# QOG

UNIVERSITY OF GOTHENBURG

# PERSPECTIVES ON GENDER AND CORRUPTION

**Gender differences in regard to corruption in Europe from an individual and institutional perspective**

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# ABSTRACT

This paper looks at gender differences in the Quality of Government institute's regional data on
governance in Europe. With point of departure in three different research perspectives on gender
and corruption this study examines the raw survey material, containing 85000 respondents from
over 200 NUTS regions in the EU. The results show interesting gender differences with regard to
corruption: Women, on average, perceive corruption levels as worse, report paying fewer bribes
and have a lower tolerance for corrupt behavior, compared to men. These gender differences seem
to exist in basically all countries in the study. In the second part of the study, established theories of
gender and corruption are tested on the basis of the individual level findings in a multi-level model
at the regional and national level in Europe, using the EQI index as the dependent variable. The
results indicate that a larger share of female politicians locally elected might have positive effects on
the regional quality of governance.

**Keywords:** Gender, Corruption, Quality of government

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## Introduction

Two articles in the early 2000s, authored by Dollar et al. (2001) and Swamy et al. (2001) respectively, received attention and provoked debate when they provided a new dimension to the study of corruption. Both articles argued for a gendered understanding of the problem of corruption and claimed that women, on average, are less likely to engage in corrupt activities compared to men. This means, the authors argue, that for example a higher share of women in leading positions in society will lead to less corruption among the elites, which in turn will influence the overall level of corruption in society in a positive direction. The articles sparked off a lively debate that prompted the World Bank (2001) to recommend gender equality as a means of curbing corruption, while other researchers dismissed measures like these as misguided. Since then numerous research papers have been written on the subject of gender and corruption, and the argument is by no means settled.

This essay takes this debate as its point of departure, and makes several contributions to the field of gender and corruption. Drawing upon previous research literature, I identify three main perspectives with regard to gender and corruption: *The liberal democracy perspective, the gender differences perspective* and *the opportunities perspective.* By using a new dataset with over 85000 respondents from 212 different regions in Europe, individual differences between men and women with regard to corruption are examined and discussed in relation to these three perspectives. In the second part of the essay, new regional level measures of women's participation in politics and in the labor market are used to gauge the effect of a larger share of women in public life on overall levels of corruption. The results are discussed in relation to the three perspectives and provide a basis for a discussion of further development of the research field of gender and corruption.

Based on my analysis and discussion I conclude that there exist interesting gender differences with regard to gender and corruption. The individual level data suggests that women, on average, are less prone to engage in corrupt transactions, perceive general corruption levels as worse, and are more likely to punish corrupt behavior, compared to men. The regional level analysis shows that having a high share of women in political life might be conducive to good governance, even after taking several other variables into account. I argue that these results provide strongest support for the *gender differences perspective,* emphasizing the relevance of the gender perspective with regard to corruption.

## The research problem

The study of gender and corruption is important because it deepens our understanding of the problem of corruption and, in Wängnerud's (2014:296) words; 'it tells us something about how societies progress'. Both relative equality between genders and better, more impartial governance are signs of modernization and is something that is characteristic of some of the most prosperous and successful societies in the world. The question that scholars of gender and corruption are trying to shed light on is whether relative gender equality and good governance might not just be a result of modernization, but rather if and how these two variables might be casually related: Can, for example, a higher share of women in parliament help curbing political corruption in a country?

Despite over 15 years of research debate, there is still no consensus regarding the potential causal connection between gender and corruption. Like many other research problems in the social sciences the relation between gender and corruption is a complex one, with problems of operationalization, potential feedback mechanisms and issues of data availability. Much of the leading research in the field has been conducted in the form of large cross-country comparative analyses at the national level. This is understandable, since it is on this level of analysis that most of the high quality comparative data collected by organizations like the World Bank is available. However, cross-country comparative analysis has several limitations when it comes to forming a deeper understanding of the casual mechanisms at work between two variables and, not surprisingly, when it comes to explaining variation *within* countries. Authors have pointed out that such variation do exist to different degrees in different countries, both in terms of general levels of modernization and also when it comes to things like corruption and gender equality (Charron et al. 2013; Wängnerud 2012). This indicates that the subnational level of analysis might be at least as interesting as the national level when it comes to the issue of gender and corruption. This level of analysis provides lots of additional cases, not captured by cross-country comparative analysis, where we can test general theories deduced from analyses at the national level.

Luckily, recent years has seen an increased availability of good data at the subnational level. A prime example of this is the Quality of Government (QoG) institute EU regional data.[1] This data is the result of a large survey of corruption conducted at the regional level in the EU, first in 2010, followed by an even larger survey conducted in 2013. The result is the *EQI index* that measures per-

ceived levels of corruption and quality of government in 212 different so called "NUTS-regions" among 23 different EU countries[2]. The QoG regional data provides an excellent opportunity to further test, discuss and develop theories of gender and corruption at the national and subnational level. The researchers at the Quality of Government Institute responsible for the EQI data have also kindly provided me with the raw survey data that was used to construct the EQI index. This data has not previously been analyzed from the perspective of gender and corruption, and gives me the opportunity to also extend the discussion to the individual level.

I think the QoG regional data helps bridging two gaps in the research field of gender and corruption: First, the individual level data that the survey material provides is uniquely large (85000 individual respondents) and is therefore a good basis for a discussion of the micro foundations with regard to gender and corruption. I think this discussion is absolutely crucial for the future development of the field, where researchers often have relied solely on cross-country analysis without testing or paying closer attention to the underlying assumptions at the micro level. Second, recent studies have emphasized the importance of contextual factors when discussing gender and corruption (see for example Alatas et al. 2007; Esarey & Chirillo 2013). In short, these studies argue that the relationship between gender and corruption might be strongly affected by the context, where things like level of democracy or cultural factors could be seen as moderating variables. Here, Europe provides a relatively homogenous context, while the regional level variables (like the EQI index) allow us to still have a large number of cases to work with. For reasons stated in the literature review below, Europe (or at the very least western Europe) is a context where the *gender differences perspective* predicts that we should expect to find interesting gender differences with regard to corruption, regardless of how much emphasis we put on contextual factors. I will nevertheless consider different potentially important contextual factors for the European case in my discussion below.

The remainder of this essay is structured as follows: First, I will provide an overview of the research field of gender and corruption. I will then move on to discuss gender differences in the EQI data, both at the individual respondent level and at the regional level, followed by a few statistical tests of some of the established theories in the gender and corruption literature. I will end with a discussion of future research in the field.

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[2] The countries covered by the EQI and reviewed in this study are: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Turkey and United Kingdom.

## Previous research on gender and corruption

As noted earlier, it was the articles by Dollar et al. (2001) and Swamy et al. (2001) that started off the academic debate on gender and corruption. Both articles presented an interesting link between gender and corruption: greater participation of women in economic and political life is associated with lower corruption. Their argument is based on the fact that several previous studies have found women to be more trust-worthy and less involved in bribery than men. Dollar et al. (2001) find that the share of women in national parliaments can have a large effect on the general levels of corruption. To put it in technical terms: a one standard deviation increase in women's political representation in national legislatures is predicted to result in a decline in corruption (as measured by data from the International Country Risk Guide) by 1/5th of a standard deviation (2001:427). The authors show that this relationship is significant even after controlling for a wide range of institutional factors previously known to affect levels of corruption. Besides examining cross-country comparative data, Swamy et al. (2001) also uses individual and country level data from the World Values Survey, together with data from firms in the country of Georgia. Their conclusion is that women in general are less likely to condone corruption, that female managers are less involved in bribery, and that countries that have greater representation of women in government or in market work have lower levels of corruption.

While the association between women's political representation and corruption has been reproduced in repeated studies (see Treisman 2007), there is an ongoing debate whether or not this is a casual relationship. One of the most persistent critics of the research indicating that there might be a gender dimension to corruption is Sung (2003; 2012), who argues that the association between gender and corruption is in fact a spurious relationship. Sung instead propose what he calls the 'fairer system' thesis: 'liberal democratic institutions and spirit increase female participation in government and restrain systematic corruption, but the latter two factors are not casually related' (Sung 2003:708). Sung (2003; 2012) shows that the relationship between women's political representation and corruption seems to be not significant when controlling for 'fairer system' variables such as rule of law, political rights and freedom of press.

A third line of argument holds that it is fewer opportunities to engage in corrupt behavior, rather than some inherent propensity to condemn corruption, that make women look more honest and public-spirited in this regard. Women, in most countries, earn less money than men and are less involved in public matters, which make them less likely to be asked for a bribe by public officials (Mocan 2008). Alhassan-Alolo (2007) argues, based on a study of public officials in Ghana, that

women, when presented with the same opportunities as men, are as likely to act in a corrupt manner. This basic conclusion is supported by several other authors: What makes women less likely to engage in corrupt behavior is the exclusion of women from traditional male patronage networks, not some 'essential' feature of the female gender (Bjarnegård 2013; Goetz 2007).

