# APPENDIX A: SUPPLEMENT TO "THE NON-DEMOCRATIC ROOTS OF ELITE CAPTURE: EVIDENCE FROM SOEHARTO MAYORS IN INDONESIA"

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## S1. THEORY OF ELITE CAPTURE IN DEMOCRATIC TRANSITIONS

IN THIS SUBSECTION, we present a theoretical model that formalizes the mechanism that, we argue, is behind our empirical results. This model is an adaptation of the one presented in Acemoglu and Robinson (2008). We implement a number of modifications to their setting to adapt it to the Indonesian context. Furthermore, we impose a number of assumptions that make the exposition easier and help us focus on the main result of interest. We refer the interested reader to Acemoglu and Robinson (2008) for a thorough description of the interactions between the agents of the model and for additional insights and results.

Consider a society made up of an elite and citizens. The country is divided into equally-sized districts, each with a population of $M$ elites. The elite and citizens regularly contest power in each district. The group that wins power makes decisions over economic institutions. We denote by $s_t \in \{E, C\}$ the group that is in power in period $t$, with $E$ referring to the elite and $C$ referring to citizens. When the elite is in power, they choose their most beneficial set of economic institutions obtaining payoff $R_e$. When the citizens are in power, the set of economic institutions that citizens choose leads to a payoff of $R_c$ for the elite. We define $\Delta R = R_e - R_c > 0$ as the difference between these two payoffs.

The game starts as a dictatorship and the elite is in power in all districts. However, for reasons exogenous to the local power dynamics, the country becomes democratic. Local-level elections are scheduled in all districts. We assume that the group that wins the election remains in power forever, and as a result, the subsequent regime becomes an absorbing state.[1]

The electoral equilibrium is determined by the relative level of political power of both groups. Political power is defined by the interaction of de jure political power and de facto political power. Since citizens are the most numerous group, democratization grants citizens with a baseline amount of de jure political power equal to $\underline{p} > 0$. The overall level of political power that citizens have at the time of the local election is

$$P_t^C = \underline{p} + \omega_t,$$

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[1]Our static framework is in sharp contrast to the model in Acemoglu and Robinson (2008) which is fully dynamic. The result we focus on is also present in a dynamic version of the model.

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where $\omega_t$ is a random variable distributed according to $F[\cdot]$.

We make a number of assumptions on $F$.

ASSUMPTION S1: *$F$ is defined over $(\underline{\omega}, \infty)$ for some $\underline{\omega} < 0$, is everywhere strictly increasing, and twice continuously differentiable. Moreover, $f[\omega]$ is single peaked around 0. Hence, $f'[\omega] > 0$ for all $\omega < 0$ and $f'[\omega] < 0$ for all $\omega > 0$ and satisfies $\lim_{\omega\to\infty} f[\omega] = 0$.*[2]

The elite does not have de jure political power, but can invest in de facto political power. For instance, they can hire political brokers to buy votes, or they can organize a local paramilitary group. $\theta_{it}$ denotes the level of investment that elite member $i$ undertakes in period $t$. We assume $\theta_{it} > \underline{\theta}$, where $\underline{\theta}$ is a positive number. Undertaking such investments comes at a cost $C(\theta_{it})$, where $C(\cdot)$ is an increasing and convex function that satisfies $C'(0) = 0$.

There are two types of districts. In the first set of districts, the elites have one period to invest in de facto power, while in the second set of districts, the elites have two periods to invest in de facto power. We refer to these as *one-period* and *two-period* districts, respectively. While in one-period districts de facto power investments can only be undertaken in period $t$, in two-period districts the investments are possible in periods $t$ and $t-1$.

The level of political power of the elite at the time of the election in the one-period type of districts is given by

$$P_t^{E1} = \sum_{i\in\mathcal{M}} \theta_{it},$$

while the level of political power in the two-period type of districts is

$$P_t^{E2} = \sum_{i\in\mathcal{M}} \theta_{it-1} + \sum_{i\in\mathcal{M}} \theta_{it}.$$

Next, we analyze the optimal investment decision of a particular elite member. This individual takes as given the investments in de facto power of every other elite member that we denote by $\theta^{E1}$ in one-period type of districts. Likewise, in two-period districts, an individual elite member takes as given investment levels of other elite members, denoted by $\theta_1^{E2}$ and $\theta_2^{E2}$ for the first and second period, respectively. The elite in one-period districts retains political power if $P_t^{E1} \geq P_t^C$. The probability of this event is given by

$$p^{E1}\big(\theta_{it}, \theta^{E1}\big) = F\big[(M-1)\theta^{E1} + \theta_{it} - \underline{p}\big]. \tag{S1}$$

