Revolutionaries for Railways *

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Abstract

This study explores the sources of regional favoritism in government-invested infrastructure projects. We built an original county-level dataset that matches the biographies of 1,614 retired communist revolutionaries with information on the expansion of China's state-directed high-speed railway program. Our findings indicate that a surviving revolutionary makes his birth county significantly more likely to receive the central government's approval for railway investment. This pattern is robust after accounting for a wide range of alternative explanations and a natural experiment design that exploits variations in the timings of revolutionaries' natural deaths. Additional evidence suggests that the empowering effect of the retired revolutionaries stems most likely from their assistance in their birth counties' bottom-up lobbying of the central government. Their moral authority as the founders of the regime helps boost local requests for investment in the eyes of central policymakers. Our findings highlight a bottom-up intergovernmental dynamic that translates personal influence into policy benefits.

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"If we did not have 105 retired veteran revolutionaries sign on to the letter petitioning the central government [advocating for the proposed Lanzhou-Chongqing railway project], the approval and the completion of the railway's construction could have been significantly delayed."

—Zhao Junguo, a local official who was involved in the preparation of the railway's construction (Source: Xinhua News Agency, September 15, 2017)

Introduction

Public works projects such as railways, highways, and electrical grid have profound social, economic, and political implications (e.g., Faber 2014; Nall 2015; Donaldson and Hornbeck 2016; Lei and Zhou 2022). Yet access to public works has been unequal (e.g., Min 2015; Do, Nguyen and Tran 2017; Auerbach 2019). Government-funded infrastructure projects are often concentrated in a few areas preferred by political leaders, resulting in what is known as "regional favoritism" (Hodler and Raschky 2014). A prevailing explanation is that politicians allocate infrastructure investments in a way that maximizes political support (Ferejohn 1974; Weingast, Shepsle and Johnsen 1981; Golden and Min 2013). Various types of connections play an important role in this patronage relationship. They help politicians identify targets of distribution and mitigate the commitment problem between the patron and the clients (Robinson and Verdier 2013; Jiang 2018). The distribution of government-funded infrastructure projects therefore is often patterned on beneficiaries' personal connections with political leaders (e.g., Hodler and Raschky 2014; Do, Nguyen and Tran 2017).

The patronage explanation emphasizes incentives and actions on the part of decision-makers at the top; it also overlooks the fact that recipients of policy benefits can also shape resource allocation. The emerging literature on intergovernmental lobbying has identified the crucial role of professional lobbyists in shaping the outcomes of bottom-up lobbying in western democracies (e.g., Goldstein and You 2017; Payson 2020*a*). We however still know

very little about what systematically determines the outcomes of the same dynamics in the developing world, where intergovernmental bargaining is likewise prevalent but formal mechanisms of interest articulation are weak and professional lobbyists are often absent.

In this paper, we examine these bottom-up dynamics in the context of China's high-speed railway program. Since 2004, the Chinese government has invested over 10 trillion RMB in rail infrastructure and tripled the amount of train tracks dedicated to high-speed rails in the world.[1] The construction of new railways and stations requires localities to obtain approval from the central government. Like other particularistic programs regulated by the center in China or elsewhere, the program has generated fervent competition among localities in lobbying the central policymakers (Ma 2022; Lei 2023).

We built an original dataset that combines county-level information on high-speed rail construction between 2004 and 2015 with the biographies of 1,614 revolutionaries who were conferred the rank of general in the People's Liberation Army (PLA) between 1955 and 1965.[2] This cohort of revolutionaries is known in Chinese as the "generals who founded the republic" or simply the "founding generals." Since the 1980s, they have gradually retired from politics under the age-based, mandatory cadre retirement system (Manion 1993), but they have retained moral weight in Chinese society. Qualitative evidence shows that local governments in these generals' birthplaces frequently invoke birthplace ties, a common source of favoritism in China and beyond (e.g., Hodler and Raschky 2014; Fisman et al. 2018), to mobilize them as lobbyists.

Our analyses first show a strong positive correlation between these revolutionaries' birth counties ("general counties") and the central government's investment decisions. A living founding general increases his birth county's hazard rate of receiving central approval for

[1]Investment data is based on China Railway Yearbooks (2005-2020) and our own calculations. For information on the track length, see `http://bit.ly/3oRB4jy`, last accessed May 5, 2022.

[2]Replication materials and code can be found at Ji and Ma (2024)

high-speed rail construction by 43.5% compared to that of a nearby, non-general county with similar socioeconomic conditions and in the same prefecture. The result is robust after accounting for a wide range of alternative explanations, including top-down, technocratic considerations in railway planning and potential patronage from incumbent leaders. An additional analysis that exploits variations in the timings of founding generals' natural deaths lends further support for the claim that the relationship is likely causal.

Our study then turns to explore the mechanism that drives the pattern. We first show that former revolutionary base areas (also known in Chinese as *laoqu*) did not receive similar favoritism as the birth counties of the founding generals. We also compare the effect of living and deceased founding generals and find that only living generals made a difference. These two results suggest that the allocative pattern we observe is unlikely a result of top-down initiative on the part of central government to favor revolutionary counties, but that it is instead shaped by localities with means to influence policymaking at the center.

We contend that, even without formal positions in government, retired founding generals leveraged their moral authority to amplify the requests of their birth counties with the central government. The revolutionary experience has conferred on these individuals unimpeachable authority and extraordinary legitimacy (Levitsky and Way 2013). Rejecting or ignoring the requests of such individuals, especially if they speak in the name of advancing collective interests, defies public morality (Ding and Javed 2021) and puts ruling party cohesion at risk (Lachapelle et al. 2020).

We demonstrate the unique source of influence of the retired revolutionaries by comparing the birth counties of surviving founding generals with those of incumbent, post-revolutionary civilian central committee members of the ruling Communist Party of China (CPC). The results show that the experience of commanding troops in revolutionary wars, not formal positions in the party state hierarchy, explains the influence of the founding generals. We further conduct additional analyses to test three alternative mechanisms: 1) By comparing the effect of surviving founding generals with those of recently retired and active-duty

generals, we show it is unlikely that an attempt to buy the military's loyalty explains the distributive pattern. 2) We show that personal connections are unlikely to be a main source of generals' influence by comparing the influence of those who had advantages in building connections with central bureaucrats in their post-retirement lives to those without. 3) We also do not find evidence that general counties have a more cohesive local bureaucracy that explains their relative advantages. These results, along with a few in-depth case studies that elaborate the processes through which the counties leveraged founding generals' influence to obtain railway benefits, suggest the empowering effect of revolutionaries' moral authority in their birth counties' bottom-up lobbying as the most likely mechanism.

Our findings contribute to a growing body of literature on regional favoritism in distributive politics. Using subnational data from 126 countries from 1992 and 2009, Hodler and Raschky (2014) find that birthplaces of current political leaders have experienced faster development than their counterparts. Do, Nguyen and Tran (2017) similarly find that promotion of native officials leads to a broad range of hometown infrastructure improvement in Vietnam. The mainstream studies in this area focus on the roles of incumbent leaders and attribute the allocative patterns to patronage decisions made in a top-down manner (Hicken 2011). Limited attention has been paid to the alternative mechanism that bottom-up lobbying on the part of policy recipients drives such patterns. Territorial administrations in large, multi-layered states, like other organized interests (e.g., Frye 2002; Kennedy 2005), do have strong incentives to influence central (federal) policy makers and sway policy decisions in their favor (Payson 2021; Ma 2022). Most existing studies that recognize these dynamics have focused on the roles of professional lobbyists in American politics (Goldstein and You 2017; Payson 2020*a*). Our study provides a novel perspective on the causes of regional favoritism by theorizing and empirically demonstrating the facilitative role of retired officials in intergovernmental lobbying outside of the United States.

Moreover, our study contributes to a deeper understanding of the policy consequences of moral authority. Research in different contexts has shown that individuals who possess

moral authority often exercise it to achieve a wide range of political goals, such as mobilizing support (e.g., Grzymała-Busse 2015; Levitsky and Way 2013), inducing citizen compliance (e.g., Mattingly 2016), holding officials accountable (e.g., Tsai 2007), and reaching desired outcomes in political negotiations (e.g., Hall 1997). In particular, scholars have recognized the unquestioned authority of revolutionary leaders and the unique political roles they play in enhancing elite cohesion and supporting the durability of the revolutionary regimes (Levitsky and Way 2013; Lachapelle et al. 2020). Our analysis highlights the social and economic implications of the revolutionary generation's authority. Even long after retiring from politics, the influence of revolutionary leaders can still be mobilized to shape social and economic policies to benefit certain groups in society.

Regional Favoritism in Comparative Perspectives

Birthplaces of political leaders often enjoy privileged policies in development. They tend to secure more government investments in infrastructure (Do, Nguyen and Tran 2017), receive more foreign aid allocation (Dreher et al. 2019), experience faster urbanization (Hodler and Raschky 2014), and be given lenient treatment in state extraction (Kung and Zhou 2021). Political leaders give preferential treatment to their birthplaces for various reasons. Some attribute birthplace favoritism to in-group preferences inherent in human nature (e.g., Wilson 1978). Others have emphasized political motivations, as shared identities provide a shortcut to locate potential supporters (e.g., Bates 1974). Birthplace favoritism enables politicians to spend resources in a targeted way to secure the loyalty of supporters or to appease potential threats (Hicken 2011). Birthplace ties also serve the crucial function of enhancing the credibility of patronage exchanges, which are otherwise susceptible to defection by both parties in a patron-client relationship (Robinson and Verdier 2013). Existing research shows that birthplace favoritism is more prevalent in countries with weak institutions of accountability (Hodler and Raschky 2014), and in cultures that put "stress on patrilineal

duties and altruism towards family members" (Do, Nguyen and Tran 2017, p.23).

The existing explanation of regional favoritism has some key limitations. First, it focuses exclusively on the motivations and behaviors of politicians at the top (i.e., patrons), and neglects the agency of recipients (i.e., clients). Classical literature on fiscal federalism suggests that regional leaders have strong incentives to extract resources from their superiors (e.g., Oates 1972). In the United States, for example, cities actively lobby the state and federal governments for additional transfers and other preferred policies (Goldstein and You 2017; Payson 2020*a*). In India, grassroots communities where their leaders are embedded in party networks are better at demanding and securing development from the state (Auerbach 2019). In former Soviet states, state-owned companies and local governments engaged in "plan bargaining" with central planners to gain access to more resources (Kornai 1992). How localities capitalize on birthplace ties in their efforts to influence central decision-makers remains poorly understood.

A second limitation is that the existing explanation is also centered around incumbent politicians. The observed effect of regional favoritism is attributable to the use of politicians' formal authority to divert resources to certain regions. We however know very little about whether sources other than the power of leaders' formal positions could also affect policy outcomes. Existing research shows that formal positions only explain a portion of politicians' overall political influence (e.g., Baturo and Elkink 2014). Retired politicians can still retain considerable influence over a wide range of important issues (Jiang, Xi and Xie 2024). In 2009, for example, the Vietnamese government was forced to reconsider a mining project in which China had invested when General Vo Nguyen Giap, a highly respected war hero who led the Vietnamese troops against France and the United States, publicly voiced his opposition to the project. General Vo was 97 at the time and had been retired from politics for nearly 30 years. Impervious to criticism from environmental activists and scholars, the Vietnamese government had already approved the project, but General Vo's opinion carried weight (Mydans 2009).

This paper attempts to fill the gaps in the literature by theorizing and empirically examining the empowering effect of retired revolutionaries in their birthplaces' efforts to gain policy benefits distributed by higher-level authorities in China. While most revolutionary leaders served lifetime positions in the governments they founded, a few revolutionary regimes, such as China, have institutionalized age-based, mandatory retirement for the revolutionary leaders (Manion 1993). Revolutionary leaders leave office peacefully under this system and continue to enjoy influence as the founding fathers of the regime, and many express opinions on current affairs and advise incumbent leaders. The CPC has encouraged revolutionaries to remain interested in state affairs after retirement and gives them continued access to party and government documents (Manion 1993, pp.56-62). The peaceful coexistence of this cohort of retired revolutionaries and a government led by post-revolutionary leaders provides a rare setting to empirically distinguish revolutionaries' personal influence from the power of their offices.

Why and How Retired Revolutionaries Help

Influential figures like retired revolutionaries are valuable assets for local governments in their birthplaces seeking to gain access to policy benefits from the center. Empirical evidence shows birthplace ties shape social, economic, and political interactions in China (e.g., Greif and Tabellini 2010; Shih, Adolph and Liu 2012; Fisman et al. 2018). The country has a strong social norm of returning to one's birthplace and giving back to the community after obtaining success elsewhere.[3] The norm was developed in imperial China for elites who left their homes for political or business careers (Chü 1962), but it appears to bind communist revolutionaries as well. For example, Nie Rongzhen, one of the 10 marshals of the PLA, cared deeply about his birthplace, Jiangjin, and connected with it in retirement through regular

[3]Chinese proverbs such as 荣归故里 (return to one's origin with glory) and 报答桑梓 (give back to one's home community) articulate this norm.

meetings with local officials even though he was living in Beijing. [4] Yang Shangkun, another senior revolutionary who served as China's president from 1988 to 1993, left his birthplace Tongnan in his 20s but returned to visit in his 80s. He spoke about his concerns about food supply issues in Tongnan days even before he died in 1998.[5]

While retired revolutionaries generally eschew public life, their emotional attachment to their birthplaces enables local officials to secure regular meetings with them, during which local officials can express their needs for policy benefits and ask for help.[6] The social norm of giving back to one's birthplace community generates reputational concerns for those who turn down such requests outright.

Retired revolutionaries can help localities overcome many challenges in securing policy benefits. In spite of increasing decentralization in China's government system in the post-Mao era, the central government still holds the authority to distribute many policy goods desired by localities, such as the authority to approve construction of railways and subways (Ma 2022; Lei and Zhou 2022). Having the attention of policymakers is a crucial step in reaching desired policy outcomes (e.g., Austen-Smith 1993). There are however few institutionalized channels for localities to influence central decisionmakers. The State Council, where most important economic policies are made and implemented, consists of only functional ministries. This limits the role of territorial governments in the daily policymaking of the central government (Shirk 1993, p.112). Some scholars have noted the role of the People's Congress, China's legislature that is often described as a "rubber stamp," as a means of articulating the interests of various groups (e.g., Lü, Liu and Li 2020). However, the

[4]See http://bit.ly/3oRB4jy, last accessed May 5, 2022.

[5]See http://bit.ly/3AwSPHt, last accessed May 5, 2022.

[6]Local governments maintain offices in Beijing where local officials work to maintain relationships to benefit the locality; while most of these relationships are with incumbent officials in the central government, retired officials with an emotional attachment to the locality are also the subject of their efforts (Ma 2022, pp.75-6).

