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JUDICIAL CAPTURE*

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We use data from Pakistan to establish a reciprocal exchange relationship between the judiciary and the government. We document large transfers in the form of expensive real estate from the government to the judiciary, and reciprocation in the form of pro-government rulings from the judiciary to the government. Our estimates indicate that the allocation of houses to judges increases pro-government rulings and reduces decisions on case merits. The allocation also incurs a cumulative cost of 0.03% of GDP to the government. However, it allows the government to expropriate additional land worth 0.2% of GDP in one year.

> When plunder becomes a way of life in a society, over the course of time they create for themselves a legal system that authorizes it and a moral code that glorifies it.
>
> Justice Athar Minallah[1]

The judiciary traditionally acts as a check on governments (De Montesquieu, 1748; Madison *et al.*, 1788). Yet, in many countries, including consolidated democracies, judiciaries seem to be abdicating their crucial role as a check on executive power (Acemoglu *et al.*, 2013). One reason for this abdication of responsibility may be judicial capture by the government. This can limit political accountability, retard economic growth and foster the rise of autocracies (Persson *et al.*, 1997; Djankov *et al.*, 2003; Glaeser and Goldin, 2006; Voigt *et al.*, 2015; Behrer *et al.*, 2021).

Given the significant implications of the state's capture of judiciaries, it is crucial to ask two fundamental questions. How does the State manage to capture the judiciaries that are meant to keep executive power in check? What facilitates this judicial capture by the government? While it is a well-established fact that governments grant favours to state officials (Mian *et al.*, 2010; Xu, 2018; Colonnelli *et al.*, 2020), the mechanics of the sensitive relationship between the government and judiciary, which in principle are meant to be independent from each other, remain inadequately understood.

This paper presents quasi-experimental evidence of how granting favours to the judiciary by the government affects pro-government rulings and decision quality. It does so by utilising a unique

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[1] Quoted from Justice Minallah's court order barring the federal government from acquiring additional land to allocate houses to judges.

natural experiment: the staggered allocation of real estate to judges in Pakistan. By combining case-level micro data on judicial decisions and real estate allocations in a generalised difference-in-differences empirical strategy, we are able to examine the complete transactional relationship between the judiciary and the government, including the transfer of real estate from the federal government to judges and the awarding of pro-government rulings from judges to the federal government. We find that allocation of houses to judges in Pakistan increases pro-government rulings and reduces decisions on merits of a case. The evidence suggests that judges reciprocate the federal government's allocation of real estate by rendering decisions that are more favourable towards the government and less based on case merits.

The study makes use of the real estate allocation system established by the Pakistani government under the 'Prime Minister's Assistance Package'. This initiative, which involves the distribution of high-end properties to senior officials within the Pakistani bureaucracy, is overseen by the federal government of Pakistan. Our analysis employs a generalised difference-in-differences research design, leveraging the staggered distribution of real estate to judges as a means of identifying variation. Under the parallel-trend assumption, the generalised difference-in-differences design allows us to address several empirical issues that could otherwise hinder our ability to interpret the results as causal. To begin with, we can account for the possibility that the outcomes are influenced by time-invariant differences in pro-government rulings by judges. It is possible that some judges may be more likely to receive real estate based on their fixed characteristics such as their gender or the law school they went to, but by incorporating judge-fixed effects, we can rule out such concerns. Furthermore, we can dismiss the notion that our results are driven by court decisions that evolve over time in a common manner across judges in different periods. This is because certain political shocks, such as national elections, may have a specific effect on the rulings of all judges, ultimately influencing their judgements. However, by incorporating year fixed effects, we can account for these potential influences. Lastly, we can exclude the possibility that different cases appear in different courts at different times: certain courts may become more congested over time, leading to significant differences in their rulings from other district courts in a particular year. But, by utilising court-by-year fixed effects, we can eliminate these concerns.

Our main finding is when judges were allocated houses by the federal government, ruling in favour of the federal government increased. House allocation raised pro-government rulings by about 25 percentage points. This is equivalent to a 50% increase in government victories over the sample mean. Rulings in favour of the provincial or local government remain unaffected. As a point of comparison, this magnitude is roughly equivalent to the impact of replacing all judges in Pakistan with presidential appointees instead of the current method of judicial selection by judge peers (Mehmood, 2022). We also find that rulings in favour of the government exclusively concerned cases involving the federal government. Since house allocation goes through the federal government and must be 'approved' by the Prime Minister, these are precisely the cases where we would expect incentives for reciprocation to be high. We highlight two additional results. We find that, on average, the real estate allocation decreased rulings on case merits. Our quantitative analysis of decision quality leverages legal experts' evaluation of case quality: judgement texts are examined by a five-member panel of attorneys to assess whether the decision is based on the cases' legal merits.[2] The results of this analysis suggest that the allocation of houses to judges also reduces the probability of cases being judged based on evidence or merits. Specifically, the house