Still, experimental studies have, over and over again, demonstrated gender differences at the micro level in different types of public goods games and corruption games. Frank et al. (2011) concludes, in a review of six experimental studies, that potentially corrupt transactions where women are involved are more likely to fail: Corrupt transactions requires trust among the involved partners since a hidden agreement is not enforceable by law, and women seem less willing to establish such a reciprocal relationship with a corrupt official. In a review of 14 experimental studies on gender and corruption, Chaudhuri (2012) concludes that women, in general, show lower propensity for corrupt behavior and are more likely to punish others for corruption. The overall pattern is, according to Chaudhuri (2012:42), that women either show more pro-social and less corrupt behavior or that there are no significant gender differences. No study in the review finds men to be less corrupt.

The ambiguity in results regarding gender and corruption has led researchers to question if this relationship is best seen as a simple, linear one, which holds for different countries in different contexts. Comparing experiments in Australia, Indonesia, India and Singapore Alatas et al. (2007) find gender differences with regard to corruption in Australia, but not in Indonesia, India and Singapore. The authors argue that this might indicate that women's views on social issues are more influenced by men's views in more unequal societies, where women are not playing an active role in public life (Alatas et al. 2007: 678). Esarey and Chirillo (2013) argue, in line with these findings, that the link between gender and corruption are strongly affected by different contexts. More specifically, they propose democratic institutions as a mediator of the relationship between gender and corruption. Drawing upon behavioral research Esarey and Chirillo argue that women are more risk-averse compared to men. In societies with stronger democratic institutions, women are therefore more careful then men and engage in less corrupt behavior, since the risk of being caught is higher in such societies. The link between gender and corruption is therefore best viewed as an interaction effect between women's political representation and democratic institutions, affecting levels of corruption. The authors find statistical support for this conclusion in a large cross-country comparative analysis: In countries with strong democratic institutions (as measured by the Polity IV project) the link between gender and corruption is strong, but in countries with weak democratic institutions the relationship is nonexistent (Esarey & Chirillo 2013:379-82).

It is obvious that there exists no clear consensus in the literature regarding the link between gender and corruption. Following Wängnerud (2014) I think we can divide the different hypotheses with regard to gender and corruption into three categories: *The liberal democracy perspective, the gender differences perspective* and *the opportunities perspective.* The first perspective, represented by Sung (2003; 2012), holds that there is no casual relation between gender and corruption. Rather, it is modern liberal democratic institutions that cause both high participation in politics among women and lower corruption.

In a liberal democracy, ideological commitment to equality and individual rights facilitates women's entry into positions of leadership, while institutional checks and balances of power reduce opportunities for endemic corruption. Both gender equality and good governance are products of a liberal democratic polity but are not causally associated (Sung 2012:198).

The latter two perspectives hold that there is an important gender dimension to corruption, albeit in two different ways. Proponents of *the gender differences perspective* argue that gender and corruption are related in that women, in general, tends to be less corrupt than men. This might for example be due to men taking more risks than women, and/or due to women's role as caregivers which encourage a more social and helping behavior (Dollar et al. 2001; Swamy et al. 2001; Melnykovska & Michailova 2009; Esarey & Chirillo 2013). Advocates of this perspective argue that a higher share of women in economic life and/or in politics tends to decrease the overall corruption in society:

Increasing the presence of women in government may be valued for its own sake, for reasons of gender equality. However, our results suggest that there may be extremely important spinoffs stemming from increasing female representation: if women are less likely than men to behave opportunistically, then bringing more women into government may have significant benefits for society in general (Dollar et al. 2001: 427).

Here, I also group the more recent 'contextual approaches' into the *gender differences* category. These approaches basically hold that there are attitudinal differences between men and women with regard to corruption (with women being less tolerant of corrupt behavior) and that women are less likely to engage in corrupt behavior, but that these differences might not be present in all contexts. Esarey and Chirillo (2013) predicts that we will not find gender differences with regard to corruption in autocracies, where endemic corruption is the state's operative norm, since women, the authors argue, are likely to adapt to a society's institutional and political norms because of gender discrimination. Alatas et al. 2007 concludes that women's views on social issues in more patriarchal

societies, such as Singapore and Indonesia, are strongly influenced by men's views, but that relatively more equal societies, such as Australia, allow gender differences to emerge (Alatas et al. 2007: 678). The interesting question with regard to this essay is thus to what extent the relevant contextual variables within the different European countries in this study vary enough to affect the relationship between gender and corruption in any substantial way. With regard to democracy, Esarey and Chirillo (2013) rely on Polity scores to distinguish autocracies from democracies, and here the variation in the country sample used in this study is very low.[3] With regard to gender equality and women's role in the public domain the variation between countries in the sample is arguably higher, even though the differences between European countries are smaller than the country-differences we encounter from a global perspective.[4] In the light of this I do not think the contextual differences between the countries in the sample are large enough to affect the relationship between gender and corruption in any substantial way. However, I will take any potential relevant contextual differences into account in the analysis below, to see if this affects the overall results.

The third perspective, *the opportunities perspective,* holds that women are in fact *not* less corrupt than men, but that there are gender differences in opportunities for corrupt behavior. Given the 'right' circumstances, women will show the same propensity as men to engage in corrupt behavior, according to this perspective (Alhassan-Alolo 2007; Bjarnegård 2013; Goetz 2007):

There is currently a myth in the making: that women are less corrupt than men. (…) The myth of women's incorruptibility is not, of course, new. It is grounded in essentialist notions of women's higher moral nature and an assumed propensity to bring this to bear on public life, and particularly on the conduct of politics. (…) (R)ather (it is) the gendered nature of access to politics and public life (that) shapes *opportunities* for corruption (Goetz 2007:87).

Apart from the different general perspectives on gender and corruption, I also think it is clear that there exists a gap between micro level (experimental and survey studies) and macro level (cross-country comparative studies) research that cross-sectional analyses at the regional level can help to fill. Regional studies can go beyond national level explanations of corruption (like type of electoral system or colonial heritage) and focus on the large variation in governance quality that exists within

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[3] The combined Polity score ranks countries from -10 (strongly autocratic) to +10 (strongly democratic). The majority of the countries in the sample have the highest score (+10) on this measure and all countries are in the range between 7 and 10, with Turkey scoring the lowest (+7).
[4] For instance, UNDP's Gender Inequality Index (GII), which reflects gender-based disadvantage in reproductive health, general empowerment and in the labor market, shows that most countries in the sample score well in a global perspective in terms of gender equality. The GII is measured on a scale from 0 (men and women fare equally) to 1 (maximum inequality between sexes). 18 of the 23 countries in the sample score under .20 and only Turkey has a score over .40 (.44). For example, India and Indonesia, used in Alatas et al.'s (2007) study score .50 and .62 respectively, and globally several other countries have a score above .70.

countries (Charron et al. 2013). Regional analyses also provide a lot of new cases where we can test established theories of gender of corruption with new data. As argued above, I think the EQI data serves this purpose well. In the next section I will provide an overview of the QoG regional data and the EQI index.

## The QoG regional data and the EQI index

The concept of *good governance* has received plenty of attention in the last two decades. While the exact definition of *good governance* is the topic of much debate (see, e.g., Rothstein & Teorell 2008; Agnafors 2013), the concept generally includes procedural measures like bureaucratic modernity and autonomy, capacity measures, including resources and degree of professionalization and different output measures (Fukuyama 2013). Since *good governance* increasingly is considered one of the most important aspect of a modern and prosperous society, more and more effort is put into finding good ways to measure this concept. Today, there exist several different governance indicators at the national level (like the World Bank Governance Indicators, the Corruption Perception Index and the International Country Risk Guide Rating). However, most of these measures are only available at the national level, and the development of good subnational measures of governance has been much slower. Here, the QoG regional data is a nice addition that opens up new possibilities for studies of governance at the subnational level.

The QoG regional data has been collected in two different waves, the first in 2010 and the second in 2013. The data is based on survey questions among randomly selected European citizens and includes approximately 34000 and 85000 respondents from 2010 and 2013 respectively. In this essay I will focus on the most recent measure from 2013 that covers 212 NUTS-regions[5] in 23 different countries in Europe. In total, the 2013 survey contains about 400 respondents from each region.

Respondents were asked to rate three different types of government services - law enforcement, health care and education – in three different aspects; quality, impartiality and corruption. The respondents' perception of the different government services were surveyed through 16 questions, which were then combined with equal weight into three pillars, corresponding to the quality, impartiality and corruption dimension of the services.[6] The three pillars were then combined with equal weight into a regional average score. The general country context, with things like national legal

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[5] NUTS refer to *Nomenclature of Territorial Units for Statistics* and is a geocode standard, developed by the European Union, that is used for referencing subdivisions of countries for statistical purposes.
[6] See Appendix 1 for an overview of the different questions used to construct each pillar.

system, immigration and trade, was also assumed to be relevant for each regions final score. Therefore, the national WGI scores from the World Bank were added to the regional scores to provide a contextual component.[7] The final score were then standardized so that the mean for the regions is zero with a standard deviation of one. This constitutes the final EQI index for each NUTS region, where high scores indicate high quality, impartiality and low corruption in the three different types of government service areas surveyed (Charron et al. 2013).