National People's Congress consists of provincial delegates and thus it has limit value for governments at lower levels (e.g., prefectures and counties), which often have interests in economic development that compete with those of the provincial governments (Jaros 2019). The lack of representation and preference incongruence with their direct superiors incentivize lobbying on the part of localities (Goldstein and You 2017; Payson 2020*b*). The fragmented state of Chinese bureaucracies does as well (Lieberthal 1992). The authority to approve new railways is spread across a number of central ministries. Failure in coordinating agreements among these bureaucracies can result in policy delay (Truex 2020).

We empirically test this argument in the context of railway lobbying in China by showing how retired revolutionaries have empowered their birth counties in this process. Provinces submit competing proposals to the various central ministries that determine where the high-speed railways will be located and counties nested in prefectures within each province compete with each other for railway stations. As grassroots-level governments, counties can only report their requests for investments to their direct superiors, the prefectural government, within the formal hierarchy of the party state (O'Brien and Li 1999). The prefectural government faces competition from other prefectures in the same province. However, retired revolutionaries can circumvent this system, appealing not only to the provincial and ministerial leaders, but also to the national leaders, who can then direct ministries to coordinate and make decisions preferred by the counties. Revolutionaries' unusual influence ensures that their requests will be heard and treated seriously. Consequently, we expect the birthplace counties of retired revolutionaries to enjoy systematic advantages in the rollout of the high-speed railways program.[7]

[7]We include an illustration of our main argument in the appendix (Figure A.1).

Background Information

China's High-Speed Railway Program

China began the construction of its high-speed railway network in 2004, with the release of the Medium- to Long-Term Railway Network Plan (hereafter "the National Railway Network Plan") by the State Council in that year. Over the next 18 years, the mileage of China's high-speed railway grew from zero to over 40,000 kilometers.[8] These newly constructed tracks are passenger-dedicated lines (i.e., they do not run freight trains), and electric multiple unit trains (instead of the traditional locomotive-powered trains) run on them at a speed of 200 to 350 kilometers per hour.

Since its inception, high-speed rails have been a prized project valued by local governments, as they bring various benefits to localities. A direct benefit is the influx of central investment in infrastructure.[9] Such investments create numerous employment and contracting opportunities and can significantly boost local economic growth in the short term (e.g., Lei and Zhou 2022). Given that most local leaders serve their position no more than three or four years in one place (Landry, Lü and Duan 2018), this short-term boosting effect constitutes a greater incentive than the long-term benefits of building railways, such as improvement in accessibility and business environment. Local leaders therefore show great enthusiasm in pursuing high-speed railway projects. In the recent wave of provincial five-year plans (2016-2020), every province in China except Tibet included proposals to build more high-speed railways (Authors' data).

[8] See `http://bit.ly/3oRB4jy`, last accessed May 5, 2022.

[9] Central and local governments share the cost of railway construction. A separate joint venture between the China Railway Corporation and local government financing vehicle finances each project. The central government provides cash while the local governments often contribute their share of equity in the form of land, which the joint venture uses as collateral in bank loans. (Lawrence, Bullock and Liu 2019, p.9)

Building more high-speed railways requires the approval of the central government. A province first needs to submit a proposal to the National Development and Reform Commission, Ministry of Transport, and China Railway Corporation[10] which deliberate on the plan and determine whether it can be included in the National Railway Network Plan. If they determine it can, the provinces can begin the formal regulatory process of seeking approval.[11] To do so the localities need to submit three reports: preliminary project feasibility report, project suggestion report, and project feasibility report. These must each be approved by various central bureaucracies in sequence.[12] These reports include details such as the estimated costs and returns of the project, direction of the tracks and location of the stations, funding plans, land requisition and compensation plans, and environmental impact evaluation. The National Development and Reform Commission, the Ministry of Transport, the China Railway Corporation, the Ministry of Ecology and Environment, and the Ministry of Natural Resources scrutinize each of these reports. They can disallow specific details in the reports (e.g., location of a station) and ask the provinces to resubmit. Each of these central ministries therefore constitutes a veto point: failure to receive endorsement from any one of these ministries in any one of the steps results in delay of the final approval. For example, the construction of the Beijing-Shenyang line, the final segment of the Beijing-Harbin High-Speed Railway, was delayed for five years because the Ministry of Ecology and Environment repeatedly refused to sign the environmental impact evaluation in the project feasibility report.[13] The localities, along with the China Railway Corporation, had to resubmit the

[10]The China Railway Corporation is the name that was given to the Ministry of Railways when it became a ministry-level state-owned enterprise in 2013.

[11]The appendix contains a detailed account of the regulatory process (Figure A.2). The National Railway Network Plan is not a rigid, binding guide for construction. It is instead an evolving document that constantly incorporates local proposals.

[12]Interview HZ 1511; Interview HZ 1606; Interview BJ 1910a, 1910b.

[13]Interview BJ 2001. Also, see http://bit.ly/3LCypDi, last accessed February 9, 2021.

project feasibility report three times before it was finally approved in 2014.[14]

The central technocrats take a variety of factors into consideration when approving a new line or deliberating on specific parameters of a proposal (e.g., location of stations), such as the economic costs and benefits, how it will complement existing transportation networks, environmental impact, and of course, political pressure from various actors (Ma 2022). Having powerful political elites lobby on behalf of localities certainly helps. They not only help articulate local demands for railways to policymakers at higher levels but also help put pressure on central technocrats, who are thus more likely to reach decisions preferred by the locality.

The Founding Generals

In 1955, the National People's Congress passed the Regulations of the Chinese People's Liberation Army on the Military Services of Officers, which established the officer rank system in the military. Between 1955 and 1965, 1,614 PLA officers were conferred the rank of general.[15] The beginning of the Cultural Revolution in 1966 interrupted the conferral of military ranks, and it did not reassume until 1988. The 1955-1965 cohort of military officers constitute an influential group of political elites in modern Chinese history; they are colloquially referred to as the "generals who founded the republic" 开国将军 (or the *founding generals*). All of them had retired by the early 2000s, when the high-speed railway program began.

We choose to focus on the founding generals for three reasons. First, the title of founding generals carries significant weight in Chinese society. The conferral of the general rank was highly selective. One needed to accumulate exceptional revolutionary credentials to be eligible. The rules for conferral were based on service in the CPC-led Red Army (1928-1937)

[14]See http://bit.ly/41Hcwbb, last accessed February 9, 2021.

[15]There were five levels of generals: 10 marshals (元帅), 10 senior generals (大将), 57 generals (上将), 177 lieutenant generals (中将), and 1,360 major generals (少将).

as follows: only those who had served as officers at the battalion level were eligible to be major generals, former officers at the regimental level were eligible to be lieutenant generals, former officers at the divisional level were eligible to be generals, and only former officers at the army level were eligible to be senior generals or marshals (Wu 2006, p.494). The criteria suggest that these individuals joined the CPC shortly after its founding in 1921, making them the most senior members of the revolutionary generation. Consequently, these generals enjoy high name recognition. Their biographies and stories are taught in schools, portrayed in TV dramas and films, and made the subject of displays in museums.

Second, 427 founding generals were still alive in 2003, the year before the high-speed railway program began, and their birthplaces span 26 provinces in China. This gives us enough leverage for empirical analysis. Other more senior revolutionaries (e.g., members of the 7th Central Committee of CPC) had mostly passed away by the early 2000s.

Third, most of the founding generals have stayed in military positions throughout their careers. Among the 1,614 founding generals, only 17 later took leadership positions in the central government.[16] Almost all, 98.9%, of the generals spent their entire careers in the military. This provides us with an ideal setting to distinguish their influence from conventional patronage. The PLA typically does not intervene in social and economic policymaking, particularly in the post-Mao era (Shambaugh 2002). The military per se does not have authority over the planning and the construction of the high-speed railways (even if it had, these generals had long retired by 2003). Thus if we observe a positive correlation between the generals' birthplaces and the allocation of railway benefits, lobbying by the retired generals, instead of a top-down, patronage mechanism in which leaders use the power associated with their positions to benefit their hometowns, is most likely the cause.

[16]We exclude these observations in one of our robustness checks.

Empirical Strategy

Dependent Variable

This paper uses variations in the county-level jurisdictions' timings of receiving central approval for the construction of their first high-speed railway station as the dependent variable. We structure our data in a way that enables survival analysis with time-varying covariates. Each county is coded 0 in the years without high-speed railway, and the data ends in the year when the construction was approved, which is coded 1.

The study period starts in 2004 when the program began and ends in 2015. The Chinese government introduced a public-private partnership model for the high-speed railway program at the end of 2015, which changed the dynamics in the financing and planning of the railways. To simplify, we limit the analysis to the period before the end of 2015. We identify high-speed railway stations by the following criteria: (1) they began construction after 2003, and (2) the tracks that connect the stations have a design speed of at least 200 KM per hour. We obtain the years in which these stations began construction from *The China Railway Yearbooks*.

Our study focuses on the county-level variations. In China's government structure, counties are placed under the jurisdictions of prefectures, which are in turn governed by provinces. The county is the level at which the official household registration identifies one's place of origin. China has nearly 2,800 county-level units, including counties, county-level cities, and districts. We only include counties and county-level cities in our analysis.[17] Districts are much smaller in size and are where the urban core and the government of a prefecture are located, and prefectural seats always get a station if a railway passes through a prefecture. Stakes are the highest in the competition for stations at the county level. Unlike conventional railways, which can have many small stations within a county, the high-speed railways

[17]A small number of counties were converted to districts or merged after 2004. Our selection is based on the county status in 2004.

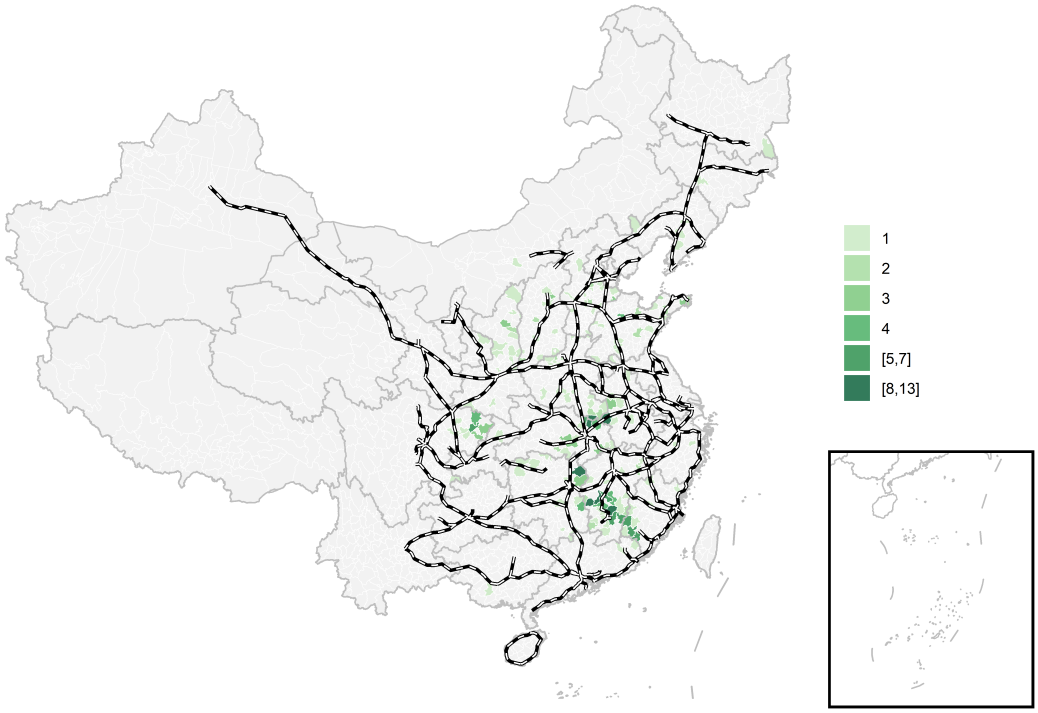

Figure 1: Founding Generals and the Paths of High-Speed Railways

Note: The black-and-white lines are the paths of high-speed railways completed or already in construction by the end of 2015. Provincial boundaries are in gray lines. The green shades denote the number of living founding generals in different counties by the end of 2003.

typically accommodate only one station in each county. We also exclude counties in Xinjiang and Tibet, where the population is sparse and many socioeconomic data points are missing. This results in a sample of 1,812 county-level units. By the end of 2015, 442 counties (24.4%) had at least one station built or in construction, and it took an average of 6.52 years for them to acquire approval. Figure 1 presents a map of Chinese counties and the paths of the railways.

Whether and when a county receives approval for rail construction serves as a proxy for the outcomes of bottom-up lobbying, particularly among nearby localities. It is worth noting that even stations on the same railway do not always receive approval simultaneously, as in the case of the five year delay in the construction of the stations between Beijing and Shenyang of the Beijing-Harbin High-speed Railway because of roadblocks by the en-

vironmental regulators. The Shanghai-Kunming High-Speed Railway was also divided into numerous small segments and each began construction at different times.

Main Explanatory Variable

We code founding generals' biographies and match their birthplaces with the 1,812 sampled counties specified in our dependent variable and find that 1,398 generals were born in 422 of the sampled counties. As shown in Figure 1, these counties are spread across most Chinese provinces. Historical studies show that those who later became senior leaders of the PLA were first recruited as soldiers during the CPC-led guerrilla wars in the 1920s (Zhang 2010). Whether these early soldiers would go on to climb the military hierarchy to reach the rank of generals and whether they would be living at the time of the beginning of the high-speed railway project, involved separate, complex processes that are, to the best of our knowledge, unrelated to the planning and construction of high-speed railways.

By the beginning of 2003, one year before the program began, 327 of the generals in sampled counties were still alive. This is a time-varying variable as the generals gradually passed away due to advanced age. The timing of the Chinese government's decision to launch the high-speed railway was certainly not related to the conditions of the founding generals. The number of surviving generals in each county each year thus provides a plausibly exogenous source of variation in a given county's ability to influence the central government. Of the 167 sampled counties with at least one surviving founding general in 2003, 55 (32.9%) had acquired high-speed railway stations by the end of 2015. In comparison, 387 out of 1,647 sampled counties (23.5%) without a surviving founding general acquired high-speed railway stations. For the 442 counties that acquired high-speed railway stations, the counties with at least one founding general in 2003 on average received the approval 14.7 months earlier than those without. In the appendix, we also provide t-tests comparing the socioeconomic conditions of counties with at least one surviving founding general by 2003 and those without (Figure A.5).

In our baseline models, we use the one-year lagged numbers of living founding generals associated with each county through place of origin as the main covariate. We use a one-year lag as most of the policy bargaining took place before the decision was finalized.

