality Values. Literature and previous research show that Gender has a significant effect on political knowledge across regions and time (Dow, 2009; Verba et. al, 1997). Hence, gender acts as an independent factor for political knowledge. It will be coded as a dummy variable, with male respondents recorded as 1 and female individuals as 0. The sample is evenly distributed, with 52.3% of women and 47.7% of men of valid data points. Refused answers here are coded as missing

for this analysis due to CSES measures. Nonetheless, future surveys should also explore the representation of populations who do not identify with either of the traditional gender categories.

To measure the effect gender values have on the gender gap in political knowledge, this analysis uses country-level measures of gender equality values retrieved from the WVS from 1981 to 2020. The five items chosen follow the Gender Culture Scale criteria in Inglehart's and Norris' (2003) book *Rising the Tide*. This measure taps into attitudes toward politics, the workforce, education and the family. These items were all recorded so that higher values consistently represent more significant support for gender equality. Moreover, these indicators are especially adequate to trace changes in political knowledge, seeing that they test the shift of the role women fulfil in politics and their political interests (Wagnerud, 2009). Moreover, they distinctly represent the position and role of women in traditional v. progressive or cosmopolitan dimensions of political behaviour (WVS, 2020). Altogether, the variable is a comprehensive country-level measure annually of the gender equality scale per year from 1981 to 2020 of 48 countries.

The first two items test respondents' notion of women's role in the family. One inquires whether the respondent approves of women as a single parent. It allows for three answers: 'Approve', 'Disapprove' and 'Depends'. The second item questions if a woman needs to have children to be fulfilled. The scale of this variable does not give room for ambiguity by posing only two viable answers: 'Agree' and 'Disagree'. This relates to the different parental encouragement and sense of self-confidence boys and girls have given societal values and expectations, which often translates to motivation and participation in school (Fox & Lawless, 2014; Slaughter & Binda, 2018; Bos et. al, 2021).

The third focuses on men's perceived competency over women to participate and lead in politics. It does so by asking whether men make better political leaders than women do on a 4-degree scale, in which they can strongly agree or disagree and solely agree or disagree but not stay neutral. The perceived competency of women relative to men in politics speaks to the barriers females have when entering into the political field as activists, volunteers or even bystanders (Campbell & Wolbrecht, 2006). These environments are crucial for the political learning process in early adulthood (Jennings and Niemi, 1983).

The fourth and fifth items measure the perception of entitlement to education and employment women have relative to men. One asks whether attaining a university degree is more important for a boy than a girl in the same 4-degree scale than the third question. Conversely, the fourth item evaluates whether men should have more rights to a job than women. It provides the option to ‘Agree’, ‘Disagree’ or respond ‘Neither’. Both items mirror the level of socialisation of women in the workforce and educational system, which is still widely uneven in most regions of the world (Delli Carpini & Keeter, 1996).

Given the different scales in the five question-item, I transformed each to a scale between 1 and 5 from less egalitarian and more egalitarian (see Table 1). Thereafter, I multi-level sorted them by country and year —in that order— and, excluding missing values, I created an aggregated score for each combination of country and year. After dividing it by the number of respondents, I got the mean of the aggregated score per country and year to be paired with the CSES individual-level data. I standardised the data with a mean of 0 and a standard deviation of 1. The observed minimum is -1.955 points, which corresponds to the Philippines in 2010. In contrast, the observed maximum score of 2.405 corresponds to Norway in 2001. The question-items used in this paper to assess gender equality values use self-report measures but fall within a sufficient degree of content validity (WVS, 2020).

In merging both databases, I matched individual-level data from the CSES project to country-level data drawn from the WVS databank. For the majority of cases, there was the same year datapoint or a very proximate date in the WVS data. However, some cases presented marginal differences in the years in which the surveys were conducted. Therefore, a protocol was formed to match the year-data points to the same or most proximate value available given three scenarios.

