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# Poverty Alleviation and State Building in Peripheral Areas: Evidence from China\*

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## Abstract

The literature suggests that the distributive allocations of local public goods help politicians secure support and thus contribute to political survival. We argue that the selective assignment of state-led infrastructure projects can bolster political control in peripheral areas by inducing the government's investment in essential administrative and security apparatus for project implementation and long-term state-building. Drawing on a unique county-level dataset, we study the effects of poverty alleviation transfers in Xinjiang. We find that poverty alleviation was associated with significant increases in government spending on public management and security. In contrast, these alleviation transfers had a small and ambiguous effect on increasing agricultural production and reducing ethnic violence in the province. Our findings highlight the importance of comparing the capacity and welfare implications of distributive politics, as fiscal subsidies may change the actions of the leader's local agents more than altering the behaviors and attitudes of those who may benefit from these transfers.

**Keywords:** Poverty alleviation; distributive politics; state building; authoritarian regimes; China

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# 1 Introduction

A key finding in the current literature on distributive politics is that the distributive allocation of government goods and services can contribute to political survival in both democratic and non-democratic states. In countries with competitive elections, there has been much discussion on how elected politicians strategically distribute different varieties of collective and particularistic goods to build their support base (e.g., [Stokes and Dunning, 2013](#); [Diaz-Cayeros, Estevez, and Magaloni, 2015](#)). Likewise, recent studies based on authoritarian regimes have demonstrated that non-democratic leaders allocate different varieties of public and private goods to prevent elite defection and popular uprisings while deterring support for the opposition (e.g., [Magaloni, 2006](#); [Blaydes, 2011](#); [Mahdavi, 2015](#)).

We argue that existing studies may have neglected a critical precondition of this widely accepted conventional wisdom, as suggested by the literature. In many developing countries and conflict-fraught areas, political leaders often lack adequate institutional means and apparatus to exercise effective control and detect citizens' preferences and support ([Fearon and Laitin, 2003](#); [Muralidharan, Niehaus, and Sukhtankar, 2016](#)). Under these constraints, we argue that distributive allocations can contribute to political survival through a different channel – the selective delivery of infrastructure-oriented public projects helps to strengthen control in areas of contested statehood through increases in the presence of government agencies and functionaries that can bolster the central state's administrative and security surveillance at the grassroots level.

To illustrate our argument, we focus on the Chinese government's campaign of poverty alleviation in Xinjiang, one of the poorest, most unstable, and most ethnically diverse provinces in the country. In the early 1990s, Beijing announced the campaign of poverty alleviation and development (*fupin kaifa*) as a key policy instrument for the Han-dominated Chinese state to address the issues of economic backwardness and ethnic grievance in Xinjiang ([Tong, 2010](#)). Using a unique panel dataset, we analyze the implementation of fiscal assistance and work-for-relief grants across different counties, as well as their effects. Both programs were

key components of China’s national poverty alleviation plan between 1994 and 2000 – namely the “8-7” Plan. The Plan was introduced to mitigate poverty and increase agricultural production in Xinjiang by financing the construction of various production facilities, such as roads, power grids, and irrigation pumps. We examine how these programs impacted local public spending and other development outcomes.

We find that poverty-relief transfers in Xinjiang have contributed more to the making of state capacity than improving rural development and reducing ethnic violence. These transfers have a statistically significant effect on increasing the local government’s spending on public security and administrative management. In comparison, the transfers have a statistically insignificant effect on rural development. In the case of ethnic violence, fiscal assistance and work-for-relief grants exhibit opposite effects, making anti-poverty payments’ overall impact on conflict reduction ambiguous. Furthermore, we show that the increase in local state capacity corresponds to the central government’s growing top-down command over the province. The results suggest that poverty relief in Xinjiang may have largely altered the local government’s spending priorities toward categories that are crucial not only for the purpose of project implementation but also for stronger state apparatus.

Our article speaks to the literature on distributive politics and authoritarian governance. In a broad vein, the findings highlight the need to consider the political implications of infrastructure-oriented public patronage and individual-oriented particularistic transfers differently (e.g., [Stokes and Dunning, 2013](#); [Harding and Stasavage, 2014](#); [Diaz-Cayeros, Estevez, and Magaloni, 2015](#))<sup>1</sup> – the former type of allocations may focus more on building state capacity rather than building political support. The distinction here can be crucial,

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<sup>1</sup>[Stokes and Dunning \(2013\)](#) suggest that politicians tend to offer particularistic goods to rural voters because villages contain densely embedded social networks for political machines to be confident about the fruit of these payments. In urban areas, political parties can find it harder to identify, mobilize, and coordinate their supporters, and resort to less discriminatory public patronage. [Harding and Stasavage \(2014\)](#) show that democratization in Sub-Saharan Africa changes a government’s focus of distributive allocations from public patronage because particularistic benefits are more “attributable,” making it easier for elected politicians to claim the credit. Finally, [Diaz-Cayeros, Estevez, and Magaloni \(2015\)](#) propose that particularistic transfers are sufficient to secure the ruling party’s core supporters, while local collective goods are more useful to attract support from swing voters.

particularly in the context of authoritarian regimes. Existing studies of distributive allocations in China and non-democratic states have primarily focused on how these strategic payments contribute to political survival by cultivating and securing support or compliance among the autocrat’s inner circle or the general public (e.g., [Magaloni, 2006](#); [Shih and Qi, 2007](#); [Saich, 2008](#); [Blaydes, 2011](#); [Mahdavi, 2015](#)). We demonstrate that anti-poverty transfers for infrastructure construction can also build the foundation of authoritarian control by extending the state’s presence in peripheral areas as a means to counter various challenges, such as lack of information ([Lee and Zhang, 2017](#); [Brambor et al., 2020](#)). Our results also complement [Albertus, Fenner, and Slater \(2018\)](#), who study how autocrats build and maintain their power through “coercive distribution” by using redistribution to undermine the power of rival political forces while extending their authoritarian influence on their citizens. More research is needed to understand how the strengthening of the administrative state in authoritarian regimes can lead to better government service delivery or more surveillance.