Similarly, in two-period districts, the probability that the elite remains in power is given by

$$p^{E2}\big(\theta_{it}, \theta_{it-1}, \theta_1^{E2}, \theta_2^{E2}\big) = F\big[(M-1)\theta_1^{E2} + (M-1)\theta_2^{E2} + \theta_{it} + \theta_{it-1} - \underline{p}\big]. \tag{S2}$$

The elite member in one-period district will choose $\theta_{it}$ to maximize the following expression:

$$\max_{\theta_{it}} \big\{ p^{E1}\big(\theta_{it}, \theta^{E1}\big)R_e + \big(1 - p^{E1}\big(\theta_{it}, \theta^{E1}\big)\big)R_c - C(\theta_{it}) \big\},$$

$$\max_{\theta_{it}} \big\{ F\big[(M-1)\theta^{E1} + \theta_{it} - \underline{p}\big]\Delta R + R_c - C(\theta_{it}) \big\},$$

[2]This assumption is analogous to Assumption 2 in Acemoglu and Robinson (2008).

where the last expression uses (S1) to substitute for the probability of the elite remaining in power.

Hence, the optimal elite investment $\theta^*_{it}$ is given by

$$f\big[(M-1)\theta^{E1} + \theta^*_{it} - \underline{p}\big]\Delta R = C'\big(\theta^*_{it}\big). \tag{S3}$$

Since all elite members are identical, in equilibrium they choose the same level of de facto power, that is, $\theta^*_{it} = \theta^{E1}$. Given this, expression (S3) simplifies to

$$f\big[M\theta^{*E1} - \underline{p}\big]\Delta R = C'\big(\theta^{*E1}\big). \tag{S4}$$

We focus on the set of parameters where we have a unique interior solution.

ASSUMPTION S2: $\underline{\theta} = \frac{p}{M}$.

Under Assumptions S1 and S2, expression (S4) uniquely defines the equilibrium level of effort $\theta^{*E1}$ in the range of values that satisfies the second-order conditions. To see that, note that the second-order condition, when evaluated at the equilibrium, is

$$f'\big[M\theta^{*E1} - \underline{p}\big]\Delta R - C''\big(\theta^{*E1}\big) < 0. \tag{S5}$$

Given the convexity of the cost function, a sufficient condition for this expression to hold is $f'[M\theta^{*E1} - \underline{p}]\Delta R < 0$. By Assumption S1, we know that $f'(\omega)$ takes negative values as long as $\omega > 0$. Given Assumption S2, we know that $M\theta^{*E1} - \underline{p} > 0$. In other words, Assumption S2 is a sufficient condition for the second-order condition to be satisfied.

Under Assumptions S1 and S2, the right-hand side of expression (S4) is increasing in $\theta$, while the left-hand side is decreasing in $\theta$, establishing uniqueness of the solution.

We now examine the optimal investments decisions of an elite member in a two-period district. The elite member solves the following problem:

$$\max_{\theta_{it},\theta_{it-1}} \big\{F\big[(M-1)\theta_1^{E2} + (M-1)\theta_2^{E2} + \theta_{it} + \theta_{it-1} - \underline{p}\big]\Delta R + R_c - C(\theta_{it}) - C(\theta_{it-1})\big\}.$$

The first-order conditions of this maximization problem are

$$f\big[(M-1)\theta_1^{E2} + (M-1)\theta_2^{E2} + \theta_{it} + \theta_{it-1} - \underline{p}\big]\Delta R = C'\big(\theta^*_{it}\big),$$
$$f\big[(M-1)\theta_1^{E2} + (M-1)\theta_2^{E2} + \theta_{it} + \theta_{it-1} - \underline{p}\big]\Delta R = C'\big(\theta^*_{it-1}\big).$$

Once we impose the symmetric equilibrium conditions $\theta^*_{it-1} = \theta_1^{E2}$ and $\theta^*_{it} = \theta_2^{E2}$, it is clear that the elite members choose the same investment in each of the two periods. We denote the per-period optimal level of investment as $\theta^{*E2}$, which is defined by

$$f\big[2M\theta^{*E2} - \underline{p}\big]\Delta R = C'\big(\theta^{*E2}\big). \tag{S6}$$

The comparison of equations (S4) and (S6) is informative about the type of districts that experience higher investments in de facto power in equilibrium.

First, it is easy to show that $\theta^{*E1} > \theta^{*E2}$. One-period districts invest more *per period* than two-period districts. This result is intuitive since one-period districts find it optimal to compensate their shorter investment window by investing more. To see this, note that the expression $f[M\theta - \underline{p}] > f[2M\theta - \underline{p}]$ holds for all $\theta$ that satisfies the second-order

conditions (i.e., $\theta > \underline{p}/M$). This is a result of function $f(\cdot)$ being decreasing in this set of values. Hence, necessarily the intersection of the left-hand side and the right-hand side takes place at a smaller value of $\theta$ for equation (S6) than for equation (S4).

