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Why are women less democratic than men?
Evidence from Sub-Saharan African countries [*]

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Abstract

A substantial literature has examined the determinants of support for democracy and although existing work has found a gender gap in democratic attitudes, there have been no attempts to explain it. In this paper we try to understand why females are less supportive of democracy than males in a number of countries. Using data for 20 Sub-Saharan African countries, we test whether the gap is due to individual differences in policy priorities or to country-wide characteristics. We find that controlling for individual policy priorities does not offset the gender gap, but those women who are interested in politics are more democratic than men. Furthermore, our results indicate that the gap disappears in countries with high levels of human development and political rights.

JEL Classification: D01, J16, O38, O55
Key words: Support for democracy, gender gap, policy priorities, institutions

1 Introduction

Many nations across the world are democracies, others are not, and these differences have important implications for the welfare of their citizens both because of the value of democracy in itself but also because of the potential economic implications that greater democracy has.[1] The variety of political systems we observe raises the question of why some countries are democratic and others less so, and various candidate explanations have been proposed. Economists have pointed out that the average level of education and income are deep causes of a country's level of democracy and tested this hypothesis using cross-country data, while political scientists argue that democratic legitimacy[2] is the key determinant of the level of democracy.[3] The latter literature has focused on the role played by individual political attitudes, and maintains that the consolidation and stability of a democracy in a country is only possible if its citizens support the democratic regime.[4]

A recent literature has thus emerged that measures the degree of *support for democracy* and has found it to be strong in some countries but not in others. Explanations of these differences have focused extensively on testing Lipset's claim that education is a pre-condition for democracy, and household survey data indicates that more educated individuals are more likely to support democracy (see, for example, Bratton and Mattes 2005 and Evans and Rose 2007). Amongst the many individual characteristics included, existing analyses control for gender and find that in developing countries women tend to exhibit less support for democracy than men. Surprisingly, this recurrent gender gap has received no attention in the literature. The aim of this paper is to establish whether, in developing countries, there exists a gender gap in attitudes towards democracy and to consider possible explanations.

There are reasons to believe that men and women have different political attitudes. Recently, a substantial body of work has documented that the two sexes behave differently in politics, as they vote differently and do not implement the same policies.[5] It is then possible that the

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[1]Sen (1999) and **?**) discuss democracy as a universal value. The literature on whether democracy is positively associated with per capita GDP levels and long-run growth has been the subject of substantial controversy, although a number of recent works point towards a positive effect; seeAcemoglu et al. (2005), Persson (2004), and Persson and Tabellini (2006), amongst others.

[2]According to Fails and Pierce (2010), the definition of legitimacy attitudes proposed by Lipset (1963) reflects the "*belief that the existing political institutions are the most appropriate ones for the society*".

[3]For the work of economists see, for example, Barro (1999), Acemoglu et al. (2008), while the approach proposed by political scientists can be found in Diamond (1999) and Mattes and Bratton (2007).

[4]Diamond (1999), p. 168, reports that "*stable democracy also requires a belief in the legitimacy of democracy*". More recently Mattes and Bratton (2007), p. 193, maintain that "*No matter how well or badly international aid donors or academic think tanks rate the extent of democracy in a given country, this form of regime will only consolidate if ordinary people believe that democracy is being supplied.*"

[5]See, for example, Lott and Kenny (1999), Abrams and Settle (1999), Aidt and Dallal (2008), and Chattopadhyay and Duflo (2004) as well as our discussion below.

two sexes also have different preferences towards democracy. The evidence for Sub-Saharan Africa indicates that, on average, 74 percent of men believe that democracy is preferable to any other kind of government, while only 66 percent of women agree with this statement.[6] There are several potential explanations for this 8 point gap. First, it could simply reflect different attitudes towards democracy across genders that are embedded in the preferences of the two sexes. The gap could also be due to the omission of relevant individual characteristics, such as access to media, that are distributed differently across the two groups, or to differences in policy priorities across genders, with men being more interested in the process through which decisions are taken and women in the actual policy outcomes. Alternatively, the gap could be caused by the economic and institutional context of the country, in line with the modernization hypothesis of Inglehart (1997) which argues that a change in the economic and political environment reduces the differences in roles between males and females and increases women's interest in issues traditionally considered to be the domain of men, such as politics. Distinguishing between these explanations is important if we are to understand whether democratic support by women can be increased and if so through which mechanism.

To conduct our analysis we use data from the Afrobarometer, a series of national surveys on the attitudes of citizens towards democracy, markets, civil society, and other aspects of development collected in African countries. Our variable of interest is support for democracy, a dummy that equals one if the individual attests that democracy is the best political regime and zero otherwise. We consider three sets of possible explanatory variables. The first is a wide set of socioeconomic characteristics which prove significant but have a minor effect on the coefficient on gender. In addition to the information on individual socioeconomic characteristics, the survey asks individuals what are the policy priorities that they think the government should tackle. We use this information to assess whether males and females have different priorities, but gender attitudes to the prioritization of government action has no impact on the gender gap in support for democracy.

The evidence hence indicates a gender gap in support for democracy, and the last question that we address is to what extent this gap is affected by the macroeconomic and institutional context. We thus examine the effect of three sets of country-wide characteristics: the human development indicator (*HDI*), different measures of political institutions, and gender gaps in various aspects of political and economic life. Although these variables prove insignificant for the population as whole, we find that higher levels of both the *HDI* and political institutions

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[6]See below for the details.

reduce the gender gap. Our results imply that in countries with sufficiently high levels of *HDI* and/or institutions there is no difference between men and women in the degree of democratic support, with the effect of gender being insignificant in between a quarter and half of the countries in our sample depending on the specification. This evidence supports the view that economic and institutional changes can change individuals' views on democracy.

Our paper is related to two strands of literature. First, it contributes to a substantial body of work addressing the determinants of support for democracy in developing countries using survey data. This literature has largely focused on establishing the importance of education for promoting democracy; see, for example, Mattes and Bratton (2001) and Bratton and Mattes (2005) on Sub-Saharan Africa, and Shafiq (2010) on Lebanon, Jordan and Pakistan.[7] Evans and Rose (2007) emphasize the differential impact of various stages of education for political attitudes. Their work on Malawi, as well as that of Mattes and Mughogho (2009) on all the Afrobarometer countries, indicates that primary schooling is sufficient for the endorsement of democracy and rejection of non-democratic regimes, with higher levels of education having a limited impact.[8] Survey data has also been used to examine the "democratic paradox of Islam", i.e. the fact that democracy is popular yet rare in Muslim-majority countries; see Rowley and Smith (2009). Maseland and van Hoorn (2011) maintain that the positive attitudes towards democracy of citizens in Muslim countries should not be explained by religion but rather by decreasing marginal utility. The scarcity of democracy -which tends to be a feature of Muslim-majority countries- implies that residents in those countries value it more than those from countries where the supply of democracy is larger.

In all of the above analyses -with the exception of Shafiq (2010)- a significant coefficient on gender indicates that women are less supportive of democracy than men, yet the reasons for this gap have not been examined. Closely related to our work is Coffe and Bolzendahl (2011) who examine gender gaps in political participation in Sub-Saharan Africa. As is the case in Western countries (e.g., Burns 2007) there is a substantial difference in the degree of political participation of men and women. However, Coffe and Bolzendahl show that the individual socioeconomic characteristics that have been found to be important in explaining this gap in Western countries do not reduce significantly the gap in Sub-Saharan Africa. They postulate that institutions are important and find a negative correlation between a country's gender gap in participation and the quality of its political institutions. These results indicate that the institutional framework

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[7]See, for example, Bratton and Mattes (2005) and Mattes and Bratton (2001).

[8]Despite a strong effect of education on political preferences, its impact on political participation is less clear; see Mattes and Mughogho (2009).

could be an important determinant of differences across genders in support for democracy too. Our approach differs from that of Coffe and Bolzendahl (2011) methodologically since we include institutions in the individual regressions rather than looking at cross-country correlations with average gender gaps. This allows us to examine the magnitude of the effect of institutions as compared to that of individual characteristics.[9]

Our work is also related to the influential literature on the differences between men and women in political preferences and behaviour, which we discuss in detail in the next section. Our paper differs from this literature in two aspects. First, existing work has focused on the effect of differences in policy preferences across genders either on voting or on government expenditure. We examine whether differences in preferences can explain the gender gap in support for democracy, a question so far not addressed by the literature. Second, previous analyses have used data for either Western countries or India, all of which are established democracies. In contrast, we focus on Sub-Saharan Africa, a region in which democracy is a relatively new concept. There is, to the best of our knowledge, no previous analysis of the political attitudes of women in this part of the world.

