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Perception of political instability in election periods: Evidence from African firms

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ABSTRACT

Political instability is a major obstacle to firms' investment and development. This article investigates how elections affect the perception of political instability of African firms. We use a survey-based dataset of approximately 21,500 firms in 33 African countries which we cross with 237 elections between 2004 and 2020. Our econometric strategy allows a detailed identification of election periods and the associated effects. We provide robust evidence of a pre-election increase in the perception of political instability by firms, but no, or limited post-election effects. The perception of political instability by firms is stronger for firms oriented towards foreign markets, in countries with non-democratic institutions or a high risk of conflict.

1. Introduction

Private sector development relies on market opportunities and ease of doing business, but it ultimately depends on the decisions made by investors and firms' managers, so their perception of the obstacles to their businesses and their opportunities is decisive. Elections are critical periods which can lead to changes in regulations and public policies, as well as to social unrest, which can affect the ways of doing business. As such, elections have the potential to alter the perception of political instability by firms and the behavior of investors and firms' managers. The relationship between elections and the perception of political instability has received little attention. One exception is Baker et al. (2020) who report a pre-election increase of political uncertainty, as measured by newspaper coverage, for a group of 23 (mostly OECD) countries.[1] This article aims to extend our understanding of how firms' perception of political instability is sensitive to the election cycle, (i) by observing the perception of political instability directly from firms' managers and (ii) by focusing attention on African countries which have a long history of political crises (Collier, 2011; Flores and Nooruddin, 2012).

The theoretical effect of elections on firms' perception of political instability in Africa is unclear. Elections are a key component of democracy designed to select by whom, and how, citizens are governed and so facilitate smooth transitions between leaders. In other words, elections are expected to pacify inter-group relationships by creating shared rules to manage latent social and political conflicts. The degree of uncertainty about an election's outcome is small in some African elections, especially when the incumbent leader is standing for re-election. Elections are often a tool for leaders to be re-elected rather than a credible way to bring transition and political

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[1] Of the 23 countries in the sample, only Brazil, Croatia, India, and Pakistan are not OECD members.

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change. For instance, in 2020, only one African presidential election (out of 10) resulted in an actual change of leadership.[2]

On the other hand, elections may exacerbate underlying tensions. Elections attract attention, which can cause opponents to coalesce and make their voices heard. In addition, incumbent leaders need to prove that their legitimacy comes from the people. They may be tempted to change the electoral rules, use propaganda tools, or even manipulate the official results.

For instance, the conduct of the elections and/or their results was challenged in almost all the African elections which occurred in 2020,[3] and pre and postelection protests are frequent in Africa (Beaulieu, 2014). In the worst cases, elections can lead to political violence (see Collier and Vicente, 2012; Cederman et al., 2013; Flores and Nooruddin, 2012, among others). According to this point of view, elections may increase the perception of political instability not only before an election, but also in the immediate post-election period if the official results are contested by opposition politicians.

The relationship between elections and the perception of political instability needs empirical investigation. As examples, consider the general elections that took place in Namibia in 2014 and Nigeria in 2015. These two elections have some common features such as the participation of the incumbent president (in Nigeria) or his designated successor (in Namibia), and the fact that the electoral process was generally non-violent. However, these elections took place in very different contexts. While the Namibian election was not competitive (the winner won with over 80% of the vote), the Nigerian election was less certain. In the contested Nigerian election, the incumbent ultimately lost. It followed a violent election in 2011 and there were threats to national security (due to attacks by the terrorist group Boko Haram), which forced the government to postpone the election. In the run-up to the election, threats of violence remained a concern, although the process ultimately remained peaceful. Data on the perception of political instability, presented in Figure A1 in Appendix, reflect these differences. In Namibia (blue), the level of perceived political instability does not increase as the election day approaches, and decreases just before it. In Nigeria (red), by contrast, firms' perception of political instability increases before the election and just after it, which may suggest worries about post-election violence. These examples show that the relationship between elections and the perception of political instability may be context-specific.

This paper examines whether the perception of political instability by firms' managers is shaped by the election cycle. Political instability is a major impediment to firms' dynamics. As indicated in Fig. 1, political instability is the third biggest obstacle for firms' operations in developing countries (smaller than access to electricity and corruption but bigger than tax and access to credit). Evidence, from industrialized countries, highlights that political risk and uncertainty, and their perception, influence firms' behavior and long-term development (Rodrik, 1991; Baker et al., 2016; Hassan et al., 2019, among others). Since business activity results directly from the behavior of investors and firms' managers, a better understanding of the drivers of the perception of political instability by firms, is therefore of prime interest to spur private sector growth and economic development.

Using micro data of firms' perception from several countries rather than macro or aggregate measures of political instability allows further investigation of the overall impact of elections on firms' perception of political instability, in two ways. First, we try to understand which firms are more likely to be affected by the timing of elections, since as shown by Hassan et al. (2019) political risk is heterogeneous across firms. Second, and in line with the examples provided above, we examine which country factors, and which election factors, influence the relationship between the election cycle and firms' perception of political instability. This allows us to better understand the channels through which elections influence firms' perception of political instability - in other words how they perceive the uncertainty regarding the future leaders and their policies or the risk of events such as regime change or events of political violence.

To investigate the impact of elections on the perception of political instability, we use firm-level data from the World Bank Enterprise Surveys (WBES) and our own data on legislative and executive elections in Africa from 2004 to 2020. We employ both an absolute measure of political instability, and a measure of political instability relative to other perceived obstacles. We use the difference in the dates of interviews of firms, relative to the same election date, to analyze whether election cycles matter.

We find evidence which indicates that firms' perception of political instability increases in the 6 months before an election. This increase is not only statistically significant, but also economically meaningful. For instance, firms surveyed in the 3 months before an election are 20 percentage points more likely to state that political instability is a major, or very severe, obstacle to their operations (which is 60% higher than the mean). However, there is a decrease in perception of political instability just after elections. We run robustness checks that confirm our main findings.

In the final part of the paper, we scrutinize heterogeneity in the relationship between election calendar and perception of political instability. We first examine which firms are more likely to perceive political instability as an obstacle to their operations. In doing so, we interact 3-month dummies with firms' characteristics. We find that firms oriented towards foreign markets (foreign-owned firms and exporters) are more sensitive to election cycles, while other characteristics (including size, age, gender and experience of the manager, location, sector) do not matter.

Finally, we consider election and country characteristics. We have two main findings. First, the perception of political instability increases when the electoral process is distorted or when the incumbent leader participates. In many countries, elections are used to legitimize the leader in power *vis-à-vis* the international community. However, elections are also an opportunity for the opposition to

[2] 8 elections resulted in the incumbent being re-elected, in the first round (Burkina-Faso, Central African Republic, Côte d'Ivoire, Ghana, Guinea, Seychelles, Tanzania, Togo), Ghana being the only country with a real competition between the winner and the runner-up. In another election (Burundi), the designated successor was elected in the first round with a large margin. In Niger the incumbent was not standing and the election resulted in a change of leader.

[3] Elections were contested by the opposition in Burundi, Cote d'Ivoire, Ghana, Guinea, Niger, Tanzania, Togo. In two countries (Burkina-Faso and Central African Republic), elections occurred in a context of instability.

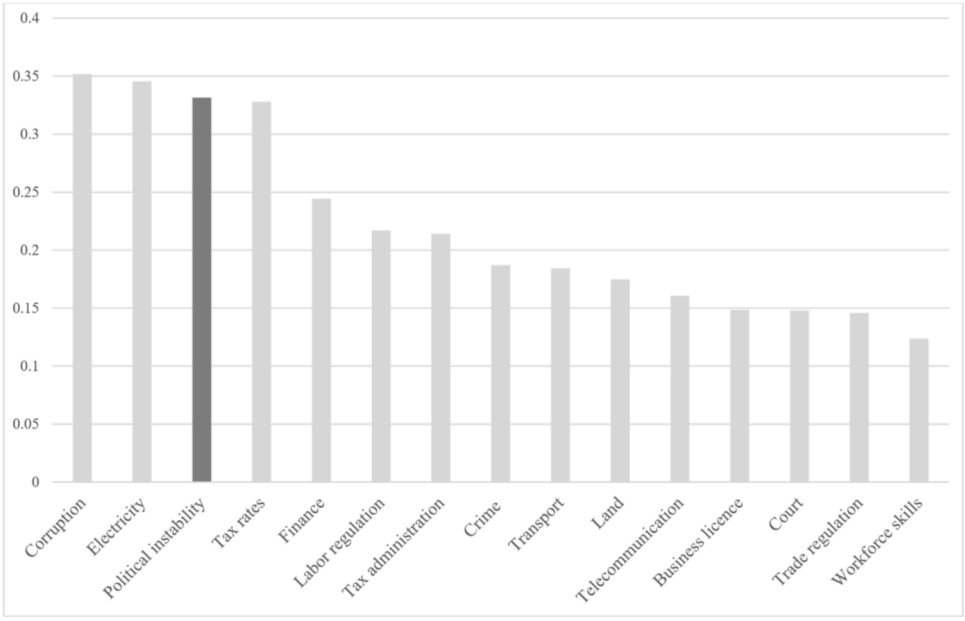

Fig. 1. Perception of obstacles to business operations.
The figures displays the percentage of firms declaring the following obstacles as a major or a very severe obstacle for their current operations (source: WBES, authors' computation). Ratios are computed using all firms included in the WBES.

make their voices heard. As a result, elections are more likely to generate political instability, or at least to increase managers' perception of instability, in non-democratic countries than in countries with strong democratic institutions. Second, even if elections take place in peaceful conditions, there is an increase in the perception of political instability. However, elections are more likely to generate an increase in the perception of political instability when the risk of conflict is higher. We find that firms are more sensitive to electoral cycles if their country experienced violent episodes before their interview. We also find that major political shocks in neighboring countries may lead to cross-border spillover effects.

