Political Science Research and Methods (2023), page 1 of 18
doi:10.1017/psrm.2023.37

ORIGINAL ARTICLE

When does education increase political participation? Evidence from Senegal

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(Received 10 June 2022; revised 11 April 2023; accepted 17 June 2023)

Abstract

We argue that education's effect on political participation in developing democracies depends on the strength of democratic institutions. Education increases awareness of, and interest in, politics, which help citizens to prevent democratic erosion through increased political participation. We examine Senegal, a stable but developing democracy where presidential over-reach threatened to weaken democracy. For causal identification, we use a difference-in-differences strategy that exploits variation in the intensity of a major school reform and citizens' ages during reform implementation. Results indicate that schooling increases interest in politics and greater support for democratic institutions—but no increased political participation in the aggregate. Education increases political participation primarily when democracy is threatened, when support for democratic institutions among educated individuals is also greater.

Keywords: Comparative politics; developing countries; political participation and turnout; Education; African politics

1. Introduction

The link between educational attainment and political participation has long interested political scientists, many of whom have focused their analyses on consolidated Western democracies. While some scholars find that education increases participation because it increases knowledge, skills, and socialization (Lipset, 1959; Dee, 2004; Milligan *et al.*, 2004), more recent scholarship question the causal validity of this effect (Tenn, 2007; Kam and Palmer, 2008; Berinsky and Lenz, 2011). Overall, the causal evidence points to a limited—if any—relationship between education and political participation in stable Western democracies.

There has been comparatively little research on the relationship between education and political participation within stable democracies in developing contexts. This gap is important because even relatively stable democracies in developing contexts exhibit marked institutional differences from consolidated Western democracies (Schedler, 1998). Democracies in developing countries are more likely to experience fluctuations in their democratic institutional strength over time. Despite maintaining free and fair elections with peaceful power transitions (Lindberg, 2006), many developing democracies are more frequently subject to periods where democratic strength is threatened (Schedler, 1998; Cheeseman, 2010). During such periods, democratic institutions functionally remain in place but are weakened or threatened by a temporary abuse of power by the incumbent party—including restrictions on freedom of expression, censoring the media, and harassing prominent members of opposition parties. Citizens play a key role in preventing democratic erosion through political participation (Svolik, 2021).

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https://doi.org/10.1017/psrm.2023.37 Published online by Cambridge University Press

We argue that democratic institutional strength is a key variable moderating the effect of education on political participation. Our logic builds upon the variation in causal evidence from recent scholarship in developing countries: while education had a positive effect on education in nascent democracies (Wantchekon *et al.*, 2015; Larreguy and Marshall, 2017), in more stable democracies there were null effects (Friedman *et al.*, 2016; Parinduri, 2019) and in authoritarian contexts, negative effects (Croke *et al.*, 2016). This variation suggests that the effect of education on participation may depend on the country's regime type. Education is relevant to political participation through the channel of increased cognitive skills (Lipset, 1959; Deutsch, 1961): education increases interest in, and understanding of, politics, which allows individuals to discern the political context and weigh the benefits of costly political participation. Thus, depending on regime type and the likelihood of bringing about political change, education may either compel voters to either increase or decrease political participation.

Where sufficiently democratic political institutions exist, educated citizens should have no additional incentives to participate in politics because citizens may perceive no need for strengthening already-strong democratic institutions. This logic comports with not only the largely null findings from Western democracies, but should be especially true in the context of developing countries, where there are often no clear policy differences across parties (Manning, 2005)—further reducing incentives to participate simply due to partisanship. However, even if political institutions are sufficiently democratic in nature, we expect the positive relationship between education and participation to be reignited when democratic institutions are threatened. Since educated citizens should be uniquely positioned to identify these threats, they should react by increasing their political participation to support the restoration of democracy.

We test our theoretical argument in Senegal and use within-country variation to investigate the links between education, the strength of political institutions, and political participation. Senegal is an ideal case for our study because it exhibits both democratic strength and periods where presidential over-reach threatened its democracy. As one of Africa's oldest and strongest democracies, Senegal has never experienced a coup d'état or harsh authoritarianism. Multiparty competition began in 1976, and democratic reforms—including an independent electoral administration and a secret ballot, among other measures—quickly followed. Senegal also experienced peaceful democratic transitions: presidents Abdou Diouf (in 2000) and Abdoulaye Wade (in 2012) both left office after losing their reelection bids. Finally, Senegal enjoys important institutional features of a strong democracy, such as an independent media and freedom of speech.

Yet, Senegal's democratic strength was threatened in the mid-2000s due to inflated presidential powers, a weak legislative branch, and a judicial branch easily manipulated by the president (Mbow, 2008; Beck, 2012). President Wade's anti-opposition measures began in 2004 and escalated for the next three years. In 2006 and 2007, Wade's government persecuted independent media and NGOs that attempted to hold the government accountable. Democratic quality did not return to the early 2000s levels until 2012, when Wade was voted out of office and peacefully transferred power to president-elect Macky Sall.

To causally identify the effect of education on political participation in Senegal, we rely on a large-scale school construction program implemented in the early 2000s. This initiative targeted rural areas that previously had little to no access to schooling, opening up educational opportunities to under-served communities. Middle school enrollment quadrupled in the 2000s, and the transition rate from primary to lower secondary increased from 35% in 1999 to 88% in 2011 (UNESCO, 2015). We first identify effects on an individual's educational attainment using a difference-in-differences (DiD) strategy that exploits (1) subnational variation in the intensity of the school reform and (2) whether an individual's age during the reform allowed them to benefit from it. Following Larreguy and Marshall (2017), we operationalize treatment intensity as the middle school completion rates of male and female birth cohorts that completed their education just prior to the reform within each *communauté rurale* (CR), the lowest administrative unit above the village level. Reforms should have a disproportionately greater effect in CRs with

https://doi.org/10.1017/psrm.2023.37 Published online by Cambridge University Press

lowest levels of education—and only among those who are young enough to benefit from the reforms.

We then assess education exposure's effect on political outcomes as measured by Afrobarometer surveys. We find that increased education access leads to substantial economic gains, greater interest in politics, and support for democratic institutions. We find that education has no effect on political participation in the aggregate; greater education access *only* had a differentially positive impact of participation during the 2005 and 2008 Afrobarometer survey years—when the threat of democratic erosion was most present. These results support our argument that education heightens awareness of politics. During this time, individuals with better access to education report lower democratic quality and even higher support for democratic institutions than do individuals with worse access. Reflecting Senegal's hyperpresidentialism, higher-access individuals have stronger preferences for checks on presidential power in the aggregate, and even more so in 2005 and 2008. All our estimates are robust to a variety of different specifications.