Control Variables

The first set of controls we include are **socioeconomic factors** in railway planning. First, it is possible that the counties with many generals happen to be in the middle of major metropolitan areas, which the new railways would pass through regardless of the generals' intervention. To account for such a possibility, we construct a "least cost network" of major Chinese cities (i.e., centrally administered cities and provincial capitals). Following existing research (e.g., Feng et al. 2023), we construct the least cost network by considering three cost parameters: undulation, slope, and river. We code the 576 sample counties that fall on the path of this network as 1. The appendix provides more details on our construction of the least cost network.

In addition, for infrastructure programs like railways, the technocrats often consider social and economic cost and benefit when allocating budgets (e.g., Huang and Morgan 2011). We control for the sizes of the county population and gross domestic product (GDP) by employing data from the county statistical yearbooks.

Geography can also affect the costs of construction (e.g., Jong and Schonfeld 2003). The planners might avoid assigning stations in rugged terrain to reduce construction costs. We employ data from You, Feng and Yang (2018), which measures geographical ruggedness by dividing counties into numerous 1KM by 1KM squares and then calculating the variations in the elevation of these squares within each county. We also include the area size of each county as an additional control.

Complementarity or competition with existing means of transportation is another factor to consider (e.g., Combes and Lafourcade 2005; Faber 2014). We include three measures as controls. We first include a dummy indicating whether the county had a station on

the traditional railway network by the end of 2003, the year before the high-speed railway program began. We then control for the logged distance of a county to its nearest major airport. We also include a variable that measures each county's distance to the provincial capital, which is typically a province's main transportation hub.

The second set of controls accounts for the alternative explanation of **top-down patronage**: that leaders in power divert policy resources to benefit certain localities (e.g., Shih, Adolph and Liu 2012; Jiang and Zhang 2020; Lei 2023). The first is a dummy for the birth counties of incumbent senior CPC leaders, including the general party secretaries, the premiers and the vice premiers, and the ministers and deputy ministers of ministries that have authority over railway construction.[18]

We also code two variables that measure the patronage ties between county and prefectural party secretaries and those between prefectural and provincial party secretaries by following the method proposed by Jiang (2018)—whether a subordinate was first promoted to the leadership position under the tenure of her superior. To code these two variables, we searched the biographies of 81 provincial, 996 prefectural, and 5,811 county party secretaries from various online sources (i.e., Xinhua official database, the Chinese Political Elite Database (Jiang 2018), and the Baidu encyclopedia).

A summary of the covariates is reported Table 1.[19]

[18]These ministries are the National Development and Reform Commission, the Ministry of Transport, the China Railway Corporation, the Ministry of Ecology and Environment, and the Ministry of Natural Resources.

[19]As some of the variables differ in values by year, we organized the data in the long-form for survival analysis (county-year). This results in a total of 19,559 observations. We code several additional variables in the mechanism analysis part. For the summary of a full list of variables we use in the paper, please see the appendix (Table A.1).

Table 1: Summary Statistics of the Covariates

	Obs	Mean	SD	Min	Max
No. of living generals	19559	0.094	0.527	0	13
Least cost network counties	19559	0.296	0.457	0	1
County GDP (10,000 RMB, logged)	19559	5.711	0.490	3.492	7.460
Population (10,000, logged)	19559	1.584	0.333	0.279	2.362
Administrative area (logged)	19559	3.318	0.364	1.748	5.077
Distance to province capital (logged)	19559	2.251	0.303	0.575	3.154
Non-HSR station before 2004	19559	0.426	0.495	0	1
Distance to nearest airport (logged)	19559	5.185	0.300	3.544	5.975
Geographical ruggedness	19559	1.016	1.166	0.000	5.974
Hometowns of incumbent leaders	19559	0.023	0.151	0	1
Provincial–prefecture party secretaries ties	19559	0.567	0.496	0	1
Prefecture–county party secretaries ties	19559	0.481	0.500	0	1

Estimation Framework

Because our dependent variable measures the duration of the occurrence of an event, we employ the Cox proportional hazards model in our analysis. The model estimates both temporal (i.e., how quickly a locality gets approval) and regional variations (i.e., whether a locality gets approval at all), and is widely used to analyze variations in policy priorities (e.g., Do, Nguyen and Tran 2017). Our estimation framework is presented as follows:

$$h_{iP}^{Station}(t) = h_{0P}(t)exp(\alpha\ LivingGenerals_{it-1} + \Sigma\theta X_{it-1})$$

in which $h_{iP}^{Station}(t)$ is the hazard rate of receiving approval for construction for county i at year t. The subscript P indicates the prefectural strata. $h_{0P}(t)$ represents the baseline hazard rate for counties in prefecture P. $LivingGenerals_{it-1}$ is the number of living founding generals associated with county i through places of origin in year $t-1$, and we want to estimate α. $\Sigma\theta X_{it-1}$ represents a set of control variables that might also affect central decisions to approve railway station construction in county i in year $t-1$.

The inclusion of prefecture-specific hazard rates (P) allows us to hold constant prefectural

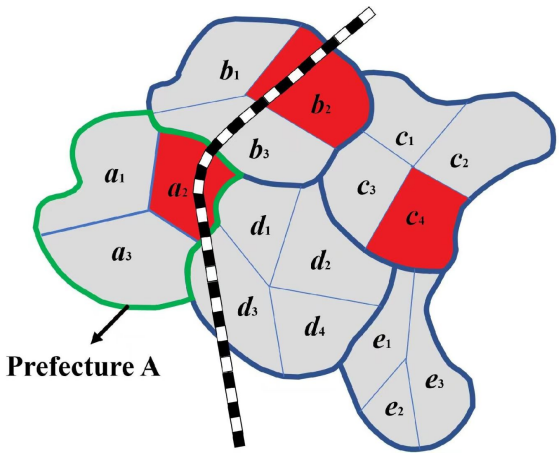

Figure 2: An Illustration of the Estimation Framework

Note: The map shows five prefectures (A, B, C, D, and E) in a hypothetical province. Counties in each prefecture are labeled with lowercase letters and numbers (e.g., a_1, a_2). Counties that are birthplaces of founding generals are marked in red.

idiosyncrasies that could affect the propensity of receiving approval among the subordinate counties (Allison 2009, p.74). As shown in Figure 2, we estimate whether having a founding general increases county a_2's chance of securing a station compared with that of nearby counties a_1 and a_3 in the same prefecture A (highlighted in green boundary). We are not comparing county a_2 with a county in a different, remote prefecture (e.g., e_3) that is not in the vicinity of proposed railways.

Results

Baseline Results

Table 2 reports the main results. In model 1, we only include the numbers of living generals associated with each county through places of origin each year (lagged by one year) ($LivingGenerals_{it-1}$) as the covariate. Model 2 controls for socioeconomic factors in railway planning, and model 3 further controls for localities' patronage ties with higher level leaders.

Our main explanatory variable, the number of living generals, appears to be positively and significantly correlated with the outcome variable across different specifications. This

Table 2: Explaining Variations in High-Speed Railway (HSR) Stations

	Time to 1st HSR Station		
	(1)	(2)	(3)
No. of living generals $_{t-1}$	0.382***	0.359***	0.361***
	(0.092)	(0.082)	(0.083)
Socioeconomic covariates	No	Yes	Yes
Political connection covariates	No	No	Yes
Strata: prefecture	Yes	Yes	Yes
Observations	19559	19559	19559
No. of counties	1812	1812	1812
No. of counties with HSR stations	442	442	442
Pseudo-R-squared	0.009	0.077	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. Numbers of living general and other time-varying covariates are lagged by one year. Socioeconomic covariates include dummies indicating whether the county is on the least cost path network or has a station on the traditional railway system, GDP, population, area size, distances to the provincial capital and the nearest airport, and geographical ruggedness. Patronage ties covariates include whether the county is the hometown of incumbent central leaders, prefectural-county party secretaries connections, and provincial-prefectural party secretaries connections. We report the full table in the appendix (Table A.2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

result lends support to our core hypothesis that having native elites mobilizable for policy bargaining increases the likelihood that localities will receive preferential policies. The coefficient for the number of living generals in model 3 is 0.361. The coefficient for the Cox proportional hazard model is the natural log of the ratio of hazard rates that are one unit apart on the predictor, which means that each living general in a county increases its chance of having a high-speed railway by 1.435 times compared to a county with no living general. The potential distributive implication of this effect is substantial. The average cost of a high-speed railway is 42 billion RMB, and each railway has 12.4 stations (Authors' data). This means that the average cost of building a station and the tracks that connect the station is around 3.39 billion RMB. Having a living founding general significantly improves a county government's chance of acquiring central approval for station construction, thereby netting

substantial investment from the central government.

Robustness Checks

We conduct a series of additional analyses to ensure the robustness of the baseline results (reported in the appendix). To summarize, we find that the baseline results are robust to three types of tests:

Alternative definitions and measurements: (1) inclusion of railway lines with lower speed (Table A.3), (2) use of two-year lag of time-dependent covariates (Table A.4), (3) alternative measures for economic development (Table A.5) and geographical topology (Table A.6), (4) adding additional control for potential connections between provincial and county party secretaries (Table A.7), and (5) replacing the least cost network with a least distance network (Table A.8).

Subsamples: (1) more restrictive samples of counties (Table A.9 and Table A.10) and generals (Table A.11), (2) results are not driven by counties with particularly high or low numbers of surviving generals (Figure A.7).

Different estimation methods: results are also not sensitive to (1) the proportionality assumption of Cox models (Table A.12), (2) clustering of counties located on the same line (Table A.13), and (3) use of a cross-sectional data (instead of the time-to-event data)(Table A.14).

A Natural Experiment Design

To further identify the causal relationship, we employ a natural experiment design by exploiting the plausibly exogenous timings of founding generals' deaths. Figure 3 shows the number of deaths (left) and the number of surviving founding generals (right) in the sampled counties by year. The two smooth curves indicate that the deaths of founding generals are primarily a function of time (i.e., advanced ages). Whether a general county was lucky enough to have a surviving general by the time the central government introduced the high-

speed railway program in 2004 is likely as-if random. It is hard to imagine any connection between the central government's decision to launch high speed rail and the health situation of certain retired military officers.

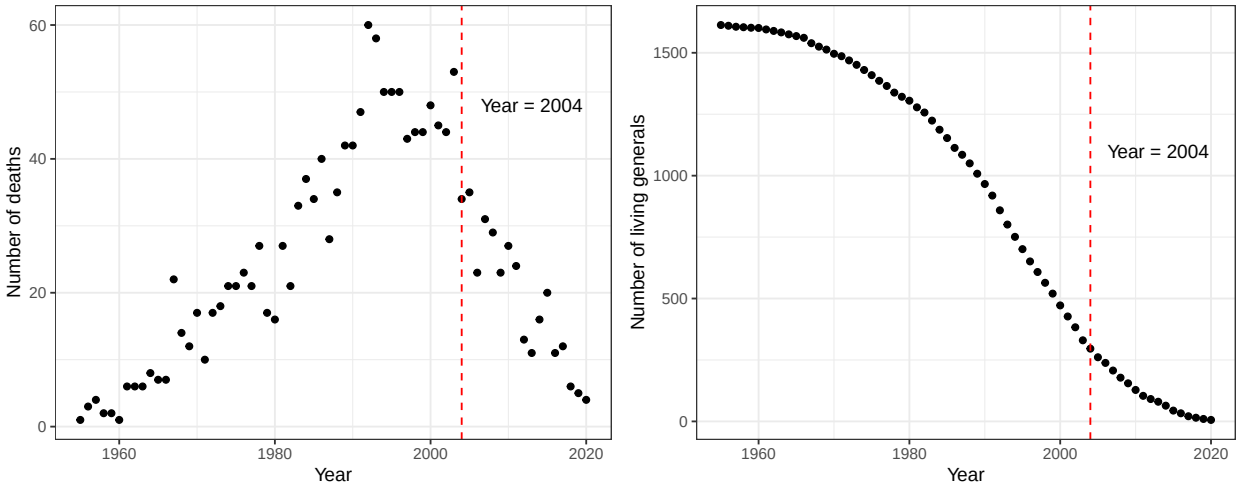

Figure 3: Numbers of Deaths (left) and Surviving Founding Generals (right) by Year

In Table 3, we report three sets of results employing the natural experiment by using a subsample of 422 counties that ever had at least one founding general (i.e., the general counties). In columns 1 and 2, we report results using the number of surviving founding generals in the general counties, with and without controls). Columns 3 and 4 report results using a dummy of whether a general county had at least one surviving general. Columns 5 and 6 report results using the number of surviving founding generals with inverse probability weighting to better proximate the random assignment process. To calculate inverse probability weights, we first estimate the mortality rate of founding generals in 2003 by their birth years. Then we calculate the probability that all founding generals in a county had already died by getting the product of the estimated probability of mortality of each general from a county derived from their birth year. The inverse probability weight equals one minus the probability that all had already died. The three coding strategies yield consistent results: among the general counties, whether a county still had surviving generals predicts preferred policy treatment in railway investments. These analyses lend additional support that the

relationship we observe is likely causal.

Table 3: A Natural Experiment Design

	Time to 1st HSR Station					
	(1)	(2)	(3)	(4)	(5)	(6)
No. of living generals $_{t-1}$	0.386***	0.405***			0.302***	0.342***
	(0.076)	(0.093)			(0.066)	(0.084)
Living generals (dummy) $_{t-1}$			0.788***	0.874***		
			(0.243)	(0.255)		
Covariates	No	Yes	No	Yes	No	Yes
Strata: prefecture	Yes	Yes	Yes	Yes	Yes	Yes
Inverse probability weights	No	No	No	No	Yes	Yes
Observations	4384	4384	4384	4384	4384	4384
No. of counties	423	423	423	423	423	423
No. of counties with HSR stations	131	131	131	131	131	131

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. Columns 1 and 2 report results that use the number of surviving founding generals as the key covariate (with and without controls); columns 3 and 4 report results using dummies of whether a county has at least one surviving general; columns 5 and 6 report results using the number of surviving founding generals with inverse probability weighting. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Exploring Possible Mechanisms

The remaining task is to explore possible mechanisms through which birthplace ties with founding generals lead to preferential policy treatment. The policy processes of any large, state-directed infrastructure projects can be quite complicated. It is beyond the scope of this study to comprehensively evaluate all possibilities, but this section finds suggestive evidence on two related aspects of the potential mechanism: (1) the observed effect is unlikely the result of a systematic, top-down initiative to favor general counties, rather than bottom-up policy bargaining efforts on the part of the localities; (2) the influence of the founding generals most likely stems from their moral authority as the revolutionary generation, rather than power associated with formal positions of the state. We also evaluate several competing

mechanisms, such as buying military loyalty and the role of the generals' personal networks, and do not find evidence of their salience.