This paper adds to the literature on the impact of political factors on firms. Although a recent body of literature scrutinizes how elections influence firms in industrialized countries (Julio and Yook, 2012, 2016; Jens, 2017), we know little about the implications of election cycles for firms in developing countries. One exception is Léon and Weill (2022) who show that firms' access to credit is reduced in pre-election and election years in developing countries. The literature has shown that elections affect firms' sunk cost decisions such as investment, but the relationship with the perception of political instability has not been studied so far, with one notable exception for the United States (Baker et al., 2020). It is ultimately the perception of instability that will shape choices made by investors and managers and therefore affect the future of a given firm. A firm is likely to reduce investment if its decision makers overestimate or are pessimistic about the level of political instability. By focusing on firms' perception of political instability, we investigate a channel in the relationship between political institutions and business activity. To the best of our knowledge, this paper is the first to investigate the perception of political instability for a large range of firms' operating in Africa. Previous papers focus either on nationwide indicators of perception of political uncertainty (Baker et al., 2016, 2020), or on firms' sensitivity to political uncertainty for a sample of large and listed firms in industrialized countries (Bia lkowski et al., 2008; Hassan et al., 2019). These approaches are not feasible in Africa due to the lack of credible data. For instance, measures based on newspaper coverage (Baker et al., 2016) are hard to implement without bias in Africa. Local press may be censored and international media may not capture the perception of local populations.[4] Our approach has a second advantage. It allows us to exploit firm-level measures of political instability, which is useful given the evidence of big differences across firms (Hassan et al., 2019; Easaw and Grimme, 2021). To our knowledge, this paper is the first to investigate firm-level differences in perception of political instability for a sample of non-listed companies operating in developing countries. We show that foreign-market oriented firms are more sensitive to election cycles, while other characteristics do not influence the relationship between the election calendar and the perception of political instability.

This article also contributes to the literature on elections in Africa. A rich body of literature has investigated whether elections spur civil conflicts in Africa (e.g. Collier and Vicente, 2012; Cederman et al., 2013; Flores and Nooruddin, 2012; Taylor et al., 2017, among

[4] It should be noted that the measure employed in this paper refers explicitly to political instability, which is different from political uncertainty. Political instability encompasses not only the uncertainty regarding future government and policies (especially in established democracies with smoother transitions) but also the risk of experiencing political violence or a regime change (Jong-A-Pin, 2009). Our index cannot distinguish between different components of political instability. However, analysis of heterogeneity across countries helps us to provide more information on how elections shape the perception of political instability in Africa.

others). In line with previous works on the relationship between elections and conflicts, we find that elections are more likely to lead to tensions in post-conflict societies and when the incumbent leader stands for re-election. However, we show that elections can influence firms' perception even when elections do not increase civil violence; elections that do not degenerate can nonetheless influence firms' decisions. This issue raises concern about the economic consequences of elections in Africa. However, the positive message is that the perception of instability in election cycles is less marked in strong democracies and in peaceful societies.

The remainder of the paper is organized as follows: Section 2 describes the nature and sources of data. Section 3 details the methodology we use in the analysis. The results are presented in Section 4 with a heterogeneity analysis in Section 5. Lastly, Section 6 concludes.

2. Data

This paper investigates how the proximity of an election influences firms' perception of political instability in Africa. To do so, we combine firm-level surveys with election data.

2.1. Perception of political instability

Our primary data source is the World Bank Enterprise Surveys (WBES). The WBES is a firm-level survey of a representative sample of an economy's private sector covering more than 168,000 firms operating in 144 countries.[5] The WBES provides harmonized questionnaires across countries. As well as information about firms' behavior and performance, the WBES contains information about firms' perceived business constraints, including how firms perceive political instability as an obstacle to their operations.

We capture the firms' perception of political instability by using the answers in the WBES to the question of how much political instability constitutes an obstacle to the current operations of a surveyed firm. Firms' answers range from 0 (no obstacle) to 4 (very severe obstacle).[6] We use this variable (which we call *absolute scale*) as a first measure of the perception of political instability.

We create a second variable (called *relative scale*) of the perception of political instability. For this second variable we measure the amount of political instability exerted on a firm relative to the number of other obstacles surveyed in the WBES. Directly employing the self-reported obstacles by the manager has limitations due to possible unobserved differences between managers. Some managers are more pessimistic than others, or a poor performer may be more willing to pit a firm's poor performance down to external circumstances (Ayyagari et al., 2008). As a result, some firms tend to report a higher value for all obstacles (irrespective of their source) than others. Building a relative scale allows us to control for this issue. We compute the relative scale variable for a firm as the difference between the score associated with political instability and the mean of the scores associated with other obstacles.[7] The resulting relative measure of perception ranges from - 4 (if political instability is not an obstacle, but all others items are classified as "a very severe obstacle") to 4 (if only political instability is a very severe obstacle but all other items are classified as "no obstacle").

The absolute measure and the relative measure of the perception of instability increase as the obstacles to firms' operations increase, and are positively correlated ($\rho = 0.85$).

2.2. Election data

We create a new dataset for elections by using information from various sources and we fill gaps through our own search when necessary. Our final election dataset covers 237 elections in 44 Sub-Saharan African countries over the period 2004–2020.

The most crucial information for our paper is the precise date of elections (day/month/year). We also collect additional information on the characteristics of each election: type (executive vs legislative), outcomes of elections (e.g. victory margin), and the conditions under which elections occurred (free and fair, electoral violence, etc.). We describe below how we create this dataset.

We begin by using the Varieties of democracy (V-DEM) database, which provides a rich set of information regarding elections across the world (Coppedge et al., 2021). From the V-DEM, we only keep presidential and legislative (lower chamber, single chamber, or both chambers) elections. The V-DEM provides the precise date of each election which is our main variable of interest. We also extract other variables provided by the V-DEM database.

We complement the V-DEM dataset by adding information for presidential elections. We use the dataset built by Girardi (2020) to obtain the victory margin (difference between the winner and the runner-up). We add victory margins for presidential elections when missing in Girardi (2020). Finally, we add information on 21 additional presidential elections (date, type, and victory margins) in 2020 (V-DEM stops in 2019). We collect this information through our own internet search.

The identification of political regime is crucial to select the relevant elections in each country, and, we identify the political regime

[5] We use the WBES retrieved as at January 2021.

[6] We use the j30e question of the survey: "To what degree is political instability an obstacle to the current operations of this establishment ?" In addition to "don't know", five answers are offered to firms: "no obstacle", "minor obstacle", "moderate obstacle", "major obstacle", "very severe obstacle".

[7] We consider 14 measures of perception to compute the average index: business license, corruption, court, crime, electricity, finance, labor regulation, land, tax administration, tax rate, telecommunication, trade regulation, transport and workforce skills. All obstacles are built using the same Likert scale (from 0 "no obstacle" to 4 "very severe obstacle"). It should be noted that four business constraints are not included due to the lack of observations: macroeconomic instability, zoning restrictions, restrictions on hours of operations, and restrictions on pricing and mark-ups.

by using the Database on Political Institutions (Cruz et al., 2018). DPI classifies countries into three regimes: Presidential, Parliamentary, and Assembly-elected President. Because DPI stops in 2017 and omits some countries, we collected our own information for the remaining years and the omitted countries.

2.3. Combining the election and firm data

We first consider all firms operating in Africa in the WBES. We remove firms operating in countries for which we have no information about elections. We only keep firms for which we are able to compute the time lapse between the date of the survey interview and the last/next relevant election (see below). We drop firms if information about the perception of political instability is unavailable.

Our final sample includes 21,493 firms operating in 33 countries in 46 surveys (some countries being surveyed more than once). The list of countries, and the number of firms per country, is provided in Appendix (Table A1).

By using the information on election and interview dates, we create variables which capture the time lapse (in days) between the interview and the closest election. For each firm, we know the precise day of the interview using question q14 in the WBES. We consider both the last election (before the survey) and the next election (after the survey). Relevant elections are defined as executive elections in Presidential regimes and legislative elections in Parliamentary or Assembly-elected President regimes. We focus on the first round of elections, since after the first round, one can assume that a part of the information regarding the election and its outcome has been revealed.

For the variables, "pre" refers to interviews occurring before an election and "post" to interviews occurring after an election. In other words, consider a situation where a firm was interviewed on June, 1, 2019, there was an election on May, 16, 2019, and there will be another on February, 1, 2020. The *pre-time* is 245 days because the next election will be 8 months after the interview. The *post-time* is 15 days because the past election occurred 2 weeks before the interview. Using the time lapse in days, we create a range of dummies that take value 1 if a firm is interviewed in a predefined period around an election.

