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Online appendix to “A time to throw stones, a time to reap: How long does it take for democratic transitions to improve institutional outcomes?”

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In this online appendix, we provide extra evidence complementing our paper “A time to throw stones, a time to reap: How long does it take for democratic transitions to improve institutional outcomes?” accepted for publication in the Journal of Institutional Economics. First, we provide additional information on the dataset and the sample. Second, we discuss four democratic transitions that illustrate our main finding: Bangladesh in 1991, Senegal in 2000, Hungary in 1990, and Nicaragua in 1990. Third, we report a series of robustness checks: a nonparametric test, using alternative definitions of transitions, using an alternative set of control variables, dropping former socialist countries, including region-specific effects, distinguishing types of transitions, conditioning the effect of democratic transitions on GDP per capita, education, and whether the transfer of power was regular or not.

Keywords Democratization; democratic transitions; institutions; governance; political risk.

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**Online appendix to “A time to throw stones, a time to reap:
How long does it take for democratic transitions to improve institutional
outcomes?”**

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A1. ADDITIONAL INFORMATION ON THE DATA

Descriptive statistics

Table A1: Descriptive statistics

	Mean	Std. deviation	Minimum	Maximum
ICRG ₁₁	62.18	13.68	13.25	90.08
Principal component	60.16	20.04	-7.28	101.84
Bureaucracy quality	2.317	1.188	0.000	4.000
Corruption	3.130	1.385	0.000	6.167
Ethnic tensions	4.064	1.414	0.000	6.000
External conflict	9.943	1.910	0.000	12.000
Government stability	7.807	2.017	1.000	12.000
Internal conflict	9.089	2.374	0.000	12.000
Investment profile	7.575	2.474	0.000	12.000
Law and order	3.823	1.466	0.000	6.000
Military in politics	3.953	1.776	0.000	6.167
Religious tensions	4.639	1.358	0.000	6.000
Socioeconomic conditions	5.841	2.270	0.000	11.000
GDP per capita	14295.627	18610.650	200.631	111968.352
Openness	38.602	26.505	0.011	218.663
Secondary enrolment	20.215	13.432	0.030	69.750
Government size	15.466	5.479	2.047	43.479

Table A2: Transition dummy variables

Variable	Number
D^1	77
D^2	93
D^3	114
D^4	125
D^5	736
A	82

Principal component analysis of the sub-indices of the icrg₁₁ index

Table A3: Principal components analysis: Factor loadings of the eleven sub-indices of the ICRG index

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11
Bureaucracy quality	0.798	0.356	0.211	0.030	0.073	0.057	0.027	0.161	0.381	0.069	0.073
Corruption	0.690	0.517	-0.075	-0.138	0.082	0.336	0.170	0.111	-0.216	-0.123	0.098
Ethnic tensions	0.635	-0.229	-0.388	-0.468	-0.178	-0.291	0.101	0.217	0.018	-0.032	-0.017
External conflict	0.644	-0.298	-0.264	0.301	0.517	-0.083	0.215	0.054	-0.017	0.001	-0.111
Government stability	0.478	-0.677	0.337	-0.141	-0.057	0.365	0.022	0.090	-0.039	0.182	-0.021
Internal conflict	0.833	-0.238	-0.183	-0.056	0.138	-0.059	-0.146	-0.261	-0.002	0.013	0.317
Investment profile	0.678	-0.278	0.494	0.243	-0.203	-0.133	0.029	0.060	-0.023	-0.309	0.036
Law and order	0.847	0.079	0.019	-0.259	0.071	0.116	-0.139	-0.282	0.077	-0.131	-0.260
Military in politics	0.816	0.191	0.007	0.154	0.028	-0.112	-0.419	0.208	-0.159	0.111	-0.066
Religious tensions	0.540	-0.042	-0.574	0.361	-0.448	0.191	0.039	-0.056	0.057	0.025	-0.037
Socioeconomic conditions	0.748	0.277	0.328	0.030	-0.169	-0.247	0.252	-0.193	-0.115	0.225	-0.038
Cumulative R-Squared	0.504	0.618	0.718	0.775	0.831	0.875	0.908	0.938	0.960	0.981	1.000