Given this finding, we can also show that the overall investment in de facto power across all periods is higher in two-period districts than in one-period districts, that is, $2\theta^{*E2} > \theta^{*E1}$. Given our previous result and the fact that the cost function is convex, we have $C'(\theta^{*E1}) > C'(\theta^{*E2})$. Given expressions (S4) and (S6), this implies that $f[M\theta^{*E1} - \underline{p}] > f[2M\theta^{*E2} - \underline{p}]$. Since function $f(\cdot)$ is decreasing in this set of values, we have $2\theta^{*E2} > \theta^{*E1}$, which concludes the proof.

Note that this result is driven by the convexity and time-separability of the cost function. This assumption captures that the elites have limited time and resources to realize simultaneously investments in de facto power of different nature. One way of capturing this is to assume that the marginal cost of the last activity undertaken increases on the amount of previous activities or investments undertaken. This is the approach we undertook in the model. However, it is likely that time gives other advantages in the production of de facto power. For instance, the construction of a network of political brokers may need time to identify suitable candidates. Time can also facilitate the development of stronger alliances with the military or with political brokers.[3]

To sum up, the conceptual framework presented in this section predicts that districts that have more time to invest in de facto power end up investing more. This has a number of empirical implications. First, we expect to find higher levels of elite persistence in districts where the Soeharto mayor was in power for longer during the democratic transition. Second, we expect to find lower levels of political competition. Effective elite capture strategies diminish real power contestation and decrease the possibility of losing power. Third, lower levels of political competition weaken the incentives of mayors to perform and deliver public goods. Hence, we expect to find low levels of public good provision and higher levels of rent-seeking.[4]

## S2. ADDITIONAL RESULTS

### S2.1. *Additional Results on Governance Outcomes*

Section 5 in the main text of the paper presents the main results on public good provision and extortion to private sector firms. In this section, we present further evidence.

First, Appendix-A Table S1 shows the cross-tabulation of appointment and ending timing of the last wave of Soeharto mayors. As we can see, most mayors complied with the five year term.

Appendix-A Table S2 presents results on firm extortion. Columns 1 and 2 present the results on extortion by the military and police. Columns 3 and 4 show results for illegal payments to local government officials. Columns 5 and 6 present results for illegal payments to thugs and criminals. The percentage of firms that report having to pay to each group is 14%, 4%, and 5%, respectively. Note that the survey explicitly asked firms for

[3]Note that the latter two possibilities are not explicitly captured by the model. Our model is highly stylized and imposes minimal assumptions on the production function of de facto power. In particular, we assume that the resulting level of de facto power is only a function of the total investment across periods, hence it does not take into account the time dimension in the production side.

[4]This is consistent with a recent empirical literature which documents that low levels of political competition are associated with low public good provision and negative economic outcomes. See Besley, Persson, and Sturm (2010) and Acemoglu, Reed, and Robinson (2014).

APPENDIX-A TABLE S1

CROSS-TABULATION OF APPOINTMENT AND ENDING TIMING[a]

| | | Number of Districts by Year of Election of the First Democratic Mayor | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
| Number of Districts by Year of Appointment of the Last Soeharto Mayor | 1994 | **14** | 14 | 0 | 0 | 0 | 0 | 28 |
| | 1995 | 10 | **50** | 4 | 0 | 1 | 0 | 65 |
| | 1996 | 4 | 5 | **14** | 0 | 0 | 0 | 23 |
| | 1997 | 0 | 2 | 0 | **6** | 5 | 0 | 13 |
| | 1998 | 5 | 1 | 1 | 3 | **45** | 3 | 58 |
| | Total | 33 | 72 | 19 | 9 | 51 | 3 | 187 |

[a]Sample restricted to districts according to their 1997 boundaries that subsequently did not split.

illegal fees paid to protect the physical integrity of the firm. The fees paid to local government officials may not include other types of rent extraction, such as bribes to speed up administrative processes.