2.4. Descriptive statistics

Table 1 presents the main descriptive statistics.[8] 22% of firms were surveyed in the year before an election, and 27% of firms were surveyed in the year after an election. However, as the period around an election is reduced, the number of "treated" firms decreases. For instance, 10% of firms were surveyed in the 6 months before an election, but less than 1% of firms were surveyed in the month before an election. In other words, determining the granularity of periods around elections is critical to using data for a sufficient number of "treated" firms and to provide a consistent analysis (not driven by outliers). In the model, we provide an analysis per 3-month period, but we also display results by month and by 6-month period as robustness checks.

The first analysis is of the relationship between firms' perception of political instability and the time to the last, and next, elections by considering different periods from 1 month to 1 year. Fig. 2 displays the kernel density of the relative measure of the perception of political instability for different groups of firms, according to the time lapse between the interview and the date of the closest election. In Figure 2(a), we consider the time lapse between the interview and the next election and in Figure 2(b) the time lapse since the previous election.

As shown in Figure 2(a), the distribution of the relative scale of the perception of political instability is skewed to the right for firms surveyed in the year before an election. In other words, firms interviewed in the months before an election more frequently report that political instability is a major obstacle to their operations than firms interviewed outside the pre-election year (control group). Symmetrically, on the left side of the graph, among firms attributing less political instability relative to other obstacles, we observe a lower density of firms interviewed in the pre-election year compared to firms interviewed outside the pre-election year.

In Figure 2(b), we show an opposite, albeit less clear-cut, picture. Firms surveyed in a post-election year tend to report lower values of relative perception of political instability as an obstacle to their operations than their counterparts who were surveyed at another time in the election cycle.

These two graphs show that before an election, firms perceive political instability as a bigger obstacle, but that it declines rapidly after the election. In other words, the results suggest that the uncertainty and tension generated by elections, at least as perceived by African firms, crystallize in the run-up to elections. Post-election protests and turbulence are regularly observed in Africa, however, once the results of the election are known, the perception of political instability decreases almost immediately. To further investigate this graphical analysis, we run a basic *t*-test using the absolute and relative measures of the perception of political instability (see Table A3 in Appendix). We confirm the main results of Fig. 2. The descriptive statistics, displayed in Fig. 2 and Table A3, indicate that firms surveyed just before (after) an election report a higher (lower) value of the perception of political instability. In the rest of the document, we further investigate this relationship.

[8] The definition of variables is provided in Appendix in Table A2.

Table 1
Descriptive variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variable (political instability)	21,493	1.26	1.40	0	4
Absolute scale					
Relative scale	21,493	-0.14	1.20	-3.73	4
Interest variables	21,493	917	559	1	2241
Time to the next election (pre)					
Average duration					
3 months	21,493	0.03	0.17	0	1
6 months	21,493	0.07	0.25	0	1
9 months	21,493	0.07	0.25	0	1
12 months	21,493	0.04	0.21	0	1
Time since the past election (past)	21,493	829	521	1	2290
Average duration					
3 months	21,493	0.05	0.23	0	1
6 months	21,493	0.06	0.24	0	1
9 months	21,493	0.10	0.31	0	1
12 months	21,493	0.04	0.19	0	1
Control variables	21,180	48.5	183.1	0	5000
Size					
Age	20,954	15.4	13.8	0	189
Manager experience (in years)	20,951	14.2	9.5	0	50
Female ownership	18,261	0.29	0.45	0	1
Foreign ownership	21,493	0.14	0.35	0	1
State ownership	21,493	0.02	0.15	0	1
Listed	21,281	0.04	0.19	0	1
Partnership	21,281	0.19	0.39	0	1
Sole proprietorship	21,281	0.56	0.50	0	1
Subsidiary	21,489	0.20	0.40	0	1
Capital	21,493	0.44	0.50	0	1
Export	20,845	0.17	0.37	0	1
Sector	21,493	0.08	0.28	0	1
Food					
Manufacturing	21,493	0.29	0.46	0	1
Metals and chemicals	21,493	0.02	0.14	0	1
Others services	21,493	0.29	0.45	0	1
Textiles	21,493	0.06	0.24	0	1
Tourism	21,493	0.01	0.10	0	1
Trade	21,493	0.20	0.40	0	1
Transport	21,493	0.00	0.06	0	1
Vehicles	21,493	0.01	0.09	0	1
Unclassified	21,493	0.03	0.17	0	1

3. Methodology

3.1. Empirical model

Our empirical strategy estimates the impact of elections on the perception of political instability reported by firms operating in Africa. In doing so, we use differential time schedules in interviews across firms within the same country. For this purpose, we estimate the following model:

$$Pol\_Ins_{i,c,d,e} = \propto + \sum_{q=-4}^{q=4} \beta_q 1\left(Election_{(d-e)} = q\right) + \Delta X_i + \mu_{c,e} + \varepsilon_{i,c,d,e} \quad (1)$$

where *i, c, d*, and *e* denote respectively firm, country, date of interview, and date of election. $Pol\_Ins_{i,c,d,e}$ is measured using two approaches (described above): the absolute scale and the relative scale. *Absolute scale* provides an absolute value of a firm's perception of political instability. *Relative scale* is a relative measure indicating whether political instability is a bigger obstacle than other obstacles (electricity, corruption, tax, etc.).

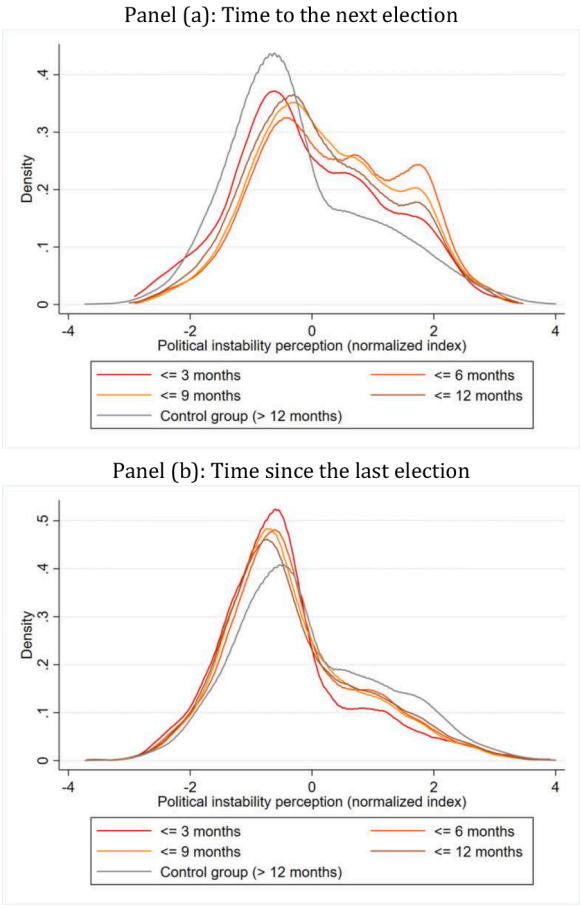

Fig. 2. Distribution of relative indicator of political instability perception.

The variables of interest are eight 3-month period (*quarters*[9]) dummies: $1(Election_{(d-e)} = q)$. Each dummy equals 1 if a firm was interviewed in the quarter q before (from -4 to -1) or after (from 1 to 4) an election. For each firm's interview, we consider both the last election and the next election. By design only one dummy before, and one dummy after, can be equal to 1, because we consider only the last and next elections.[10]

To control for differences across firms, we add observable firms' characteristics. The variable $\mathbf{X}_i$ is a set of firm-level control variables. These include firm *Size* defined as the number of workers (in log) and firm *Age* defined as the duration (in log) between the year of interview and the year of creation reported in the WBES. We consider the experience of the manager in years (*Experience*). We add a set of dummies to capture: if a female manages a firm (*Female*); foreign-owned firms (*Foreign*) and state-owned firms (*State*) if foreigners or the government owns more than 10% of capital; exporters (*Export*); firms located in the administrative capital (*Capital*); firms being a part of a larger firm (*Subsidiary*). We add 3 dummies which take into account the different legal status: *Listed, Partnership, Sole Proprietorship*. We finally include sector dummies to account for differences across industries. Table 1 provides descriptive

[9] For convenience, we use the term "quarter" for a period of 3 months even if this quarter does not correspond to the classic quarter in a year and are different from one election to another because of different dates. In other words, if the election is held on May 16, the term "quarter before the election" refers to the period from February 15 to May 15 and not the official quarter (from January 1 to March 31).