Our findings allow us to rule out potential alternative mechanisms. First, while we argue that education affects participation through increased cognizance of democratic institutional strength and interest in politics, existing scholarship have identified potential alternative mechanisms such as instilling a democratic culture (Almond and Verba, 1963; Evans and Rose, 2007), fostering empowerment (Kuenzi, 2006), or increasing an individual's bureaucratic language proficiency (Bleck, 2015). These alternative mechanisms, however, would predict a monotonic increase in political participation across regime type and within stable democracies such as Senegal. They are thus at odds with our findings that education *only* leads to increased political participation during periods of when democracy is threatened. Second, we rule out increased participation due to discontent over performance: education may have increased scrutiny over the government's policies. We show that education increased frustrations over corruption but not government performance, lending credence to our argument. Third, we show evidence that our results cannot be explained by varying levels of clientelism across election years—which would bias our results toward zero.

These results support our argument that the effect of education on political participation depends on the strength of democratic institutions. While we may not always observe greater participation from the educated citizenry when democratic institutions are stable, we find that educational attainment remains an important positive factor for political development. As we show, education increases interest in politics; thus, when democracy is threatened, we should expect educated citizens to play a leading role in restoring the strength of democratic institutions. These results complement recent work on education's political effects under different regime types (Dahlum and Wig, 2019; Paglayan, 2021). Finally, the findings in the paper have implications for sustaining democratic norms beyond the developing world (Levitsky and Ziblatt, 2018; Graham and Svolik, 2020)—particularly given the recent wave of populism that has undermined democratic institutions across the world (Hyde, 2020).

2. Literature and theory

Modernization theory and the political socialization literature argue that education leads to political participation and democratization: as citizens become more educated, they expand their interests, better understand politics, and develop democratic values (Lipset, 1959; Deutsch, 1961). Recent research emphasizing causality (Milligan *et al.*, 2004; Dee, 2004; Sondheimer and Green, 2010) indeed find a positive effect of education on civic attitudes, political interest, and participation—including turnout.

These findings, however, do not comport with historical trends (Putnam, 1995): while education in the United States has increased steadily over time, we have not witnessed a similar trend in voter turnout. To reconcile this inconsistency, scholars have pointed to omissions in research

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design: after adjustments to causal identification, the effect of education on political participation disappears or significantly weakens (Kam and Palmer, 2008; Henderson and Chatfield, 2011). Most relevantly, Marshall (2019) argues that the results in Milligan *et al.* (2004) and Dee (2004) have not adequately isolated the causal effect of education, and that there is no effect of education on turnout in the United States upon correction. Rather than participation, education primarily plays the role of shaping democratic values (Marshall, 2016, 2019) and interest in politics (Siedler, 2010). In a wider sample of 15 European countries, Borgonovi *et al.* (2010) finds that the relationship between education and turnout disappears once they instrument education with compulsory schooling. Articles using alternative identification strategies generally also find no significant effect of education on voter turnout in the United States, Sweden, and Norway—either in the short or long run (Tenn, 2007; Berinsky and Lenz, 2011; Pelkonen, 2012; Ahlskog, 2021).[1]

Yet, there is strong evidence that education positively affects political participation through formal channels in developing contexts. Larreguy and Marshall (2017) find that education increased political participation in Nigeria: more educated citizens are more likely to be interested in and informed about politics, to contact local government officials, to participate in community associations and meetings, and to vote in elections. Formal education in Mali (Bleck, 2015) and nonformal education in Senegal (Kuenzi, 2006) have also increased political knowledge and participation. The relationship between and education and participation also extends across generations: Wantchekon *et al.* (2015) demonstrate that educated individuals in colonial Benin, as well as their descendants in post-colonial Benin today, are more likely to be politically active.

What explains these different results between Western and developing contexts? We argue that the strength of a country's democratic institutions might play an important role in dictating the extent to which educated citizens choose to participate in politics. When deciding whether to participate, individuals weigh the clear costs against the more uncertain benefits of political participation (Riker and Ordeshook, 1968). While individuals may vote or engage in other forms of political participation for expressive reasons (Schuessler, 2000), this is particularly unlikely in developing contexts—and even more so for more educated individuals—since political parties often have indistinguishable political platforms (Manning, 2005).

Thus, political participation when democratic institutions are established and well-functioning imposes greater cost than benefit. However, as the expectation of democratic *improvement* increases, so do the benefits of political participation. Unlike results from Western democracies, findings from developing contexts primarily consider countries and time periods where democratic institutions are fragile. In these cases, political participation provides an avenue for change for citizens who seek to bolster democracy and combat poor governance. This argument accords with the findings from (Croke *et al.*, 2016), which investigates formal political participation in an authoritarian context and finds a reduction in political participation among more educated citizens, suggesting disengagement where there is no avenue for change.[2]

A key mechanism linking education to greater political participation in developing contexts is that the benefits of political participation are more identifiable to individuals who are more interested in, and knowledgeable of, political affairs. As citizens receive more education, they are more likely to critically evaluate government performance and make determinations about whether political participation may lead to improvements in governance and democratic quality (Lipset, 1959; Deutsch, 1961). Educated citizens therefore recognize that the returns to participation depend significantly on the strength of democratic institutions. While participation in

[1]Sondheimer and Green (2010) is an exception to this. In addition, in Sweden, Lindgren *et al.* (2019) find no effect of education on political participation on the aggregate, but do find turnout gains among people in low socioeconomic households.

[2]Here we differentiate between formal political participation and contentious politics, which takes place outside of the institutionalized political system (Dahlum and Wig, 2019).

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autocracies is unlikely to lead to change and is likely to validate the regime, the basic democratic institutions that characterize emerging democracies, such as relatively free and fair elections, can be a venue for citizens to oust poorly-performing, entrenched incumbents. Ultimately, when democratic institutions are accountable and democracy is functioning well, political participation is unlikely to have much impact. This is especially so when there is limited policy differentiation across political alternatives, as in the context of Africa (Manning, 2005). Thus, the effect of education on political participation should vary with the strength of democratic institutions in a country.

We examine Senegal, a stable but developing democracy that has scored highly in terms of the strength of its democratic institutions. Senegal is an ideal case to test our argument: despite being one of Africa's oldest and strongest democracies, the strength of its democratic institutions was tested when presidential over-reach threatened its democratic institutions in the mid-2000s. This internal change in Senegal's democratic quality allows us to test for the differential effect of increased education on political participation as a function of democratic institutional strength, and the mechanisms through which increased education affects political participation.

Specifically, if education affects political participation through increased political awareness, we should expect no differential effect of education on participation during periods of strong democratic institutions, but a positive differential effect during periods of when these institutions are threatened. On the contrary, if education affects democracy through other mechanisms such as greater democratic values or connectedness to national political life (Almond and Verba, 1963; Evans and Rose, 2007), expressive voting (Schuessler, 2000), or bureaucratic language proficiency (Bleck, 2015), education should increase political participation *regardless* of whether democratic institutions are being challenged.

