Grassroots Mobilization Capacity and Rural Human Capital: Evidence from China's Literacy Campaign

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Abstract: *The effective provision of public goods remains a persistent challenge across most developing countries. However, in the early years of the People's Republic of China, the State succeeded in delivering relatively effective public goods despite severe resource constraints. The economic logic underpinning this achievement has yet to be fully elucidated. This study uses China's rural literacy campaign (1950s) as its empirical context. It investigates the causal relationship between the Communist Party of China's grassroots social mobilization capacity and improvements in rural literacy. The findings indicate that the primary beneficiaries of the campaign were rural young adults under 30. A one-standard-deviation increase in mobilization capacity is associated with an increase equivalent to 12% of the overall mean in the number of people who became literate. Further heterogeneity analysis demonstrates that the campaign yielded stronger effects in the revolutionary base areas and also generated significant gains for women. Overall, unraveling the economic logic behind China's relatively effective provision of rural education not only yields historical insights for advancing the Chinese modernization, but also offers a valuable reference for other developing countries seeking to improve their public goods provision.*

Keywords: *Mobilization capacity; Literacy Campaign; Rural human capital*

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1. Introduction

The effective provision of public goods remains a persistent global challenge, particularly for developing countries. Yet, since its founding in 1949, the People's Republic of China (PRC) has achieved remarkable success in delivering public goods despite severe economic constraints. In the field of education, China's national illiteracy rate in 1949 exceeded 80% among a population of over 600 million, with rural illiteracy rates surpassing 95%. By 2001, China had successfully realized its strategic objectives of universalizing nine-year compulsory education and largely

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eliminating illiteracy among young and middle-aged adults (Gao, 2014). Unpacking the economic logic behind China's effective provision of rural education yields valuable historical insights to advance the Chinese modernization. Notably, it offers instructive lessons for other developing countries seeking to improve public goods provision amid resource scarcity.

The provision of rural public goods has long been a focal issue in the academic literature. For example, existing studies have examined the role of informal institutions, such as clans (Wang & Lu, 2020), and the impact of government-led adjustments in the allocation of public educational goods (Liang & Wang, 2020), both of which contribute to understanding how rural human capital can be effectively enhanced. However, this body of research has yet to fully account for China's specific national context when evaluating the efficiency of rural public goods provision. It tends to overlook the pre-reform period before 1978. Early on, the PRC achieved a historically unprecedented and broad-based improvement in rural human capital despite formidable structural constraints—including a vast population, highly dispersed settlement patterns, and low enthusiasm for adult literacy. Central to this transformation was the distinctive Literacy Campaign (1950s) with Chinese characteristics. Nonetheless, rigorous empirical analysis of this campaign from an economic perspective remains notably absent in the literature.

This study seeks to evaluate the impact of the Communist Party of China's (CPC) grassroots social mobilization capacity on the eradication of rural illiteracy. Why was such mobilization capacity pivotal for rural public goods provision in the early years of the PRC, particularly when the primary targets of literacy efforts were adults? The answer lies in three distinctive features of the rural context at the time. First, the sheer scale of the rural population stood in stark contrast to the severe scarcity of formal educational resources. In the early years of the PRC, more than 400 million people resided in rural areas, rendering literacy education on such a scale unprecedented in human history. Meanwhile, formal educational resources were extremely limited nationwide. Official statistics show that the primary school net enrollment rate was only 20%, while the junior secondary gross enrollment rate stood at just 3.1%. Educational resources were also disproportionately concentrated in urban areas, leaving rural schooling systems significantly underdeveloped (Ministry of Education, 2019). Second, the rural population was geographically dispersed, making spatial concentration inherently difficult. Shaped by smallholder agricultural practices and natural conditions, including land distribution and water systems, rural households were typically scattered. Yet, effective literacy education requires a minimum level of physical concentration; otherwise, both learning costs rise substantially and the efficiency of educational expansion declines. Third, the nature of agricultural production made it difficult for farmers to gather at fixed times. Farming requires continuous labor input, whereas literacy acquisition demands sustained, uninterrupted study. Balancing these competing demands—without undermining household production—posed a significant practical challenge. In addition, substantial regional heterogeneity in average educational levels, crop types and their growth cycles, teacher availability, and infrastructure conditions made it infeasible to implement a uniform, top-down literacy policy nationwide through administrative directives alone. Consequently, grassroots Party organizations were compelled to act proactively, mobilizing local populations through flexible, context-specific, and campaign-style approaches tailored to local conditions and seasonal rhythms,

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thereby advancing the Literacy Campaign (1950s).

Only a strong grassroots social mobilization capacity could overcome the above structural constraints and thereby achieve a broad-based improvement in rural human capital. To identify the causal effect of mobilization capacity on literacy outcomes, this study undertakes the following steps. First, to measure grassroots mobilization capacity, we follow Cai et al. (2024) and Bai et al. (2023) by compiling county-level data on the number of Party martyrs who sacrificed their lives between 1921 and 1950. The underlying rationale is that, during the revolutionary war period, the CPC relied on mobilizing local populations to enlist in the military and undertake high-risk tasks. A higher number of martyrs within a county thus serves as a proxy for stronger local Party organizational capacity and mobilization effectiveness, plausibly persisting into the post-1949 period. Second, to assess the effectiveness of the Literacy Campaign, we draw on data from the 1990 China Population Census on educational attainment to identify rural individuals who became literate as a result of the campaign. These data are then matched with additional county-level information to construct a unique dataset for empirical analysis.

With respect to the identification strategy, much of the existing literature can only delineate the broad population groups potentially affected by the Literacy Campaign, without precisely identifying how many individuals became literate or what their demographic characteristics are (Feng et al., 2021). Thus, this study addresses this limitation by employing an event-study framework to conduct a dynamic, year-by-year analysis, thereby identifying the specific cohorts that benefited from the campaign. The results indicate that, at the national level, the Literacy Campaign was effective primarily for rural individuals aged 30 or younger in 1950 (i.e., those born after 1920). Building on this age threshold derived from the dynamic analysis, we construct a DID model that links the number of rural individuals who became literate in each county to local mobilization capacity. Importantly, this approach allows us to quantify the average effect of grassroots mobilization capacity on literacy outcomes.

Against the backdrop of pervasive illiteracy in the early years of the PRC, grassroots mobilization capacity played a pivotal role in advancing the Literacy Campaign and enhancing rural human capital. Specifically, a one-standard-deviation increase in the grassroots social mobilization capacity of Party organizations is associated with an approximately 12% increase in the number of rural individuals who became literate through the campaign, relative to the sample mean. A series of robustness checks and placebo tests further corroborate the validity and stability of these findings. Moreover, the effects were strongest in the revolutionary base areas, where the Party leveraged pre-existing organizational networks and mass support established during the revolutionary period to facilitate broader participation. Furthermore, the campaign significantly narrowed the gender literacy gap, generating substantial human capital gains among rural women.

To distinguish the effects of mobilization capacity at different levels, this study further examines the role of non-Party martyrs. The empirical results show that neither the central government's mobilization capacity, represented by railway networks and water conservancy projects, nor spontaneous local mobilization capacity, represented by clans, has a significant effect. This indicates that the implementation of the Literacy Campaign relied less on horizontal central government mobilization and spontaneous local mobilization, and more on grassroots social

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mobilization by Party organizations.