List of countries and transitions in the dataset

Table A4: Democratic and autocratic transitions

Country	Year of switch to democracy	Year of switch to autocracy	Country	Year of switch to democracy	Year of switch to autocracy	Country	Year of switch to democracy	Year of switch to autocracy
Albania	1992	None	Greece	None	None	Niger	None	None
Algeria	None	None	Guatemala	1996	None	Nigeria	1999	None
Angola	None	None	Guinea	None	None	Norway	None	None
Argentina	None	None	Guinea-Bissau	2005	None	Oman	None	None
Armenia	None	None	Guyana	1992	None	Panama	1994 ^F	None
Australia	None	None	Haiti	None	None	Papua New Guinea	None	None
Austria	None	None	Honduras	None	None	Paraguay	1993	None
Azerbaijan	None	None	Hungary	1990 ^F	None	Philippines	1987 ^F	None
Bahamas	None	None	Iceland	None	None	Poland	1990	None
Bahrain	None	None	Indonesia	1999; 2005 ^F	None	Portugal	None	None
Bangladesh	1991	None	Iran	None	None	Qatar	None	None
Belarus	None	None	Iraq	None	None	Romania	1990	None
Belgium	None	None	Ireland	None	None	Russia	1993	None
Bolivia	None	None	Israel	None	None	Saudi Arabia	None	None
Botswana	None	None	Italy	None	None	Senegal	2000	None
Brazil	1985	None	Jamaica	None	None	Serbia	2000	None
Brunei	None	None	Japan	None	None	Sierra Leone	None	None
Bulgaria	1991 ^F	None	Jordan	2016	None	Singapore	None	None
Burkina Faso	None	None	Kazakhstan	None	None	Slovakia	1993	None
Cameroon	None	None	Kenya	None	None	Slovenia	1992 ^F	None
Canada	None	None	Korea	1988	None	Somalia	None	None
Chile	1990 ^F	None	Korea, Dem. Rep.	None	None	South Africa	1994 ^F	None
China P.R.: Mainland	None	None	Kuwait	None	None	Spain	None	None
China P.R.:Hong Kong	None	None	Latvia	None	None	Sudan	None	None
Colombia	None	None	Lebanon	2005	None	Suriname	1991	None
Congo, Dem. Rep. Of	None	None	Liberia	2006	None	Sweden	None	None
Costa Rica	None	None	Libya	None	None	Switzerland	None	None
Côte d'Ivoire	None	None	Lithuania	1993 ^F	None	Syria	None	None
Croatia	2000 ^F	None	Luxembourg	None	None	Taiwan	None	None
Cuba	None	None	Madagascar	1993	None	Tanzania	1995	None
Cyprus	None	None	Malawi	1994	None	Thailand	1992; 2008	None
Czech Rep.	1993 ^F	None	Malaysia	None	None	Togo	None	None
Denmark	None	None	Mali	1992	None	Trinidad-Tobago	None	None
Dom. Rep.	None	None	Malta	None	None	Tunisia	2014	None
Ecuador	None	None	Mexico	1997	None	Uganda	None	None
Egypt	None	None	Moldova	None	None	Ukraine	2005	None
El Salvador	1994	None	Mongolia	1992 ^F	None	United Arab Emirates	None	None
Estonia	None	None	Montenegro	None	None	United Kingdom	None	None
Ethiopia	1995	None	Morocco	None	None	United States	None	None
Finland	None	None	Mozambique	1994	None	Uruguay	1985 ^F	None
France	None	None	Myanmar	2016	None	Venezuela	2013	None
Gabon	None	None	Namibia	None	None	Vietnam	None	None
Gambia	None	1994	Netherlands	None	None	Yemen, Republic Of	None	None
Germany	None	None	New Zealand	None	None	Zambia	1991	None
Ghana	1996	None	Nicaragua	1990	None	Zimbabwe	None	None

F: Full transition.

A2. ILLUSTRATIVE EXAMPLES

In this section, we illustrate our findings using four democratic transitions that took place in Asia, Africa, Europe, and Latin America. Specifically, we briefly discuss the transitions of Bangladesh, Senegal, Hungary, and Nicaragua. Figures A1a to A1d are constructed in a similar way to Figure 2. We display country i 's ICRG₁₁ scores five, four, etc. years before the transition, at the transition year and one, two, etc. years after the transition, and normalize the index by subtracting from the country's 14 numbers the ICRG₁₁ corresponding to its transition year.

Bangladesh (1991)

Bangladesh had been ruled by President Hossain Mohammed Ershad since a 1982 military coup. In October 1990 student protests evolved into mass protests culminating in a march on Dhaka on December 4 that led to Ershad's resignation and free elections in February 1991.¹ The election was won by the Bangladesh Nationalist Party, led by Khaleda Zia, who became prime minister. Between the 1991 transition and 1999, Bangladesh remained a parliamentary democracy. Elections were held again in 1996, resulting in the Bangladesh Nationalist Party being defeated by the Awami League, headed by Sheikh Hasina. The two parties have since alternated in power, with a hiatus between January 2007 and December 2008 when the military imposed a caretaker government to combat corruption.²

In Figure A1a, while the country's normalized ICRG₁₁ index shows no specific pattern before 1991 (the transition year) it exhibits a marked improvement after 1991. During the five years preceding the transition year, the normalized index oscillated between 1.25 points above

¹ Hussain Muhammad Ershad later served time in prison for corruption, before returning to parliament.

² For a more detailed narrative of the transition in Bangladesh, the interested reader may refer to van Schendel (2009).

and 4.58 points below the value of the transition year. A year after the transition, in 1992, the index had increased by 7.42 points with respect to its 1991 value. It then fluctuated between 20.58 and 27.42 points above its value in 1991. Although it slightly decreased after 1997, the index remained 21.75 points above its value before the transition. Before the transition Bangladesh belonged to the first decile of the ICRG₁₁ distribution in our sample. At the end of the transition period, it fluctuated between the fourth and fifth deciles.