The remainder of the paper is organized as follows. We start with a discussion of the relationship between gender and politics that reviews the existing literature and postulates our hypotheses about the gender gap in political participation. Section 3 describes the data, while section 4 sets up the empirical model. In section 5 we present the central analysis of the paper, while the last section concludes.

2 Political attitudes and gender

2.1 Related literature

It is well established that men and women vote differently, with women tending to support more left-wing parties; see Langer (1996). Over the past decade and following the seminal work of Lott and Kenny (1999) and Aidt and Dallal (2008), economists have started examining the causes of differences in political attitudes of men and women and their impact on economic policy. Three reasons have been put forward as explanations of gender differences in preferences for parties and policies: women's greater risk aversion and the consequent desire for insurance; women's lower incomes or expected incomes, for example following a prospective divorce, leading to support for redistribution; and a preference for social expenditures such as basic infrastructure (e.g.

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[9]In fact, as we will see below, one of the advantages of our approach is that by including country-level measures of institutions in regressions on individual data we can examine whether or not good institutions can erode the impact of gender differences. This cannot be done when regressing national average gaps on country features.

water supplies), health and education that impact the production of household goods, including children, on which women tend to specialize; see Lott and Kenny (1999) and Chattopadhyay and Duflo (2004). The evidence indicates that the effect of women's entry into the political arena, either as voters or as policy-makers has been substantial. Lott and Kenny (1999) use cross-sectional data for US states over the period between 1870 and 1940 to examine the impact of female suffrage on the size of public expenditure and, in particular, on social spending. Their results indicate that women's vote resulted in both larger government and increased social spending, a result also found in Western European countries where government spending moved away from "guns" and into "butter"; see Aidt and Dallal (2008).

Following this literature two different questions have been addressed by recent work. The first one tries to establish whether differences such as those found in voting behavior also appear when women are policy-makers. Work on both rich and developing countries indicates that this is indeed the case. Evidence for India shows that the type of public goods provided depends strongly on the gender of the local political leader, with female leaders investing more in goods linked to their own concerns, such as drinking water, and spending more in public health provision; see Chattopadhyay and Duflo (2004), Clots-Figueras (2011) and Bhalotra and Clots-Figueras (2011). In the case of rich countries, where the distinction between 'women oriented' and 'male oriented' public goods is less clear, the evidence has concentrated on social spending, and recent work on Switzerland by Funk and Gathmann (2010) indicates that female policy-makers affect the composition of public spending, tending to increase spending on public health and social welfare. Policy outcomes have also been shown to be strongly influenced by women's movements and the intensity of their activities; see S.L. Weldon (2012).

A complementary literature has seek to understand and test the causes of these differences across genders. Edlund and Pande (2002) and Edlund et al. (2005) focus on the role of marriage patterns. The last three decades of the 20th century have witnessed a decline in marriage, whether because of divorce (the most prevalent cause in the US) or due to the possibility of forming other types of unions (a pattern common in much of Western Europe). These changes have made men richer while women have become poorer and face greater income uncertainty. Economic theory then implies that the latter will demand greater income redistribution and more family-oriented social spending, and this could have been the cause of the observed changes in public expenditure. In contrast, Cavalcanti and Tavares (2011) argue that higher government spending reduces the cost of housework, with child-care being the most obvious example. This implies that the opening of labour markets to female employment that occurred in the mid-20th

century also increased the demand for social spending. Both hypotheses seem to be supported by the data, either in a cross section of countries or at the individual level, with Edlund and Pande (2002) finding that following divorce women become more left-wing. Such evidence indicates that the socioeconomic environment in which women live can affect the gap in their policy preferences relative to those of men. Among the various differences between women and men in the political arena, the work on corruption and gender has highlighted that females are less likely to be involved in corruption and in bribes and that increasing the share of females in the political arena and, more generally, social equality between men and women reduces the degree of corruption; see Swamy et al. (2001), Swamy et al. (2001) and Branisa et al. (2009).

Concerning, the gender gap in support for democracy, the evidence indicates that it is present in regions other than Sub-Saharan Africa. Rowley and Smith (2009) and Maseland and van Hoorn (2011) use the *World Values Survey* for countries from different regions to test whether citizens from Muslim majority countries are less democratic than others. Among the different controls, they include gender and the resulting coefficient indicates that women are less democratic than men. Waldrom-Moore (1999) explores the origins of mass support for democracy using the Central and Eastern surveys from the Eurobarometer. The evidence for Hungary, Czechoslovakia, Poland, Russia, Ukraine and Lithuania implies a gender gap. This result is consistent with the view that Eastern European women accept traditional roles, prefer the order and security of authoritarian rule and are less willing to accept plurality; see Bahry (1987), Carnaghan and Bahry (1990)). The only exception seems to be Shafiq (2010) who does not find a gender gap in support for democracy when looking at Indonesia, Jordan, Lebanon, Pakistan and Turkey.

2.2 Hypotheses

The literature we have just discussed indicates that men and women have different policy preferences and that gender can have a substantial effect on policy outcomes. With its focus on democratic countries, it highlights that female votes and female politicians result in different levels and composition of public expenditures than those that would have prevailed if only men had participated in the political process. The question we pose goes back one step and asks whether men and women also differ in their attitudes towards democracy.

There are various reasons why reported attitudes towards democracy may differ across genders. The first is simply that men and women have different intrinsic preferences concerning democracy, just in the same way as women tend to be more risk-averse; see, for example, Brachinger et al. (1999).

A second possibility is that existing work has failed to include all the relevant individual characteristics that determine democratic support. Several aspects come to mind. The first is the difference across genders in access to media. Much media access in developing countries does not occur in the home but in communal places, such as bars or coffee houses, that women are less likely to visit. As a result, their access to information may be more limited and lead to lower democratic support. A second aspect that may affect political attitudes is the experience of corruption. Encounters with corrupt officials and bureaucrats could reduce faith in the political system and undermine support for democracy. If women tend to have more experience of these encounters, for example because they deal with these bureaucrats while running the household (i.e. establishing access to utilities, seeking medical treatment, or ensuring children's education), then these experiences will affect their political attitudes.[10] We are also interested in the environment in which the interview took place, since the presence of children or a male relative and the need to conform to traditional female roles in front of them could affect females' responses. A third hypothesis is that responses to the question concerning support for democracy reflect different policy priorities across genders. If women saw the type of political regime as being of secondary concern relative to the actual policies that are implemented, this could make them exhibit less support for democracy. Controlling for policy priorities would then explain the gender gap in democratic support.

Lastly, we will examine whether the country's economic and institutional environment affects gender differences in democratic support by considering the effect of three sets of country-wide characteristics: the human development indicator (HDI), political institutions, and gender gaps in education and policy-making. There are various reasons why development, good institutions and gender equality may affect political attitudes. The modernization hypothesis proposed by Inglehart (1997) and further developed by Inglehart and Norris (2003) argues that changes in the economic and political environment tend to be followed by a decrease in the differences in gender roles, and this will in turn impact the political climate. In the context of our analysis, it is conceivable that traditional gender attitudes see only men as entitled to have political opinions, implying that women would not have a view on the desirability or not of democratization. In countries where gender differences are strong this would lead to systematic differences in support for democracy across genders, which would be absent in more gender-egalitarian societies.

There is a second reason why the institutional context may matter. Recent evidence on

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[10]The relationship between democracy and corruption at the aggregate level is not obvious, since widespread corruption is observed in all types of regimes; Bardhan (1997) and Bardhan (2006). Nevertheless, the prevalence of corruption in democratic countries is compatible with the fact that, in a given country, those who have experienced corruption may exhibit less support for democracy.

democratization and economic development has shown that many transitions to democracy are violent and create substantial civil conflict, and this has been particularly so in Africa. Moreover, empirical work on the effect of democratization on output and growth rates shows that the short-run effect of democratization is positive when the process is peaceful but not when it is violent.[11] In this context it is possible that the different responses of men and women are related to the cost of democratization, which may be higher for women. The cost of conflict may be higher for women for reasons going from the cost of fleeing conflict areas and relocating to that of female-specific violence such as rape. Even in less extreme situations, women may expect to bear a higher cost of conflict since it will lead to an increase in military expenditure and a reduction in welfare spending, which as has been shown by the literature reviewed above, they value more than men. When institutions are weak and the level of development low, democratization is more likely to be accompanied by conflict, and the internalization of such costs may make women more cautious about supporting democracy than men. In contrast, in a more favorable economic and institutional climate the transition to democracy is more likely to be peaceful, thus reducing the gender gap in democratic support.