Bottom-up Intergovernmental Lobbying

The process we elaborate in the background section shows that it is incumbent upon the local government to submit applications to the central ministries for approval of railway investment. The pattern we observe therefore should largely be determined by the differential abilities of the local governments to lobby policymakers. A competing and observationally equivalent mechanism is that central policymakers took the initiative in giving preferential policies to these localities even in the absence of bottom-up lobbying. This top-down mechanism might be plausible as the revolutionary history plays a crucial role in enhancing the CPC's legitimacy (Perry 2012; Javed 2022). Giving preferential policies (e.g., railway investments) to places associated with the revolutionaries might be an effective, however costly, way for post-revolutionary leaders to draw symbolic connections with the revolutionary generation.

To evaluate this possibility, we first create a variable of whether a county belonged to the revolutionary base area (regions that had intensive CPC activities before, also known in Chinese as 革命老区) and include it in our baseline model. The government designated this status after 1979 to facilitate development in these areas. If the top-down mechanism stands, we should expect these counties to receive just as much, if not more, preferential treatment from the center as the birth counties of founding generals. However the variable is not a significant predictor for railway benefits, nor does its inclusion change the effect of the founding generals (see appendix Table A.15). This result suggests that if incumbent policymakers favor revolutionary counties on their own initiative, railway investment is not the policy instrument they use to express their favor.

Furthermore, we count the numbers of deceased and living founding generals in each county each year and include them in the baseline model. Figure 4 shows that when both

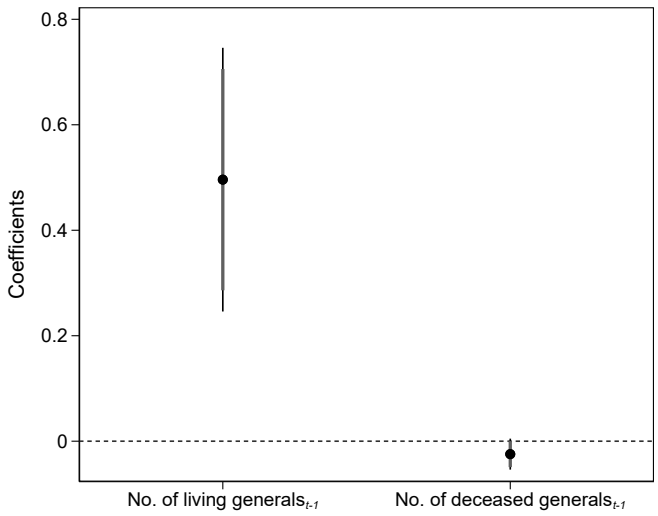

Figure 4: Living versus Deceased Generals

Note: Coefficients of numbers of living and deceased generals when both are included in the baseline model. 95% (90%) confidence intervals are in dark (gray) lines. See appendix Table A.16.

groups are included in the model, the number of deceased generals in each county is not a significant predictor whereas the number of surviving generals remains significant. This result lends additional support to the bottom-up lobbying mechanism. After all, only living generals can speak on behalf of their birth counties to influence central policymakers. The bottom-up dynamic is also more consistent with qualitative accounts of the roles of central ministries as regulatory gatekeepers rather than proactive planners in the build-out of local infrastructure projects like subways and high-speed railways (Lei and Zhou 2022; Ma 2022).

Moral Authority of the Founding Generals

We contend that the influence of the founding generals, who had long retired from politics by the time China began high-speed railway construction, might stem from their moral authority as the founding figures of the regime. Scholars of various types of organizations (e.g., firms) have long noted that founders of organizations often enjoy profound and lasting influence beyond their tenure as they played an instrumental role in the creation of the organizations' visions, values, and rules (e.g., Schein 1983; Nelson 2003). Founders of governments are no

exception, and such influence became more pronounced when the governments were erected through revolutions. The experience of violent struggles that led to liberation tends to "produce a generation of leaders with extraordinary legitimacy and unquestioned authority" (Levitsky and Way 2013, p.9), and such influence does not diminish after revolutionary leaders chose to leave office (e.g., Vogel 2011).

The founding generals' unique influence is a valuable asset for their birth counties seeking to influence central bureaucracies. Counties that otherwise lack channels to influence policymakers at the center can have revolutionaries lobby on their behalf. The attention of policymakers is "a prime scarce resource" (March and Olson 1983, p.292), and having their attention is a prerequisite for obtaining desired policy outcomes. Revolutionaries' unusual influence ensures that their requests will be heard and treated seriously. Amplifying the power of this strategy, revolutionaries' messages are stronger when their moral authority is mobilized to advance collective, instead of individual, interests (Grzymała-Busse 2015). In the context of this study, advocating for one's birthplace is considered a virtuous act in China as it reflects deep emotional attachment to one's roots and willingness to pay back to the local community. Ignoring or rejecting such requests from revolutionaries would defy the expectation of public morality and cost the incumbent support (Ding and Javed 2021) or even elite cohesion (Lachapelle et al. 2020).

While moral authority is hard to measure, this section attempts to provide an "eyeball test" by comparing the founding generals with incumbent and retired civilian Central Committee members of the CPC.

The Central Committee (CC) is the supreme decision-making body of the CPC (Shirk 1993). Its members encompass political elites at the ministerial/provincial level and above, including those with formal authority on railway investments. We obtained the biographies of 380 incumbent and 570 retired, living CC (and alternate) members between 2004 and 2015 and counted the number of CC members associated with each county through places

of origin. [20]

None of the incumbent CC members since the 16th Party Congress (2002) joined the CPC before 1949. They achieved their positions by being professional bureaucrats and getting promoted within the party-state hierarchies. In other words, their authority is derived exclusively from the positions they hold. When mobilized by localities as lobbyists, the pressure they could exert on central policymakers is limited. They do not enjoy the same moral authority as the founding generals, and the ministers in charge of railway policies are also CC members, who might have the same or even higher ranks than the lobbyists. We therefore expect their influence on railway investment, if there is any, should be much smaller than that of the founding generals.

Table 4: Founding Generals vs. Central Committee(CC) Members

	(1)	(2)	(3)	(4)	(5)	(6)
No. of living generals $_{t-1}$		0.359***	0.358***		0.338***	0.489***
		(0.083)	(0.115)		(0.082)	(0.099)
No. of incumbent CC members $_{t-1}$	0.086	0.042	0.041			
	(0.125)	(0.120)	(0.136)			
No. of living generals $_{t-1}$ × No. of incumbent CC members $_{t-1}$			0.001			
			(0.111)			
No. of retired CC members$_{t-1}$				0.163**	0.083	0.145*
				(0.071)	(0.066)	(0.081)
No. of living generals $_{t-1}$ × No. of retired CC members$_{t-1}$						-0.095
						(0.060)
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Strata: prefecture	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19559	19559	19559	19559	19559	19559
No. of counties	1812	1812	1812	1812	1812	1812
No. of counties with HSR stations	442	442	442	442	442	442
Pseudo-R-squared	0.069	0.077	0.077	0.071	0.078	0.079

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. Columns 1 through 3 compare the effect of founding generals with that of incumbent, civilian CC members; columns 4 through 6 compare the effect of founding generals with that of retired, civilian CC members. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As shown in Table 4, the number of incumbent CC members is not a significant predictor,

[20]We obtain data from Lu and Ma (2019), and exclude military central committee members in these counts. Details of data coding appear in the appendix (Appendix M).

nor does it drastically change the coefficient of founding generals. The number of retired, living civilian CC members is a significant predictor when included alone, as the group has a few retired revolutionary leaders who had held civilian positions. However, its effect is weakened when we include founding generals as a covariate, suggesting the key role of military experience during the revolution in sustaining post-retirement influence. In sum, the comparison gives further evidence of the distinctive impact of those who had commanded troops in revolutionary wars.

Additional Mechanisms

Securing Military Loyalty: One plausible explanation for the effect associated with founding generals is that central leaders trade policy benefits for the loyalty of the military. Securing the loyalty of the military is essential for regime durability (McMahon and Slantchev 2015). The party however has addressed the issue through the use of personnel appointments, which has secured the party's absolute dominance over the military (Mattingly 2021). Incumbent party leaders have not faced major threat from the military in the post-Mao era. Thus there is no threat to appease with high-speed rails. Also, infrastructure is not an ideal tool to purchase loyalty as it renders a commitment problem (Robinson and Verdier 2013): patrons can hardly retract infrastructural benefits ex post to punish disloyal clients.

If the loyalty-securing mechanism exists, we would expect incumbent military leaders and those generals who retired more recently to have greater influence on railway policies than the founding generals. In Table A.17, we compare the effect of founding generals with those of two groups of military leaders. The first group is 116 active-duty military leaders who sit on the party's all-powerful Central Committee (columns 1 through 3) between 2004 and 2015. The second group is 596 retired generals who were conferred the rank of general after 1988 (columns 4 through 6). We code their biographies and link their birthplaces with our county sample.[21] We also include an interaction of the founding generals and these two groups of

[21]For details of data coding, please see Appendix M.

military leaders, in case founding generals exert their influence through incumbent military leaders who share their birthplaces. The results suggest that the loyalty-securing mechanism may be less salient: neither incumbent military leaders nor recently retired generals have an effect on the railway benefits of their hometowns.

Personal Networks: Another possibility is that the generals help their hometowns through their personal connections with central policymakers (particularly ministerial leaders) instead of through the influence of their moral authority. On its face this seems unlikely, as very few founding generals had careers outside of the military and all of them retired many years before the high-speed railway program began, which limited their opportunities to cultivate connections with incumbent ministerial leaders.

We collected additional data to address the possibility of personal networks. Among the 327 generals in sampled counties who were still alive by 2003, all but one had died by May 2024. We obtain the official obituaries of these deceased generals and code a dummy on whether they passed away in Beijing. Among them, 187 died in Beijing. The location of their deaths provides proximate information for the places they might have lived in their post-retirement lives. It is reasonable to assume that those who had lived in Beijing had a higher chance of forming connections with ministerial officials through various social settings, such as the annual Spring Festival Gathering, which includes both incumbent and retired leaders. If the connection mechanism explains our results, this subgroup of generals should be the most influential. However we found no conspicuous difference between the groups, and both have positive effects (see Table A.18). While this comparison suggests the personal network mechanism may be less salient, it gives further support to the plausibility of the moral authority mechanism. The generals' moral authority as the founding figures of the regime certainly does not depend on where they lived in their post-retirement lives or who they knew personally.

Local Cohesion: As mega-projects like high-speed railways require a significant amount of mobilization on the part of local government agencies, one additional advantage of the general

counties might be that the presence of founding generals would make the local bureaucratic actors more united in pursuing high-speed railway. In other words, these localities could be better organized and prepared than others to submit proposals for railway investments. Indeed, the expectation that their application will have a better chance being approved through the help of the founding generals could make local government departments more motivated to work together on the project. Thus their faith in the impact of the founding generals might have influence apart from the generals' impact itself. If this were the case, general counties would receive swift approval because they are more active in submitting proposals in the first place. As central ministries only publish approved proposals, we do not have full documentation of when and whether each locality submitted a proposal. We construct a dataset on the time when each place first proposed its high-speed railway project using internet searches of local government websites. This dataset however shows no evidence that the general counties began proposing high-speed rail earlier than others (Table A.19). We hesitate to say this result falsifies the local cohesion mechanism, as data collected from internet searches might suffer from selection issues. Many localities chose to not publicize their action of sending proposals to avoid humiliation in case if they were rejected. Future research could look further into this possibility through more extensive data gathering.

Case Evidence

In this section, we further explore several qualitative cases that demonstrate the mechanisms through which founding generals empowered their birth counties. These cases show how retired founding generals leveraged their personal influence to help their birth counties secure the attention of central policymakers and reach preferred decisions. These vivid accounts, along with the preceding analyses, suggest that the founding general's use of personal influence in assisting localities' bottom-up policy bargaining is the most plausible mechanism that drives regional favoritism.

The case of Xingguo County illustrates how localities have actively mobilized local revo-

lutionaries to their advantage. Xingguo is located in southern Jiangxi province and is home to 56 founding generals. Both the Beijing-Kowloon railway and the Nanchang-Ganzhou high-speed railway take a conspicuous detour to go through the county, which is colloquially referred to as the "Xingguo curve (兴国弯)" among China's railway enthusiasts. When asked by journalists to comment on why the railway has been detoured so that Xingguo has a station, the county's party secretary replied, "Because we are the (founding) general county (将军县). We sacrificed so much for the Chinese revolution!" The local leader is not shy about admitting that local government used these revolutionaries to their advantage. He said, further, "When we competed for a railway station, we used it [i.e., the county's status as a general county] as our leverage.... I went to Beijing and reached out to those retired Xingguo generals. I briefed them on our requests and let them appeal on our behalf." [22]

When influential figures like the founding generals make appeals on behalf of localities, it is hard to ignore their requests. In 1995, 34 prefectural and county governments in Sichuan and Gansu collectively wrote a letter to the National Planning Commission (now the National Development and Reform Commission) and the Ministry of Railways, asking them to consider adding a new railway between Lanzhou and Chongqing.[23] There was no response at that time, despite these local governments' efforts to try to make a strong case for themselves. Four years later, the same governments mobilized 105 retired Red Army soldiers of local origin and had them sign onto a second letter asking for the approval of the project. Local leaders who organized the second attempt explained that their rationale for having the signatures of these retired revolutionaries was to "gain the attention of leaders at the highest level."[24] The county leaders from Cangxi, one of the locales along the proposed railway, traveled to Beijing and met with the founding general and native son Li Kaixiang. Although he was extremely frail, General Li signed the letter with others' assistance and expressed his

[22]See http://bit.ly/3oOLPTF, last accessed May 7, 2024.

[23]See http://bit.ly/3LgqtG2, last accessed May 7, 2024.

[24]See https://bit.ly/4b5U40C, last accessed May 7, 2024.

wish to see the proposal materialize.[25] This time the letter reached the desk of then-Premier Zhu Rongji, who instructed the director of the National Planning Commission and the Minister of Railways to expedite their research on the proposal.[26] The Lanzhou-Chongqing railway was approved and began construction in 2008, and a station was built in Cangxi County. This paper's epigraph quotes a Cangxi official who was involved in the process of describing the role of retired revolutionaries in a 2017 interview.[27]

As demonstrated in Cangxi's case, founding generals helped localities capture the attention of national leaders, who in turn exerted pressure on the ministries to reach preferred decisions by localities. In another example, eight founding generals, headed by Li Desheng and You Taizhong (both major generals), wrote a letter to the central government in 1992, asking that the proposed Beijing-Kowloon railway include a detour to their birthplace of Xinyang in Henan province. The letter was directly addressed to then-General Party Secretary Jiang Zemin and Premier Li Peng.[28] The detour to Xinyang would cost a few hundred million RMB in additional central investments, but it was added eventually.[29] Railway ministry officials acknowledged the pressure exerted by these generals when interviewed by a newspaper reporter, "These old generals have so much strength left that they are strong enough to bend a railway!"[30]

[25]See http://bit.ly/3n9o6x0, last accessed May 7, 2024.