First, where there were multiple CSES data points for a single WVS data point, the data points were all assigned to the single WVS score. This was the case for Australia, Brazil, Canada, Taiwan, Finland, France, Germany, Hong Kong, Mexico, the Netherlands, Norway, the Philippines, Poland, Romania and Switzerland. Second, where there was one single CSES year datapoint for multiple WVS data, the priority to the most proximate earlier year in WVS datapoint was given. This happened for the Republic of South Korea, Kyrgyzstan, Russia and South Africa. Finally, for cases in which there were multiple data for both indicators, the same logic as the third scenario was applied. This happened for Japan, New Zealand, Peru, Spain, Sweden and the United States (see Appendix 1 for further detail). There was no intention in selecting only one year from WVS per year and country. However, it ended up being what was the most logical and proximate data to measure each of the available data points for political knowledge from the CSES database after a case-by-case individual analysis.

Table 1.

Gender Values Aggregated Score

Q1: Should men have more rights to a job than women if there is job scarcity?	1		3		2
Q2: A woman has to have children to be fulfilled.	1				0
Q3: How acceptable is a woman as a single parent?	0		2		1
Q4: Men make better political leaders than women do.	1	2		3	4
Q5: University education is more important for a boy than for a girl.	1	2		3	4
Recoded Scale per question	1	2	3	4	5
Aggregated Score	5	10	15	20	25

*0: Neutral (includes Don't know responses in order not to penalise given the DK effect.

Control Variables. Following the concerns emerging from the literature review about the political knowledge indicator's sensitivity towards survey protocol and environment, the gender of the interviewer in the survey is added to the model as an individual-level dummy variable. Overall, female respondents in particular tend to be more sensitive to a male interviewer, particularly in face-to-face interviews (Kenski & Jamieson, 2000). This subconscious reaction can affect their performance in the survey. As mentioned above, the analysis controls for other types of survey protocol shortcomings by not penalising 'DK' or 'Refused' answers.

Secondly, the level of educational attainment of each respondent was simplified to measure whether they obtained a secondary school degree or not. Research on this topic indicates that the level of education is significantly associated with people's levels of political

knowledge, interest and engagement (Verba et. al, 1997). Moreover, lower levels of academic development are often related to culturally more conservative-oriented beliefs and values (Inglehart and Norris, 2003, Mounk, 2018). Furthermore, the age of respondents is also controlled for at an individual level. Due to heterogeneously coded data at the individual-level of respondent's socio-economic strata, the income of respondents could not be included in the analysis.

Finally, the analysis also accounts for two country-level control variables: Gross Domestic Product (GDP) per capita and its Gini Coefficient. A country's wealth and inequality ratios disproportionally burden women due to the lack of economic, institutional and labour systems of support (Pfau-Effinger, 1998; Fraile 2013). Therefore, theory usually expects developing nations with higher Gini Indexes to have larger gender gaps in political knowledge (Inglehart & Norris, 2003; Fraile & Gomez, 2017). The former allows controlling for any income-sourced differences that could manifest in gender equality values. The data was sourced from the World Bank Database per country and year. GDP per capita is measured in American dollars (USD) and run through a natural logarithm function to approximate more normally distributed data. Moreover, the Gini Coefficient is aimed to account for high levels of inequality within countries. Disparities in attitudes towards gender are often particularly troubling when they stem from deficits in publicly provided participatory resources (Atkeson & Rapoport, 2003)**.**

Case selection

As detailed above, this analysis uses individual-level data available in the CSES database and country-level data from the WVS project. The case selection was done based mainly on the compatibility character of the cases between both variables available. Therefore, there are certain limitations to the data of illiberal democracies, such as Russia in

2004 or Kyrgyzstan in 2006 (Freedom House, 2021). For instance, younger democracies or unstable political regimes can pose a different challenges for respondents in terms of difficulty and accuracy in questions of political knowledge (Inglehart & Norris, 2003). However, Norris (2020) remarks that people in autocratic states can identify and contrast liberal values and democratic institutions.

Model

Given the theory and literature reviewed alongside the operationalisation of the data, a General Linear Regression model will be performed on the general population of respondents. Subsequently, a linear regression model will be employed on the age demographic between 18 and 21 years of age to see if the relation strengthens at the height of the political socialisation process. This method of statistical analysis will investigate the impact of each independent variable on the political knowledge score. Most importantly, it will evaluate the interaction between gender values and the gender of respondents, and their effect on the political knowledge gender gap.

