

Political Dynasties and Service Delivery: Evidence from Rural Health Clinics in Pakistan*

Faiz Ur Rehman[†] Noman Ahmad[‡]

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Abstract

Research suggests that politics play a pivotal role in public service provision in scarce resources context. But, there is limited evidence available on how dynastic politicians influence public service delivery. We examine this question in the context of the health sector in Punjab, Pakistan. By employing the representative sample of rural health clinics, we develop measures to capture the *quantity* and *quality* of doctors at the clinic-level. These data are then matched with provincial constituency-level data to study the impact of having a dynastic member of the parliament (MP) on the *quantity* and *quality* of doctors available in their respective constituencies. Our findings entail that having a dynastic MP has no discernible impact of the *quantity* of doctors. However, clinics in constituencies with dynastic MP have a higher *quality* of doctors. These findings remain robust to various complementary explanations.

Keywords: Political Dynasties, Public Goods Provision, Pakistan

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[†]Department of Economics, Institute of Business Administration (IBA) Karachi. Email: faizrehman@iba.edu.pk

[‡]Department of Economics, Terry College of Business, University of Georgia, Athens. Email: noman@uga.edu

1 Introduction

In the developing world, the general public looks to the government for the provision of basic public goods ([Devarajan et al., 2003](#)). However, these governments are perpetually constrained by resources due to which public expenditures on public goods, as a percentage of GDP, are historically low. Low government spendings trigger the issue of spatial inequality in the distribution of public goods within the different regions of a country. The relevant question to ask in this scenario is: what explains that a specific region gets more public services than the others?

The political economy literature argues that politics play a pivotal role in shaping public good provision. For instance, one strand of literature shows that political competition affects public goods provision and local development ([Besley et al., 2010; Boulding and Brown, 2014; Nye and Vasilyeva, 2015; Kosec et al., 2018; Gottlieb and Kosec, 2019](#)). Similarly, another strand of literature put forth the explanation that political connections and access to governing party politicians enhance the support in terms of provision of public goods ([Fisman, 2001; Ansolabehere and Snyder Jr, 2006; Baldwin, 2013; Albouy, 2013; Azulai, 2017](#)). Nevertheless, most of the existing debates have no say on the effects of candidate-specific characteristics (such as political capital and family networks) on mobilizing the resources for their respective constituents.¹ In this paper, we attempt to fill this gap by documenting the effects of having a dynastic member of the parliament (MP) on public service delivery with a focus on public health in Punjab, Pakistan.

The paper starts by arguing that dynastic politicians are different in several contexts from non-dynastic politicians. On the one hand, dynastic politicians acquire higher political capital from their ancestors. On the other hand, dynastic politicians also enjoy a disproportionate electoral advantage. Theoretically, the former difference predicts that dynastic MPs will out-perform the non-dynastic MPs in mobilizing resources and public service delivery for their respective constituents. However, the latter difference predicts that dynastic MPs have less incentive to deliver because of brand-name advantage. In

¹[Pande \(2003\)](#) and [Besley et al. \(2004\)](#) are the exemption in this regard which find that politician's group identity matters for public goods provision.

principle, the net effect of having a dynastic MP on public service delivery is ambiguous.

We examine the impact of having a dynastic MP on public service delivery in the context of a developing country: Punjab, Pakistan. To do so, our study elicits the geo-tagged primary data on public health officials (i.e., doctors) working in Basic Health Units in rural Punjab. Furthermore, this primary panel data of clinics is then combined with novel data that identifies the familial links of members of the Punjab assembly to ascertain the impacts of having a dynastic MP on quantity and quality of public health received by the constituents.

Our study is based on Punjab and particularly the public health sector due to two reasons: Punjab is the largest province of Pakistan with more than 110 million population (53% of Pakistan's total population) and the health department is devolved to the provincial government after 18th amendment of Pakistan's Constitution.² The primary data on the health sector comprises of a representative panel survey of 850 Basic Health Units (34% of the total clinics in Punjab), primarily located in the rural areas of Punjab, collected by [Callen et al. \(2018\)](#). In each of the three rounds of the panel survey, enumerators made unannounced visits to determine the attendance of doctors in the clinics. Using this information, two measures that supposedly quantify the *quantity* and *quality* of public services at the clinic-level are generated.³ The data on political dynasties reveal that relatives of fifty-one percent of the MPs elected in the 2008 Punjab assembly had previously served either in the provincial or national assembly of Pakistan.

The empirical strategy in paper utilizes two approaches to examine the effects of having a dynastic politician on public service delivery. First, the ordinary least square (OLS) methodology is used to identify the desired effects. OLS methodology enables us to cater for different covariates that posit the threads of omitted variable bias. Second, leveraging the geo-referenced information on clinics and political constituencies, the geographic regression discontinuity design (GRDD) based on distance (proximity) of a clinic

² “The 18th constitutional amendment has been considered a milestone in the history of Pakistan as it has devolved major legislative and executive authorities alongside departments from federal to provincial level that includes health as well.” ([Khan et al., 2014](#))

³ By *quantity*, we mean whether a given clinic in the constituency has doctor assigned. However, by *quality*, we mean whether a given clinic in the constituency has experienced doctor (measured by tenure of the doctor).

to constituency boundaries is exploited to find the causal effects of political dynasties on public health.

The results of both the specifications show that having a dynastic MP has no discernible impact on *quantity* of public service measured by doctor's assignment and doctor's attendance in clinics of the given constituency. Nonetheless, *quality* of doctors working in the clinics located in dynastic constituencies is better than that of doctors working in clinics of non-dynastic constituencies. These findings corroborates with that of [Ali \(2016\)](#), who show that dynastic politicians fail to mobilizes higher resources for their constituencies. Concomitantly, [Asako et al. \(2015\)](#) and [Nazir \(2020\)](#) also show that although dynastic politicians attract more development funds for their respective regions, the additional funds do not guarantee higher public goods provision in those regions.

Our paper also analyzes several competing explanations that substantiate our baseline evidence. First, it finds that experienced dynastic MPs, those who previously had a term in the provincial or national assembly, fail to provide an additional quantity of public service to their constituents. Second, results also show that dynastic MPs from the governing party could not mobilize additional public service for their areas. Finally, it also determines that political competition also fails to motivate the dynastic MPs to provide additional services to their constituents. These estimated effects of political dynasties can be taken as causal for two reasons: first, the possibility of reverse causality is highly unlikely as our outcome (*doctor's assignment*, *doctor's attendance* and *doctor's quality*) has no plausible influence the electability of dynastic MPs. Second, we incorporate a battery of confounding variables to assuage the possibility of endogeneity stemming from omitted variable bias.

This study makes several contributions to various strands of literature intersecting politics and economics. First, it broadly contributes to the political economy of development literature by addressing the political aspect of service delivery. Second, it also contributes to the relatively nascent but emerging literature on dynastic politics and its impact on local development.

The rest of the paper proceeds as follows: section 2 discusses the context of study with

the focus on theory and evidence related to political dynasties and economic development, the political landscape of Pakistan, and the health department of Punjab, Pakistan. Section 3 highlights the identification strategy of the study. Section 4 explains the data and construction of variables used for empirical analyses. The results and subsequent discussion on the results are presented in section 5. Section 6 concludes the study.