[2] In common law jurisprudence, a ruling 'on evidence or merits' means that the judicial decision is 'based on evidence rather than technical or procedural grounds' (Pound, 1998). This dummy variable is constructed from a reading of the

allocation reduces decisions on case merits by about 40%. These findings are consistent concerns raised by civil society in Pakistan that house allocation deteriorates judicial decision quality and the rule of law (Sattar, 2017). Lastly, we estimate the value of the additional land expropriation that occurs as a result of the 'houses for judges' system. According to our computations, the system of house allocation results in a cumulative cost to the government of approximately 0.03% of GDP, based on the total market value of the allocated houses. However, the system also allows the government to expropriate additional land worth 0.2% of GDP each year. To put this amount into perspective, it is roughly equivalent to 10% of what the Pakistani government spent on education in 2019 (World Bank, 2019).

Our empirical strategy rests on the parallel-trend assumption. One may worry about the plausibility of the parallel-trend assumption in our setting. That is, it may be that judges who were allocated real estate may be on different pro-government ruling trends than those who were not. We speak to this concern in three ways. First, we estimate a fully dynamic version of the two-way fixed-effect model and check for potential pre-trends. Second, we explore the existence of differential trends prior to the house allocation by estimating fully dynamic versions of alternative estimators introduced in Borusyak *et al.* (2021); Callaway and Sant'Anna (2021); and Sun and Abraham (2021). Results from all these estimators provide evidence consistent with parallel trends. This is also in line with anecdotal accounts suggesting that judges are generally unable to predict their house allocation status (The News International, 2015). Third, to the extent that such trends are evolving at the court-by-year level, we are able to account for them by including court-by-year fixed effects. Lastly, anecdotal evidence further bolsters these quantitative findings, as it suggests that judges find it challenging to predict their house allocation status (The News International, 2015). In all these settings, the evidence appears to not contradict the parallel-trend assumption.

Finally, our empirical approach rests on the homogeneity of treatment effects across units and time to deliver consistent estimates. We speak to this identification challenge by showing that our results survive estimation by robust estimators that do not require the homogeneity assumption. These estimators shut down the 2×2 difference-in-differences comparisons between newly treated and already treated units to deliver consistent estimates (Borusyak *et al.*, 2021; Callaway and Sant'Anna, 2021; Goodman-Bacon, 2021; Sun and Abraham, 2021). Across these robust estimators, the coefficient estimates on the impact of house allocation remain qualitatively and statistically similar. The Goodman-Bacon decomposition of the estimates also indicates the 'forbidden comparisons' of newly treated with already treated as controls do not drive our results (Goodman-Bacon, 2021).

This paper speaks to at least three strands of the literature. Principally, it relates to the literature on institutions and development, particularly the studies emphasising the importance of checks and balances on executive power (North, 1990; La Porta *et al.*, 1998; Shleifer and Vishney, 2002; Djankov *et al.*, 2003; Rodrik *et al.*, 2004). We contribute to this literature by showing how reciprocation of favours by the judges may 'increase expropriation risk' (Acemoglu *et al.*, 2001, p.1371) by increasing state victories in land expropriation cases against the citizenry. We hence provide empirical support for the theory and mechanisms behind many of these seminal studies. This paper is also related to recent studies that investigate the impact of the

text of the judgement order by two independent teams of five attorneys each within a law firm (see Online Appendix A for more details). Anecdotal accounts from Pakistan also suggest that ruling on technicalities or legal lacunas is a 'weapon of choice to rule unfairly' (Haq, 2018) and that judges use decisions on technicalities to 'favour the state authorities' (Arshad, 2017).

presidential appointment of judges in Pakistan on the rule of law (Mehmood, 2022) and long-run economic development (Mehmood, 2023). The paper extends these works in two important dimensions: (*a*) it provides evidence of a reciprocal relationship between the government and the judiciary and (*b*) it shows how unlegislated and unwritten rules, unlike the presidential appointment of judges in the previous work, may also undermine the independence of the judiciary.

Second, we speak to the literature on state capacity and public sector effectiveness (Besley and Persson, 2010; Manacorda *et al.*, 2011; Xu, 2018; Acemoglu *et al.*, 2020; Bandiera *et al.*, 2020; Callen *et al.*, 2020; Colonnelli *et al.*, 2020). We advance suggestive evidence of judicial capture by the government (Acemoglu *et al.*, 2013)[3] and document a reciprocative exchange relationship between the federal government and the judiciary. While past studies have focused on the reciprocal exchange of favours between politicians and donors (Colonnelli *et al.*, 2020) and between regulators and special interest groups (Mian *et al.*, 2010), we document the reciprocal transaction between the judiciary and the government. More importantly, however, the judiciary's de jure requirement for independence sets it apart from other government branches, since it must safeguard individual rights and serve as a check and balance to other branches of the State. Consequently, the exchange of favours with other state institutions becomes a significant concern. Lastly, we contribute to the literature on the legal origins of economic development (La Porta *et al.*, 1998; 2008; Glaeser and Shleifer, 2002; Anderson, 2018). Our contribution to this literature is two-fold. First, we show that the protections provided in common law for private economic interests are weakened when rules and norms allow for reciprocal exchange between the government and the judiciary. Second, we provide an estimate of the costs and benefits—to the government—of favour exchange to a key organ of the State, the judiciary.