The EQI index opens up new possibilities for studying regional variation in governance in Europe, and the survey material contains a uniquely large set of individual responses relating to issues of corruption. Before turning to the aggregated EQI index I will therefore examine the raw survey material from the perspective of gender and corruption.

## Gender differences in the QoG survey data

In the following section I will look at gender differences in the raw survey data from which the EQI index is constructed. In the light of my main research problem, I will focus mainly on the questions relating to corruption. The data consists of answers from over 85000 respondents from the 212 different NUTS regions covered in the 2013 wave of the QoG regional survey. Apart from the 16 questions used to construct the EQI index, the survey also includes questions on generalized trust, a hypothetical corruption scenario, and individual level information for the respondents like age, income, education and gender.[8]

First, we should note that there are no general gender differences with regard to the final EQI index or the combined 16 question index. This is also something that Charron et al. (2010:29) notes in their report. We can therefore conclude, that if we accept Charron et al.'s (2010; 2013) definition, there are no general significant differences in how men and women perceive the *overall* quality of government in Europe.

Does this mean that there are no gender differences with regard to corruption in Europe? I think the answer is no. By breaking down the different questions used to construct the EQI index and by looking at the complementary questions in the survey, we can form a more nuanced understanding of gender differences with regard to the quality of government in Europe.

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[7] For details and the exact equation, see Charron et al. 2013:73-74).
[8] All questions in the survey are available in Appendix 1.

TABLE 1, GENDER DIFFERENCES IN EACH SEPARATE PILLAR USED TO CONSTRUCT THE AGGREGATE EQI MEASURE. ALL RESPONDENTS

| | | Mean | Difference | N |
|---|---|---|---|---|
| Quality Pillar | Male | -0.044 | -0.083* | 36765 |
| | Female | 0.039 | | 41665 |
| Impartiality Pillar | Male | 0.028 | 0.053* | 37044 |
| | Female | -0.025 | | 42086 |
| Corruption Pillar | Male | 0.005 | 0.009 | 36583 |
| | Female | -0.004 | | 41515 |

*Comment: Data shows the male and female part, respectively, of the three standardized pillars used to construct the aggregate EQI indicators for the different NUTS regions. * indicates that the gender gap is statistically significant at $p < 0.05$ (two-tailed test).*

Table 1 shows gender differences within the three pillars used to construct the EQI index. The results from the different survey questions composing each pillar were first standardized (to a mean of 0 with a standard deviation of 1), and then standardized again after aggregation with equal weight into a single pillar. Table 1 show the male and the female respondents of each pillar separately, where higher scores indicate better subjective quality, more impartiality and less corruption in the three different public sectors covered by the questionnaire. All gender differences are calculated using independent sample t-tests, where the female score is subtracted from the male score.

The results might seem a bit confusing at first. While women view the public sector[9] as *less* impartial, compared to men, they also rate the overall quality *higher*. However, I think women's higher quality ratings can be explained by the fact that women work within the public sector to a much larger extent than men. People who in the survey report that they are working within the public sector in general, and in the three sectors in the questionnaire in particular, rate the quality of the public sector significantly higher than those who do not. For example, people working within education, health or law enforcement rate the quality higher with over 50 % of a standard deviation compared to people working in other areas. About 20 % of the female respondents, compared to 16 % among the male respondents, report that they work within the public sector, and about 12 % of female respondents, compared to 7% of male respondents, report that they work within education, health or law enforcement. These figures make the results look less surprising, and give us reasons to believe that the gender differences with regard to quality are not in fact very significant.

As noted above, the impartiality scores show that women in general view the public sector as less impartial, compared to men. At the same time, there seems to be no significant gender differences

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[9] I will henceforth refer to the three different sectors (education, health and law) covered in the questionnaire as the "public sector".

with regard to corruption. Here we have to look closer at the specific questions used to construct the corruption pillar.[10] The corruption pillar is composed of five questions. Four of these questions ask the respondent to assess the general prevalence of corruption; the first three concerns corruption in the local public education system, public health system in the area and the local police force respectively, and the fourth ask the respondent to estimate how often other people in the area use bribery to get special advantages.

The fifth question is an index composed of four underlying questions. These four questions ask the respondent if they, or anyone living in their household, during the last 12 months have paid a bribe in any form to the education services, health or medical services, the police or any other government-run agency. It would obviously be better, for the sake of this essay, if the question asked if *just* the respondent him- or herself has paid bribes during the past 12 months or not. However, all in all I think this question provides a relatively good rough measure of gender diff-erences in actual corrupt behavior, despite the part concerning others living in the respondent's household. This is because, firstly, I think we can assume that there is no difference between men and women in reporting whether or not *someone else* in their household has paid a bribe. Secondly, in every household with only one adult the respondent will naturally answer whether or not he or she herself has paid bribes. Therefore I think we can reasonable assume that eventual gender differences with regard to this question will be driven by the respondents' own experience of bribe payment.

TABLE 2, GENDER DIFFERENCE IN THE QUESTIONS COMPOSING THE CORRUPTION PILLAR. ALL RESPONDENTS

|  |  | Mean | Difference | N |
|---|---|---|---|---|
| Corruption, | Male | 0.003 | 0.005 | 38467 |
| Education | Female | -0.002 |  | 44608 |
| Corruption, Public Health | Male | 0.008 | 0.014* | 38751 |
|  | Female | -0.007 |  | 44987 |
| Corruption, | Male | 0.011 | 0.021* | 38544 |
| Police | Female | -0.010 |  | 44414 |
| Corruption, | Male | 0.024 | 0.045* | 37748 |
| Others | Female | -0.021 |  | 43411 |
| Has paid bribe | Male | -0.037 | -0.068* | 39125 |
|  | Female | 0.031 |  | 45730 |

*Comment: The first four questions concern the respondents' perception of the prevalence of corruption. The last question asks whether the respondent or anyone in his or her household has paid a bribe during the last 12 months.*
*\* indicates that the gender gap in statistically significant at p < 0.05 (two-tailed test).*

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[10] The gender difference for the individual questions composing the Quality and Impartiality pillar generally follows the overall pattern presented in Table 1.

Table 2 shows an interesting pattern. The first four questions reflect the respondents' perception of general corruption levels. Here we find a significant gender difference, where women perceive corruption as more common than men. This is in line with the gender difference with regard to impartiality pillar in Table 1, where women found the public sector to be less impartial, compared to men. However, the last question shows the reverse pattern. Here, female respondents report a significantly lower amount of bribes paid. The number -0.068 tells us that the female score is lower than the male score by 6.8% of the standard deviation for all respondents. The contradicting gender patterns emerging from Table 2 also explains why the aggregated corruption pillar did not show any gender significant gender differences in Table 1.
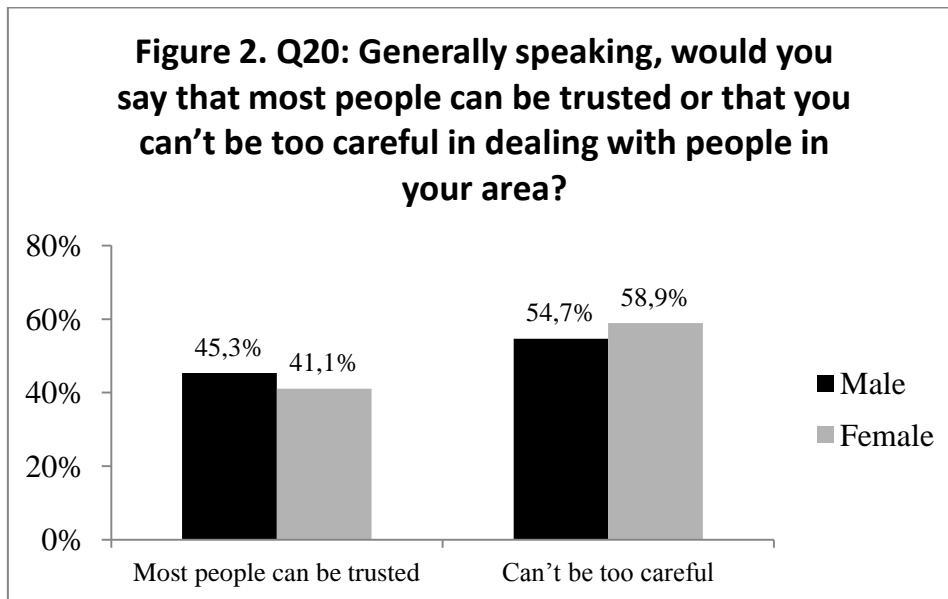
The fact that women in general report that they have paid fewer bribes than men is of course an interesting finding for the topic of this essay. This in itself does not, however, indicate whether the result is due to women being more honest, as the *gender differences perspective* suggest, or because women have fewer opportunities to engage in corrupt behavior, as suggested by the *opportunities perspective.*

Aside from the questions used to construct the EQI index the survey contains a number of comple-mentary questions, some of which are of interest for this study, and can help us get a more complete picture of the relationship to corruption among female and male respondents respectively. Question 20 measures level of social trust among respondents, something that previous research has connected to corruption (see Rothstein & Uslaner 2005). Question 24 in the survey asks the respondent which political party he or she would vote for if the national parliamentary election were today. Question 25 follows up on the question in the following way: 'Now imagine that that party was involved in a corruption scandal, which of the following would be most likely?' The alternatives are: 'Still vote for the same party', 'Vote for another party not involved in the corruption scandal'                 and                 'Not                 vote                 at                 all'.