[10] To clarify, we reconsider the example above (with a firm interviewed on June, 1, 2019 and elections on May, 16, 2019 and on February, 1, 2020). This firm was interviewed 15 days after an election, so q + 1 equals 1. Meanwhile, it was interviewed 245 days before another election, so q − 3 equals to 1. Other quarter dummies equal 0.

statistics for the firm-level control variables.[11]

In a second step, we extend Eq. (1) to examine the factors that influence the relationship between election cycle and managers' perception of political instability. To test heterogeneity, we run an interaction model. We consider 3 blocks of factors: firm, election, and country characteristics. For each mitigating variable under investigation, we classify firms, elections, and countries into two groups (see Section 4 for details of the classification used for each characteristic). We then interact the dummy for the pre- and postelection quarter (q) with the dummy for each group as follows:

$$Pol\_Ins_{i,c,d,e} = \propto + \sum_{q=-4}^{q=4} \beta_q 1\left(Election_{(d-e)} = q\right) \times D_{i/c/e} + \Delta X_i + \mu_{c,e} + \varepsilon_{i,c,d,e} \quad (2)$$

where $D_{i/c/e}$ equals 1 for the first group and zero for the other group of firms (i), countries (c) or elections (e).[12] We also control for the mitigating variables by adding these variables into the set of firm controls ($\mathbf{X}_i$) for firms' characteristics, and by controlling for country and election unobserved characteristics through fixed effects ($\mu_{c,e}$). This approach allows us to plot in the same graph, the impact of an election cycle on the perception of political instability for both groups under scrutiny.[13]

3.2. Identification strategy

The inclusion of election fixed effects ($\mu_{c,e}$) is crucial for the identification strategy. The logic behind this is the same as that employed by Depetris-Chauvin et al. (2020). The inclusion of election fixed effects means that when estimating Eq. (1) we focus exclusively on the effect of the time lapse between the interview and the election. We not only compare firms operating in the same country but also relative to the same election.[14] Election fixed effects consider time-varying and time-invariant unobserved country characteristics, because relative to the same elections, firms are interviewed within a few months. Election dummies also avoid comparing firms relative to 2 different elections in the same country but occurring in different contexts (e.g. Cote d'Ivoire which had elections in 2010 and 2015) that may blur the impact of the time lapse. In such cases, it is crucial to compare firms relative to the same election. In the robustness checks, we consider alternative sets of fixed effects (country-year, survey, etc.).[15]

Our identification strategy assumes that the interview schedule is not affected by the election calendar. On the one hand, the logistics involved in the implementation of surveys requires long-term preparation, and is independent of election cycles (Eifert et al., 2010). On the other hand, elections in Africa might induce tensions and the time period for implementing surveys could be altered by some weeks or months. To assess the validity of our strategy, we use 2 tests.

In Figure A2, in Appendix, we plot the distribution of interviewed firms according to the date between the interview and the nearest election. A rejection of the hypothesis of independence between election and interview schedules should be reflected in a decrease in the number of firms interviewed just before and/or after an election. As indicated in Figure A2, the number of firms interviewed does not decline in the quarter before or after an election.

The number of firms surveyed does not help us to test whether firms interviewed close to an election differ in their characteristics, so we run a balance test to examine whether some firms are more, or less, likely to be interviewed just before or just after an election. We use the same specification as that in Eq. (1) with two modifications. First, we change the dependent variables (we use firms' characteristics instead of the perception of political instability). Second, we exclude firm-level control variables (which are now dependent variables). In the presence of selection bias (election cycle on interviews), we should observe that some firms are less/more likely to be interviewed before/after an election. As indicated in Table 2, we do not observe a relationship between electoral cycle and characteristics of interviewed firms. One exception is the share of firms managed by a female. We see that just before an election, the likelihood of surveying female-managed firms is reduced, and then increases just after an election. However, as shown below, controlling for the gender of the manager does not have any impact on our results.

[11] The number of workers is measured as the number of employees +1 (i.e. the manager/owner). For the variable which captures the age of firms, we employ the logarithm of age +1 to avoid zero. Sector dummies include: Food, Manufacturing, Metals and chemicals, Services, Trade, Tourism, Transport, Vehicles and Other sectors. According to Table 1, firms seem relatively large and old for African markets. However, averages hide wide heterogeneity in the distribution of size and age. 40% of firms have less than 10 employees and only 25% of firms have more than 30 employees (median is 12 employees). The distribution of age provides a similar picture. The median age is 12 years old and the top quartile is 19 years old. Regarding other firms' characteristics, we see than 30% of firms are owned by a female, 14% are foreign-owned, and almost 50% of firms are located in the capital. The majority of firms operate in services and trade sectors, and have the legal status of sole proprietorship.

[12] The dummy has three possible subscripts because we divide observations into two groups according to firm, country or election characteristics.

[13] For instance, to study whether domestic and foreign firms differ in their response to election cycle we plot in the same graph the perception of domestic- and foreign-owned firms according to time before and after an election.

[14] Technically, we add two election dummies for each firm: a dummy for the last election and a dummy for the next election. We add election dummies, even if quarter dummies are always equal to zero.

[15] Firms with reference to the same election are interviewed during the same survey round. The time to implement enterprise surveys in different countries ranges from less than 1 month to two years. In detail, around 40% of surveys are implemented in three months, 47% in three months to one year and the rest (16%) in one year to two years.

Table 2
Balance tests.

Dependent variable (↓)	Quarter dummy to the next election				Quarter dummy to the past election				Obs.
	Q-4	Q-3	Q-2	Q-1	$Q+1$	$Q+2$	$Q+3$	$Q+4$	
Size (in log)	1.076	36.39**	7.681	22.20	7.943	23.19***	28.25***	−7.390	21,180
	(0.09)	(2.18)	(0.48)	(1.25)	(0.47)	(2.82)	(5.26)	(-1.13)	
Age (in log)	1.999*	3.317**	0.666	2.204	-0.549	-0.596	0.159	-1.528	20,954
	(1.96)	(2.62)	(0.54)	(1.54)	(-0.47)	(-0.91)	(0.24)	(-1.50)	
Female	-0.084*	-0.212***	-0.274***	-0.209***	0.157***	0.116**	0.101**	0.022	18,261
	(-1.72)	(-4.22)	(-5.36)	(-3.88)	(3.35)	(2.53)	(2.60)	(0.67)	
Exp. Manag.	0.547	0.980	-0.112	0.896	0.677	-0.382	-1.150	0.337	20,951
	(0.40)	(0.64)	(-0.07)	(0.46)	(0.60)	(-0.56)	(-1.12)	(0.40)	
Foreign	-0.026	0.018	0.008	-0.031	-0.022	-0.019	0.001	-0.004	21,493
	(-0.96)	(0.77)	(0.32)	(-1.32)	(-0.57)	(-1.11)	(0.04)	(-0.15)	
State Own.	0.007	-0.001	0.027	-0.040***	-0.000	0.008**	0.008	-0.003	21,493
	(0.64)	(-0.15)	(1.20)	(-3.01)	(-0.04)	(2.24)	(1.48)	(-1.28)	
Listed	-0.019	-0.001	-0.019	-0.021	-0.034***	0.000	0.010	0.006	21,281
	(-1.37)	(-0.04)	(-0.79)	(-0.85)	(-2.81)	(0.02)	(0.62)	(0.44)	
Partnership	0.032	0.088**	0.067	0.075	0.018	0.043	0.049	-0.009	21,281
	(1.06)	(2.28)	(1.31)	(1.39)	(0.65)	(1.14)	(1.19)	(-0.66)	
Sole Proprietorship	0.037	-0.020	-0.015	0.062	0.033	0.001	-0.028	0.068**	21,281
	(0.55)	(-0.33)	(-0.23)	(1.01)	(0.72)	(0.03)	(-0.54)	(2.27)	
Subsidiary	0.117*	-0.052	-0.207**	-0.182	-0.65	-0.057	-0.090**	-0.065**	21?489
	(1.79)	(-0.82)	(-2.53)	(-1.60)	(-1.06)	(-1.67)	(-2.40)	(-2.53)	
Capital	0.072	0.036	0.040	-0.051	-0.232***	-0.074	-0.006	0.063	21,493
	(0.67)	(0.34)	(0.39)	(-0.53)	(-3.37)	(-1.08)	(-0.14)	(1.39)	
Export	0.023	0.027	0.058*	-0.151***	-0.001	0.034	0.061	-0.004	20,845
	(1.50)	(1.31)	(1.87)	(-3.93)	(-0.03)	(0.85)	(1.29)	(-0.12)	

The table displays point estimates associated with Pre and Post quarter dummies for 11 different dependent variables (raws). Robust t-value in parentheses are clustered at the survey level. All estimates are based on OLS regressions using election fixed effects to ensure that the comparison in the covariates is made between firms referring to the same (pre and post) election in the same country. *, ** and *** refer to statistical significance at 10%, 5% and 1% respectively.

4. Results

4.1. Baseline results

We test the empirical relationship between the election calendar and the perception of political instability. We consider two dependent variables: absolute scale and relative scale. Our main results are shown in Fig. 3. We plot the estimated coefficient and the 95% confidence intervals for each quarter before and after an election. The results should be interpreted against the reference group (omitted variable) made up of firms interviewed in nonelection periods (defined as periods outside the window of one year around an election). In Panel (a) we present the results for the absolute scale, and in Panel (b) for the relative scale. The coefficients are estimated using a regression in which we control for firms' characteristics and election dummies. All the associated regression results are shown in Table A4 in Appendix.[16]

With both specifications, we see an increase in the perception of political instability during the four quarters before an election. The degree of perception of instability is the highest in the last two quarters before an election. This finding is in line with our expectations and its magnitude is substantial. For the absolute scale in the two quarters before an election, the measure of perception of instability increases by 0.65 (approximately 45% of the standard deviation, SD = 1.40). The magnitude is even bigger for the relative scale where the perception of political instability increases by 0.7 in the two quarters before an election (approximately 60% of the standard deviation, SD = 1.20).