The paper is structured as follows. Section I provides a brief overview of the background followed by Section 2, which describes the data. In Section 3, we outline the empirical methodology employed in our analysis, and the results are presented in Section 4. A final section concludes. A detailed description of the data and their sources, as well as variable definitions, and robustness analysis of our results, can be found in Online Appendix A. Additional figures and tables from the robustness analysis are reported in Online Appendix B.

1. Background

1.1. *Context*

In many vulnerable democracies, powerful institutions such as the military and the judiciary wield their influence to establish institutionalised perks for their respective institutions. This is particularly prevalent in Pakistan, where both the military and the judiciary have set up major housing schemes for their top cadres (Siddiqa, 2007). This study investigates one such housing scheme for judges. The existence of such transfers by the government is a closely guarded secret, with qualitative accounts reporting that even some judges learn of it only after assuming office.[4] However, a high-profile media leak occurred when a prominent newspaper published the names

[3] Acemoglu *et al.* (2013) presented a series of case studies showing that judicial capture by governments is common worldwide.

[4] 'Justice Jawwad Khawaja mentioned that soon after his elevation to the Court, the registrar sent him an application for a residential plot. Justice Khawaja inquired whether the granting of a plot was mentioned in the constitutional provisions determining the entitlement of judges. He was told it was not.' (The News International, 2015)

of judges who had received real estate from the Prime Minister as part of the 'Prime Minister's Assistance Package' (The Express Tribune, 2010), prompting a public call for an inquiry into the house allocation system. The Prime Minister's Assistance Package was established in 1989, which created a government department responsible for allotting residential land to public servants. It was initially called the 'FGE Housing Foundation', and was created as a department within the Ministry of Housing and Works. The department operated for a long time without any legal cover from the legislature. It was only after repeated litigation by citizens that the President of Pakistan signed an executive order on July 12, 2019, giving it some official backing from the Government (Ministry of Housing and Works, 2022). Many commentators, including former judges, called the allocation of houses to judges 'corruption'. One newspaper ran the headline 'daylight robbery', while the Islamabad High Court Chief Justice termed it 'plunder', and a Supreme Court judge called it an 'unlawful favour' (Justice Faez Isa quoted in Sattar, 2017). More fundamentally, doling out favours by the government to the judiciary is problematic because the judiciary is crucially different from other branches of government. One fundamental characteristic is its intended independence, which sets it apart from entities such as the bureaucracy or the legislature that at some level are answerable to the executive. Unlike the legislature, which is typically bound to the executive even in majoritarian systems, the judiciary operates with a degree of autonomy. This independence enables the judiciary to act as a check and balance on the other branches of government, ensuring the protection of individual rights and the interpretation and enforcement of laws. Given this unique position, the exchange of favours between the judiciary and other state branches becomes a matter of important consideration.

1.2. *Procedure*

The precise method of assigning houses to judges remains veiled in secrecy. Our interviews with former judges and government officials indicate that Islamabad's Capital Development Authority allocates residential plots to judges through the Federal Ministry of Housing, upon written request from the Prime Minister to the federal ministry. The judge was required to apply for a house and to pay a non-refundable fee of PKR 500 or USD 2.10. If the Prime Minister approves the application, the judge is allotted a 4,500-square-foot residential plot in a central location in Islamabad called the Judicial Colony. Importantly, however, the governmental allocation entitles the judges to full legal ownership of the property, to live in it, rent it or sell it (Abbasi, 2017a,b). The colony of judges' houses in Islamabad is one of the most valuable pieces of residential real estate in the whole country. The average value of a house allocated is about USD 400,000 (Zameen, 2019), equivalent to roughly 80 times the High Court judges' monthly salary or about seven times their annual salary.

2. Data

Our empirical analysis leverages data on judicial cases from case archives at the Registrar Offices of the High Courts. We randomly sample about 8,600 cases from 1986–2019 for all High Courts in Pakistan (from the universe of cases decided in this period) conditional on the State being one of the parties. This is 0.2% of the total cases available at the High Courts. This is combined with the list of judges receiving real estate from a dataset obtained from the Public Accounts Committee

of the Pakistani Parliament.[5] Online Appendix Table B1 presents the descriptive statistics of the variables used in the paper, while Online Appendix Figure B1 shows the distribution of pro-government rulings, our main outcome variable of interest.[6] Out of the 446 judges included in our full sample, 224 of them were allocated real estate. The key outcome and explanatory variables are detailed below. Further explanations of the data and their sources, including a full description of the variables, can be found in Online Appendix A.