Our article engages with the literature on Chinese political economy by exploring how intergovernmental transfers can contribute to the state’s infrastructural presence in peripheral ethnic regions. While studies during the past decade have attempted to uncover the determinants of fiscal subsidies in China (e.g., [Su and Yang, 2000](#); [Wang, 2004](#); [Shih, Zhang, and Liu, 2007](#)), few studies have examined the impact of poverty-alleviation payments on institutional development.<sup>2</sup> Most work aims to understand how the allocated goods encourage loyalty and compliance among political elites and various groups of citizens in the country (e.g., [Saich, 2008](#); [Solinger, 2015](#)). We use poverty alleviation in Xinjiang to illustrate that the central government can focus more on “purchasing” capacity when allocating financial and other resources. Our article also speaks to studies that similarly explore the changing role of the Chinese state in the Reform Era ([Shue, 1988](#); [Hu and Wang, 2001](#)). The results also suggest that the 8-7 Plan may have paved the way for the targeted poverty alleviation

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<sup>2</sup>[Meng \(2013\)](#) and [Lü \(2015\)](#) serve as exceptions, but they both focus on China as a whole and address different research questions. [Meng \(2013\)](#) studies the effect of the status of National Poverty Counties (NPC) on overall economic development while [Lü \(2015\)](#) focuses on the effect of the NPC status on local governments’ education spending.

program introduced by Xi Jinping (see [Zeng, 2020](#)).

For causal identification, we employ a newly extended covariate balancing propensity score (CBPS) to estimate the causal effect of poverty alleviation transfers ([Fong, Hazlett, and Imai, 2018](#)). CBPS combines propensity score estimation with balance covariates to derive the inverse probability of treatment weights (IPTWs). The method has been generalized to allow continuous treatments, as well as introducing a non-parametric balance-based estimation approach for the weights.<sup>3</sup> As alternatives, we employ first-differenced and instrumental variable regression analysis, which yields similar results.

We would like to emphasize that poverty alleviation in Xinjiang illuminates the relationship between distributive politics and state building. Although the poverty alleviation transfers examined here took place more than two decades ago, it is one of the most well-documented policy programs through which the central government explicitly declared its intention to bring order and peace in the province through the construction of large-scale local public production facilities. Between 1994 and 2000, the Chinese government’s poverty alleviation campaign allocated nearly five billion RMB to Xinjiang (about 625 million in USD according to the exchange rates in 2000); in comparison, Yunnan – another ethnically diverse province – received about one billion RMB. In fact, the size of payments for poverty alleviation is comparable to other non-poverty-relief fiscal subsidies. In some counties, the amount of the payments was twice as much as non-relief subsidies. The results of additional analysis also show that other non-relief intergovernmental transfers do not have the same capacity-building effects as poverty alleviation payments.

Our article proceeds as follows. In Section 2, we discuss the existing literature to develop testable hypotheses. In Section 3, we introduce the campaign of poverty alleviation in China and its implementation in Xinjiang. In Section 4, we present the data and define the key

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<sup>3</sup>Recent work that includes all counties in China has suggested the application of fuzzy regression discontinuity (FRD) design. In the case of Xinjiang, using FRD is nonetheless problematic because it is likely that Beijing adopted different criteria to select NPCs in minority areas ([Park, Wang, and Wu, 2002](#)). Also, poverty alleviation transfers covered non-NPC counties, making NPC a less accurate treatment. We will return to this issue later.

variables before providing the CBPS and other estimates of the effect of poverty-reduction transfers in Xinjiang. In Section 5, we examine the implications of local state building and highlight the central government’s increasing control over the provincial government throughout the 1990s. We conclude our article by discussing the implications for future research.

## 2 Distributive Allocations For State Building

Since [Lasswell \(1936\)](#), who inquires “who gets what, when and how,” many have been interested in learning why some areas or groups in a country have received more or better government resources and services ([Golden and Min, 2013](#)). Existing studies suggest that the distributive allocations of public goods and services can contribute to political survival by shaping the attitudes of those who benefit from these allocations. For instance, elected politicians, depending on their risk preferences, tend to selectively target their core or swing voters when rendering distributive decisions (e.g., [Stokes and Dunning, 2013](#); [Diaz-Cayeros, Estevez, and Magaloni, 2015](#)). Also, politicians may have incentives to focus on the poor because the arranged transfers will create the largest marginal utility to those living in impoverishment, and, as a result, bring the largest number of votes per dollar spent ([Dixit and Londregan, 1996](#)). Despite the absence of fully competitive elections, recent studies of authoritarian regimes have shown that the distributive allocations of public goods or private patronage can help autocrats stay in power (e.g., [Magaloni, 2006](#); [Blaydes, 2011](#); [Mahdavi, 2015](#)).

