

Networks rewired: quota enforcement and the unintended mobilization of native place ties

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We explore how institutional designs can have unintended consequences, especially by rewiring social networks. Using archival data on the civil-service examinations in historical China, we argue that the enforcement of a regional quota system in 1427 reshaped group boundaries along native place, turned emotional affinities for one's hometown into political stakes, and reinforced the influence of native place ties among political elites. Analyzing approximately 30,000 individual records, we confirm this argument by documenting a macro-level shift from a highly unequal to a more balanced provincial distribution of students who passed the examinations following the enforcement of the quota system. As native place became a primary basis for network homophily, elites deliberately cultivated these connections, seizing the opportunity as *ad hoc* examiners to provide preferential treatment based on shared place of origin. Our micro-level analysis of 12,752 passing students between 1400 and 1580 identifies this in-group favoritism, with examiners often ranking students from their own provinces higher. A mechanism of safeguarding political stakes underscores this baseline effect, which became more pronounced during the quota stage, especially under weaker state capacity, among examiners from disadvantaged provinces, and when examiners had greater vested interest in their hometown. These findings enrich theories of group boundaries and categorization, network homophily and formation, and the unintended consequences of institutional designs while also providing policy insights for affirmative action.

Key words: native place ties; unintended consequences; quota system; network homophily; group boundary.

Introduction

The concept of *guanxi*, a term used to denote social networks, in China today governs everyday interactions. Of particular importance are native place ties, built on shared geographical origins. The place boundary is flexible, and it often serves as a homophilous basis for developing interpersonal relations and for nurturing community norms (Ma and Xiang, 1998). Extant research confirms their effects in various contexts, including migrant workers' job searches and the

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promotion of bureaucrats (Shih et al., 2012; Oppen et al., 2015). Explaining why these ties matter, Oppen et al. (2015, 335) state that “[place-based] homophily [serves] as an *ex ante* screening mechanism to place like-minded actors in key positions,” especially in environments lacking institutional support. To be sure, this is not exclusively a Chinese phenomenon; similar place-based networks among factory workers were observed in industrializing America (Gutman, 1973).

Despite their universal presence, native place ties in China became a primary tool for political elites to forge alliances during the early Ming dynasty (1368–1664), well before large-scale economic migration. While an affinity for one's hometown is common when people relocate (Honig, 1992), and such ties certainly existed in earlier dynasties, it was during the Ming dynasty that they became a significant basis for socializing with peers from the same place, largely irrespective of socioeconomic status. Prior to this, Chinese political elites predominantly came from high-status families. For instance, during the Tang dynasty (618–907), elites “no longer had direct links with their places of ancestral origin” (Tackett, 2014, 52). Instead, they were bound by intermarriage networks. These connections were so powerful that the court attempted to prohibit intermarriage among the most prominent families, “hoping thereby to weaken their social prestige. In fact, the ban was entirely ineffective, serving only to elevate their status” (Tackett, 2014, 35). Similarly, the Song dynasty (960–1279) elites, as Hartwell (1986, 33) describes, remained as an endogamous social group, maintaining hegemony through marriage alliances. Their dominance persisted even during the famously controversial Wang Anshi Reforms (1069–1076), which split them ideologically (Shang and Huang, 2022). In contrast, the elites of the Ming dynasty were marked by place-based network homophily (Feng, 2011).

Since then, native place ties have played an important role in many areas of life in China, extending beyond informal politics. It is essential to examine the institutional sources through which these ties were mobilized as important political stakes, initially for Ming elites. Why, among multiple group boundary markers, did native place assume prominence? An answer to this question will offer a crucial lens into network formation and its political and social consequences. This inquiry leads to a second question: after gaining salience, how did native place ties then affect elite recruitment? Addressing this question will illuminate the dynamics of network reproduction.

These inquiries are also important for gaining theoretical insights into group boundaries. Concrete social networks in terms of how individuals are connected to one another embody and reify an abstract conceptualization of social structure (Erikson and Occhiuto, 2017). Their interactions generate distinct social groups, fostering a sense of sameness within groups while intensifying distinctions between them. This seemingly natural process induces categorization (Lamont and Molnár, 2002; Goldberg et al., 2016), which serves as a cognitive economizer for reasoning inductively about novel encounters.

Research has unpacked how changing patterns of connections among elites recategorized social groups, facilitating or hindering the state-building efforts in Western contexts (Bearman, 1993; Gould, 1995; Hillmann, 2008; Parigi and Bergemann, 2016). Throughout these historical transformations, social networks conveyed ideas and resources necessary for political actions. In terms of network origins, institutional designs intended for other purposes can sometimes inadvertently rewire networks by creating and reconfiguring social groups. Among alternatives such as gender and race, the specific marker used to define a prominent group boundary is often determined by policy choices (Skrentny, 1996; Loveman, 1999; Ahmed et al., 2007; Wimmer, 2013; Emigh et al., 2016). Policy makers, under pressure to address inequality in visible and effective ways, often resort to categorizing individuals into groups (De Zwart, 2005). This approach creates experiential distinctions: through paperwork and daily interactions, group boundaries are reinforced, making the shared experiences of in-group members a basis for forming social networks and guiding behavior.

In the case of native place ties, attachment to one's hometown is sentiment as old as Chinese civilization itself. Therefore, their mobilization as crucial political stakes cannot be attributed solely to the historical significance of the Ming dynasty. Instead, the early Ming period represented a historical continuity rather than a critical juncture, a point that will be elaborated upon

later. Given this context, we can explore and rule out alternative explanations. For instance, politically, unification had long become the *de facto* political ideology (Zhao, 2015), stifling any impetus toward sustaining localism. Economically, the agrarian economy discouraged geographic mobility, attenuating the lived experience of sojourners and weakening motivations to cultivate native place ties as a coping mechanism. Regarding formal institutions, China developed one of the earliest bureaucracies, which constrained particularism, including place-based favoritism. Specifically, the civil-service examination system that recruited political elites through open competition first emerged during the Sui dynasty (581–618), with fundamental changes occurring in earlier dynasties. The absence of significant social, political, and economic transformations in the Ming dynasty begs the two key questions that motivate this article.

Our answer focuses on the unintended consequences of the regional quota system enforced on civil-service examinations in 1427. This change categorized students by their place of origin and made distinctive places commensurate with their students' success in examinations, hence creating an informal power base within the bureaucracy. As the elites sorted themselves into various place-based groups, native place replaced status as the primary basis for network homophily. With the increasing importance of these ties, favoring those from the same place at the examination stage and beyond became a deliberate choice.

Our empirical analysis proceeds in two steps, drawing on detailed historical data from approximately 30,000 students who passed the examinations and were conferred the title of *Jinshi* between the twelfth and sixteenth centuries. First, we explore whether the regional quota system affected the geographic origins of *Jinshi*. Our findings indicate a more unequal provincial distribution of *Jinshi* prior to the quota enforcement and a more balanced distribution afterward. These stylized facts provide tentative evidence of a developing place-based group boundary and suggest the increasing influence of native place ties.

Our second step involves a micro-level analysis to test whether these ties became more crucial in influencing examination outcomes during the quota stage, using finer-grained relational data based on a subsample of 12,752 *Jinshi* between 1400 and 1580. Our findings indicate that, following the enforcement of the quotas, having native place ties with examiners moved up a student's ranking, increasing his likelihood of being fast-tracked into the bureaucracy. We also find evidence supporting the mechanism of safeguarding political stakes. In the following sections, we begin with a summary of the relevant literature, proceed through the two analytical steps, and conclude with the theoretical contributions and policy implications.

Relevant literature

Our interest in the institutional contingencies of native place ties relates to three strands of literature. First, our empirical inquiry into the conditions under which these ties gained salience extends a theoretical understanding of homophily, the tendency for individuals to *associate* with those who are similar (McPherson et al., 2001). In modern societies, homophily occurs through both ascribed and achieved factors, such as cultural tastes. Across these dimensions, the adage “birds of a feather flock together” has been tested in various settings as a mechanism explaining network-induced inequalities in access to resources (McPherson et al., 2001; Kossinets and Watts, 2009).