We formulate four testable hypotheses. First, we test the core channel through which our argument runs: that formal education in Senegal does indeed increase an individual's understanding of, and interest in, politics.

Hypothesis 1: Education should positively affect knowledge of and interest in politics in Senegal.

Second, when democratic institutions are strong and there is little policy differentiation between political parties—as in the context of many African countries such as Senegal—educated citizens should not be more likely to participate in politics.

Hypothesis 2: In Senegal, a stable but developing democracy with strong democratic institutions, education should have a limited effect on political participation in the aggregate.

However, education should increase participation if democratic institutions are threatened. Educated citizens—because they have greater knowledge and political awareness—should be more willing to participate in politics since the benefits of participation increase during these periods.

Hypothesis 3: Education should have a positive effect on citizen support for democratic institutions and political participation when democratic institutions were threatened in Senegal between 2004 and 2012.

Finally, more educated citizens in stable but developing democracies should demand constraints on aspects of their government that most threaten democracy when these threats emerge. In the case of Senegal, more educated citizens should be more aware of, and critical of, the hyper-presidentialism in the country (Beck, 2012). They should therefore exhibit greater support for checks on presidential power when democratic institutions are weak.

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Hypothesis 4: Educational attainment should lead citizens to be better able to identify when democratic institutions are threatened by the office of the presidency and more likely to demand checks that limit its power during that period.

3. Democracy in Senegal

3.1 The rise of democracy in Senegal

Since 2000, "Senegal reclaimed its cherished status as Africa's most 'advanced' democracy" (Galvan, 2001). Although a *de facto* single-party state following its independence in 1960, it remarkably transitioned to democratic rule by 2000 when opposition party leader Abdoulaye Wade won the presidential election following four failed campaigns. Incumbent Abdou Diouf did not contest the election's outcome: the transition was peaceful, and Senegal quickly became the model of a peaceful change from competitive authoritarianism to a multiparty democracy.

However, the transition to democracy and the strengthening of democratic institutions did not happen overnight. Although Senegal was ruled by one party before 2000, it had slowly moved toward democratic competition since allowing multiparty competition in 1976. A series of reforms followed over the next two decades and included such measures as "lowering the voting age, the introduction of a secret ballot, establishing an independent electoral observer commission, competitive local, municipal and regional elections, adopting a mixed legislative elector system,…computerized voting lists, and full press freedom" (Mozaffar and Vengroff, 2002, 138). Elections have been free and fair since 1993 (Villalon, 1994), and many institutions necessary for democracy, including open media and lack of citizen censorship, were in place well before the landmark elections in 2000.

Although these reforms solidified democratic institutions, single-party dominance prevented Senegal from consolidating its democracy. Until 1999, the Polity IV Project, which assigns a yearly polity score for each country ranging from −10 (full autocracy) to 10 (full democracy), had consistently given Senegal a polity score of −1 due to the lack of turnover at the presidential level. With Wade's election in 2000, Senegal's polity score jumped to 8 (Polity IV Project, 2019).

3.2 Challenges to Senegalese democracy

While Senegal has invested in its democratic institutions, these institutions have also faced challenges. Since independence, the country has suffered from hyperpresidentialism: politics has been marred at times by presidential overreach (Beck, 2012). This continued during Wade's presidency, when presidential powers remained strong and unchecked by the weak legislature and judiciary. The result was that, early in Wade's presidency, "country experts [were] increasingly outspoken in their condemnation of President Wade's presidency" (Elgie, 2011).

From the very beginning, Wade "did offer a few scattered hints of authoritarian tendencies" (Galvan, 2001) and his subsequent rule pointed to dangers of a "return to personalist politics" (Mbow, 2008). Throughout his presidency, Wade's party has used its power to silence the opposition and the media as well as to crack down on citizen-led protests against anti-democratic government actions. This began in 2003 when opposition leader Talla Sylla was attacked for criticizing the president and worsened after Wade dismissed prime minister Idrissa Seck in 2004 (Kelly, 2012). In 2006 and 2007, government security forces routinely attacked journalists and NGOs that reported on government corruption or criticized the president. To intimidate the opposite, Wade "threatened to reopen legal cases against a number of prominent opposition officials" (Freedom House, 2008). This worsened leading up to the 2007 elections, during which the government further cracked down on peaceful demonstrations and marches led by opposition leaders.

Freedom in the World reports from 2005 to 2008 cited significant problems surrounding routine crackdown on opposition and passing new laws to give the ruling party an advantage. In advance of the 2007 elections, Wade sought to pass new laws to reinforce his powers while

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also ensuring that the government bodies tasked with investigating electoral malfeasance were ill-equipped to take on opposition complaints (Freedom House, 2008). For example, Wade filled the Constitutional Courts with loyalists who gave Wade unfair influence in the 2007 election and refused to investigate allegations of electoral fraud in 2007 (Mbow, 2008). The Election Commission, an independent body, only had a "limited mandate" that allows it to "monitor and supervise" rather than to enforce electoral rules (Kelly, 2012, 122). Reflecting such democratic decline, the Polity Project downgraded Senegal's democracy score in 2007, attributing this to declines in constraints to the executive (Polity IV Project, 2019). In response, twelve opposition parties boycotted the legislative elections in 2007, citing electoral irregularities.

The 2008 *Freedom in the World* further reported that Wade's "political maneuvering" and electoral victory in 2007 was "primarily a result of the opposition's inability to unite behind a single candidate" (Freedom House, 2008). Indeed, hyperpresidentialism in Senegal was made easier by a weak opposition due to the proliferation of dozens of small political parties. Similar to political parties across Africa (Manning, 2005), these opposition parties maintain indistinguishable political platforms, with no differentiation in development goals (Kelly, 2014). Rather than relying on policy differentiation, political parties in Senegal—including the main parties who contest for the presidency—win voters through a mixture of clientelism and leader recognition (Osei, 2013).

3.3 Education and perceptions of threats to democracy

The president's political manipulation of the law was noticed earlier by individuals with higher education. While Senegalese democracy faced generally little scrutiny during Wade's initial years as president,[3] enthusiasm quickly began "ebbing away, first among Senegalese intellectuals and then among foreign analysts" Mbow (2008, 157).

We emphasize the *difference* in interpreting political events between those with greater educational attainment, and those with less. Specifically, education led people to care more about democracy and discern threats to democracy more *quickly*. Accordingly, we examine how participants with and without secondary school education evaluated democracy in Senegal between 2002 and 2014. We use Afrobarometer surveys from 2002 to 2014 provide a suggestive correlation between education and the ability to perceive declines in Senegal's democratic quality. Based on the sequence of political events, threats to democracy began in 2003 and continued until the 2012 elections. Due to the highly publicized elections in 2007, it became clearer to everyone by the 2008 survey that democratic institutions had eroded in Senegal. However, before that, threats to Senegal's democracy should have primarily been noticed by the educated citizenry.