Current research on post-Reform China has similarly explored how fiscal transfers and social welfare policies have sustained the Chinese Communist Party’s legitimacy by inducing loyalty among its members while gaining citizens’ support ([Saich, 2008](#)). [Shih, Zhang, and Liu \(2007\)](#) show that fiscal transfers have been focused on localities with a large number of Party cadres and associates, in order to retain their political loyalty. In the case of education reform, [Lü \(2014\)](#) studies how social policy reform can shape Chinese citizens’ perception of

government legitimacy. Likewise, [Huang \(2015\)](#) argues that the central government allows local officials to undermine the threat of popular grievances by selectively determining the coverage and generosity of health insurance programs. When constructing the ideal types of current social assistance programs in China, [Solinger \(2015\)](#) explicitly suggests that the anti-poverty programs in China aim to address grievances in the general population.

We contend, however, that previous studies may have neglected a crucial precondition. To ensure these allocations achieve the expected “support-building” scenario, it is crucial that politicians and government agencies are *capable* of defining the criteria of payment, specifying eligible recipients, and ensuring the planned payments will reach designated beneficiaries. Such capacity, as elaborated by [Mann \(1984\)](#), is manifested by the government’s *infrastructural* power, undertaken by a set of administrative organizations. The state plays a crucial role in commanding and coordinating different government agencies and functionaries within its territory – their “penetration” into the society builds the foundation for effective governance, allowing the state to maintain political order while staying informed about citizens’ needs and preferences (e.g., [Rotberg, 2004](#); [Rothstein and Stolle, 2008](#); [Soifer and vom Hau, 2008](#)).

In many developing countries, state *incapacity* has hindered effective territorial control (e.g., [Herbst, 2000](#); [Michalopoulos and Papaioannou, 2014](#); [Muralidharan, Niehaus, and Sukhtankar, 2016](#)). Although governments in these countries have been providing various pro-poor benefits to individuals and households, the implementation of these allocations has been a daunting task due to low or weak state capacity. For instance, without a functioning statistical system, the government will not have accurate information to determine or verify the eligibility of service delivery and locate eligible individuals. Taxation will also be problematic because government agencies are not fully aware of their tax base. With no efficient and reliable bureaucracy, there is also no guarantee that the planned payments will take place. Even in China, where the central state has been considered relatively strong, prior research has noted similar predicaments, highlighting non-state and familial communities

as the key forces of local public goods provision (Tsai, 2007; Xu and Yao, 2015). Lee and Zhang (2017) summarize the importance of information in understanding state capacity, as the amount and depth of information regarding the citizens and different locations are crucial in ensuring effective governance. In their operationalization of state building, Brambor et al. (2020) adopt a similar position by considering various information collection and processing activities through government agencies, such as censuses, statistical yearbooks, and civil and population registers.

These challenges are common in countries fraught with ethnic violence. While previous studies have explored how fiscal subsidies help to contain regional grievances and prevent ethnically divided countries from disintegration (e.g., Treisman, 1999), governments in many of these countries have also had a difficult time imposing reliable administrative and policing forces to counter rebel and insurgent groups, especially in remote areas (Fearon and Laitin, 2003). Even if fiscal appeasement can be a potential solution to reduce violence and conflicts, Berman, Shapiro, and Felter (2011) demonstrate that the delivery of government relief can best reduce conflicts when government administration holds sufficient local knowledge.

In a nutshell, the conventional wisdom that the allocations of government goods and services will bring loyalty or support can be problematic, as it assumes a certain degree of state capacity that can be absent in developing or unstable countries. We propose that selective distributions of anti-poverty goods can contribute to political survival by allowing the state to build its ruling capacity at the local level. In particular, when poverty alleviation transfers are allocated to build roads, bridges, power stations, water pumps, and other production facilities in politically unstable areas, we argue that the government will have the incentive to build up its administrative and security forces. These forces can play a key role in managing the allocated resources and supporting the construction of the assigned projects. In the long run, these agencies and functionaries allow the state to stay informed and to mobilize the collection of human and financial resources, as suggested by Migdal (2004) – the “routine performance” of state actors and agencies plays a crucial role in establishing and sustaining

political control. These infrastructure projects are pivotal for state development, as put by [Van de Walle and Scott \(2011\)](#) and [Joyce and Mukerji \(2017\)](#), by facilitating the state’s penetration and the standardization of its daily control. In other words, infrastructure-focused poverty alleviation schemes allow the state to extend its reach to peripheral areas and create regular forces to exercise its governing authority as the central state establishes mechanisms to monitor and inspect the progress and outcome of poverty alleviation programs.

In a case study of the Fujian Province in China, [Lyons \(1998\)](#) also hints that poverty reduction serves to boost the Center’s oversight over the province, as poverty alleviation entails the creation of new provincial branches of the Leading Group of Poverty Alleviation and Development in Beijing. In a review of China’s Western Development Program (WDP), [Naughton \(2004\)](#) also suggests that the infrastructure investment arranged by the central government may have extended its control in peripheral areas. Outside China, [Hechter \(1975\)](#) theorizes the concept of “internal colonialism” to elucidate the growth of England’s presence in the British Isles through administrative expansion and resource extraction. Likewise, based on the experience of poverty alleviation in Lesotho, [Ferguson \(1990\)](#) finds that road construction and electrification have facilitated state building in the country. While the programs initiated by the World Bank may appear to be “apolitical,” these programs have helped the central state to wield its authority in remote and impoverished areas. [Callen \(2016\)](#) focuses on how the establishment of the national railway network in the United States reflected the interactive dynamics between the federal government and individual states, which in turn shaped the trajectory of state building in the 19th century.

The scenarios we have described above resemble our case of poverty alleviation in Xinjiang, as poverty alleviation there explicitly focused on infrastructure construction. In a conflict-fraught and peripheral province, the central government inevitably needs to tackle the issue of state *incapacity*. The corollary of our argument is that poverty alleviation payments, when focusing on the local public facilities, can trigger the investment in governance infrastructure that will not only facilitate the construction of these infrastructure projects

but also strengthen the state’s control in these areas. Our argument thus departs from the conventional “building support” story, as we focus on how the distributive allocations allow political elites to increase their control in areas of contested statehood.