[26]See http://bit.ly/3oRCCKo, last accessed May 7, 2024. We also obtained a photo copy of Zhu Rongji's directive and include it in the appendix (Figure A.8). In a 2000 State Council meeting that deliberated on the railway, Zhu Rongji again mentioned the letter by the revolutionaries. See https://bit.ly/3URahBc, last accessed May 7, 2024.

[27]See http://bit.ly/3n9o6x0, last accessed May 7, 2024.

[28]We acquired a copy of the letter and have included it in the appendix (Figure A.9).

[29]See http://bit.ly/3NknGhU, last accessed May 7, 2024.

[30]See http://bit.ly/3NihB5q, last accessed May 7, 2024.

Conclusion

In this paper, we explore the sources of regional favoritism in one of the largest infrastructure programs in human history. We find that birth counties of China's surviving revolutionary generals enjoy sizable advantages in the build-out of the high-speed railway network. A host of evidence suggests that the retired generals' assistance in their hometown governments' bottom-up lobbying efforts to gain railway investments from the central government most likely explains this pattern. The experience of commanding troops in revolutionary wars has given these generals unique influence that helps sway central decisions in their hometowns' favor.

The expansion of the high-speed railway network provides an extraordinarily rare opportunity to test the revolutionaries' influence systematically, for several reasons. First, China had no high-speed railway at all before 2004 but the program had reached most provinces in the country within a few years. These features not only provide us with rich temporal and geographical variations, but also a clean setting to isolate the effect of political distortion, which other infrastructure programs (e.g., airports, highways), with their long and complex histories, do not offer. Second, the program began at a time when there were still a large number of surviving founding generals, such that they affected enough localities that their impact was relatively easy to isolate through statistical analyses.

Notwithstanding the rarity of our empirical setting, the conclusions of this paper have broader implications for understanding distributive politics in subnational contexts. Variations in local infrastructure have been mostly considered as the result of top-down allocation by a unitary state actor (e.g., Hodler and Raschky 2014; Do, Nguyen and Tran 2017; Chang and Wang 2024). Our research supplements this line of inquiry by providing an alternative, bottom-up perspective. Across different countries and political systems, local authorities with interests that are not sufficiently heeded by their superiors rely on the help of various actors to influence policy makers at higher levels (e.g., Auerbach 2019; Payson 2021; Ma 2022). The influence of such actors, including retired revolutionaries, goes far beyond

infrastructure investments. For example, local governments in China also mobilized retired revolutionaries to lobby the State Council bureaucrats when French automaker Citroen was searching for sites for a factory in 1988 (Chen 2005, p. 249).

Further, retired revolutionary leaders are not the only group with such influence to shape policies in China. Individuals who command societal respect for other reasons can similarly leverage their personal authority for policy or political purposes. For example, the township of Anjiang in Huaihua, Hunan province, secured a high-speed railway station with the help of widely respected agronomist Yuan Longping. He was known to ordinary people around the country as the "Father of Hybrid Rice," who helped reduce food shortage. Yuan developed deep emotional ties with the town over three decades of local work experience, and reports show that his lobbying of provincial leaders on behalf of the town for the station played a significant role in the siting of Anjiang Station.[31] Beyond China, one prominent example is the policy influence of the Catholic church in Poland. The crucial role of the Roman Catholic Church in facilitating a peaceful democratic transition enhanced the church's moral authority, in addition to its ecclesiastical influence, in Polish society. Post-communist leaders therefore regularly seek the church's endorsement to amass political support. The church consequently has been able to gain institutional access to influence policies and legislation (Grzymała-Busse 2015).

In sum, our study highlights a bottom-up intergovernmental dynamic that translates moral authority into policy benefits. Future studies that look further into the dynamic should reflect several scope conditions. First, bottom-up policy lobbying documented in this study is more prevalent when institutions for local interests articulation are weak or fragmented (Payson 2020*b*; Ma 2022). Second, the focus and strategies of lobbying might differ in specific contexts. County leaders care far more about the location of railway stations than provincial leaders, whose primary focus is issues such as the division of financial responsibilities between the localities and the ministries. Future studies should pay greater attention to the rich

[31]Interview BJ 2105. Also see http://bit.ly/3LgrePK, last accessed April 28, 2023.

strategies local actors employ to secure various policy benefits in different political contexts.

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Revolutionaries for Railways:
Regional Favoritism and Intergovernmental Lobbying in China

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A Illustration of Argument

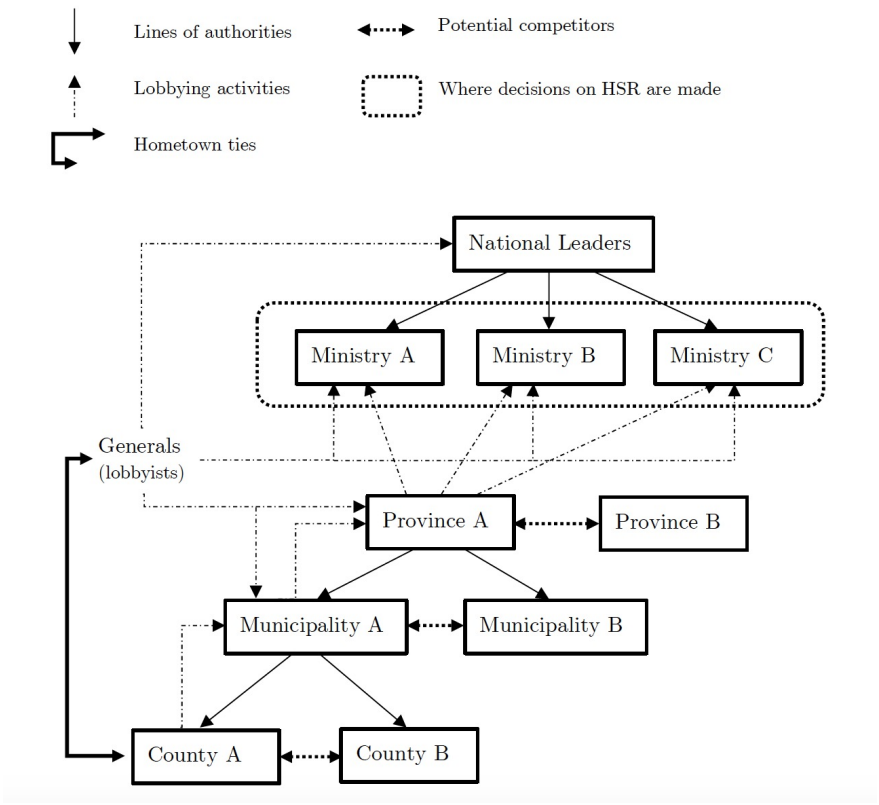


Figure A.1: An Illustration of the Argument

Figure A.1 illustrates the logic of our argument in the context of railway lobbying in China. Provinces submit competing proposals to the various central ministries that determine where the high-speed railways will be located and counties nested in prefectures within each province compete with each other for railway stations. As the lowest level of government in this graph, counties can only report to their direct superiors, the prefectural government, within the formal hierarchy of the party state. The prefectural government faces pressure from other prefectures in the same province. However, retired revolutionaries (in this case, retired founding generals of PLA) can circumvent this system, appealing not only to the provincial and ministerial leaders, but also to the national leaders, who can then direct ministries to coordinate and make decisions preferred by the localities. Revolutionaries' unusual influence ensures that their requests will be heard and treated seriously. Consequently, we

expect the birthplace counties of founding generals to enjoy systematic advantages in the rollout of high-speed railways program.

B The Process of Getting Central Approval for Railways

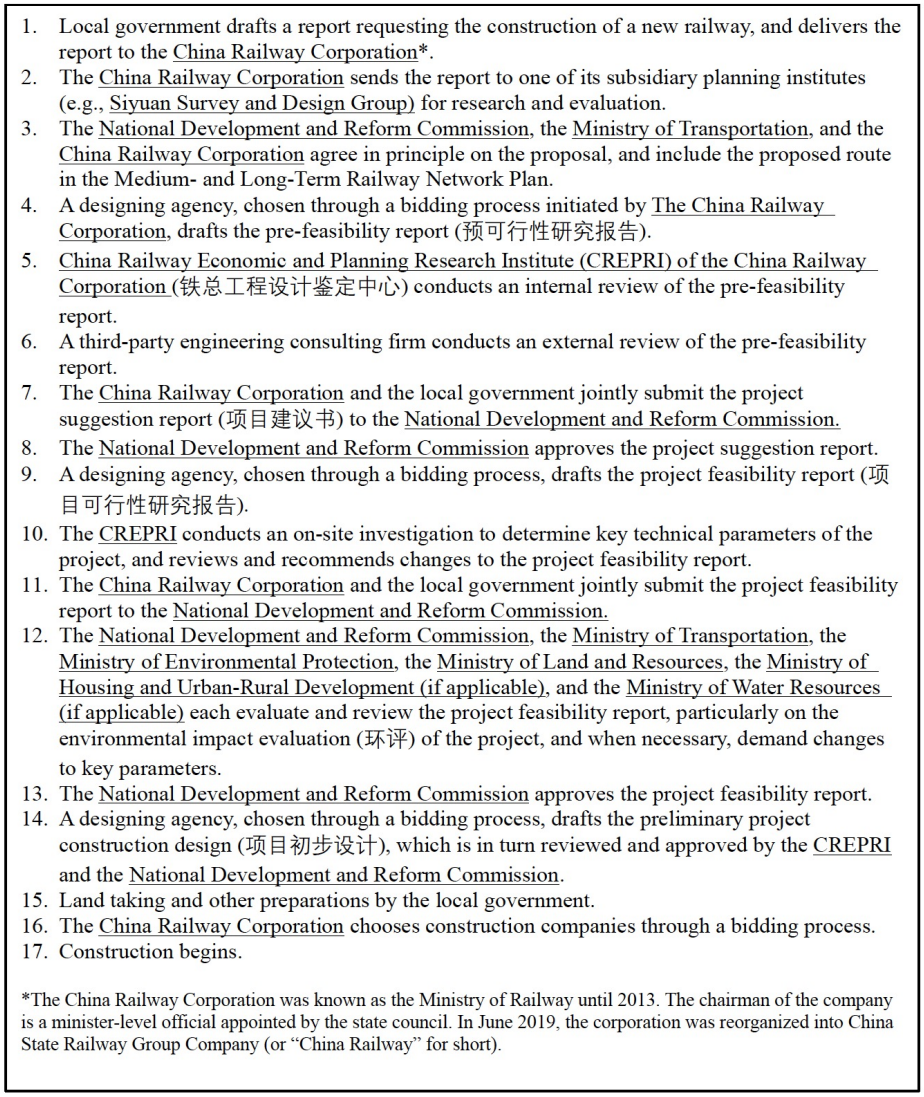


Figure A.2: The Process of Getting Central Approval for Railways

The information in Figure A.2 is based on multiple interviews with local government officials responsible for the application of projects (Interview HZ 1511; Interview HZ 1606).

C Summary of the Outcome Variable

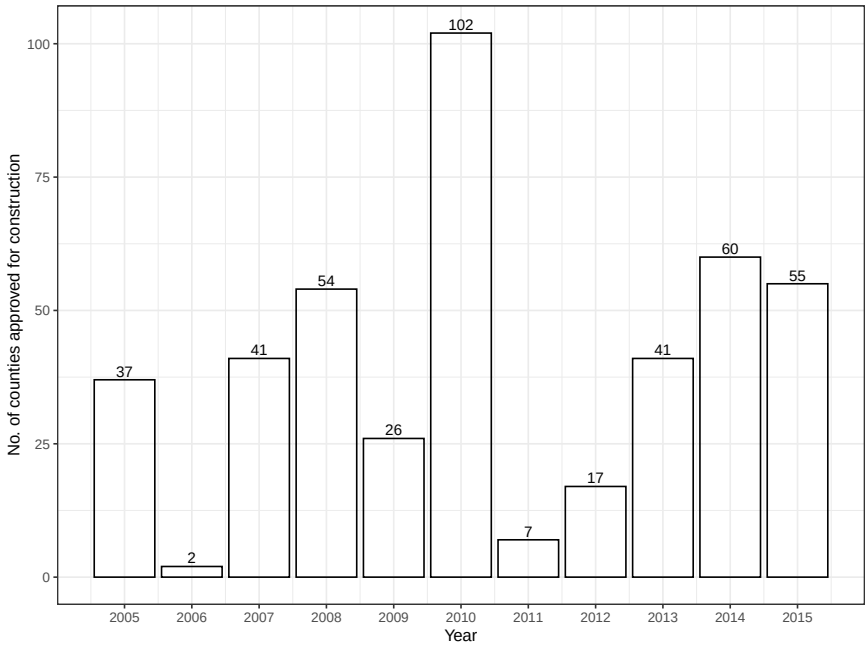


Figure A.3: Number of counties approved for HSR station each year

D Summary Statistics

Table A.1 presents the summary statistics. As some of the variables differ in values by year, we organized the data in the long-form for survival analysis (county-year). This results in a total of 19,559 observations. We also took the common logarithm of the GDP, population, administrative area, and the distances to provincial capital and the nearest airport to avoid bias from the impact of extreme values. Detailed biographic information on county party secretaries is incomplete—for many, we were only able to obtain names. We therefore adopted a simplified strategy of coding prefectural-county party secretaries ties: county secretaries are considered connected to a prefectural party secretary if they were appointed during the latter's tenure.