2 Context of the Study

2.1 Political Dynasties and Economic Development: Theory and Evidence

This section provides theoretical predictions and existing empirical evidence on how the performance of dynastic politicians can contrast with that of non-dynastic politicians in terms of economic development and the provision of public goods.

Theoretical Predictions: Existing theoretical research on dynastic politics identifies at least two mechanisms that shape the behavior of dynastic politicians. On the one hand, politicians with familial links have a higher accumulation of political capital which they acquire from the family ([Dal Bó et al., 2009](#); [George and Ponattu, 2018](#)). Higher political capital inherited by dynastic politicians suggests that, theoretically, dynastic politicians might outperform the non-dynastic politicians as higher political capital is ‘useful at the local level, such as local political connections or name recognition as opposed to talent or drive’ ([Dal Bó et al., 2009](#), p. 112). On the other hand, dynastic politicians enjoy a disproportionate electoral advantage over non-dynastic politicians ([Dal Bó et al., 2009](#); [Feinstein, 2010](#)). The disproportionate electoral advantage predicts that dynastic politicians will underperform due to the fact that performance is not associated with re-election ([Geys and Smith, 2016](#)). It is evident that both these mechanisms have a counter-acting effect on the overall behavior of dynastic politicians. If the political capital mechanism outweighs the electoral advantage mechanism, it is predicted that dynastic politicians will supply more public goods to the constituents. Likewise, if the electoral advantage mechanism dominates, the prediction is that the dynastic politicians will deliver less pub-

lic goods to his/her constituencies. Henceforth, the overall impact of having a dynastic politician is ambiguous.

Literature Review: The existing empirical work on the political dynasties and economic development is nascent and unable to solve the puzzle of how dynastic legislator affects economic development and public goods provision. In this respect, [Besley and Reynal-Querol \(2013\)](#) pioneer this literature by studying the impact of political dynasties on economic growth. It finds that dynastic executives outperform non-dynastic legislators in situations where executive constraints are weak. [Braganca et al. \(2015\)](#) also find that dynastic mayors from Brazil spent more resources on healthcare, infrastructure, and sanitation in their areas. Likewise, [Mendoza et al. \(2016\)](#) find a positive association between dynastic persistence and the prevalence of poverty in the Philippines.

Contrarily, [Asako et al. \(2015\)](#) find that the economic performance of districts with dynastic legislators is worse than their counterparts although they bring manage to bring more resources to their home districts, these additional assets at home districts did not enhance economic growth. Similarly, dynastic politicians also ‘under-perform in terms of economic growth, crime, utilization of development funds, and parliamentary performance’ in the case of India ([Tantri and Thota, 2015](#)). For Pakistan, [Ali \(2016\)](#) explores the effects of dynasties on economic development in flood-affected districts of Pakistan. It finds that dynastic politicians mobilize 10.9% lower development expenditures for their flood-affected constituencies as compared to non-dynastic politicians. In a similar fashion, [Rahman \(2013\)](#) shows that dynastic politicians under-perform in parliamentary affairs and tend to have a criminal record in Bangladesh. In another study, [Mendoza et al. \(2012\)](#) find that “jurisdictions of political dynasties are characterized by lower standards of living, lower human development, and higher levels of deprivation and inequality” (p. 132). Finally, [George and Ponattu \(2018\)](#) also comprehensively study the impact of political dynasties on economic development in India and find that dynastic MPs under-deliver public goods compared to non-dynastic MPs.

2.2 Political Landscape of Pakistan

Pakistan is a relatively nascent democracy with the history of several coup d'état.⁴ After the general elections of 2008 and subsequent democratic government, Pakistan seems to have gained the pace towards a democratic state.⁵ In 2018, Pakistan witnessed the third consecutive redetermined regime transition through elections.

In terms of organization, Pakistan has a parliamentary democracy. At the national level, the parliament (*also known as, Majlis-e-Shoora*) of Pakistan is divided into two organs: The Senate (the upper house) and The National Assembly (the lower house). The Senate has 104 members who are elected indirectly by the provincial assemblies. However, 272 members of the National Assembly are elected directly under universal adult suffrage.⁶

There are also four provincial legislative assemblies, one in each of the four provinces of Pakistan. The total number of legislative seats in the provinces is 577. Our focus in this study is Punjab province which has 371 seats, with 66 positions reserved for women and eight reserved for non-Muslims. The [Constitution of Pakistan](#) bids three major powers to the members of provincial assembly: (1) To make the laws [See, Article 141 and 142 of the [Constitution of Pakistan](#)]; (2) To manage the national exchequer [Article 123 (3) of the [Constitution of Pakistan](#)]; and (3) To have a vigilant eye on the policies of the Government [Article 130 of the [Constitution of Pakistan](#)].

In addition to the *de jure* powers delegated by the [Constitution of Pakistan](#), provincial assembly members also exercise the *de facto* power to influence the design, location, allocation of programmatic and non-programmatic policies ([Mirza, 2012](#); [Ali, 2016](#); [Kosec et al., 2018](#)). The role and importance of provincial MPs accrued after the approval of 7th National Finance Commission (NFC) award and subsequent 18th Amendment to the

⁴The most recent was on 12th of October 1999, when General Pervez Musharraf overthrew the democratic government of Pakistan Muslim League-Nawaz (PML-N).

⁵Pakistan showed significant improvement in various global democracy indices. For instance, the country had the lowest rating of 3.92 in 2006 on the Economist Intelligence Unit's Democracy Index but it shows continuous improvement over time. In 2019, Pakistan scored 4.25 on the Democracy Index. <https://www.eiu.com/topic/democracy-index/>.

⁶Total seats in the National Assembly of Pakistan are 342. Sixty seats are reserved for women and 10 seats are held for non-Muslims, as per Article 51 of the [Constitution of Pakistan](#).

[Constitution of Pakistan](#), where the former is a financial settlement in which provinces were entitled to have a greater share from the federal divisible pool and the latter devolves 17 major federal departments to provincial government ([Shah, 2012](#)). Public health, which is the focus of our study, also devolved to provincial governments after the 18th amendment ([Nishtar et al., 2013](#)).

2.3 Public Health in Punjab

As mentioned above, public health is devolved to provincial governments after the 18th amendment to the [Constitution of Pakistan](#). In Punjab province, public health provision is administered by the Department of Health which works under the Ministry of Health, headed by a provincial minister. Primarily, public healthcare is divided into five types of facilities: (1) Basic Health Units (BHUs); (2) Rural Health Centers (RHCs); (3) Tehsil Headquarter Hospitals (THQs); (4) District Headquarter Hospitals (DHQs); and (5) Teaching Hospitals ([Punjab Development Statistics, 2013](#)).

The focus of this paper is Basic Health Units (BHUs)⁷. BHUs are located at the Union Council level in rural areas and serve around 25,000 population in their periphery. The 36 districts of Punjab have 2,496 BHUs which deliver both preventive and curative healthcare services at the lowest administrative unit in Pakistan ([Majrooh et al., 2014](#)).