Empirically, we focus on the relationship between poverty alleviation transfers and the local government’s spending priorities. We expect to observe that the transfers allocated for infrastructure construction lead to increases in public spending in the categories that are vital for governing capacity. More specifically, following from our argument, the increases in the capacity-related spending should take place during the construction stage of an infrastructure project. We expect the effect to be immediate even before the infrastructure is in place. Existing literature has identified different dimensions of state capacity (e.g., [Hendrix, 2010](#)). While a comprehensive review is beyond this article’s scope, a capable state will be able to impose effective control by deploying adequate bureaucratic agencies and security forces to maintain political and social order to ensure a smooth implementation of its proposed policies. We therefore expect to see poverty alleviation in Xinjiang associated with increases in the per capita spending on government administration and public security.

**Hypothesis 1.** *Capacity-building poverty-reduction transfers will increase the local government’s per capita spending on public administration.*

**Hypothesis 2.** *Capacity-building poverty-reduction transfers will increase the local government’s per capita spending on public security.*

As government agencies and functionaries are on their way to increasing their security and administrative capacity, it will take time to build sufficient information capacity to extract taxes and other fiscal revenues – a crucial aspect of state capacity in the literature (e.g., [Levi, 1988](#)). As a result, we hypothesize that

**Hypothesis 3.** *Capacity-building poverty-reduction transfers will not immediately increase the government’s per capita revenue collection.*

When poverty alleviation transfers focus more on the building of administrative and security capacity, these transfers may not have an immediate effect on development and conflict reduction since both objectives demand the presence of capable governing forces. In fact, if the primary objective here is to bolster the government’s administrative and security capacity, poverty alleviation can even incite more conflicts – “[t]he daily exercise of state power through public expenditures, security policies, and revenue collection” can end up reinforcing or exacerbating existing ethnic conflicts (Migdal, 2004, p.29).

**Hypothesis 4.** *Capacity-building poverty-reduction transfers will not immediately improve rural development.*

**Hypothesis 5.** *Capacity-building poverty-reduction transfers will not immediately reduce ethnic violence.*

Our findings on ethnic violence can help to discern the nature of the increases in the spending on public security. On the one hand, if we observe more security spending along with an intensification of ethnic violence, then the increases in security spending will serve as a response to the conflicts rather than boosting the local government’s control in the province. On the other hand, if the increases in security spending are observed without seeing more incidents of ethnic violence, security spending in this case perhaps serves as a preemptive endeavor of the provincial government to facilitate the implementation of assigned infrastructure projects, which is consistent with our argument.

The argument we have proposed here does not necessarily suggest that the local government has to “divert” the poverty alleviation funds for other purposes. Instead, the argument suggests that the government will have the incentives to strengthen its governing capacity to support the execution of the assigned development projects – in the case of Xinjiang, the poverty alleviation program focused on the construction of production facilities. While it may be tempting to argue that the Chinese government has used various development programs to increase repression in the province (see Becquelin, 2000), this scenario is unlikely given

the data we have or that remains to be verified by future research. In the official records, each poverty alleviation transfer was designated to a specific infrastructure project, and the data of local finances and the payments for poverty alleviation are separately listed in different sources (see Section 4.1). As such, the increases in security spending do not necessarily suggest that the local government was using the poverty alleviation transfers to “pay for more repression.” Our argument is not that poverty alleviation transfers have “funded” the spending for public administrative and security; what we attempt to argue is that transfers for infrastructure construction can encourage more spending on public administrative and security. Relatedly, poverty relief during the period was not “windfalls” as often depicted in the literature (e.g., Gervasoni, 2010). The subsidies of interest here were not meant to release provincial officials from their existing revenue-collection responsibilities.

Also, we do not argue that the Chinese government has fully resolved the challenges of weak capacity and political control in Xinjiang through poverty alleviation. The political and socioeconomic implications of the attempts at state building remain to be studied. Our theory instead highlights that infrastructure construction can affect public investment in a way that helps to strengthen the state’s administrative presence and security surveillance in unstable areas.

### 3 Poverty Alleviation in Xinjiang

Compared with other provinces, Xinjiang is unique in several ways. For one thing, Xinjiang is entangled in poverty. Despite four decades of market reform, economic development in Xinjiang still lags behind wealthy Han coastal provinces. In 2011, Xinjiang had the lowest disposable income for urban households and ranked among the 9th lowest for disposable income of rural households (ranked 23rd out of 31 provinces)<sup>4</sup> Recent research has also documented considerable disparity in income and other socioeconomic indicators between the Han and the Uyghurs, the group that accounts for the majority of the total population

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<sup>4</sup>Source: *Xinjiang Statistical Yearbook*, 2012. Urumqi: The Bureau of Statistics of the Xinjiang Uyghur Autonomous province, pp. 681-4.

in Xinjiang (e.g., [Bhalla and Luo, 2013](#); [Wu and Song, 2014](#)).

Meanwhile, Xinjiang has been fraught with conflicts between the Han and ethnic minorities ([Bovingdon, 2010](#)). The Uyghurs, a Turkic Muslim group, constitute the largest ethnic group in the province.<sup>5</sup> Between 1980 and 2000, the provincial government of Xinjiang documented one large-scale anti-government armed riot, eight inter-group conflicts, 12 incidents of social disorder, 14 mass protests, and 18 major crimes, including arson, bombings, and the assassinations of Han and Uyghur government officials ([Provincial Government of Xinjiang, 2004](#)). Such records are exceptional if one considers that other groups have been relatively compliant and seldom mobilize against Beijing ([Dillon, 1999](#); [Kaup, 2000](#); [Han, 2011](#)).