The potential contributions of this paper are threefold:

First, using the Literacy Campaign (1950s) in the early years of the PRC as a case study, this paper provides empirical evidence that the grassroots social mobilization capacity of Party organizations can enable relatively effective provision of public goods under severe resource constraints. Existing research suggests that multiple types of actors can participate in the provision of public goods (Long et al., 2020). However, rural education provision in modern China failed to improve significantly before 1949. When the State lacks the capacity to penetrate grassroots society directly, it may rely on local social resources and forces to achieve objectives such as taxation and the provision of public goods (Balán et al., 2022; Henn, 2023). By contrast, when the State can extend its reach into local society, mobilization capacity can play a significant role in events such as warfare (Alesina et al., 2020). Within the Chinese context, existing studies have highlighted the positive role of mobilization capacity in areas such as technological innovation governance (Cai, 2021) and poverty alleviation (Xu & Chen, 2022). However, relatively little attention has been paid to how grassroots mobilization capacity translates into capacity for public goods provision, and few studies have evaluated the performance of public goods provision. Against the distinctive historical backdrop of poverty and backwardness in the early years of the PRC, this study empirically examines the positive role of mobilization capacity in the Literacy Campaign. It tests the causal relationship between mobilization capacity and improvements in rural human capital. In doing so, it provides empirical evidence from China on public goods provision in developing countries.

Second, this study provides a quantitative evaluation of the effectiveness of the Literacy Campaign and the factors influencing it, enriching research on rural human capital. Studies on modern Europe and the United States find that the universalization of education involves a series of fundamental factors: external war threats are an important reason for countries to popularize basic education (Aghion et al., 2019), religious traditions have a significant inhibitory effect (Squicciarini, 2020), and social education systems with concentrated land property rights are often more backward (Cinnirella & Hornung, 2016). Rural human capital is a major practical issue in China. Economic research on the post-reform period has been extensive, examining issues such as educational poverty alleviation from perspectives including policy changes, government adjustments in educational allocation, and the impact of nutrition improvement programs (Wang et al., 2019; Liang and Wang, 2020; Jin et al., 2023). Research on the pre-reform period is relatively scarce; among the most influential studies, the focus is on how the Down to the Countryside Movement, a policy that sent urban youth to rural areas (1968-1978), improved rural human capital (Chen et al., 2020). Regarding the topic of this paper, existing studies that directly examine the Literacy Campaign focus only on its long-term impact on economic development (Feng et al., 2021). Based on data, this study clarifies many perceptions of the Literacy Campaign, noting that although the campaign was effective overall, it primarily affected people under 30. Through quantitative analysis, this paper not only reveals the effectiveness of campaign-style rural illiteracy elimination but also its limited impact, leading to a more accurate understanding of rural education issues.

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Third, the economics literature in China has yet to examine the linkage between mobilization capacity formed during the revolutionary war period and public goods provision in peacetime. Unlike the conscription systems of other countries, the CPC relied on a robust mass mobilization mechanism to organize its military during the revolutionary war period. Rooted deeply in local communities, grassroots Party organizations were responsible not only for conscription during the war but also for a wide range of social mobilization tasks, such as publicity, resource allocation, and logistical support. Consequently, the number of Party martyrs can be regarded as a reflection of the wartime mobilization capacity of local Party organizations. It may be correlated with grassroots social mobilization capacity in peacetime. Using the number of Party martyrs as a proxy for mobilization capacity enables this study to engage with existing literature on military service and veterans, thereby broadening the research perspective. Existing literature highlights the long-term socio-economic impacts of military service and veterans. For instance, soldiers and veterans play a crucial role in national political and economic development (Koenig, 2023), and military service significantly shapes individual cognition and beliefs, which in turn affects institutional change and economic development (Navajas et al., 2022). The key innovation of this paper lies in its shift of perspective: Using the number of Party martyrs as a proxy indicator to explore how the grassroots social mobilization capacity of Party organizations influenced public goods provision in the early years of the PRC. This approach differs fundamentally from previous studies on the socio-economic impact of veterans themselves, as it investigates whether and how wartime organizational mobilization capacity can be translated into peacetime grassroots social governance capacity.

The remainder of this paper is organized as follows: Section 2 presents the historical background; Section 3 describes the data; Section 4 outlines the identification strategy and baseline results; Section 5 conducts heterogeneity analyses; Section 6 examines the effects of mobilization at different institutional levels; and Section 7 concludes.

2. Historical Background of China's Literacy Campaign (1950s)

2.1 The Evolution of the Literacy Campaign

Following the founding of the PRC in 1949, education became a central national strategy, marking a fundamental shift away from the traditional elitist orientation and establishing the guiding principle of "opening education to workers and farmers". This allowed literacy education for the broad masses of workers and farmers to be widely implemented (Yang et al., 2025). Since its founding in 1921, the CPC has actively promoted various educational campaigns. In revolutionary base areas, it offered spare-time classes, night schools, and literacy groups, and popularized education by setting up literacy boards at village entrances, road crossings, and street corners. In 1937, the Shaanxi-Gansu-Ningxia Border Region had 382 winter schools with 10,337 enrollees; by 1940, the number of winter schools reached 965 with 21,689 enrollees (Shaanxi Provincial Local Chronicles Editing Committee, 2001).

After the founding of the PRC in 1949, the CPC further intensified its efforts to develop education, with a particular focus on literacy education for the broad masses of workers and farmers. The First National Education Work Conference, held in December 1949, stressed the

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need to prepare for nationwide literacy education and to eradicate illiteracy. The First National Conference on Workers and Farmers Education, convened in September 1950, extensively discussed and clarified the significant political importance of strengthening cultural education for workers and farmers. The conference report noted that such education had developed considerably over the previous year, with more than 12 million farmers in old revolutionary base areas attending winter schools (Party Literature Research Center of the CPC Central Committee, 1997). Placing workers' and farmers' education on the national policy agenda was historically significant, and the Literacy Campaign was subsequently launched nationwide.

2.2 Grassroots Implementation of the Literacy Campaign

2.2.1 Mobilization of resource inputs

To meet the substantial resource demands of a large-scale literacy campaign, local governments adopted a range of strategies while relying primarily on existing local conditions.

Funding. Financial resources were largely self-raised at the grassroots level. The Literacy Campaign was launched at a time when the country awaited reconstruction, and the economy had yet to recover. With national priorities focused on stabilizing cities and developing the economy, the government was unable to invest heavily in rural education. It thus emphasized the principle that "farmers should run rural education". Funding primarily relied on local community contributions, with targeted government subsidies provided where necessary.

Teacher Supply and Mobilization. The supply of teachers relied primarily on mass mobilization at the grassroots level. In the early years of the PRC, formally trained teachers were scarce; consequently, the approach of mobilizing people to teach one another was adopted to address the shortage. Literate individuals were enlisted to teach those who could not read or write, making full use of community members with teaching ability—including cadres, cultural and educational workers, intellectuals, and students returning home on break. This created a situation in which "everyone was a teacher, and everyone was a student". Limited government investment was reserved for essential links, such as training programs for community-sponsored (*minban*) teachers. As a vital force in the Literacy Campaign, these teachers served voluntarily, adhering to the principles of remaining in the local workforce, staying off the official State payroll, and not relying on State grain rations.

2.2.2 Mobilizing participation among the rural population

Strategic Targeting. The Literacy Campaign did not encompass the entire population, and actual participation did not always fully align with initial policy objectives. The primary participants were workers and rural residents beyond conventional school age. The 1956 *Decision of the Central Committee of the CPC and the State Council on the Eradication of Illiteracy* stipulated that the campaign primarily targeted individuals aged 14 to 50 (Archives Bureau, CPC Central Committee., 2013). Subsequently, the Ministry of Education's 1957 directive emphasized prioritizing the elimination of illiteracy among young and middle-aged adults under 40 in the working and rural populations, while also designating rural women as a key focus of the campaign (Ministry of Education, 1957).