**Figure 1. Q25: Now imagine that that party was involved in a corruption scandal, which of the following would be most likely?**
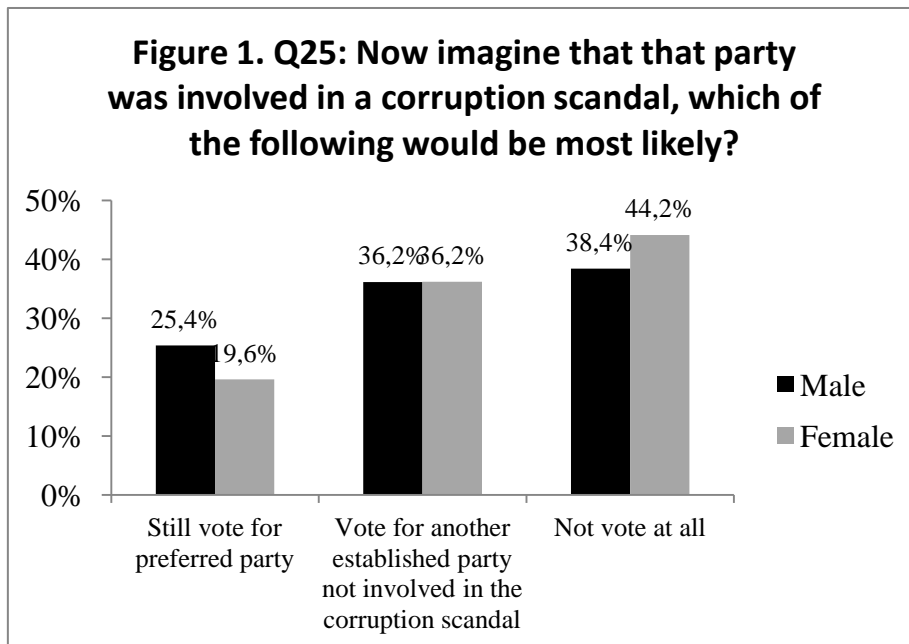
*Comment: Gender differences for all respondents. Differences for alternative 1 and 3 are significant at p < 0.05 (two-tailed test).*

Question 25 can be interpreted as a question measuring tolerance for corrupt behavior, or the propensity among respondents to punish such behavior. The answers reveal some interesting gender differences. Female respondents report a significantly lower willingness (6 percentage points) to vote for a party involved in a corruption scandal. Female respondents also report a higher propensity (by 6 percentage points) to protest against the system by not voting at all, as a response to a corruption scandal. I think this can be interpreted as women showing a lower tolerance for (political) corruption in general. This is in line with previous findings from surveys and experiments indicating that women, on average, have a lower tolerance for corrupt behavior and think corruption is harder to justify than men (Chaudhuri 2012; Esarey & Chirillo:369-74; Frank et al. 2011; Melnykovska & Michailova 2009:401-2; Swamy et al. 2001:27-37). I think this result, together with the gender differences shown in table 2, suggests that there might be interesting general gender differences with regard to corruption and that this pattern might not *only* be a result of differences in opportunities for corrupt behavior between men and women. Rather, the findings signal that women take a more active stance against corruption compared to men, and lose trust in the system when they observe corrupt behavior.

**Figure 2. Q20: Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people in your area?**

Figure 2 also shows significant gender differences with regard to interpersonal trust. Men, to a higher extent than women, think that other people in general can be trusted. Rothstein and Uslaner (2005:54-56) cite several studies showing a strong link between corruption and general trust. While some studies indicate that low levels of trust leads to high levels of corruption, others indicate that corruption depresses general levels of trust. The casual chain here is probably a complex one, with several feedback mechanisms (see Uslaner 2013). The gender differences in the QoG regional survey data examined here seem to give some support to the conclusion that corruption depresses general levels of trust: Women perceive the public sector as more corrupt and less impartial (Table 1, Table 2 questions 1-4), and a higher share of female respondents than male think that you 'can't be too careful' when dealing with other people (Figure 2). There is, however, nothing that indicates that women in general should be more prone to corrupt behavior, or think that corruption is more tolerable, because of their lower general trust. Having lower trust in other citizens is also one of the reasons that women are less likely to establish the reciprocal relationship needed to participate in corrupt transactions, according to Frank et al. (2011).

As noted above, the general picture from the QoG regional survey data is that women perceive corruption levels as worse than men, and are more careful when dealing with other people. On the other hand, women report that they pay fewer bribes and show a lower tolerance for corrupt behavior, compared to men. Survey data like this cannot account for these differences in terms of assessing the exact casual mechanisms at work, but based on previous research I do think the data support the notion that there is an interesting gender dimension with regard to corruption. Here, I

also think the data gives strongest support for the *gender differences perspective* in that women seem to show both less tolerance for corrupt behavior and seem to be involved in corrupt transactions less frequently than men.

What can we say about differences between countries and contexts with regard to gender and corruption from these survey responses? As discussed in the literature review, recent research has suggested that context might affect the relationship between gender and corruption (Alatas et al. 2007; Esarey & Chirillo 2013; Esarey & Schwindt-Bayer 2014). These studies have focused on things like level of democracy, gender equality and cultural factors, as variables affecting the relationship between gender and corruption. Table 3 summarizes responses with regard to three aspects of corruption discussed above, divided into different contextual categories.

The first aspect of corruption is 'Tolerance difference', referring to the gender difference in the percentage of respondents who could imagine voting for a party involved in a corruption scandal (alternative 1 on Question 25, Figure 1). 'Bribe difference' refers to the gender difference for question 5 in the same table that measures how often the respondents have paid bribes in the last 12 months. The third aspect of corruption is 'Corruption difference' – referring to the gender difference in the combined score for question 1-4 in Table 2 that measures the respondents' perception of the general prevalence of corruption.

Drawing upon previous research, the different contextual categories in table 3 try to capture potentially important factors that might affect the link between gender and corruption. Esarey and Chirillo (2013) argue that women are more prone to adapt to a society's norms with regard to corruption. Therefore general differences in the level of corruption between countries might affect how men and women in different countries relate to corruption. I divided the countries into two categories based on the median value (1.01) for the countries in the sample on the World Bank's 'Control of Corruption' measure. Alatas et al. (2007) theorizes that women's views with regard to corruption in more patriarchal societies might be strongly influenced by men's views, but that relatively more equal societies allow gender differences to emerge. Here, I divide the countries in the sample based on the median (0.15) on UNDP's Gender Inequality Index (GII), where low numbers (closer to 0) indicate lower gender-based inequalities. I also include eastern Europe/Post Soviet countries in a separate category and lastly I show the results for Turkey alone, since Turkey is the biggest outlier in the sample when it comes to democracy and gender equality (according to Polity scores and the GII                                                                                                     measure).

TABLE 3, GENDER DIFFERENCES WITH REGARD TO CORRUPTION IN DIFFERENT CONTEXTS.

| | Tolerance Difference | Bribe Difference | Corruption Difference | N |
|---|---|---|---|---|
| Control of Corruption > 1.01 | -5.1 %* | -0.033* | 0.073* | 40359 |
| Control of Corruption < 1.01 | -6.5 %* | -0.090* | 0.006 | 32511 |
| Gender Inequality Index > 0.15 | -5.9 %* | -0.100* | 0.009 | 26048 |
| Gender Inequality Index < 0.15 | -5.8 %* | -0.034* | 0.062* | 45591 |
| Post-Soviet Union | -5.8 %* | -0.156* | -0.030 | 19284 |
| Turkey | -6.6 %* | -0.032* | 0.032 | 4355 |

*Comment: 'Tolerance difference' is the gender difference in the percentage of male versus female respondents who could imagine oneself voting for a party involved in a corruption scandal and therefore selected alternative 1 on question 25 in Figure 1. 'Bribe Difference' refers to the gender difference in bribe payment shown in question 5, Table 2. 'Corruption Difference' refers to the gender difference in the respondents' perception of the prevalence of corruption and is a standardized index of question 1-4 in Table 2. N is the total number of respondents in each contextual category. \* indicates that the gender gap in statistically significant at $p < 0.05$ (two-tailed test).*

A negative sign on the 'tolerance measure' indicates that men have a higher tolerance for corrupt behavior. On the remaining two aspects of corruption a positive sign indicate that men have a higher average score than women and vice versa. To illustrate, the data for countries with a 'Control of Corruption' score above 1.01 indicate that men have a higher tolerance for corrupt behavior (-5.1%), pay more bribes (-0.033) and perceive corruption levels as lower (0.073), compared to women.