To address this predicament, Beijing introduced a series of poverty alleviation programs, the earliest of which took place in the 1980s. These programs, covering all poverty-stricken localities with per capita income below the stipulated income line, were not exclusively designed for the province.<sup>6</sup> However, Xinjiang has constantly been highlighted as a principal target of the central government's poverty relief efforts. As documented by the official documents ([Provincial Government of Xinjiang, 2009](#)), Beijing began providing a variety of goods and financial support in the mid-1980s. In 1986, the State Council convened the Leading Group on Economic Development in Impoverished Areas, which Beijing in 1993 turned into the Leading Group of Poverty Alleviation and Development. In the following year, the Leading Group released "the 8-7 National Plan for Poverty Reduction" (hereafter "8-7 Plan"), an initiative in which Beijing attempted to relieve the sufferings of 800 million (eight *yi* in Chinese) poor people within seven years.

Under the 8-7 Plan, the central government integrated three programs that had existed

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<sup>5</sup>Between 1994 and 2000, the Uyghurs accounted for about 50% of the total population in Xinjiang. The Han, the dominant ethnic group in China, accounted for about 30%. In addition to the Uyghurs, Xinjiang is also home to other non-Han groups, such as the Hui, the Kirghiz people, and the Mongolians. The Uyghurs accounted for about 80% of the total non-Han population according to the most recent census.

<sup>6</sup>In 1985, the central government considered a county as "poverty-stricken" if the rural average income fell below 150 RMB. For counties in old revolutionary base areas and ethnic minority counties, the income line was 200 or 300 RMB. The latter thresholds were later extended to other counties in China. That said, as documented by [Park, Wang, and Wu \(2002\)](#), the list of poverty-stricken counties included counties that were above the originally designated income threshold, thus raising the question of whether the designation of National Poverty County (NPC) status was indeed solely driven by economic considerations.

in Xinjiang in the 1980s: Fiscal assistance (*caizheng fupin*), work-for-relief grants (*yigong daizhen*), and special loans (*fupin daikuan*). The fiscal assistance program was administered by the provincial government in Urumqi (the capital city of Xinjiang).<sup>7</sup> Composed of the Underdeveloped Areas Funds and the New Grants for Economic Production, fiscal assistance supplements regular yearly fiscal transfers to provinces. The work-for-relief grant program was managed by the National Development and Reform Commission (NDRC) in Beijing, formerly the State Planning Commission (SPC), providing a consistent regulatory framework for the allocation and purpose of these grants throughout the country (Zhu, Lai, and Deng, 2001). While the SPC and the subsequent NDRC have their own local branches in Urumqi, as delineated by (Chow, 2011), these two government bodies are, in fact, centralized so that their branches are not accountable to the provincial government but to the SPC and NDRC in Beijing. As a result, the designation of work-for-relief grants is largely under Beijing's control. Finally, the special loans were jointly assigned by Urumqi, Beijing, and the Agricultural Bank of China.

By design, these transfers were delivered to finance the delivery of primary education and the construction of sanitation, electricity supply, transportation, water pumps, industrial plants, and other basic infrastructure (Provincial Government of Xinjiang, 2009). In this article, we focus on the allocation of fiscal assistance and work-for-relief grants because these two programs were solely under the discretion of provincial and central government. In contrast, special loans involve the consideration of specific distribution formulas and stochastic market trends in the financial sector. Also, we will examine the allocation of poverty-reduction aid between 1994 and 2000 because the data for the 8-7 National Plan are relatively complete.<sup>8</sup> Finally, our analysis excludes all municipalities governed by the Xinjiang Production and Construction Corps (XPCC). XPCC is a unique para-military

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<sup>7</sup>The Ministry of Finance and the Working Group on Poverty Alleviation and Development in the provincial government were responsible for allocating the grants from the fiscal assistance program.

<sup>8</sup>The provincial government of Xinjiang stopped reporting the distribution of work-for-relief grants at county level after 2004. It also did not provide additional information about riots and protests during the 2000s.

economic organization that can be traced back to the People’s Liberation Army (PLA) troops that Beijing dispatched to take over the province after the Civil War (Wei, 2011).

The campaign of poverty alleviation and development has by no means treated all counties in the province equally. As shown in Figure 1, the average amount of transfers varies sharply across Xinjiang, which thus warrants additional explanation and analysis in the following sections. Moreover, notice that these two programs, which were managed by different government agents, more or less concentrated on a similar group of counties. At glance, it appears that fiscal assistance and work-for-relief complement rather than substitute each other.<sup>9</sup>

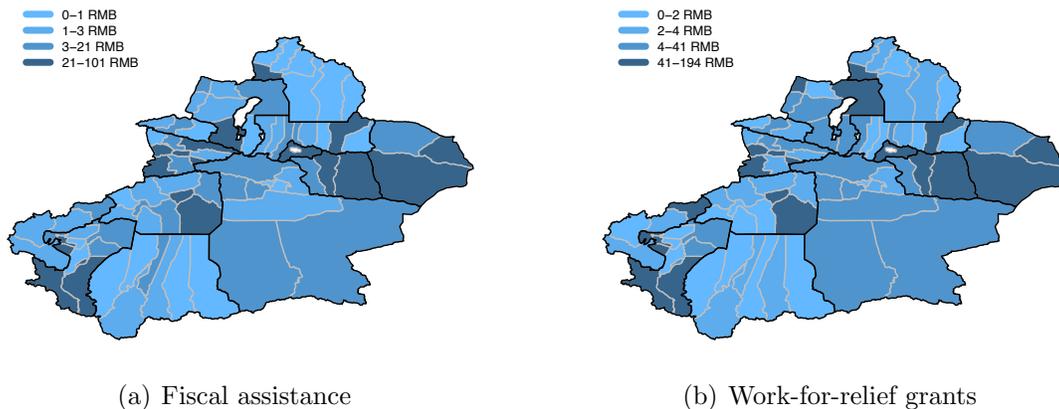


Figure 1: Per capita fiscal assistance and work-for-relief grants across all counties in Xinjiang during the 8-7 National Plan.