Temporal Adaptation to Agricultural Cycles. To accommodate the rhythms of agricultural

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production, the campaign adopted diverse and context-specific instructional approaches. Given the time constraints imposed by household livelihoods, literacy education was organized on the principle of "integrating learning with production and central tasks". Additionally, instruction was aligned with the agricultural calendar to avoid disrupting routine production: more intensive study during slack seasons, reduced learning during moderately busy periods, and self-directed study during peak agricultural periods.

Organizational Forms. Where conditions permitted, literacy instruction was delivered in concentrated classroom settings during the winter slack season. Following the spring plowing period, flexible and decentralized approaches were adopted in areas where centralized instruction was not feasible. These included object-based literacy methods, small-group learning, doorstep instruction, courtyard classes, and mobile teaching teams. The most widely adopted format was the winter school, which provided literacy, political education, and basic knowledge of production and hygiene to young and middle-aged rural residents, typically from early December to late February. Building on accumulated organizational experience in the liberated areas, well-functioning winter schools were, in some cases, further institutionalized into regular half-day schools for the rural population.

Given the geographically dispersed settlement patterns of the rural population, the advancement of the Literacy Campaign required context-specific implementation strategies and, critically, strong mobilization capacity. In practice, the campaign adopted two principal modes of instruction: centralized and decentralized learning. Centralized instruction was typically organized in relatively large villages, towns, and settlements, taking the form of winter schools and community-run schools. However, in areas where population size, geographic conditions, or cultural factors constrained the feasibility of centralized instruction, decentralized approaches were adopted. A common decentralized format was flexible-time instruction, whereby participants attended learning sessions according to their own schedules and spare time, allowing for greater flexibility and targeting. Another important approach was production-integrated teaching, which combined literacy acquisition with everyday productive activities. This method enabled participants to learn and retain commonly used characters and terms in direct connection with their work and daily lives.

During the implementation of the Literacy Campaign, a central challenge for local governments was how to deliver literacy education with limited resources without disrupting normal production and daily routines. To address this, the campaign employed a wide array of organizational forms—including winter schools, year-round community schools, accelerated literacy classes, literacy teams, and literacy brigades—demonstrating significant temporal and spatial adaptability. Precisely because of this diversity in implementation, it is difficult to capture the campaign using any single indicator. Accordingly, this study adopts "mobilization capacity" as a comprehensive measure of Party organizations' ability to mobilize resources and coordinate diverse forms of literacy provision across heterogeneous local contexts.

3. Data

Because agricultural collectivization in China was largely completed by 1956—and its organizational structure may have influenced mass literacy efforts—all variables in the empirical

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analysis are measured up to 1955.[1]

3.1 Literacy Campaign Performance

Given data availability and temporal relevance, this study constructs key variables using microdata from the 1990 China Population Census, the earliest nationally representative dataset providing detailed information on educational attainment. The construction proceeds as follows.

First, we identify individuals who are most likely to have attained literacy through the Literacy Campaign. The sample includes individuals whose highest level of education is recorded as primary school—including those who never attended formal schooling but met the literacy standard—and who lacked formal school registration.[2] Second, we restrict the sample to individuals with agricultural household registration (*hukou*) to identify the rural population. Third, to minimize potential bias arising from population mobility, we impose stringent restrictions: we retain only individuals whose current residence and *hukou* registration are both located in the same county or city, and exclude those whose place of residence five years before the census differs from their current location.[3] At the county level, the number of rural residents who attained literacy through this channel ranges from 0 to 27, with a mean of 0.637 and a standard deviation of 1.643.

3.2 Mobilization Capacity

Following Cai et al. (2024) and Bai et al. (2023), this study measures mobilization capacity using wartime sacrifice as a proxy. In the early years of the PRC, Party organizations constituted the most effective institutional force penetrating grassroots society. Compared with the general population, Party members typically exercised greater local influence, demonstrated stronger commitment to implementing central directives, and played a vanguard role in policy execution. Accordingly, this study uses the number of Party martyrs whose registered place of origin

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[1] Due to space constraints, descriptive statistics are omitted, and only the key variables are briefly summarized. Detailed results are available upon request.

[2] To precisely identify individuals who likely attained literacy through the Literacy Campaign rather than through the formal education system, we draw on the detailed coding instructions of the 1990 Fourth National Population Census. In the census, the "educational attainment" indicator records the highest level of schooling completed by the respondent, or the equivalent level of literacy attained through other means, as of the time of the survey. This indicator consists of two components. The first component is educational level. "Primary school" refers to individuals whose highest level of education is primary school, including those who have graduated from, not completed, or are currently enrolled in primary school. It also explicitly includes individuals who have never attended school but have reached the national literacy standard—defined as recognizing more than 1,500 Chinese characters, reading simple books and newspapers, and writing short notes. The second component is completion status, which is divided into four categories. "Enrolled" refers to individuals who are currently receiving formal education at any level and possess official school registration. "Graduated" refers to those who have completed their highest level of education and passed the relevant examinations. "Incomplete" refers to individuals who did not complete their highest level of education, either because they dropped out before completion or because they failed the required examinations. "Other" refers to individuals who attained a certain level of education through non-formal channels while not being formally enrolled, including private traditional schooling, self-study, or other alternative forms of learning. Based on these definitions, we identify the target population as individuals whose educational attainment is recorded as "primary school" and whose completion status is "other". This group comprises individuals who have reached the literacy standard but did not receive their education through the formal school system and lack formal school registration.

[3] It is important to note that, due to data limitations, the estimated effects likely represent a lower bound of the true impact of mobilization capacity on the Literacy Campaign. Individuals who attained literacy are more likely to pursue further education or migrate to urban areas following the Reform and Opening-up period since 1978, and are therefore disproportionately excluded from our restricted sample.

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corresponds to each county as a proxy for the grassroots social mobilization capacity of Party organizations. The research team manually compiles the data from the China Martyrs Network. This measurement strategy is based on the following considerations.

First, mobilization capacity is inherently difficult to observe directly, particularly in the context of a nationwide campaign in which localities adopted heterogeneous strategies shaped by differences in production structures, educational foundations, and social environments. As a result, observable and consistently measurable proxies are required. Second, during the revolutionary war period, the number of Party martyrs reflects both the intensity of local Party activities and the depth of their mass base, thereby capturing the effectiveness of grassroots mobilization. Third, in the early period after the founding of the PRC in 1949, Party organizations bore primary responsibility for mobilizing rural residents to participate in public affairs—including literacy programs—making their organizational networks and mobilization efforts central to the campaign's implementation. Fourth, mobilization capacity, proxied by martyr counts, exhibits intertemporal persistence. To illustrate this, we aggregate the number of Party martyrs by decade for each county of origin and regress later-period counts on earlier-period counts (see Table 1).

TABLE 1. Inter-temporal Persistence of Mobilization Capacity: The Effect of Early-Period Party Martyr Counts on Subsequent Counts

Variables	Number of party martyrs				
	1940-1950		1950-1960		
	(1)	(2)	(3)	(4)	(5)
Number of party martyrs (1920-1930)	0.683*** (0.154)	—	0.212*** (0.057)	—	—
Number of party martyrs (1930-1940)	—	2.012*** (0.048)	—	0.411*** (0.021)	—
Number of party martyrs (1940-1950)	—	—	—	—	0.169*** (0.006)
Observations	2 725	2 725	2 725	2 725	2 725
R-squared	0.007	0.394	0.005	0.122	0.214

Note: ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Standard errors are reported in parentheses.