Our empirical analysis hence proceeds in three steps. We first consider the effect of additional socioeconomic characteristics on the gender gap in support for democracy. We next examine differences across genders in policy preferences and see whether they help us understand the gap in democratic support. Lastly, we test whether the country's economic and institutional environment has an effect on the gap.

3   Data and descriptive statistics

3.1   The Afrobarometer survey

We use the latest data from the Afrobarometer, round 4, which contains surveys that took place in 20 countries between March 2008 and June 2009. In total 27,713 individuals aged between 18 and 64 years were interviewed. The countries that took part in the survey are Benin, Botswana, Burkina Faso, Cape Verde, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. The data was collected through face-to-face interviews with questions posed in the local language. National probability sampling is applied in order to generate a sample that is a representative cross-section of all citizens of voting age in a given country. For instance the

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[11]See Cervellati and Sunde (2011), Cervellati and Sunde (2012) and Nannicini and Ricciuti (2010).

method of random selection is used at each stage of the sample.[12] Table 1 reports the descriptive statistics of the core variables.

Our main dependent variable is support for democracy. We construct it from the answers to question Q89 of the survey which asks: *Which of these three statements is closest to your opinion?* The possible answers are: (1) Democracy is preferable to any other kind of government; (2) In some circumstances, a non-democratic government can be preferable; (3) For some like me, it does not matter what kind of government we have, and (4) I don't know. As has been done in previous work, we create a binary variable (*democracy*), which takes a value of 1 if the respondent thinks that a democratic system is preferable to any kind of political system, and 0 otherwise.[13] The data indicates strong support for democracy, with 70% of the population giving the first answer. The remaining 30% of respondents are roughly equally divided into the three other possible answers. The fraction of respondents saying that they don't know is substantial (8%), and in the robustness section we will examine whether our results are affected by their exclusion.

Our key explanatory variable is *female* which takes a value of 1 for females and 0 for males. The data is such that 50.01% of the interviewees are males and 49.99% are females. Figure 1 depicts preferences for democracy for the two sexes. A majority of both men and women support democracy, but the figure is almost 8 percentage points higher for males, with only 65.81% of women saying that democracy is always preferable as compared to 73.55% of men. For the other three replies, the frequency is higher for women, although in the case of "in some circumstances, a non-democratic government can be preferable "the difference is not statistically different across genders.[14].

We include in our regressions standard individual socioeconomic characteristics that have been used in previous work, namely education, age, place of residence, and employment status. Education is divided into 5 categories: no-formal schooling concerning 20% of the population, incomplete primary school (18%), completed primary (35%), completed secondary (15%), and completed post-secondary (11%). The overall level of education is hence very low, with only 74 percent of the population having at best completed primary education.[15] The three age

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[12]For more details about the survey method and questionaires readers are invited to refer to the manual of the Afrobarometer. For details on sampling methods, see the section *Survey and Methods* of the Afrobarometer available at http://www.afrobarometer.org/survey-and-methods/sampling-principles.

[13]When we talk about support for democracy we refer to the reply that "Democracy is preferable to any other kind of government".

[14]The standard error of the difference of frequency across genders is 0.558 for the reply "Democracy is preferable to any kind of government", 0.383 for "In some circumstances, a non-democratic government can be preferable", 0.389 for "It does not matter what kind of government we have" and 0.322 for "I don't know".

[15]These are the categories reported in the questionnaire, and hence we do not have information on, for example,

categories are 18 to 25 year-olds, those between 26 and 35, and those above 35. For the place of residence we have people living in rural areas (62%) versus urban areas (38%). The employment status has three categories: employed, unemployed and inactive.

We also consider access to media and experience of corruption. To measure access to media we consider separately the access to news from radio,TV and newspapers. For each of them the variable is a dummy which is equal to 0 if the individual attests never having access to media from that given source, and 1 otherwise. In the sample 87% of the population has access to news from radio, 54% from TV and 41% from newspapers. For the perception of corruption we code 0 for people who have never been in a situation in which they had to pay a bribe, provide a gift or do a favor to officials in exchange for a document or permit, and 1 otherwise. A relatively small fraction of the population, 21%, reply that they have experienced corruption. Because democracy can be linked to views on the current government, we measure perceptions about the government. We use the question *"how well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: managing the economy, narrowing gaps between rich and poor"*. We code *manage1* (*gappoor1*) as one if the answer concerning managing the economy (narrowing gaps) is 'fairly well' or 'very well', while *manage2* (*gappoor2*) takes the value of 1 if the individual answers that s/he does not have enough information. The reference group are thus those who answer 'very badly' or 'fairly badly'.

As we have argued above, in traditional societies the replies of women may be influenced by the presence of others during the interview. We hence consider variables that inform us about the environment through which the interview took place and which are recorded by the interviewer at the end of each interview. We create the variable *presence* that tells us whether someone (spouse, children or others) was present during the interview. The variable *check* equals 0 if the interviewee did not check his/her replies with anybody during the interview and 1 otherwise. The last two variables that we use are a dummy *influence* which is equal to 1 if the interviewer thinks that the individual is influenced by someone present and a dummy *approach* which equals 1 if any representative of community associations or political parties approached the interviewee during the interview.

To shed light on the impact of individual policy priorities on the gender gap on support for democracy we exploit the question Q56pt in the survey which asks: *"In your opinion, what should be the most important problems facing this country that the government should*

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those who have had some secondary education but not completed it.

address?" Each respondent can give up to three problems or say that there are no problems. A total of 36 problems are listed, which we then group into 5 categories; (1) *Macro*, (2) *Social-discrimination*, (3) *Politics-war*, (4) *Infrastructure*, and (5) *Agriculture.* We also create the category (6) *Nothing* which contains people who think that there are no problems. A description of the components for each of the first five categories is given in table A 2 in the appendix. Examples of the items included in these categories are concerns over the management of the economy, unemployment and wages for macro; food shortages, education, health and women's rights for the second category; political rights and wars for the third; roads, electricity and water supplies for infrastructure; and farming policy and droughts for agriculture.[16]

The fact that each respondent can give up to three concerns raises the issue of how to attribute policy priorities to individuals. Our main strategy for coding these policy priorities is to create for each priority a dummy equal to 1 if at least two out of the three problems given by an individual fall in that category and 0 otherwise. Consequently, for each individual in the survey there will be a one in a given policy priority and zero in all the others, implying that we will attribute a unique policy priority to each respondent. When using this strategy there will be a 7th category, termed *else*, that includes individuals who either report only one problem or report at least two but all in different categories.

3.2 Measuring the economic and institutional context

To control for the context in which the individual lives we use the Human Development Index (HDI), the percentage of seats held by women in the national assembly (*Nationalseats*) and the adult literacy gap between males and females (GAP). All of these measures come from the UNDP and the descriptive statistics are reported in table A3 in the appendix. We measure political institutions by the index of democracy (DEM) from Polity IV, the indices of political rights (PR) and of civil liberties (CL) from the Freedomhouse data, as well as some of the Worldwide Governance indicators, in particular the rule of law index (RL), the voice and accountability measure (VA) and the political stability index (PS). For all of these different measures we use the value for 2008, which coincides with the earliest year of interview in the surveys.

The HDI index measures development by combining indicators of life expectancy, educational attainment and income. It ranges between 0 for the lowest development level and 1 for full

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[16]Constructing indices of policy priorities is not straightforward, however it has the advantage of providing summary measures of the types of priorities that affect support for democracy. Our results on gender are not affected when we include the 36 raw priorities. For further discussion on policy priorities, see the working paper version of this paper available at *http://www.amse-aixmarseille.fr/fr/recherche/documents-de-travail/why-are-women-less-democratic-men-evidence-sub-saharan-african*

development. The average cross-country value of *HDI* is 0.454 with a standard deviation of 0.096. Mozambique records the lowest *HDI* index, 0.304, and Botswana has the highest value, 0.624. Despite widespread use, a major limitation of the *HDI* is that it does not account for distributional aspects, either across households or across genders.[17] To deal with this concern, we use two types of measures. On the one hand, we replace the *HDI* by the inequality-adjusted *HDI* (*IHDI*) which captures inequality across individuals in the three dimensions of the *HDI* as well as the average values. On the other, we include the two measures of gender gaps mentioned above: the percentage of seats held by women in the national assembly and the adult literacy gap between males and females. The average percentage of seats held by women in parliament is 18.6%, with Nigeria exhibiting the lowest and Mozambique the highest values. To compute the adult literacy gap we divide the literacy rate of females aged over 15 by the literacy rate of males aged over 15, which yields an average literacy gap of 0.812.