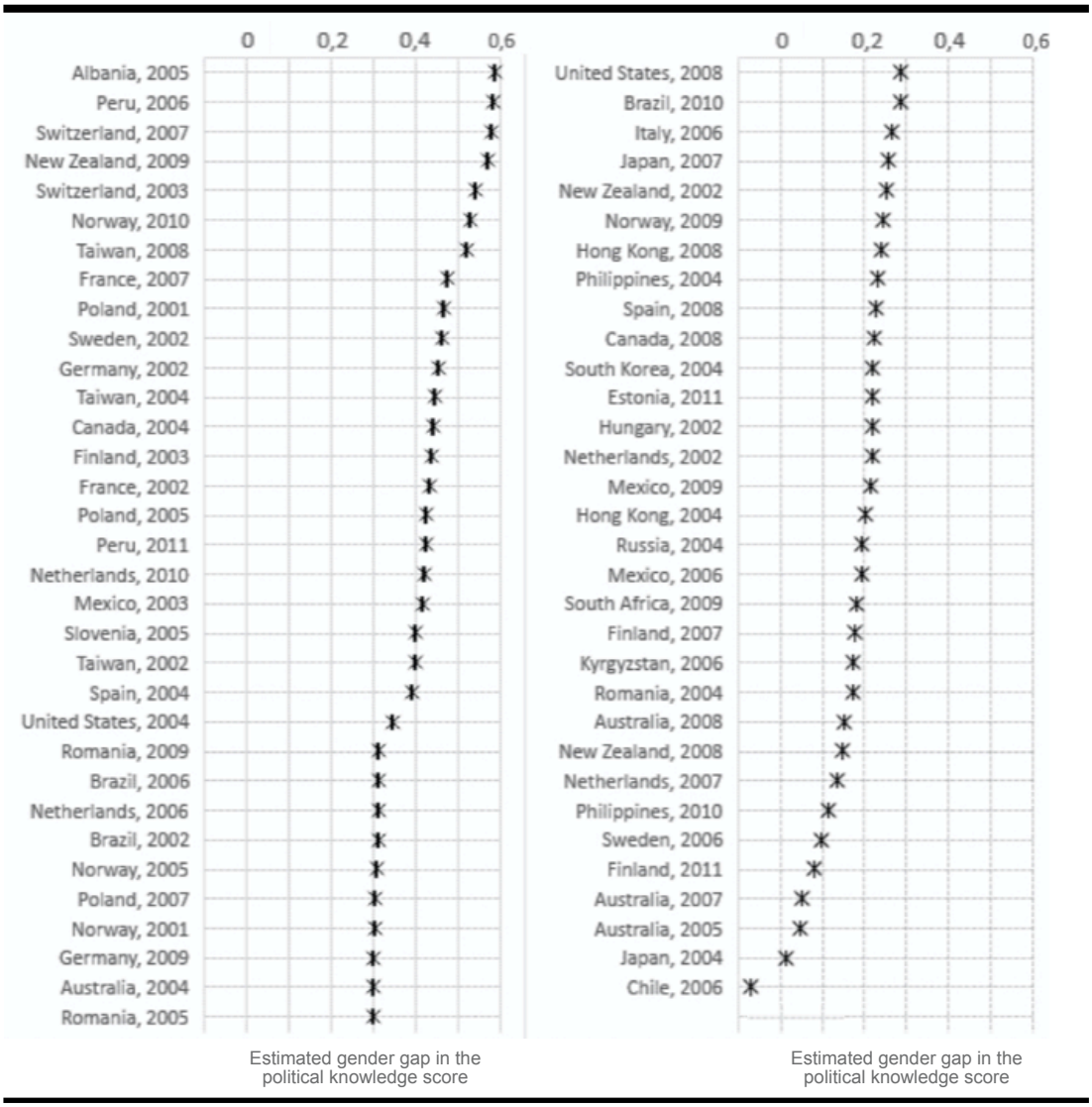
Given that there is one single data point from WVS per country, the gender-egalitarian values scale was constructed to assign the same score for the pertinent cluster of country data points from the CSES dataset. In order to comply with the independent errors assumption from the Ordinary Least Squares method, the general linear regression is run under a complex sample process to cluster the standard errors of the country variable for both linear regressions. Since CSES performs surveys of their Modules 2 and 3 with no major time-sensitive disturbances in the questioning or its execution (CSES, 2020), a clustering of standard errors for the year variable was discarded. This decision was also corroborated by the database merging process that left no multiple years for every country in the WVS data.