First, in Figure 1, survey responses validate qualitative accounts that democracy was threatened: citizen views of Senegalese democracy sharply declined between 2002 and 2008 across the board. However, educated citizens became critical much sooner, and held opinions that were more in line with ongoing Senegalese politics by 2005. Respondents were asked whether they were satisfied with Senegal's democracy and whether they believed that Senegal is a functioning democracy. While more than 50% of the population answered affirmatively, this is largely driven by those with less education. Among those who had attended some secondary school, opinions already dropped substantially in 2005—when threats to democracy had just begun. On the other hand, respondents with primary education or lower reported roughly similar levels of satisfaction between 2002 and 2005, and were even more positive that Senegal was a functioning democracy in 2005. By 2008, all citizens reported lower satisfaction; but, satisfaction was lower for those who had attended secondary school.

[3]For example, Freedom House, V-Dem, and Polity scores failed to quickly reflect these nuanced issues; while V-Dem and Polity did reduce Senegal's scores in 2007, Freedom House did not downgrade Senegal until 2009.

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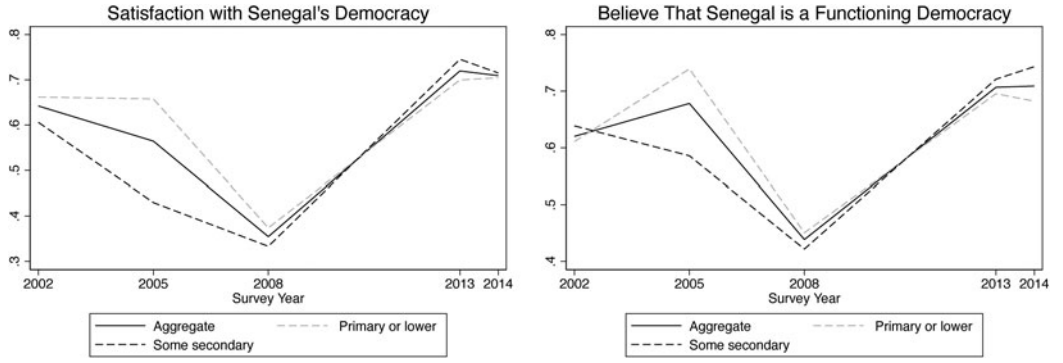

Figure 1. Citizen Views on Senegalese Democracy. *Note: How democratic is Senegal* is coded 1 if respondents feel that Senegal is "A democracy, but with minor problems" or "A full democracy", and 0 if the respondent believes that Senegal has "major problems" or is "not a democracy." *Satisfaction with Senegal's democracy* is coded 1 if respondents feel "fairly satisfied" or "very satisfied" with Senegal's democracy, and 0 if the respondent feels "not very satisfied" or "not at all satisfied.".

A similar pattern emerges in citizens' views on Senegalese electoral institutions (Fig. 2). In 2005, respondents were asked to reflect upon whether the 2000 elections—when an opposition party won for the first time in the history of Senegal—were free and fair. All respondents converge in their positive opinions. In 2008 however, the views of more educated respondents drop far more than those of less educated respondents, suggesting a greater awareness about the election problems that took place during the 2007 elections. Education again seems to be correlated with lower trust in the Electoral Commission, and particularly so in 2005 than in 2008. Altogether, these descriptive data lend support to our argument that education leads to higher levels of political awareness and knowledge.

Notably, Figures 1 and 2 show convergence in positive opinions among the Afrobarometer respondents by 2013, reflecting events from the 2012 election and the power transition from Wade to Sall. In 2012, Wade aimed to run for a third term, claiming that the two-term limit law shouldn't apply to his first term as it was established after the 2000 election. The loyalist-packed Constitutional Court permitted his candidacy. During this period however, important

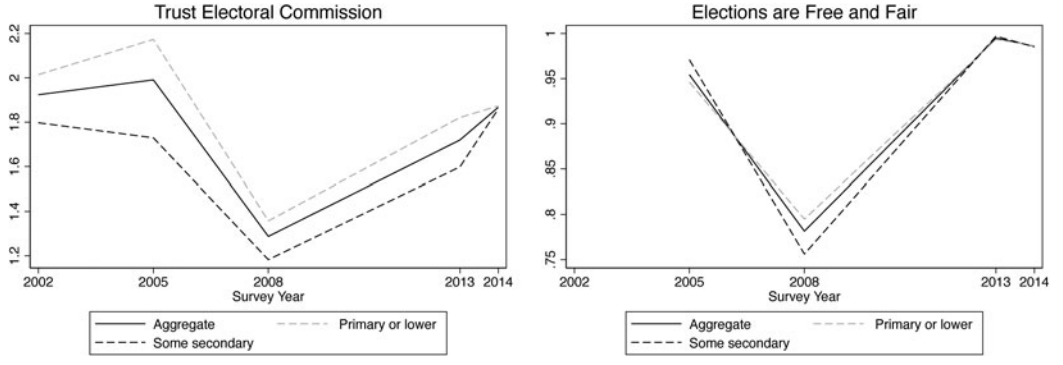

Figure 2. Citizen Views on Elections. *Note: Elections are free and fair* is not asked in 2003. The variable is coded 1 if the respondent agrees that the last national election is "completely free and fair" or has only "minor problems," and 0 if the respondent felt that there were "major problems" or that elections were "not free and fair." In the 2005 survey, the previous election indicated is the 2000 election. In the 2008 survey, the previous election is 2007, while in the 2013 and 2014 surveys, the previous election is 2012. *Trust electoral commission* is coded as 1 if the respondent trusts the EC "somewhat" or "a lot," and 0 if they trust the EC "just a little" or "not at all.".

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pop culture figures in the *Y'en a Marre* movement helped to mobilize broad opposition and widespread pressures for change expanded significantly. In a strong demonstration of democratic strength, Wade lost the 2012 election by a landslide as Senegalese citizens voted against legitimizing a third-term presidential campaign. Correspondingly, views about democracy and democratic institutions increased sharply in 2013 (Figs. 1 and 2). Citizens with different levels of education converged again in their views about the strength of the Senegalese democracy.

4. Background on educational access in Senegal

Until the early 2000s, education in Senegal lagged far behind other countries with respect to primary school enrollment and gender parity (UNESCO, 1995, 2015). Post-primary education was worse: middle school *capacity* was only around 25%, meaning that a large percentage of those who completed primary school could not attend middle school. In 2000, Dakar hosted the World Education Forum, where 73 participating countries pledged to uphold the goals of UNESCO's Education for All movement—to provide and mandate education, improve literacy rates, and correct gender imbalances in school enrollment. The Senegalese government then released a multi-phase plan in September 2000 to improve basic education (primary and middle school) for all children. The education reform curriculum emphasized improving reading skills within a broader social sciences and math curriculum (Clasby, 2012; USAID, 2017), which is particularly important for increasing political interest and awareness (Hillygus, 2005).