Figure A1: Change in the ICRG₁₁ index around specific democratic transitions

Figure A1a: Bangladesh

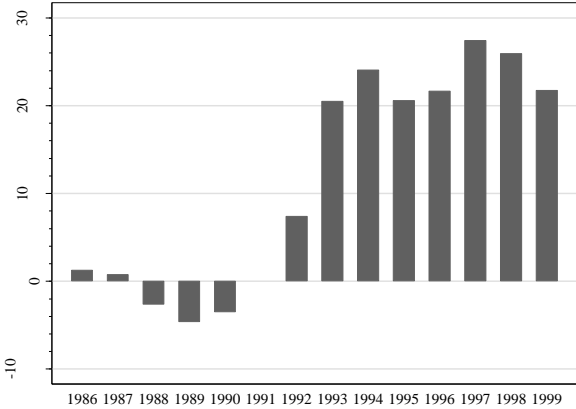


Figure A1b: Senegal

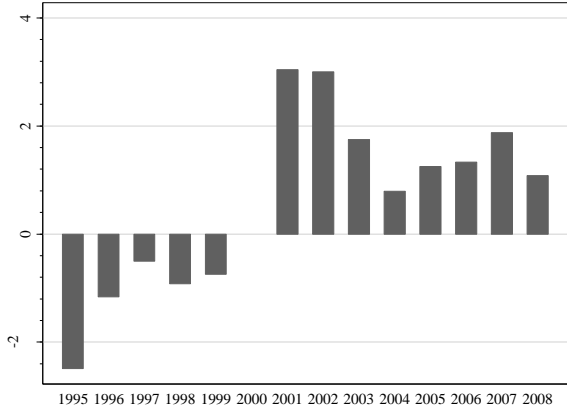


Figure A1c: Hungary

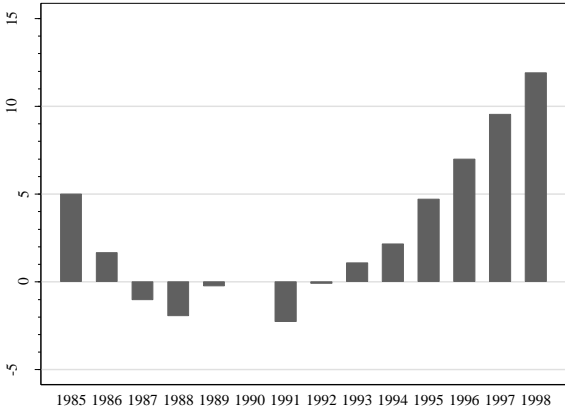
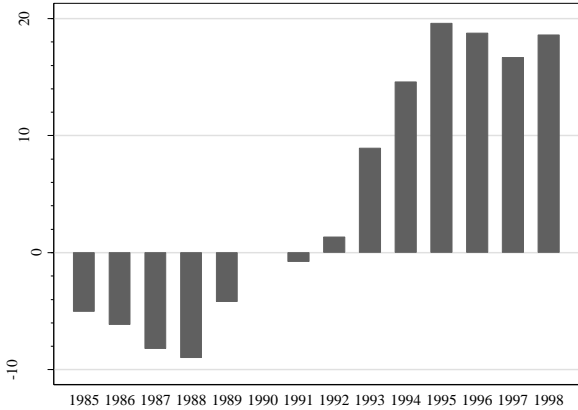


Figure A1d: Nicaragua



Senegal (2000)

Senegal experienced a peaceful transition in 2000, when Abdoulaye Wade won the presidential election against former president Abdou Diouf, ending uninterrupted control of the government by the Socialist Party since independence. Single-party dominance was facilitated by constraints on the number of political parties until 1981, and advantages in terms of access to state resources and the media granted to the incumbent by the electoral code until 1991. For these reasons, Huntington (1991) deemed Senegal a “semi-democracy”. Despite moves by Abdoulaye Wade to consolidate power, such as reinstating the Senate or amending the constitution to run for another term in office, Senegal did not revert to a single-party system, and Macky Sall defeated Abdoulaye Wade in the 2012 presidential election.³

Figure A1b shows that, before the democratic transition of 2000, the index fluctuated between 2.5 points and 0.5 points below its 2000 value. In the year following the transition, the index increased by three points for a couple of years before decreasing and stabilizing at around one and a half points above its transition year value for the rest of the period.

Hungary (1990)

The transition in Hungary was part of the wave that swept over the socialist block in the late 1980s and early 1990s. It started in May 1988, when János Kádár, General Secretary of the Communist Party since 1956, retired and was replaced by former Prime Minister Karoly Grosz, a moderate reformer. His prime minister was Miklós Németh, a more radical reformer. Although parliament passed a “democracy package” granting concessions such as trade union pluralism and freedom of association, the true transition occurred when on 15 March, the anniversary of the 1948 Revolution, mass demonstrations organized by the opposition gathered over 100,000 participants while official commemorations could not attract more than 20,000. The demonstrations prompted the regime to start talks with the opposition. These talks led to

³ Fowler (2015) provides an overview and a discussion of the transition in Senegal.

an agreement on a constitutional reform that was eventually passed by parliament between 16 and 20 October 1989. Free parliamentary elections were held on March 24 1990. They resulted in a three-party coalition government led by Prime Minister József Antall that implemented legal and economic reforms.⁴ The amendment to the preamble of the constitution is indicative of the direction of reforms in Hungary. The preamble to the new constitution adopted in October 1989 declared that “the Hungarian Republic is an independent, democratic state *based on the rule of law*, in which the values of bourgeois democracy and democratic socialism are equally recognized”, which was a first step away from socialism. It was revised after the 1990 election to simply define the Hungarian Republic as “an independent democratic state *based on the rule of law*” (cited by Cartledge, 2011, the emphasis is by the authors).

In 1985, Mikhail Gorbachov was appointed General Secretary of the Communist Party of the Soviet Union. For some time after this appointment a general uncertainty surrounded socialist countries. This uncertainty likely explains why the ICRG₁₁ index decreased from 5 points above to 1.92 points below the transition year value between 1985 and 1988, as Figure A1c. In the year following the 1990 transition, the index declined slightly. However, starting from the second year after the transition the index increased steadily until 1998. It ended up 1.92 points above its value in the transition year, on a par with Western democracies.

Nicaragua (1990)

Nicaragua experienced a partial democratization in 1990 when the first free and fair elections after the Somoza dictatorship and the Sandinistas revolution were held.⁵ The civil war waged between the left-wing Sandinista National Liberation Front, which officially held the government, and Contras, a coalition of rebel groups, had ended the year before. The election was held on February 25, 1990. Incumbent President Daniel Ortega was defeated by Violeta

⁴ Cartledge (2011) provides a description of Hungary’s transition and its aftermath.

⁵ Close (1999) carefully describes the Nicaraguan transition and the years that followed.

Chamorro, who was leading a 14-party anti-Sandinista coalition, the National Opposition Union. The Sandinista National Liberation Front accepted its defeat, although polls had predicted a comfortable victory.

While outbreaks of violence still occurred in the early years following the transition, Nicaragua gradually became safer. Firstly, a series of amendments to the constitution was adopted on 15 June 1995, following a constitutional crisis, resulting in more checks on the executive and better protection of property rights.⁶ Secondly, the issue raised by the claims of owners expropriated during the Sandinista decade, which was highly conflictual in the early years of the transition and complicated by the vague land titles awarded by the Sandinista government, was settled by the Property Stability Law of November 1995.