Looking at the 'Tolerance difference' measure, I think it is remarkable how consistent the gender gap is across contexts. Women report that they are more prone to punish corrupt behavior in all different contexts that we found within our 23 country sample. This is an interesting finding with regard to both the *opportunities perspective* and with regard to contextual approaches that argue that women's opinion on corruption are strongly influenced by men's in more patriarchal societies. The latter perspective gets no support from this data: it does not seem to be the case that women's and men's propensity to punish corrupt behavior are more equal in more patriarchal societies (societies with a GII score above 0.15). The *opportunities perspective* predicts that men and women will converge in relation to corruption as societies become more equal, and where women get more access to the public sphere (see Alhassan-Alolo 2007). As noted above, this does not seem to be true for the 'Tolerance difference' measure. The 'Bribe difference' measure shows that the difference between men and women with regard to the amount of bribes paid is larger in more unequal and more corrupt countries. However, this difference is driven by the post-soviet countries, with a high difference score of -0.156. If post-soviet countries are excluded from the analysis the difference between countries with a GII score above and below 0.15 respectively becomes much smaller.[11] The 'Cor-

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[11] Here, the 'Bribe difference' score for more unequal countries with a GII score above 0.15 instead becomes -0.044.

ruption difference' measure shows gender differences in perceived levels of general corruption. This measure seems to vary more across different contexts. Still, the only significant differences that we find are where women perceive corruption levels as worse. This seems to be the case in less corrupt and more equal societies. The fact that we do not find significant 'Corruption differences' in more corrupt/less equal countries is again driven by the post-soviet countries. If this group of countries is excluded, the pattern between the less corrupt/more corrupt and less equal/more equal countries become very similar.[12]

The somewhat diverging pattern of the post-soviet countries can probably be explained by what Michailova and Melnykovskal (2009:394) describes as the more traditional role of women in the post-soviet era:

In the post-soviet era active involvement of women in social, political and economic structures was hindered by return of the patriarchal relations in a society, which, dependent on the cultural and historic past, are more or less dominant. (...) (The) revival of old patriarchal views and growth of nostalgia about traditional woman's roles were promoted by economic crisis and wreck of former system. These views were largely shared by women themselves, who got tired of "emancipation" of the former period and from double workload.

Here, the fact that women report that they pay significantly fewer bribes, and do not perceive general corruption levels as worse than men, might simply be the result of women participating less in public life. That is, what proponents of the *opportunity perspective* describes as having fewer opportunities to engage in corrupt transactions.

However, as I argue above, I do not think the *opportunity perspective* can fully account for all gender differences in the data. The reported propensity to punish corrupt behavior seems to be similar in all contexts (even in Turkey), and fact that women generally perceive corruption levels as worse than men (especially in the less corrupt and more equal countries) indicate that women are not just passive and unaware of corrupt practices. Rather, women take an active stance against such practices by not participating in corrupt transactions to the same extent as men, as suggested by the *gender differences perspective*. This is also in line with previous experimental findings on gender and corruption (Frank et al. 2011; Chaudhuri 2012).

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[12] If the post-soviet countries are excluded the 'Corruption difference' measure for countries with a Control of corruption score below 1.01 becomes 0.021, and the same measure for countries with a GII score above 0.15 becomes 0.040.

I think the overall story for all countries in this study is basically the same: Women are more prone to punish corrupt behavior and in general pay fewer bribes. In most countries women also perceive corruption levels as worse, possibly indicating that women react more strongly when detecting corrupt practices. These differences also seem to exist, albeit to different degrees, across relatively disparate contexts. Here, I am not necessarily arguing against the findings of for example Esarey and Chirillo (2013) who argue that very different contexts, for instance very different levels of democracy, will affect the relationship between gender and corruption. The data from post-soviet countries shows that context is not unimportant. Nevertheless, the contextual differences in our 23 country sample do not seem large enough to undermine the fact that there is a general important gender dimension to corruption.

Where does this leave us in relation to the overarching debate about gender and corruption? It is hard to tell from survey questions like these how gender might affect overall corruption levels in society. If women in fact are less corrupt then men, how does this transpire when we look at the aggregate data for the different regions covered in the QoG regional data? I will discuss this question in the next section.

## Gender and corruption at the regional level

Can previous findings on gender and corruption at the national level be translated to the regional level? I think regional measures of corruption like the EQI index provide a great opportunity to test and discuss general theories on gender and corruption that earlier almost exclusively has been tested at the national level.

Previous research has often pointed to the electoral arena as an area where the gender balance might affect overall levels of corruption. If women are less corrupt than men, a higher share of women in politics will mean less corrupt politicians. This in turn, the argument goes, will affect the overall levels of corruption. Swamy et al. (2001) suggests that the share of women in parliament might affect corruption levels in at least two ways: First, legislative corruption is in itself an important aspect of governmental corruption, something that politicians less prone to giving and taking bribes might help combat. Second, female politicians might try to place corruption higher on the public agenda and thereby, through for example the passing of legislation to deter corruption, influence overall levels of corruption. The gender differences in the survey material analyzed above suggests that women often perceive corruption levels as worse and have a lower tolerance for corruption, compared to men. This is something that may lead female politicians to act more decisively against corruption.

A third possibility is to focus on the signaling aspect of the behavior of elites and government officials. In societies in which people see elites and people in power acting in a corrupt manner, it is reasonable to expect a greater willingness on part of citizens themselves to disregard rules and laws. In this sense, corruption represents a relatively stable equilibrium that is contingent on peoples shared expectations of how other people will act. The signals from elites and authorities might in this sense help to either reinforce or disrupt this equilibrium.

If women in general are less prone to pay bribes, as suggested by my analysis of the QoG regional survey material and previous experimental studies (Frank et al. 2011; Chaudhuri 2012), we might also expect that a higher share of economically active women might lower general levels of corruption. This is a conclusion supported by Swamy et al. (2001:40-43) who finds the share of women in the labor force to significantly decrease corruption. However, on the basis of previous research this finding is not nearly as robust as the findings emphasizing the gender balance in the electoral arena. I will nevertheless include this variable in my analysis as my second main independent variable.

In the next sections I will test these propositions about gender and corruption at the regional level in Europe. First I will provide an overview over the data material used, then I will explore the most commonly observed bivariate relationship in the literature on gender and corruption; the connection between female politicians and general levels of corruption. Finally I will test the impact of the share of female councilors and the share of women in the labor force on the EQI index in a multi-level regression model.

## Data and Method

My main dependent variable consists of the EQI index from 2013, described above. This is a somewhat broader and more generic measure than the narrower corruption measures (like the World Banks 'Control of corruption' index) used in most of the comparative studies on gender and corruption. While measures that focuses only on corruption tries to assess general corruption levels in society, the EQI index also aims at measuring the general quality and impartiality of the services provided by the public sector.

My main variables to test theories of gender and corruption at the regional level are the female share of the labor force and the share of women in local political assemblies in Europe. Data on the number of people in the labor force is available from Eurostat (2014). The share of women in the labor force is calculated by taking the total number of women in the labor force divided by the total

number of people in the labor force in each region. The measurement year for all regional variables is 2011, unless otherwise specified. This is the year when the interviews for the QoG regional survey were conducted and the measurement year of the WGI data used in the construction of the EQI index.

Data on the share of women in governments and national parliaments has long been made available by the Inter-Parliamentary Union (www.ipu.org). It is this data that most of the cross-country comparative studies on gender and corruption are utilizing. However, good data on the subnational level has been much harder to access. Luckily, Aksel Sundström has during the past few years been collecting data on the proportion of women in local political assemblies in Europe. The data was collected for assemblies corresponding to municipal councils and was constructed based on contacts with a range of different sources, with the aim to find as recent figures as possible (as of June 2013).[13] Figures on local councilors in each municipality or local division were then aggregated to an average value for each larger region so that each region corresponds to the EU's NUTS regions (Sundström 2013).