Each clinic has one doctor (also known as Medical Officer) who is accompanied by the support staff. Doctors, like other public servants, are recruited by Punjab Provincial Service Commission (PPSC) either on a temporary or permanent basis. However, if required, the district administration can also hire a doctor on *ad hoc* basis by bypassing PPSC. Moreover, the Department of Health does not have a transparent tenure-based transfer and posting policy. This loophole provides significant leverage to politicians to influence the transfer and posting of doctors. Doctors with political connections can get posted on their home stations. They can also seek protection via their political links against under-performance ([Callen et al., 2016, 2018](#)). In return, doctors are reportedly found campaigning for the politicians ([Free and Fair Election Network \[FAFEN\]](#)).

⁷Our paper uses the terms ‘clinics’ and ‘Basic Health Units (BHUs)’ interchangeably and as referred to the lowest level of healthcare facility provided by provincial government.

3 Empirical Strategy

This section explains the empirical strategy to identify the causal impact of dynastic Members of the Parliament (MP) on public service delivery in Punjab. In estimation, omitted variables bias is the potential threat that masks the true impact of having a dynastic MP on service delivery in the public health sector. For instance, constituencies with dynastic MP can be different in other respects from those with non-dynastic MP and one can not split out the causal effect unless one controls for covariates that capture those differences. Moreover, reverse causality is less likely to emerge in our analysis because our outcome variables measure short-term public service delivery. It is highly unlikely that doctor's assignment, attendance, and experience affect the electability of dynastic politicians.

Our study exploits two empirical strategies to overcome the problem of omitted variables bias.⁸ First, we estimate the effect of dynastic MP on service delivery using the ordinary least squares (OLS) technique with various controls and covariates. To substantiate the findings obtained by employing the first strategy, geographical regression discontinuity design (GRDD), with constituency boundaries as natural cut-offs, is used to assess the effects of having dynastic MP on public health service provision. The details of both strategies are provided below:

3.1 Ordinary Least Square Estimation

As discussed above, the potential threat to the causal interpretation of our findings is from omitted variables bias. To tackle this, a large set of confounding factors is to be isolated in pursuit of obtaining the true impact of having a dynastic MP on public goods. Thus, the empirical analysis uses the following baseline regression equation;

⁸One can also think of using the close-elections regression discontinuity design, as used by [George and Ponattu \(2018\)](#) to find the causal effect of having a dynastic politician on economic development. However, in our case, most of the constituencies have a dynastic winner as well as dynastic runner-up, making it difficult for us to exploit the quasi-random variation offered by close-elections regression discontinuity design.

$$Y_{icjt} = \beta(Dynastic\ MP)_c + \delta_j + \gamma_t + \mathbf{X_g} + \mathbf{Z_e} + \mathbf{W_i} + \epsilon_{icjt} \quad (1)$$

Where, Y_{icjt} represents outcome variable at i^{th} clinic in constituency c in Tehsil j at survey wave t . $Dynastic\ MP_c$ is a dummy variable whose value is unity when a MP in the given constituency c is dynastic. δ_j and γ_t capture the sub-district (tehsil) level and survey wave fixed effects. Similarly, $\mathbf{X_g}$, $\mathbf{Z_e}$, and $\mathbf{W_i}$ are the vectors of geographic location, election, and clinic level controls, respectively. Finally, ϵ_{icjt} is the error term.

Equation 1 shows that β , the effect of having a dynastic MP on outcome variable, is the coefficient of interest in the analysis. The subsequent regressions also incorporate a set of available covariates discussed in the section below. Sub-district-level (tehsil) fixed effects capture the unobservable characteristics specific to the tehsils (tehsils are the administrative boundaries). Equation 1 also includes geographic location variables to control time-invariant characteristics specific to the clinics. Similarly, Equation 1 controls the election-specific covariates, such as electoral competition, political alignment, and vote share to capture the influence of major political parties. Finally, doctor specific controls are also included in the regressions to control for the possible influence the outcome variables (such as attendance of the doctor). These controls are, whether a doctor knows a politician and doctor's distance to his/her home.

It is also worth noting that instead of adding different confounding variables at once, our analysis include a set of similar control variables progressively in the baseline regression. The underlying advantage of this approach is that it serves as a robustness check to see how the coefficient of our outcome variable behaves when different set of variables are included in the regressions.

3.2 Geographic Regression Discontinuity Design

As the data on basic health units and constituencies is geo-referenced, we exploit this advantage to estimate the treatment effects by comparing health clinics in dynastic constituencies with other clinics that are otherwise alike but situated in non-dynastic constituencies. The strategy used to isolate the impact of dynasties on public service delivery

is based on the geographic discontinuity design developed by [Dell \(2010\)](#) to study the long-run impacts of the mining Mita, an extensive bonded mining labor system. Our analysis is based on the following equation;

$$Y_{ibt} = \alpha + \beta(Dynastic\ MP)_c + f(x_{ib}, y_{ib}) + \delta_j + \gamma_t + \epsilon_{ibt} \quad (2)$$

Where, Y_{ibt} refers to outcome variable at i^{th} clinic lies closest to the constituency boundary b at survey wave t . $Dynastic\ MP_c$ is a dummy variable whose value is unity if a MP in the given constituency c is dynastic. δ_j and γ_t capture the sub-district (tehsil) level and survey wave fixed effects. Moreover, $f(x_{ib}, y_{ib})$ is the control function based on the latitudes and longitude of clinics. Following [Callen et al. \(2018\)](#), our GRDD regressions use “cubic polynomial in latitude and longitude” as control function in the regression.⁹ Finally, ϵ_{ibt} is the error term.

While estimating the effects of having a dynastic MP on public health service provision using geographic RDD, it is assumed that the clinics in dynastic constituencies do not differ systematically from the clinics in non-dynastic constituencies. We also make certain bandwidths using the triangular kernel, which gives more weight to the near border clinics as compared to clinics distant to the border and limit our analyses within these bandwidths to obtain the desired coefficient (i.e., β). “This regression discontinuity approach estimates a Local Average Treatment Effect (LATE) that should be interpreted as being local to clinics that lie one the boundary of two constituencies” ([Callen et al., 2018](#), p. 18).

4 The Data

4.1 Outcome Variable(s)

We obtain primary panel data on rural healthcare units from [Callen et al. \(2018\)](#). It provides the data of 850 clinics out of the 2,496 basic health units in rural Punjab. These

⁹The linear and quadratic control functions are also used as a robustness check.

data record three aspects of each clinic: (1) whether a doctor is assigned?; (2) If assigned, whether he/she was present during the enumerator's visit; and (3) tenure length of the assigned doctor. These data were gathered by enumerators between November 2011–October 2012 by making three unannounced visits to the clinics. These data cover all the districts of Punjab except Khanewal.¹⁰ Table 1 provides the descriptive statistics of outcome variables. It shows that doctors are assigned to about 66 percent of clinics. Similarly, 31 percent of the doctors were present during the visits and the average tenure length of the doctors is 6.1 months.¹¹ In rest of the paper, by *quantity*, we mean whether a given clinic in the constituency has doctor assigned. However, by *quality*, we mean whether a given clinic in the constituency has experienced doctor (measured by tenure of the doctor). Figure 1 provides the geographical distribution of sampled clinics in Punjab. Each dot in the figure represents the clinic and each polygon is a provincial constitutional assembly.