Figure A1d shows that in the five years preceding 1990 (the transition year), Nicaragua's ICRG₁₁ index fluctuated between 4.17 and 9 points below its value in the transition year. After decreasing by 0.75 points in the following year, it then started increasing and plateaued at around 18 points above its transition year value by the end of the period. As a result, Nicaragua moved from the first to the fifth decile of the distribution of the ICRG₁₁ index over the transition period.

⁶ In particular, Article 44 of the constitution was revised to guarantee the right of “private property” instead of “personal property”. In addition, the reformed article, while still allowing expropriation with due compensation, prohibited outright expropriation. The same reform of the constitution restrained the power of the army, by making it a professional force, banning conscription and forced recruitment, and even changing its name from “Sandinista Popular Army” to “Nicaraguan Army”.

A3. ROBUSTNESS CHECKS AND EXTENSIONS

A non-parametric test

We complement the descriptive statistics reported in Figure 2 by a non-parametric test. We test whether the $ICRG_{11}$ index in a given year around the transition is statistically different from its value in the year of the transition. To do so, we compute the difference between the value of the index in each year around the transition and in the transition year and perform a series of 13 paired t-tests that are reported in Table A5 below.

Table A5: Comparison of the $ICRG_{11}$ index around transitions with the $ICRG_{11}$ index in the transition year
(paired t-tests)

	T-5	T-4	T-3	T-2	T-1	T	T+1	T+2	T+3	T+4	T+5	T+6	T+7	T+8
Mean	-0.23	-0.29	-0.50	-0.18	-.91	0	1.6	1.81	2.59	3.46	3.71	2.92	3.03	2.92
Obs.	42	44	45	45	49	49	49	48	48	46	45	44	44	44
t	-0.15	-0.19	-0.36	-0.18	-1.90		3.20	2.91	3.26	3.91	4.07	2.63	2.7	2.71
					*		***	***	***	***	***	**	***	***

Tests are performed on the average $ICRG_{11}$ index minus the world average. T is the transition year. The null hypothesis is that the mean difference is equal to zero. *** significant at 1%, ** significant at 5%, * significant at 10%

The results reported in Table A5 closely follow those of Figure 2. We thus observe that the $ICRG_{11}$ index in the five years preceding democratic transitions does not significantly differ from its value in the transition year at standard levels of confidence. The year immediately preceding the transition is an exception, as the difference with the transition year is significant at the ten-percent level. This is because the index jumps in the transition year, increasing on average by 0.91 points with respect to the previous year.

The index is larger in the first year after the transition than in the year of the transition and the difference keeps on increasing in the following years. The difference between the index in the transition year and in the following years is moreover always statistically significant beyond the five-percent level.

Alternative definitions of transitions

First, we consider that a transition occurred in year t if the PolityIV index moved from a negative value in the previous year to a positive value in year t and no backward transition occurred in the following five years. Second, we consider that a transition occurred in year t if a country's Freedom House status moved from "not free" to "free" or "partly free" or from "partly free" to "free". Third, we also directly use the classification of democratic transitions by Acemoglu et al. (2019), which refines Papaioannou and Siourounis's (2008) classification by aggregating more data sources and by including transitions that do not meet the five-year stability condition. The results obtained with these alternative definitions of transitions are reported in Table A6.

Table A6: Impact of democratic transitions on overall institutional quality: Alternative definitions of democratic transitions. Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

Definition of transitions	PolityIV	Freedom House	Acemoglu et al. (2019)
	(A6.1)	(A6.2)	(A6.4)
$ICRG_{11\ t-1}$	-0.164 (14.39)***	-0.163 (14.68)***	-0.164 (14.32)***
D^1	-0.483 (1.76)*	0.040 (0.16)	-0.554 (1.76)*
D^2	-0.099 (0.28)	0.216 (0.67)	-0.275 (0.71)
D^3	0.7 (2.34)***	0.582 (2.35)***	0.817 (2.68)***
D^4	0.238 (0.99)	0.281 (1.35)	0.356 (1.25)
D^5	0.067 (0.25)	0.459 (1.84*)	0.083 (0.31)
A	-1.35 (1.94*)	-0.701 (2.81)***	-0.296 (0.64)
Number of observations	3566	3566	3566
Number of Countries	135	135	135
Adjusted R-squared	0.183	0.182	0.183
F (zero slopes), P-value	0.00	0.00	0.00

All regressions include country and time fixed effects Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

The three regressions confirm that democratic transitions improve institutional outcomes during the first three years following the transition. Specifically, D^3 is positive and significant at the ten-percent level or beyond, while D^4 and D^5 are insignificant. Our findings are therefore not specific to any particular definition of democratic transitions.

Alternative codings of transitions

First, to impose less structure on the estimated relationship, we estimated a specification with a single dummy variable capturing the transition. This variable, D^{Total} , is set to one in all years following the transition, and is simply the sum of D^3 , D^4 , and D^5 . The coefficient of that dummy variable may be used to compare the change in institutional quality after the transition with its change before the transition. This type of coding is used for instance by Acemoglu et al. (2019). Second, to avoid pooling years that may be different, we also defined one dummy variable for each year, ranging from five years before the transition to six years after the transition. D^5 was defined in the same way as before and captures the variation in institutional quality in all the years from the seventh year after the democratic transition onwards.⁷

⁷ This definition of dummy variables assumes a much more specific timing of the effects of transitions than our baseline specification, thereby exacerbating the risk of muting the effect, which is why we do not use it as our baseline specification. Imagine for instance that the effect of a transition on institutional quality appears after exactly 13 months in all countries. Assume further that, in year t , Country A switches to democracy in January, while Country B switches to democracy in December. The improvement in institutional quality in Country A will be recorded in year $t + 1$ while it will be recorded in year $t + 2$ in Country B . Pooling years in batches of three reduces the likelihood of that possibility, while considering years separately introduces noise in the relationship between transition dummies and institutional quality.