In 2001, Senegal took its first steps toward meeting these goals by adopting a new Constitution that pledged to significantly expand educational infrastructure. A large-scale school construction program quickly followed in mid-2001; by 2011, 666 new middle schools had been built.[4] Second, the government introduced free and mandatory middle schooling for all of its citizens in 2004. The positive benefits of these large-scale changes are reflected in Senegal's education statistics, where the greatest gains were seen at the middle school level. Between 2000 and 2007, middle school enrollment rates increased by 95%, while secondary school enrollment increased by 78% and primary school enrollment increased by 25% (DeStefano *et al.*, 2009). Transition from primary school completion to lower secondary school increased from 35% in 1999 to around 88% by 2011; by 2012, secondary school attendance had increased to 41%. (UNESCO, 2015).

5. Research design

To identify the effects of increased education on political participation in Senegal, we use a DiD identification strategy. This strategy exploits differences in the potential impact of the Senegalese school reform that started in the early 2000s to capture plausibly exogenous variation in individual school attainment. We use this identification strategy rather than simply using survey respondents' education measure as it allows us to account for confounding unobservable variables. Education is endogenous to a variety of factors, including socio-economic factors, individuals' taste for learning (both in school and outside), and political factors that inhibit both education and political access (Borgonovi *et al.*, 2010). These omitted variables may significantly bias estimates (see Appendix A.10).[5]

The DiD strategy relies on the impact of the reform varying along two dimensions: first, the age of the individual at the time of the reform (individuals already past middle school age were unaffected) and second, where the individual lives (some areas had far fewer middle schools than others prior to the reform, and these areas therefore had lower baseline levels of education). The

[4]Numbers calculated using Republique du Senegal (N.d.) reports dated: June 13, 2002; June 11, 2003; March 12, 2007; September 10, 2009; November 6, 2012.

[5]Bias may move in different directions. Within our analyses, we find that estimates are biased downward for the Economic and Interest variables; however, for Participation, we found that OLS estimates were biased upward.

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variation along these two dimensions allows us to estimate educational attainment increases for individuals who were young enough to be affected by the reform, and compare these effects between areas with previously high education levels and areas with previously low education levels.

We find that our DiD strategy effectively captures plausible exogenous variation in educational attainment (Appendix A.7). We then use the DiD strategy to estimate the effects of the reform on political participation and attitudes. We present the average effects over the entire time period covered by the Afrobarometer surveys, and then introduce heterogeneous effects to compare effects between the period when democracy is threatened and periods of democratic strength.[6]

Our DiD strategy captures the effect of the reform on individual educational attainment by comparing differences in education of cohorts young enough and cohorts too old to benefit from the reform, across areas with varying pre-reform middle-school completion rates. First, since middle school begins when children are 13 years old and comprises four years of schooling, we compare educational attainment of those who were 16 or younger by the year 2002—and thus were just young enough to benefit from the reforms—with those who are over 16 years of age and thus were not affected. Second, different areas in Senegal should have been affected differently by middle school construction depending on how educated the areas already were before the education reforms. Specifically, areas with high levels of schooling prior to the reform should have seen relatively smaller increases in education compared to previously under-served areas.[7]

We define the *intensity* of the reform as the potential effect of reforms based on prior education levels. We calculate *intensity* across different areas by computing the middle-school attainment of the individuals that were too old to have benefitted from the education reform. We use the *communauté rurale* (CR), the lowest administrative unit above individual villages, as our unit of area. We then find the area's average educational attainment rates in the 2002 Senegalese census for individuals between the ages of 17–26 (i.e., the ten cohorts immediately prior to the first cohort exposed to the reform) to determine the pre-reform middle school attainment within a CR. We further break this down by gender because females tend to have lower education levels than males in Senegal. Reform *intensity* for gender g in CR l is:

$$\text{intensity}_{l,g} = 1 - \frac{\text{total } g \text{ of ages } 17-26 \text{ who completed middle school in } l}{\text{total } g \text{ of ages } 17-26 \text{ in } l}$$

We treat those who were 16 or younger when the education reforms came into effect as affected by the reform. However, we do not expect 16-year-olds in 2002 to have the same level of exposure as 13-year-olds, as the latter had more years to benefit. In order to capture the fact that individuals who were of middle school age were only partially affected by the reforms, we define our exposure variable, *post*, as follows. We assign a *post* value of 1 to those who were ages 13 or younger and were thus fully treated. We assign a value of 0.75–14-year-olds, a value of 0.5–15-year-olds, a value of 0.25–16-year-olds, and a value of 0 to those 17 years old and older.[8]

5.1 Estimation strategy

We estimate the effects of education on political participation and attitudes using Senegal's Afrobarometer surveys (r2–6). We matched Afrobarometer respondents to school reform

[6]We focus on this estimation—essentially, reduced-form DiD estimates—because the exogenous variation in educational attainment generated by the reform does not deliver multiple sufficiently strong independent instruments when analyzing these heterogeneous effects. Appendix A.12 shows sizable but noisier IV estimates that support our theoretical argument.

[7]This assumption is empirically well-founded in Senegal, where rural areas had very little access to middle school education (Section 4).

[8]Results are robust to an alternative method of defining *post*, by dropping all those who are partially affected by the reform Appendix Table A14).

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intensities based on their CR of residence and gender. We restrict our sample to those born after 1970 for comparability. Our DiD specification is:

$$y_{i,g,c,l,t} = \tau\left(post_t \times intensity_{g,l}\right) + X_{i,g,c,l,t}\gamma + \kappa_c + \eta_{g,l} + \zeta_t + \epsilon_{i,g,c,l,t}, \quad (1)$$

where $y_{i,g,c,l,t}$ is an outcome for individual i of gender g in cohort c, CR location l, and survey year t. We further include fixed effects for survey year, ζ_t; cohort, κ_c; and CR by gender, $\eta_{g,l}$. In this equation, $post_t$ and $intensity_{g,l}$ are omitted since they are colinear with ζ_t and $\eta_{g,l}$, respectively. Finally, to increase power, we also include ethnicity and urbanity fixed effects as control variables, $X_{i,c,l,t}$. All regressions include CR-level clustered standard errors.

While we mostly focus on estimates of the reform on political outcomes, we compute *school*—a three-point scale of educational attainment for each individual respondent in the Afrobarometer surveys—to validate that the education reform effectively induced a plausibly exogenous variation in educational attainment. We code respondents as "0" if they did not receive any formal schooling, "1" if they had some primary school education, and "2" if they completed primary school or above.[9] In the appendix, Figure A1 and Table A10 confirm that increased access to middle schools led to an overall increase in schooling from the primary school-level and above.[10] We provide all IV estimates as robustness checks in Appendix Section A.12.