By focusing on native place, we enrich the homophily literature by introducing an understudied ascribed dimension and revealing how institutional designs intended for other purposes unintentionally reinforce this specific sameness. Unlike race or gender, which has natural and visible distinctions, place of origin in a racially homogenous society is not an intuitive basis for homophily. Since everyone originates from a place, invoking this otherwise invisible marker to sort social interactions highlights a subtle distinction between baseline and inbreeding homophily (McPherson et al., 2001, 419). The former refers to the extent of homophily arising from the demographic distribution of the population, while the latter is moderated by institutionalized preferences for sociability. Although it is challenging to disentangle these two types of homophily

in empirical settings, the growing role of native place as a basis for networking illustrates a shift from baseline to inbreeding homophily at the conceptual level.

Second, our focus on the unintended consequences of institutional designs speaks to the growing interest in the role of the state in shaping social groups and categorization. Extant research has explored how race and ethnicity are constructed for group inclusion or exclusion in various contexts (De Zwart, 2005; Ahmed et al., 2007; Emigh et al., 2016). If we consider inequality to be unavoidable, then a group-based redistributive policy to promote inclusion becomes a convenient choice due to its efficiency in producing immediately visible effects. Many policy makers adopt such an approach to address inequality, often by defining groups that individuals must register with to access resources. This results in what De Zwart (2005, 137–138) refers to as the “dilemma of recognition,” where “designating castes as beneficiaries of affirmative action entailed recognition and accentuation of the very social distinctions.”

Research on race-based affirmative action reflects a similar dilemma, showing that existing discrimination against racial minorities can be intensified by such policy agendas (Leslie et al., 2014). However, understanding these findings requires careful consideration of their specific context. Entrenched racial discrimination in the United States means that recent policy remedies may not be immediately effective. Additionally, race and ethnicity are often correlated with socioeconomic status, raising questions about the impact of categorizing intended beneficiaries by class as an alternative policy option. It is well established that salient group boundaries are socially constructed, shaped by heightened experiences of existing divisions that inscribe meanings and establish relational routines associated with these groups. For example, the identity cards instituted in Rwanda by the Belgian colonizers constructed an artificial ethnic classification between Hutu and Tutsi. Despite the absence of noticeable physical differences, this arbitrary group boundary fostered hatred and distrust, ultimately leading to the 1994 genocide (Longman, 2001). In our case, despite the racial, cultural, and linguistic homogeneity among the Jinshi, a place-based group boundary fostered in-group favoritism, with the elites hoarding opportunities for people from their own regions. Our research reveals a strong group-making effect: institutionalizing social groups along existent, largely invisible, and seemingly natural dimensions has a lasting impact on elite reproduction.

The third strand of literature relevant to our research is historical network analysis (Bearman, 1993; Gould, 1995; Stovel et al., 1996; Hillmann, 2008; Parigi and Bergemann, 2016; Makovi, 2019), especially studies exploring how networks influenced political actions and their consequences. For example, Bearman (1993) documents how the ties bonding Norfolk county gentry in England shifted from kinship- to patronage-based networks between 1540 and 1640. This change consolidated the gentry group across different places to act as a whole, invoked the abstract religious term of “Puritanism,” and staged collective action leading to the English Civil War (1642–1651).

Regarding what initially led to network formation during these historical junctures, Gould’s (1995) classic study on insurgent identities in nineteenth-century France highlights state policy as a turning point in reshaping social interactions. Insurgents in 1848 responded to a working-class identity because “the social networks . . . are patterned in such a way that the people in them can plausibly be partitioned into ‘workers’ and ‘nonworkers’” (Gould, 1995, 15). Workers participating in the Commune of 1871 identified themselves as urban inhabitants. The massive rebuilding efforts in Paris in between these two events rewired the networks that connected workers as they moved from urban craft enclaves to newly established suburban residential neighborhoods. There, they socialized in popular clubs with neighbors from diverse socioeconomic backgrounds. These clubs provided an organizational basis that “encourage[d] the recognition of commonalities on a scale considerably broader than would be expected on the basis of informal social networks alone” (Gould, 1995, 22). The significance of space in shaping social networks and political outcomes in the nineteenth century is also evident in the boardinghouses of congresspeople in Washington, D.C. (Parigi and Bergemann, 2016), and in the taverns and inns in Manchester (Makovi, 2019). As we will document below, native place associations established in Ming China shared this organizational feature.

In line with these strands of literature, we explore how an institutional design aimed at leveling the playing field for political representation unintentionally shaped a new group boundary, rewiring the network patterns among political elites and mobilizing native place ties as political stakes.

Institutional design and the mobilization of native place ties in Ming China

Macrostructural preconditions as heightened experiences

Long before the Ming dynasty, the Chinese political elite were primarily bound by status rather than native place. Many came from great families and secured important bureaucratic positions across generations, mainly through referrals. Although they practiced a choronym system that prefixed a surname with the place of an ancestor's origin, they usually neither resided in that place nor did they identify with the ordinary people living there (Hymes, 1987, 66). Instead, they clustered in capital cities, enjoyed national recognition, and established intermarriage ties with families of equivalent status. Ultimately, status was a defining group boundary distinguishing the elite from the rest of society. However, their centuries-old prominence came to an end, presumably between the tenth and thirteenth centuries, alongside rigorous civil-service examinations and demographic and economic changes. Political turmoil during this period further challenged their dominance, leading many relocate to areas outside of capitals. These changes jointly set the stage for the later formulation of a regional quota system during the Ming dynasty.

In this context, the Song dynasty witnessed the establishment of community and lineage schools by local groups, driven by the increasing legitimacy of examinations for elite recruitment. A gentry class dedicated to mastering Confucianism and passing examinations emerged. Meanwhile, those with dispensable financial and cultural resources began to compile local gazetteers, "a rather standardized compendium of information about an administrative unit" (Bol, 2001, 37). A gazetteer often included detailed accounts of individuals who had passed the examinations. The circulation of these cultural artifacts gave a place content, distinction, and a recitable history that outlived the dynasties, transforming a seemingly primordial notion of place into a sense of shared identity. Despite these efforts to cultivate a local place, Song elites largely maintained status-based endogamy (Hartwell, 1986). It was only with the Ming dynasty's introduction of a regional quota system that distinct places became commensurate with their students' success in the examinations.

A regional quota system

The civil-service examination system reached its zenith during the Ming dynasty, when many rules were strictly enforced to ensure its transparency and fairness. Despite its goal of upholding meritocracy, students from the southern provinces excelled disproportionately, which likely spurred the formulation of the regional quota system. A triggering event occurred in 1397, when the founding emperor, Zhu Yuanzhang (r. 1368–1398), discovered that all passing students in that year were from southern provinces. Zhu then ordered that all the exam essays be reevaluated. As an extreme countermeasure, he bestowed the honor of *jinshi* exclusively to students from northern provinces. Zhu also ordered the formulation of a quota system, assigning a pre-determined percentage of *jinshi* to each region. However, a civil war following his death in 1398 delayed the implementation of this policy. In 1427, the quota system began to be applied routinely and rigorously,¹ regarded as one of the earliest examples of affirmative action.

This system consolidated a group boundary by native place, which, in our setting, is exemplified by province. The archives we have consulted indicate that the average cohort of *jinshi* in the triennial civil-service examination was 288. This means that about sixty students from each one of the fourteen provinces would enter the bureaucracy within a 10-year window (i.e., three cohorts of *jinshi*) and would be dispatched to govern across the large empire with 1,435 administrative units. It made more sense to invoke the same province as an effective group boundary than

a smaller unit with few fellow *Jinshi*. According to the bureaucratic rule of avoidance, officials were required to serve a place other than their place of origin. However, this rule did not sever their attachment to their hometown, where most of their extended family remained and they were required to return upon retirement. Although these bureaucratic arrangements and the emotional attainment of one's hometown had existed for centuries, it was with the enforcement of the quota system during the early Ming dynasty that the elites increasingly formed friendships with bureaucrats from their native places.

Native place associations as organizational bases

Merely coming from the same place does not necessarily generate meaningful connections, but it does create an opportunity to develop interpersonal ties, especially in organizational contexts. In the three decades between announcement of the quota system in 1397 and its implementation in 1427, regional inequalities in examination success persisted. Anticipating the enforcement of the policy, native place associations were founded in Beijing by officials from the same place, serving as organizational bases for fostering meaningful interactions. A typical native place association featured a dedicated physical gathering space, often a compound building. According to Ho (1966), the first association was established no later than 1410 by an official from what is today's Wuhu city in Anhui province. Others soon followed suit and founded their own native place associations. A total of approximately 400 associations eventually came into existence (including those founded in the Qing dynasty, 1644–1911).