2.1. *State Wins*

Our key outcome variable is *State Wins*. This is a case-level measure of government favouritism constructed from the text of the judgement order containing details on the case. Following the literature (e.g., Djankov *et al.*, 2003), we asked attorneys at a law firm to code this variable. The lawyers at the law firm coded the 'State Wins' dummy variable as one if the State won the dispute and zero in the case of government defeats in all cases where the State is one of the parties. The State here includes all organs of the state yielding executive power, such as local, provincial and federal governments (in line with the conceptualisation of the State as an executive organ in De Montesquieu, 1748). The State tends to win roughly half of the cases on average. A graphical representation of this variable's distribution can be found in Figure B1 of Online Appendix B.

2.2. *Merit*

To analyse the quality of judicial decisions, we use an additional outcome variable: *Merit*. This measure of decision quality is a dummy, also coded by attorneys at the law firm, for the decision being 'based on evidence rather than technical or procedural grounds' (Pound, 1998). There are two reasons for constructing this variable. First, legal scholarship in Pakistan argues that ruling on technicalities is a 'weapon of choice to rule unfairly' and that judges use decisions on technicalities to 'favour the State authorities' (Aziz, 2001) and such rulings are 'symptomatic of a biased decision' (Arshad, 2017). Therefore, we proxy the 'correctness' or unbiasedness of a judicial decision by this dummy variable. Second, this variable is consistent with common law jurisprudence, which aspires toward rulings on merits, i.e., based on evidence and the spirit of the Law rather than legal technicalities (Pound, 1998 and Tidmarsh, 2009 discuss this in detail).

2.3. *House Allotted*

The main explanatory variable in our study is *House Allotted*, which is a binary variable that turns on for a particular judge in the year when the judge receives a house. The variable is obtained from a list obtained from the Public Accounts Committee of the Pakistani Parliament. This committee within the Pakistani legislature is responsible for examining public audits, summoning ministers and public officials to testify before the committee, and publishing their findings for the benefit

[5] The opaque nature of transactions under the Prime Minister Assistance Package did not deter scrutiny of the allocation of real estate to superior court judges, following a 2010 media leak (The Express Tribune, 2010). Our study supplements the leaked list with a more comprehensive roster obtained from the Public Accounts Committee of the Pakistani Parliament, covering the 1990–2019 period.

[6] Online Appendix Figure B2 illustrates the random sampling process of about 8,600 cases, which were selected from the entire population of district High Courts in Pakistan. These cases were sampled across all years from 1986 to 2019, with the sampled cases representing approximately 0.2% of the total cases decided during this period.

of the public. We were able to match the complete list of 224 judges who received real estate in this roster among the 446 judges in the case-level database.

2.4. *Control Variables*

We use all available time-varying case characteristics as control variables in the regressions. The case characteristics are also obtained from judgement texts and include the following variables: number of pages of the judgement order, presence of the chief justice on the bench, number of judges on the case, number of lawyers on the case and dummies for the type of cases. Additional information on variable definitions, construction and sources can be found in Online Appendix A.

3. Empirical Methodology

3.1. *Empirical Strategy*

In this paper, our main aim is to investigate the impact of real estate allocation on pro-government rulings. A simple correlation may be plagued by severe endogeneity concerns. Examples of such endogeneity concerns include reverse causality (e.g., judges who are already friendly towards the government may be more likely to receive real estate) and omitted variable bias (e.g., politically connected judges may be both more likely to receive houses and have higher pro-government rulings). To obtain estimates that can be more credibly interpreted as causal, we leverage the staggered allocation of real estate across Pakistani judges over time. Under parallel trends, the quasi-experimental variation generated by the staggered house allocation allows for estimation of the impact of real estate on pro-government rulings. As a baseline specification, we estimate the following difference-in-differences model with judge, year and court-by-year fixed effects:

$$Y_{it} = \alpha_i + \delta_t + \lambda_{ct} + \beta \times \textit{House Allocation}_{it} + X_{it} \times \gamma + \epsilon_{it}. \quad (1)$$

Here Y_{it} denotes the judicial decision for judge i in decision year t; α_i and δ_i are judge and year fixed effects, respectively; λ_{ct} is the court-by-year fixed effect; X_{it} is a vector of time-varying case characteristics that we add as controls. This includes the type of case (e.g., constitutional, land or criminal), the number of pages in the judge's order, the presence of the state chief justice in the judicial bench and the number of judges and lawyers involved in the case. As baseline, we estimate (1) using ordinary least squares (OLS) at the case-level regression and cluster SEs at the judge level.[7]

[7] When using such designs, Chen *et al.* (2016) proposed clustering SEs at the decision-maker level, which is what we do as a baseline. The results, however, are robust to alternative clustering methods (Table B7 in Online Appendix B), including multi-way clustering at the judge-by-year level or the most conservative court-level clustering. We also applied wild bootstrap with small sample correction, as suggested by Angrist and Pischke (2008) for a cluster size less than 42. This approach, based on the method outlined by Cameron *et al.* (2008), allows us to make reliable inferences without relying on results from asymptotic theory. The results, shown in Figure B4 of Online Appendix B, maintain statistical significance at conventional levels, suggesting that our findings are not driven by incorrect inference due to small sample bias.