The index of democracy takes into account the competitiveness of executive recruitment, the openness of executive recruitment, constraints on the executive, and competitiveness of political participation. It ranges between 0 and 10, with a value of 0 denoting a full autocracy and a value of 10 a full democracy.[18] The average level of democracy across countries in the sample is 5.786 (standard deviation of 2.719). The only full democracy in the data is Cape Verde, and Uganda has the lowest value, 1.[19] The political rights index reflects freedom in the political process, including the right to vote freely, compete for public office, join political parties and organizations, and elect representatives. The index of civil liberties measures freedom of belief and of association and assembly, the protection from physical abuse and from state terror, including rights of ethnic and religions, and gender equity. In the original data both indexes, *PR* and *CL*, range between 1 and 7, with a lower value indicating higher quality of institutions. We have recorded them in an ascending order so that higher values reflect better institutions. The average value for the *PR* index is 4.824 with the minimum and maximum being, respectively, the values for Zimbabwe and Cape Verde/Ghana. Zimbabwe and Cape Verde are also the countries with the lowest and highest values of the *CL* index. Turning now to the Worldwide Governance Perception Indicators, the index of rule of law measures the extent to which agents have confidence in and abide by the rules of society, among them

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[17]See, Harttgen and Klasen (2012) as well as Klasen and Schüler (2011).

[18]Polity IV provides indices of democracy and autocracy that measure different concepts, since the former includes formal aspects of political life (e.g. are there elections of some form?) while autocracy focuses on the constraints faced when in power irrespective of whether power was obtained through a democratic process or otherwise. Polity IV then builds the *polity index* defined as democracy minus autocracy which ranges from -10 to 10. Because of the focus of the paper, we have chosen to use the index of democracy.

[19]Some countries, such as Uganda, have surprisingly low levels of democracy due to the fact that we are using a single year, 2008.

the quality of contract enforcement, property rights, the police and the courts. The voice and accountability component indicates the extent to which citizens in a country are able to participate in selecting their government, to have the freedom of expression and association and a free media. The last index, political stability and absence of violence and terrorism is a perception of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means. These three indices range between -2.5 and 2.5, with lower values corresponding to worse outcomes. In our sample, the average values are -0.393 for *rule of law*, -0.109 for *voice and accountability*, and -0.261 for *political stability*. Zimbabwe has the lowest value of the *RL* and *VA* indices, and Nigeria that of the *PS* index. Botswana, Cape Verde and Namibia exhibit, respectively, the highest values of these three indicators.

4 Empirical Strategy

We denote by $p_{ij} = Prob(democracy_{ij} = 1)$ the probability that individual i living in country j prefers a democratic regime to any alternative. In a logistic model this probability can be expressed as follows:

$$p_{ij} = \frac{exp(z_{ij})}{1 + exp(z_{ij})} \tag{1}$$

where

$$z_{ij} = \alpha_0 + \alpha_1 female_{ij} + \alpha_2 X_{ij} + \epsilon_{ij} \tag{2}$$

The vector X_{ij} contains the socioeconomic characteristics of individual i in country j. Our parameter of interest is α_1 which measures the impact of gender on the probability to support democracy. A negative sign means that being female decreases the probability to support democracy compared to being male, and we are interested in whether after the inclusion of additional explanatory variables this coefficient remains significant.

It is likely that individual error terms are not independent within countries, thus standard errors may be underestimated with traditional regression techniques. We use multilevel modeling in order to takes such clustering into account. By allowing the intercept α_0 to vary across countries, we can write the following two-level equation system:

$$\begin{aligned} \text{Level 1:} \quad z_{ij} &= \alpha_{0j} + \alpha_1 female_{ij} + \alpha_2 X_{ij} + \epsilon_{ij}, \quad \varepsilon_{ij} \sim N(0, \sigma^2), \\ \text{Level 2:} \quad \alpha_{0j} &= \alpha_{00} + u_j, \quad u_j \sim N(0, \gamma^2), \quad \varepsilon_{ij} \perp u_j \end{aligned} \tag{3}$$

and combining level 1 and level 2 we obtain

$$z_{ij} = \alpha_{00} + \alpha_1 female_{ij} + \alpha_2 X_{ij} + u_j + \epsilon_{ij} \tag{4}$$

The term $u_j + \epsilon_{ij}$ in equation (4) represents the random part of the model where u_j is the country-specific effect and ϵ_{ij} is the individual-level error term. To measure the correlation between individuals that share the same country we use a measure of intraclass correlation, which indicates the proportion of the variance that is explained by the clustering structure. The formula for the interclass correlation ρ is given by

$$\rho = \frac{\gamma^2}{\gamma^2 + \sigma^2} \tag{5}$$

The parameter σ^2 is the variance of the error term u_j and by convention in a multilevel logit model the parameter γ^2 is supposed to be equal to $\pi^2/3$ where π is the mathematical constant; see Hox (2010).

We are also interested in whether the gender gap in support for democracy depends on cross-national differences in the economic and institutional environment. We hence incorporate a vector of aggregate variables Y_j as well as a term interacting these variables with gender. Our specification then takes the form

$$z_{ij} = \alpha_{00} + \alpha_{01}Y_j + \alpha_1 female_{ij} + \alpha_{11}Y_j * female_{ij} + \alpha_2 X_{ij} + u_j + \epsilon_{ij} \tag{6}$$

The parameter α_1 reflects the direct impact of being female on the probability to support democracy while α_{11} tells us the degree to which the impact of gender on the probability to support democracy depends on country features such as the level of development and the quality of institutions. A positive and significant α_{11} means that the higher the level of development and/or institutions in a given country, the smaller the gender gap in support for democracy is, with the total effect of being female given by the term $\alpha_1 + \alpha_{11}Y_j$, which obviously is country specific.

5 Results

5.1 Support for democracy

We start by reporting in table 2 the coefficients obtained when we regress the probability to support democracy on a standard set of individual variables. The first column reports the regression where *female* is the only covariate and we add sequentially additional socioeconomic characteristics. The estimated value of the intraclass correlation is 0.088, indicating that roughly 8.8% of the variance is explained by country specificity. Column [3] mimics the standard regression run by much of the literature, with education having a positive and significant effect, and older individuals and urban residents being more likely to support democracy. The coefficient

on *female* is statistically and economically significant, and being a man increases support for democracy as much as the difference between having had some primary education and having completed it (the effect is given by the differences between the coefficients on *educ2* and *educ1*). Columns [4] to [6] include, sequentially, access to media, experience of corruption, dummies for the presence of someone else during the interview, and the individual's views on how the government is dealing with poverty and the economy. Most of these variables are significant and although they reduce slightly the impact of *female*, its coefficient remains large and statistically significant in all of them.

Turning now to the other individual characteristics included in the regression, we find that as well as education, age plays an important role in explaining democratic support, with young people supporting democracy less than their elders.[20] Youth represents an important fraction of the population in Sub-Saharan Africa, and in our sample 57% of individuals are between 18 and 35 years old. Little attention has been given to explaining the behavior of Africa's youth in politics, with the exception of Resnick and Casale (2011) who find that youth in Sub-Saharan Africa vote less and are less partisan that their elders. Urban residents are more supportive of democracy than those from rural areas, but once we control for access to media the coefficient on urban becomes significant only at the 10% level. We do not find a significant impact of employment status on the degree of support for democracy. The results also show that media access plays an important role, with those getting news from the radio and from newspapers being more democratic than people who do not have access to media from any source. TV access has only a weakly significant coefficient, as aspect that may be due to the fact that it is more likely to be government-controlled than other sources of information. In addition, individuals who have experienced corruption favor democracy less than those who have never experienced corruption, suggesting that corruption hinders democratic support.

In column [5] we control for the environment in which the interview took place through variables reported by the interviewer at the end of each meeting. Results show that the presence of someone has a negative impact on support for democracy, but the effect is insignificant when it is the spouse that is present and significant only for *presence3*. That is, having children present during the interview reduces the probability of supporting democracy. This could be due to women trying to conform to traditional roles in front of their offspring. An alternative

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[20]Although this observation may seem contradictory with events depicted in the media such as the so-called 'Arab spring', what the media captures is not support for democracy but rather public expressions of support for democracy. Since, young people are likely to have a much lower cost of expressing their support for democracy than older individuals, the greater participation of the former in pro-democracy demonstrations is consistent with the latter being more likely to support democracy but having greater costs of expressing it.

explanation is that the coefficient captures selection rather than a causal effect. Women who view themselves as not following traditional female roles are probably more likely to say that they support democracy and also more inclined to send their children to school, hence they tend not to have them at home during the interview. Lastly, respondents who have consulted with someone before replying to some question or have been approached by a community or political party representative during the interview are less democratic.