Table A.1: Summary Statistics of the Covariates

	Obs	Mean	SD	Min	Max
No. of living generals	19559	0.094	0.527	0	13
Least cost network counties	19559	0.296	0.457	0	1
County GDP (100 million RMB, logged)	19559	5.711	0.490	3.492	7.460
Population (10,000, logged)	19559	1.584	0.333	0.279	2.362
Administrative area (logged)	19559	3.318	0.364	1.748	5.077
Distance to province capital (logged)	19559	2.251	0.303	0.575	3.154
Non-HSR station before 2004	19559	0.426	0.495	0	1
Distance to nearest airport (logged)	19559	5.185	0.300	3.544	5.975
Geographical ruggedness	19559	1.016	1.166	0.000	5.974
Hometowns of incumbent leaders	19559	0.023	0.151	0	1
Provincial–prefecture party secretaries ties	19559	0.567	0.496	0	1
Prefecture–county party secretaries ties	19559	0.481	0.500	0	1
No. of deceased generals	19559	0.610	2.877	0	56
No. of living generals lived in Beijing	19559	0.042	0.275	0	7
No. of living generals lived elsewhere	19559	0.033	0.241	0	5
No. of incumbent CC members	19559	0.096	0.340	0	3
No. of retired CC members	19559	0.167	0.501	0	9

E Notes on the Least Cost Network

The key nodes we choose to connect in the least cost network include centrally administered cities (Beijing, Tianjin, Shanghai, and Chongqing) and provincial capitals on mainland China (except Lhasa, the capital city of Tibet, which has not announced a plan to build a high-speed railway). The rule for drawing the network is that each provincial capital (or centrally administered cities) has one line connecting each of its neighboring counterparts. For Beijing and Tianjin, two cities surrounded by Heibei, in addition to their connection with Shijiazhuang, Hebei's provincial capital, we also include their connections with two provincial capitals (Jinan and Shenyang) of Hebei's neighbors. We also removed several improbable lines. For example, although Heilongjiang, Jilin, and Liaoning all neighbor Inner Mongolia, we removed the lines that connect the capital cities of the three northeastern provinces and Hohhot, the capital city of Inner Mongolia.

We use the "least cost path" function in QGIS that considers three cost parameters (i.e., undulation, slope, and river) to generate the network. The network contains 576 counties (shown in Figure A.4).

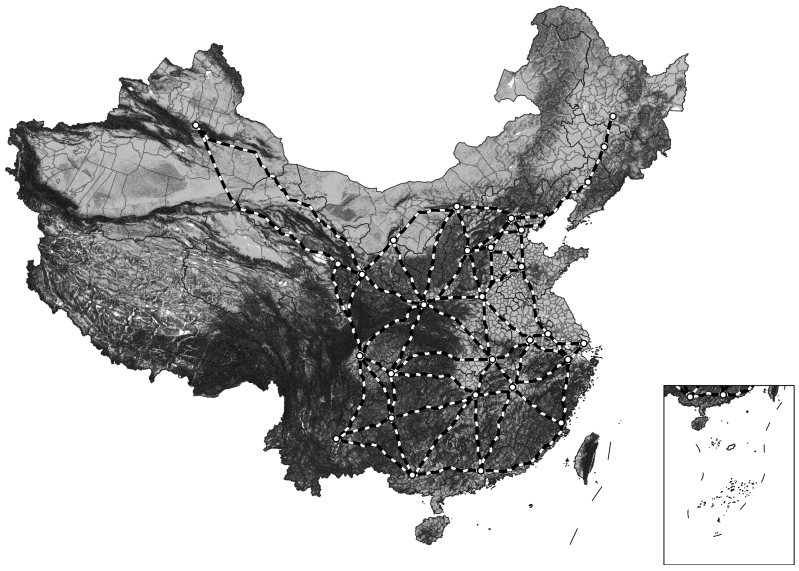


Figure A.4: "Least Cost Network" counties

F Comparing Counties with and without Generals

In our analysis, we use the absolute number of living generals in each county, instead of a dummy indicating whether a county has at least one general. However, here we compare the means of covariates between counties with at least one living general in 2003 (one year before the program began) and of those without (Figure A.5). The general counties differ from the non-general counties in a few socioeconomic indicators (least cost network, GDP, population, area size, and terrain) and the two groups are equivalent in terms of political connections.

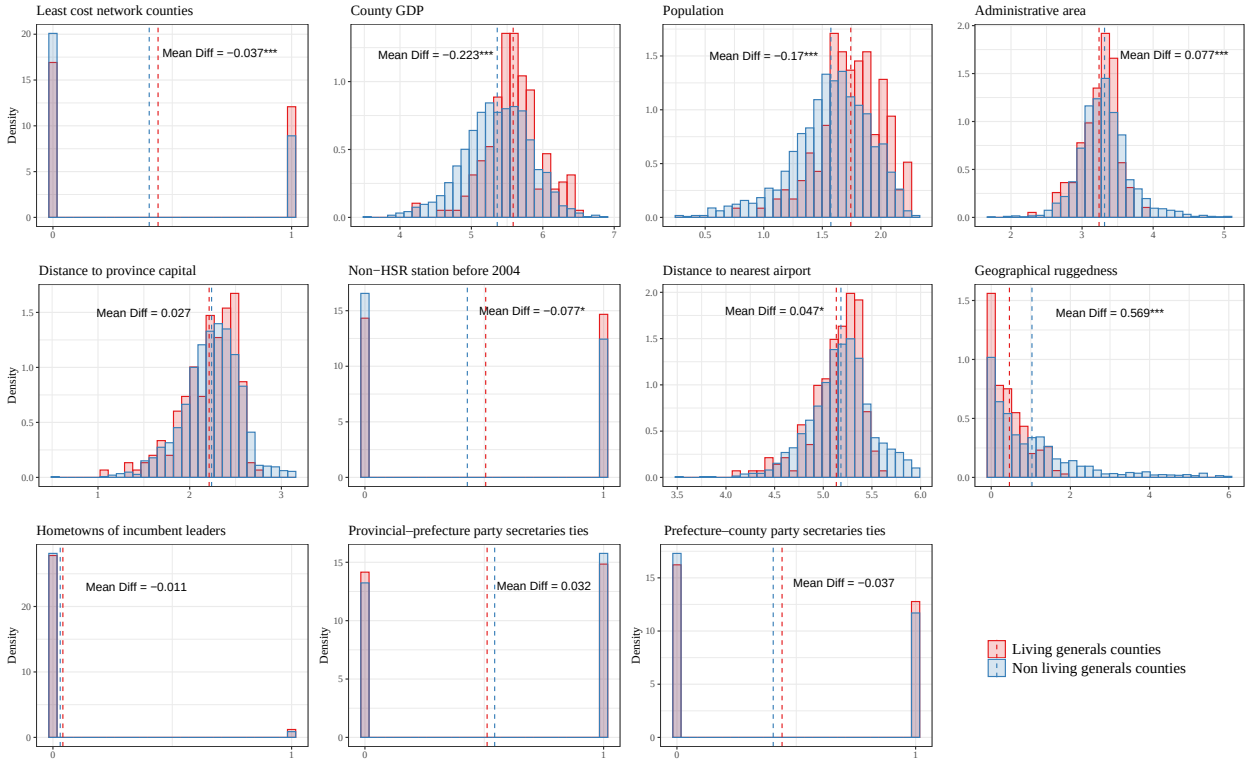


Figure A.5: Comparision between counties with at least one living general and those without in 2003

G Baseline Results: Full Table

Table A.2 reports full results from the baseline models. Among the control variables, the sizes of GDP and population and whether the county is on the least cost network or already had one station in the traditional railway network before 2004 are all positively and significantly correlated with the outcome. This means that the central government tends to prioritize high-speed railway construction in or between economic and population centers and in places that are already connected through the traditional railway networks. The size of a county's administrative areas turns out to be negatively associated with the chance of approval. Those large counties tend to be located in hinterlands with very few transportation networks. The variables for distance to provincial capital and typology are not correlated with the timings of station construction.

The coefficients for the three variables that measure patronage ties are, surprisingly, not significant. Kramon and Posner (2013) point out that the logics of patronage might differ based on the types of goods being distributed. We believe that the null effect of connection with incumbent leaders might be attributable to the distinctive feature of infrastructure benefits. It often takes a long period of time, longer than the average tenure of local leaders, to build high-speed railway stations. Infrastructure benefits also create a commitment problem typical in the exchange of patronage favor (Robinson and Verdier 2013): that the leader cannot retrospectively retract or discontinue the benefits to punish disloyal clients once the benefits are delivered. Incumbent leaders therefore prefer to use other types of goods to strengthen support among followers, such as loans, transfers, or government positions (e.g., Shih 2008; Shih, Adolph and Liu 2012; Jiang and Zhang 2020).

Table A.2: Baseline Results: Full Table

	Time to 1st HSR Station			
	(1)	(2)	(3)	(4)
No. of living generals	0.225***	0.382***	0.359***	0.361***
	(0.054)	(0.092)	(0.082)	(0.083)
Least cost network counties			0.733***	0.738***
			(0.110)	(0.111)
County GDP			0.956***	0.988***
			(0.278)	(0.279)
Population			1.043***	0.966**
			(0.400)	(0.405)
Administrative area			-0.677**	-0.668**
			(0.296)	(0.295)
Distance to province capital			-0.032	-0.026
			(0.433)	(0.434)
Non-HSR station before 2004			0.359***	0.359***
			(0.108)	(0.108)
Distance to nearest airport			-0.116	-0.105
			(0.337)	(0.340)
Geographical ruggedness			0.086	0.072
			(0.156)	(0.157)
Hometowns of incumbent leaders				0.286
				(0.181)
Provincial–prefecture party secretaries ties				0.632
				(0.705)
Prefecture–county party secretaries ties				-0.011
				(0.114)
Strata: prefecture	No	Yes	Yes	Yes
Observations	19559	19559	19559	19559
No. of counties	1812	1812	1812	1812
No. of counties with HSR stations	442	442	442	442
Pseudo-R-squared	0.002	0.009	0.077	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H Robustness Checks

H.1 Alternative definitions and measurements

H.1.1 Robustness Check 1: Inclusion of railways with lower speed

In Table A.3, we relax the criteria we use in identifying high-speed railway stations. In the baseline analysis, we only count those stations in the high-speed railway network with a minimal designing speed of 200KM per hour. A small portion of the high-speed railway network has tracks below 200KM per hour because of geographical limitations. We included these stations in the coding of our dependent variable, and the number of counties experiencing the event of interest increased from 442 in the baseline to 494. We then re-ran the stratified Cox model with prefecture-specific hazard rates as specified in the baseline model (Table 2).

Table A.3: Inclusion of railways with lower speed

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.345***	0.327***
	(0.075)	(0.072)
Least cost network counties		0.756***
		(0.106)
County GDP		1.052***
		(0.260)
Population		0.960**
		(0.382)
Administrative area		-0.667**
		(0.275)
Distance to province capital		0.011
		(0.381)
Non-HSR station before 2004		0.426***
		(0.103)
Distance to nearest airport		-0.067
		(0.304)
Geographical ruggedness		0.100
		(0.153)
Hometowns of incumbent leaders		0.336*
		(0.177)
Provincial–prefecture party secretaries ties		0.621
		(0.694)
Prefecture–county party secretaries ties		-0.043
		(0.106)
Strata: prefecture	Yes	Yes
Observations	19291	19291
No. of counties	1812	1812
No. of counties with HSR stations	494	494
Pseudo-R-squared	0.008	0.082

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.1.2 Robustness Check 2: Two-year lag for time-varying covariates

In the baseline model, we use a one-year lag for time-varying covariates (e.g., number of living generals, GDP, population, and the hometowns of incumbent central leaders). In Table A.4, we use a two-year lag of time-varying covariates, in case earlier events affected the decisions.

Table A.4: Two-year lag for time-varying covariates

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.311***	0.302***
	(0.085)	(0.074)
Least cost network counties		0.738***
		(0.111)
County GDP		1.035***
		(0.275)
Population		0.891**
		(0.403)
Administrative area		-0.639**
		(0.296)
Distance to province capital		-0.030
		(0.433)
Non-HSR station before 2004		0.363***
		(0.107)
Distance to nearest airport		-0.098
		(0.338)
Geographical ruggedness		0.067
		(0.157)
Hometowns of incumbent leaders		0.289*
		(0.169)
Provincial–prefecture party secretaries ties		0.608
		(0.704)
Prefecture–county party secretaries ties		-0.013
		(0.115)
Strata: prefecture	Yes	Yes
Observations	17750	17750
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.008	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.1.3 Robustness Check 3: Alternative measure of economic development

Another concern is that the indicator we use for local development, GDP, might be subject to data falsification. To address this concern, we replace GDP with a measure for nighttime satellite luminosity in Table A.5. The results are consistent with baseline.

Table A.5: Alternative measure of economic development

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.368***	0.362***
	(0.089)	(0.084)
Night light	0.995***	0.467***
	(0.119)	(0.142)
Least cost network counties		0.749***
		(0.111)
Population		1.425***
		(0.345)
Administrative area		-0.746***
		(0.289)
Distance to province capital		-0.096
		(0.425)
Non-HSR station before 2004		0.365***
		(0.108)
Distance to nearest airport		-0.043
		(0.346)
Geographical ruggedness		0.073
		(0.154)
Hometowns of incumbent leaders		0.251
		(0.179)
Provincial–prefecture party secretaries ties		0.555
		(0.674)
Prefecture–county party secretaries ties		-0.025
		(0.115)
Strata: prefecture	Yes	Yes
Observations	19551	19551
No. of counties	1811	1811
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.037	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.1.4 Robustness Check 4: Alternative measure of typology

The lack of statistical significance of the typology measure in the baseline is counterintuitive, and it is possible that an imperfect measure of typology could bias our main estimates. In Table A.6, we create a dummy to distinguish plain counties from hill and mountain counties according to the categorization in the county statistical yearbooks.

Table A.6: Alternative measure of typology

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.400***	0.366***
	(0.085)	(0.081)
Plain county	0.620***	0.179
	(0.131)	(0.134)
Least cost network counties		0.725***
		(0.111)
County GDP		0.959***
		(0.281)
Population		0.816**
		(0.384)
Administrative area		-0.505*
		(0.273)
Distance to province capital		-0.046
		(0.438)
Non-HSR station before 2004		0.361***
		(0.108)
Distance to nearest airport		-0.052
		(0.342)
Hometowns of incumbent leaders		0.290
		(0.182)
Provincial–prefecture party secretaries ties		0.650
		(0.729)
Prefecture–county party secretaries ties		-0.011
		(0.115)
Strata: prefecture	Yes	Yes
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.018	0.078

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.1.5 Robustness Check 5: Additional measure for political connections

In the baseline analysis, we account for connections between provincial, prefectural, and county party secretaries. The coding strategy assumes that local leaders are appointed by their direct superiors at one level up. Provincial authorities sometimes also have a say in the appointment of county leaders (e.g., Zhejiang province). In Table A.7, we include an additional control (Provincial–county party secretaries ties) that measure the potential connection between provincial and county leaders.