Table 1: Descriptive Statistics of Outcome Variables

	N	Mean	Std. Dev.	Min	Max
Doctor Assigned	2,204	0.66	0.47	0	1
Doctor Present	2,191	0.31	0.46	0	1
Doctor's Tenure (logged)	2,206	1.46	2.03	0	5.95

Notes: *Doctor Assigned* and *Doctor Present* are the dummy variables indicating doctor's assignment and doctor's attendance in the given clinic, respectively.

Source: Callen et al. (2018)

4.2 Treatment Variable: Dynastic Member of the Parliament (MP)

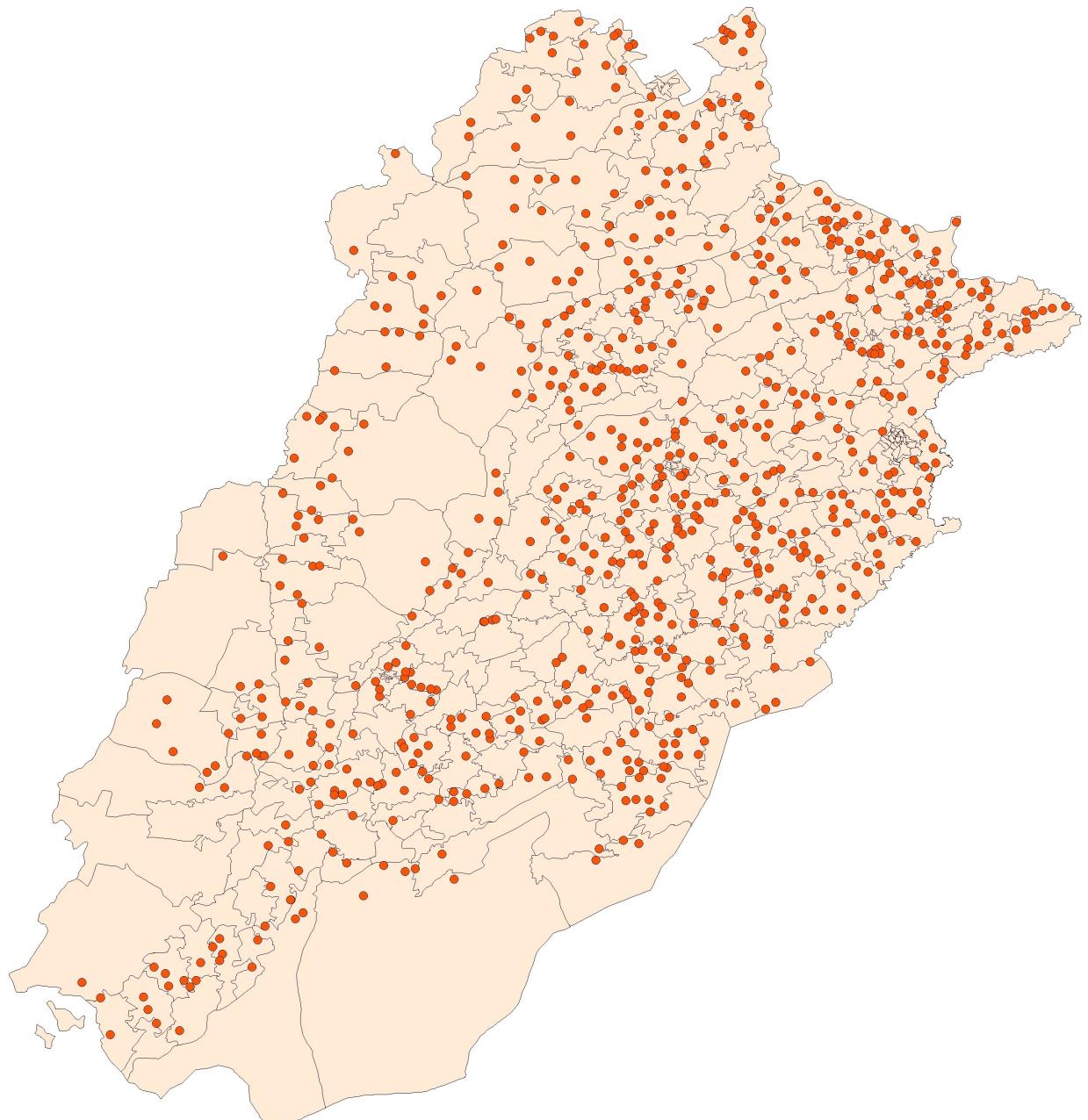
The focused explanatory variable of the study is a categorical variable which equals unity if the winner in the given constituency is dynastic. This study characterizes a politician as *dynast* if at least one family member¹² was a member of the provincial assembly or

¹⁰It is excluded because the pilot survey was conducted in Khanewal.

¹¹Measured as antilog of 1.46, minus 1.

¹²By family, we mean both blood and marriage relations. Thus family includes; grandfather, grandmother, father, mother, uncle, brother, sister, father-in-law, and mother-in-law.

Figure 1: Spatial Distribution of Sampled Clinics Across Punjab



Note: Each dot on the map shows geographical distribution of ‘sampled’ clinics across Punjab province. The polygons represent provincial constituency boundaries.

Data Source: [Callen et al. \(2016\)](#)

national assembly of Pakistan.¹³

We exploit the ancestry information of members of the 2008 Punjab Assembly to construct a dummy variable that distinguishes dynastic and non-dynastic MP. The information on the political background of the members is publicly accessible from Punjab Assembly website.¹⁴ We also use the information presented in [Cheema and Naseer \(2013\)](#) to cross verify the dynastic/non-dynastic status of the MPs. Finally, we also contacted the district newspaper correspondents to cross-check the identified data on political dynasties.

Table 2 provides the descriptive statistics of dynastic MPs in the 2008 Punjab Assembly.¹⁵ It shows that 51 percent of the MPs are identified as dynastic. About 18 percent of the MPs, who are dynastic, was also elected in the previous legislative assemblies, thus are labeled as experienced dynastic MPs. Finally, 11 percent of the MPs are dynastic and affiliated with the ruling party in Punjab. Figure 2 shows the geographical distribution of dynastic MPs in the 2008 Punjab Assembly. Each polygon represents a provincial assembly constituency. Constituencies in dark (light) color have dynastic (non-dynastic) MPs. Moreover, two maps are drawn in figure 3 that traces the constituencies with experienced dynastic MPs and ruling part dynastic MPs, respectively.

4.3 Controls

As mentioned above, the potential threat while estimating the causal effect of having dynastic MP on service delivery is from omitted variables bias. Our empirics include a number on covariates in the OLS regressions to diminish the possibility of endogeneity stemming from omitted variables bias. These covariates broadly fall under the following

¹³Our definition exclude senate because senators are elected indirectly by legislators. There are chances that they might not have any vote bank. Yet, they were nominated for the seat because of party loyalty or other possible financial and political reasons.

¹⁴<https://www.pap.gov.pk/members/listing/en>

¹⁵It is worth mentioning that the analysis presented below is based on 214 constituencies of Punjab assembly. However, the Punjab assembly has 297 constituencies. It is mainly due to the following three reasons. First, some of the data on clinics are lost while matching them with constituencies through ArcGIS. Second, it was not possible retrieve the information on the dynastic background for some MPs. In some constituencies, the winner of 2008 elections either died or resigned from the seat. Finally, as mentioned by [Callen et al. \(2018\)](#), Khanewal district is excluded from the data collection which resulted in the loss of 8 constituencies from the analysis.