To check for potential spurious correlations I include a number of national and regional level control variables that have shown to affect corruption levels in previous studies. Economic development is generally considered very important in explaining corruption. Treisman (2007:225) calls the relationship between economic development and corruption 'extremely robust'. Therefore, GDP per capita both at the regional and the national level are included. The national level control is meant to capture the 'country context' in terms of general economic modernization, in which each region is situated. Both variables were logarithmically transformed to account for skewed distribution. In addition to the GDP variables, the total regional employment rate is included. This is a variable that is closely tied to overall regional economic performance. Moreover, this could be a mediating variable with regard to the female employment variable: A higher share of women in the labor force might not have a direct effect on corruption, but might simply increase the total employment rate. This in turn might create a better functioning economic situation which decreases overall levels of corruption. In this case, the gender composition of the labor force would not be the primary explanation for the level of corruption in society.

I also include a regional measure from Eurostat of the share of households with internet access at home. This can be seen as an additional variable measuring the general level of modernization and

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[13] The election year from which the data were collected varies between 2009 and 2013 (see Sundström 2013).

also a proxy for the citizens' media consumption, something that should affect their ability to for example monitor politicians. Another similar variable is the regional level of education. A more educated electorate might be better at identifying, and less tolerant to, corrupt behavior (Hakhverdian & Mayne 2012; Swamy et al. 2001:40), and the regional education levels also says something about a regions' level of development. The share of the regional population with tertiary education, available from Eurostat, is therefore included as a control variable.

The level of democracy plays an important role as a determinant of the level of corruption (Keefer 2007), and several authors argue that it affects the relationship between gender and corruption (Esarey & Chirillo 2013; Sung 2003; Sung 2012). However, it is unclear to what extent we can speak of different levels of democracy *within* a certain country. One could argue that the different regions within a country exist in the same 'democratic context', with the same type of electoral system, election laws and the same (formal) political and civil rights. Since no direct measure of democracy at the regional level exists, I instead opt for a national level control variable. As discussed above, the countries in the sample show very little variance with regard to traditional democracy measures such as Polity's democracy scores. Instead, I include Freedom House's Freedom of the Press index as an alternative measure, where we find more interesting variation between the countries in the study. Treisman (2007:230-31) notes that this press freedom measure is highly correlated with other democracy measures such as political rights and cite several authors arguing for the importance of freedom of the press for exposing corrupt officials and deterring the misuse of office. Press freedom is also a variable that Esarey and Schwindt-Bayer (2014) argue affects the relationship between gender and corruption. This argument holds that since women are more sensitive to risk (risk aversion), they will be less likely to engage in corrupt transactions where the probability of those transactions getting exposed is higher. Therefore, the authors argue, the relationship between gender and corruption can be expected to be stronger in countries with a higher degree of press freedom. To model this theory, an interaction between the share of women locally elected at the regional level and the degree of press freedom at the national level is included.

Following Swamy et al. (2001) I also control for the percent of population who are Muslim and the percent of population who are Catholic in a country. These variables should be considered proxies for 'cultural' factors that may affect women's participation in politics and/or corruption, and are here measured at the national level.[14] Protestant countries have also been found to have lower lev-

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[14] This data is based on La Porta et al. (1999) and taken from the Quality of Government dataset (Teorell et al. 2013).

els of perceived corruption (La Porta et al. 1999), and the share of Protestants in a country is therefore also controlled for. Ideally, I would of course want regional data on cultural variables like these. I still think the inclusion of these three variables is relevant since they still might tell us something about corruption in general and the overall status of women in a country with regard to corruption and/or politics.

Table 5 shows summary descriptive statistics for the variables discussed above.

TABLE 5, SUMMARY STATISTICS FOR 172-REGION SAMPLE.

| Variable | Level | N | Mean | Std. dev. | Min | Max |
|---|---|---|---|---|---|---|
| EQI 2013 | Regional | 172 | 0.169 | 0.096 | -2.598 | 1.761 |
| Share of elected women (%) | Regional | 172 | 27.559 | 8.188 | 10 | 44.6 |
| Women in labor force (%) | Regional | 172 | 45.417 | 2.472 | 34.10 | 50.23 |
| Log of GDP per capita | Regional | 172 | 9.992 | 0.396 | 8.88 | 10.93 |
| Log of GDP per capita | National | 172 | 10.136 | 0.332 | 9.29 | 10.51 |
| Employment rate (%) | Regional | 172 | 63.954 | 7.719 | 39.4 | 77.8 |
| Tertiary education (%) | Regional | 172 | 70.19 | 14.02 | 35 | 98 |
| Internet access (%) | Regional | 172 | 24.557 | 8.578 | 9.9 | 50.9 |
| Press freedom | National | 172 | 92.872 | 3.027 | 85 | 96 |
| Muslim proportion | National | 172 | 1.065 | 2.075 | 0 | 10.6 |
| Catholic proportion | National | 172 | 57.482 | 33.589 | 0.1 | 96.9 |
| Protestant proportion | National | 172 | 14.637 | 23.281 | 0.1 | 95.2 |

Before turning to a more detailed multi-level analysis, I will review the bivariate relationship between the variables described in this section.
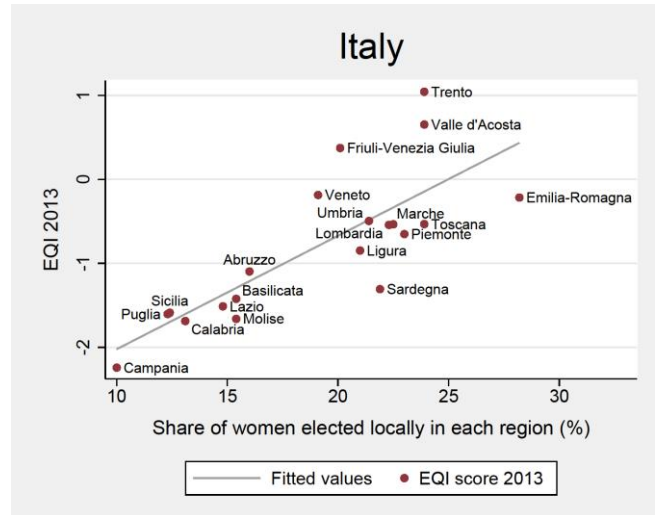
## Bivariate relationships

Figure 3 shows two-way scatterplots of the relationship between the share of locally elected female councilors and the EQI index.
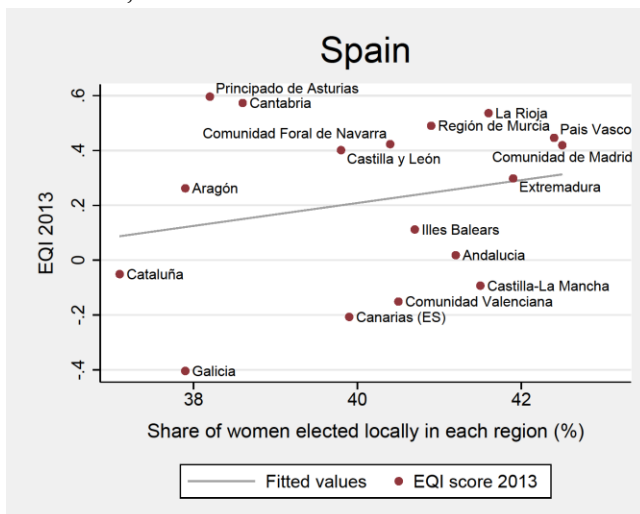
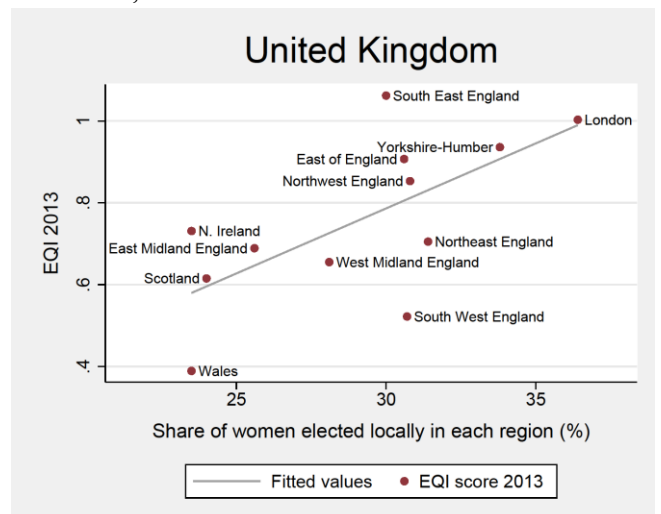*FIGURE 3, BIVARIATE RELATIONSHIPS: QUALITY OF GOVERNMENT AND FEMALE COUNCILORS.*
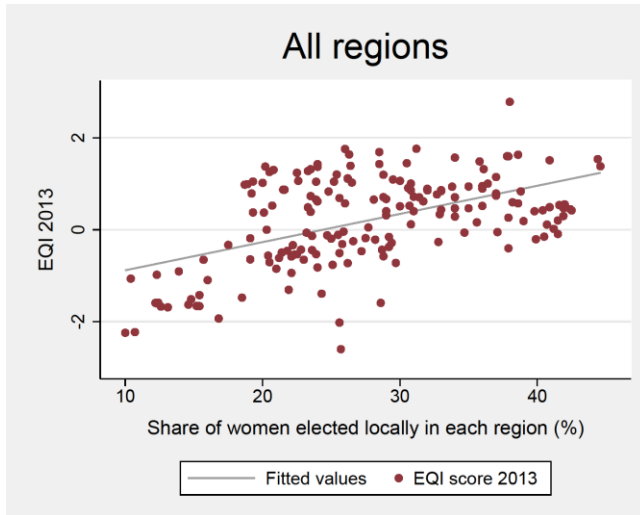


R² = 0.263, N = 179

R² = 0.613, N = 20

R² = 0.051, N = 17

R² = 0.432, N = 12

As shown in the figure for all regions, there exists a significant positive relationship between the share of female politicians and the quality of government, as measured by the EQI index. This connection can also be found *within* several of the countries in the analysis. Figure 3 shows the bivariate relationship for one country from each WGI cluster (as presented in Table 3). However, many countries contain too few observations to make more comprehensive analysis of this connection interesting within a single country at this stage.