Results

In line with previous research based on the CSES database, women perform consistently lower than men in political knowledge items in all the 106 election years surveyed except for Chile in 2006. In a preliminary analysis, Figure 1 illustrates the estimated gender gap per country by subtracting the mean of women's political knowledge score from the mean of men's political knowledge score in the CSES data. Indeed, the majority of cases have a statistically significant gender gap and consistently throughout the decade presented.

Figure 1.

Gender Gap in Political Knowledge



Note: Estimates are the based on political knowledge aggregated scores per country and year by the number of respondents in the CSES database.

Source: CSES Modules 2 and 3.

Following the model plan above, all relevant assumptions are fulfilled. The first model includes only gender to confirm the relationship between political knowledge and gender in the merged database (see Table 2). The second model includes the variable of gender-egalitarian values and their interaction with gender. Model 3 adds all the individual-level controls available: Gender of the interviewer, attainment of a secondary degree of schooling and age of respondents. Model 4 adds both country-level control variables: GDP per capita and the Gini coefficient. The analysis is performed in order to test hypothesis 1, in which *the gender gap in political knowledge narrows as the gender-egalitarian values in countries increases*.

First, Model 1 shows that men answer approximately 0.296 (0.018) questions more on average than women constantly. Model 2 shows that for every one-unit increase in the gender-egalitarian scale, one can see a linear increase in the gap of 0.016 points. However, this increase is statistically insignificant within the scheme of the Model, as the interaction term shows statistically insignificant. Therefore, the data here is unable to identify a meaningful change in the political knowledge gender gap in relation to an increase in gender-egalitarian values. Specifically, the constant tells us that women in a country with an average gender-egalitarian values rating would score 1.539 (0.061) points on the political knowledge scale. Simultaneously, men in a country with an average gender-egalitarian values rating

would expect to score on average 1.82. Therefore, the difference between men and women is 0.281 (0.024).

As mentioned above, this difference between the genders in political knowledge increases 0.016 points for every unit of the gender-egalitarian scale. In a country with a low gender-egalitarian values rating of -1, men and women would expect to score on average 1.867 and 1.602 respectively. Hence, the difference between them amounts to 0.265 points overall. For individuals living in a country with a high gender-egalitarian values score of 1, the difference in political knowledge between the genders equals 0.297.

Model 3 strengthens the explanatory power of the model, due to the statistical significance of education and age over political knowledge. However, the number of cases in the model drops significantly due to a large number of missing cases in the gender of the interviewer variable. Nonetheless, this does not seem to affect the coefficient results or the direction of the model (see Appendix 4 for the model run without the gender of the interviewer variable). 7.3% of the variability in political knowledge can be accounted for by gender, its interaction with gender-egalitarian values and the individual-level control variables.

In general, individuals who attained a secondary school degree have a political knowledge score of 0.458 (0.058) points higher than those who did not, statistically significant at a 0.001 level. For every one-year increase in age, individuals should expect to score 0.003 (0.001) points higher than before. This result is significant at a level of 0.05. In contrast, respondents in the CSES survey do not seem significantly by the gender of their interviewer. Similarly, in Model 4, the country-level control variables are not significant to the model and add insignificantly to the explanatory power of Model 3. The insignificance of

the control variables could stem from the fact that the analysis clustered standard errors per country, minimising any external deviation among the groups.

Table 2.

General linear model of political knowledge with Gender Equality Values

	Model 1	**Model 2**	**Model 3**	**Model 4**
(Intercept)	1.484***	1.539***	1.132***	1.645
	(0.045)	(0.061)	(0.113)	(1.169)
Gender	0.296***	0.281***	0.303***	0.294***
	(0.018)	(0.024)	(0.030)	(0.035)
Gender Values		-0.063	-0.014	-0.044
		(0.047)	(0.072)	(0.137)
Gender Values * Gender		0.016	0.026	0.032
		(0.015)	(0.029)	(0.028)
Gender of the Interviewer			0.070	0.110
			(0.055)	(0.074)
Secondary degree education			0.458***	0.481***
			(0.058)	(0.076)
Age of respondent			0.003*	0.003
			(0.001)	(0.002)
Gini Coefficient				-0.595
				(0.913)
GDP per capita				-0.025
				(0.123)
R Square	0.022	0.025	0.073	0.085
N	131114	131114	31956	31956

Note: linear regression coefficients with standard errors in brackets.