Table 2: Descriptive Statistics of Explanatory Variables

	N	Mean	Std. Dev.	Min	Max
Dynastic MP	214	0.51	0.50	0	1
Dynastic MP (Experienced)	214	0.18	0.39	0	1
Dynastic MP (Ruling Party)	214	0.11	0.32	0	1

Notes: The table provides descriptive statistics of identified dynastic MPs in 2008 Punjab Assembly. Row 2 and 3 report dynastic MPs who are experienced (served in previous tenures) and dynastic MPs who belong to ruling party, respectively.

Source: Author's own calculations using data from [Cheema et al. \(2013\)](#) and Punjab assembly website.

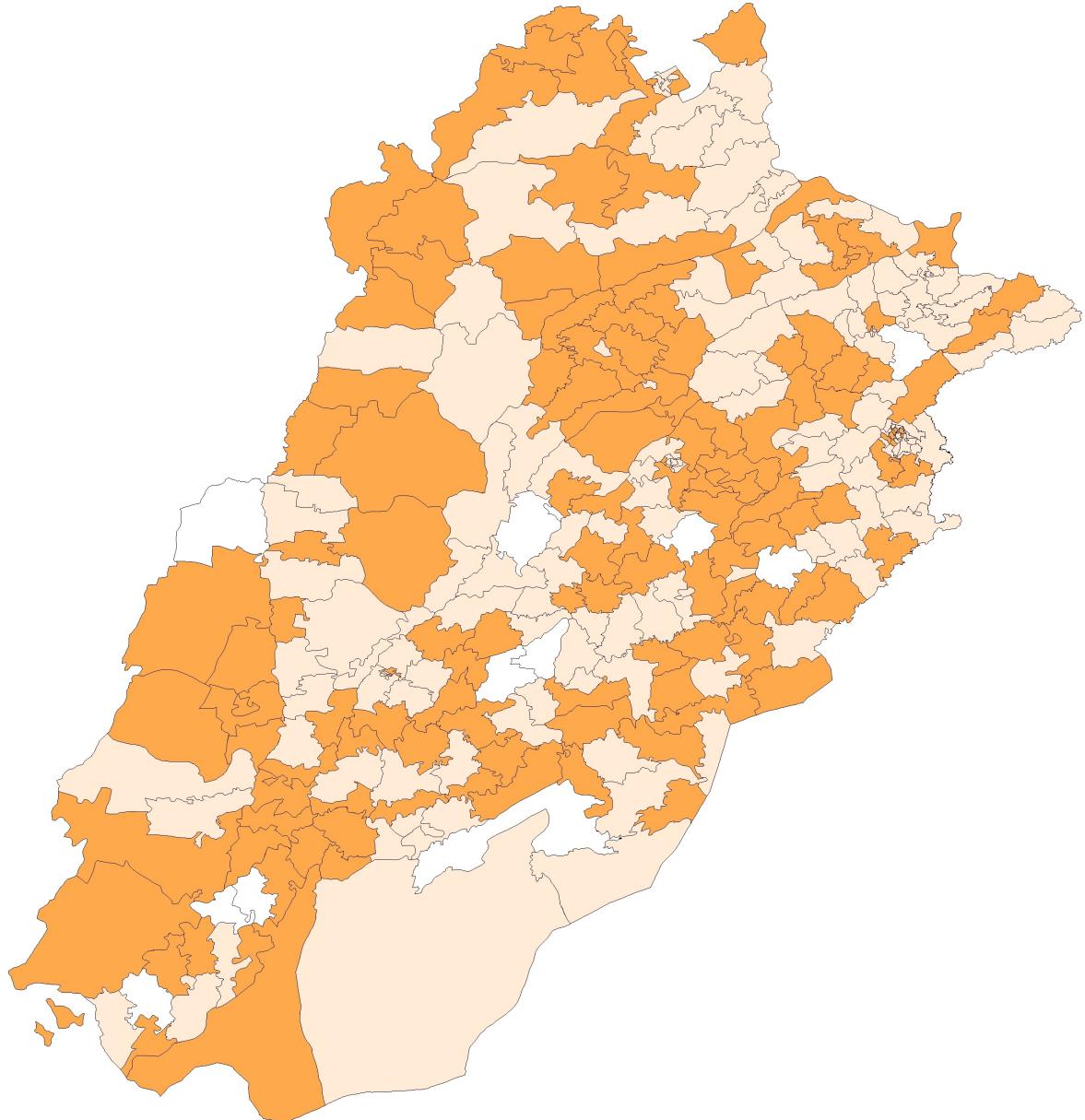
Table 3: Descriptive Statistics of Control Variable

	Mean	Std. Dev.	Min	Max
<i>Panel A: Geographic Location Controls</i>				
Latitude	31.30	1.26	28.21	33.95
Longitude	72.84	1.15	69.73	75.29
Latitude Squared	981.01	78.71	795.71	1152.35
Longitude Squared	5306.59	167.39	4862.67	5669.02
Latitude×Longitude	2280.25	114.11	1971.55	2494.70
Distance to Tehsil Headquarter (in KM)	48.57	29.42	4	198
<i>Panel B: Political Controls</i>				
HH Index	0.86	0.11	0.53	1.00
Vote Share (Federal Ruling Party)	0.26	0.15	0	0.64
Vote Share (Provincial Ruling Party)	0.25	0.16	0.004	0.65
PPP Winner	0.31	0.46	0	1
PMLN Winner	0.27	0.45	0	1
PMLQ Winner	0.29	0.45	0	1
<i>Panel C: Individual Controls</i>				
Doctor Knows Politician	0.10	0.30	0	1
Doctor Knows Politician (Directly)	0.07	0.25	0	1
Doctor's Distance to Home (in KM)	3.72	1.49	0	7.43

Notes: The table is based on the descriptive statistics of control variables. Panel A of the table reports descriptive statistics of geographical controls related to clinics. Similarly, Panel B and C of the table report descriptive statistics of political and individual controls, respectively. All these control variables are used in the OLS regressions reported in the sections below.