An interesting question is whether the perception of political instability persists after elections. In developed countries, elections are often a source of uncertainty about the winner and the future politics. However, just after an election, uncertainty vanishes (Baker et al., 2020). In Africa, post-electoral periods could also be perceived as politically unstable due to protests and rejection of the official result. Our econometric analysis provides an unclear answer to this question. When the perception of political instability is captured by

[16] Figure 3 is based on the last column for each dependent variable of Table A4. Table A4 also reports alternative specifications in the first two columns. In the first column, we just consider quarter dummies without election fixed effects and control variables. In the second column, we include election fixed effects.

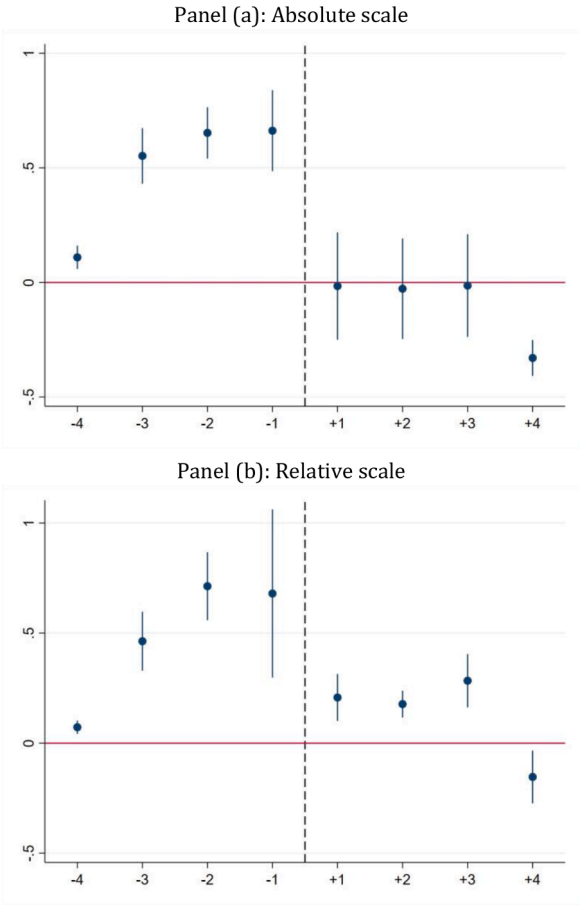

Fig. 3. Elections and perception of political instability, quarter analysis. The figures plot the coefficients and the 95 percent confidence intervals for 8 dummies indicating quarter blocks from one year before to one year after an election. Models are estimated using OLS with firm-level control variables and pre- and post-election dummies. Standard errors are clustered at the survey level.

the absolute scale, we do not see an effect in the post-election period (Panel a). On the contrary, the results for the relative scale (Panel b) indicate that the perception of political instability remains higher after elections, though the magnitude is much smaller than the magnitude of pre-election effects. These findings suggest that in the months after an election, firms continue to perceive political instability as an obstacle to their operations.

To sum up, our findings indicate that firms perceive political instability as an obstacle before an election. The impact of elections on the perception of political instability is strong in the two quarters before an election, but there is a sharp reduction after elections.

4.2. Robustness checks

We run robustness checks to test the validity of our main findings about the impact of elections on the perception of political instability of firms. The results are presented in Appendix.

First, we consider different dummies of interest. We consider months in Figure A3 and 6-month periods (*semesters*) in Figure A4. Both month and semester analyses confirm our main findings, especially for pre-election periods. We observe from the semester analysis that the perception of political instability increases in the last semester. The analysis confirms the quarter analysis by suggesting that firms begin to perceive political instability approximately 9 months before an election.[17] The degree of perception, however, begins to decrease a few months before an election. The month analysis also confirms the result for the post-election period (and the difference in results between absolute and relative scale). But the semester analysis does not confirm this impact of the post-

[17] One might keep in mind that the number of firms interviewed for each month are sometimes limited and therefore estimated coefficients (and confidence intervals) subject to caution. For this reason, we believe quarter estimates to be more consistent.

election period.[18]

Second, we change the dependent variable by using dummy variables. To replace the absolute scale, we create a dummy equal to 1 when a firm declares political instability as a major or very severe obstacle to its operation and 0 otherwise. For the relative scale, we create a dummy equal to 1 if the relative scale is positive, indicating that political instability is more important than other obstacles. Our findings, displayed in Figure A5, are qualitatively similar to our baseline analysis for the pre-election period, with no effect associated to post-election periods. The dummies are useful to gauge the size of the impact of elections on the perception of political instability. Firms surveyed before an election are 20 percentage points more likely to declare that political instability is a major or a very severe obstacle; this corresponds to an over 60% increase in the average probability of declaring political instability as a major obstacle. The magnitude is similar for the relative dummy variable. While 44% of firms declare that political instability is a stronger obstacle than the average of other obstacles, being interviewed just before an election increases this likelihood by 30 percentage points (a 75% increase). In an unreported analysis, we also run an ordered logistic regression for the model for the absolute scale. The results, available upon request, are in line with the baseline model.

Third, we present additional changes to our econometric model in Table A5. We test whether the results are driven by the set of dummies considered. Table A5 shows that our findings are unchanged if we replace election dummies by country Fixed Effects and year Fixed Effects (column 1), country-year Fixed Effects (column 2) or survey Fixed Effects (column 3).

Fourth, we study whether our econometric results are explained by the sample considered. In doing so, we weight each observation by the inverse of the number of observations from the survey from which firm i is extracted. This method allows us to weigh each survey round equally. Our results are robust to this change as indicated in the fourth column of Table A5. In an unreported analysis, we confirm that our econometric results are not driven by one specific country (we exclude countries one by one without changing the estimated results).

Fifth, we consider several characteristics of election or political regime in the rest of the Table A5. We exclude countries with parliamentary elections in column (5) without altering our conclusions. Sixth, we remove anticipated or postponed elections in the last column. Identifying elections with a non-fixed calendar is a complex task. Previous papers focus mainly on legislation to identify if an election has a fixed calendar (*de jure*). However, even constitutional laws are not written in stone (as the recent examples of Côte d'Ivoire or Guinea showed for term limits). We therefore web search for each election to see if the election calendar was changed. Many elections are moved by a few days and it is sometimes difficult to know the reason for the calendar change, so the analysis should be treated with great caution. We observe that political uncertainty seems stronger between 6 and 9 months before an election with a fixed calendar, while the uncertainty in the last quarter is reduced. However, these elections tend to induce a post-election instability.

Finally, one may ask whether our results are specific to Africa or common to all countries in the developing world. Episodes of tension during elections are frequent in other continents (Latin America, Asia). We therefore extend our scope to investigate whether our hypothesis holds in other parts of world. Figure A6 in Appendix indicates that the relationship between elections and perception of political instability is not present outside Africa.[19]

4.3. Impact of election cycle on other obstacles

We then investigate whether the election cycle influences other obstacles to firm growth. While elections are primarily expected to influence the perception of political risk, recent papers show election cycles influencing other obstacles such as corruption (Sidorkin and Vorobyev, 2018; Potrafke, 2019), access to finance (Léon and Weill, 2022), and electricity (Baskaran et al., 2015). We apply the same approach as before but we change the dependent variables. The results are displayed in Tables A6 and A7. We consider 14 different obstacles: business license, corruption, courts, crime, electricity, finance, labor regulation, workforce skills, access to land, tax administration, tax rates, telecommunication, trade regulation and transport. We do not see an election cycle effect for most of the other obstacles, but we do find that the perception of 3 obstacles increases just before elections and decreases just after elections: trade regulation, courts, and corruption. The results for corruption are in line with observations made by Sidorkin and Vorobyev (2018) and Potrafke (2019). Electricity and crime are perceived as weak just before an election but rise after an election. The former can be explained as an improvement of public services just before an election to buy votes.

Baskaran et al. (2015) provide evidence about this manipulation in the context of India. One possible explanation for crime is that authorities increase control of the population before an election, to avoid political unrest, and reduce it after the election.

5. Heterogeneity analysis

This final section examines whether the relationship between election cycle and perception of instability is shaped by firm, country,

[18] It should be noted that we initially would like to run a placebo test by changing the relevant election. The test will employ parliamentary elections in Presidential regimes and presidential elections in Parliamentary regimes. Unfortunately, in many African countries elections are general elections (with both types of elections the same day). We technically cannot run this placebo test due to the lack of observations.

[19] Several explanations can be advanced to justify differences between Africa and the rest of the world. First, Africa is very specific and electoral contests are often marked by contested results, even in non-democratic countries (it is a way for opposition parties to join forces against the power and to alert the international community). Second, the term political instability may refer to different realities due to the polysemy of the term (Jong-A-Pin, 2009). For instance, in stable democracies, political instability can be a synonym to government instability, while it may refer more to political unrest and conflicts in Africa.

or election characteristics. This section has a double objective. Firstly, we use firms' characteristics to scrutinize if some categories of firms are more likely to be sensitive to electoral cycles. Secondly, by analyzing whether country and election characteristics alter the baseline relationship presented above, we can scrutinize the channels through which elections influence firms' perception of political instability.

5.1. . Which firms are more sensitive to election cycles?