In column [6] we add further variables to measure the perception that individuals have on the actions of the government. We only kept the variables that are significant (*gappoor* and *manage*). Results support that those who think that the government is handling fairly/very well the gap between poor and rich are less supportive of democracy than those who think that the government is handling it badly. On the contrary, people who think that the government is handling fairly well or very well the management of the economy are more democratic than those who think that he is handling it badly. Individuals who claim that they do not have enough information about either issue are less democratic than the reference group.

In order to test whether the differential support of democracy across genders is due to men and women having different priorities, we add dummies for the various policy priorities in the last column of table 2: *macro*, *social-discrimination*, *politics*, *infrastructure*, *agriculture* and *nothing*. Most of the signs and the coefficients of the variables remain unchanged once we control by individual policy priorities. The size of the coefficient on *female* is not significantly different from our earlier specifications, indicating that priorities per se do not explain the gender gap in democratic support.

The bottom panel of table 2 shows some goodness of fit criteria, namely, the log-likelihood values and the Bayesian information criterion. Both of these measures record their lowest values in the last two columns, hence in the rest of the paper our baseline specification for the estimation will be the model in column [7] that includes all the individual socioeconomic characteristics that we consider in this paper.

Our results provide evidence that women are less democratic than men and are robust to the inclusion of various individual socioeconomic characteristics. Overall, the individual characteristics have only a moderate impact on the gender gap, increasing the coefficient on women from -0.396 to -0.279, i.e. by 30 percent. In particular, although education and access to media reduce the magnitude of the coefficient on gender, they do not fully explain the gap in support for democracy between males and females. In our preferred specification, the coefficient on *female* is substantially higher than that on having had some primary education and of about

the same magnitude as having regular access to a radio, indicating its economic significance.

5.2 Development, institutions and the gender gap in support for democracy

The next question we address is whether the inclusion of country level characteristics affects the gender gap. The regression results are displayed in table 3, where we add to the previous variables country level measures of development, gender gaps, and institutions.

The direct impact of *female* on support for democracy remains significant and negative in all specifications, but the absolute value of the estimated coefficient increases substantially. In table 2, column (7), we find a coefficient on gender equals -0.279 while in table 3 after controlling by institutions this value rises to about 0.9. This difference is due to the fact that in the former table the coefficient on gender reflects the impact of females on support for democracy when the measures of institutions are taken at their average levels, while in the latter table the coefficient on gender captures the impact of females on support for democracy when the level of institutions are at their lowest values.

The first regression indicates that the level of *HDI* does not have a significant effect on its own but has a positive and significant coefficient when interacted with gender, suggesting that although development does not affect the political views of men it decreases the negative impact of being female on support for democracy. In contrast, although the gender gap in education has a negative and significant effect, the interacted term proves insignificant. This implies that in countries with large male-female education gaps there is less support for democracy but the impact is the same for the two genders. The following column substitutes the literacy gap between men and women by female presence in parliament. This variable proves insignificant, probably because it captures an aspect of gender equality that is too far removed from the daily experiences of the majority of the population. Moreover, as S.L. Weldon (2012) has shown, in many countries the number of the women in the legislature has been of lesser importance in influencing policy and political attitudes than women's movements.

We next add, one by one, different measures of political institutions, democracy, civil rights, political rights, rule of law, voice and accountability and political stability. The reason to proceed sequentially is that these variables are highly correlated with each other (see table A.4 in the appendix), thus leading to multicollinearity. Our results indicate that democracy has no impact either on its own or interacted with gender. This contrasts with the argument put forward by Maseland and van Hoorn (2011) that support for democracy is greater the less abundant it is, although the coefficient has the expected negative sign and its low significance could be due to the lack variability in the measure of democracy in our small sample of countries. Civil rights

also has insignificant coefficients, while that on political rights is insignificant on its own but positive and significant when interacted with gender. Similar results appear with the measures of voice accountability and political stability but the latter is significant only at the 10% level. The measure of rule of law has insignificant coefficients. Column [9] presents our preferred specification, which includes the variables that had significant coefficients in one of the previous regressions (as well as HDI and PR on their own). This equation tells us that the only aggregate variable having a (weakly) significant effect on the preferences of the whole population is the educational gender gap, while a higher level of both the HDI and the PR indices tends to reduce the gender gap in democratic support. Similar specification is replicated in column [10] where we replace PR by VA. The last equation in the table substitutes the HDI for the IHDI, and both the development index and that for property rights remain significant when interacted with the female dummy.

These results and in particular the effect of HDI on support for democracy seem to contradict the debate on the impact of income on democracy, as re-examined by Acemoglu et al. (2008) and Acemoglu et al. (2009). These two papers investigate the validity of the modernization hypothesis as defined by Lipset (1959) that emphasizes the importance of the level of economic development in the creation and consolidation of democracy. Using cross-country data and different econometric specifications, the authors find neither a positive association between income and democracy (see Acemoglu et al. (2008)) nor a positive impact of income on the transition to or from democracy (see Acemoglu et al. (2009)).

We can now evaluate the overall effect of gender on support for democracy taking into account the fact that country characteristics affect this gap. We use the coefficients reported in columns [9] and [10] of table 3 in order to consider two different measures of institutions. From equation (1), we can write the odds ratio, r_{ij}, as

$$r_{ij} \equiv \frac{p_{ij}}{1 - p_{ij}} = e^{z_{ij}} \tag{7}$$

where z_{ij} is given by equation (7). The relative odds ratio in country j, defined as the odds ratio for men over that for women, is then given by

$$\frac{r_{mj}}{r_{fj}} = \frac{1}{\exp\left[\alpha_1 + \alpha'_{11} * HDIj + \alpha''_{11} * PRj\right]} \tag{8}$$

Using each country's values for the two aggregate variables we compute the total coefficient on gender, i.e. $\left(\alpha_1 + \alpha'_{11} * HDIj + \alpha''_{11} * PRj\right)$, and the values are reported in table 4. When we use PR, the total coefficient on being female remains negative for all countries but is insignificant for Botswana, Cape Verde, Namibia and South Africa. These results imply that the gender gap

in democratic support is conditional on the economic and institutional environment in which women live, with those in countries with high levels of development and political rights being as democratic as men. Equivalent results are obtained using *VA* as our indicator of political institutions.

The relative the relative odds ratio is lowest and not significantly different from 1 for Botswana, Cape Verde, Namibia and South Africa, and highest for Burkina Faso and Zimbabwe. In the latter countries and when measuring institutions by *PR*, it is 1.64 and 1.79, respectively, which, evaluated at the mean level of support for men in the country implies a gap of 12 and 13 percentage points, respectively.[21]

It is important to acknowledge at this point that we have treated the macroeconomic and institutional framework as given, yet both change over time. Moreover, despite an still unsettled controversy about causation between development and institutions, the evidence indicates that they tend to move together. This implies that the gender gap in policy priorities rather than being a given (if country specific) feature has the potential to evolve in response to changes in the macroeconomic and institutional context.

5.3 Alternative measures of democracy

In this section we explore further specifications to test the robustness of our results. The first step consists of recoding the dummy *support for democracy*. It is possible that differences in democratic support are driven by the fact that women are more likely than men not to reply to the question or to say that the political regime does not matter for them. In figure 1 we see, for instance, that roughly 5% of males reply they don't know, with the value rising to 10% for females. Hence we first exclude all individuals that reply *"I don't know"*, and build the variable *democracy 1* (dem 1) which takes a value of 1 if the individual says that *"democracy is preferable to any other kind of government"* and zero if s/he replies either that *"in some circumstances a non-democratic government can be preferable"* or *"for some like me it does not matter what kind of government"*. We also construct the dummy *democracy 2* (dem 2) which considers only those that say that democracy is preferable (value of 1) and those who reply that a non-democratic government may be preferable (value of 0).