Columns 3 and 5 show that each additional year of exposure to Soeharto mayors leads to a 1 percentage point increase in the prevalence of illegal payments to government of-

APPENDIX-A TABLE S2

EFFECTS OF EXPOSURE TO SOEHARTO MAYORS ON FIRM EXTORTION[a]

| | Dependent Variables: Dummy for Illegal Payments Made to | | | | | |
|---|---|---|---|---|---|---|
| | Military or Police | | Local Officials | | Thugs and Criminals | |
| | All Firms (1) | Not Connected Firms (2) | All Firms (3) | Not Connected Firms (4) | All Firms (5) | Not Connected Firms (6) |
| *Mean Dep. Var.* | *0.14* | *0.11* | *0.04* | *0.04* | *0.05* | *0.05* |
| | | | Panel A. Linear Effect | | | |
| Year of Appointment | 0.024*** | 0.025** | 0.009* | 0.011* | 0.011* | 0.012* |
| | (0.009) | (0.010) | (0.005) | (0.006) | (0.007) | (0.006) |
| Observations | 8,147 | 4,832 | 8,147 | 4,832 | 8,147 | 4,832 |
| R-squared | 0.039 | 0.030 | 0.006 | 0.011 | 0.022 | 0.029 |
| Number of Clusters | 127 | 127 | 127 | 127 | 127 | 127 |
| | | | Panel B. Flexible Specification | | | |
| Appointment 1995 | 0.042*** | 0.039*** | 0.007 | 0.009 | 0.003 | 0.005 |
| | (0.015) | (0.015) | (0.009) | (0.009) | (0.011) | (0.010) |
| Appointment 1996 | 0.049** | 0.048** | 0.018 | 0.016 | 0.019 | 0.027* |
| | (0.023) | (0.023) | (0.012) | (0.016) | (0.016) | (0.015) |
| Appointment 1997 | 0.076*** | 0.081** | 0.026 | 0.040* | 0.034 | 0.032 |
| | (0.029) | (0.036) | (0.017) | (0.022) | (0.023) | (0.023) |
| Observations | 8,147 | 4,832 | 8,147 | 4,832 | 8,147 | 4,832 |
| R-squared | 0.039 | 0.030 | 0.006 | 0.011 | 0.022 | 0.030 |
| Number of Clusters | 127 | 127 | 127 | 127 | 127 | 127 |

[a]Standard errors clustered at the district level in parentheses. The unit of observation is the firm. All specifications include as controls a set of island-group fixed effects, district-level vote shares obtained by Golkar and PDI in the 1992 election, the number of years of experience of the firm, dummies for intervals of number of employees, and a dummy for the wave of the EGI survey. Not connected firms are those whose owner reports not knowing the mayor in person and are smaller than the 75th percentile of the firm-size distribution. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

ficials and criminal organizations. This effect represents approximately a 20% increase over the sample mean, which is similar to the magnitude of the estimated effects of payments to the military. While the results are weaker in terms of statistical significance, we observe an increasing pattern of the coefficients for districts with longer exposure to Soeharto mayors during the democratic transition.

One caveat to these results is that some of these firms may be connected to local elites. As we describe in Section 1.1 of Appendix B, the Indonesian qualitative literature has characterized the elites as being formed by bureaucrats, members of the military, business owners, their families, and their business associates. While the defining trait of these actors was the fact that they amassed their wealth thanks to their proximity to the state, over time, some of them developed interest in the private sector as well. However, there was also a middle class composed of professionals that also include small business owners and that did not belong to the elite. Hence, it is possible that the firms included in our sample are heterogeneous in terms of their connection to the elites.

Accordingly, we empirically evaluate the robustness of our results to the exclusion of those firms that are more likely to be part of the elite. In particular, we exclude firms that are in the top quartile of the firm-size distribution and firms whose manager reports knowing the mayor in person. We present these results in Appendix-A Table S2. Columns 2, 4, and 6 indicate that our results are robust to excluding from the sample firms that are most likely to be connected to the regime. If anything, the results become slightly stronger, suggesting that our main estimates could underestimate the actual extent of extortion that unconnected firms experienced.

Next, we describe in more detail the results on public good provision that were summarized in the main text of the paper. Appendix-A Table S3 presents the complete set of results on the z-scores of health and education. We also report results for the z-score on basic services.[5] Basic services are not under the sole control of district governments because they require the collaboration with village governments. However, for completeness, we report the results for these outcomes here.

Panels A and B estimate our baseline empirical specifications using the corresponding outcomes as reported in the 2011 village census. The results suggest that the later the appointment timing of the last Soeharto, the lower is the level of public good provision in 2011. In particular, Panel A shows that every additional year a Soeharto mayor is in office during the transition is associated with a decrease in public good provision of between 0.047 and 0.061 standard deviations across the different types of public good provision.

Panel B relaxes the assumption of a linear effect of the appointment timing on outcomes. While the effects vary in terms of statistical significance, the point estimates are consistently negative and generally increasing in magnitude on the level of exposure to the Soeharto mayor during the transition.