Explaining the rise of these associations, Ho (1966) recounts three traditions: (1) the Confucian norm that required officials to return to their hometown for 27 months after a parent's death to sweep their tombs; (2) a bureaucratic rule of avoidance that prevented officials from administering their hometowns; and (3) a requirement that native place information must be reported when taking the examinations. We agree with him, further adding that "place" had been used as a bureaucratic concept for more than 1,000 years. As in other contexts, state-building went hand in hand with census-making (Emigh et al., 2016). The earliest Chinese census was administered during the Qin dynasty (221–206 BCE) to facilitate tax collection (Ge, 1991), providing detailed information about administrative regions. Despite this, place did not become an entrenched group boundary until the enforcement of the regional quota system.

The geographic distribution of the places based on which these associations were founded is revealing. For example, Jiangxi province had the highest number of associations (47) with varying boundaries, reflecting its phenomenal examination success (contributing 20 percent of the first-place holders). Similar to the popular clubs in Paris, these associations provided Ming elites with social and physical space to socialize with native place fellows, promoting and substantiating their solidarity.

The associations fostered trust and reinforced community norms. For instance, when a natural disaster affected their hometown, the elites would gather and formulate recovery plans. As a result, forging political alliances based on native place became crucial. Zhang Juzheng's (1525–1982) experience is illustrative. Zhang rose to the position equivalent to that of a prime minister and became one of the most influential bureaucrats of the Ming dynasty. As an *ad hoc* chief examiner in 1571, he allegedly favored Liu Zhu, a veteran student (aged 57) from his home province of Huguang, by ensuring he passed the examination (Tan, 2006). Prior to that, Liu had likely failed the examination numerous times, possibly because the Ming court had not appointed any chief examiners from his home province in the previous five examinations. Zhang's investments in his native place paid off, particularly during his reforms on taxation and performance appraisals for bureaucrats. Among his task force of 70 active members, 11 were from his home province, while 21 non-natives had previously worked there and were patronized by him (Feng, 2011, 62–66). With their backing, his reforms achieved partial success.

In summary, the Ming dynasty's regional quota system elevated native place as a key group boundary, turning it into an important homophilous basis. In response, political elites formed native place associations, transforming emotional attachments to their hometown into political

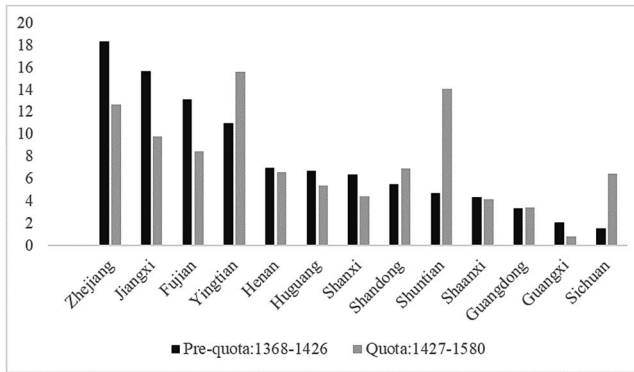


Figure 1. Percentage share of *Jinshi* by province, 1368–1580.

stakes. Below, we present stylized facts on the provincial distribution of *Jinshi* before and after the enforcement of the quota system.

The changing distribution in the provincial origins of *Jinshi*

We use digitized data from the China Biographical Database (CBDB) at Harvard University and from Xiamen University library to code the provincial origin of each *Jinshi* during the Ming and Southern Song (1127–1279) periods, respectively. For the Ming dynasty, we use the year 1427 as the cut-off point to calculate the before and after quota enforcement situations. For each period, we assess the average number of *Jinshi* per 10,000 residents per examination per province, using corresponding population estimates (Cao, 2000; Wu, 2000). We then calculate a Williamson index, a population-weighted coefficient of variation across provinces, with higher scores correlated with more unequal provincial distributions (Williamson, 1965). It's worth noting that during the Ming dynasty, population growth remained steady, but the average cohort of *Jinshi* increased significantly after 1427 (before gradually stabilizing around 300), reflecting a more institutionalized approach to recruiting the political elite.

The Williamson index of the pre-quota stage was 0.77, which decreased to 0.64 after the quota system was enforced. This shift suggests a more balanced provincial distribution, aligning with the policy agenda. To corroborate this pattern, we also calculate the provincial distribution of *Jinshi* during the Southern Song period, which had a higher Williamson index of 2.07.² This pattern aligns more closely with the pre-quota Ming dynasty situation and suggests that the changing distribution of *Jinshi* origins was caused by the quota system rather than by any idiosyncratic factors related to dynastic turnover.

To further analyze the quota effect, in figure 1, we break down the percentage of *Jinshi* by province. The black bars represent 11 examinations held prior to 1427, during which three leading southern provinces—Zhejiang, Jiangxi, and Fujian—produced 47.2 percent of all *Jinshi*. Their share dropped sharply to 35.2 percent after the quota was enforced, without substantial migration or demographic changes. Their loss resulted for a gain of some northern provinces that had previously contributed only a small share of *Jinshi*. Take Shuntian, for example. It roughly included what constitutes today's Beijing, Tianjin, and Hebei province. Its share of *Jinshi* increased from 4.7 percent to 14.0 percent following the enforcement of the quota system.

A general comparison between the southern and northern provinces is illustrative.³ Before the quota enforcement, northern provinces contributed only 27.8 percent of *Jinshi*, while southern provinces accounted for 64.9 percent, with the remaining *Jinshi* coming from a few central provinces. This pattern changed after 1427, as the contribution of southern provinces dropped to 55.2 percent and that of northern provinces increased to 36.1 percent. Furthermore, the quota system was designed at the regional level, with each of the three broader regions comprising

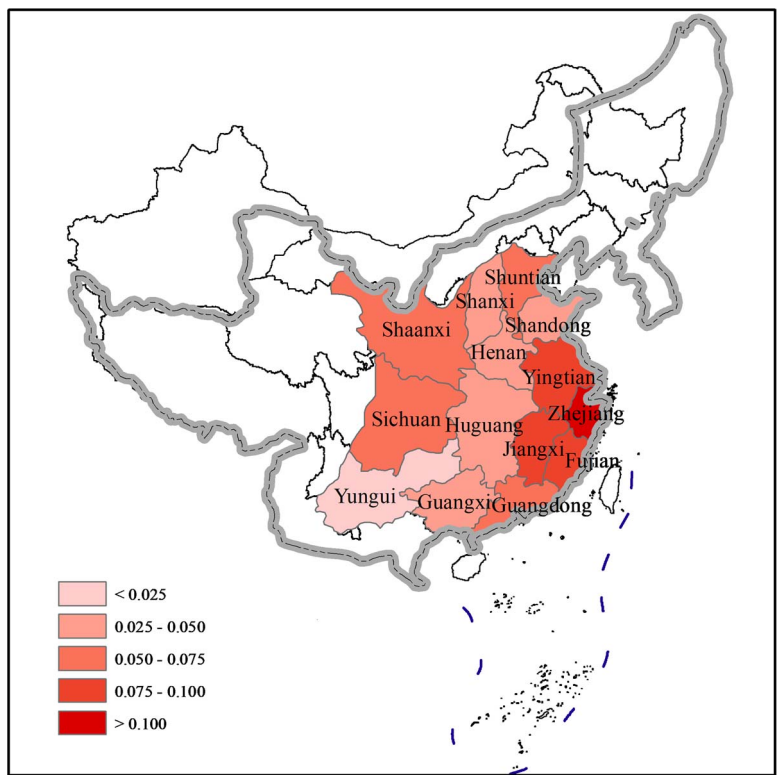


Figure 2. Percentage share of top twenty performers by province, 1427–1580.

several provinces. However, within regions, some provinces contributed a disproportionately large share of *Jinshi*. For example, Yingtian (primarily today's Jiangsu province) outperformed other southern provinces.