Table 1. *Impact on State Wins by the Type of Government.*

	(1)	(2)	(3)	(4)	(5)	(6)
	State victories					
	Disputes with the federal government				Disputes with the local government	Disputes with the state government
House Allotted	0.288*** [0.0924]	0.277*** [0.0890]	0.312*** [0.0949]	0.263*** [0.0807]	0.0940 [0.0791]	0.0780 [0.0657]
Judge and year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	Yes	Yes	Yes	Yes
State-by-year FEs	No	No	Yes	No	No	No
District-by-year FEs	No	No	No	Yes	Yes	Yes
Observations	857	857	857	857	1,675	1,815
R^2	0.376	0.421	0.490	0.565	0.506	0.446
Mean of the dependent variable	0.520	0.520	0.520	0.520	0.487	0.472

Notes: This table explores the effect of house allocation on government victories by the type of government. Specifically, it presents estimates of coefficient β from (1) with state victories as the outcome variable. The outcome variable is *State Wins*, a case-level dummy that takes the value of one if the State wins in the case and zero otherwise. Columns (1) to (4) estimate a progressively saturated model with varied fixed effects in cases pertaining to the federal government. Column (5) estimates (1) for cases involving the local government, and column (6) for the state or provincial government. Controls include the number of pages of the judgement order, the presence of the chief justice on the bench, the number of judges on the case, the number of lawyers on the case and dummies for the type of cases. The unit of analysis is at the case level for this table. All columns always include judge, year and district court-by-year fixed effects. SEs are reported in brackets and are clustered at the judge level. *** $p < 0.01$.

4. Results

4.1. *Difference in Differences*

In this study, we examine whether judges who are allocated real estate by the federal government tend to issue rulings that favour the federal government. We estimate β for state victories using (1) and present these results in Table 1. In the first four columns of Table 1, we progressively estimate a more saturated specification for disputes involving the federal government. The results from columns (1) to (4) indicate a significant and meaningful effect of house allocation on government victories in cases against the federal government, despite the relatively smaller sample size compared to cases involving local or state governments. Specifically, the house allocation increases pro-government rulings in cases involving the federal government by approximately 25 percentage points, a 50% increase compared to the sample mean. In columns (5) and (6) of Table 1, we further estimate cases involving disputes with other government entities, specifically local and provincial governments. The coefficient estimates are statistically insignificant and close to zero, suggesting that rulings for the federal, not local or state governments, play a more pivotal role in explaining our results. Henceforth, our paper concentrates on cases that pertain to the federal government.

4.2. *Event Study*

In order to partially test for parallel trends and study the dynamic effect of house allocation, we estimate an event-study version of the Two-Way Fixed Effects (TWFE) model with indicators

for time to and from the actual house allocation. Specifically, we estimate the specification

$$Y_{it} = \alpha_i + \delta_t + \Sigma \beta_k \times D_k + \epsilon_{it}, \quad (2)$$

where Y is government victories and D is a set of indicator variables that take the value one if the house allocation was k years away. The subscript 'k' serves as a time index that represents the year of the judicial decision. It indicates the years from the house allocation to judges when the judicial decisions were observed. For example, when k is equal to $+2$, it corresponds to judicial decisions observed two years after the house allocation. We denote by α_i and δ_i judge and year fixed effects, respectively. When estimating the model, we treat one year before the house allocation as the omitted category and compare it to pro-government rulings in the other years.

As discussed in Sun and Abraham (2021), the fully dynamic version of the TWFE model in (2) estimated using OLS delivers consistent estimates, but only under relatively strong assumptions regarding treatment effect homogeneity. In order to allow for heterogeneity in treatment effects across time and treated units, we also present the event-study figures generated by a set of recently proposed estimators that are robust to treatment effect heterogeneity (Borusyak *et al.*, 2021; Callaway and Sant'Anna 2021; Sun and Abraham 2021). Figure 1 presents this event-study figure. The results suggest that the estimates from all of the estimators are consistent with the parallel-trend assumption. Specifically, regardless of the estimator employed, the coefficients on the years leading up to the house allocation are close to zero and do not show any noticeable pre-trends. This aligns with anecdotal evidence, which indicates that judges typically face challenges in predicting their house allocation status (The News International, 2015).