The results are reported in the first two columns of table 5. Across columns the gender gap in preference for democracy remains significant and large. The coefficient on female is now

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[21]To compute these figures we use the country coefficients just reported and calculate the relative ratio $r_{mj}/r_{fj} = \left(\exp \left[\alpha_1 + \alpha'_{11} * HDIj + \alpha''_{11} * PRj \right] \right)^{-1}$. Using the fact that $r_{mj} = p_{mj}/(1 - p_{mj})$ and $r_{fj} = p_{fj}/(1 - p_{fj})$ we get the difference between p_{mj} and p_{fj}. The value of p_{mj} is the one for country j

lower than in the earlier regression, and the effect is offset by a larger impact of political rights (coefficients of 0.071 and 0.083, compared to 0.051 in the previous table). In contrast, the coefficient on *HDI* interacted with gender has lost its significance. These results indicate that the difference across genders that our earlier regressions and previous work capture does not simply reflect the fact that women are less likely to express an opinion on the desirability of a democratic regime. In particular, column [2] indicates that even when the only two options consider are *"democracy is preferable"* and *"a non-democratic government can be preferable"* differences across genders persist.

As with our earlier measure of democracy, we compute the overall effect of gender on the probability to support democracy to see whether the impact of institutions is sufficiently strong to offset the direct gender effect. The computations are reported in table 6. The first two column [dem 1] corresponds to the estimation in column [dem 1] of table 5, and the next column [dem 2] corresponds to the estimation in column [dem 2] of table 5. The results are even stronger than in table 4 for the first specification, with the overall coefficient on gender being significant for 19 countries. For the second, it is significant for only 11 countries out of 20 countries in our sample.

The last issue that we examine is whether the gender gap is also present when we use other views on the political system as proxies for democratic support. We consider three questions reported in the survey (questions 31, 32 and 38) which ask: whether the leader should be chosen through regular open and honest elections, whether many political parties are needed, and whether the number of turns for a leader should be limited. For each of these questions we create a dummy (denoted *elections, plurality* and *limits,* respectively) which takes a value of 1 if the person answers yes and zero otherwise. The results are reported in the last three columns of table 5. Surprisingly, the regression for support for elections, column [3], does not imply a gender gap. Both the coefficient on female and those of female interacted with aggregate variables are insignificant. The regressions for plurality and presidential limits, columns [4] and [5], replicate our main results, with the coefficient on gender being negative and significant but offset by the interaction between gender and either *HDI* or *PR.*

These results point towards the role of conflict as a possible explanation for the gender gap in democratic support. Women are as likely as men to reply that the country's leader should be chosen through elections, yet tend to disapprove of plurality and limits to terms in office. The presence of many parties and attempts to force a leader in power not to run again for election can be seen as potential sources of conflict, giving a possible explanation of why women show

less support for these features of a democratic regime while being as likely as men to reply that leaders should be chosen through elections.

6 Conclusion

The role of women in development has received substantial attention in recent years. Females have been argued to take different decisions from men, whether at the level of households or in the political arena. Greater education of mothers increases the schooling of children, female control over domestic finances raises expenditures in health and food, and female policy-makers increase the availability of public goods. Based on this evidence, the 2012 World Development Report emphasized the importance of women for development. At the same time, evidence trying to understand the determinants of support for democracy in developing countries has found that women are less supportive than men, raising the question of whether female attitudes can hamper the much-needed democratic legitimacy in these countries.

In this paper we have tried to understand to what extent there exists a gender gap in democratic support and what may be its potential causes. Our data for 20 Sub-Saharan African countries indicate that there is an 8 percentage points gap between the support expressed by men and that of women. We consider three possible hypotheses. First we examine whether socioeconomic characteristics can explain this gap. For example, women are less educated and are likely to have less access to media than men, and since both these characteristics are positively correlated with democratic support they could cause the gap. Our results indicate that even after controlling for a wide range of socioeconomic variables the gender gap remains large and significant.

We then test two further hypotheses. The first is that men and women have different policy priorities, with women being more interested in social issues and men in the political decision making process. It could then be that women see democracy as being less important than the actual policies implemented and thus are more likely to reply that in some circumstances a non-democratic regime may be better. Alternatively, the gap could be due to the economic and institutional context in which women live. The level of development, measures of gender gaps, and institutional quality may all affect women's responses. As proposed by the 'modernization hypothesis' of Inglehart (1997), changes in the economic and political environment may induce a decrease of the differences in gender roles and increase women's interest in issues traditionally considered to be the domain of men, such as politics.

We find that differences in policy priorities do not erode the gender gap. In contrast, ag-

gregate variables have a major impact, and in countries with a sufficiently high level of the Human Development Index and political rights there is no significant difference in the replies of the two sexes. Such evidence implies that the observed gender gap in democratic support does not capture intrinsic differences in the preferences of men and women but rather that it is highly dependent on the economic and institutional climate in which women live. However, our tests for the impact of the gender gap in education or political representation at the country level indicate that these variables have no effect on differences in democratic support, raising the question of whether the modernization hypothesis is a suitable explanation for our findings.

An alternative hypothesis is that women's lower support for democracy is related to women having a higher incidence or cost of conflict than men. Conflict may play a role because in the countries we consider intimate partner violence is prevalent, yet women may feel that democracy cannot prevent them for being subject to these aggressions. Alternatively, conflict can play a role because democratic transitions are often associated with civil conflict. Our analysis seems to point in this direction. When asked whether the country's leader should be chosen through open elections, women respond yes as often as men. However, they are less likely to support party plurality and limits on re-election. It is possible that these two aspects are seen by women as sources of potential conflict and hence as the 'down side of democracy', which would explain their replies to the broader question of whether they think democracy is the best possible regime. The relationship between conflict, gender and democratic support is, in our view, an issue that merits detailed investigation in the future.

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Figure 1: **Support for democracy by gender**
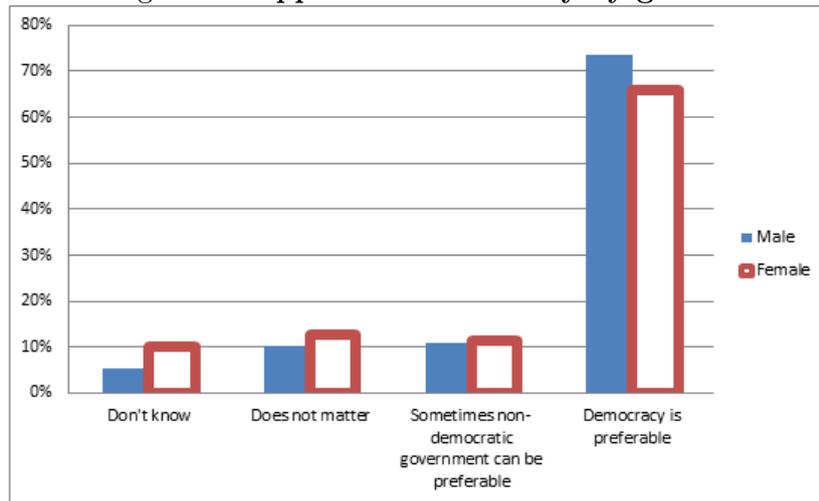
Table 1: **Descriptive Statistics: Afrobarometer data**

Variable	Categories				
Support for democracy	Democracy is preferable 69.68%	Don't Know 7.68%	Doesn't matter 11.57%	Non democracy can be preferable 11.11%	
Female	Females 49.99%	Males 50.01%			
Education	No formal 20.32%	Incomplete primary 18.34%	Completed primary 35.45%	Completed secondary 15.12%	Post secondary 10.77%
Age	[18-25] 27.36%	[26-35] 29.57%	>35 43.07%		
Location	Rural 62.18%	Urban 37.82%			
Employment	Employed 33.88%	Unemployed 34.19%	Inactive 31.82%		
Access to media	Radio 86.81%	TV 54.44%	News papers 40.66%		
Perception of corruption	Ever experienced 21.27%	Never experienced 78.73%			
Presence of someone during the interview	Noone 65.97%	Husband 6.74%	Childreen 12.27%	Someone else 14.01%	
Does the individual check someone	No 94.69%	Yes 5.31%			
Is the individual influenced	No 95.58%	Yes 4.42%			
Approached by community or party member	No 98.57%	Yes 1.43%			