The number of Party martyrs in earlier periods has a significantly positive effect on the number of martyrs in subsequent periods, indicating strong intertemporal persistence in mobilization capacity (Table 1). These findings suggest that the sacrifice of early martyrs did not weaken subsequent local mobilization capacity. Although individual martyrs could not directly participate in the post-1949 Literacy Campaign, their numbers capture the strength of Party organizations' grassroots social mobilization capacity within a locality. Moreover, this capacity did not diminish with the loss of individual martyrs; rather, it persisted and continued to function effectively in the postwar period, remaining empirically observable for at least a decade after the founding of the PRC in 1949.

Accordingly, the number of Party martyrs also serves as a valid proxy for grassroots mobilization capacity. In the identification strategy, this study employs the number of Party martyrs who sacrificed their lives between 1921 and 1950—including those who died while serving as Communist Youth League members—as the key explanatory variable. This measure is normalized

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by the 1964 county-level population, with one added before taking the natural logarithm. The resulting mobilization capacity variable has a maximum value of 11.203, a minimum of 0, a mean of 1.583, and a standard deviation of 2.212.

3.3 Control Variables

To isolate the effect of mobilization capacity, this study incorporates several sets of control variables.

*Educational Foundation***.** Subsequent educational development is typically closely associated with a region's initial educational conditions. Due to the absence of systematic statistical data from the early period of the PRC, we construct county-level measures of early educational attainment using the 1990 Population Census, including rural primary school completion rates, secondary school completion rates, and illiteracy rates. In addition, we include the number of academies during the Qing Dynasty (1644-1911) as a proxy for earlier educational infrastructure, capturing broader regional differences in economic development and institutional conditions.

Climatic Conditions. According to the operational guidelines of the Literacy Campaign, winter schools in disaster-affected areas were expected to incorporate production and disaster-relief activities. In cases of severe disruption, such programs could be suspended. To account for these exogenous shocks, we include dummy variables indicating whether a county experienced extreme drought or extreme flooding during the period 1950-1955.

External Factors. The expansion of missionary schools across China after 1840 played a significant role in shaping modern educational development. To account for this external influence, we include the number of students enrolled in Christian primary schools and the number of personnel engaged in Christian educational institutions as additional county-level control variables.

4. Identification Strategy and Baseline Results

4.1 Identification Strategy

Due to the scarcity of detailed statistical records from the early years of the PRC, this study can only establish a lower bound for the Literacy Campaign's impact by focusing on cohorts who were already adults when the campaign began. Taking 1950 as the reference year, we consider individuals born before 1932 (i.e., aged 18 or older in 1950) as more likely to have been affected by the campaign rather than by formal schooling. However, the precise age groups influenced by the Literacy Campaign remain an open empirical question. We therefore begin by employing an event-study approach to identify the specific birth cohorts most responsive to grassroots mobilization capacity. The econometric specification is as follows:

$$literacy_{t,c} = \beta_0 + \sum_{t=1910}^{1932} \beta_{1,t} martyr_c \times year_t + \sum_{t=1910}^{1932} \beta_{2,t} \Lambda_c \times year_t + \lambda_c + \mu_t + \varepsilon_{t,c} \quad (1)$$

where the dependent variable $literacy_{t,c}$ is the number of rural residents born in year t in county c who became literate through the Literacy Campaign, as recorded in the 1990 Population Census; the explanatory variable $martyr_c$ is the proxy for mobilization capacity, defined as the natural logarithm of (one plus) the population-normalized number of Party martyrs from county c between 1921 and 1950, and $year_t$ represents the birth-year cohort for cohorts born between 1910 and 1932.

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To control for factors that may influence literacy outcomes, we include a full set of interaction terms between county-level characteristics Λ_c and birth-year dummies ($year_t$). The vector Λ_c comprises three groups of controls: (i) educational foundation, including early rural primary and junior secondary graduation rates, illiteracy rates, and the number of Qing Dynasty academies (1644-1911); (ii) climatic conditions, captured by dummy variables for extreme drought and extreme flooding in the county between 1950 and 1955 (equal to 1 if extreme drought or flooding occurred); and (iii) external influences, measured by the number of students and staff in Christian missionary primary schools during the Qing Dynasty. County fixed effects λ_c and birth-Year FE μ_t are included, with standard errors clustered at the county level.

As shown in Figure 1, the coefficients on the interaction terms represent point estimates of the effect of county-level mobilization capacity on literacy attainment, through the Literacy Campaign (1950s), for rural residents born in specific years. Using 1920 as the cutoff, mobilization capacity has a statistically significant effect on literacy outcomes for rural residents born in or after 1920. In contrast, the effects for those born earlier are not statistically different from zero. This result indicates that the grassroots social mobilization capacity of Party organizations effectively improved the performance of the Literacy Campaign, with the primary beneficiaries being young and middle-aged adults under 30 at the time.

Although policy documents emphasized workers and farmers aged 14-50 as the primary targets of literacy education (Archives Bureau of CPC Central Committee., 2013), the dynamic regression results show that the campaign's impact was concentrated among those under 30. We attribute this pattern to the structure of rural society and the division of household responsibilities, which constrained the implementation of policy goals. Specifically, farmers over 30 were typically already embedded in family structures. They bore primary responsibilities for agricultural production and childcare, making it difficult for them to allocate time to literacy learning and resulting in higher opportunity costs of education.

Although policy directives called for prioritizing the elimination of illiteracy among young and middle-aged workers and farmers under 40, in practice, those under 30 were better positioned to participate in literacy programs due to lighter labor burdens and lower learning costs. Notably, this is consistent with the dynamic regression results. Accordingly, defining the treatment cohort as those "born after 1920" in the subsequent DID analysis is supported by both empirical evidence and the socio-economic context of rural China at the time. We therefore adopt 1920 as the upper age bound for the affected rural population in the subsequent analysis.

4.2 Average Effect Estimation

Building on the identification strategy, we employed a DID framework to estimate the average effect of grassroots mobilization capacity on rural literacy outcomes. The baseline regression model is specified as follows:

$$literacy_{t,c} = \beta_0 + \beta_1 martyr_c \times post_t + \sum_{t=1910}^{1932} \beta_{2,t} \Lambda_c \times year_t + \lambda_c + \mu_t + \varepsilon_{t,c} \qquad (2)$$

where $post_t$ is a cohort indicator capturing exposure to the Literacy Campaign: it equals 1 for individuals born between 1920 and 1932, and 0 for those born between 1910 and 1919. All other variables are defined as in Equation (1).

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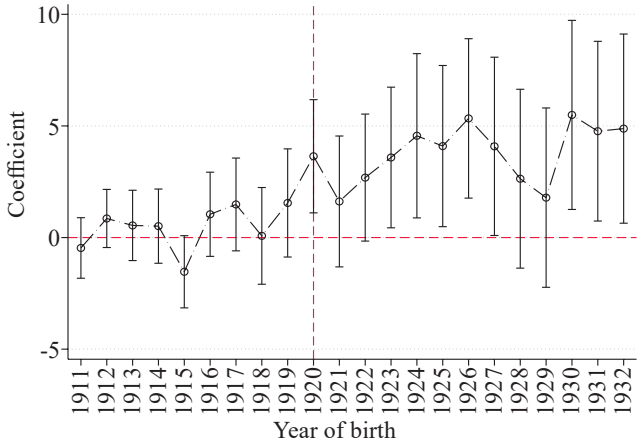

Fig.1. Event-Study Estimates of Mobilization Capacity on Literacy Attainment

Note: The first cohort in the sample period (1910) was used as the reference group and is omitted in the parallel trends regression.