4.3. *Interpretations*

Figure 1 reveals patterns regarding the influence of treatment effects. We note that the new, robust estimators all indicate lasting effects of house allocation. After houses are assigned, we observe a rise in state victories by around 20 percentage points, continuing for up to four years post-allocation. This trend towards pro-government rulings may represent judges' gratitude or reciprocation towards the federal government. Figure 1 also dispels the possibility of two alternative mechanisms. In the first, judges anticipating receiving a house might try to pressure the government by ruling against it just before the allocation. This scenario is unlikely due to the absence of pre-trends and the unpredictability of house allocation outcomes (The News International, 2015). The second scenario hypothesises that judges may rule favourably towards the government in hopes of improving their chances of receiving a house, then cease such rulings once they have received their house. If this scenario were the main driver of our results, we would expect to see a post-allocation decrease in pro-government rulings. Instead, we see a surge in such rulings following house allocation. In summary, the lack of pre-trends, the observed increase in pro-government rulings post-allocation and the unpredictability of house allocation all support our interpretation that judges' gratitude or reciprocation explain our results.

4.4. *Decision Quality*

To investigate whether real estate allocations negatively impacted decision quality, we utilise a measure of decision quality based on evaluations of judgement texts by attorneys in Pakistan. Our approximation of decision quality is an indicator variable called *Merit*, which switches on if the decision is 'based on evidence rather than technical or procedural grounds' (Pound, 1998).

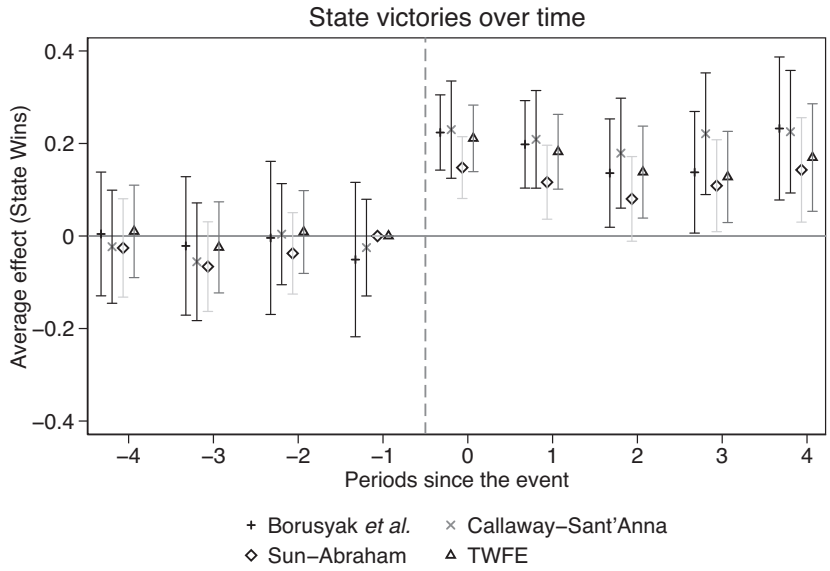

Fig. 1. *Time-Varying Impact on State Wins.*
Notes: This figure overlays the event-study plots constructed using four different estimators: a dynamic version of the TWFE model, (2), estimated using OLS (with triangle markers); Sun and Abraham (2021) (with diamond markers); Callaway and Sant'Anna (2021) (with cross markers) and Borusyak *et al.* (2021) (with plus markers). The time variable is the year of decision and the treatment group variable is given by the judge allotted the house by the government. The omitted category is the year before the house allocation. The figure displays only four post-periods because the estimation of additional post-periods would require employing already treated units as controls for the newly treated units. In the presence of heterogeneous dynamic treatment effects, such comparisons would bias the estimation and, therefore, they are shut down by all the newly introduced robust estimators. The maximum number of post-periods that can be estimated robustly, therefore, is four. We also use four pre-periods because the Borusyak *et al.* (2021) estimator dramatically increases the SEs after four pre-periods (Borusyak *et al.*, 2021, p.24). The bars represent 95% confidence intervals with SEs clustered at the judge level.

We estimate (1) using this dependent variable, and the results are presented in Table 2. The first column in the table shows the findings from the simplest specification, which included only judge and year fixed effects. The second column added time-varying case controls, and the third column further incorporated state-by-year fixed effects. In the fourth column, we replaced the state-by-year fixed effects with district court-by-year effects. Our results were consistent across all specifications, indicating that the allocation of real estate by the federal government to judges led to a decrease in decisions on merits. In particular, house allocation reduced decisions on merits by about 25 percentage points, a 40% decrease over the sample mean. Furthermore, we expand our analysis by evaluating the dynamic influence of house allocation on decisions based on their merits. To this end, we estimate (2) using merit decisions as the dependent variable across the four robust estimators. The results, presented in Figure 2, show a sharp and persistent fall in meritorious decisions following the house allocation, suggesting that the house allocation deteriorated the quality of judicial decision-making.