Source: [Callen et al. \(2018\)](#) and [Election Commission of Pakistan \(2018\)](#)

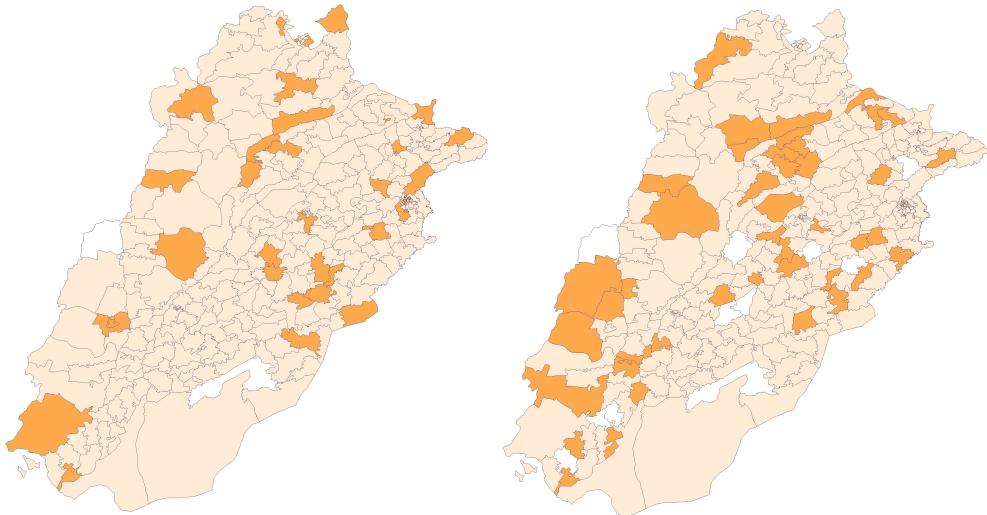
Figure 2: Dynastic MPs in Punjab Assembly in 2008



Note: This map distinguishes constituencies with dynastic MP from the constituencies with non-dynastic MP. The darker polygons posit that the MP in given constituency is dynastic.

Data Source: Author's own calculations.

Figure 3: Experienced Dynastic MPs (left) and Ruling Party Dynastic MPs (right) in 2008 Punjab Assembly



Note: These maps distinguish constituencies with experienced or ruling party dynastic MPs, and otherwise. The darker polygons in the first map show that given constituencies has experienced dynastic MP. In second map, darker polygons show ruling party dynastic MPs.

Data Source: Author's own calculations.

three categories:

Geographical Controls: As the geography of a given clinic can potentially affect the attendance of doctors, a quadratic function of latitude and longitude, and distance to district headquarter is used to cater the geographic influence on the outcome variable.

Election Controls: The regressions are also controlled for election-specific variables such as political competition (measured by Herfindahl Index), political alignment (indicator variable to capture whether the given MP is affiliated to the ruling party), and vote shares of major political parties (Pakistan People's Party Parliamentarians (PPP), Pakistan Muslim League Quaid-i-Azam (PML-Q), and Pakistan Muslim League Nawaz (PML-N)).

Individual Controls: The existing research shows that the political connections of employees encourage absenteeism ([Callen et al., 2016](#)). Likewise, political connections can also be used to expedite the transfer process.¹⁶ Therefore, our analysis include three indicator variables capturing whether the given doctor is connected with a politician, is

¹⁶It is the first-hand experience of one of the authors. While working in the public education sector, he saw many such cases in which politically connected teachers easily get transferred to his desired colleges whereas those who do not have this luxury serve at distant colleges (also called, *hard stations*).

this connection direct, and distance to home.¹⁷

Table 3 provides the descriptive statistics of the control variables of the analysis. Panel A of the table reports statistics of geographical controls (such as Latitude, Longitude, Latitude-Squared, Longitude-Squared, Latitude \times Longitude, and Distance to Tehsil Headquarter). On average, clinics are 48.57 kilometers away from tehsil headquarter. Panel B presents political controls which are obtained from [Election Commission of Pakistan \(2018\)](#). This information revealed that 2008 provincial assembly elections were fairly competitive with the average HH index of 0.86.¹⁸ The average vote share of the ruling party in federal and provincial governments is 26% and 25%, respectively. Also, 31%, 27%, and 29% of the provincial assembly seats are won by PPP, PML-N, and PML-Q, respectively.¹⁹ Moreover, panel C of table 3 uncovers that 10% of the doctors know politicians while 7% of these know them directly. Finally, doctors' average distance from their homes is 3.72 kilometers.

5 Results and Discussion

This section presents the results of ordinary least square (OLS) and geographic regression discontinuity design (GRDD) regressions, respectively. First, we provide and discuss the OLS results in detail for three outcome variables used in the analysis: doctor assigned, doctor presents, and tenure of the doctor. Second, we present the results of GRDD to substantiate the OLS findings. Finally, we explore various alternative explanations of when dynastic politicians are most efficient in providing services.

¹⁷The doctors who remained absent during the visits of enumerators were also traced out to acquire this information.

¹⁸Herfindahl-Hirschman index of political concentration lies between 0 and 1, with 1 means perfect competition.

¹⁹As mentioned above, our analysis covers 214 of the total 297 constituencies. The complete results of 2008 elections reveal that 27.76%, 21.29%, and 38.89% of the seats are won by PPP, PML-N, and PML-Q, respectively.

5.1 OLS Results

The OLS results are presented in Table 4-6 obtained by estimating equation 1. Column 1 of each Table 4-6 shows the results when an only focused explanatory variable and a constant are included in the regression. In addition, column 2 to 5 progressively includes tehsil-fixed effects, wave-fixed effects, geographic, election, and individuals controls, respectively. Our results suggest that quantity and quality of service delivery is not significantly different in constituencies having dynastic MP, compared to constituencies having non-dynastic MP.

Doctor Assigned: First, the paper estimates the effect of having a dynastic MP on the assignment of doctors to a clinic in a given constituency. Table 4 show that dynastic MP does not significantly affect the assignment of doctors at rural health clinics in Punjab. All specifications show that political dynasties are not significantly associated with the provision of public service. It is worth noting that the number of clinics during the time of study remain unchanged ([Punjab Development Statistics, 2013](#), p. 190).

One more intricacy which is worth documenting here is that allocation/assignment can have two meanings when it comes to public sector departments in Pakistan. One way of assignment is the inclusion of new “sanctioned” posts, which are to be approved by the Finance department after budgetary allocation. On the other hand, “filled” post refers to assigning a civil servant (i.e., doctor) to the “sanctioned” post. The former type of assignment requires a hefty bureaucratic process, while the latter is done by recruiting new doctors or adjusting the in-service doctors against the vacant posts through transfers. Luckily, there was a temporary ban on new recruitment during the analysis period of the study, so assignment only denote transfers of doctors between clinics.

The appointment of the doctors against a vacant post is carried out by an autonomous organization named Punjab Public Service Commission through testing and interviewing of candidates as per merit. The ban on new requirements during the period of analysis helped us in the sense that ‘assignment’ only represents the part that can be influenced by the politicians. The null impact of dynastic MP on doctors’ assignment can be understood

as these MPs did not use their influence to allocate more doctors in their constituencies.

Doctor Present: Second, our study examine whether the doctor's attendance in the clinic is affected by the dynastic nature of the MP. Surprisingly, dynastic MP has no effect on a doctor's attendance at the clinic level. Although results presented in columns 1-5 of Table 5 show that the doctor's attendance in dynastic constituencies is low, compared to the non-dynastic constituencies but this finding is also statistically insignificant.

Doctor Tenure: Finally, the paper also examine the impact of having a dynastic MP on the quality of doctor measured by doctor's tenure. The regression results of this specification are provided in columns 1-5 of table Table 6. Contrary to the finding in case of assignment and attendance, the results show that dynastic constituencies have doctors with greater experience meaning that dynastic MP has a positive effect on the quality of the doctor. Although results become insignificant on the inclusion of election controls and doctor's political connections in the regression analysis.