Figure 2 presents the provincial distribution of the top twenty performers. Unfortunately, due to the lack of systematic data on the examination rankings from the pre-quota years, we are only able to present the pattern of the quota stage. In contrast to their declining provincial share of total *Jinshi*, several southern provinces continued to excel among the top twenty performers. For example, Zhejiang had 11.1 percent of their *Jinshi* among the top twenty performers, followed by Jiangxi's 9.1 percent and Fujian's 8.7 percent. Simply put, although the quota system significantly reduced the share of *Jinshi* from some southern provinces, they still produced a disproportionate share of the top performers. This fact mattered because top performers would then be more likely to embark on successful political careers and later to serve as *ad hoc* examiners, presumably with more opportunities to favor students from their home provinces. Noticing the advantage of top performers, examiners from other provinces responded with increased favoritism, possibly seeing it as a way to level the playing field given their minority status in the bureaucracy, a point explored later in detail.

Taken together, the enforcement of the regional quota system generated a more balanced provincial distribution of *Jinshi*. The proclaimed goals of the quota policy, along with its anticipated effects, likely alerted political elites to changes in politics. As a result, they began to center their interactions on native place, which became increasingly significant during the quota stage and more profoundly influenced examination outcomes.

The effect of native place ties on examination outcomes

Civil-service examinations during the Ming dynasty

The civil-service examinations reached their zenith during the Ming dynasty. Their unprecedented status was upheld by supporting institutions. Take education as an example. An edict in 1369 mandated that each administrative unit establish a dynasty school, admitting students exclusively through open competition. The state provided students with scholarships, and only those who passed annual qualifying exams were allowed to take the triennial examinations. If they passed, they would become *Jinshi* and be offered a promise of a political career.

Exam evaluation was considerably objective, resting on a narrowing definition of merit and exclusively testing students' knowledge of the *Four Books*, the *Five Classics*, and the officially compiled histories of the preceding dynasties. Information on the exam format, procedures, location, scheduling, and evaluation criteria was transparent. Preparatory materials were widely available and affordable. The students penned their essays following a strict word limit and a standard format, offering appropriate citations to the Confucian classics to illustrate their points. All of these features facilitated presumably objective and fair evaluations.

The examinations were sequential and hierarchical. Held triennially, each examination consisted of three sequential exams. The first was the provincial exam that took place simultaneously across fourteen provincial capitals in August,⁴ and each province would have an assigned quota regarding how many students would pass. Those who passed took the subsequent national-level metropolitan exam, held in Beijing in the following February. The passing students then proceeded to take the palace exam in March, also held in Beijing, with the emperor as the symbolic chief examiner. This final-stage exam did not eliminate any students. All those who took the palace exam would become *Jinshi* and eligible for a bureaucratic appointment, but their relative rankings still mattered greatly because these determined who would be fast-tracked into the bureaucracy. Likewise, the rankings from the metropolitan exam were equally crucial, as they signaled rising stars.

Central to our argument is the simultaneous enforcement of a strict anonymous evaluation procedure and a regional quota system during the metropolitan exam, the *de facto* gatekeeping step for entry into the bureaucracy. These two features conditioned how native place ties affected exam outcomes. In terms of anonymity, Elman (2013, 227) explains that "the process inside the examination compound temporarily stripped examinees of their names, family, and social rank. Each was presumed to be unknown and thus equal in the eyes of the examiners." To conceal their names, each student was assigned an identification number. Furthermore, to prevent examiners from identifying a student through his handwriting, 200–300 copyists transcribed all the exam essays. Any blank pages or any suspicious phrases would be interpreted as irregularities and would trigger an automatic disqualification. All these measures thwarted the examiners' ability to identify and thereby favor any specific students. Working in the opposite direction, the regional quota system required that a student's place of origin be signaled during the evaluation, thus allowing students from an examiner's home province to be favored.

Micro-level relational data

As above, we use the CBDB information that provides data on five aspects of *Jinshi*: (1) name, age, native place (usually specified at the county or prefectural level), the dynasty school he attended, which of the *Five Classics* he claimed as his literary specialty, and the year he passed the examination; (2) the names of his father, grandfather, and great grandfather and their *Jinshi* status and bureaucratic experiences; (3) his brothers' names, and their *Jinshi* status and bureaucratic experiences; (4) one of the following four household categories to which he belonged (military, commoner, scholar, and craft); and (5) maiden names of his wife and concubines. In total, this dataset includes 14,116 *Jinshi* who passed 51 examinations between 1371 and 1610. However, five examinations lack information on age and rankings for many *Jinshi*. We therefore study the remaining complete sets of 12,752 *Jinshi* who passed 46 examinations between 1400 and 1580.

We gather similar information on their chief examiners to construct the variable for native place ties.

Dependent variables

Consistent with theoretical reasoning, our primary dependent variable is *metropolitan exam rankings*, with the original value of “1” indicating the top scorer. To provide a straightforward interpretation, we reverse-code these rankings. Although the palace exam setting is not central to our argument, we reverse-code *palace exam rankings* as an additional dependent variable to further corroborate the effect of native place ties. For provincial exams, students who passed them but then failed the subsequent metropolitan exam could retake metropolitan exams triennially without starting over. Unfortunately, we do not know the year they passed the provincial exam, nor do we have information on how many times each student retook the metropolitan exam. Nevertheless, the missing data are not crucial to our argument as our focus is on the effects of the regional quota system on the national-level competition. We leave the evaluation of provincial exams for future research.

Independent variables

Our most important independent variable is the presence of *native place ties* between a student and his examiners. A metropolitan exam usually had two chief examiners from different provinces who selected the passing students and assigned their relative rankings. Our measurement is thus a dummy variable indicating whether a student came from the same province as at least one chief examiner (there are only a few cases in which the two examiners came from the same province). To better identify the effect of native place ties (operated at the provincial level), we generate a dummy variable indicating whether a student and his examiner came from the same county.

To test the mechanism of political stakes that conditioned the effects of native place ties, we use *tax collection* as a proxy for state capacity to hold examiners accountable. This measures the average percentage of household income paid in taxes (Wang, 2022). In this operation, we treat a higher percentage of tax collection as an indicator of a stronger state capacity while acknowledging the limitations of such an assumption. At the provincial level, we generate a dummy variable for *advantaged provinces* to test that examiners from the disadvantaged provinces may show greater favoritism. It is coded as 1 for Jiangxi, Zhejiang, and Yingtian and 0 for all other provinces. In our dataset, these three provinces jointly contributed a majority of the ninety-two chief examiners: sixteen from Zhejiang, twenty from Jiangxi, and twenty-three from Yingtian. For robustness check not reported here, we use the provincial percentage of the national population as a proxy for provincial affluence. Admittedly, these are not ideal measures, but systematic data on other straightforward economic development measures are unavailable. Finally, at the individual level, we count a chief examiner's *number of brothers* as a proxy for his political stakes. Due to the strict household registration system, an examiner's extended family remained in his hometown. Thus, favoring fellow provincials during the examinations would help bring more colleagues who could later advocate for preferential policies benefiting their shared home province.

As an alternative mechanism of knowledge diffusion, we generate a dummy variable to indicate whether a student's hometown was located within 50 km of that of the examiners. For another alternative mechanism built on a cultural homophily explanation, we construct a *same specialty* measure, whereby a student and his chief examiner shared the same specialty from the *Five Classics*. Each specialty contained a limited number of citations from which a student could draw in order to answer the exam questions.⁵

Control variables

We control for merit, which is proxied by age. Specifically, we reverse-code the age (13–59) at which a student passed the examination and normalize it ($\text{merit} = \ln[(59 - \text{age}) / (59 - 13) \times 100]$) to provide a clear interpretation. This is because much of the exam content involved rote memorization and

Table 1. Summary of variables^a.