## 4 Empirical Strategy

### 4.1 Data and Variables

We analyze a unique dataset that includes various fiscal, political, demographic, and economic variables for all counties in Xinjiang between 1994 and 2000. The data are collected from various sources, such as the *Xinjiang Yearbook*, the *Xinjiang Statistical Yearbook*, and the *Xinjiang Gazetteers*. Additional fiscal data are taken from the *Fiscal Statistics of Provinces, Municipalities, and Counties in China*. The unit of analysis is county-year. As

<sup>9</sup>See Section 5 for more discussion on the relationship between central and local payments.

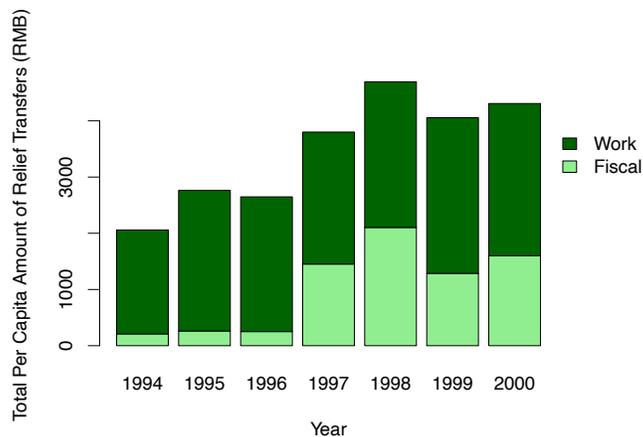


Figure 2: Fiscal assistance and work-for-relief grants during the 8-7 National Plan.

the lowest level of government administration in China, the county is the level of government administration where the Chinese government implemented the 8-7 Plan. Table [A1](#) in the appendix provides the summary statistics of our variables.

#### 4.1.1 Poverty-Alleviation Transfers

The main explanatory variables are the per capita payments of two types of relief transfers (*yuan*/person): Fiscal assistance and work-for-relief grants. Both variables are logged given their skewed distributions.<sup>10</sup> As mentioned above, under the 8-7 Program, fiscal assistance was largely at the discretion of the provincial government in Urumqi while the central government in Beijing mainly managed the work-for-relief grants. Studying these two programs separately will allow us to examine whether these two levels of government jurisdictions had similar or different distributive imperatives when they allocated poverty-relief transfers in Xinjiang.

Figure [2](#) shows the relative size of these two programs during the 8-7 Plan. While the total amount of poverty alleviation transfers grew significantly over time, work-for-relief grants accounted for a larger share of these transfers. However, per capita fiscal assistance grew dramatically between 1994 and 2001.

<sup>10</sup>For each variable, we add .001 before carrying out log transformation to avoid unnecessary missing values.

### 4.1.2 Capacity-related Government Spending

The primary outcomes of interest are three measures that can capture the government's efforts at state building from local government's spending data. First, we use the rate of change in per capita *local* fiscal revenues to indicate local government's capacity to collect resources.<sup>11</sup> Next, we use the rates of change in per capita government spending on public security and administrative management respectively to measure the attempt to increase the security and administrative capacity of local government.<sup>12</sup>

### 4.1.3 Rural Development

In line with existing studies that investigate the effectiveness of Chinese poverty alleviation campaigns (e.g., Park, Wang, and Wu, 2002; Meng, 2013), we use the change in per capita agricultural production as the outcome variable in order to estimate the welfare effect of poverty-alleviation transfers. Including the change in per capita agricultural production as one of the outcome variables allows us to compare the impact of the 8-7 Program over different capacity- and welfare-related outcomes. If the 8-7 Plan focused more on capacity building as hypothesized, the allocated transfers should have a smaller or even insignificant effect on the growth of the rural economy.

### 4.1.4 Ethnic Violence

We include a binary indicator that takes the value of 1 if a county had at least one incident of ethnic violence in the previous year. The violence data are provided by Bovingdon (2010) and Cao et al. (2018). In line with Cao et al. (2018), we use this variable to indicate the presence of any ethnically related political instability in a county, such as terrorism, insurgency, riots,

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<sup>11</sup>It is calculated by dividing all non-subsidy local revenues by total population.

<sup>12</sup>Acemoglu, Garcia-Jimeno, and Robinson (2015), in their study on state capacity in Colombia, adopt the size of national and local government agencies and employees to measure governments' administrative capacity. In China, such data are scant and often incomplete due to the unclear definition of public employees. Prior studies of Chinese intergovernmental transfers (e.g., Shih, Zhang, and Liu, 2007) used the size of *fiscal dependents*, which refers to the citizens who are placed on public payrolls, to measure a similar concept. We prefer per capita administrative spending (e.g., Dincecco and Katz, 2016) instead because fiscal dependents, which might be defined differently across different years and localities, often include former cadres, retired military officers, and employees of other social organizations.

assassinations, and violent street protests.