In Panel C, we report the results on the panel specification (S2) described in the main text of the paper. While the effects are slightly smaller in magnitude than those presented in Panel A, they are consistently negative and of a comparable order of magnitude. The results for health and education facilities were summarized in Figure 2 in the main text of the paper. We do not find significant effects for basic services. This could be explained by village governments taking actions to compensate for the lack of provision of public goods by district governments.

[5]Basic services include: access to safe drinking water, garbage disposal, presence of toilets, availability of electricity or kerosene for cooking, and quality of roads. See Section 2 in Appendix B for specific definitions.

APPENDIX-A TABLE S3

EFFECTS OF EXPOSURE TO SOEHARTO MAYORS ON PUBLIC GOODS PROVISION[a]

| | Dependent Variables | | |
|---|---|---|---|
| | Z-Score Education Public Goods (1) | Z-Score Health Public Goods (2) | Z-Score Basic Services (3) |
| Panel A. Linear Cross-Sectional Specification. Outcomes from 2011 Village Census | | | |
| Year of Appointment | −0.047*** | −0.061** | −0.050 |
| | (0.017) | (0.024) | (0.033) |
| Observations | 13,014 | 12,665 | 12,935 |
| R-squared | 0.117 | 0.119 | 0.176 |
| Panel B. Flexible Cross-Sectional Specification. Outcomes from 2011 Village Census | | | |
| Appointment 1995 | −0.060 | −0.021 | −0.061 |
| | (0.062) | (0.063) | (0.088) |
| Appointment 1996 | −0.115** | −0.185*** | −0.119 |
| | (0.057) | (0.069) | (0.094) |
| Appointment 1997 | −0.128** | −0.068 | −0.135 |
| | (0.055) | (0.078) | (0.114) |
| Observations | 13,014 | 12,665 | 12,935 |
| R-squared | 0.117 | 0.126 | 0.177 |
| Panel C. Linear Panel Specification | | | |
| Year of Appointment×Post2003 | −0.030** | −0.031** | −0.009 |
| | (0.011) | (0.016) | (0.020) |
| Observations | 91,095 | 88,295 | 86,455 |
| R-squared | 0.113 | 0.197 | 0.405 |
| Panel D. Flexible Panel Specification | | | |
| Appointment 1995×Post2003 | −0.039 | −0.001 | −0.023 |
| | (0.033) | (0.046) | (0.051) |
| Appointment 1996×Post2003 | −0.079*** | −0.098** | −0.022 |
| | (0.030) | (0.044) | (0.052) |
| Appointment 1997×Post2003 | −0.076* | −0.023 | −0.035 |
| | (0.040) | (0.052) | (0.070) |
| Observations | 91,095 | 88,295 | 86,455 |
| R-squared | 0.113 | 0.198 | 0.405 |

[a]Standard errors clustered at the district level in parentheses. 108 districts/clusters included in the sample. In Panels A and B, the unit of observation is the village. All specifications in Panels A and B include a set of island-group fixed effects, district-level vote shares obtained by Golkar and PDI in the 1992 election, and a quartic in log population of the village as controls. Panels C and D correspond to panel specifications where the unit of observation is the village-year. The years included in the sample are 1986, 1990, 1993, 2003, 2005, 2008, and 2011. These regressions include district and year fixed effects, and a quartic in log population of the village as controls. All outcome variables correspond to standardized averages. Hence, all of them have mean value 0. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

In Panel D, we estimate an analogous specification where we interact the variable $Post\_2003_t$ with dummies for the different years of appointment of the last Soeharto mayor. The results are also similar to those presented in Panel B, albeit slightly smaller in magnitude.

Overall, these results show that districts with higher exposure to Soeharto mayors during the transition experience a deterioration in public good provision in educational and health facilities relative to districts with lower exposure. These effects are observed in the cross-section of districts of 2011, as well as in the panel specification that includes district and year fixed effects. This increases our confidence in the main empirical specification, since it is consistent with the assumption that the appointment timing is orthogonal to unobservable district-level characteristics.

## S2.2. *Additional Public Good Outcomes*

Our main public good outcomes, presented in the main text of the paper, correspond to the number of health and educational facilities, as well as health personnel. One of the main reasons why we focus on these outcomes is data availability: these variables are consistently reported in several waves of the village census (PODES). By examining these outcomes, we can implement both a cross-sectional and a panel data analysis. The latter allows for the inclusion of district and year fixed effects, which relaxes the exogenity assumption of the appointment timing.

In this section, we complement this analysis using additional measures of public good outcomes. These measures represent better proxies of the *quality* of public good provision and citizens' well-being. However, these outcomes have at least two limitations: first, they are only provided for a few years.[6] Hence, the analysis is cross-sectional in nature. Second, some of these measures can also be affected by factors that are not under the control of district governments. For instance, health outcomes may also be influenced by cultural health practices or attitudes towards formal medicine. Hence, some of the effects are more noisy and less precisely estimated.