Table 2. *Impact of House Allocation on Case Merits in Rulings against the Federal Government.*

	(1)	(2)	(3)	(4)
	Case merits			
House Allotted	−0.308***	−0.311***	−0.331***	−0.263***
	[0.0890]	[0.0876]	[0.0986]	[0.0842]
Judge and year FEs	Yes	Yes	Yes	Yes
Controls	No	Yes	Yes	Yes
State-by-year FEs	No	No	Yes	No
District-by-year FEs	No	No	No	Yes
Observations	857	857	857	857
R^2	0.359	0.370	0.437	0.507
Mean	0.620	0.620	0.620	0.620

Notes: This table explores the effect of house allocation on government victories and meritorious decisions. Specifically, it presents estimates of coefficient β from (1). Case merits is the dependent variable that takes the value of one if the decision is 'based on evidence rather than technical or procedural grounds'. *House Allocated* is a binary variable that turns on for a particular judge in the year when the judge receives the real estate. Controls include the number of pages of the judgement order, the presence of the chief justice on the bench, the number of judges on the case, the number of lawyers on the case and dummies for the type of cases. The estimates from the baseline equation with judge, year and district-court-by-year fixed effects are reported in column (4). SEs are reported in brackets and are clustered at the judge level. The regressions are estimated on the sample presented in column (3) of Table 1, specifically focusing on cases involving citizens and the federal government. *** $p < 0.01$.

4.5. *Balance Checks*

In the High Courts of Pakistan, the allocation of cases within a district court is carried out randomly by means of a computerised case management system. From a theoretical perspective, the non-random assignment of cases has ambiguous effects on the estimated coefficients. The non-random allocation of cases to judges who have received real estate versus those who have not could affect the way they rule on cases. This would depend on whether they are assigned cases where the government's position is strong or weak. If judges who have received real estate are assigned to cases where the government's position is strong then any resulting pro-government rulings might be due to the strength of the government's position, rather than the fact of the house allocation itself. This could mean that we may be overestimating the impact of house allocation on state victories. In contrast, if house-allocated judges are assigned cases where the government's position is weak then the high number of state victories we observe might actually underestimate the true effect of the house allocation achieved if cases had been randomly assigned among judges. Our evidence from two balance tests, however, suggests both these possibilities are unlikely since consistent with de jure assignment rule at the High Court, cases appear to be randomly assigned within courts. We test for this de jure randomness of the case allocation within courts via two balance tests. In the first test, we estimated the baseline (1) reported in column (3) of Table 1. However, we replaced the dependent variables with the available case characteristics, which are shown in Table 3. Second, we test for balance using the joint orthogonality balance test suggested by Bruhn and McKenzie (2009). This balance test jointly estimates the case characteristics with treatment variables and is shown to perform better in simulation exercises (Bruhn and McKenzie, 2009). The joint orthogonality balance test results are available in Table B2 of Online Appendix B. Results from both tests support the view that cases are randomly assigned within courts. Finally, it is worth noting that the inclusion of the court-by-year fixed effect in the main specification also precluded the comparison of cases across courts and over time, by allowing for within-court and

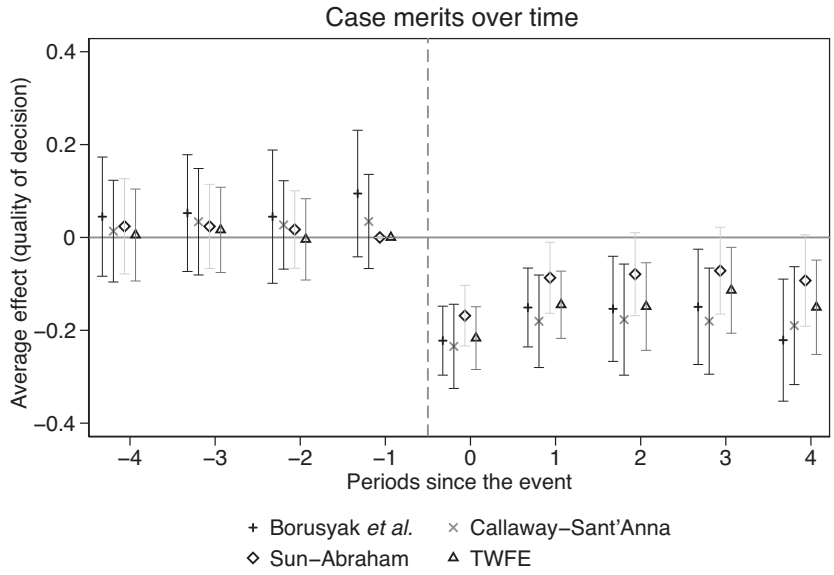

Fig. 2. *Time-Varying Impact on Meritorious Decisions.*
Notes: This figure overlays the event-study plots constructed using four different estimators: a dynamic version of the TWFE model, (2), estimated using OLS (with triangle markers); Sun and Abraham (2021) (with diamond markers); Callaway and Sant'Anna (2021) (with cross markers) and Borusyak *et al.* (2021) (with plus markers). The time variable is the year of decision and the treatment group variable is given by the judge allotted the house by the government. The omitted category is the year before the house allocation. The figure displays only four post-periods because the estimation of additional post-periods would require employing *already treated units* as controls for newly treated units. In the presence of heterogeneous dynamic treatment effects, such comparisons would bias the estimation and, therefore, they are shut down by all the newly introduced robust estimators. The maximum number of post-periods that can be estimated robustly is therefore also four. We also use four pre-periods because the Borusyak *et al.* (2021) estimator dramatically increases the SEs after four pre-periods (Borusyak *et al.*, 2021, p.24). The bars represent 95% confidence intervals with SEs clustered at the judge level.