Table 2: Support for democracy

Reference	variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male	female	-0.396***	-0.341***	-0.321***	-0.301***	-0.287***	-0.278***	-0.279***
		(0.028)	(0.028)	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)
No formal	educ1		0.219***	0.241***	0.204***	0.200***	0.190***	0.186***
			(0.046)	(0.047)	(0.048)	(0.048)	(0.048)	(0.048)
	educ2		0.552***	0.597***	0.536***	0.530***	0.507***	0.496***
			(0.042)	(0.045)	(0.047)	(0.047)	(0.047)	(0.047)
	educ3		0.676***	0.738***	0.658***	0.645***	0.619***	0.607***
			(0.052)	(0.056)	(0.059)	(0.059)	(0.060)	(0.060)
	educ4		0.922***	0.945***	0.849***	0.829***	0.800***	0.786***
			(0.052)	(0.064)	(0.068)	(0.069)	(0.069)	(0.069)
18-25	age2			0.108***	0.113***	0.115***	0.113***	0.110***
				(0.038)	(0.038)	(0.038)	(0.038)	(0.038)
	age3			0.297***	0.302***	0.312***	0.310***	0.308***
				(0.037)	(0.037)	(0.037)	(0.037)	(0.038)
Rural	urban			0.107***	0.0665**	0.0645*	0.0620*	0.0582*
				(0.032)	(0.034)	(0.034)	(0.034)	(0.034)
Employed	employ1			0.052	0.060	0.058	0.074*	0.076*
				(0.038)	(0.039)	(0.039)	(0.039)	(0.039)
	employ2			-0.003	0.010	0.011	0.009	0.009
				(0.037)	(0.037)	(0.037)	(0.038)	(0.038)
No access	radio				0.273***	0.268***	0.253***	0.253***
					(0.044)	(0.044)	(0.044)	(0.044)
	tv				0.066*	0.063	0.062	0.060
					(0.039)	(0.039)	(0.039)	(0.039)
	paper				0.099**	0.098**	0.086**	0.086**
					(0.039)	(0.039)	(0.039)	(0.039)
Never	corruption				-0.179***	-0.178***	-0.181***	-0.182***
					(0.037)	(0.037)	(0.037)	(0.037)
No one	presence2					-0.024	-0.027	-0.031
						(0.059)	(0.059)	(0.059)
	presence3					-0.115***	-0.113**	-0.113**
						(0.044)	(0.045)	(0.045)
	presence4					0.064	0.063	0.063
						(0.045)	(0.045)	(0.045)
No	check					-0.215***	-0.205***	-0.204***
						(0.078)	(0.078)	(0.078)
No	influence					-0.143*	-0.149*	-0.151*
						(0.086)	(0.086)	(0.086)
No	approach					-0.438***	-0.379***	-0.373***
						(0.118)	(0.119)	(0.119)
Badly	gappoor1						-0.203***	-0.199***
							(0.038)	(0.038)
	gappoor2						-0.364***	-0.357***
							(0.067)	(0.067)
	manage1						0.168***	0.170***
							(0.033)	(0.033)
	manage2						-0.294***	-0.292***
							(0.067)	(0.067)
Else	Macro							0.171***
								(0.053)
	Socialdis							0.088**
								(0.034)
	Poliwar							0.057
								(0.093)
	Infras							0.068
								(0.047)
	Agri							-0.189
								(0.156)
	Nothing							-0.464**
								(0.208)
	Constant	1.075***	0.642***	0.395***	0.178	0.211	0.245*	0.205
		(0.128)	(0.128)	(0.140)	(0.145)	(0.146)	(0.144)	(0.144)
	LL	-15638	-15438	-15120	-14780	-14692	-14609	-14598
	BIC	31306	30948	30363	29723	29609	29483	29522
	Nb obs	26,938	26,897	26,501	26,062	25,953	25,918	25,918
	Nb countries	20	20	20	20	20	20	20

The table reports coefficients from the logit estimation, the dependent variable is support for democracy. Standard errors are in parenthesis. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 3: Support for democracy and institutions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
female	-0.939***	-0.908***	-0.855***	-0.939***	-0.932***	-0.879***	-0.610***	-0.754***	-0.932***	-0.609***	-0.929***
	(0.159)	(0.140)	(0.138)	(0.151)	(0.141)	(0.198)	(0.179)	(0.151)	(0.141)	(0.179)	(0.145)
HDI	0.956	-0.449	-0.674	-0.779	-0.976	-1.329	-1.419	-0.862	0.932	0.557	
	(1.463)	(1.279)	(1.525)	(1.733)	(1.512)	(1.754)	(1.614)	(1.417)	(1.814)	(1.988)	
HDI*female	1.115***	1.172***	1.052***	0.989**	0.891***	1.317***	0.768**	1.086***	0.891***	0.768**	
	(0.356)	(0.306)	(0.347)	(0.393)	(0.346)	(0.389)	(0.378)	(0.317)	(0.346)	(0.378)	
GAP	-1.654**								-1.521*	-1.401	-1.482*
	(0.839)								(0.891)	(0.903)	(0.888)
GAP*female	0.187										
	(0.208)										
NSEATS		-0.019									
		(0.014)									
NSEATS*female		0.005									
		(0.003)									
DEM			0.003								
			(0.057)								
DEM*female			0.017								
			(0.013)								
CL				0.017							
				(0.156)							
CL*female				0.043							
				(0.036)							
PR					0.0402				-0.018		-0.012
					(0.099)				(0.097)		(0.096)
PR*female					0.051**				0.051**		0.056**
					(0.023)				(0.023)		(0.022)
RL						0.176					
						(0.302)					
RL*female						-0.006					
						(0.069)					
VA							0.236			0.048	
							(0.298)			(0.307)	
VA*female							0.154**			0.154**	
							(0.069)			(0.069)	
PS								0.064			
								(0.172)			
PS*female								0.069*			
								(0.038)			
IHDI											2.723
											(5.571)
IHDI*female											2.529**
											(1.052)
Constant	1.142	0.780	0.590	0.487	0.454	0.889	0.877	0.618	1.111	1.111	1.079
	(0.644)	(0.620)	(0.606)	(0.663)	(0.616)	(0.879)	(0.753)	(0.662)	(0.693)	(0.728)	(0.701)
Nb obs	25,918	25,918	25,918	25,918	25,918	25,918	25,918	25,918	25,918	25,918	25,918
Nb country	20	20	20	20	20	20	20	20	20	20	20
LL	-14586	-14586	-14587	-14588	-14586	-14588	-14585	-14587	-14584	-14584	-14585
BIC	29539	29539	29541	29542	29538	29543	29537	29539	29545	29545	29546

The table reports coefficients from the logit estimation, the dependent variable is *support for democracy*. All the regressors that are in column 7 of table 1 have been included but not reported. Standard errors are in parenthesis. *** denotes significant at 1%, ** significant at 5%, * significant at 10%.

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Table 4: Coefficient at country level

Country	Variable values			Total coeff on female		Odd ratio	
	HDI	PR	VA	with PR	with VA	with PR	with VA
Benin	0.419	6	0.302	-0.253(0.046)***	-0.241(0.049)***	1.287	1.272
Botswana	0.624	6	0.485	-0.070(0.059)	-0.055(0.059)	1.073	1.057
Burkina Faso	0.321	3	-0.32	-0.493(0.053)***	-0.412(0.053)***	1.637	1.509
Cape Verde	0.563	7	0.926	-0.073(0.054)	-0.034(0.064)	1.076	1.035
Ghana	0.519	7	0.384	-0.113(0.053)**	-0.151(0.041)***	1.119	1.163
Kenya	0.493	4	-0.289	-0.289(0.041)***	-0.275(0.039)***	1.335	1.316
Lesotho	0.436	6	-0.111	-0.238(0.043)***	-0.291(0.031)***	1.268	1.338
Liberia	0.328	5	-0.244	-0.385 (0.055)***	-0.395(0.052)***	1.469	1.484
Madagascar	0.483	4	-0.341	-0.298(0.040)***	-0.291(0.038)***	1.347	1.337
Malawi	0.377	4	-0.254	-0.392(0.038)***	-0.359(0.039)***	1.480	1.431
Mali	0.346	6	0.16	-0.318(0.064)***	-0.319(0.063)***	1.374	1.375
Mozambique	0.304	5	-0.073	-0.406(0.062)***	-0.387(0.066)***	1.501	1.472
Namibia	0.613	6	0.436	-0.080(0.056)	-0.071(0.056)	1.083	1.074
Nigeria	0.446	4	-0.76	-0.331(0.035)***	-0.384(0.052)***	1.392	1.467
Senegal	0.451	6	-0.283	-0.224(0.041)***	-0.306(0.032)***	1.251	1.358
South Africa	0.608	6	0.552	-0.084(0.055)	-0.057(0.056)	1.088	1.059
Tanzania	0.448	4	-0.174	-0.329(0.035)***	-0.292(0.031)***	1.389	1.339
Uganda	0.43	3	-0.503	-0.396(0.049)***	-0.356(0.037)***	1.486	1.428
Zambia	0.413	5	-0.181	-0.309(0.035)***	-0.320(0.033)***	1.362	1.377
Zimbabwe	0.338	1	-1.538	-0.580(0.081)***	-0.586(0.084)***	1.786	1.797