Variable	Definition	Mean	SD	Min	Max
Metropolitan exam rankings	Reverse-code metropolitan exam rankings	153.505	96.583	1	400
Palace exam rankings	Reverse-code palace exam rankings	152.385	96.090	1	403
Native place ties	Whether a student came from the same province as his examiners	0.211	0.408	0	1
Quota stage	1 for examinations in the quota stage; 0 for the pre-quota stage	0.957	0.206	0	1
Tax collection	Percentage of household income paid in taxes	0.226	0.095	0.134	0.528
Advantaged provinces	1 for Zhejiang, Jiangxi, and Yingtian; 0 for other provinces	0.384	0.486	0	1
# brothers	The number of brothers a chief examiner had	3.451	2.693	0	12
From the same county	Whether a student came from the same county as his examiners	0.009	0.094	0	1
Same specialty	Whether a student and his examiners claimed the same specialty of <i>Five Classics</i>	0.618	0.486	0	1
Within 50 km	Whether a student's hometown was within 50 km of his examiner's	0.028	0.164	0	1
Merit	Reverse-code and normalize age: $\ln[(59 - \text{age})/(59-13) \times 100]$	4.012	0.239	0.777	4.605
Father in bureaucracy	Whether a student's father held a position in the bureaucracy	0.248	0.431	0	1
Provincial exam scores	Reverse-code and normalize provincial examination rankings	0.708	0.232	0	0.997
Dynasty school	Schools attended representing different resources received (1–5)	3.968	1.336	1	5
First son	Whether a student was the first son of his father	0.367	0.482	0	1
Wealth ^b	The number of wife and concubines a student had, multiplied by land per capita of his province	9.554	4.849	0	46.00

Notes: Calculated based on the full sample, 1400–1580. The means used in in-text calculation may vary slightly in the subsample for the quota stage. Wives and concubines did not engage in income generation, and most did not bring dowries. A higher number indicates that the student or his family could provide more material support to sustain a larger household. Information on land per capita is from Xu and Wan (2015).

mechanical regurgitation of some 400,000 Chinese characters and phrases from the Confucian classics (Elman, 2013). Older students were presumed to have an advantage over equally intelligent younger peers. Additionally, age was positively correlated with the number of times a student had previously failed the metropolitan exams. All else being equal, younger students would likely be academically more competent to compensate for the lack of accumulated experience in memorization and exam-taking.

We also control for a student's family background, such as whether his father served in the bureaucracy, his household registration type, the resources he received from a dynasty school he attended, and (family) wealth. For provincial exams, we reverse-code the original rankings and then normalize them to generate a continuous variable for provincial exam scores. Table 1 summarizes these variables.

Models

Since the archives contain information only on individuals who passed the examinations, we use their reverse-coded rankings as a dependent variable instead of a binary pass or fail variable. We

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employ the rank-ordered logit (ROL) models designed for discretely ranked preferences (Beggs et al., 1981) to regress the exam rankings. Additionally, we validate the ROL results using ordinary least squares (OLS) models, treating the transformed exam rankings (converted into scores) as continuous variables.

Baseline effect of native place ties on metropolitan exam rankings

Table 2 confirms the effect of native place ties on metropolitan exam rankings, which was strengthened after the enforcement of the quota system in 1427. In Model 1, its coefficient is 0.072, and it is statistically significant ($P < .01$). Since the coefficient in the ROL models lacks an intuitive interpretation, we turn to its relative effect to that of merit to provide explanations. To make this comparison more straightforward here and in several instances later, we refer to how merit is measured through the transformation of age and use the corresponding exponential function to explain the relative effect. In general, coming from the same province as a chief examiner was 1.355 times [$\exp(0.072/0.237) = 1.355$] as useful as was the effect of merit (coef. = 0.237) in determining a student's metropolitan exam ranking. Specifically, for a 33-year-old student (the average age at which students passed the examinations), coming from the same province as a chief examiner could save him approximately 9 years of effort needed to pass the examination [$(1.355 - 1) \times (59 - 33) = 9.23$], compared to otherwise similar students from a different province. When scaled up to the provincial level, the aggregate effect on students from an examiner's home province becomes significant in this zero-sum ranking scenario. In-group favoritism would benefit provinces with a higher number of examiners, who had typically been high performers themselves when they passed the examinations years earlier unless examiners were appointed by randomly rotating their provinces of origin.

To test whether the effect of native place ties was strengthened in the quota stage, we add an interaction term between these two variables in Model 2. This results in collinearity between the interaction and main terms. To address this issue, we follow the data transformation principles outlined in Frost (2019, 249) and apply a non-linear function to convert the interaction term. The choice of a specific functional form is guided by a heuristic learning process. We list the general criteria used for the transformation of several interaction terms in Appendix 1 and provide a detailed selection process for this interaction term in Appendices 2A and B.

The results in Model 2 show that native place ties had a stronger effect after the quota system was enforced, as the interaction term is positive and statistically significant (coef. = 0.087; $P < .05$). The effect of the main term, however, becomes no longer significant, suggesting that the effect of native place ties primarily emerged after 1427. Nevertheless, we should interpret this pattern with caution, as we only have systematic ranking data for the two examinations administered before 1427.

To further determine if the effect of native place ties was driven by the enforcement of the quota system rather than by any emotional affinity for one's hometown, in Model 3, we add a dummy variable for the same county. It is intuitive that an examiner would have stronger incentives to favor students from the same county (i.e., a smaller community) than those from the same province. This effect does not appear in Model 3, since metropolitan exams were graded anonymously and a student's county information was withheld from the examiners. To corroborate this finding, we add into Model 4 an interaction term between the quota stage and from the same county, which is not statistically significant, indicating that the quota system did not change one's hometown emotional attachment.

We also conduct two subsample analyses in Models 5–6 to estimate the effect of native place ties in the pre-quota and quota stages separately. The findings suggest that these ties had no effect during the pre-quota period (Model 5) but increased metropolitan exam rankings during the quota stage (coef. = 0.76, $P < .01$ in Model 6). Again, we should interpret these findings in light of the small sample size during the pre-quota stage. Taken together, the results in table 2 confirm the unintended effects of the quota system that mobilized native place ties as political stakes. Throughout the models, the effects of the control variables are consistent, especially the effect of

Table 2. Rank-ordered logit regressions for metropolitan exam rankings, 1400–1580.

Variables	Metropolitan exam rankings					
	Full sample				Pre-quota stage	Quota stage
	1	2	3	4	5	6
Native place ties (NPT)	0.072** (0.025)	−0.008 (0.044)	−0.007 (0.044)	−0.008 (0.044)	−0.181 (0.212)	0.076** (0.026)
NPT × quota stage ^a		0.087* (0.038)	0.088** (0.038)	0.089* (0.039)		
From the same county			−0.072 (0.099)	−0.058 (0.144)	−0.359 (0.765)	−0.061 (0.100)
From the same county × quota stage				−0.017 (0.122)		
Merit	0.237*** (0.042)	0.238*** (0.042)	0.237*** (0.042)	0.237*** (0.042)	−0.108 (0.379)	0.239*** (0.043)
Father in bureaucracy	0.013 (0.022)	0.013 (0.022)	0.013 (0.022)	0.013 (0.022)	−0.333 (0.861)	0.014 (0.022)
Provincial exam scores	0.362*** (0.044)	0.364*** (0.044)	0.364*** (0.044)	0.364*** (0.044)	0.176 (0.454)	0.361*** (0.045)
Dynasty school	0.030*** (0.008)	0.030*** (0.008)	0.030*** (0.008)	0.030*** (0.008)	0.070 (0.065)	0.030*** (0.008)
First son	0.034* (0.019)	0.034* (0.019)	0.034* (0.019)	0.034* (0.019)	0.010 (0.167)	0.035* (0.019)
Wealth	−0.003 (0.002)	−0.003 (0.002)	−0.003 (0.002)	−0.003 (0.002)	0.048 (0.049)	−0.003~ (0.002)
Observations	12,294	12,294	12,294	12,294	212	12,082
Groups (exam years)	46	46	46	46	2	44
Likelihood	−56973.52	−56970.99	−56970.72	−56970.71	−756.96	−56197.61
χ ²	401.42	406.48	407.02	407.04	32.99	406.31

***P < .001, **P < .01, *P < .05, ~P < .1 (one-tailed); standard errors in parentheses; we control for exam specialty, household registration category, and province fixed effect. Notes: To address collinearity, we transform the interaction term into $(NPT_H + \left(\frac{\text{lower rank}}{\text{higher rank}}\right) \times NPT_L)^2 \times \text{quota stage}$, where NPT_H denotes the ties with the higher-ranked examiner, whereas NPT_L denotes the ties with the lower-ranked examiner. Please refer to the online material in [Appendix 2A](#) for a detailed explanation.

merit. Additionally, the anonymous evaluation procedure partly leveled the playing field, as the bureaucratic experience of a student's father had no impact.