Table 3. *Balance over Case Characteristics on Rulings against the Federal Government.*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Criminal case	Constitutional case	Land case	Pages of the judgement order	No. of lawyers on the case	No. of judges on the bench	Chief justice on the bench
House Allotted	0.00479	0.00368	−0.0820*	−1.351	0.226	0.0855	0.0552
	(0.00473)	(0.00363)	(0.0314)	(0.688)	(0.173)	(0.0956)	(0.0451)
Year and judge FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District-by-year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	857	857	857	857	857	857	857
R^2	0.972	0.971	0.361	0.370	0.162	0.323	0.311
Mean	0.0677	0.935	0.540	8.537	4.102	1.758	0.0548

Notes: This table explores the effect of house allocation on available observed case characteristics. Specifically, it presents estimates of coefficient β from (1) with the following case characteristics as dependent variables: the number of pages of the judgement order, the presence of the chief justice on the bench, the number of judges on the case, the number of lawyers on the case and dummies for the type of cases. The unit of analysis is at the case level. Judge, year and district-court-by-year fixed effects are always included in each column. SEs are reported in brackets and are clustered at the judge level. The regressions are estimated on the sample presented in column (3) of Table 1, specifically focusing on cases involving citizens and the federal government.

within-year comparisons. Collectively, these findings suggest that our results are unlikely to be explained by non-random allocation of cases.

4.6. *Costs and Benefits to the Government of House Allocation*

A back-of-the-envelope calculation allows us to ascertain the value of the land expropriated by the government that can be attributed to house allocation to judges. We have data on the market value of 57 properties expropriated by the government as a result of pro-government rulings in its favour. These property values were obtained from judgement texts and are assumed to be representative. Our strategy is similar to the computation of Khwaja and Mian (2005) of economy-wide costs of political connections using minimum and maximum bounds (i.e., most conservative to least conservative estimates). Using their methodology, we estimate that house allocation to judges allows the government to expropriate additional land valued in the range of 0.1% (most conservative) to 0.3% (least conservative) of GDP every year, where the yearly average value of land expropriated due to real estate allocation to judges is estimated at about 0.2% of GDP.[8] Based on the number of houses allocated and the market value of houses in the Judicial Colony, our estimates indicate a cumulative cost to the government of 0.03% of total GDP in 2019 on house allocation. This suggests that in a single year, through land expropriation alone, the government may be able to recover the total amount spent on house allocation. This may explain why the allocation of houses to judges has remained popular with the government and endured through transitions from left-wing to right-wing governments, as well as from military to 'democratic' rule.

5. Conclusion

The relationship between the government and the judiciary is widely regarded as one of the most sensitive. This recognition is not new, as De Montesquieu (1748) famously emphasised the importance of an independent judiciary, advocating for its separation from the executive branch in order to prevent abuses of government power and uphold the rule of law. Despite this, the writers of the US Constitution (Madison *et al.*, 1788) sought to regulate this relationship, exemplified by their decision to grant the executive branch the power of judicial appointment. Our paper delves into this special relationship to show how reciprocity or gratitude can sustain a two-way exchange relationship between the government and the judiciary. Our findings suggest that informal mechanisms can sustain a reciprocal relationship between the government and the judiciary, and indicate conditions under which the independence of the judiciary may be compromised. Specifically, we demonstrated that, when the Pakistani central government allotted expensive real estate to judges, their rulings in favour of the government increased and the decisions on case merits decreased. The effects are exclusively observed in cases directly involving the federal government, which signs off the real estate allocation.

Research examining patronage has hitherto been unable to empirically establish the fundamental two-way—quid pro quo—transaction that is at the heart of patronage arrangements, especially

[8] In 45% of our 8,600 sampled cases, the government successfully expropriated land. By randomly sampling 0.2% of the overall population of cases, we estimated that the total successful land expropriations by the government would amount to approximately 600,000. This calculation was based on a survey indicating that, on average, 30% of land cases involve the direct expropriation of private property. Considering the average value of USD 53,700 for the 57 expropriated properties in our dataset and a coefficient estimate of 25%, we deduced that the annual impact of land expropriation due to house allocation is between 0.1% and 0.3% of GDP (for more details, see Table B3 in Online Appendix B).

between the judiciary and the government. We show that the protection of private property and political rights promised in common law is attenuated under norms that facilitate reciprocating exchange between the government and the judiciary. Even constitutional protections, such as security of tenure or a relatively independent appointment system, may not be enough to prevent government capture of the judiciary. This may severely curtail the judiciary's ability to hold state officials to account, protect political rights and prevent abuse of government power.

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Additional Supporting Information may be found in the online version of this article:

Online Appendix
Replication Package

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