Table 2 reports the baseline regression results. Column (1) presents the DID estimates for rural residents' participation in the Literacy Campaign and attainment of literacy, controlling for county fixed effects and birth-Year FE. Column (2) adds four controls for local educational foundations: early rural primary school completion rates, early junior secondary school completion rates, early illiteracy rates, and the number of Qing Dynasty academies. Column (3) further incorporates two climatic controls that indicate the occurrence of extreme drought and flooding. Column (4) additional controls for two external factors: the number of students in Christian primary schools and the number of personnel in Christian educational institutions. After controlling for local educational foundations, climatic conditions, and external influences, the estimated coefficients remain statistically significant. On average, a one-standard-deviation increase in mobilization capacity raises the number of rural residents who attained literacy through the campaign by 0.075. Given that the sample mean for such individuals is only 0.637, this represents an approximately 12% increase relative to the sample mean, indicating substantial economic significance.

TABLE 2. The Impact of Mobilization Capacity on Rural Literacy Campaign Performance: Average Effects

Variables	Local rural population who achieved literacy through literacy campaigns			
	(1)	(2)	(3)	(4)
Mobilization capacity×Cohort	0.052*** (0.012)	0.040*** (0.012)	0.039*** (0.012)	0.034*** (0.012)
Education foundation×Year FE	No	Yes	Yes	Yes
Climatic conditions×Year FE	No	No	No	Yes
External factors×Year FE	No	No	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	42 864	42 111	42 110	42 110
R-squared	0.616	0.625	0.627	0.630

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. All specifications include county and birth-Year FE.

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4.3 Robustness Checks

Centrally administered municipalities and provincial capitals occupy special positions in terms of economic and political status, with advantages in population, resources, and infrastructure relative to ordinary cities. These factors may bias the estimation results. To address this, we re-estimate the baseline model after excluding such regions. In addition, rural residents who became literate through the campaign may have been more likely to migrate after the Reform and Opening-up period. While these individuals are excluded from the baseline analysis, they are reintroduced in the robustness checks. We further consider additional social and economic factors that may have influenced the Literacy Campaign by incorporating extra control variables. Due to the limited availability of county-level economic statistics in the early period of the PRC, we include a proxy variable indicating whether a county hosts a municipal government seat or is part of a centrally administered municipality (1 if true), which captures local economic development and administrative status.

The results are reported in Table 3. Column (1) excludes provincial capitals; Column (2) excludes both provincial capitals and centrally administered municipalities; Column (3) relaxes the sample restriction by re-including previously excluded literate rural residents; and Column (4) adds additional control variables. Across all specifications—whether excluding special regions, re-including the previously excluded group, or expanding the set of controls—the estimated effect remains positive and statistically significant. These results confirm the robustness of the impact of mobilization capacity on rural literacy outcomes.

TABLE 3. Robustness Checks —The Impact of Mobilization Capacity on Rural Literacy Campaign Performance

Variables	Local rural population who achieved literacy through literacy campaigns			
	(1)	(2)	(3)	(4)
	Excluding provincial capitals	Excluding provincial capitals and municipalities	Relaxing population mobility restrictions	Full rural sample
Mobilization capacity × Cohort	0.034*** (0.012)	0.035*** (0.012)	0.034*** (0.012)	0.035*** (0.012)
Education foundation × Year FE	Yes	Yes	Yes	Yes
Climatic conditions × Year FE	Yes	Yes	Yes	Yes
External factors × Year FE	Yes	Yes	Yes	Yes
Economic conditions × Year FE	No	No	No	Yes
Region FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	41 454	41 358	42 110	42 110
R-squared	0.631	0.631	0.631	0.631

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. Economic controls include a dummy variable indicating whether the county served as the seat of a municipal government or was part of a centrally administered municipality (1 if true). All specifications include county and birth-Year FE.

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4.4 Placebo Test

4.4.1 Urban samples

Compared to cities, rural China in the early post-1949 period was characterized by its vast geography, dispersed populations, and a wider array of local customs. By contrast, urban areas had better educational resources and greater access to formal schooling. As a result, mobilization capacity may have a greater impact on the Literacy Campaign in rural areas. As a result, mobilization capacity may have a greater impact on the Literacy Campaign in rural areas.

As shown in Column (1) of Table 4, the effect of mobilization capacity on urban literacy campaign performance is not statistically significant. This may be because participants in urban literacy programs were mainly workers, who, compared with farmers, had more regular and concentrated time, more convenient learning conditions, and more abundant teaching resources(Ministry of Education, 1957). Thus, mobilization capacity was not the main factor determining urban residents' participation in the Literacy Campaign. This finding supports our main conclusion from another perspective: mobilization capacity is more important in resource-scarce, underdeveloped rural areas.

4.4.2 Temporal placebo tests: alternative cohorts

This study argues that the Literacy Campaign was the most important policy factor in promoting mass literacy in China during this period, and that no prior historical events generated comparable effects. The rapid expansion of formal education after the founding of the PRC may have also narrowed regional educational gaps, so that mobilization capacity no longer served as the main driver of regional educational development in later periods.

To examine this, we conduct placebo tests using alternative birth cohorts. First, we use an earlier sample: individuals born between 1915 and 1919 are defined as the pseudo-treated group, while those born between 1910 and 1914 serve as the control group. A difference-in-differences model is then estimated. Second, we use a later sample: individuals born between 1938 and 1942 are defined as the pseudo-treated group, and those born between 1933 and 1937 as the control group, again using the same DID framework.

The results are reported in Table 4. Column (2) shows that, before the Literacy Campaign, no other historical events produced similar effects. Column (3) indicates that, for later cohorts, differences in the grassroots social mobilization capacity of Party organizations no longer constitute a major factor driving regional disparities in educational outcomes after the expansion of formal education.

TABLE 4. The Impact of Mobilization Capacity on Rural Literacy Campaign Performance: Placebo Tests

Variables	Literacy gains attributed to the campaign		
	(1)	(2)	(3)
	Urban areas	Non-urban areas	Non-urban areas
Mobilization × Cohort	0.000 (0.005)	—	—
Mobilization × Cohort (Lead)	—	0.002 (0.006)	—

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TABLE 4 Continued

Variables	Literacy gains attributed to the campaign		
	(1)	(2)	(3)
	Urban areas	Non-urban areas	Non-urban areas
Mobilization × Cohort (Lag)	—	—	-0.016 (0.011)
Educational foundation × Year FE	Yes	Yes	Yes
Climatic conditions × Year FE	Yes	Yes	Yes
External factors × Year FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	19 743	17 901	18 735
R-squared	0.485	0.564	0.751

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. Economic controls include a dummy variable indicating whether the county served as the seat of a municipal government or was part of a centrally administered municipality (1 if true). All specifications include county and birth-Year FE.

4.4.3 Other historical events

To rigorously identify the effect of grassroots mobilization capacity on rural human capital in China, it is necessary to account for other contemporaneous historical events. The grassroots mobilization capacity of Party organizations played an important role in a series of major events following the founding of the PRC in 1949. Given the partial temporal overlap, agricultural collectivization (1950s) may also have influenced improvements in rural human capital.

During the agricultural collectivization period, institutions such as People's Communes and Production Brigades may have affected the literacy campaign through multiple channels. First, organizations, including commune-level literacy committees, literacy offices, and production brigade literacy leadership groups, became key components of grassroots literacy governance, responsible for planning and organizing literacy campaigns. Second, communes and brigades provided material and financial support—such as classrooms, teaching materials, administrative funding, and lamp oil for evening classes—thereby reducing the operational burden of literacy programs (Zhu, 2021). Third, the work-point system, administered by communes and brigades, constituted the primary source of income for rural teachers and directly influenced the recruitment and retention of literacy instructors (Hu & Zheng, 2018).