Table A.7: Additional measure for political connections

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.385***	0.362***
	(0.094)	(0.083)
Provincial–county party secretaries ties	-0.166	-0.202
	(0.108)	(0.134)
Least cost network counties		0.730***
		(0.111)
County GDP		0.965***
		(0.281)
Population		1.001**
		(0.405)
Administrative area		-0.660**
		(0.294)
Distance to province capital		-0.065
		(0.434)
Non-HSR station before 2004		0.360***
		(0.108)
Distance to nearest airport		-0.067
		(0.338)
Geographical ruggedness		0.065
		(0.157)
Hometowns of incumbent leaders		0.291
		(0.181)
Provincial–prefecture party secretaries ties		0.697
		(0.690)
Prefecture–county party secretaries ties		0.104
		(0.141)
Strata: prefecture	Yes	Yes
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.010	0.078

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.1.6 Robustness Check 6: Replace least cost network with least distance network

We used the "least cost path" generated by QGIS in our baseline as a control. It is possible that the construction of high-speed railway does not necessarily minimize cost. The Code for Design of High-Speed Railway (《高速铁路设计规范》, released and implemented by the Ministry of Railways on December 1, 2009) requires the routes of the high-speed railways to be as straight as possible. For the 350KM per hour track, the minimum curve radius needs to be 8 to 10 kilometers. The design of high-speed railways therefore frequently uses elevated bridges and tunnels to cut through different barriers (rivers, valleys, and mountains). As a robustness check, we replace the least cost network with a least distance network, in which we use straight lines to connect major cities (Figure A.6). The results using this alternative measure are reported in Table A.8.

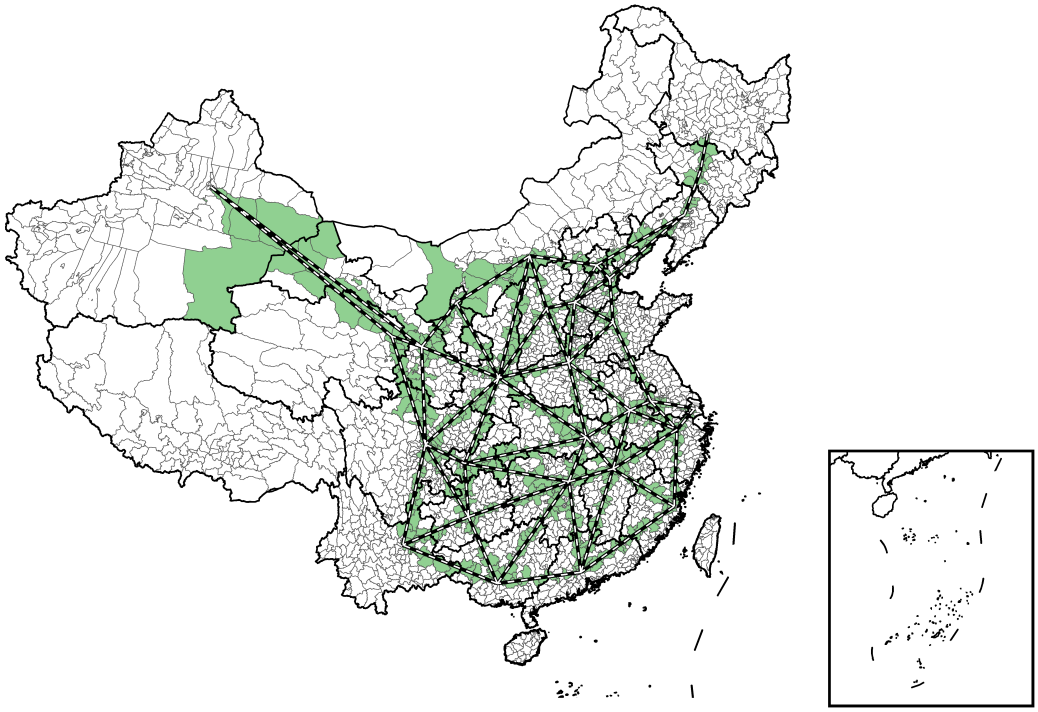


Figure A.6: Counties on the "Least Distance Network"

Table A.8: Replace least cost network with least distance network

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.399***	0.344***
	(0.098)	(0.078)
Least distance network counties	0.467***	0.319***
	(0.104)	(0.109)
County GDP		0.998***
		(0.282)
Population		1.049***
		(0.407)
Administrative area		-0.597**
		(0.294)
Distance to province capital		-0.056
		(0.431)
Non-HSR station before 2004		0.440***
		(0.106)
Distance to nearest airport		-0.183
		(0.343)
Geographical ruggedness		0.027
		(0.161)
Hometowns of incumbent leaders		0.215
		(0.193)
Provincial–prefecture party secretaries ties		0.648
		(0.684)
Prefecture–county party secretaries ties		-0.013
		(0.112)
Strata: prefecture	Yes	Yes
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.017	0.063

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.2 Subsamples

H.2.1 Robustness Check 7: Counties with >500K population

In Table A.9, we limit our analysis to counties with a population larger than 500,000, which reduces the number of sample counties to 754. The Chinese government has announced that by 2035 the high-speed railway network would cover all cities with at least 500,000 people. By limiting the analysis to these counties, we are only comparing counties that are potentially "eligible" for the stations in the medium term. This rules out the possibility that the inclusion of counties that did not produce a founding general and would have little chance of getting a station in any case inflates our results.

Table A.9: Counties with >500K population

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.256***	0.282***
	(0.074)	(0.072)
Least cost network counties		0.722***
		(0.144)
County GDP		0.797**
		(0.391)
Population		0.625
		(0.685)
Administrative area		-0.880*
		(0.519)
Distance to province capital		-0.377
		(0.431)
Non-HSR station before 2004		0.323**
		(0.151)
Distance to nearest airport		0.062
		(0.385)
Geographical ruggedness		0.048
		(0.243)
Hometowns of incumbent leaders		0.176
		(0.206)
Provincial–prefecture party secretaries ties		-0.327
		(0.773)
Prefecture–county party secretaries ties		0.279*
		(0.156)
Strata: prefecture	Yes	Yes
Observations	7225	7225
No. of counties	754	754
No. of counties with HSR stations	262	262
Pseudo-R-squared	0.009	0.061

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.2.2 Robustness Check 8: Exclude remote counties

In our baseline analysis, we already exclude counties located in Xinjiang and Tibet. In this analysis, we further exclude counties in Inner Mongolia from our sample. It is possible that remote counties that do not have founding generals and have a low chance of acquiring high-speed railway stations are driving our results. We report the result in Table A.10, and the result is largely consistent with the baseline result.

Table A.10: Exclude remote counties

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.382***	0.360***
	(0.092)	(0.082)
Least cost network counties		0.722***
		(0.111)
County GDP		1.004***
		(0.279)
Population		0.946**
		(0.406)
Administrative area		-0.647**
		(0.299)
Distance to province capital		-0.029
		(0.436)
Non-HSR station before 2004		0.369***
		(0.108)
Distance to nearest airport		-0.103
		(0.340)
Geographical ruggedness		0.067
		(0.158)
Hometowns of incumbent leaders		0.284
		(0.181)
Provincial–prefecture party secretaries ties		0.636
		(0.703)
Prefecture–county party secretaries ties		-0.015
		(0.114)
Strata: prefecture	Yes	Yes
Observations	18638	18638
No. of counties	1735	1735
No. of counties with HSR stations	439	439
Pseudo-R-squared	0.009	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.2.3 Robustness Check 9: Exclude generals held government positions

In Table A.11, we exclude 17 generals who held leadership positions in the central government. The generals in the remaining sample spent their entire careers in the PLA. By doing so, we want to make sure that influence from people who had direct decision-making power over railway benefits is not driving the association we observe.

Table A.11: Exclude generals who held government positions

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.384***	0.355***
	(0.097)	(0.083)
Least cost network counties		0.736***
		(0.111)
County GDP		0.987***
		(0.279)
Population		0.960**
		(0.404)
Administrative area		-0.661**
		(0.295)
Distance to province capital		-0.024
		(0.434)
Non-HSR station before 2004		0.361***
		(0.108)
Distance to nearest airport		-0.103
		(0.339)
Geographical ruggedness		0.069
		(0.157)
Hometowns of incumbent leaders		0.285
		(0.181)
Provincial–prefecture party secretaries ties		0.634
		(0.705)
Prefecture–county party secretaries ties		-0.009
		(0.114)
Strata: prefecture	Yes	Yes
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.008	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.2.4 Robustness Check 10: Counties with different numbers of generals

We replace the explanatory variable in models 3 of Table 2 with a dummy indicating whether a county has *at least* K (K=1, 2, 3...) number of living generals. Figure A.7 plots the coefficients for the dummies indicating counties with different numbers of living generals.[32] This exercise helps us examine whether a few extreme values drive the baseline results. We find that the size of the coefficient gradually increases in the number of living generals associated with a county, suggesting that officials in county with more generals have greater success in obtaining high-speed rail.

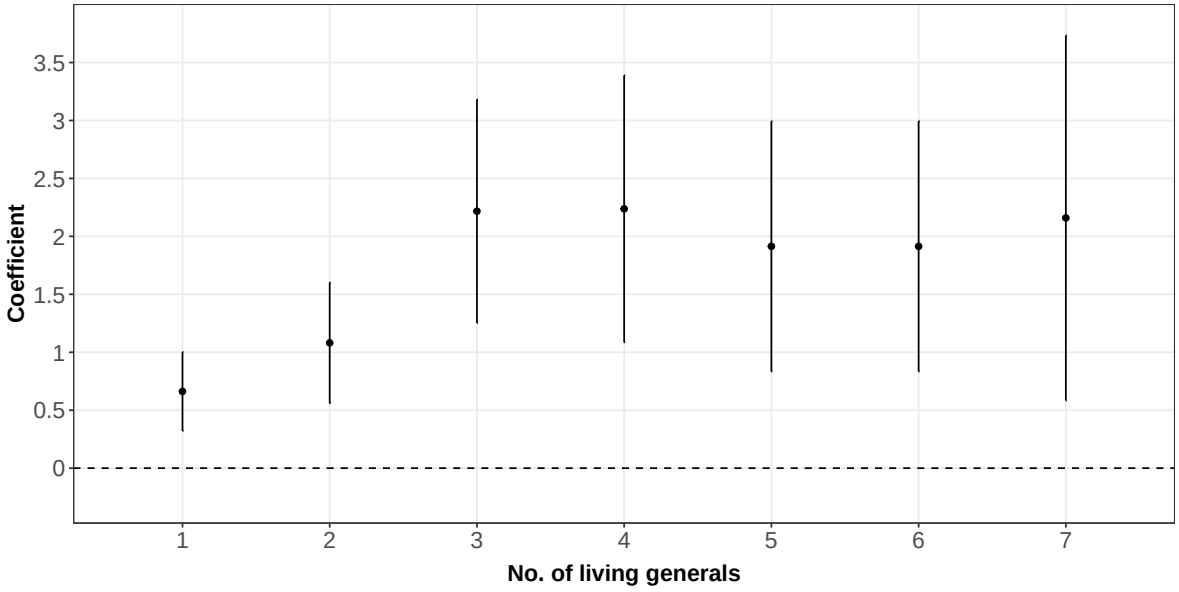


Figure A.7: The Sizes of the Coefficients by the Numbers of Living Generals

[32]There are very few counties that have more than eight living generals. Including them does not change the overall patterns.

H.3 Different estimation methods

H.3.1 Robustness Check 11: Using logit models for estimation

We use Cox regressions with prefecture-specific hazards in our baseline analysis. Our results might be sensitive to the Cox model assumption that the underlying hazards of different models are proportional. In Table A.12, we relax this assumption by using a piece-wise logistic model to analyze the data. In line with our baseline analysis, we include prefectural dummies to account for unobserved heterogeneities at the prefectural level. The results are consistent with the baseline.

Table A.12: Using logit models for estimation

	(1)	(2)
No. of living generals	0.189***	0.303***
	(0.063)	(0.070)
Least cost network counties		0.915***
		(0.150)
County GDP		2.709***
		(0.218)
Population		0.162
		(0.462)
Administrative area		-0.193
		(0.408)
Distance to province capital		0.600
		(0.557)
Non-HSR station before 2004		0.401***
		(0.144)
Distance to nearest airport		-0.362
		(0.457)
Geographical ruggedness		0.069
		(0.209)
Hometowns of incumbent leaders		0.551*
		(0.296)
Provincial–prefecture party secretaries ties		0.404***
		(0.127)
Prefecture–county party secretaries ties		0.024
		(0.116)
Prefecture fixed effect	Yes	Yes
Observations	12304	12304
Pseudo-R-squared	0.061	0.143

Note: The models report coefficients from piece-wise logit models with prefecture fixed effects.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.3.2 Robustness Check 12: Clustering counties on the same lines

The timing of approval might be correlated among counties on the same railway, but, as explained in the main text, the amount of time to approval can vary even for stations on the same line. To further mitigate this concern, we report results that cluster the standard errors of counties located on the same line by applying multiway clustered standard errors in the manner proposed by Cameron, Gelbach and Miller (2011) (Table A.13). An ideal strategy would be clustering all counties that are eligible for approval, but the available data only show the counties that eventually received approval. Readers should therefore interpret this result with caution.

Table A.13: Clustering counties on the same lines

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.225***	0.190**
	(0.082)	(0.092)
Least cost network counties		0.712***
		(0.178)
County GDP		0.658***
		(0.243)
Population		1.096***
		(0.372)
Administrative area		-0.137
		(0.270)
Distance to province capital		0.010
		(0.309)
Non-HSR station before 2004		0.197
		(0.148)
Distance to nearest airport		-0.800**
		(0.386)
Geographical ruggedness		0.139
		(0.118)
Hometowns of incumbent leaders		0.114
		(0.204)
Provincial–prefecture party secretaries ties		0.133
		(0.162)
Prefecture–county party secretaries ties		0.006
		(0.126)
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.002	0.042

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

H.3.3 Robustness Check 13: Using cross-sectional data

We believe the estimation model we use in our baseline analysis—Cox proportional hazard model—is most appropriate to test our argument, as it estimates both temporal (i.e., how quickly a locality gets approval) and regional variations (i.e., whether a locality gets approval at all). Some cautious readers might suggest our results are sensitive to the assumptions of survival models. To ameliorate this concern, we test our hypothesis using simple cross-sectional data. The outcome variable measures whether a county had at least one station by 2015, and the explanatory variable is the number of living generals in 2003. The results are reported in Table A.14. While the use of cross-sectional data sacrifices temporal variations, we are still able to obtain results consistent with our baseline models.