One might argue that native place ties could be entangled with provincial characteristics in that some provinces may generate a disproportionate share of both examiners and Jinshi. We address this concern as follows (results not reported here). First, we control for the province-fixed effect in all models, thus correcting the upward bias. In comparison, the coefficient for native place ties doubles without controlling for this effect. Second, we control for provincial-level economic development, measured by the provincial share of the national population. The results are consistent with the estimates in [table 2](#).

The mechanism of safeguarding political stakes

[Table 3](#) presents evidence supporting the mechanism of safeguarding political stakes at three levels. Given the overall findings in [table 2](#), we focus here exclusively on the subsample from the quota stage. To test this mechanism at the national level, Model 7 adds an interaction term between native place ties and state capacity. To address the resulting collinearity issue,

Table 3. Rank-ordered logit regressions testing the mechanism of political stakes^a.

Variables	Metropolitan exam rankings (n = 9, 453)			
	7 National level	8 Provincial level	9 Individual level	10 All levels ^e
Native place ties (NPT)	0.057* (0.031)	0.170*** (0.045)	0.014 (0.045)	0.087* (0.049)
NPT × tax collection ^b	−2.136* (1.249)			−1.869~ (1.192)
NPT × advantaged provinces ^c		−0.161** (0.060)		−0.132* (0.050)
NPT × # brothers ^d			0.018* (0.010)	0.012~ (0.009)
Merit	0.238*** (0.049)	0.237*** (0.049)	0.237*** (0.049)	0.208*** (0.027)
Father in bureaucracy	0.014 (0.024)	0.012 (0.024)	0.013 (0.024)	0.012 (0.023)
Provincial exam scores	0.361*** (0.049)	0.361*** (0.049)	0.360*** (0.049)	0.315*** (0.043)
Dynasty school	0.027*** (0.009)	0.028*** (0.009)	0.027*** (0.009)	0.023*** (0.008)
First son	0.044** (0.022)	0.044* (0.022)	0.044** (0.022)	0.040** (0.022)
Wealth	−0.003 (0.003)	−0.003 (0.003)	−0.003 (0.003)	−0.003 (0.002)
Groups (exam years)	32	32	32	32
Likelihood	−44277.71	−44275.51	−44277.65	−44463.95
χ^2	330.27	334.66	330.38	312.71

***P < .001, **P < .01, *P < .05, ~P < .1 (one-tailed); standard errors in parentheses; we control for exam specialty, household registration category, and province fixed effect. Notes: We focus only on the subsample of quota stage examinations, which includes 44 rounds. However, we lack specific information about the number of brothers for 12 examinations, resulting in a reduced sample size of 9,453. We also use the full sample to replicate Models 7–8, and the results remain robust (not reported here). To address collinearity, we transform the interaction term into $NPT \times [\text{tax collection}^2 - \text{mean}(\text{tax collection}^2)]$, where the mean of tax collection^2 is 0.046 and the standard deviation is 0.095. Please refer to the online material in [Appendix 3A](#) for a detailed explanation. To address collinearity, we transform the interaction term into $(NPT_H + \frac{\text{lower rank}}{\text{higher rank}}) \times NPT_L \times \text{advantage provinces}$, where NPT_H denotes the ties with the higher-ranked examiner while NPT_L denotes the ties with the lower-ranked examiner. Please refer to the online material in [Appendix 4A](#) for a detailed explanation. To address collinearity, we transform the interaction term into $NPT_H \times (1 + \frac{\#Brothers_H}{4})^2 + NPT_L \times (\frac{\text{lower rank}}{\text{higher rank}}) \times (1 + \frac{\#Brothers_L}{4})^2$, where NPT_H denotes the number of brothers the higher-ranked examiner had, whereas NPT_L denotes that of the lower-ranked examiner. Please refer to the online material in [Appendix 5A](#) for a detailed explanation. Because all three interaction terms are highly correlated with each other and with NPT, we use the LASSO approach to address multicollinearities. The coefficients of the right-hand-side variables could be estimated by $\hat{\beta} = \arg \min_{\beta} - \sum_{i=1}^n \sum_{j=1}^{card(j)} \log \left(\frac{\exp(x_i' \beta)}{\sum_{i=1}^n \exp(x_i' \beta)} \right) + \lambda |\beta|$, where i refers to the i -th exam year, $card(j)$ is the total number of students in exam year i , j refers to the j -th lowest rank in exam year i , and λ is the penalty parameter to be chosen. Please refer to the online material in [Appendices 6A and B](#) for details.

we adhere to the principles outlined by [Frost \(2019\)](#), as discussed earlier in this section (for details on selecting the functional form to transform this interaction term, please refer to [Appendices 3A and B](#)). To explain the negative coefficient of the interaction term, let us consider two examples. In one case where state capacity is equal to mean 0.226, the effect of native place ties on exam rankings is $0.046 [0.057 - 2.136 \times (0.226^2 - 0.046)] = 0.046$, where the left-hand value of 0.046 represents the mean of the squared term for 0.226; see [Appendix 3A](#) for the formula].

This effect is equivalent to a net saving of 6 years of effort needed to pass the examination for a 33-year-old student from the same province as the examiners, compared to a similar student from a different province $[(59-33) \times (\exp(0.046/0.238) - 1) = 5.565]$. In another case where the state capacity value is set 1 SD below the mean $(0.226-0.095 = 0.131)$, the total effect of native place ties was increased by 0.119 $[0.057-2.136 \times (0.131^2-0.046) = 0.119]$. This suggests an unearned advantage equivalent to a savings of 17 years of effort needed to pass the examination for a 33-year-old student from the same province as his examiners $[(59-33) \times (\exp(0.119/0.238) - 1) = 16.795]$. The difference between the two scenarios is considerable—11 years—because a weaker state lacked effective means to hold the examiners accountable.

To test the mechanism at the provincial level, we generate an interaction term between native place ties and the dummy variable for *advantaged provinces* in Model 8 (for details on selecting the functional form to address the resulting collinearity issue, please refer to [Appendices 4A and B](#)). The joint effect of the main term (coef. = 0.170, $P < .001$) and the interaction term (coef. = -0.161 , $P < .01$) suggests that examiners from disadvantaged provinces displayed favoritism more aggressively $(0.170 - 0.161 = 0.009)$ than their counterparts from advantaged provinces. This may seem counterintuitive given that bureaucrats from advantaged provinces would have greater incentives to protect their local interests. We suggest two explanations. First, it is plausible that examiners from disadvantaged provinces were more motivated to seize this rare opportunity to increase their political influence, given their typically smaller network of alliances within the bureaucracy. A small group is often associated with stronger norms and payback from the favored students would be more valuable. Second, the Ming court was vigilant about the potential for favoritism by bureaucrats from advantaged provinces and established rules to prohibit them from serving in important positions related to tax collection. In contrast, the court was more lenient toward those from disadvantaged provinces, even permitting some to govern their hometowns ([Yang, 2005](#)). This leniency signaled to examiners from these provinces that they were less likely to be caught and punished for in-group favoritism.

Finally, to understand individual variations in favoritism, we turn to the *number of brothers* an examiner had. As shown in Model 9, its interaction term with native place ties is positive and statistically significant (coef. = 0.018, $P < .05$; for details on selecting the functional form to address the resulting collinearity issue, please refer to [Appendices 5A and B](#)). This means that an examiner with six brothers would save a 33-year-old student from his home province 16 years of effort needed to pass the examination $[(\exp(0.113/0.237) - 1) \times (59-33) = 15.883]$, compared to otherwise similar students from a different province. Even for the same student from the same province, comparing an examiner with six brothers to one with five brothers, the marginal effect is 0.021 (substituting 6 and 5 into the function separately and calculating their difference as 0.021). This difference could still save the student more than two years of effort $[(\exp(0.021/0.237) - 1) \times (59-33) = 2.409]$.

We include all three interaction terms in Model 10. Due to the resulting multicollinearity concern, we apply the least absolute shrinkage and selection operator (LASSO) approach. It is often used to identify the most relevant right-hand-side variables by dropping the irrelevant variables ([Montgomery et al., 2012](#); [Belloni et al., 2014](#); [Frost, 2019](#)). Although we have a clear theoretical basis for retaining all three interaction terms, potential multicollinearity between them and native place ties raises concerns about including all of them in the same regression. Therefore, we adopt the LASSO approach to test whether all three interaction terms can be retained throughout the computation process. In Model 10 (for details on specifying the model fit indicator of λ , refer to [Appendices 6A and B](#)), the effects of the main term and of three interaction terms remain robust, confirming that safeguarding political skates is a major incentive for examiners to play favorites.