There is a lot of heterogeneity among firms in terms of political risk (Hassan et al., 2019) and uncertainty (Easaw and Grimme, 2021). Some firms and sectors are more sensitive to change of leaders because they depend strongly on regulations or public contracts. In addition, the vulnerability of firms to troubles which occur during an election process can differ due to differences in risk exposure or the ability to protect themselves.

We study whether firms' characteristics alter the relationship between election cycles and perception of political instability. We consider the following characteristics (details below): firm size, age, location, and sector, the experience and gender of the manager, the ownership status of the firm (foreign-owned, sole proprietorship, and listed firms),[20] whether the firm is a subsidiary of a larger group, and whether the firm is an exporter.

We run the interaction model described in Eq. (2). For each characteristic, we classify firms in two groups, using the median value for continuous variables (size, age, experience of the manager). We classify firms as small if the number of employees is between 0 and 10 (45% of firms have less than 10 employees). Firms under 10 years of age are classified as young (48% of firms are young). 10 years is used to distinguish between experienced and inexperienced managers (52% of managers are experienced according to this classification). For other variables, we employ information directly provided by the WBES on sector, gender, location, ownership, etc.[21]

For a majority of the firms' characteristics, we do not observe a difference, irrespective of the measure of perception used, as indicated in Figures A7 (absolute scale) and A8 (relative scale) in Appendix. The age, size and location of the firm, the experience and gender of the manager, firm's sector, legal status and being part of a larger group do not affect the relationship between election cycle and perception of political instability by firms.

However, Fig. 4, shows that firms oriented towards foreign markets are more sensitive to election cycles. Foreign-owned firms and exporters are more sensitive to election cycles, especially before an election, irrespective of the perception measure used. These firms are more sensitive to possible disruption in supply chain and transport caused by political tensions. Firms oriented towards foreign markets may suffer from problems accessing inputs or selling outputs during a conflict (Amodio and Di Maio, 2018). In addition, foreign-owned firms can be highly sensitive to changes in policies, especially trade regulations (Wagner et al., 2018).

5.2. Channels through which election cycles influence perception

Lastly, we investigate country and election factors that influence a firm's sensitivity to election cycles in Africa. Elections can play a role in the perception of political instability through different channels. Studying election and country factors that affect the impact of election cycles can provide information about these channels.

First, contested elections might lead to stronger instability, even in established democracies (as during the 2020 U.S. Presidential election). The risk is even higher in Africa due to less established democracies. According to this view, political competition matters in explaining the relationship between election cycles and the perception of political instability. Eifert et al. (2010) support this argument. They point out that political competition spurs ethnic identification in Africa, with the risk of degenerating into conflict. In other words, perception of political instability increases with the degree of electoral competition.

To test this explanation, we examine whether political instability perception is higher in contested elections. To do so, we run the interaction model presented in Eq. (2) by breaking down elections into tight elections and non-tight elections. We define a tight election as an election with a margin between the winner and the runner-up of less than 10 percentage points during the first round of the election.[22] The results presented in Panel (a) of Table 5, show that the perception of political instability is stronger before tight elections, especially in the last quarter before the election. The model using relative perception (right column) shows that the post-election period is also marked by a stronger perception of political instability when the victory margin is small.

To confirm the role played by tight elections, we consider alternative measures of election contestability. An election outcome is an

[20] In an unreported analysis, we test whether state-owned firms differ from private firms. Despite the small number of state-owned firms, we do not see a statistical difference between them and private firms. Results are available upon request.

[21] We made the following choices to classify firms. For location, we create a variable if the firm is located in the political capital. One alternative would be to use the main economic center that sometimes differs from capital in some African countries (as in Nigeria, Côte d'Ivoire, South Africa, etc.). However, because we focus on the risk of political uncertainty we might expect that the political capital city matters more. We classify firms as foreign if a minimum of 10% of their capital is owned by foreigners. We consider all firms exporting as exporters, irrespective of the volume of exports. For other variables, firms are already directly classified in a category.

[22] This variable is only available for presidential elections, however, presidential elections dominate in Africa. This cut-off allows us to consider a balanced distribution of observations, as tight elections concern two thirds of firms operating in 17 different countries. We also provide sensitivity analysis using 15, 20 and 25 percentage points as the threshold. Results are unchanged. Unfortunately, we cannot employ a lower cut-off (e.g., 5 percentage points) due to the lack of observations. For instance, there are no firms surveyed in the three months before an election with an election with a margin below 5 percentage points. As a result, we cannot plot point estimates for all quarters.

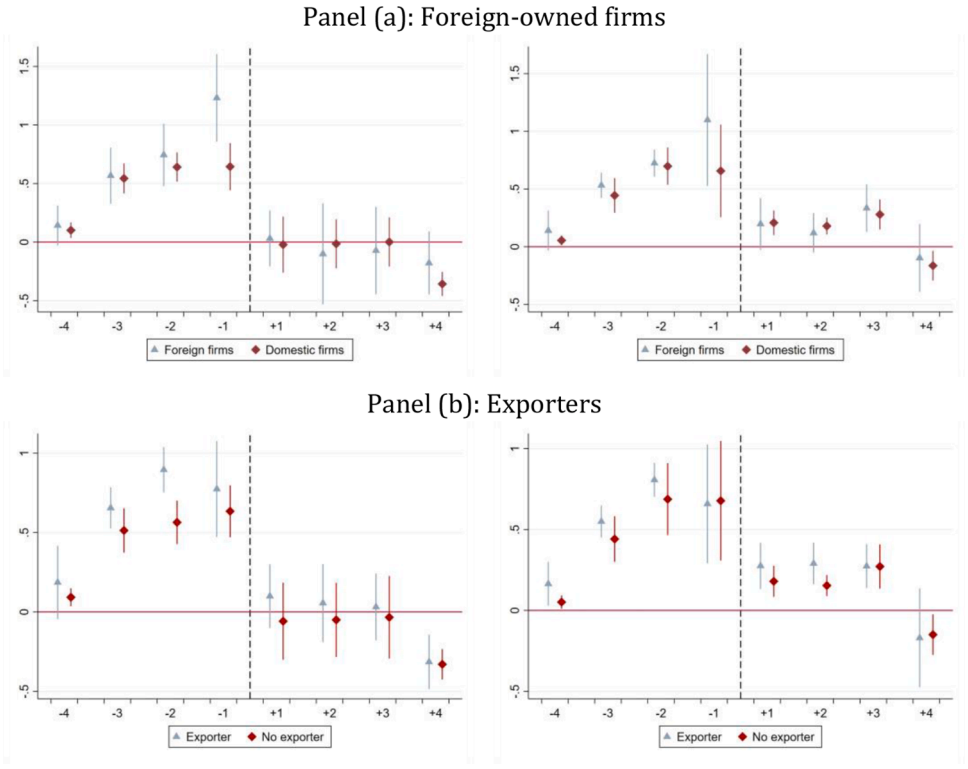

Fig. 4. Foreign market oriented firms and perception of instability over the election cycle.
The dependent variable is the absolute scale of perception of political instability in the left column and relative scale of perception of political instability in the right column. The figures plot the coefficients and the 95% confidence intervals for quarter dummies interacted with firms' characteristics. We consider foreign-owned firms in Panel A and exporters in Panel B. Models are estimated using OLS with firm-level control variables and pre- and post-election dummies. Standard errors are clustered at the survey level.

imperfect measure of uncertainty of election, as documented in political science literature (see Hyde and Marinov, 2012; Kayser and Lindstädt, 2015; Dash et al., 2019, among others). Also, the official outcome is not a good proxy for electoral competition in countries with distorted election processes, because the official result given by the electoral commission is not always that obtained in the ballot. In Panel (b) of Fig. 5, we exploit another proxy of electoral competition by distinguishing between elections with and without the participation of the incumbent leader. African elections are often used as a tool to confirm the leader in power and the degree of uncertainty is low, with incumbents frequently being re-elected. For instance, among the 63 elections with an incumbent included in our analysis, the incumbent lost in only 9 cases.[23]Contrary to the above findings based on victory margins, we show that the presence of incumbent leaders fosters the perception of political instability before an election. In other words, the role of election uncertainty is unclear and depends on the measure used (victory margin or presence of incumbent leader).

An explanation of these ambiguous results could be based on the overall election process. When the incumbent leader participates, the process can be altered to favor re-election, especially if institutions are weak. In Panels (c) and (d) of Fig. 5, we show that in non-democratic countries, and when the electoral process is not free and fair, the perception of political instability increases sharply before, but also after an election.[24] These results are not in line with the hypothesis of contestability.

To sum up, the findings reported in Fig. 5 show that the perception of political instability tends to increase when the leader participates and electoral institutions are weak. In many countries, elections are used to legitimize the leader in power *vis-`a-vis* the international community. However, elections are also a moment for the opposition to make their voices heard. As a result, elections are more likely to generate political instability (or to at least increase its perception by managers) in non-democratic countries and less contested elections than in countries with strong electoral institutions.

Beyond electoral institutions, another strand of literature points out that elections are a driver of political violence in Africa, especially in countries with a high risk of conflict Collier and Vicente, 2012; Cederman et al., 2013; Flores and Nooruddin, 2012). We

[23] These elections are: Côte d'Ivoire (2010), Gambia (2016), Ghana (2016), Madagascar (2018), Malawi (2009, 2014), Nigeria (2015), Senegal (2012) and Zambia (2011).