Appendix-A Table S4.A presents the results on additional health measures. First, we examine under-5 mortality. The results are presented in column 1. They suggest that there is a positive association between child mortality and exposure to Soeharto mayors during the transition. This is consistent with the lower provision of health centers and personnel that we document in the main text of the paper. Column 2 suggests that there is also a positive effect on mortality of mothers. Columns 3 to 6 present the results on various measures of morbidity. In particular, column 3 examines the z-score for prevalence of a number of diseases in children under the age of 5. These diseases are flu, fever, diarrhea, headaches, among others. See the table notes for details. We also find a positive association between the exposure to Soeharto mayors and morbidity in children. Column 4 specifically focuses on the prevalence of diarrhea as an outcome, one of the leading causes of under-5 mortality that is to a great extent preventable. The results indicate that there is also a positive effect of exposure to Soeharto on the prevalence of diarrhea on children under the age of 5. Columns 5 and 6 investigate similar outcomes for the overall population, but there is not a clear effect for adults.

Appendix-A Table S4.B presents the results on additional education measures. Columns 1 and 2 examine the effects on student-teacher ratios. However, we find no effect on these outcomes. We then proceed to examine other dimensions of the quality of education, such as enrollment rates. Column 3 shows that longer exposure to Soeharto mayors is associated with having more primary school dropouts as reported in the village census. The results are consistent with the measures of enrollment from other data sources. Columns 4 and 5 show negative effects of exposure to Soeharto mayors on primary and high school enrollment from the INDO-DAPOER data. However, the effects on high school are more precisely estimated. Finally, Columns 6 and 7 examine learning outcomes. The outcomes correspond to the average test scores in a standardized test that the Indonesian government conducts in grades 6 and 9, known as *Ujian Nasional*. The results on the primary school exam exhibit a negative association with year of appointment, albeit imprecisely estimated. The effects on junior high school grades are more precise, suggesting that

[6]We obtain these additional outcomes from different sources: village census (PODES), socioeconomic household survey (SUSENAS), and the INDO-DAPOER data collected by the World Bank. See Section 2 of Appendix B for further details.

APPENDIX-A TABLE S4.A

EFFECTS OF EXPOSURE TO SOEHARTO MAYORS ON PUBLIC OUTCOMES (HEALTH)[a]

| | Dependent Variables | | | | | |
|---|---|---|---|---|---|---|
| | Mortality (PODES 2011) | | Morbidity (SUSENAS 2009) | | | |
| | Number of Deaths: Children Under Age 5 (per 1,000 Population) (1) | Number of Deaths: Mothers (per 1,000 Population) (2) | Z-Score Morbidity (Children) Under Age 5) (3) | Prevalence Diarrhea (Children Under Age 5) (4) | Z-Score Morbidy (Overall Population) (5) | Prevalence Diarrhea (Overall Population) (6) |
| *Mean Dep. Var.* | *0.28* | *0.04* | *0.00* | *0.04* | *0.00* | *0.02* |
| | | | Panel A. Linear Effect | | | |
| Year of Appointment | 0.020* | 0.007** | 0.011* | 0.005** | 0.008 | 0.001 |
| | (0.010) | (0.003) | (0.007) | (0.002) | (0.006) | (0.001) |
| Observations | 22,269 | 22,269 | 35,589 | 35,589 | 337,839 | 337,839 |
| R-squared | 0.043 | 0.004 | 0.021 | 0.020 | 0.043 | 0.014 |
| Number of Clusters | 125 | 125 | 129 | 129 | 129 | 129 |
| | | | Panel B. Flexible Specification | | | |
| Appointment 1995 | 0.075*** | 0.022*** | 0.027 | 0.012** | 0.014 | 0.003* |
| | (0.026) | (0.005) | (0.017) | (0.005) | (0.015) | (0.002) |
| Appointment 1996 | 0.071*** | 0.029*** | 0.031 | 0.009* | 0.021 | 0.002 |
| | (0.026) | (0.009) | (0.020) | (0.006) | (0.018) | (0.002) |
| Appointment 1997 | 0.064* | 0.016* | 0.034* | 0.017** | 0.022 | 0.004* |
| | (0.036) | (0.009) | (0.020) | (0.008) | (0.017) | (0.002) |
| Observations | 22,269 | 22,269 | 35,589 | 35,589 | 337,839 | 337,839 |
| R-squared | 0.044 | 0.004 | 0.021 | 0.020 | 0.043 | 0.014 |
| Number of Clusters | 125 | 125 | 129 | 129 | 129 | 129 |