The results of the regressions using a single democratic transition dummy variable are reported in Table A7. The coefficient of dummy variable D^{Total} is positive and significant at the five-percent level in both regressions, suggesting that institutional quality on average increases after democratic transitions. Furthermore, we observe that the coefficient of dummy variable A is negative and significant at the five-percent level.

Table A7: Impact of democratic transitions on overall institutional quality: After vs. before the transition

Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

	(A7.1)	(A7.2)
$ICRG_{11\ t-1}$	-0.161 (14.02)***	-0.16 (13.97)***
D^{Total}	0.522 (2.12)**	0.497 (2.01)**
A		-1.686 (2.04)**
Number of observations	3570	3570
Number of Countries	135	135
Adjusted R-squared	0.179	0.180
F (zero slopes), P-value	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

Table A8 reports the result of the regressions capturing the timing of transitions using single-year dummy variables. None of the dummy variables capturing pre-transition years or the transition year is significant at standard levels of significance. Again, this suggests that transitions were not anticipated. The post-transition dummies capturing the first, the third and the fourth transition years exhibit a positive and significant coefficient. The bulk of the effect therefore appears within four years after the transition. The two robustness checks using alternative transition dummies therefore show that our baseline results are robust to the timing assumed in the estimated specification.

Table A8: Impact of democratic transitions on overall institutional quality: Alternative definitions of democratic transitions dummy variables.

Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

	(A8.1)	(A8.2)
$ICRG_{11\ t-1}$	-0.157 (13.38)***	-0.158 (13.45)***
Democratic transition year-5	0.004 (0.007)	0.004 (0.007)
Democratic transition year-4	-0.316 (0.65)	-0.315 (0.65)
Democratic transition year-3	-0.535 (1.02)	-0.532 (1.02)
Democratic transition year-2	-0.021 (0.028)	-0.018 (0.023)
Democratic transition year-1	-0.387 (0.44)	-0.38 (0.43)
Democratic transition year	0.818 (1.47)	0.827 (1.48)
Democratic transition year+1	1.70 (3.03)***	1.72 (3.051)***
Democratic transition year+2	0.35 (0.781)	0.36 (0.814)
Democratic transition year+3	0.96 (1.95)*	0.98 (1.981)**
Democratic transition year+4	1.07 (2.591)***	1.09 (2.638)***
Democratic transition year+5	0.43 (0.973)	0.46 (1.021)
D^5	0.166 (0.55)	0.202 (0.67)
A	-1.831 (2.06)**	
Number of observations	3218	3218
Number of Countries	135	135
Adjusted R-squared	0.176	0.175
F (zero slopes), P-value	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

Control variables

Table A9: Impact of democratic transitions on overall institutional quality: Additional control variables

Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

	(A9.1)	(A9.2)	(A9.3)	(A9.4)	(A9.5)
$ICRG_{11\ t-1}$	-0.161 (13.31)***	-0.079 (10.50)***	-0.081 (10.47)***	-0.085 (10.71)***	-0.087 (10.75)***
D^1	-0.171 (0.40)	-0.12 (0.39)	-0.018 (0.06)	0.052 (0.17)	0.052 (0.17)
D^2	0.356 (0.71)	0.279 (0.62)	0.341 (0.78)	0.466 (1.11)	0.413 (1)
D^3	0.882 (1.98)**	0.612 (2.28)**	0.62 (2.04)**	0.784 (2.61)***	0.704 (2.24)**
D^4	0.386 (0.82)	-0.004 (0.01)	-0.013 (0.04)	0.104 (0.34)	0.068 (0.21)
D^5	0.398 (0.92)	-0.039 (0.3)	-0.008 (0.06)	-0.019 (0.13)	0.056 (0.38)
A	0.018 (1.27)	0.018 (4.79)***	0.018 (4.25)***	0.018 (3.72)***	0.018 (3.68)***
GDP per capita	0.006 (0.84)	0.007 (4.07)***	0.008 (3.88)***	0.007 (3.46)***	0.008 (3.63)***
Openness	0.001 (0.029)	0.01 (3.11)***	0.008 (2.1)**	0.009 (2.17)**	0.008 (1.83)*
Secondary enrolment	-0.03 (1.29)	0.001 (0.009)	-0.005 (0.42)	-0.005 (0.44)	-0.013 (1.01)
Government size	0.254 (1.58)	0.368 (4.16)***	0.399 (4.23)***	0.41 (4.44)***	0.428 (4.33)***
Press freedom	-1.482 (1.67)*	-0.525 (1.39)	-0.502 (1.30)	-0.249 (0.63)	-0.278 (0.70)
British legal origin			-0.29 (1.3)		-0.31 (1.23)
French legal origin			-0.267 (1.25)		-0.519 (2.28)**
Socialist legal origin			-0.153 (0.54)		-0.08 (0.22)
German legal origin			-0.215 (0.82)		-0.335 (1.22)
East Asia Pacific				0.23 (1.12)	0.059 (0.24)
Europe and Central Asia				-0.086 (0.41)	-0.438 (1.299)
Middle East North Africa				0.208 (0.97)	0.272 (1.25)
South Asia				-0.84 (2.44)***	-1.01 (2.64)***
Western Europe				0.11 (0.43)	0.022 (0.083)
North America				0.322 (0.84)	0.263 (0.65)
Sub-Saharan Africa				-0.238 (1.33)	-0.295 (1.54)
Country fixed effects	yes	no	no	no	no
Time fixed effects	yes	yes	yes	yes	yes
Number of observations	2770	2770	2690	2756	2690
Number of Countries	135	135	135	135	135
Adjusted R-squared	0.180	0.170	0.166	0.173	0.169
F (zero slopes), P-value	0.00	0.00	0.00	0.00	0.00

Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

We first included time-variant control variables in Model 1, then estimated the model without country fixed effects, to explicitly control for time-invariant geographic dummies.⁸ In all these regressions, dummy variables D^1 and D^2 are statistically insignificant, confirming the absence of anticipation effects, while the coefficients of D^4 and D^5 , though positive, fail to be statistically significant at conventional levels of confidence. However, in all four regressions, the coefficient of D^3 is positive and significant at the five-percent level or beyond, confirming that institutional quality improves in the three years following a democratic transition. Overall, these results confirm that democratic transitions are followed by an improvement in institutional quality and are therefore in line with the findings of the baseline estimations.