As suggested by Han and Paik (2014), using an indicator is more appropriate than using the frequencies because counting the actual number of incidents is often difficult or impossible. Figure 3 shows the number of counties that witnessed the occurrence of ethnic violence between 1994 and 2000. Noticeably, nearly a third of counties in Xinjiang were afflicted by ethnic violence.

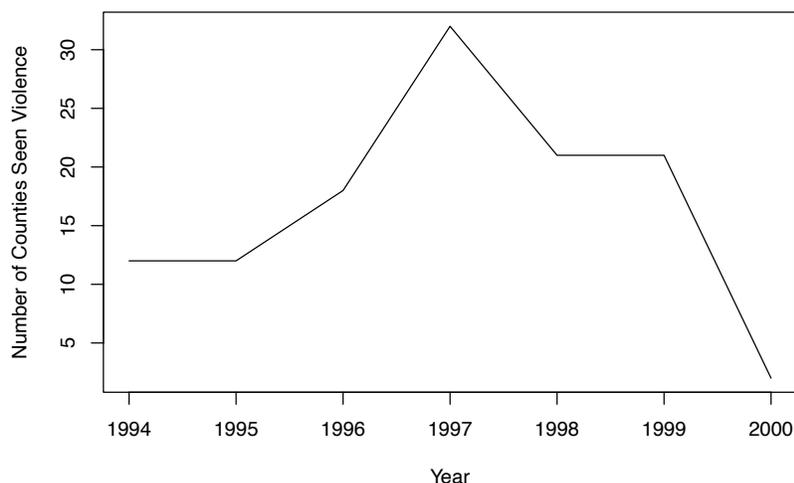


Figure 3: Number of counties with ethnic violence between 1994 and 2000.

#### 4.1.5 Other Variables

We include the following economic and demographic confounders. First, we control for the log of each county’s lagged GDP per capita (*yuan/person*). If poverty alleviation aims at economic equalization, the Center and the provincial government should concentrate transfers on areas with relatively low average income.

Beijing and Urumqi can focus on counties where county governments are incapable of collecting adequate revenues in their respective jurisdictions. Therefore, we include *fiscal dependence*, defined as the share of fiscal subsidies allocated through other channels in each county’s total revenues. If poverty alleviation focuses on supporting fiscally weak local

governments, the degree of fiscal dependence will be positively correlated with observed transfers. Finally, we include each county’s economic growth rate because the allocation of the relief payments can be based on the principle of economic productivity and thus continuously focus on growing counties. In our analysis, all economic variables are lagged by one year.

We also control for the proportion of Uyghur population in each county. Since the 1980s, the Uyghurs have been involved in many incidents of ethnic violence in the province. As the government highlighted “ethnic minority areas” as a key target for poverty alleviation (Park, Wang, and Wu, 2002), poverty-relief transfers may be positively correlated with the relative size of the Uyghur population in each county.<sup>13</sup> In addition, we include population density in each county. Considering the prevalence of “urban bias” in China and other developing countries (e.g., Wallace, 2013), densely populated localities may receive more transfers when other things are held constant.<sup>14</sup>

## 4.2 Identification Strategy

Given the concerns of reverse causality and selection bias, the conventional approach to regress the outcome variables on transfers and other variables may yield estimates that say little about the causal effect of poverty alleviation. Recent work has adopted rigorous causal identification strategies to estimate the effect of poverty alleviation programs. Meng (2013) and Lü (2015) both employ a fuzzy regression discontinuity (FRD) design. Treating the 1992 average rural income as the forcing variable, both studies claim that the FRD design provides a quasi-experiment setting since the assignment of treatment status on either side of the cutoff along the forcing variable can be treated as if random. The FRD design relies on the

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<sup>13</sup>As shown in Table A1, the proportion of Uyghur population varies dramatically across all counties, from 2% to 99.5%. We carry out an analysis to examine whether there is a quadratic relationship between the proportion of Uyghur population and the per capita amount of poverty alleviation transfers. The results are statistically insignificant.

<sup>14</sup>The demographic variables are not lagged by one-year because their values remained quite stable between 1994 and 2001. Also, for population statistics, we use the most recent version published by the provincial government of Xinjiang after 2000 given that some data published in the 1990s show irregularities (e.g., the sum of each group’s population size is not consistent with the published size of the total population).

assumption that the poverty line (RMB 400) specified by the central government will increase the probability that a county would be designated as a National Poverty County (NPC) under the 8-7 Plan, the treatment status of interest.<sup>15</sup> With the FRD design, the poverty line based on the 1992 rural average income can be used as the instrumental variable for NPC status to estimate the effect of poverty alleviation in the full sample or in a subsample that only includes observations within a given bandwidth around the income cut-off point.

While the FRD design is compelling, we argue that it is not a useful identification strategy in the context of Xinjiang for several reasons. First, both studies use the 1992 rural per capita income with RMB 400, the nationwide poverty line defined by Beijing, to create the discontinuity design such that being under RMB 400 increases a county’s probability of being selected as a National Poverty County (NPC).<sup>16</sup> However, in Xinjiang, where Beijing named 25 NPCs in 1994, only two counties had rural average income below RMB 400.<sup>17</sup> Given the unique political situation in Xinjiang, it is very likely that Beijing used different and additional economic and political criteria to determine the NPC status in the province (Park, Wang, and Wu, 2002). Second, both studies create a binary indicator of NPC as the treatment when estimating the effect of the 8-7 Plan. Doing so can conceal important information as there remains considerable variation regarding the actual amount of payments across designated NPCs. In fact, as explained by the Provincial Government of Xinjiang (2009), the 8-7 Plan also intentionally included non-NPC counties, making NPC status a less accurate treatment status for the province.