[24] We use data from V-DEM to measure the degree of democracy and the quality of electoral process. A country is considered a democracy if the country is classified as an electoral democracy or a liberal democracy by V-DEM (variable v2x polyarchy). An election is considered free and fair if the index of clean election provided by V-DEM (v2xel fair) is higher than 0.5 (it ranges from 0 to 1).

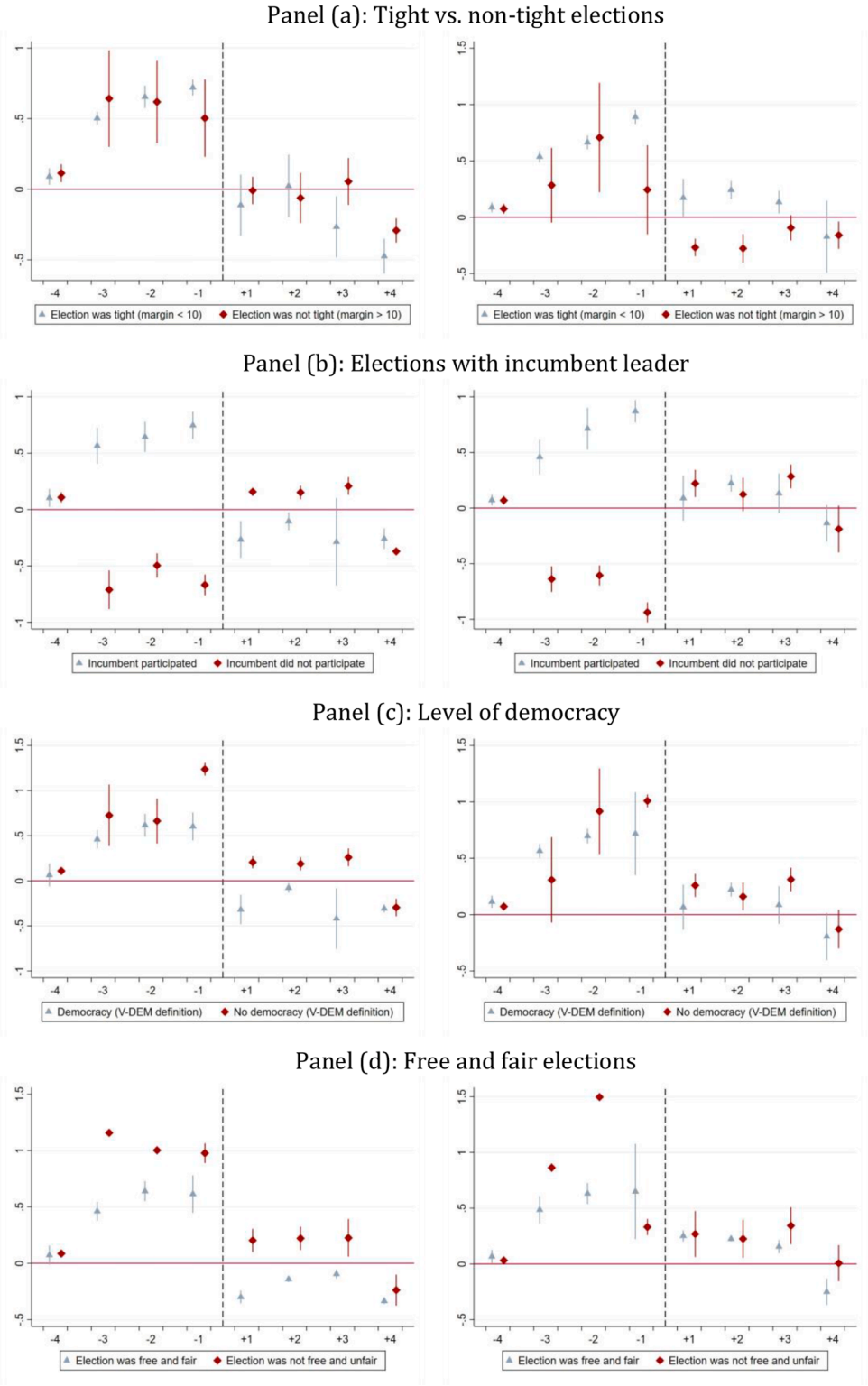

Fig. 5. Elections and country characteristics.
The dependent variable is the absolute scale of perception of political instability in the left column and relative scale of perception of political instability in the right column. The figures plot the coefficients and the 95% confidence intervals for quarter dummies interacted with firms' characteristics. Models are estimated using OLS with firm-level control variables and pre- and post-election dummies. Standard errors are clustered at the survey level.

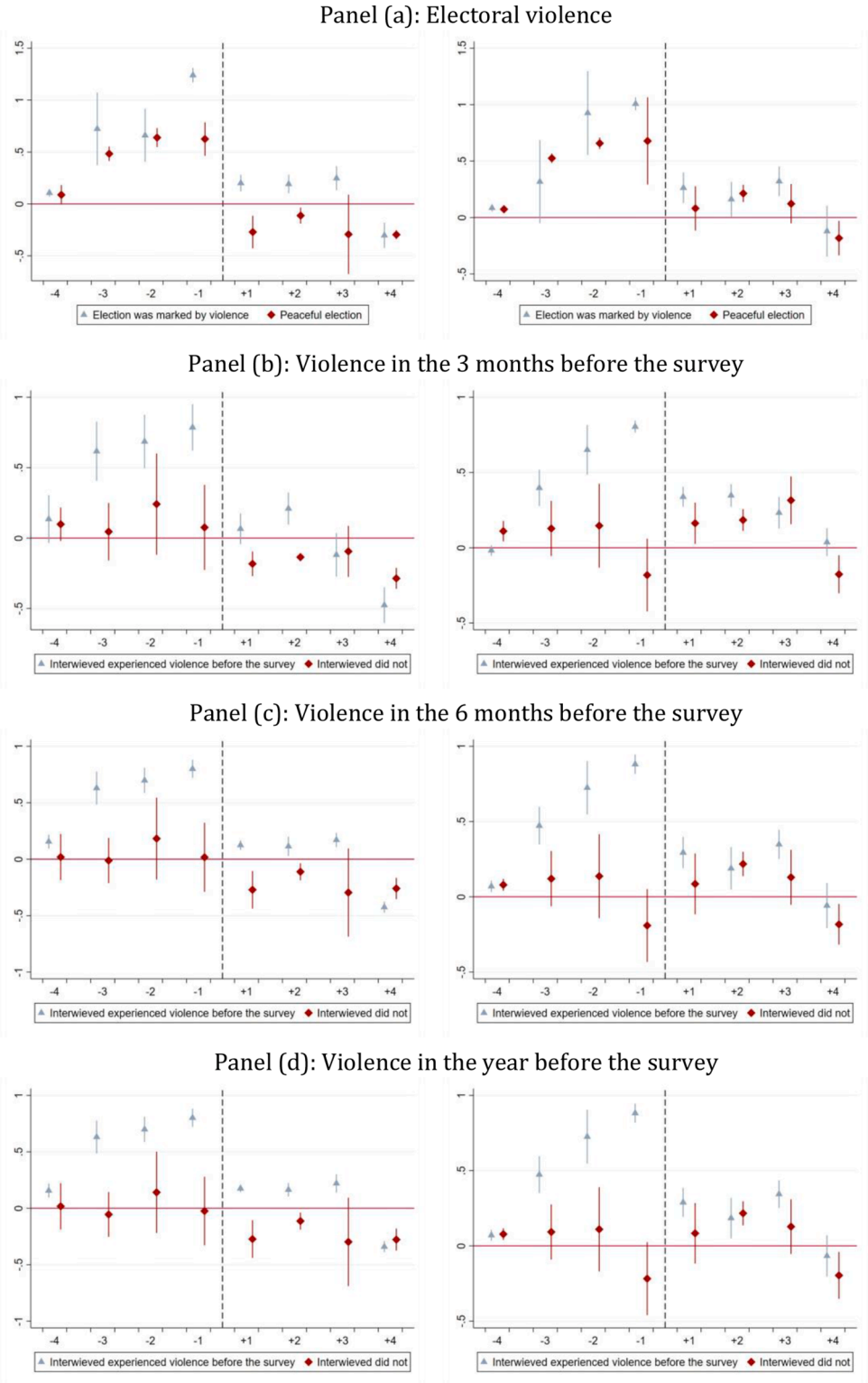

Fig. 6. Violence and perception of political instability.
The dependent variable is the absolute scale of perception of political instability in the left column and relative scale of perception of political instability in the right column. The figures plot the coefficients and the 95% confidence intervals for quarter dummies interacted with firms' characteristics. Models are estimated using OLS with firm-level control variables and pre- and post-election dummies. Standard errors are clustered at the survey level.

first show in Panel (a) of Fig. 6 that the perception of political instability before and after the election is higher when the electoral process is marked by violence.[25] This finding is far from surprising. However, we note that the perception of political instability increases just before an election even if there is no violence before or after the election. In other words, elections also alter firms' perception of political instability when elections are not accompanied by violent episodes.