Table A.14: Using cross-sectional data

	(1)	(2)
No. of living generals in 2003	0.037***	0.032***
	(0.013)	(0.012)
Least cost network counties		0.158***
		(0.025)
County GDP		0.189***
		(0.060)
Population		0.147*
		(0.076)
Administrative area		-0.020
		(0.053)
Distance to province capital		0.009
		(0.096)
Non-HSR station before 2004		0.072***
		(0.023)
Distance to nearest airport		-0.078
		(0.093)
Geographical ruggedness		-0.017
		(0.031)
Hometowns of incumbent leaders		0.095
		(0.078)
Provincial–prefecture party secretaries ties		0.359
		(0.252)
Prefecture–county party secretaries ties		-0.040*
		(0.023)
Constant	0.201**	-0.936*
	(0.102)	(0.508)
Prefecture fixed effect	Yes	Yes
Observations	1735	1735
Adjusted-R-squared	0.209	0.283

Note: The models report coefficients from ordinary least square regressions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

I Exploring Possible Mechanisms

I.1 Accounting for the effect of *Laoqu*

In Table A.15, we further control for whether the counties were in a CPC-occupied area (also known as the "revolutionary base area" or *laoqu*) before 1949. We obtain the information on county *laoqu* status from the county yearbooks. It is possible that the birthplaces of the generals largely overlap with *laoqu*, and the CPC government purposefully prioritized revolutionary counties in railway planning. The result shows that *laoqu* is not a significant predictor in railway station assignment, nor does it change the effect of our main explanatory variable.

Table A.15: Accounting for possible effect of *Laoqu*

	Time to 1st HSR Station	
	(1)	(2)
No. of living generals	0.383***	0.360***
	(0.093)	(0.083)
CPC revolutionary county	-0.027	0.043
	(0.172)	(0.166)
Least cost network counties		0.738***
		(0.111)
County GDP		0.983***
		(0.281)
Population		0.973**
		(0.407)
Administrative area		-0.675**
		(0.297)
Distance to province capital		-0.033
		(0.435)
Non-HSR station before 2004		0.360***
		(0.108)
Distance to nearest airport		-0.106
		(0.340)
Geographical ruggedness		0.071
		(0.157)
Hometowns of incumbent leaders		0.285
		(0.182)
Provincial–prefecture party secretaries ties		0.629
		(0.705)
Prefecture–county party secretaries ties		-0.011
		(0.114)
Strata: prefecture	Yes	Yes
Observations	19559	19559
No. of counties	1812	1812
No. of counties with HSR stations	442	442
Pseudo-R-squared	0.009	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

I.2 Living versus deceased generals

In Table A.16, model 1 repeats model 3 of the baseline analysis. Model 2 only includes deceased generals as the key explanatory variable. [33]Model 3 includes both living and deceased generals.

Table A.16: Living vs. Deceased Generals

	Time to 1st HSR Station		
	(1)	(2)	(3)
No. of living generals	0.361***		0.496***
	(0.083)		(0.128)
No. of deceased generals		0.031***	-0.025
		(0.010)	(0.015)
Covariates	Yes	Yes	Yes
Strata: prefecture	Yes	Yes	Yes
Observations	19559	19559	19559
No. of counties	1812	1812	1812
No. of counties with HSR stations	442	442	442
Pseudo-R-squared	0.077	0.072	0.078

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

[33]When the number of deceased generals is included alone, it registers statistical significance. This is because counties with more deceased generals also have more living generals.

J Additional Mechanisms

J.1 Securing Military Loyalty

Table A.17: Founding Generals vs. Subsequent Military Leaders

	(1)	(2)	(3)	(4)	(5)	(6)
No. of living generals		0.368***	0.414***		0.359***	0.307**
		(0.079)	(0.075)		(0.085)	(0.124)
No. of incumbent military CC members	-0.090	-0.190	-0.128			
	(0.163)	(0.171)	(0.184)			
No. of living generals × No. of incumbent military CC members			-0.127			
			(0.125)			
No. of retired post-1988 generals				0.064	0.006	-0.012
				(0.061)	(0.061)	(0.069)
No. of living generals × No. of retired post-1988 generals						0.034
						(0.048)
Covariates	Yes	Yes	Yes	Yes	Yes	Yes
Strata: prefecture	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19559	19559	19559	19559	19559	19559
No. of counties	1812	1812	1812	1812	1812	1812
No. of counties with HSR stations	442	442	442	442	442	442
Pseudo-R-squared	0.069	0.078	0.078	0.070	0.077	0.078

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. Columns 1 through 3 compare the effect of founding generals with that of incumbent military CC members; columns 4 through 6 compare the effect of founding generals with that of post-1988 generals. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

J.2 Personal Connections

Table A.18: Generals who had lived in Beijing vs. had lived elsewhere

	(1)	(2)	(3)
No. of living generals lived in Beijing	0.511***		0.349**
	(0.139)		(0.162)
No. of living generals lived elsewhere		0.615***	0.377***
		(0.118)	(0.144)
Covariates	Yes	Yes	Yes
Strata: prefecture	Yes	Yes	Yes
Observations	19559	19559	19559
No. of counties	1812	1812	1812
No. of counties with HSR stations	442	442	442
Pseudo-R-squared	0.076	0.075	0.077

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

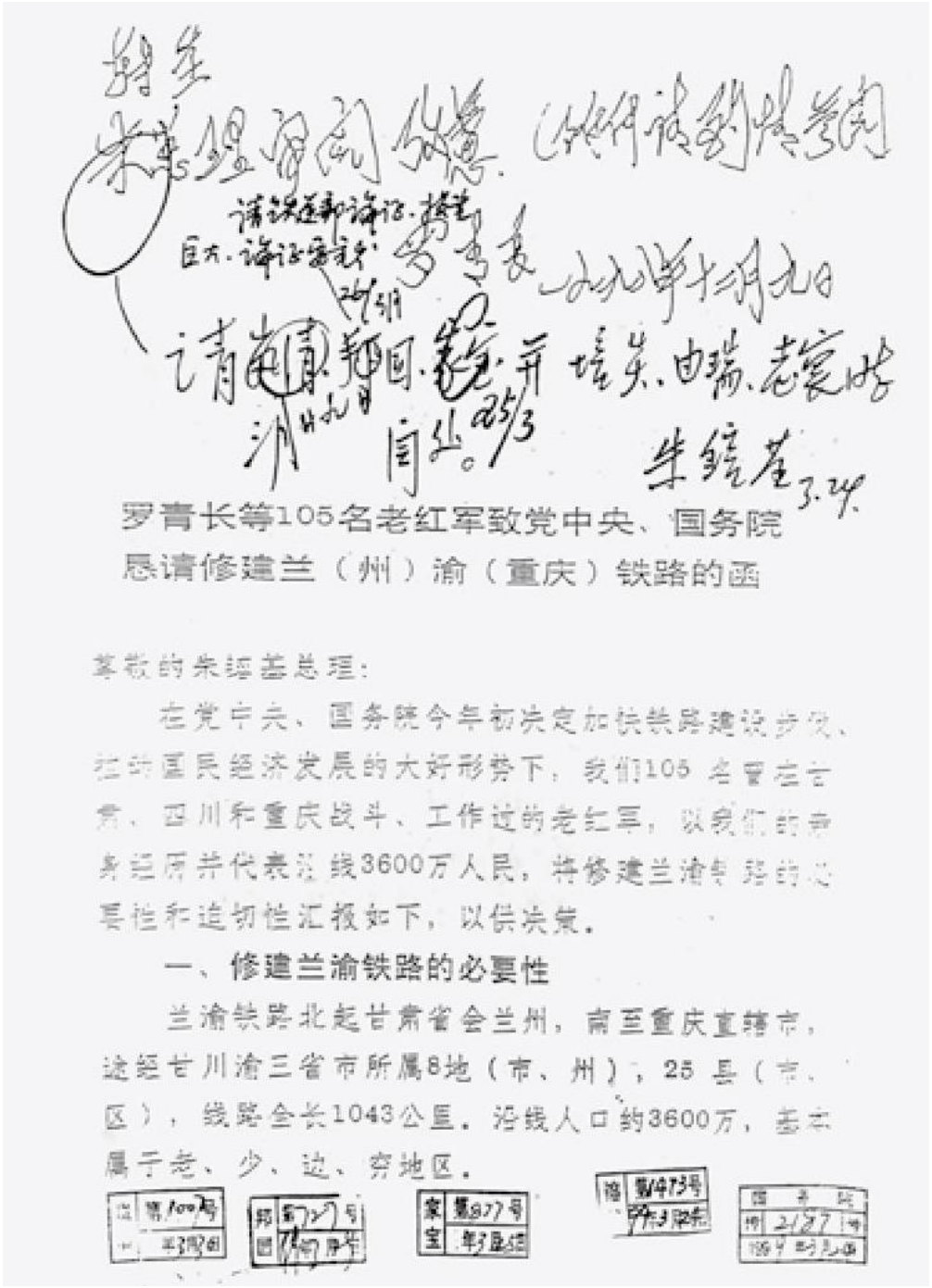
J.3 Local Cohesion

Table A.19: Local Cohesion

	Time of First Proposing HSR		
	(1)	(2)	(3)
No. of living generals	0.062**	0.039	0.039
	(0.026)	(0.029)	(0.029)
Socioeconomic controls	No	Yes	Yes
Political connection controls	No	No	Yes
Strata: prefecture	Yes	Yes	Yes
Observations	11724	11724	11724
No. of counties	1812	1812	1812
No. of counties proposed HSR stations	1173	1173	1173
Pseudo-R-squared	0.000	0.016	0.016

Note: The models report coefficients from stratified Cox regressions with prefecture-specific hazard rates. We include the same list of controls as the baseline models (Table 2).
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

K Case Evidence: supplementary material



罗青长等105名老红军致党中央、国务院
恳请修建兰（州）渝（重庆）铁路的函

尊敬的朱镕基总理：

在党中央、国务院今年初决定加快铁路建设步伐、扩大国民经济发展的大好形势下，我们105名曾在甘肃、四川和重庆战斗、工作过的老红军，以我们的亲身经历并代表沿线3600万人民，特修建兰渝铁路的必要性和迫切性汇报如下，以供决策。

一、修建兰渝铁路的必要性

兰渝铁路北起甘肃省会兰州，南至重庆直辖市，途经甘川渝三省市所属8地（市、州），25县（市、区），线路全长1043公里。沿线人口约3600万，基本属于老、少、边、穷地区。

Figure A.8: Zhu Rongji's Directive on the Letter Signed by Retired Revolutionaries on the Lanzhou-Chongqing Railway

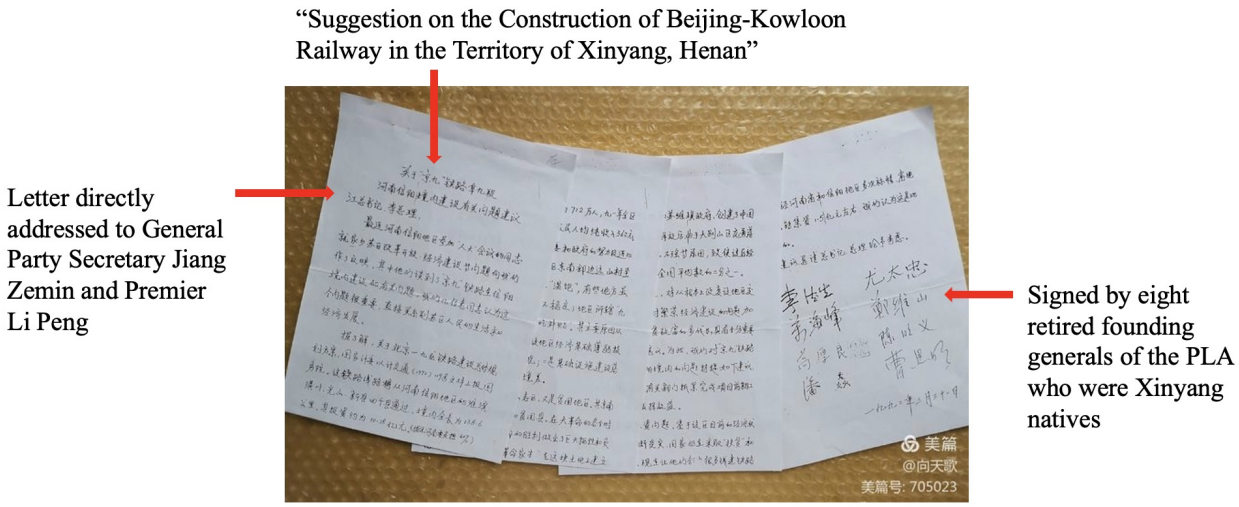


Figure A.9: Founding Generals' Letter

Note: Founding generals' letter to General Party Secretary Jiang Zemin and Premier Li Peng.

L Summary Statistics for Variables in Additional Analyses

Table A.20: Summary statistics for variables in additional analyses

	Obs	Mean	SD	Min	Max
No. of living generals lived in Beijing	19559	0.042	0.275	0	7
No. of living generals lived elsewhere	19559	0.033	0.241	0	5
No. of living without govt positions	19559	0.091	0.514	0	13
No. of incumbent CC members (2004-15, minus military)	19559	0.096	0.340	0	3
No. of military CC members (2004-15)	19559	0.047	0.239	0	3
No. of retired CC members	19559	0.167	0.501	0	9
Night light (logged)	19551	2.552	0.626	0	4.667
Plain county	19559	0.288	0.453	0	1
CPC revolutionary county	19559	0.124	0.330	0	1
Provincial–county party secretaries ties	19559	0.504	0.500	0	1
Least distance network counties	19559	0.309	0.462	0	1

M Data Coding Rules for Additional Variables

Number of incumbent military Central Committee members: We count the number of military leaders who were full and alternate members of the 16th (2003–2007), 17th (2008–2012), and 18th (2013–2018) Central Committee. There are 116 military committee members during this period. We match their birthplaces with our county sample.

Number of retired post-1988 generals: We count the number of generals and lieutenant generals who were conferred the ranks after 1988. Those who were first lieutenant generals and later promoted to generals are only counted once. We also exclude those generals who were conferred the rank of major generals before 1965 and then promoted after 1988. The retirement age for lieutenant generals is 63 and 65 for generals. There are 596 post-1988 generals in total. We match their birthplaces with our sample counties and count the number of retired generals.

Number of Incumbent Central Committee members: We count the number of civilian officials who were full members of the 16th (2003–2007), 17th (2008–2012), and 18th (2013–2018) Central Committee. Those who were elected CC members multiple times are only counted once. There are 380 members in total. We match their biographies with our sample counties and exclude those who were investigated for corruption.

Number of retired Central Committee members: We count the number of all living, retired Central Committee members each year in our sample county. We exclude those peasants and workers members elected during the Cultural Revolution, and those who were expelled because of political reasons or corruption investment. There were 570 retired, living CC members in total during the observation period.

Time of first proposing high-speed railways: The data on the timing of county's first proposal to build high-speed railway suffers from severe missingness. Many counties did not publish anything until they got approved for construction by the central government. We collected anything we could find using internet search. When we lack data on all counties in a prefecture, we use the year the prefecture first proposed the construction instead.

Appendix Reference

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