We also explore alternative mechanisms in [table 4](#). One explanation could be that native place ties reflect cultural homophily, as people from the same province often share similar literary tastes and thus claim the same specialty among the *Five Classics*. Model 11 tests this speculation by adding the same specialty dummy variable, but the results do not support this alternative

Table 4. Rank-ordered logit regressions for testing alternative mechanisms.

Variables	Metropolitan exam rankings (N = 12,082)	
	11 Cultural homophily	12 Knowledge diffusion
Native place ties (NPT)	0.074** (0.026)	0.069** (0.026)
The same specialty	0.013 (0.024)	
Within 50 km		0.071 (0.059)
Merit	0.240*** (0.043)	0.241*** (0.043)
Father in bureaucracy	0.015 (0.022)	0.015 (0.022)
Provincial exam scores	0.361*** (0.045)	0.360*** (0.045)
Dynasty school	0.030*** (0.008)	0.030*** (0.008)
First son	0.035* (0.019)	0.036* (0.019)
Wealth	−0.003 (0.002)	−0.003 (0.002)
Groups (exam years)	44	44
Likelihood	−56197.67	−56197.10
χ^2	406.20	407.33

***P < .001, **P < .01, *P < .05, ~P < .1 (one-tailed); standard errors in parentheses; we control for exam specialty, household registration category, and province fixed effect.

argument. Another competing explanation is knowledge diffusion, as coming from the same place usually means a shorter geographic distance between hometowns, facilitating the spread of tacit knowledge about the examination. For this, we add into Model 12 a more precise measure of whether a student’s hometown was within 50 km of an examiner’s hometown. The evidence does not support this mechanism. In summary, the findings in tables 3 and 4 suggest that the effect of native place ties was related to an examiner’s desire to safeguard his political stakes, which was strengthened by the quota system.

To further explore the heterogeneity effects, figure 3 presents the distribution of ages when students passed the examinations, broken down by advantaged versus disadvantaged provinces. It reveals no noticeable difference. Figure 4 suggests that within the disadvantaged provinces, it was the sons of the political elites who benefited the most, whereas in the advantaged provinces, the quota system intensified intra-province competition, and coming from a political elite family did not help much.

On the palace exam rankings

As noted earlier, the palace exams were not graded anonymously, and students’ individual information was assessible. As such, analyzing how native place ties affected palace exam rankings will provide additional insights into our argument about the importance of the quota system. Table 5 replicates the most relevant models for the palace exam rankings, paralleling those explored for the metropolitan exams in tables 2–4.

Model 13 shows that native place ties had a similar baseline effect on the palace exam rankings (coef. = 0.054, P < .1), which only emerged during the quota stage. Unlike the case for metropolitan

Table 5. Rank-ordered logit regressions for palace exam rankings.

Variables	Palace exam rankings					Alternative mechanisms		
	Baseline effect		The mechanism of political stakes					
	13	14	15	16	17	18	19	
		National level	Provincial level	Individual level	All levels ^b	Cultural homophily	Knowledge diffusion	
Native place ties (NPT) ^a	0.011 (0.044)	0.104*** (0.030)	0.068~ (0.044)	0.055~ (0.044)	0.011 (0.060)	0.070** (0.025)	0.066** (0.026)	
NPT × quota stage ^b	0.054~ (0.039)							
From the same county	0.268* (0.147)							
From the same county × quota stage	−0.107 (0.127)							
NPT × tax collection ^b		0.009 (1.249)			0.173 (1.196)			
NPT × advantaged provinces ^b			0.062 (0.057)		0.063 (0.063)			
NPT × # brothers ^b				0.014~ (0.010)	0.013~ (0.010)			
The same specialty						0.059** (0.024)		
Within 50 km							0.049 (0.059)	
Merit	0.257*** (0.041)	0.294*** (0.048)	0.295*** (0.048)	0.295*** (0.048)	0.258*** (0.031)	0.265*** (0.042)	0.265*** (0.042)	
Father in bureaucracy	0.132*** (0.022)	0.103*** (0.024)	0.103*** (0.024)	0.103*** (0.024)	0.090*** (0.024)	0.133*** (0.022)	0.132*** (0.022)	

(Continued)

Table 5. Continued.

Variables	Palace exam rankings						
	Baseline effect	The mechanism of political stakes				Alternative mechanisms	
		13	14	15	16	17	18
		National level	Provincial level	Individual level	All levels ^b	Cultural homophily	Knowledge diffusion
Provincial exam scores	0.347*** (0.044)	0.340*** (0.049)	0.339*** (0.049)	0.339*** (0.049)	0.293*** (0.044)	0.341*** (0.045)	0.341*** (0.045)
Dynasty school	0.029*** (0.007)	0.023** (0.009)	0.023** (0.009)	0.023** (0.009)	0.020** (0.008)	0.029*** (0.008)	0.030*** (0.008)
First son	0.043* (0.019)	0.043* (0.022)	0.043* (0.022)	0.043* (0.022)	0.038* (0.021)	0.047** (0.019)	0.048** (0.019)
Wealth	−0.008*** (0.003)	−0.007** (0.003)	−0.007** (0.003)	−0.007** (0.003)	−0.006* (0.003)	−0.008*** (0.003)	−0.008*** (0.003)
Observations	12,365	9519	9519	9519	9519	12,152	12,152
Groups (exam years)	46	32	32	32	32	44	44
Likelihood	−57540.22	−44799.12	−44798.55	−44798.09	−44839.14	−56756.23	−56758.94
χ^2	447.84	322.31	323.46	324.39	390.04	440.13	434.72

*** $p < .01$, ** $p < .05$, * $p < .1$ (one-tailed); standard errors in parentheses; we control for exam specialty, household registration category, and province fixed effect. Notes: We use provincial origins of the examiners of metropolitan exams to construct native place ties that could affect palace exams too. The palace exam situation is rather complicated. On one hand, the emperor was a symbolic decision maker, and a maximum number of seven coordinators functioned as *de facto* chief examiners in charge of the process. Measuring ties with them would give native place ties undue influence since a considerable percentage of students came from the same province as at least one coordinator. On the other hand, the examiners of metropolitan exam could affect palace exam outcomes by coaching some students after the metropolitan exam rankings were announced. Taking this complexity into consideration, we use native place ties with the metropolitan exam examiners in the main regressions and conduct a series of robustness checks using the ties with the palace exam coordinators. The results remain robust (not reported here). To address collinearity, we adopt the same approaches used in tables 2 and 3 for the corresponding interaction terms in this table.

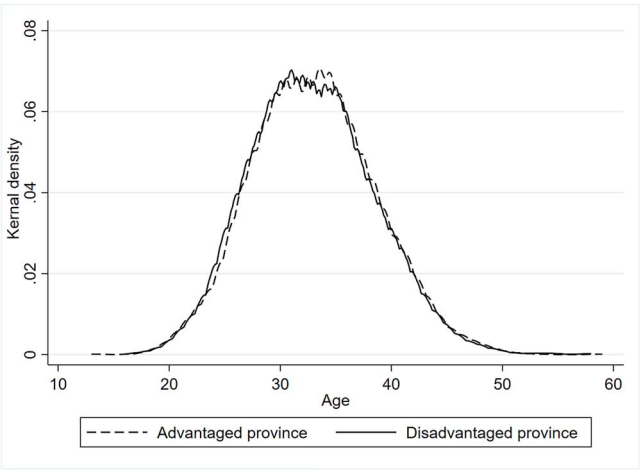


Figure 3. Age distribution of *Jinshi* by advantaged versus disadvantaged provinces. Note: Age at which a student passed the examination is a proxy for *merit* involving a transformation in reverse order.