To capture how the effects vary when democratic institutions are threatened, our heterogeneous-effects equation estimates:

$$\begin{aligned} y_{i,g,c,l,t} = {} & \tau_1\left(\text{post}_i \times \text{intensity}_{i,g,c,l,t}\right) + \tau_2\left(\text{post}_t \times \text{intensity}_{i,g,c,l,t} \times \text{threatened}_t\right) \\ & + X_{i,g,c,l,t}\gamma + \kappa_c + \eta_{g,l} + \zeta_t + \epsilon_{i,g,c,l,t}, \end{aligned} \quad (2)$$

where $threatened_t$ captures the period under which presidential over-reach threatened democracy in Senegal—which overlaps with the 2005 and 2008 Afrobarometer surveys. As with Equation (1), lower-order terms are omitted since they are colinear with the fixed effects. Throughout our analysis, we standardize *post* × *intensity* to allow for easier interpretation of the coefficients.

We first confirm that we observe parallel trends for our main outcome of interest, *school*, in Appendix Figure A1. We further demonstrate the validity of our estimates by running the same regression on two placebo cutoffs—1969 and 1974—and produce parallel trend plots for our main outcomes. Appendix Tables A19 and A20 show no overall treatment effect for placebo birth-year cutoffs prior to school reform year, and Appendix Figure A2 shows parallel pre-treatment trends for our main outcomes. Second, we show that the extent to which an individual was exposed to the reform is orthogonal to the likelihood that she is surveyed in the Afrobarometer surveys. In Table A8, we show balance on a variety of respondent attributes determined prior to the treatment.

[9]This operationalization of *school* reflects that, as seen in Appendix Figure A1 and Appendix Table A10, increased access to middle schools did in fact lead to a differential increase in primary schooling (columns 2 and 3).

[10]In principle, the DiD Equation (1) would allow us to instrument for educational attainment using the interaction term *post* × *intensity* as the excluded instrument. Under IV estimation, we would estimate $y_{i,g,c,l,t} = \tau\text{school}_{i,g,c,l,t} + X_{i,g,c,l,t}\gamma + \kappa_c + \eta_{g,l} + \zeta_t + \epsilon_{i,g,c,l,t}$ instrumenting $\text{school}_{i,g,c,l,t}$ with $post_t \times intensity_{i,g,c,l,t}$. However, while our first stage F-statistic exceeds the standard critical value of 10 (Staiger and Stock, 1997) in the aggregate, the variation in education attainment generated by the reform is not strong enough to generate two independent instruments for the effect of education separately in times of strong democratic institutions and in times when these institutions were threatened by presidential over-reach.

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Table 1. Effect of Education Access on Economic Well-being and Interest in Politics

A: Economic	(1) Economic index	(2) Employed	(3) Assets index	(4) Basic necessities index
Post × Intensity	0.094***	0.161***	0.102***	0.020
	(0.019)	(0.037)	(0.029)	(0.019)
Observations	3177	3160	2676	3177
DV Mean	0.370	0.263	0.409	0.450
B: Interest	Interest index	Interest in pub affairs	Discuss politics	News index
Post × Intensity	0.126***	0.143**	0.120**	0.114
	(0.045)	(0.069)	(0.046)	(0.089)
Observations	3177	3152	3162	3176
DV Mean	1.571	1.097	1.119	2.488

Notes: *$p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses, clustered at the CR level. All regressions include fixed effects for survey year, birth cohort, CR by gender, ethnicity, and urbanity.
Panel A: *Economic index* is made up of *employed*, *assets index*, and *basic necessities index*. We create the *assets index* using *owns radio*, *owns TV* and *owns vehicle*, and the *basic necessities index* using *no food*, *no water*, *no healthcare*, *no fuel* and *no income*.
Panel B: The interest index (*interest index*) is made up of *interest in pub affairs*, *discuss politics*, and *news index*. We define the *news index* as whether an individual gets political news via *newspaper*, *TV*, and *radio*.

6. Results

We consider six sets of political behavioral and attitudinal outcomes from all available geo-coded Afrobarometer surveys rounds in Senegal (2002, 2005, 2008, 2012, and 2015). Our main outcomes are indices that combine variables to maximize sample size and avoid cherry-picking variables.[11] For each set of outcomes, we provide a brief explanation of variable construction as we discuss the results; a full description of how variables are operationalized is available in Appendix A.1.

6.1 Interest in politics

We evaluate H1—that education increases cognitive ability and social skills as the mechanism for increased interest in politics—-in two ways. First, following Hillygus (2005), we indirectly assess the effect of education on cognitive ability and social skills by looking at the effect of education access on economic well-being. Table 1, Panel A provides estimates for an index of economic variables that measure whether respondents are employed, own basic assets, and whether their basic necessities are met. Overall, consistent with H1, we find that a one-standard-deviation increase in program exposure leads to a 9.4pp increase in economic well-being (Column 1). The effect is largely driven by employment and asset ownership (Column 2 and 3), rather than access to basic necessities (Column 4).

We then assess if education access leads to greater interest in politics—a prerequisite for civic and political engagement (Lipset, 1959). Column 1 in Panel B provides estimates for an interest index, which is a three-point scale that summarizes whether a respondent is interested in public affairs, discusses politics frequently, and consumes news through a variety of media. Consistent with H1, results indicate that a one-standard-deviation increase in program exposure leads to a 0.126 unit (3.6pp) increase in interest (Column 1). Breaking down the index, education access increases respondents' interest in public affairs and the extent to which they discuss politics with peers (Column 2 and 3). The effect on news consumption is sizable but misses statistical significance (Column 4), perhaps because of how common it is to listen to the radio in Senegal.[12] These results are strong evidence for our proposed mechanism—that education leads to greater political awareness and interest.

[11]Indices are created using the alpha command in Stata, which does not use casewise deletion.

[12]If we instead use indicator variables for whether the respondent *frequently* consumes these media forms for political information, the news index also becomes statistically significant.

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Table 2. Effect of Education Access on Political Participation

A: Main Effects	(1) Participation index	(2) Participate index	(3) Contact index
Post × Intensity	−0.010	−0.043	0.023
	(0.047)	(0.063)	(0.045)
Observations	3177	3177	3166
DV Mean	0.781	1.297	0.263
B: Democracy Threatened	Participation index	Participate index	Contact index
Post × Intensity	−0.017	−0.058	0.024
	(0.054)	(0.073)	(0.052)
Post × Intensity × HE	0.163*	0.285**	0.038
	(0.094)	(0.140)	(0.101)
Observations	3177	3177	3166
DV Mean	0.721	1.241	0.197

Notes: *$p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses, clustered at the CR level. All regressions include fixed effects for survey year, birth cohort, CR by gender, ethnicity, and urbanity. Heterogeneous effects (HE) is defined as "1" if the survey years are 2005 and 2008, and "0" otherwise.
We create *Participation index* using *participate index* and *contact index*. *Participate index* is an made up of *voted* in the last election, *raise issue*. *Contact index* is made up of *contact officials*, *contact local government councilor*, and *contact MP*.