[a]Standard errors clustered at the district level in parentheses. In columns 1 and 2, the unit of observation is the village level, while in columns 3 to 6 the unit of observation is the individual. Specifically, columns 3 and 4 restrict the sample to children below age 5, whereas columns 5 and 6 include the entire sample of surveyed individuals. All specifications include island-group fixed effects and district-level vote shares obtained by Golkar and PDI in the 1992 election as regressors. Columns 1 and 2 also add a quartic in log population of the village as controls. Column 3 to 6 also add dummy variables for age (in years) as well as gender as controls. The z-score of morbidity considers all illnesses which were part of the SUSENAS survey instrument on morbidity. More precisely, the disease categories which are summarized in the z-score are: Fever, cough, cold, asthma, diarrhea, headaches, toothaches as well as "others" where respondents could indicate whether they suffered from any other type of illness in the past one month. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

children reach high school with weaker levels of learning in those districts with higher exposure to Soeharto mayors during the transition.

While not all of the effects are precisely estimated, the additional health and education results suggest that exposure to Soeharto mayors had negative effects on a range of health and education outcomes. Hence, the results are consistent with our negative effects on the number of health and education facilities. Overall, the results indicate that districts that had longer exposures to Soeharto mayors during the transition have lower provision of public goods in the long run, and that this also has negative consequences for the well-being of citizens living in those districts.

### S2.3. *Reelection and Performance*

In Appendix-A Table S5, we investigate the relationship between performance and re-election in more detail. The dependent variable in Panel A takes value 1 if the incumbent

APPENDIX-A TABLE S4.B

EFFECTS OF EXPOSURE TO SOEHARTO MAYORS ON PUBLIC OUTCOMES (EDUCATION)[a]

| | Dependent Variables | | | | | | |
|---|---|---|---|---|---|---|---|
| | Student-Teacher Ratio Primary School (1) | Student-Teacher Ratio High School (2) | Elementary School Dropouts (per 1,000 Population) (3) | Net Enrollment Primary School (4) | Net Enrollment High School (5) | Average Score National Exam Primary School (6) | Average Score National Exam Junior High School (7) |
| *Mean Dep. Var.* | *16.21* | *4.84* | *5.72* | *94.24* | *58.41* | *68.36* | *73.26* |
| | | | | Panel A. Linear Effect | | | |
| Yr. of App. | 0.009 | −0.155 | 0.797* | −0.317 | −1.270* | −0.426 | −1.057** |
| | (0.794) | (0.299) | (0.410) | (0.408) | (0.649) | (0.462) | (0.494) |
| Observations | 129 | 129 | 21,453 | 129 | 129 | 127 | 114 |
| R-squared | 0.074 | 0.201 | 0.038 | 0.228 | 0.400 | 0.340 | 0.205 |
| | | | | Panel B. Flexible Specification | | | |
| App. 1995 | −1.134 | −0.390 | −0.140 | 0.636 | 1.848 | −0.071 | −1.023 |
| | (2.043) | (0.694) | (1.024) | (0.712) | (1.517) | (1.274) | (1.029) |
| App. 1996 | 0.816 | −0.514 | 3.353*** | 0.048 | −1.409 | −1.313 | −2.358* |
| | (2.742) | (0.843) | (1.274) | (1.083) | (2.233) | (1.630) | (1.278) |
| App. 1997 | −1.049 | −0.403 | 0.046 | −1.097 | −3.433* | −0.776 | −2.949* |
| | (2.229) | (1.002) | (0.997) | (1.387) | (1.926) | (1.316) | (1.719) |
| Observations | 129 | 129 | 21,453 | 129 | 129 | 127 | 114 |
| R-squared | 0.081 | 0.202 | 0.043 | 0.242 | 0.421 | 0.343 | 0.206 |

[a]Columns 1 and 2 as well as 4 to 7 show robust standard errors in parentheses. Column 3 shows standard errors clustered at the district level in parentheses. In columns 1 and 2 as well as 4 to 7, the unit of observation is the district level, while in column 3 the unit of observation is the village level. All specifications include island-group fixed effects and district-level vote shares obtained by Golkar and PDI in the 1992 election as regressors. Column 3 also adds a quartic in log population of the village as controls. The outcomes in Columns 1 and 2 as well as 4 to 7 are measured in 2009 and were obtained from the World Bank's Indo DAPOER dataset. The outcome in Column 3 is obtained from the village census wave conducted in 2003. The outcome variable in Column 3 is constructed as the number of elementary school dropouts in 2003 per 1,000 village population. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

mayor was reelected in the first direct election. The dependent variable in Panel B is the analogous measure for the second direct election. We regress these outcomes on a measure of poor performance in public good provision obtained in the first year of each electoral cycle.[7] We construct a z-score of public good provision on health and education. We classify districts as having poor performance as those with z-scores below a given percentile. The column headings of columns 1 to 4 describe the percentiles used as thresholds. We interact the measure of poor performance with our main regressor of interest: year of appointment of the Soeharto mayor.