This paper argues that agricultural collectivization did not directly increase individual human capital; rather, it improved local human capital accumulation and educational levels indirectly by reallocating resources and mobilizing existing educational capacity. To examine the impact of agricultural collectivization on the literacy campaign, we employ a DID approach. Specifically, we construct a measure of early rural illiteracy using data from the 1990 Population Census, which serves as a proxy for pre-existing local educational conditions. In terms of timing, the agricultural cooperativization movement intensified following the Sixth Plenary Session of the Seventh CPC Central Committee in 1955. By the end of 1956, primary agricultural cooperatives had been largely established, and by the end of 1957, 93.3% of rural households had joined advanced agricultural

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producers' cooperatives (Gao & Lu, 2019). Accordingly, we define 1957 as the treatment year for agricultural collectivization and estimate the impact of this policy on the performance of literacy campaigns. The empirical specification is as follows:

$$literacy_{t,c} = \beta_0 + \beta_1 edu_c \times post_t + \sum_{t=1920}^{1939} \beta_{2,t} H_c \times year_t + \lambda_c + \mu_t + \varepsilon_{t,c} \quad (3)$$

In this specification, the dependent variable $literacy_{t,c}$ measures the performance of the literacy campaign in county c for cohort t, defined as the number of rural individuals born in year t who became literate through the campaign, as reported in the 1990 Population Census. The key explanatory variable edu_c serves as a proxy for pre-existing educational resources in county c, measured by the early rural illiteracy rate. The cohort indicator $post_t$ identifies individuals exposed to the full implementation of agricultural collectivization in 1957—specifically, those aged 18 or older in 1957 (i.e., born in 1939 or earlier). Following the previous literature, we define age 30 as the upper bound of the literacy campaign's effective impact. Accordingly, individuals born between 1927 and 1939 are assigned to the treatment group, while those born between 1920 and 1927 are assigned to the control group. We further include interaction terms between a vector of county-level characteristics $H_{c,}$ and cohort fixed effects $year_{t,}$ as controls. The vector H_c includes climatic conditions and external factors. All other variables are defined as in Equation (1).

As shown in Table 5, the coefficient of interest, β_1, remains statistically insignificant across Columns (1)-(3) under different sets of control variables. This suggests that agricultural collectivization itself was not a direct determinant of literacy campaign performance. Instead, the grassroots mobilization capacity of Party organizations constitutes the core explanatory factor driving the success of the literacy campaign. In contrast, agricultural collectivization did not independently promote the accumulation of rural human capital.

TABLE 5. Impact of Confounding Historical Events on Rural Literacy Performance: Agricultural Collectivization

Variables	Local rural population who achieved literacy through literacy campaigns		
	(1)	(2)	(3)
Educational foundation × Cohort	0.087 (0.151)	0.095 (0.150)	0.181 (0.149)
Climatic conditions × Year FE	No	Yes	Yes
External factors × Year FE	No	No	Yes
Region FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	45 188	45 188	45 188
R-squared	0.726	0.726	0.728

Notes: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Climatic condition controls are dummy variables indicating whether the locality experienced droughts or floods between 1950 and 1955 (equal to 1 if the disaster occurred). External factors include the number of students in Christian primary schools and the number of Christian educational staff. All specifications include Region FE and Year FE.

5. Heterogeneity Analysis

5.1 Revolutionary Base Areas

During the New Democratic Revolution period (1919-1949), the CPC placed considerable

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emphasis on literacy campaigns within the revolutionary ranks and base areas, implementing a variety of initiatives to promote local educational development. This historical experience likely enhanced local peasants' awareness of the importance of education, making them more responsive to social mobilization and more willing to participate in the post-1949 literacy campaign. In addition, former revolutionary base areas were characterized by stronger grassroots Party organizations, with a higher density of Party members and closer ties to the local population, facilitating more effective information transmission and mobilization. Therefore, regions that historically served as revolutionary base areas may exhibit a stronger positive effect of mobilization capacity on literacy campaign performance.

To test this hypothesis, following You & Yao (2020), we conduct subsample regressions for counties in major Anti-Japanese revolutionary base areas during 1939-1945, including the Jin-Cha-Ji, Jin-Ji-Lu-Yu, and Shandong base areas. To further assess whether the effect of mobilization capacity differs significantly between groups, we include an interaction term between the base area dummy (equal to 1 for former base areas) and the key explanatory variable and conduct a coefficient-difference test. The results are reported in Table 6.

As shown in Columns (1) and (2) of Table 6, the former revolutionary base areas exhibit significantly better literacy campaign outcomes, with mobilization capacity having a substantially stronger effect. Column (3) further indicates that, although the literacy campaign has a positive impact on both groups, the effect is markedly larger in the former revolutionary base areas than in non-base areas.

TABLE 6. Impact of Mobilization Capacity on Rural Literacy Campaign Performance: Heterogeneity across Revolutionary Base Areas

Variables	Local rural population who achieved literacy through literacy campaigns		
	(1)	(2)	(3)
	Base areas	Non-base areas	Difference-in-coefficients test (Base area = 1)
Mobilization capacity × Cohort	0.060* (0.032)	0.028** (0.013)	0.022* (0.012)
Mobilization capacity × Cohort × Base area (Yes = 1)	—	—	0.060* (0.032)
Education foundation × Year FE	Yes	Yes	Yes
Climatic conditions × Year FE	Yes	Yes	Yes
External factors × Year FE	Yes	Yes	Yes
Region FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	8 611	33 499	42 110
R-squared	0.675	0.621	0.631

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. Economic controls include a dummy variable indicating whether the county served as the seat of a municipal government or was part of a centrally administered municipality (1 if true). All specifications include county and birth-Year FE.

5.2 Gender

Before 1949, males had substantially greater access to education, while females' educational opportunities were severely constrained. In the early years of the PRC, female illiteracy rates were

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markedly higher than male illiteracy rates. Following the launch of the literacy campaign, women became a key target group and were expected to benefit significantly from the expansion of education. To test this hypothesis, we conduct a heterogeneity analysis by splitting the sample by gender. We further include an interaction term between a female dummy variable (equal to 1 for females) and the key explanatory variable, and conduct a coefficient-difference test. The results are reported in Table 7.

As shown in Columns (1) and (2) of Table 7, both males and females benefited from the literacy campaign. The post-1949 expansion of education not only improved male educational attainment but also reduced long-standing gender inequalities in access to education. For women, literacy expanded employment opportunities, enhanced social status, and increased labor force participation. However, Column (3) indicates that, although the literacy campaign significantly improved women's access to education, the magnitude of the gains remained smaller than those for men during the early years of the PRC.

5.3 Ethnicity

Compared with the predominantly agrarian and sedentary Han population, ethnic minority groups are more likely to reside in remote and geographically isolated areas, where grassroots mobilization by Party organizations is more difficult to implement. In addition, traditional customs and religious beliefs may affect the acceptance of formal education among minority populations. As a result, the literacy campaign likely encountered greater obstacles and achieved weaker outcomes in ethnic minority regions. As shown in Columns (4) and (5) of Table 7, grassroots mobilization capacity has a significantly stronger positive effect for the Han population. At the same time, its impact on ethnic minority groups is not statistically significant.

TABLE 7. Heterogeneity in the Impact of Mobilization Capacity on Literacy Campaign Performance: Gender and Ethnicity

Variables	Local rural population who achieved literacy through literacy campaigns				
	(1)	(2)	(3)	(4)	(5)
	Female	Male	Difference-in-coefficients test (Female = 1)	Han Chinese	Ethnic minorities
Mobilization capacity × Cohort	0.009*** (0.003)	0.023** (0.010)	0.053*** (0.011)	0.030** (0.012)	0.007 (0.006)
Mobilization capacity × Cohort × Gender (Female=1)	—	—	-0.074*** (0.011)	—	—
Gender (Female =1)	—	—	-0.389*** (0.020)	—	—
Education foundation × Year FE	Yes	Yes	Yes	Yes	Yes
Climatic conditions × Year FE	Yes	Yes	Yes	Yes	Yes
External factors × Year FE	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	40 409	39 930	80 348	38 596	10 507
R-squared	0.418	0.602	0.428	0.632	0.334

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. Economic controls include a dummy variable indicating whether the county served as the seat of a municipal government or was part of a centrally administered municipality (1 if true). All specifications include county and birth-Year FE.