⁸ Those time-variant variables are GDP per capita, openness to trade, secondary enrolment, the ratio of government consumption to GDP (all from the World Development Indicators database), press freedom (from Freedom House's 2014 historical dataset), and a series of time-invariant regional dummy variables.

Dropping former socialist countries

We ran specific regressions where former socialist countries were dropped from the sample.

They are reported in Table A10.

Table A10: Impact of democratic transitions on overall institutional quality: Dropping former socialist countries

Dependent variable: $ICRG_{11 t} - ICRG_{11 t-1}$

	(A10.1)	(A10.2)
$ICRG_{11 t-1}$	-0.154 (12.88)***	-0.153 (12.81)***
D^1	-0.533 (1.407)	-0.541 (1.429)
D^2	0.308 (0.60)	0.292 (0.57)
D^3	0.838 (2.11)**	0.814 (2.05)**
D^4	0.485 (1.32)	0.455 (1.24)
D^5	0.041 (0.12)	-0.008 (0.02)
A		-1.785 (2.17)**
Number of observations	3099	3099
Number of Countries	135	135
Adjusted R-squared	0.176	0.175
F (zero slopes), P-value	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

These results confirm that democratic transitions prompted no anticipation effect, as the coefficients of dummy variables D^1 and D^2 are statistically insignificant in all regressions. Moreover, the coefficient of dummy variable D^3 is positive and statistically significant at the five-percent level of confidence. Finally, we observe that the coefficients of D^4 and D^5 are statistically insignificant at standard levels of significance.

Region-specific effects

Table A11: Impact of the transitions on overall institutional quality by region

Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

		(A11.1)	(A11.2)
Asia	$ICRG_{11\ t-1}$	-0.201 (7.68)***	-0.201 (7.68)***
	D^1	0.272 (0.30)	0.271 (0.3)
	D^2	-1.522 (1.55)	-1.544 (1.57)
	D^3	0.372 (0.36)	0.343 (0.33)
	D^4	1.186 (1.16)	1.157 (1.13)
	D^5	0.515 (0.5)	0.464 (0.45)
	A		-1.705 (1.86)*
Number of observations		912	912
Number of Countries		30	30
Adjusted R-squared		0.17	0.18
F (zero slopes), P-value		0.00	0.00
Sub-Saharan Africa	$ICRG_{11\ t-1}$	-0.158 (7.38)***	-0.154 (7.13)***
	D^1	0.183 (0.31)	0.144 (0.24)
	D^2	1.301 (1.59)	1.234 (1.51)
	D^3	1.64 (2.18)**	1.53 (2.02)**
	D^4	0.753 (1.24)	0.629 (1.03)
	D^5	0.475 (0.85)	0.34 (0.6)
	A		-1.832 (1.23)
Number of observations		850	850
Number of Countries		31	31
Adjusted R-squared		0.00	0.00
F (zero slopes), P-value		0.96	0.96
Latin America and the Carribean	$ICRG_{11\ t-1}$	-0.117 (5.22)***	-0.117 (5.22)***
	D^1	0.16 (0.25)	0.16 (0.25)
	D^2	2.158 (2.33)***	2.158 (2.33)***
	D^3	1.73 (2.84)***	1.73 (2.84)***
	D^4	1.303 (2.18)**	1.303 (2.18)**
	D^5	0.726 (1.19)	0.726 (1.19)
	A		0.000 (0.00)
Number of observations		641	641
Number of Countries		22	22
Adjusted R-squared		0.07	0.63
F (zero slopes), P-value		0.19	0.18

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

As the geographic context of transitions may affect their outcome, we let the effect of democratic transitions be specific to geographic regions as defined by the World Bank. We therefore run separate regressions for Asia, Sub-Saharan Africa, and Latin America and the Caribbean. Over our period of study, no transition was observed in either Western Europe or Northern America, and only one in the MENA region. We therefore ran no regression for those regions.

Table A11 reports the results of region-specific regressions. As before, we first estimate the model without controlling for autocratic transitions (Column A11.1) then include the autocratic transition dummy in the set of explanatory variables (Column A11.2).

Both series of regression results are in line with our baseline findings. Thus, the coefficient of the lagged value of the ICRG₁₁ index is negative and statistically significant, and the coefficient of dummy D^3 is positive and statistically significant, while other coefficients are statistically insignificant, in Sub-Saharan Africa and Latin American and the Caribbean. In the Latin American sample, we observe that D^3 is statistically significant and positive, which suggests that transitions may be anticipated in that region. We could find no statistically significant effect of democratic transitions in Asia, although we observe that the autocratic reversal dummy exhibits a negative coefficient statistically significant at the five-percent level.

Distinguishing types of transitions

We follow Papaioannou and Siourounis (2008b) and define partial democratic transitions as those resulting in the Freedom House index remaining “partly free” or in the PolityIV index remaining below seven points. By contrast, full democratic transitions are transitions that prompted the Freedom House index to be “free” and the PolityIV index to exceed seven points.