***p<0.001, **p<0.01, *p<0.05

The same analysis was run on a smaller sample of respondents between 18 and 21 years of age. Hypothesis 2 predicts that the gender gap in political knowledge for this demographic in countries that scored high in gender equality values will be significantly less than countries with lower scores in gender equality values. Preliminarily, in Model 1, young men score approximately 0.128 (0.025) points higher than their female counterparts (see Table 3). This coefficient is statistically significant at a level of 0.001. Although congruent with the analysis in the wider population, the gender gap in political knowledge is smaller in this demographic by 0.168 points.

Model 2 shows that for every one-unit increase in the gender-egalitarian scale, one can see an increase in the gender gap in political knowledge of 0.009 points. In this model, the interaction term is statistically insignificant, and so the increase for every unit is statistically insignificant within the Model. Meaning that the analysis is unable to recognise any significant change in the political knowledge gender gap in relation to an increase in gender-egalitarian values. However, the coefficient for gender-egalitarian values shows a statistical significance at a level of 0.05. More precisely, the constant indicates that women in a country with an average gender-egalitarian values rating would score 1.478 (0.064) points on the political knowledge scale. Men in the same context would expect to score on average 1.599. Therefore, the difference between men and women is 0.121 (0.031).

To be specific, in a country with a low gender-egalitarian values rating of -2, men and women would expect to score on average 1.847 and 1.744, respectively. Hence, the difference between them equals 0.103 points overall. For individuals living in a country with a high gender-egalitarian values score of 2, the difference in political knowledge between the genders equals 0.139 points.

Model 3 introduces the control variables of the gender of the interviewer, the attainment of a secondary school degree, and the age of respondents. The number of cases in this model drops remarkably here as well due to the missing cases in the gender of the interviewer variable (see Appendix 5). Model 3 and 4 show that even among the youth, the attainment of a secondary school degree has a statistically significant effect on political knowledge at a level of 0.001. Similarly to the previous analysis, respondents who obtained their high-school diploma scored significantly higher than their counterparts by 0.420 (0.096) and 0.490 (0.0113), respectively. The respondents in this variable are evenly spread, with people with the degree representing 56.3%. The rest of the individual-level and country-level controls variables are statistically insignificant to this model.

Table 3

General linear model of political knowledge with Gender Values for Younger demographic

	Model 1	**Model 2**	**Model 3**	**Model 4**
(Intercept)	1.376***	1.478***	0.547	-0.297
	(0.070)	(0.064)	(0.519)	(1.844)
Gender	0.128***	0.121***	0.155**	0.143*
	(0.025)	(0.031)	(0.047)	(0.064)
Gender Values		-0.133*	-0.027	-0.070
		(0.063)	(0.070)	(0.149)
Gender Values * Gender		0.009	-0.018	-0.006
		(0.022)	(0.040)	(0.045)
Gender of the Interviewer			0.078	0.046
			(0.089)	(0.093)
Secondary degree			0.420***	0.490***
attainment				
			(0.096)	(0.113)

Age of respondent (>18 years)			0.033	0.050
			(0.029)	(0.033)
Gini Coefficient				0.892
				(1.003)
GDP per capita (in USD)				0.022
				(0.161)
R Square	0.004	0.021	0.050	0.068
N	8864	8864	2853	2279

Note: linear regression coefficients with standard errors in brackets.

***p<0.001, **p<0.01, *p<0.05

Discussion and Conclusion

This research set out to discover whether *the gender gap in political knowledge varies alongside the broader gender values of a country.* Intuitively, in environments with more progressive gender expectations around labour and schooling, women tend to display higher levels of political participation (Pfau-Effinger, 1998; Inglehart & Norris, 2003). However, the analysis performed proved to be insufficient to corroborate the relationship between the broader gender-egalitarian values and the gender gap in political knowledge. For one, gender does seem to significantly affect the gender difference in the dependent variable, in accordance with previous research (Verba et. al, 1997). Besides Chile in 2006, men score higher than women in political knowledge, despite coming from a variety of educational backgrounds, regions and demographics. Moreover, the gender gap in political information of young adults is significantly smaller than the wider sample.