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6. Impact of Mobilization Capacity at Different Levels

6.1 Non-Party Martyrs

The main explanatory variable in this study is the number of Party martyrs, which serves as a proxy for the grassroots mobilization capacity of Party organizations. A natural question arises: do non-Party martyrs, who also sacrificed their lives during wartime, exert a similar effect on the performance of the literacy campaign? To address this, we replace the number of Party martyrs with the number of non-Party martyrs as the key explanatory variable, applying the same normalization and logarithmic transformation. The results are reported in Table 8.

As shown in Column (1) of Table 8, the coefficient on non-Party martyrs is statistically insignificant. This finding reflects fundamental differences in mobilization mechanisms and political attributes between the two groups. Party membership implies that individuals had already undergone systematic political mobilization and organizational integration before participating in wartime activities. As such, the number of Party martyrs directly captures the capacity of Party organizations in political mobilization, mass organization, and resource coordination. By contrast, the motivations of non-Party martyrs are more heterogeneous. They may reflect broader social factors, such as economic incentives (e.g., enlistment subsidies or household financial pressures), peer effects, or spontaneous patriotism. Consequently, non-Party martyrs are more indicative of general social mobilization rather than the organizational capacity of Party organizations. Lacking the political networks and institutional structures associated with Party organizations, they are less likely for their wartime participation to translate into a sustained post-war capacity to implement policy or provide public goods.

In summary, the number of Party martyrs serves as a direct proxy for the grassroots mobilization capacity of Party organizations. In contrast, the number of non-Party martyrs primarily reflects broader societal mobilization. Consequently, non-Party martyrs do not demonstrate the same enduring impact on policy implementation and social governance as their Party counterparts.

6.2 Railway Networks

Railway networks capture the central government's horizontal mobilization capacity—namely, its ability to allocate resources and implement policies across regions through transportation infrastructure. In contrast, the number of Party martyrs reflects the vertical mobilization capacity of Party organizations at the grassroots level, that is, their ability to organize and mobilize widely dispersed local populations directly. This paper argues that the effectiveness of the literacy campaign relied primarily on grassroots mobilization by Party organizations, which maintain close ties with local communities. However, a growing body of literature emphasizes the role of physical infrastructure—such as transportation and communication networks—in facilitating policy implementation. In particular, railway networks can promote cultural diffusion, population mobility, and information transmission, thereby contributing to the expansion of social movements (Zhao et al., 2023). Accordingly, the central government's horizontal mobilization capacity may also have contributed to human capital accumulation in the early years of the PRC.

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To examine this possibility, we employ a DDD framework. Given that railways were the most efficient mode of long-distance transport in the early 1950s—when road networks and motorized transport were still underdeveloped—we use each county's distance to the nearest railway in 1952 as a proxy for horizontal mobilization capacity. The results are reported in Column (2) of Table 8. The coefficient on the interaction between mobilization capacity and the birth cohort remains statistically significant, whereas the triple interaction term (mobilization capacity × railway network × birth cohort) is not. This suggests that, in the early PRC period, grassroots mobilization by Party organizations, rather than the central government's horizontal mobilization capacity through railway networks, played a more decisive role in the literacy campaign's effectiveness.

6.3 Water Conservancy Projects

Large-scale public works—particularly irrigation districts and major reservoirs—require centralized planning and resource allocation, and thus constitute another important manifestation of the central government's horizontal mobilization capacity. To examine whether this form of top-down State capacity influenced the literacy campaign, we compile data on whether each county undertook irrigation or large reservoir construction during 1950-1955 and construct corresponding dummy variables. We then employ a DDD framework to assess the impact of central government mobilization, as proxied by water conservancy projects, on literacy campaign performance.

The regression results are reported in Columns (3) and (4) of Table 8. The interaction between mobilization capacity and birth cohort remains significantly positive, whereas the triple interaction terms (mobilization capacity × irrigation/reservoir construction × birth cohort) are statistically insignificant. These findings suggest that central government mobilization capacity—captured by large-scale water conservancy projects—was not a primary driver of literacy campaign performance. This further supports our core conclusion that the grassroots mobilization capacity of Party organizations played the decisive role.

6.4 Social Networks

We further consider an alternative hypothesis: beyond mobilization by Party organizations, pre-existing and spontaneous local social networks may have independently contributed to the performance of literacy campaigns. To capture such informal institutions, we use the number of lineage clans in each county during 1912-1948 as a proxy for the scale of traditional clan-based organization, and the number of genealogies as a proxy for the strength of local social networks. These measures are incorporated into the DDD regressions.

The results, reported in Columns (5) and (6) of Table 8, show that the interaction between mobilization capacity and birth cohort remains significantly positive. In contrast, the triple interaction terms involving clan numbers or genealogy counts are statistically insignificant. This indicates that the dominant source of mobilization in the literacy campaign was the grassroots capacity of Party organizations, rather than traditional lineage-based social networks, which have inherent but limited mobilization potential.

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TABLE 8. Mobilization Capacity at Different Levels: Evidence from Non-Party Martyrs, Railway Networks, Water Conservancy Projects, and Social Networks

Variables	Local rural population who achieved literacy through literacy campaigns					
	(1)	(2)	(3)	(4)	(5)	(6)
Non-party member martyrs × Cohort	-0.009 (0.009)	—	—	—	—	—
Mobilization capacity × Cohort	—	0.032** (0.013)	0.034*** (0.012)	0.032*** (0.012)	0.032*** (0.012)	0.033*** (0.012)
Mobilization capacity × Railway network × Cohort	—	-0.084 (0.283)	—	—	—	—
Railway network × Cohort	—	-2.051*** (0.380)	—	—	—	—
Mobilization capacity × Irrigation district construction × Cohort	—	—	-0.020 (0.031)	—	—	—
Irrigation district construction × Cohort	—	—	-0.258*** (0.050)	—	—	—
Mobilization capacity ×Reservoir construction × Cohort	—	—	—	0.161 (0.208)	—	—
Reservoir construction × Cohort	—	—	—	-0.091 (0.204)	—	—
Mobilization capacity × Number of lineages × Cohort	—	—	—	—	0.001 (0.001)	—
Number of lineages × Cohort	—	—	—	—	0.001 (0.001)	—
Mobilization capacity × Number of lineages × Cohort	—	—	—	—	—	0.000 (0.000)
Number of lineages × Cohort	—	—	—	—	—	0.000 (0.000)
Education foundation × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Climatic conditions × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
External factors × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	35 734	42 088	42 110	42 110	42 110	42 110
R-squared	0.633	0.631	0.631	0.631	0.631	0.630

Note: Standard errors clustered at the county level are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Educational foundation controls include early rural primary school completion rates, junior secondary school completion rates, illiteracy rates, and the number of Qing Dynasty academies. Climatic controls include dummy variables indicating whether extreme drought or flooding occurred in the county during 1950-1955 (equal to 1 if such events occurred). External factors include the number of students in Christian primary schools and the number of personnel in Christian educational institutions. Economic controls include a dummy variable indicating whether the county served as the seat of a municipal government or was part of a centrally administered municipality (1 if true). All specifications include county and birth-Year FE.