Standard errors are in parenthesis. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 5: Alternative measures of support for democracy

Variable	[dem 1]	[dem 2]	[elections]	[plurality]	[limits]
female	-0.792***	-0.651***	-0.213	-0.489***	-0.593***
	(0.151)	(0.211)	(0.153)	(0.136)	(0.139)
HDI	2.073	3.235*	0.635	0.244	-0.583
	(1.814)	(1.764)	(1.707)	(1.076)	(1.927)
HDI*female	0.523	0.163	0.174	-0.051	0.889***
	(0.368)	(0.488)	(0.374)	(0.327)	(0.345)
GAP	-1.812**	-1.693**	-1.266	-0.327	-0.694
	(0.891)	(0.861)	(0.837)	(0.525)	(0.947)
PR	-0.049	-0.169*	-0.055	-0.052	-0.045
	(0.097)	(0.0967)	(0.093)	(0.059)	(0.105)
PR*female	0.071***	0.083**	0.014	0.069***	0.0005
	(0.025)	(0.036)	(0.025)	(0.022)	(0.023)
Constant	1.528**	2.415***	1.909***	1.021**	1.514**
	(0.694)	(0.680)	(0.653)	(0.415)	(0.735)
LL	-12571	-7918	-13150	-16087	-14940
BIC	25516	16206	26677	32550	30257
Nb obs	24,041	21,053	25,912	25,915	25,911
Nb country	20	20	20	20	20

Table reports coefficients from the logit estimation, The dependent variable is *democracy1* in [1], *democracy2* in [2], *elections* in [3], *plurality* in [4] and *limits* in [5]. All the regressors that are in column 7 of table 1 have been included but not reported. Standard errors are in parenthesis. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table 6: Coefficient at the country level

Country	HDI	PR	Total Coeff on female [dem 1]	Total Coeff on female [dem 2]	Odd ratio [dem 1]	Odd ratio [dem 2]
Benin	0.419	6	-0.147(0.050)***	-0.085(0.066)	1.158	1.088
Botswana	0.624	6	-0.040(0.004)***	-0.051(0.084)	1.040	1.053
Burkina faso	0.321	3	-0.411(0.003)***	-0.350 (0.081)***	1.509	1.419
Cape Verde	0.563	7	-0.001 (0.003)	0.022(0.079)	1.001	0.978
Ghana	0.519	7	-0.024(0.003)***	0.015(0.078)	1.024	0.986
Kenya	0.493	4	-0.250(0.002)***	-0.239(0.063)***	1.284	1.270
Lesotho	0.436	6	-0.138(0.002)***	-0.082(0.062)	1.148	1.085
Liberia	0.328	5	-0.265(0.003)***	-0.183(0.077)**	1.304	1.200
Madagascar	0.483	4	-0.255(0.002)***	-0.240(0.060)***	1.291	1.272
Malawi	0.377	4	-0.311(0.002)***	-0.258 (0.057)***	1.365	1.294
Mali	0.346	6	-0.185(0.005)***	-0.097(0.091)	1.203	1.101
Mozambique	0.304	5	-0.278(0.004)***	-0.186(0.087)**	1.320	1.205
Namibia	0.613	6	-0.045(0.004)***	-0.053(0.080)	1.046	1.055
Nigeria	0.446	4	-0.275(0.001)***	-0.246(0.054)***	1.316	1.279
Senegal	0.451	6	-0.130(0.002)***	-0.079(0.059)	1.139	1.083
South Africa	0.608	6	-0.048(0.003)***	-0.054(0.078)	1.049	1.055
Tanzania	0.448	4	-0.274(0.001)***	-0.246(0.054)***	1.315	1.279
Uganda	0.43	3	-0.354(0.003)***	-0.332(0.077)***	1.425	1.394
Zambia	0.413	5	-0.221(0.001)***	-0.169(0.049)***	1.247	1.184
Zimbabwe	0.338	1	-0.544(0.008)***	-0.513(0.131)***	1.723	1.670

[dem 1] corresponds to the estimation in column [dem 1] of Table 5 and [dem 2] corresponds to the estimation in column [dem 2] of Table 5. Standard errors are in parenthesis. *** significant at 1%, ** significant at 5%, * significant at 10%.

Table A 1: **Data sources**

The Afrobarometer data can be accessed at http://www.afrobarometer.org/.
The indexes of HDI, literacy rates and the seats held by women at the national courts are available at
http://hdr.undp.org/en/statistics/.
The index of IHDI is provided by Huang and Quibria (2013).
The indexes of political rights and civil liberties can be acessed at hthttp://www.freedomhouse.org/
Polity V is available at http://www.systemicpeace.org/polity/polity4.htm.
The indexes of governance indicators are available at http://info.worldbank.org/governance/wgi/

Table A 2: Description of priorities

Macro	Management of the economy, Wages income and salaries
	Unemployment, Rates and Taxes
Social-discrim	Poverty/Destitution, Food/shortage/Famine
	Education, Housing, Orphans/street
	children/homeless children, Health, AIDS
	Sickness/disease,Discrimination/inequality
	Gender issues/women's rights
Politics-war	Crime and security, Corruption
	Political violence
	Political instability/political division/ethnic tensions
	Democracy/political rights, international and civil war
Infras	Transportation,Communications
	Infrastructure/roads, Electricity
	Water supply, services, Agricultural marketing
	Barrage, Moulin
Agri	Farming/agriculture, Drought
	Land, Farm inputs

Table A 3: **Descriptive Statistics for Institutions**

Variable	Mean	STD	Min	Max	Data source
HDI	0.454	0.096	0.304	0.624	African Development Indicators, UNDP
IHDI	0.454	0.096	0.304	0.624	Huang and Quibria (2013)
Nationalseats	18.6	9.32	7	34.8	African Development Indicators, UNDP
GAP	0.812	0.162	0.522	1.150	African Development Indicators, UNDP
Democracy	5.786	2.719	1	10	Polity V
Political rights	4.824	1.471	1	7	Freedom House
Civil liberties	4.913	1.066	2	7	Freedom House
Voice accountability	-0.109	0.534	-1.538	0.926	Worlwide Governance Indicators, World Bank
Rule of law	-.393	0.548	-1.766	0.659	Worlwide Governance Indicators, World Bank
Political stability	-0.261	0.828	-1.862	1.186	Worlwide Governance Indicators, World Bank

Table A 4: Coefficients of correlation

Variable	HDI	IHDI	NSEATS	GAP	DEM	PR	CL	VA	RL	PS
HDI	1									
IHDI	0.984	1								
NSEATS	0.196	0.180	1							
GAP	0.572	0.574	0.218	1						
DEM	0.521	0.505	-0.128	0.279	1					
PR	0.521	0.482	0.059	0.082	0.860	1				
CL	0.663	0.594	0.171	0.116	0.696	0.833	1			
VA	0.624	0.561	0.232	0.158	0.757	0.877	0.939	1		
RL	0.660	0.602	0.322	0.248	0.495	0.660	0.795	0.837	1	
PS	0.371	0.304	0.282	0.084	0.475	0.614	0.683	0.762	0.811	1

Table A 5: **Support for Democracy dropping countries**

Country dropped	female	HDI*female	PR*female
Benin	-0.938***	0.978***	0.045*
Botswana	-0.937***	0.921**	0.051**
Burkina Faso	-0.832***	0.775**	0.046**
Cape Verde	-0.908***	0.875**	0.049**
Ghana	-0.930***	0.878**	0.055**
Kenya	-0.933***	0.937***	0.049**
Lesotho	-0.924***	0.932***	0.046*
Liberia	-0.970***	1.040***	0.045*
Madagascar	-0.945***	0.984***	0.046*
Malawi	-0.837***	0.770**	0.048**
Mali	-0.912***	0.836**	0.054**
Mozambique	-1.024***	1.216***	0.038
Namibia	-0.824***	0.633*	0.052**
Nigeria	-0.909***	0.901***	0.049**
Senegal	-0.928***	0.753**	0.069***
South Africa	-0.909***	0.874**	0.051**
Tanzania	-0.928***	0.931***	0.048**
Uganda	-0.963***	0.850**	0.061**
zambia	-0.948***	0.962***	0.047**
zimbabwe	-1.046***	0.871**	0.074***

The coefficients reported on each line are those obtained by dropping the country on that line.
*** significant at 1%, ** significant at 5%, * significant at 10%.

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