Although the explanatory power of both statistical analyses can be portrayed as low —given that they both rendered R-squared values of less than 9%— the literature review accounts for a large range of factors that influence the gender gap. This paper aimed to shed light on a potential factor of interest in the political knowledge field, not to render all-encompassing decoding of the source of the gender gap.

As reviewed above, other authors have investigated in-depth external factors that contribute to the gap in political knowledge beyond endogenous characteristics of gender. Women do seem to be keener in local affairs rather than national politics (Rapeli, 2014). On average, they also perform better in a narrower range of topics, particularly ones related to healthcare and social protections (Kenski & Jamieson, 2000). The statistical analysis above was unable to factor them into the model due to the data at hand. However, investigating whether gendered-political socialisation affects the issue-specific differences among men and women is worth investigating in further detail. Perception of gendered expectations shows potential to explain the nature of these differences in more targeted studies, where one can control for the content of political information questions.

More importantly, this research aimed to build on descriptive representation literature and questions the adequacy of its indicator as a cause for the reduction of the gender gap in political knowledge among young adults. For one, a larger number of women in positions of power does not guarantee the advancement of a gender equality agenda or necessarily encourage other women to participate in the political process (Dodson, 2006; Wangnerud, 2009). Therefore, measures such as gender-egalitarianism may be good mediating variables for future scholars to consider. Moreover, the statistical insignificance of the analysis presented may also indicate why a measure such as gender-proportionality in parliament is more adequate for a cross-national analysis. As women in positions of power can be seen as a

strong manifestation of developed egalitarian values, they may produce stronger signals to counter the high variance of the response data in the political knowledge indicator.

That does not mean that gender-egalitarian norms and values are not influential for women to engage in politics. Gender equality values are on itself a rather subjective measure by focusing on people's perceptions of women in the family and the workplace. Therefore, the effects of such on the cognisance of political information are subject to numerous context-specific factors. In addition, the lack of homogeneity in political systems makes cross-national studies measure different across nations. Therefore, variability in the data is high, making broad generalisations difficult.

Notwithstanding the results, this essay opens an opportunity for future research to explore factors that tap into socio-cultural institutions and the inner psyche of respondents. The latter in particular is useful to find more nuanced effects of gendered roles, norms and values on individuals' political engagement. By now, articles that take more gender-sensitive measures of political engagement have shown promising results (Wolbrecht & Campbell, 2007; Bos et. al, 2021).

Furthermore, since the late 1800s, the division of tasks and roles of men and women have exponentially shifted with each coming generation (Jennings, 1987; 1996). Cultural and socio-political attitudinal changes are often prompted by new generations, who are more exposed and responsive to different media and progressive social movements (Abramson & Inglehart, 1986). Therefore, it is worth studying younger respondents extrapolated from country-level measures and closer to individual determinants, like age and education.

These findings have relevant implications not only for the gender difference in political knowledge but also for the weight culture has on gender differences in the political sphere. As Harrison and Huntington (2000) assertively write, culture matters rather a lot.

Although the roles of motherhood and gender identity fall in a complex socio-constructed system of norms and values, the binary conceptualisation of gender leads to a different life experience in terms of employment, education, role in the home and social relations (Cha & Weeden, 2014; Zaidi, 2010; Sherwin, 2003). Ultimately, the baseline of the matter is that the more society considers women worthy of the same education, employment and freedom than men, the more enabled women will be to participate in the democratic process.

If political knowledge is a means to evaluate how competent and attentive women are in politics relative to men, younger generations offer hope that the tide is changing in the right direction. However, this might also imply that structural and durable gender equality may take decades if not centuries to achieve. Moreover, we must acknowledge that social norms, values and habits highly influence who we become as civilians and professionals. More equitable legislation and opportunities for women to grapple with gender-sourced inequalities can prompt a higher interest in national politics. “To achieve gender equality, we need to mobilise not just parliaments but populations, not only civil society but all of society” (Mlambo-Ngcuka, 2015).