Table 4: Impact of Dynastic MP on Doctor's Assignment

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Assigned=1</i>					
Dynastic MP	-0.015 (0.031)	-0.014 (0.031)	-0.016 (0.031)	-0.026 (0.031)	-0.038 (0.027)
Observations	2,124	2,124	2,033	2,033	2,033
R-squared	0.332	0.336	0.350	0.356	0.461
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor assigned*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. Columns 2-5 progressively expands the model by adding tehsil-fixed effects, wave-fixed effects, geographic controls, election and individual controls, respectively. Geographic controls include quadratic function of latitude and longitude, and distance to district headquarter (in KM). Election controls include political competition (measured by, Herfindahl Index), political alignment (indicator variable to capture whether the given MP is affiliated either with federal or provincial government), and vote shares of major parties (PPP and PML-N). Individual controls include whether the given doctor is connected with a politician, is this connection direct, and distance to home (logged).

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. *** < 0.01; ** < 0.05; and * < 0.10.

Table 5: Impact of Dynastic MP on Doctor's Attendance

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Present=1</i>					
Dynastic MP	-0.022 (0.030)	-0.022 (0.030)	-0.015 (0.030)	-0.021 (0.030)	-0.035 (0.028)
Observations	2,112	2,112	2,022	2,022	2,022
R-squared	0.198	0.199	0.209	0.213	0.372
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor present*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4.

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 6: Impact of Dynastic MP on Doctor's Quality

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Tenure (log)</i>					
Dynastic MP	0.240* (0.138)	0.240* (0.138)	0.239* (0.144)	0.146 (0.148)	0.125 (0.137)
Observations	2,126	2,126	2,035	2,035	2,033
R-squared	0.179	0.189	0.191	0.200	0.341
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor tenure (logged)*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4.

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

The overall results show that having a dynastic MP has a null effect on service delivery. This result is contrary to the existing literature on political dynasties. For example, [Mendoza et al. \(2016\)](#) finds the negative effect of dynastic incumbent on poverty in the Philippines. [Ali \(2016\)](#) and [George and Ponattu \(2018\)](#) show the negative effects of po-

litical dynasties on economic development in Pakistan and India, respectively. However, the results of this paper are in-line with Bragan  a et al. (2015), who show null effects of dynasties on public service delivery.

5.2 Geographic RD Results

This study also examine the effects of a dynastic incumbent on public service delivery by exploiting Geographic Regression Continuity (GRDD) design. Tables 7-9 show regression results obtained by estimating equation 2. The findings of GRDD corroborates with OLS results. For example, Table 7 shows that dynastic MPs have no impact on the doctor's assignment for all the bandwidths. Similar results can also be found for doctor's attendance, presented in Table 8. Finally, Table 9 shows that constituencies with dynastic MP have a higher quality of doctors compared to constituencies with dynastic MP, which are otherwise similar. These results are significant for 5KM and 10KM bandwidths. While estimating this impact, our GRDD regressions use cubic "polynomial in latitude and longitude" as a control function.²⁰

Table 7: Impact of Dynastic MP on Doctor's Assignment

Outcome: Doctor Assigned=1					
Bandwidth in KM (+/-)	1	2	IK=2.46	5	10
Dynastic MP	0.122 (0.138)	0.115 (0.094)	0.085 (0.078)	0.042 (0.056)	-0.012 (0.047)
Mean of Dependent Var.	0.696	0.682	0.679	0.673	0.669
Constituencies	106	141	160	200	214
Observations	433	737	885	1,532	2,035

Notes: Outcome variable in the analysis is *doctor assigned*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. For all bandwidths, our GRDD regressions use cubic "polynomial in latitude and longitude" as control function..

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

²⁰We also use linear and quadratic control functions, these results are available for interested readers on request.

Table 8: Impact of Dynastic MP on Doctor's Attendance

Outcome: Doctor Present=1					
Bandwidth in KM (+/-)	1	2	IK=2.77	5	10
Dynastic MP	0.067 (0.137)	-0.054 (0.116)	-0.072 (0.086)	-0.058 (0.060)	-0.033 (0.041)
Mean of Dependent Var.	0.305	0.298	0.304	0.312	0.314
Constituencies	106	141	169	200	214
Observations	427	730	955	1,523	2,023

Notes: Outcome variable in the analysis is *doctor present*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. For all bandwidths, our GRDD regressions use cubic “polynomial in latitude and longitude” as control function..

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 9: Impact of Dynastic MP on Doctor's Quality

Outcome: Doctor Tenure (log)					
Bandwidth in KM (+/-)	1	2	IK=3.13	5	10
Dynastic MP	0.130 (1.610)	0.420 (0.754)	0.420 (0.382)	0.410* (0.244)	0.298* (0.163)
Mean of Dependent Var.	1.529	1.532	1.542	1.530	1.508
Constituencies	106	141	181	200	214
Observations	433	737	1,086	1,534	2,037

Notes: Outcome variable in the analysis is *doctor tenure (logged)*. Focused explanatory variable is *Dynastic MP*. Unit of analysis for the study is a clinic. For all bandwidths, our GRDD regressions use cubic “polynomial in latitude and longitude” as control function..

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

5.3 Complementary Explanations

This section provides the results of various specifications which substantiate the baseline finding of the null effect of dynasties on public service delivery. First, we estimate whether the senior dynastic MPs, who have an experience of more than one term, have any impact on service delivery. Then, we explore whether the dynastic MPs from the government party has any influence on public service delivery in their constituency. Finally, we show how dynastic MP influence public service delivery in constituencies with the higher electoral competition.

5.4 Does Prior Experience of Electoral Politics Matter for Service Delivery?

In this section, our focus is on the dynastic politicians who have prior experience of electoral politics (i.e., served before 2008 either in provincial or national assembly). Besides familial links, politicians' own experience in the political arena can also play an important role in delivering services to the constituents. However, senior politicians also have a lower incentive to deliver because of brand-name advantage. Tables 10-12 provide the results when our analysis use senior dynastic MP as an explanatory variable. Results show that the seniority status of the dynastic candidate has no effect either on assignment, attendance, or quality of the doctor.

5.5 Does Dynastic MPs from the Ruling Party Affect Service Delivery?

There is a vast literature which shows that voters who elected the ruling party candidates are served disproportionately ([Baldwin, 2013](#); [Panda, 2015](#); [Blakeslee, 2018](#)). [Callen et al. \(2018\)](#) exploits the same data used in this study to explore whether constituencies with governing party candidates receive higher public services. In this section, our analyses examine whether the dynastic MPs from the governing party could mobilize higher public service for their constituencies. By doing this, our analysis combines the two forces:

Table 10: Experienced Dynastic MP and Doctor's Assignment

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Assigned=1</i>					
Experienced Dynastic MP	0.014 (0.043)	0.016 (0.043)	0.012 (0.041)	-0.006 (0.042)	-0.014 (0.038)
Observations	2,124	2,124	2,033	2,033	2,033
R-squared	0.332	0.336	0.349	0.355	0.460
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor assigned*. Focused explanatory variable is *Senior Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4.
In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 11: Experienced Dynastic MP and Doctor's Attendance

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Present=1</i>					
Experienced Dynastic MP	0.002 (0.036)	0.002 (0.036)	0.007 (0.035)	-0.002 (0.038)	-0.012 (0.034)
Observations	2,112	2,112	2,022	2,022	2,022
R-squared	0.197	0.199	0.208	0.213	0.372
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor present*. Focused explanatory variable is *Senior Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4.