6.2 Civic engagement and views of government

H2 argues that educated citizens should not generally be more likely to support democratic institutions or participate politically, despite increased awareness and interest in politics. Table 2 Panel A assesses whether education access affects actual political participation in the aggregate. Where possible, we consider variables that correspond to Verba and Nie (1972)'s modes of participation: voting, campaigning, communal activity, and particularized contacting. Accordingly, we define "participation" as whether the respondent took actions to change political outcomes—voting in the last election, joining others to raise an issue, or contacting local or national politicians.[13] Consistent with H2 and results from the Western democracies literature, results in Panel A show that increased reform exposure has no effect on political participation in the aggregate.

To test H3, Table 2 Panel B differentiates the effect of schooling on political participation based on whether the survey took place when Senegal's democratic institutions were threatened by presidential overreach. We examine the differential effect of education access in the 2005 and 2008 surveys, which coincided with the period when president Wade's administration adopted increasingly authoritarian measures. Consistent with H3, results show a statistically significant and substantial effect of program exposure on political participation during this period. Individuals with greater education access were substantially more likely to participate in politics (Column 1). This effect is primarily driven by voting during the previous election and raising issues with other citizens (Column 2), but not by increasing contact with government officials (Column 3).

One concern may be that the respondents are participating on behalf of the ruling party since education may increase their affinity toward—or connections to—the party in power. We confirm that this is not the case: in Appendix Table A9, we show that treated participants feel significantly less close to the ruling party PDS (−8.4pp, p-value = 0.004).

These results comport with the high levels of hyperpresidentialism and weak legislative powers in Senegal's government. The heterogeneous results on political participation is particularly important to our theory, as it suggests greater political action from better educated individuals between 2003 and 2007—when illiberal politics required greater attention. Post-2008, popular culture figures such as the *Y'en a Marre* movement helped to broadly publicize hyperpresidentialism primarily during the 2012 elections—explaining the lack of aggregate results.

[13]Campaigning questions—whether the respondent attended a campaign meeting, persuaded others to vote for a candidate or political party, and worked for a candidate or party only appear in later rounds of the Afrobarometer surveys and thus cannot be used to estimate heterogeneous effects.

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We provide evidence of our underlying mechanism—that the effect is driven by hyperpresidentialism threatening democracy (H4)—in Table 3. In Panel A, we assess the effect of education exposure on respondent views toward the quality of Senegalese democracy, their support for democratic institutions generally, and their support for checks on presidential powers specifically. As expected, we find no aggregate effect of education on respondents' views about the quality of democracy (Column 1). We do see a statistically significant 0.068 unit effect of education access on the democratic support index (Column 2). Disaggregating this index, this effect is driven primarily by support for greater checks on the presidency (Column 3) rather than increased support for other democratic institutions (Column 4). The statistically significant effect of education access on support for checks on the office of the president is evidence for H4, which argues that educated citizens, because of their greater awareness of political affairs, should be more wary of Senegalese hyperpresidentialism and should demand checks on presidential power.

When democracy was threatened, more differences emerge. Lending strong support for both H3 and H4, Panel B shows that those with greater access to education had more negative views about Senegal's democratic quality (Column 1), and indicated a 0.24 unit (12pp) increase in support for democracy and democratic institutions (Column 2). During this period, those individuals were even more likely to support checks on the president than during periods of strong democracy (Column 3). We thus find strong support for our argument that the effects of education on participation is mediated both by the overall strength of democratic institutions and by within-country over-time variation in democratic strength.

Altogether, our findings suggest that education does provide a greater cognitive ability and interest in politics but no large differential effect on political participation or support for democratic institutions overall. This is consistent with our theoretical argument that educated citizens are not more likely to participate in politics if democratic institutions are strong and there is little policy differentiation, and thus the return to political participation is not sufficiently high. The null finding is also evidence against alternative channels that link education to political participation—such as increased democratic values or bureaucratic language proficiency—as

Table 3. Effect of Education Access on Views Toward Democratic Quality and Institutions

A: Support for Democracy	(1) Democratic quality index	(2) Dem support index	(3) Checks on president	(4) Dem institutions index
Post × Intensity	−0.041	0.068**	0.087**	0.047
	(0.042)	(0.029)	(0.037)	(0.032)
Observations	3169	3174	3162	3174
DV Mean	0.894	1.191	1.186	1.200
B: Support for Democracy	Democratic quality index	Dem support index	Checks on president	Dem institutions index
Post × Intensity	0.040	0.033	0.052	0.013
	(0.045)	(0.032)	(0.043)	(0.037)
Post × Intensity × HE	−0.249**	0.240**	0.250**	0.235**
	(0.117)	(0.100)	(0.116)	(0.103)
Observations	3169	3174	3162	3174
DV Mean	0.906	1.181	1.172	1.192

Notes: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses, clustered at the CR level. All regressions include fixed effects for survey year, birth cohort, CR by gender, ethnicity, and urbanity. Heterogeneous effects (HE) is defined as "1" if the survey years are 2005 and 2008, and "0" otherwise.

Democratic quality index combines: *careful speaking about politics*, *free to speak their mind*, *free to join political organization*, *free to vote their choice*, *how democratic is Senegal* and *satisfaction with Senegal's democracy*. *Democratic support index* combines *checks on president index democratic institutions index*: *Checks on president index* uses *reject one-man rule*, support for *term limits*, *against presidential discretion*, *opposition parties criticize*, and belief in *checks and balances*. *Democratic institutions index* uses *support for democracy*, *media accountability*, *against one party rule*, *reject military rule*, support for free *election choice*, *against government banning organizations*, and support for free press (*newspapers free*).

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these alternative mechanisms would predict a monotonic increase in political participation and support for democratic institutions with educational access.

Instead, we find that the link between education and participation is moderated by the strength of democratic institutions. The evidence is consistent with our argument that education increases cognizance of, and interest in, political matters, which leads educated citizens to be more likely to participate when democratic institutions are threatened. Breaking down the Afrobarometer survey waves based on variation in democratic institutional strength, we find that education increases the awareness and sensitivity of citizens toward changes in those institutions over time. In particular, when democracy was threatened under President Wade, more educated citizens identified this authoritarian backsliding as early as survey responses from 2005. As a result, educated citizens were more likely to both participate and support stronger democratic institutions during that period.

6.3 Alternative explanations and robustness checks

We investigate three alternative explanations. First, the 2005 and 2008 surveys coincides with the global economic downturn, so effects may run through economic or policy-based discontent rather than discontent over political institutions. We show evidence against this alternative in Table 4, where we examine education's effects on perceptions of corruption (political discontent) and perceptions of government performance (economic and governance discontent). The results provide support of our argument: education significantly increases perceptions of government corruption during this time, and in particular with respect to the president's corruption. On the other hand, we find null effects on performance for both president and non-president politicians, suggesting that education's effects on participation during this period does not run through economic or governance discontent. In Appendix Table A12, we further show no change in individual economic outcomes during the 2005 and 2008 period.