7. Concluding Remarks

This study examines the impact of the grassroots mobilization capacity of Party organizations on the rural literacy campaign in the early years of the PRC. Despite severe economic underdevelopment and extremely limited resources, China implemented a large-scale literacy campaign in a relatively short period through effective mobilization mechanisms, thereby significantly improving rural human capital.

First, grassroots mobilization capacity is shown to have a substantial positive effect on rural literacy outcomes. Specifically, stronger mobilization significantly increased the number

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of individuals who became literate through literacy classes, with particularly significant effects among young and prime-age adults under 30. Quantitatively, a one-standard-deviation increase in mobilization capacity was associated with an approximately 12% increase in the number of individuals achieving literacy, relative to the sample mean. Notably, this result remains robust after excluding provincial capitals and municipalities, relaxing constraints on population mobility, and incorporating additional control variables. Second, former revolutionary base areas exhibited stronger mobilization foundations, which further enhanced the effectiveness of the literacy campaign. Women also benefited significantly from the campaign, indicating that it not only improved overall human capital but also helped reduce gender disparities in educational access. Third, alternative mobilization channels—including non-Party martyrs (capturing broader social mobilization), central government horizontal capacity (proxied by railway networks and water conservancy projects), and traditional lineage-based social networks—do not exhibit statistically significant effects on literacy campaign performance. This reinforces the central role of grassroots mobilization by Party organizations.

The effective provision of public goods remains a persistent challenge for most developing countries, where disadvantaged regions and populations often face limited access to essential services. China's experience since 1949 demonstrates that even under severe resource constraints, relatively effective provision of public goods can be achieved through strong grassroots mobilization. The key lies in the Party organizations' ability to penetrate local society and coordinate collective action. Building on China's historical experience, this study elucidates the critical role of grassroots Party mobilization in the provision of public goods. The findings contribute not only empirical evidence for constructing a self-reliant knowledge system with Chinese characteristics but also offer valuable insights for other developing countries seeking to improve public service delivery under resource constraints.

References:

Aghion P., Jaravel X., Persson T., Rouzet D. Education and Military Rivalry[J]. Journal of the European Economic Association, 2019(2): 376-412.

Alesina A., Reich B., Riboni A. Nation-Building, Nationalism, and Wars[J]. Journal of Economic Growth, 2020(4): 381-430.

Archives Bureau of CPC Central Committee. Selected Important Documents Since the Founding of the PRC (Vol. 1)[M]. Beijing: Central Party Literature Press, 1997.

Archives Bureau of CPC Central Committee.. Selected Documents of the Central Committee of the Communist Party of China (October 1949 - May 1966, Vol. 22)[M]. Beijing: People's Publishing House, 2013.

Bai Y., Jia R., Yang J. Web of Power: How Elite Networks Shaped War and Politics in China[J]. Quarterly Journal of Economics, 2023(2): 1067-1108.

Balán P., Bergeron A., Tourek G., Weigel J. L. Local Elites as State Capacity: How City Chiefs Use Local Information to Increase Tax Compliance in the Democratic Republic of the Congo[J]. American Economic Review, 2022(3): 762-797.

Cai Y. Z. STI Governance and Digital Transformation under the Leadership of the Communist Party of China: From the Perspective of Building & Improving a New Type of Data-driven National System[J]. Journal of Management World, 2021(8): 30-46.

Cai Y., Hu S., Sun S. Confucianism and War Mobilization: Evidence from Chinese Revolutions[J]. Cliometrica, 2023(2): 493-529.

中国知网 https://www.cnki.net

Chen Y., Fan Z., Gu X., et al. Arrival of Young Talent: The Send-Down Movement and Rural Education in China[J]. American Economic Review, 2020(11): 3393-3430.

Cinnirella F., Hornung E. Landownership Concentration and the Expansion of Education[J]. Journal of Development Economics, 2016, 121: 135-152.

Ertola Navajas G., López Villalba P. A., Rossi M. A., et al. The Long-term Effect of Military Conscription on Personality and Beliefs[J]. Review of Economics and Statistics, 2022(1): 133-141.

Feng S. L., Cheng Y. D., Gong L. T. Investment of Public Human Capital and Long-term Economic Growth: A Study Based on "The Literacy Campaign" of New China[J]. Journal of Peking University (Philosophy and Social Sciences), 2021(3): 129-139.

Gao M., Lu Q. W. Seventy Years of Development of China's Rural Collective Economy[J]. Chinese Rural Economy, 2019(10): 19-39.

Gao S. G. Achievements and Experiences of China's Literacy Campaign[J]. Basic Education Review, 2014(7): 12-18.

Henn S. J. Complements or Substitutes? How Institutional Arrangements Bind Traditional Authorities and the State in Africa[J]. American Political Science Review, 2023, 117(3): 871-890.

Hu Y., Zheng X. R. The Recruitment of Rural Teachers and Its Influence in Rural China From 1949 To 1976: A Research Based on Oral History[J]. Journal of Beijing Normal University (Social Sciences), 2018(4): 15-25.

Jin G., Yin Y. F., Shen K. R. The Synergy Effect of National and Local Pilots: Evidence from the Student Nutrition Improvement Plan[J]. The Journal of World Economy, 2023(11): 30-53.

Koenig C. Loose Cannons: War Veterans and the Erosion of Democracy in Weimar Germany[J]. Journal of Economic History, 2023(1): 167-202.

Liang C., Wang S. S. The Influence of Public School Allocation on Human Capital: Evidence from the School Consolidation in China[J]. Economic Research Journal, 2020(9): 138-154.

Long D. G., Wang M., Huang Y. X. Providers of Public Goods and Their Comparison: A Long-term Investigation of China's Waterway Construction[J]. Journal of Management World, 2020(4): 220-231.

Ministry of Education. National Education Development Statistical Bulletin of 2018[J]. Chinese Geological Education, 2019(4): 96-100.

Ministry of Education. Notice from the Ministry of Education on the Work to Eliminate Illiteracy[J]. Gazette of the State Council of the PRC, 1957(11): 208-210.

Shaanxi Provincial Local Chronicles Editing Committee. Shaanxi Provincial Chronicles: Women's Chronicles (Volume 62)[M]. Xi'an: Shaanxi People's Publishing House, 2001.

Squicciarini M. P. Devotion and Development: Religiosity, Education, and Economic Progress in Nineteenth-Century France[J]. American Economic Review, 2020(11): 3454-3491.

Wang D. H., Guo J., Mao Z. G. Schooling and Income Effect of Education Development in China: Evidence from the National Compulsory Education Project in China's Poor Areas[J]. Economic Research Journal, 2019(9): 155-171.

Wang D. L., Lu M. Provision of Rural Public Goods in China: The Mechanism of Society-Government Complementarities[J]. Economic Research Journal, 2020(9): 155-173.

Xu Y., Chen J. Y. The State's Capacity for Good Governance: The Logic behind the Success of China's Poverty Alleviation as a Social Project[J]. Social Sciences in China, 2022(6): 106-121+206-207.

Yang D. C., Jiang Y. Q., Wang M. Research on the Impact of National Capacity on Basic Education Supply Patterns: Perspectives Based on the Historical Facts of the Development of Basic Education Since the Qing Dynasty[J]. Journal of Shandong University (Philosophy and Social Sciences), 2025(3): 199-208.

You W. Y., Yao Y. Women's Political Status and the Sex Ratio in the Population at Birth—An Empirical Study Based on County-Level Data 1950-2000[J]. Social Sciences in China, 2020(4): 66-89+205-206.

Zhao J. S., He P. L., Cai Y. Railroad and the Revolution of 1911[J]. Researches in Chinese Economic History, 2023(6): 104-125.

Zhu G. L. The Operational Experience and Historical Enlightenment of Rural Public Cultural Life from 1949 to 1978[J]. Academics, 2021(5): 178-190.

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