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Appendix

Appendix 1. Special country cases from Merger of WVS and CSES databases

Special country cases

	Frequency
Republic of Korea	All WVS datapoints for Republic of Korea (2001) will apply for the CSES (2004) datapoints.
Kyrgyzstan	All WVS datapoints for Kyrgyzstan (2003) will apply for the CSES (2006) datapoints.
Russia	All WVS datapoints for Russia (2006) will apply for the CSES (2004) datapoints.
South Africa	All WVS datapoints for South Africa (2006) will apply for the CSES (2009) datapoints.
Japan	The WVS datapoints for Japan (2005) will apply for the CSES (2004) and (2007) datapoints.
New Zealand	The WVS datapoints for New Zealand (2004) will apply for the CSES (2002), (2008) and (2009) datapoints.
Peru	The WVS datapoints for Peru (2006) will apply for the CSES (2006) and (2011) datapoints.
Sweden	The WVS datapoints for Sweden (2006) will apply for the CSES (2002) and (2006) datapoints.
United States of America (USA)	The WVS datapoints for USA (2006) will apply for the CSES (2004) and (2008) datapoints.
Spain	The WVS datapoints for Spain (2007) will apply for the CSES (2004) and (2008) datapoints.

Appendix 2. Political knowledge data (CSES Database)

*Political knowledge score**

	Frequency	**Percent**	**Cumulative percent**
No question correct	21260	16.2	16.2
Low score	35048	26.7	42.9
Medium score	46647	35.5	78.4
High Score	28307	21.6	100.0
Total	131262	100.0	

Note: In the Age category, Kyrgyzstan coded the age in four groups (between 19 and 29, 30 and 39, 40 and 49, 50 and above)

Appendix 3. Political knowledge scores on CSES respondents between 18 and 21 years-old

Political knowledge score of young age cohort

	Frequency	Percent	Cumulative percent
No question correct	2009	22.6	22.6
Low score	2535	28.6	51.2
Medium score	2745	30.9	82.2
High Score	1581	17.8	100.0
Total	8870	100.0	

Appendix 4. General linear model in wider population without the gender of the interviewer variable

General linear model of political knowledge with Gender Equality Values without Gender of the Interviewer variable.

	Model 1	**Model 2**	**Model 3**	**Model 4**

(Intercept)	1.484***	1.539***	1.122***	1.470*
	(0.045)	(0.061)	(0.088)	(0.613)
Gender	0.296***	0.281***	0.272***	0.260***
	(0.018)	(0.024)	(0.022)	(0.031)
Gender Values		-0.063	-0.073	-0.050
		(0.047)	(0.048)	(0.095)
Gender Values * Gender		0.016*	0.016*	0.022*
		(0.015)	(0.015)	(0.017)
Gender of the Interviewer				
Secondary degree education			0.410***	0.433***
			(0.041)	(0.039)
Age of respondent			0.004**	0.004**
			(0.001)	(0.001)
Gini Coefficient				0.130
				(0.640)
GDP per capita				-0.045
				(0.064)
R Square	0.022	0.025	0.063	0.066
N	131114	131114	128631	99451

Note: linear regression coefficients with standard errors in brackets.

***p<0.001, **p<0.01, *p<0.05

Appendix 5. General linear model in younger demographic population without the gender of the interviewer variable

General linear model of political knowledge with Gender Values for Younger demographic without the Gender of the Interviewer variable

	Model 1	**Model 2**	**Model 3**	**Model 4**

(Intercept)	1.376***	1.478***	1.111**	0.592
	(0.070)	(0.064)	(0.399)	(0.664)
Gender	0.128***	0.121***	0.137***	0.128***
	(0.025)	(0.031)	(0.028)	(0.032)
Gender Values		-0.133*	-0.120	-0.158
		(0.063)	(0.066)	(0.115)
Gender Values * Gender		0.009	-0.002	0.010
		(0.022)	(0.020)	(0.022)
Secondary degree attainment			0.320***	0.318***
			(0.071)	(0.071)
Age of respondent (>18 years)			0.007	0.015
			(0.022)	(0.023)
Gini Coefficient				0.989
				(0.688)
GDP per capita (in USD)				0.006
				(0.070)
R Square	0.004	0.021	0.042	0.057
N	8864	8864	8797	6828

Note: linear regression coefficients with standard errors in brackets.

***p<0.001, **p<0.01, *p<0.05