Table 6 shows bivariate correlations for all 11 variables included in the analysis. All variables, apart from the press freedom index and some of the 'cultural controls' (variable 9-11), are positively correlated to the main independent variables and the dependent variable, and to a large extent to each other. This means that regions that show a high degree of modernization (in terms of economic development, education etcetera), also have a higher share of women elected, a larger share of female participation in the labor market and have a higher quality of government. This is in line with previous research and show that my control variables are relevant. Among the 'cultural controls' the Protestant variable seems to follow this pattern, while the Muslim variable shows negative correlations with several of the modernization indicators.

Both of the main independent variables - the share of women elected locally and the share of women in the regional labor markets - show significant positive correlations with the EQI index. However, as noted above, this is also true for all the 'modernization variables', and for some of the 'cultural controls' as well. To assess if these two gender variables are just picking up the effects of a more liberal and developed context, as suggested by Sung (2003; 2012), or if these in fact might be casually related to the quality of government, I will in the next section test the variables described above in a multivariate model.

TABLE 6, CORRELATION MATRIX. N = 172.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. EQI 2013 | - | | | | | | | | | | | |
| 2. Women elected | 0.493*** | - | | | | | | | | | | |
| 3. Women in labor force | 0.566*** | 0.462*** | - | | | | | | | | | |
| 4.GDP per capita (Reg.) | 0.606*** | 0.323*** | 0.324*** | - | | | | | | | | |
| 5. GDP per capita (Nat.) | 0.753*** | 0.289*** | 0.199*' | 0.748*** | - | | | | | | | |
| 6. Employment rate | 0.736*** | 0.132 | 0.632*** | 0.608*** | 0.535*** | - | | | | | | |
| 7. Tertiary education | 0.501*** | 0.558*** | 0.484*** | 0.567*** | 0.418*** | 0.439*** | - | | | | | |
| 8. Internet access | 0.776*** | 0.285*** | 0.471*** | 0.694*** | 0.711*** | 0.749*** | 0.563*** | - | | | | |
| 9. Press Freedom | 0.027 | 0.003 | 0.025 | 0.196* | 0.089 | 0.001 | -0.116 | -0.023 | - | | | |
| 10. Muslim proportion | -0.190* | 0.027 | 0.245** | -0.322*** | -0.321*** | -0.112 | -0.028 | -0.248*** | -0.121 | - | | |
| 11. Catholic proportion | -0.017 | 0.234** | -0.142 | 0.146 | 0.148 | -0.300*** | -0.180* | -0.138 | 0.103 | -0.315* | - | |
| 12.Protestant proportion | 0.567*** | 0.089 | 0.309*** | 0.362*** | 0.409*** | 0.600*** | 0.370*** | 0.649*** | 0.165* | 0.184* | -0.565*** | - |

*Comment: * = p < 0.05, ** = p < 0.01, *** = p < 0.001*

## Multi-level analysis

Since my different independent variables exist at both the regional and the national level, where a substantial amount of variation exists at the national level (Model 1), a multi-level regression model can be used to gauge the effect of the different variables on the EQI index. I ran a random intercept, random slope model to account for the general different modernization levels of the different countries in the analysis, and to try to model differences in slopes of some of the variables. Before running the analysis all level 1 predictors (regional level) where centered (using grand mean centering), and the full models (models 4-6) was checked for potential multicollinearity problems (no variables showed a tolerance value below 0.2 or a VIF value above 5). Table 7 shows the results from the multivariate regressions.[15]

The results corroborate the hypotheses that the share of women locally elected has a positive effect on the quality of governance. The second model includes both my main independent variables, which both are positively related to the EQI index. However, when we control for total regional employment rate (model 3) the female share of the labor force become insignificant. This indicates that the female share of the labor force does not have any direct effect on the EQI index. Rather, increasing the share of women in the labor market might be a way to increase the total employment rate and improve the functioning of the economy, which in turn improves quality of government.

The share of women locally elected remains significant through all models. The full models (model 4-6) predict that a one percentage point increase in the political representation of women will increase the EQI score by 0.02-0.03 points. This effect does not seem to vary much between the countries in the sample when taking all control variables into account: The interaction effect between press freedom and elected women shows no significant effect[16] and the random slope effect for the share of elected women (model 5) show no significant variation between countries.

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[15] Unfortunately, 4 countries where excluded from the analysis due to missing data on some of the variables. These countries include: Finland, Ireland, Croatia and Turkey.
[16] I also ran the same model but with an interaction between the share of elected women and a dummy variable indicating whether or not a country has a proportional electoral system. Esarey and Schwindt-Bayer (2014) argues that the electoral system affect the degree of 'personalism' and hence the risk-calculation of female politicians. However, this new interaction variable showed no significant effect and did not change the overall results.

TABLE 7, PREDICTING EQI 2013: RESULTS FROM MULTI-LEVEL ANALYSIS

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Fixed intercept | 0.181 (0.225) | 0.106* (0.185) | -0.138 (0.135) | -14.431*** (2.032) | -15.682*** (1.963) | -19.739*** (2.239) |
| Elected women | | 0.022** (0.008) | 0.030*** (0.007) | 0.033*** (0.006) | 0.030** (0.008) | 0.021** (0.006) |
| Women in labor force | | 0.076*** (0.020) | -0.046 (0.027) | 0.021 (0.024) | -0.004 (0.024) | -0.027 (0.024) |
| Log of GDP/capita (Regional) | | | | -0.331* (0.158) | -0.311* (0.152) | -0.285 (0.149) |
| Log of GDP/capita (National) | | | | 1.387*** (0.204) | 1.496*** (0.193) | 1.899*** (0.224) |
| Employment rate | | | 0.058*** (0.009) | 0.049*** (0.009) | 0.038*** (0.009) | 0.027* (0.011) |
| Tertiary education | | | | -0.009 (0.006) | -0.005 (0.006) | -0.001 (0.006) |
| Internet access | | | | -0.001 (0.005) | -0.000 (0.005) | -0.001 (0.006) |
| Press freedom | | | | -0.008 (0.014) | -0.022 (0.012) | -0.015 (0.013) |
| Press freedom * Elected women | | | | -0.003 (0.002) | -0.003 (0.002) | -0.003 (0.002) |
| Muslim proportion | | | | 0.017 (0.026) | 0.030 (0.023) | 0.035 (0.032) |
| Catholic proportion | | | | 0.005* (0.002) | 0.008** (0.002) | 0.008** (0.002) |
| Protestant proportion | | | | 0.012** (0.003) | 0.015*** (0.003) | 0.016*** (0.003) |
| Regional variance (Residual) | 0.172*** (0.020) | 0.152*** (0.017) | 0.130*** (0.015) | 0.116*** (0.014) | 0.109*** (0.013) | 0.096*** (0.012) |
| Random intercept | 0.927** (0.314) | 0.615** (0.216) | 0.317* (0.124) | 0.022 (0.016) | 0.004 (0.012) | 0.042 (0.029) |
| Elected women, random slope | | | | | 0.000 (0.000) | |
| Employment rate, random slope | | | | | | 0.001 (0.000) |
| -2 Log likelihood | 255.454 | 228.292 | 191.865 | 135.622 | 129.368 | 116.411 |
| AIC | 261.454 | 238.292 | 203.865 | 165.622 | 163.368 | 150.411 |
| BIC | 270.896 | 254.029 | 222.750 | 212.835 | 216.876 | 203.919 |
| Observations | 172 | 172 | 172 | 172 | 172 | 172 |
| Number of countries | 19 | 19 | 19 | 19 | 19 | 19 |

*Comment: Standard errors are shown in parentheses. * = p < 0.05, ** = p < 0.01, *** = p < 0.001*

## Conclusions

GDP per capita at the country level has, as expected from previous research, a strong positive effect.[17] This indicates that a country's *overall* level of development is an important predictor of the quality of governance at the regional level. However, when all variables are included, GDP per capita at the regional level has no significant effect. Still, the overall results show, consistent with previous research (Treisman 2007), that economic variables (such as GDP and total employment rate) are very important in predicting corruption and overall quality of governance.