Table A12: Impact of the type of democratic transitions on overall institutional quality
Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

	Was the democratization full?		Was the pre-democratization regime a military regime?		Was the pre-democratization regime a communist regime?	
	(A12.1)	(A12.2)	(A12.3)	(A12.4)	(A12.5)	(A12.6)
$ICRG_{11\ t-1}$	-0.16 (13.83)***	-0.159 (13.77)***	-0.158 (13.61)***	-0.158 (13.55)***	-0.159 (13.67)***	-0.159 (13.60)***
NO						
D^1	-0.363 (0.92)	-0.371 (0.94)	-0.043 (0.07)	-0.054 (0.089)	-0.545 (1.44)	-0.553 (1.46)
D^2	0.035 (0.066)	0.021 (0.041)	-0.214 (0.25)	-0.231 (0.27)	0.313 (0.62)	0.298 (0.59)
D^3	0.906 (2.05)**	0.885 (2.01)**	-0.262 (0.29)	-0.286 (0.31)	0.847 (2.13)**	0.824 (2.08)**
D^4	0.301 (0.7)	0.273 (0.63)	1.894 (2.07)**	1.866 (2.04)**	0.54 (1.47)	0.511 (1.39)
D^5	0.041 (0.11)	-0.003 (0.007)	0.721 (1.29)	0.676 (1.21)	0.088 (0.26)	0.041 (0.12)
YES						
D^1	-0.859 (1.21)	-0.862 (1.21)	-0.821 (2.17)**	-0.826 (2.19)**	-1.71 (1.75)*	-1.696 (1.73)*
D^2	0.711 (0.71)	0.695 (0.69)	0.33 (0.64)	0.318 (0.61)	-1.466 (1.35)	-1.456 (1.34)
D^3	0.938 (1.86)*	0.916 (1.82)*	0.848 (2.36)**	0.828 (2.31)**	-0.842 (1.03)	-0.84 (1.03)
D^4	0.527 (1.1)	0.498 (1.04)	0.088 (0.25)	0.06 (0.17)	-1.873 (1.96)**	-1.88 (1.96)**
D^5	0.411 (1.02)	0.364 (0.91)	0.017 (0.054)	-0.028 (0.086)	-1.164 (1.44)	-1.186 (1.46)
A		-1.753 (2.11)**		-1.762 (2.12)**		-1.752 (2.11)**
Number of observations	3486	3486	3486	3486	3486	3486
Number of Countries	135	135	135	135	135	135
Adjusted R-squared	0.184	0.185	0.186	0.187	0.184	0.186
F (zero slopes), P-value	0.00	0.00	0.00	0.00	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

We follow Cheibub et al. (2010) and define a regime as military if the effective head is or was a member of the military by profession. Finally, we distinguished transitions that were accompanied by a move out of communism from other transitions, following Cheibub et al. (2010), who classify a regime as communist if the country leader is the head of the Communist Party.

Non-linear regressions

The first variable on which we condition the impact of transitions is GDP per capita. La Porta et al. (1999) for instance argue that economic development itself should create demand for good government. In turn, it stands to reason that the same demand for good government should be more effective in a democratic country, where officials are elected and civil rights respected. We should therefore expect the effect of democratic transitions on institutional outcomes to be larger in countries with a higher GDP per capita. We accordingly interacted democratic transition dummies with per capita GDP.

Secondly, the impact of democratic transitions may be affected by education, because better educated citizens are more likely to report inappropriate behavior, as suggested by the finding of Botero et al. (2013). As complaints are likely to be more dangerous in dictatorships than in democracies, we should expect democratic transitions to unleash more complaints and the effect to be larger in countries where citizens are more educated hence more prone to complain. We therefore interacted democratic transition dummies with the ratio of total students in secondary education over the population of the relevant age (Barro and Lee, 2013).

Thirdly, another variable on which we condition the impact of transitions is whether the regime change was regular or irregular. We follow Colgan's (2012) definition of irregular transfers and consider that a transfer is irregular if the individual leader used armed force against his own state at any time prior to coming to office as an integral part of his coming to state leadership, or if mass demonstrations or uprisings were instrumental in deciding the outcome

of the transition. We created a dummy variable set to one if the transition was irregular and zero otherwise and interacted it with democratic transition dummies.

We include each of those variables and their interaction terms in the same regression. The raw coefficients of the estimations including interaction terms are reported in Table A13. Because individual coefficients in models with an interaction term cannot be directly interpreted, Table A14 reports the marginal effects of D^i variables estimated at the minimum, mean, and maximum values of each additional control variable.⁹ The marginal effect of D^3 is positive and statistically significant at the ten-percent level around the mean value of GDP per capita and schooling. D^3 , D^4 , and D^5 are also significantly positive around the minimum of schooling. When the level of schooling approaches its maximum, the marginal effects of the variables coding transitions are either statistically insignificant or statistically significant and negative. This finding is in line with Berthélemy et al.'s (2000) contention that skilled labor may be devoted to unproductive activities such as rent-seeking.

⁹ On the interpretation of models including an interaction term, see Brambor et al. (2006).

Table A13: Conditional impact of democratic transitions on overall institutional quality: Raw coefficients

Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

Interaction with	GDP per capita	Secondary schooling	Irregular transfer
	(A13.1)	(A13.2)	(A13.3)
$ICRG_{11\ t-1}$	-0.158 (14.23)***	-0.162 (13.56)***	-0.164 (12.33)***
D^1	-1.009 (1.96)**	0.801 (1.42)	-0.719 (1.55)
D^2	-0.437 (0.72)	0.763 (0.98)	-0.466 (0.73)
D^3	0.376 (0.87)	2.107 (3.49)***	0.17 (0.35)
D^4	0.058 (0.14)	1.398 (2.44)***	-0.501 (1.00)
D^5	0.101 (0.33)	1.086 (2.25)**	-0.699 (1.48)
D^1 * interaction	0.179 (1.24)	-0.081 (2.25)**	0.237 (0.33)
D^2 * interaction	0.101 (0.71)	-0.056 (1.33)	0.886 (0.80)
D^3 * interaction	0.085 (1.08)	-0.069 (3.01)***	0.766 (0.86)
D^4 * interaction	0.048 (0.73)	-0.063 (2.43)***	1.602 (1.73)*
D^5 * interaction	0.023 (0.74)	-0.047 (2.59)***	0.937 (1.545)
A	-1.115 (1.42)	-1.742 (2.11)**	-1.582 (1.09)
GDP per capita	-0.014 (0.89)		
Secondary schooling		0.038 (2.01)	
Use of force			-0.58 (1.50)
Number of observations	3287	3170	2179
Number of Countries	135	135	135
Adjusted R-squared	0.179	0.181	0.159
F (zero slopes), P-value	0.00	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