In the rest of the Fig. 6, we do not exploit observed violence during electoral process but rather we try to measure the risk of conflict. To do so, we use the ACLED database to highlight episodes of violence in a country at a granular level. For each country, we compute the number of violent episodes in the 3, 6, and 12 months before the survey as well as the total number of deaths in these events (irrespective of their source). We consider that a country experienced violence if the total number of deaths exceeds 50 during the period under investigation.[26,27] The results presented in Panels (b), (c), and (d) of Fig. 6 show that the perception of political instability only increases for managers operating in countries with episodes of violence before the interview. In other words, the electoral process induces an increase of political instability only in countries at risk. In peaceful countries, we do not see an impact of political process on perception of political instability.

Lastly, one might argue that there are political spillovers across countries. Managers may adjust their perception of political instability according to recent events occurring in neighboring countries.[28] To investigate this, we adapt the approach developed above for internal conflicts. Instead of considering domestic conflicts, we identify whether there is a conflict in a neighboring country (i.e. with a common border). We consider three thresholds to identify a conflict in a neighboring country: 100, 250 or 500 deaths in one year. We consider higher thresholds than before because a situation of instability is likely to spread to neighboring countries only if a conflict is large enough (due to population movements or media coverage).[29]

The results, presented in Fig. 7, show a pre-election increase (during the last two quarters before elections) of the perception of political instability by domestic firms when a neighboring country experiences more than 500 conflict-related fatalities in the past 12 months. However, this result is apparent only for large events. We show that violence in neighboring countries has little influence on firms' perception of political instability over the election cycle in the case of smaller conflicts, as indicated in Panel (b) (less than 250 deaths). The relationship is even inverted for the smallest conflicts (Panel (a)).[30] In an unreported analysis (available upon request), we confirm our main results by adopting another approach at the election-level. We classify domestic elections into two groups. The first group is domestic elections not associated with any violent election in neighboring countries during the past year (because there is no election or because elections in neighboring countries were non-violent). The second group is domestic elections that take place after a turbulent election in at least one neighboring country. According to this classification, 79 elections (out of 207) occurred in a context of violence in neighboring countries (which account for 30% of firms). The results suggest that recent violent elections in neighbors are associated with higher sensitivity to election cycles. Overall, these findings indicate that the perception of political instability is more sensitive to election cycles if neighboring countries are politically unstable (i.e. turbulent elections and violent conflicts occurring in neighboring countries).

6. Conclusion

Political instability has long been recognized as an impediment to private sector development because it limits firms' decisions to invest and innovate. Identifying factors influencing political instability or its perception by firms is therefore of prime importance to favor private sector development. This paper investigates how election cycles are associated with the perception of political instability by African firms.

WBES provides us with a measure of political instability as an obstacle to the firms' current operations for 21,500 firms representative of the 33 African countries surveyed. We combine firm survey data with information on national elections across the continent, such as dates and results among other characteristics. This allows us to properly identify and split periods before and after elections to capture precisely the variations in firms' perception during these periods.

We find a significant and sharp increase of the perception of political instability before elections. Specifically, the perception of political instability increases during the 3 quarters preceding elections. This result holds for various robustness checks and is not driven

[25] The measure of electoral violence is provided by V-DEM using the variable v2elpeace. An election is classified as violent if the answer to the question "In this national election, was the campaign period, election day, and post-election process free from other types (not by the government, the ruling party, or their agents) of violence related to the conduct of the election and the campaigns (but not conducted by the government and its agents)?" is (0) No, or ((1) Not really (other answers are somewhat, almost and peaceful).

[26] As a robustness check, we consider alternative thresholds for the three-time windows:

[27] deaths and 100 deaths. The results are similar to those reported in Figure 6.

[28] We thank a Reviewer for inviting us to consider this possibility.

[29] Another argument is statistical. Most countries have several neighbors and we code the dummy variable of neighboring country conflict as 1 if one of the neighbors has more than 100, 250 or 500 deaths in one year. The lower the threshold, the smaller the number of firms classified in the category without conflict among neighbors, making the empirical analysis less balanced and reliable. The large majority of firms are classified as having a neighbor in conflict if the threshold is a cumulative number of deaths exceeding 50 (84%), while this ratio is 76% for 100, 66% for 250, and 51% for 500 deaths.

[30] There are two possible explanations for the latter result. First, we might argue that small conflicts have an effect on perception of political instability. Observing a troubled environment abroad can lead to a heightened sense of security, either because individuals compare to the situation of one's neighbor or because the authorities can tighten their grip in order to avoid any spillover. Another explanation is just statistical. The sample of firms classified as without violence is reduced and estimations are not robust.

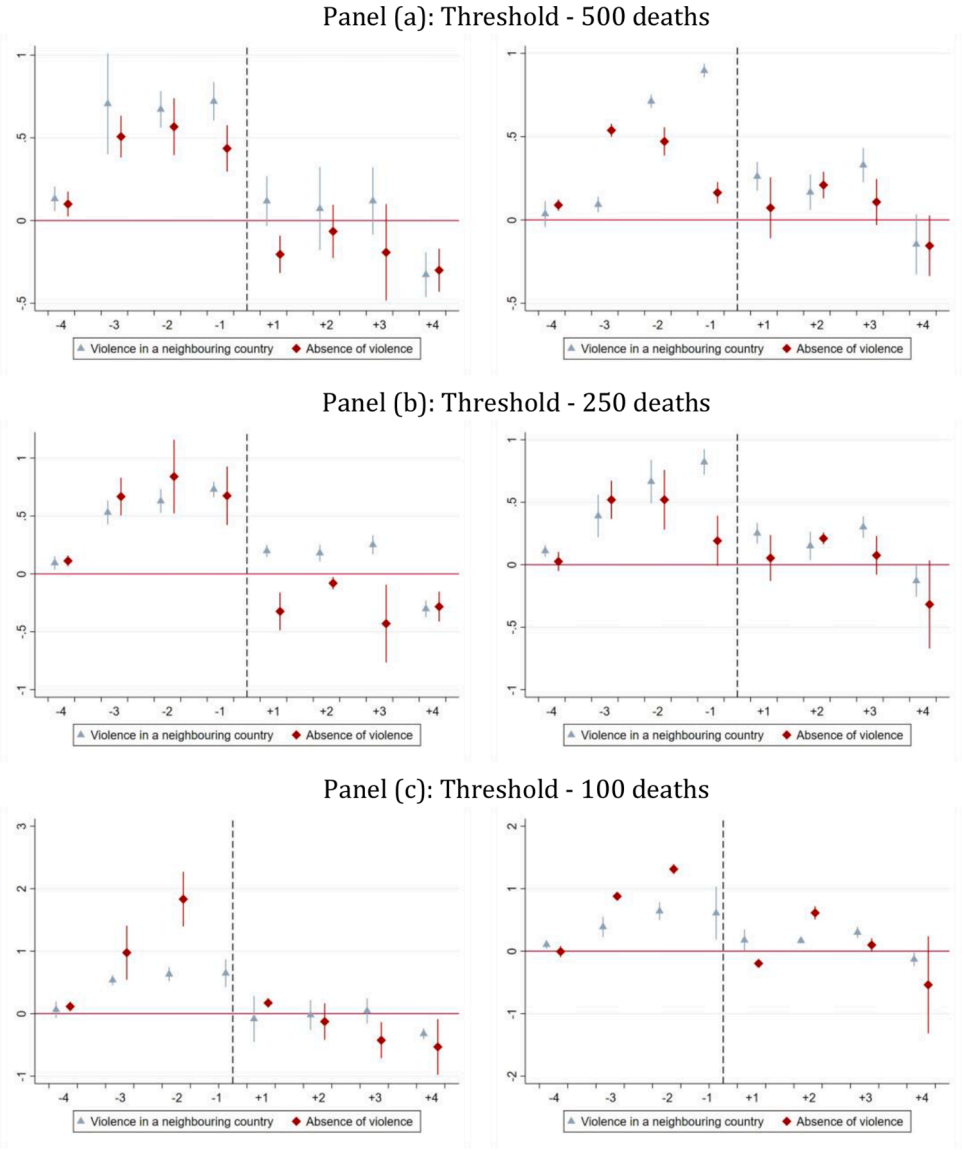

Fig. 7. Political spillover.
The dependent variable is the absolute scale of perception of political instability in the left column and relative scale of perception of political instability in the right column. The figures plot the coefficients and the 95% confidence intervals for quarter dummies interacted with firms' characteristics. Models are estimated using OLS with firm-level control variables and pre- and post-election dummies. Standard errors are clustered at the survey level.

by a perception of an overall increase of all kinds of obstacles before elections. We observe that the perception of political instability falls after elections. However, all firms are not equally sensitive to election cycles. In particular, firms oriented towards foreign markets are more sensitive to election cycles. We do not find a significant impact of other firm characteristics (size, age, sector, location) in shaping the relationship between the election cycle and the perception of political instability.

In the last part of the paper, we scrutinize whether country characteristics shape the relationship between election cycle and perception of political instability. Elections are more likely to generate an increase in perception of political instability in countries with weak electoral institutions and when the incumbent leader participates in the election. On the other hand, elections in democracies only slightly influence the perception of political instability. Finally, we focus on the role of conflict. We show that perception is also sensitive to the election calendar during peaceful elections (without pre- and post-election violence). Nonetheless, the election cycle generates a higher level of perceived political instability in countries at a high risk of conflict (post-conflict societies). We also find that major political shocks in neighboring countries lead to cross-border spillover effects.

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