Second, education access may is itself a correlate of other outcomes. For example, school construction reforms may lead to positive views about state capacity, or school building may contribute positively to the local economy—thereby increasing satisfaction. However, these visible effects of development should affect all cohorts. Moreover, we find that education access negatively (rather than positively) affected respondents' views (Table 4). Finally, our results of increased participation during periods when democracy is threatened suggest that any confounding effects of school construction would also have to vary simultaneously with democratic threats, which is unlikely.

Third, participation may also be confounded by differing degrees of clientelism across election cycles. If the 2007 elections saw less vote-buying by the ruling party, then people who are less-educated—who are also less well off—would be less likely to participate politically in comparison to their better-educated counterparts. For several reasons, this is unlikely. First, tests of

Table 4. Effect of Education Access on Views Toward Government Performance

	(1) Corruption	(2) Pres. Corrupt	(3) Performance	(4) Corruption	(5) Pres. Corrupt	(6) Performance
Post × Intensity	0.060	0.096	−0.053	0.027	0.105	−0.036
	(0.068)	(0.089)	(0.050)	(0.080)	(0.099)	(0.059)
Post × Intensity × HE				0.398**	0.520**	−0.085
				(0.198)	(0.242)	(0.127)
Observations	2648	2453	3172	2648	2453	3172
DV Mean	1.186	1.115	1.271	1.194	1.130	1.283

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$. Robust standard errors in parentheses, clustered at the CR level. All regressions include fixed effects for survey year, birth cohort, CR by gender, ethnicity, and urbanity. Heterogeneous effects (HE) is defined as "1" if the survey years are 2005 and 2008, and "0" otherwise.
Corruption includes perceptions about the president, government officials, MPs, and local government councilors. *Performance* includes perceptions of: (1) the performance of the president, MPs, and local government councilors; (2) how the government handles economic issues; (3) how the government handles public goods provision.

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the mechanism in Table 3 indicate that our effects on political participation are driven by democratic quality rather than vote-buying. Second, rural polling station bloc-voting on behalf of the ruling party is substantially higher in 2007 than in both 2000 and 2012 (37.6% of the polling stations in 2007 in comparison to only 2.5% in 2000 and 17.5% in 2012), suggesting that clientelism was perhaps even *stronger* in 2007 (Gottlieb and Larreguy, 2020). Third, alternatively, greater clientelism increases participation from those who are more educated, who are more likely to be brokers (Bleck, 2015). However, not only would that effect would be far outweighed by the citizens whose votes they brokered, but we show in Appendix Table A9 that participants with greater educational attainment were less supportive of Wade's political party (−8.4pp, p-value = 0.004).

We further demonstrate the robustness of our results to alternative specifications (Appendix Section A.11). First, to deal with the concern that we are incorrectly parameterizing exposure to the school reform program for partially treated individuals (those ages 14–16 in 2005), we drop them from our sample. Second, we add region-specific trends to ensure that our variation is not only explained by a few areas. Third, while our baseline specification restricts the sample to cohorts born after 1970 to ensure that our identification relies on individuals born close to the reform, we consider an even narrower window of individuals born after 1975. Fourth, we consider an alternative definition of the reform-intensity variable created using the education level of the five cohorts immediately prior to the first cohort exposed to the reform rather than the ten cohorts that we consider in our main specifications. Fifth, to deal with migration concerns, we consider an especially strict specification where we drop the top quartile of most populated CRs from the sample. Since migration most likely affects more urban areas, smaller CRs should provide estimates that are less affected by migration. Throughout these robustness checks, we find that both statistical significance and point estimate magnitude generally remain stable.[14]

Lastly, we present instrumental variable (IV) results as a robustness check in Appendix Section A.12, where we instrument educational attainment with increased educational exposure due to the reform. We report Anderson-Rubin (AR) 95% confidence intervals and p-values, which are robust under weak-IV assumptions, and find that results accord with our main specifications.

7. Conclusion

Scholars have long been interested in the effects of education on political participation, including the most basic of political rights—the vote. While recent research from consolidated Western democracies largely finds limited causal effects, evidence from recent work on developing democracies indicates that the relationship between education and political participation might in fact be more complex. We argue that the strength of democratic institutions matters for explaining these different results because it shapes citizens' incentives for participation. Education increases an individual's cognitive abilities and interest in politics—which allow individuals to identify when the benefits of participation are worthwhile.

We test our argument using within-country variation in Senegal, a country with relatively institutionalized democratic politics. Supporting our theory, while education increases interest in politics, it does not lead to greater political participation or higher support for democratic institutions in the aggregate. However, when democratic strength was threatened, more educated citizens are more likely to demand stronger democratic institutions through greater political participation, and this behavior is explained by their greater ability to identify illiberal politics. Our findings comport with research across developing contexts, which find different relationships between education and participation based on institutional qualities: negative in authoritarian

[14]We lose statistical significance for heterogeneous-effects regression when we drop partially treated individuals or most populated CRs from the sample likely due to insufficient power since the sample of treated individuals decreases substantially in both instances.

https://doi.org/10.1017/psrm.2023.37 Published online by Cambridge University Press

contexts (Croke *et al.*, 2016), and positive in nascent democracies (Bleck, 2015; Larreguy and Marshall, 2017).

Our argument contributes to existing work on how education affects political participation by providing evidence of a causal mechanism that explains behavior in both consolidated Western democracies as well as developing democracies. Moreover, our results highlight the importance of educated individuals in guarding democratic institutions. This speaks to a growing body of work that study how the recent wave of populism has undermined democratic institutions around the world (Plattner, 2010; Graham and Svolik, 2020).

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/psrm.2023.37. To obtain replication material for this article, https://doi.org/10.7910/DVN/7RNTZS

Acknowledgements. We thank Abhit Bhandari, Guy Grossman, Michael Kevane, John Marshall, and Alice Xu for their feedback. We thank Allie Nicole Cunningham for her outstanding research assistance. We are grateful to the National Statistics Agency (ANSD) and Independent Electoral Commission (CENA) in Senegal for generously sharing their census and election data. Horacio Larreguy acknowledges funding from the IQSS Undergraduate Research Scholars Program at Harvard University and France's Agence Nationale de la Recherche under the Programme des Investissements d'Avenir grant ANR-17-EURE-0010.

Competing interest. None.

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Cite this article: Larreguy H, Liu SX (2023). When does education increase political participation? Evidence from Senegal. *Political Science Research and Methods* 1–18. https://doi.org/10.1017/psrm.2023.37

https://doi.org/10.1017/psrm.2023.37 Published online by Cambridge University Press