Table A14: Conditional impact of democratic transitions on overall institutional quality:
 Marginal effects
 Dependent variable: $ICRG_{11 t} - ICRG_{11 t-1}$

	(A14.1)			(A14.2)			(A14.3)	
	GDP per capita			Secondary schooling			Irregular transfer	
	Min.	Mean	Max.	Min.	Mean	Max.	No	Yes
D^1	-0.979 (1.97)**	1.452 (0.87)	19.02 (1.21)	0.798 (1.42)	-0.773 (1.45)	-4.841 (2.23)**	-0.719 (1.55)	-0.482 (0.75)
D^2	-0.42 (0.71)	0.947 (0.6)	10.82 (0.7)	0.761 (0.98)	-0.33 (0.55)	-3.153 (1.3)	-0.466 (0.73)	0.421 (0.42)
D^3	0.39 (0.92)	1.547 (1.780)*	9.905 (1.16)	2.105 (3.49)***	0.761 (1.740)*	-2.718 (2.15)**	0.17 (0.35)	0.936 (1.12)
D^4	0.066 (0.16)	0.725 (0.93)	5.486 (0.76)	1.396 (2.44)***	0.169 (0.38)	-3.01 (2.01)**	-0.501 (1.00)	1.101 (1.32)
D^5	0.105 (0.35)	0.423 (0.86)	2.719 (0.78)	1.084 (2.24)**	0.164 (0.41)	-2.218 (2.08)**	-0.699 (1.48)	0.238 (0.35)
Number of observations	3922			3115			2162	
Number of Countries	135			135			135	
Adjusted R-squared	0.188			0.185			0.164	
F (zero slopes), P-value	0.00			0.00			0.00	

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered by country and year. *** significant at 1%, ** significant at 5%, * significant at 10%

Components of the ICRG Index

Table A15: Impact of democratic transitions on the components of the ICRG index. Dependent variable: $ICRG_{11\ t} - ICRG_{11\ t-1}$

ICRG component	Corruption	Law and Order	Military in politics	External conflict	Internal conflict	Bureaucratic quality	Ethnic tensions	Investment profile	Religious tensions	Socioecon. conditions	Government stability
	A15.2	A15.3	A15.4	A15.5	A15.6	A15.11	A15.8	A15.10	A15.7	A15.9	A15.1
<i>ICRG component</i> $t-1$	-0.14 (18.26)***	-0.134 (17.06)***	-0.131 (16.39)***	-0.176 (21.72)***	-0.155 (19.61)***	-0.091 (16.13)***	-0.127 (18.12)***	-0.192 (21.13)***	-0.105 (17.16)***	-0.164 (20.03)***	-0.301 (27.43)***
D^1	-0.034 (1.01)	-0.054 (1.36)	0.022 (0.5)	0.099 (1.35)	-0.244 (2.99)***	-0.037 (1.91)**	-0.147 (4.28)***	-0.063 (0.77)	-0.051 (1.81)*	-0.022 (0.31)	-0.016 (0.16)
D^2	-0.004 (0.13)	-0.01 (0.25)	0.059 (1.34)	0.26 (3.76)***	0.007 (0.09)	-0.013 (0.73)	0.025 (0.78)	-0.157 (2.06)**	-0.069 (2.63)***	-0.171 (2.64)***	-0.093 (1.01)
D^3	0.1 (3.35)***	0.082 (2.13)**	0.146 (3.39)***	0.272 (4.16)***	0.125 (1.73)*	0.002 (0.10)	0.003 (0.11)	0.066 (0.91)	-0.015 (0.62)	-0.036 (0.6)	-0.16 (1.83)*
D^4	0.034 (1.07)	0.031 (0.78)	0.084 (1.88)*	0.225 (3.29)***	0.001 (0.02)	-0.011 (0.61)	0.02 (0.63)	-0.034 (0.45)	-0.018 (0.70)	-0.221 (3.461)***	0.001 (0.001)
D^5	-0.025 (1.07)	-0.006 (0.16)	0.078 (1.86)*	0.085 (1.65)*	-0.042 (0.74)	0.012 (0.87)	-0.026 (1.07)	0.007 (0.11)	-0.034 (1.75)*	-0.162 (3.35)***	-0.062 (0.90)
A	-0.025 (0.46)	-0.018 (0.21)	-0.285 (2.88)***	-0.239 (2.01)**	-0.125 (0.95)	-0.023 (0.75)	-0.013 (0.24)	-0.345 (2.62)***	0.012 (0.26)	-0.203 (1.82)*	-0.056 (0.35)
Number of observations	3359	3359	3359	3359	3359	3359	3359	3359	3359	3359	3359
Number of Countries	135	135	135	135	135	135	135	135	135	135	135
Adjusted R-squared	0.12	0.18	0.07	0.17	0.18	0.14	0.18	0.23	0.11	0.11	0.26
F (zero slopes), P-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

All regressions include country and time fixed effects. Standard errors are heteroskedastic-consistent and clustered at the country level. Absolute t-statistics are in parentheses. *** significant at 1%, ** significant at 5%, * significant at 10%

A4. REFERENCES OF THE ONLINE APPENDIX

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