In the last model (Model 6) a random slope for the strongest regional predictor, total employment rate, is added. While the results show no significant variation between countries in the effect of the total employment rate, this model provides the best overall fit.

When all variables are included the results show no significant variation left on the national level (random intercept). However, we still find significant individual variation between regions (0.096 in model 6). This suggests that the results should be interpreted with caution in the light of potential omitted variable bias, even though we should not expect a model like this to perfectly explain all variation between subjects.

I think the overall results fits well with the *Gender differences perspective.* The results show that increasing the share of female politicians locally might be a good way to increase the regional quality of government. I do not think the *Liberal democracy perspective* can easily explain why the share of women elected is significantly associated with better quality of government *within* countries. This would require an argument that focuses on differences in democratic institutions within single countries. Since Sung's theory (2003; 2012) focuses on typical national level variables like level of democracy and civil and political rights, it is not clear how such an argumentation would proceed.

## Conclusions

I think the results in this essay clearly indicate that there is in fact an interesting gender dimension to corruption. The mere fact that men and women *perceive* levels of corruption differently, report different rate of bribe payments and respond differently to hypothetical corruption cases is in itself something that should catch our attention. The consequence that these gender differences might have at the macro level is an equally fascinating and difficult question. Here, analyses at the region-

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[17] For example, model 6 predicts that a 1 percent increase in a country's GDP will increase the overall regional score on the EQI index by 0.019.

al level can help us form a more comprehensive understanding of these macro consequences, and help us scrutinize theories that previously only have been tested comparatively at the national level.

All in all, I think the results in this study support the notion that women are, on average, less corrupt than men. While Sung (2003; 2012) certainly is correct in that modern, liberal and prosperous countries and regions tend to have both lower levels of corruption and higher gender equality (as shown in Table 6), taken together, the results suggests that these 'fairer system' factors cannot account for the whole gender and corruption dimension. However, even if we accept that women might be less involved in corrupt behavior, this does not prove that women are in fact the 'fairer sex'. Proponents of the *opportunities perspective* claim that the observed gender differences with regard to corruption can be fully explained by the fact that men and women are given different opportunities to engage in corrupt behavior. Goetz (2007:87) goes as far as to dismiss the *gender difference perspective* as a 'myth in the making'. In light of the results in this study, I do not think such a confident rejection is warranted. The survey results from the QoG regional data shows that women are *actively* reacting to corruption by protesting against the system (Figure 1) and showing lower interpersonal trust when they perceive corruption levels as high (Figure 2). The gender difference in tolerance for corrupt behavior also seems remarkably consistent across the different contexts in the study (Table 3). If gender differences with regard to corruption are only a result of opportunity structures, we should see very large variation in the gender effect across different contexts, and we should see men and women converge with regard to corruption as societies become more equal. Table 3 suggests that this picture is too simplistic. While the post-soviet countries show large gender differences with regard to bribe payment (which might reflect a more traditional role of women), we still find significant gender differences in more equal countries. Here, the gender differences with regard to how men and women perceive corruption levels also seem to be larger. In general, I also think it is important to see that the *gender difference perspective* and the *opportunities perspective* are not logically incompatible: It might be true that women, on average, are less corrupt than men *and* in general are given fewer opportunities to engage in corrupt transactions.

The regional level analysis gives support to previous findings indicating that higher gender equality in political life can affect overall corruption levels in a positive direction. Here, proponents of the *opportunities perspective* have suggested that in the parliamentary arena the causality instead goes in the opposite direction: high corruption might prevent women from entering politics and keep them out of clientelist networks (see Bjarnegård 2013). Again, I do not think that these perspectives are mutually exclusive. Rather, I think it is reasonable to expect that the casual relationships are complex

and contains feedback mechanisms (Wängnerud & Grimes 2012), as is often the case in the social sciences.

Even though the results from this essay does not specifically support any of the more recent 'contextual theories' with regard to gender and corruption (e.g. Esarey & Chirillo 2013; Esarey & Schwindt-Bayer 2014), I do not think these results necessarily contradicts said theories. In relation to most studies done at the international level the European context is relatively homogenous, especially with regard to things like democracy, and it is reasonable to expect that larger contextual differences might affect the relationship more substantially.

Future research should utilize regional data like the QoG data to further develop theories on gender and corruption. The contextual approaches to gender and corruption certainly beg the question if the regional pattern shown in this study would be similar in different parts of the world. Contextual differences shown in this study also seem to be an interesting subject for further research: The fact that post-soviet countries stand out in terms of gender differences in bribe payment is interesting. As is the fact that gender differences with regard to perceptions of corruption seems to be larger in more equal countries. Lastly, I think more qualitative studies are needed to fully understand the casual mechanisms with regard to gender and corruption. For example, what kind of considerations does a female politician faced with a bribe make? Does her deliberative process differ from the male politician's?

The debate on gender and corruption is alive and well. New high quality data like the EQI index means that we can deepen the discussion, and hopefully get closer to a better, more complete understanding of the research problem.

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# Appendix 1: Questions in the QoG regional survey used to construct the EQI index.

TABLE 8, QUESTIONS IN THE QOG REGIONAL SURVEY USED TO CONSTRUCT THE EQI INDEX.

| Question | Alternatives (Range) | EQI pillar |
|---|---|---|
| Q4. How would you rate the quality of public education in your area? | 0 (Being very poor) - 10 (Being excellent quality) | *Quality* |
| Q5. How would you rate the quality of the public health care system in your area? | 0 (Being very poor) - 10 (Being excellent quality) | *Quality* |
| Q6. How would you rate the quality of the police force in your area? | | |
| Q7. "Certain people are given special advantages in the public education system in my area." | 0 (Being very poor) - 10 (Being excellent quality) | *Quality* |
| Q8. "Certain people are given special advantages in the public health care system in my area." | 0 (Strongly disagree) – 10 (Strongly agree) | *Impartiality* |
| Q9. "The police force gives special advantages to certain people in my area." | 0 (Strongly disagree) – 10 (Strongly agree) | *Impartiality* |
| Q10. All citizens are treated equally in the public education system in my area | 0 (Strongly disagree) – 10 (Strongly agree) | *Impartiality* |
| Q11. All citizens are treated equally in the public health care system in my area | 1 (Agree) – 4 (Disagree) | *Impartiality* |
| Q12. All citizens are treated equally by the police force in my area | 1 (Agree) – 4 (Disagree) | *Impartiality* |
| Q13. Corruption is prevalent in my area's local public school system | | |
| Q14. Corruption is prevalent in the public health care system in my area | 1 (Agree) – 4 (Disagree) | *Impartiality* |
| | 0 (Strongly disagree) – 10 (Strongly agree) | *Corruption* |
| Q15. Corruption is prevalent in the police force in my area | | |
| Q16. (1). In the past 12 months have you or anyone living in your household paid a bribe in any form to: A. Education services? | 0 (Strongly disagree) – 10 (Strongly agree) | *Corruption* |
| Q16. (2). In the past 12 months have you or anyone living in your household paid a bribe in any form to: B. Health or medical services? | 0 (Strongly disagree) – 10 (Strongly agree) | *Corruption* |
| | 1 (Yes) – 2 (No) | *Corruption* |
| Q16. (3). In the past 12 months have you or anyone living in your household paid a bribe in any form to: C. Police? | 1 (Yes) – 2 (No) | *Corruption* |
| Q16. (4). In the past 12 months have you or anyone living in your household paid a bribe in any form to: D. Any other government-run agency? | 1 (Yes) – 2 (No) | *Corruption* |
| Q17. In your opinion, how often do you think other people in your area use bribery to obtain other special advantages that they are not entitled to? | 1 (Yes) – 2 (No) | *Corruption* |
| Q18. Corruption is NOT present in elections in my area. | | |
| Q19. I trust the information provided by the local mass media in reporting on matters of politics and public services in my area. | 0 (Never) – 10 (Very frequently) | *Corruption* |
| Q20. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people in your area? | 0 (Strongly disagree) – 10 (Strongly agree) | *Quality* |
| | 0 (Strongly disagree) – 10 (Strongly agree) | *Quality* |
| Q24. What political party would you vote for if the national parliamentary election were today? | 1 (Most people can be trusted) – 2 (Can't be too careful) | |
| Q25. Now imagine that that party was involved in a corruption scandal, which of the following would be most likely? | | |
| | Open | |
| | 1 – Still vote for preferred party, 2 – Vote for another established party, 3 – Not vote at all | |