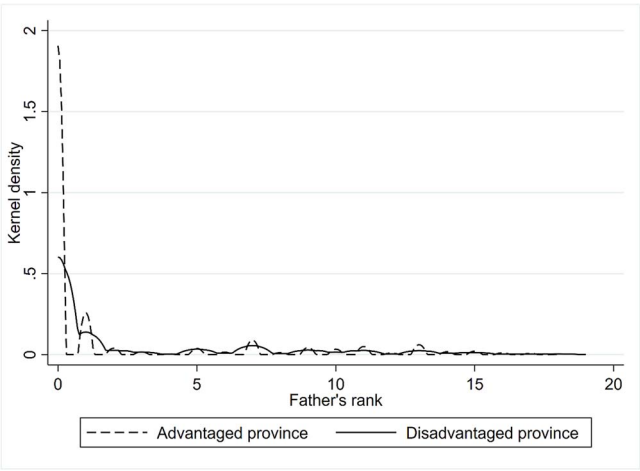


Figure 4. Family background of *Jinshi* by advantaged versus disadvantaged provinces. Note: A value 1 indicates the father of *Jinshi* had no experience in the bureaucracy. Values ranging between 2 and 20, reflect the father's bureaucratic experience, with larger numbers indicating higher-ranked positions.

exams, coming from the same county had a positive effect (coef. = 0.268, $P < .05$) on palace exam rankings, which was even stronger than that of the native place ties measured as being from the same province. This contrast makes sense since the palace exams were not graded anonymously, and an examiner had opportunities to recognize students from the same county and to play favorites more aggressively. Furthermore, same-county favoritism increased following the implementation of the quota system. Models 14–17 test the mechanism of safeguarding political stakes at the three levels, respectively. We find evidence only at the individual level. As mentioned earlier, we ran OLS models using the transformed exam rankings as dependent variables to ensure the robustness of the results presented in tables 2–5. The results (not reported) are consistent with those obtained from the ROL models.

Discussion

As an extreme form of affirmative action, the regional quota system under study reflected the state's efforts to address regional inequalities in the production of political elites. This institutional design, however, unintentionally consolidated place-based group boundaries, transformed the elites' emotional affinities for hometowns into political stakes, and elevated native place as the primary homophilous basis for social interactions. Consequently, these elites seized the opportunity as examiners to favor students from their home province. The degree of their in-group favoritism varied depending on the political stakes. At the national level, a stronger state could hold them more accountable, leading to less aggressive favoritism. At the provincial level, examiners from advantaged provinces exhibited less favoritism, as they were closely monitored by the emperor and rival bureaucrats. At the individual level, those had more brothers residing in their hometown demonstrated favoritism more aggressively, driven by their greater vested interest there.

Native place ties influenced not only examination outcomes but also extended into the bureaucracy and everyday politics. The Ming dynasty's expansive bureaucracy made the evaluation of officials challenging, creating opportunities for social networks to influence career advancement (Kiser and Tong, 1992, 310). As Zhang Juzheng's brief account suggests, he not only nurtured interpersonal relationships with officials from his home province of Huguang but also cultivated artificial native place ties with bureaucrats governing the region. Although these bureaucrats were not natives due to the bureaucratic rule of avoidance, their work experience in Huguang often led them to claim it as their sentimental hometown, especially when socializing with influential locals like Zhang (Feng, 2011). In contrast, posthumous challenges to the legacies of his reform primarily came from the Donglin faction, composed mainly of bureaucrats from what is now Jiangsu province (Dardess, 2002).

Our research makes three theoretical contributions. First, we explore native place as a primary dimension of network homophily, a concept that prior research has investigated mainly through the lenses of race and gender. Since place is not an immediately visible distinction and is not closely related to socioeconomic status in our case, the policy change that elevated it to a crucial basis for homophily offers a unique setting to study how inbreeding homophily is shaped by institutionalized preferences for sociability and extends well beyond baseline homophily. Second and relatedly, this research enhances our understanding of boundary making and categorization, showing the mechanism by which state policies can unintendedly reshape group boundaries. We investigate the entrenched boundary carved out by the largely invisible and taken-for-granted marker of "native place." By studying this extreme case, we offer theoretical insights into how institutional designs can transform intergroup dynamics and outline the broader scope of their unintended consequences. Third, we enrich historical network analysis by specifying the processes of network formation as well as its consequences. Specifically, we analyze how the enforcement of a quota system rewired networks among political elites, prompting them to adapt their networking strategies to the emerging political stakes. In doing so, we deepen our theoretical understanding of social networks by exploring how changes in network structure and content come about.

Our theory-informed findings offer important policy insights into affirmative action. Designed to help disadvantaged groups overcome entry barriers, affirmative action garners public attention in high-stakes contexts like admissions to elite universities. Its relevance spans across societies and is embedded in our daily conversations and practices (Skrentny, 1996; Leslie et al., 2014). While much research focuses on out-group discrimination in racial contexts, we find in-group favoritism in terms of opportunity hoarding. This seemingly minor distinction is indeed crucial when choosing policy interventions. For instance, it may be simpler to allocate additional resources and opportunities to disadvantaged groups than to change the biases of advantaged groups.

As we reflect the broader implications of our research, it's essential to explore why native place ties continue to influence the contemporary Chinese political elite (Nathan and Tsai, 1995; Shih et al., 2012; Shih, 2016). A recent example is the anti-corruption campaigns of the 2010s, during which the Central Commission for Discipline Inspection of the Chinese Communist Party stressed that political leaders should refrain from participating in activities organized by native place associations.⁶ This highlights the prevalence of place-based powers and reflects the state's effort to curb their influence. Despite the presence of these cliques and state countermeasures, the interaction between formal and informal elements in Chinese politics remains underexplored both theoretically and empirically.

More broadly, in a society where individual empowerment remains constrained—characterized by limited civic engagement—native place ties serve a natural and safe means for self-organizing to address emerging challenges. This is particularly intriguing amid China's rapid modernization, which should encourage individuals to “assert [themselves] energetically” (Simmel, 1955, 142) rather than remain bound to their native place. If overdoing native place ties fuels intense regional competition at the expense of social and political integration, what measures can be taken to weaken or dismantle this prominent group boundary? Conversely, what alternative networking strategies might individuals adopt in a fast-changing society where native place continues to serve as a significant basis for homophily?

Endnotes

1. After a brief period of trial and error, the quotas were stabilized and apportioned as follows: 55 percent of passing students were to come from the southern provinces (Zhejiang, Jiangxi, Fujian, Yingtian, Guangdong, and Huguang), 35 percent from the northern provinces (Shuntian, Shandong, Shanxi, Henan, and Shaanxi), and 10 percent from the central provinces (Guangxi, Sichuan, and Yungui). Written records and correspondence with historians provide no clarity regarding exactly how information about place was operationalized during the metropolitan exam evaluation process. But there is a consensus that it likely occurred when all the graded exam essays were presented to the chief examiners. It is possible that a student's province was revealed at that time so the examiners could add up the passing students from several provinces in a region to fulfill the quota requirement. Alternatively, if regional rather than specific provincial information had been marked, it would not have been difficult for examiners to infer a student's province of origin, as students from a given province often specialized in one of the *Five Classics*, which was reflected in their essays. Either way, after selecting the passing students upon fulfilling the quota requirement, the chief examiners would make the relative rankings. For simplicity, we use the same province of origin throughout this article but conduct additional tests using the same region, which yield similar results.
2. This relatively high William index was due to two outlier circuits (equivalent to provinces): Fujian and Liangzhe (including today's Shanghai, Zhejiang province, and part of Jiangsu province) jointly contributed more than 60 percent of *Jinshi*. Additionally, between these two periods was the Yuan dynasty (1271–1368), founded by the Mongols, during which the civil-service examinations were largely suspended.
3. Not all northern provinces were outperformed by their southern counterparts. For example, Henan province had a higher number of *Jinshi* per 10,000 residents per examination even before quota enforcement (0.044). However, this outlier did not change the politically constructed perception that northern provinces were underrepresented and should be favored. Henan's number became 0.071 during the quota stage, a modest increase compared to other northern provinces.
4. Guizhou and Yunnan provinces initially shared one provincial examination. Due to the lack of precise data for each individual province, we use their combined information throughout this article and treat the two provinces as one.

5. By the Ming dynasty, the examination system had been in place for hundreds of years. The extensive cumulative knowledge made preparation extremely challenging for students. Allowing them to specialize in one specialty alleviated these pressures and the associated financial burdens.
6. See <https://m.ccdi.gov.cn/content/59/a1/6567.html> for information (accessed June 27, 2024).

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Supplementary material

Supplementary material is available at *Social Forces* online.

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Conflicts of interest

We declare that there are no conflicts of interest related to this article.

Data availability

The data underlying this article will be shared based on requests to the corresponding author.

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