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 12: Experienced Dynastic MP and Doctor's Quality

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Tenure (log)</i>					
Experienced Dynastic MP	0.147 (0.179)	0.145 (0.179)	0.125 (0.181)	0.083 (0.206)	0.004 (0.206)
Observations	2,126	2,126	2,035	2,035	2,033
R-squared	0.178	0.188	0.189	0.200	0.340
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor tenure (logged)*. Focused explanatory variable is *Senior Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

political capital acquired by the dynastic politician from his family and support from the governing party.

Tables 13-15 present the results of regressions when *ruling party dynastic MPs* is used as an explanatory variable. Like previous results, table 13 reports that dynastic MPs from the ruling party does not significantly affect doctor's assignment in clinics of their constituencies. Similarly, table 14 also shows the null effect of ruling party dynastic MPs on the attendance of doctors. Nevertheless, Table 15 shows that doctors serving in the clinics in constituencies of ruling party dynastic MPs tend to have higher experience than the doctors who serve in other constituencies.

5.6 Does Competition in Dynastic Constituencies Matter for Service delivery?

Finally, the paper also explores whether dynastic MPs perform better when they face competition. Existing evidence show that political competition has positive impact on public goods provision ([Besley et al., 2010](#); [Boulding and Brown, 2014](#); [Nye and Vasilyeva, 2015](#); [Kosec et al., 2018](#); [Gottlieb and Kosec, 2019](#)). We argue while documenting the

Table 13: Ruling Dynastic MP and Doctor's Assignment

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Assigned=1</i>					
Dynastic MP (Ruling)	-0.010 (0.049)	-0.010 (0.049)	-0.033 (0.049)	0.019 (0.057)	-0.023 (0.051)
Observations	2,124	2,124	2,033	2,033	2,033
R-squared	0.332	0.336	0.350	0.355	0.460
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor assigned*. Focused explanatory variable is *Senior Dynastic MP*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 14: Ruling Dynastic MP and Doctor's Attendance

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Present=1</i>					
Dynastic MP (Ruling)	-0.025 (0.045)	-0.025 (0.045)	-0.042 (0.044)	0.008 (0.051)	-0.024 (0.041)
Observations	2,112	2,112	2,022	2,022	2,022
R-squared	0.198	0.199	0.209	0.213	0.372
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor present*. Focused explanatory variable is *Dynastic MP from Ruling*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4.

In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 15: Ruling Dynastic MP and Doctor's Quality

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Tenure (log)</i>					
Dynastic MP (Ruling)	0.098 (0.177)	0.104 (0.177)	0.068 (0.183)	0.510** (0.206)	0.444** (0.200)
Observations	2,126	2,126	2,035	2,035	2,033
R-squared	0.177	0.188	0.189	0.202	0.342
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor tenure (logged)*. Focused explanatory variable is *Dynastic MP from Ruling*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

theoretical predictions that dynastic MPs has lesser incentive to perform better because of brand-name advantage ([Dal Bó et al., 2009](#)).

Table 16: Dynastic MP and Doctor's Assignment

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Assigned=1</i>					
Dynastic×Competition	-0.008 (0.036)	-0.007 (0.036)	-0.010 (0.036)	-0.029 (0.035)	-0.042 (0.031)
Observations	2,124	2,124	2,033	2,033	2,033
R-squared	0.332	0.336	0.349	0.355	0.461
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor assigned*. Focused explanatory variable is *Dynastic×Competition*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

The results of our regressions, when the interaction of competition and dynastic MP is used as an explanatory variable, are reported in Tables 16-18. Table 16 finds that political

Table 17: Dynastic MP and Doctor's Attendance

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Present=1</i>					
Dynastic×Competition	-0.016 (0.035)	-0.015 (0.035)	-0.009 (0.034)	-0.024 (0.035)	-0.038 (0.032)
Observations	2,112	2,112	2,022	2,022	2,022
R-squared	0.198	0.199	0.209	0.213	0.372
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor present*. Focused explanatory variable is *Dynastic×Competition*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

Table 18: Dynastic MP and Doctor's Quality

	(1)	(2)	(3)	(4)	(5)
<i>Outcome: Doctor Tenure (log)</i>					
Dynastic×Competition	0.281* (0.161)	0.280* (0.161)	0.287* (0.167)	0.157 (0.166)	0.137 (0.155)
Observations	2,126	2,126	2,035	2,035	2,033
R-squared	0.179	0.189	0.191	0.200	0.341
Tehsil Fixed Effects	✓	✓	✓	✓	✓
Wave Fixed Effects		✓	✓	✓	✓
Geographic Controls			✓	✓	✓
Election Controls				✓	✓
Individual Controls					✓

Notes: Outcome variable in the analysis is *doctor tenure (logged)*. Focused explanatory variable is *Dynastic×Competition*. Unit of analysis for the study is a clinic. In all columns, the specification of included controls is the same as Table 4. In all the regressions, standard errors (given in square brackets) are clustered at tehsil level. where, *** < 0.01; ** < 0.05; and * < 0.10.

competition does not drive the dynastic MPs to improve the doctor's assignment in clinics of their respective constituencies. Similarly, table 17 also shows that the attendance of doctors, though negative, is statistically insignificant in most of the specifications. So, we can conclude that dynastic MPs do not influence the presence of doctors in either way. Finally, table 18 presents the results of regressions when the outcome variable is a measure of a doctor's quality. The results show that the quality of doctors in clinics under dynastic constituencies is better than that of non-dynastic constituencies. This finding is robust for most of the specifications but not in the fully-specified model.

6 Conclusion

The existing literature of the political economy of development provides several explanations of why some areas get more public services than the others. This study examined one of these explanations in the case of public health of Punjab, Pakistan. We argued in the paper that there are two plausible explanations of why dynastic MPs can perform differently from the non-dynastic MPs. First, dynastic MPs have a higher accumulation of political capital acquired from their political family. Second, dynastic MPs enjoy a disproportionate electoral advantage over non-dynastic MPs. The former explanation predicts that dynastic MP will outperform non-dynastic while the latter explanation indicates that dynastic MPs will under-perform that their counterparts.

By combining the primary data on rural health clinics collected by [Callen et al. \(2018\)](#) with novel data on familial links of members of the provincial assembly, this study analyzed the effects of having a dynastic MP on public service delivery in Punjab. The paper explores these effects both in terms of *quantity* and *quality* of the service delivery. Our empirical results found that having a dynastic MP has no impact on the quantity of public service measured by doctor's assignment and doctor's attendance in rural clinics. However, our study found a positive impact of having a dynastic MP on quality of service measured by tenure length of the doctors in clinics. The findings of this paper suggest that the alternative explanations of differences in the behavior of dynastic MPs forces

nullify the overall effects on public service delivery.

The study also probed several additional considerations to support our baseline evidence. First, it found that dynastic MPs who served for more than one term in parliament are also unable to mobilize the public services in their respective constituencies. Second, although MPs from the ruling party have higher access to the public funds, nonetheless, dynastic MPs from the governing party also fails to provide more quantity of services to their subjects. Finally, we showed that dynastic MPs who face higher political competition perform better in terms of providing quality public health in clinics of their constituencies.

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