The results suggest that, in districts with no exposure to Soeharto mayors during the transition, poor performance is associated with a lower probability of reelection. In both

[7]In Panel B, we use measures of public good provision from the 2011 wave of the village census. Consequently, we exclude elections that took place in 2010. While this reduces the sample size, the results are still highly significant. The results are robust to including districts with elections in 2010, and using as a measure of performance public good provision in 2007. However, the results are less precisely estimated since electoral results are measured with a larger time lag with respect to the measurement of public good outcomes. These results are available upon request.

APPENDIX-A TABLE S5

EFFECTS OF EXPOSURE TO SOEHARTO MAYORS ON QUALITY OF LOCAL ACCOUNTABILITY[a]

| | Dependent Variable: Dummy for Reelection of Incumbent Mayors | | | |
|---|---|---|---|---|
| | Performance Below 20th Percentile (1) | Performance Below 30th Percentile (2) | Performance Below 40th Percentile (3) | Performance Below 50th Percentile (4) |
| | Panel A. First Direct Elections (2005–2008) | | | |
| *Mean Dep. Var.* | *0.66* | *0.66* | *0.66* | *0.66* |
| Bad Performance Dummy | −0.231 | −0.183 | −0.289* | −0.150 |
| | (0.238) | (0.183) | (0.160) | (0.166) |
| Year of Appointment× | 0.096 | 0.132 | 0.189* | 0.143 |
| Bad Performance | (0.128) | (0.102) | (0.097) | (0.101) |
| Observations | 115 | 115 | 115 | 115 |
| R-squared | 0.114 | 0.116 | 0.135 | 0.119 |
| | Panel B. Second Direct Elections (2011–2014) | | | |
| *Mean Dep. Var.* | *0.46* | *0.46* | *0.46* | *0.46* |
| Bad Performance Dummy | −0.687** | −0.812*** | −0.712** | −0.546* |
| | (0.279) | (0.287) | (0.270) | (0.287) |
| Year of Appointment× | 0.467*** | 0.476*** | 0.305** | 0.314** |
| Bad Performance | (0.123) | (0.123) | (0.145) | (0.144) |
| Observations | 46 | 46 | 46 | 46 |
| R-squared | 0.216 | 0.234 | 0.159 | 0.135 |

[a]Robust standard errors in parenthesis. The unit of observation is the district level. All specifications include as controls a set of island-group fixed effects and the district-level vote shares obtained by Golkar and PDI in the 1992 election. The dependent variable is a dummy variable which equals 1 if either the incumbent mayor or vice mayor (or both) are reelected to serve an additional term as mayor or vice mayor, 0 otherwise. The number of observations varies due to missing information about the incumbency status and the electoral results. In panel B, the sample only consists of districts which held the second direct elections between 2011 and 2014. The performance dummies are defined based on the z-score of all public goods (education and health) at the district level. More precisely, we calculate a joint z-score for all public goods (education and health) for the PODES 2005 and 2011 cross-sections. We then define the thresholds for performance based on the district-level means of this z-score for each cross-section. In panel A, we rely on the measure of performance derived from the PODES 2005, whereas panel B shows results based on the measure of performance derived from the PODES 2011. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

panels, the uninteracted coefficients are negative. These results correspond to what we would expect from districts where there is political accountability.

However, the interaction term of poor performance and year of appointment is positive and statistically significant in most specifications. This suggests that exposure to Soeharto mayors during the transition weakens the accountability relationship. The extent to which voters punish electorally mayors for poor performance diminishes with districts' exposure to Soeharto mayors during the transition. Indeed, the point estimates suggest that, for districts with two or three years of exposure to Soeharto mayors, poor performance and reelection probability are positively correlated.

These results are consistent with the hypothesis that districts with longer exposure to Soeharto mayors during the transition developed higher levels of elite capture that persist over time. In districts with high levels of elite capture, elites may have developed a network of political brokers that buy votes and intimidate voters at time of elections. These strategies allow mayors to be reelected despite poor performance in public good provision. Furthermore, since voters do not vote on the basis of performance, incumbent mayors have weak incentives to exert effort to deliver public goods and to refrain from rent-seeking. Hence, the presence of a positive correlation between poor performance

and reelection rates for some districts can be explained by those districts having high levels of elite capture.

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