We employ the recently developed covariate balance propensity score (CBPS) to estimate the causal effects of poverty alleviation on state capacity, rural development, and ethnic violence in Xinjiang. The CBPS, like other propensity score estimation techniques, follows the strategy of “selection on the observables” (SOO) to identify causal effect from observational

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<sup>15</sup>In other words, contrary to the sharp regression discontinuity design, the poverty line does not perfectly determine the treatment status.

<sup>16</sup>It should be noted that other scholars have expressed concern about using income data as the forcing variable because income statistics might be subject to the government’s manipulation.

<sup>17</sup>Among these 25 NPCs in Xinjiang, 11 of them had been designated as NPCs in 1986 (Provincial Government of Xinjiang, 2009).

data. SOO posits that one can identify, at least partially, the effect if observations in the sample are nearly identical based on observed pre-treatment covariates. The observations only differ regarding the status of treatment assignment. With the assumption that no additional unobserved confounders exist, whether a unit receives the treatment or not can then be presumed to be “as if random” within a stratum of observed pre-treatment covariates. In practice, the SOO strategy uses observed covariates to construct counterfactuals against the treated units to identify the effect (Sekhon, 2009). A common estimation technique based on the SOO strategy is matching, through which researchers use observable variables to “pair” most similar observations, between which the assignment of treatment can be reasonably assumed “as if” random. One can also carry out matching or weighting by using observed covariates to estimate treatment assignment, namely the “propensity score,” for each unit and apply the derived scores or weights to adjust observed confounded imbalances between the treated and control units. In addition to propensity score, the SOO assumption also leads to the adoption of inverse probability treatment weight (IPTW) to reconstruct the condition under which the treatment is independent of pre-treatment covariates (Robins, Hernan, and Brumback, 2000).

However, the standard matching and propensity score approaches only allow binary treatment status. The parametric estimation of propensity score can also be biased if the model is not correctly specified. The CBPS explicitly addresses these two challenges. While the CBPS achieves covariate balance and treatment prediction at the same time (Imai and Ratkovic, 2014), recent progress on CBPS provides a non-parametric estimation of IPTW weights, making model misspecification a less severe concern. More crucially, the extended CBPS generalizes the treatment regime to accommodate non-binary and continuous treatments (Fong, Hazlett, and Imai, 2018). The new CBPS is thus more appropriate for current purposes, given that poverty-reduction transfers, the primary treatment of interest, are continuous variables. The conventional FRDD estimation is problematic in this case as it creates extremely few cases under the discontinuity of the forcing variable under the stipulated

threshold for effect identification.

In sum, we prefer CBPS over FRD design. The implementation of CBPS analysis begins with the estimation of CBPS weights. The estimation is carried out by regressing the treatment variables, namely the per capita amount of fiscal assistance or work-for-relief grants, on observed pre-treatment covariates, including the log of lagged GDP per capita, lagged fiscal dependence, lagged economic growth rate, the proportion of Uyghur population, and population density (log) in county  $i$  and year  $t - 1$ .<sup>18</sup> The derived CBPS weights will then be applied in the conventional OLS analysis to estimate the effects of poverty-alleviation transfers. We regress the outcome variables on both treatments (i.e., per capita fiscal assistance and work-for-relief grants), controlling for all observed covariates  $\mathbf{X}$ .

$$y_{i,t} = \alpha + \beta(\text{Treatment})_{i,t-1} + \mathbf{X}_{i,t-1}\gamma + \epsilon_{i,t}, \quad (1)$$

where  $y$  refers to the outcome variable at county  $i$  in year  $t$ . The coefficient  $\beta$  indicates the estimated treatment effects of poverty alleviation transfers.  $\mathbf{X}$  represents the matrix of pre-treatment covariates while  $\gamma$  is the vector of their corresponding coefficients. We cluster the standard errors by county to account for within-county correlation of errors over time.<sup>19</sup>

### 4.3 Main Results

Figure 4 presents the estimated treatment effects of fiscal assistance and work-for-relief grants with 95% confidence intervals.<sup>20</sup> We carry out the analysis with and without one-year lagged

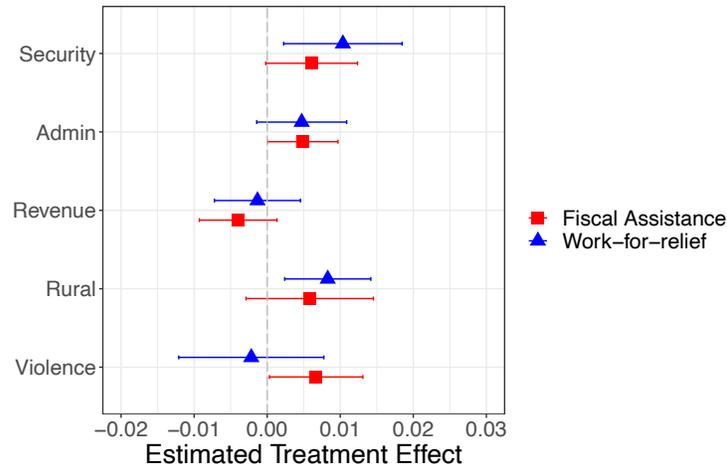
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<sup>18</sup>In our matching estimations, we first partial out the county and year fixed effects of outcome, treatment, and observed covariates. The fixed effects, first, will help to address the effects of border counties as Beijing has been highlighting border localities as the potential source of ethnic separatism in Xinjiang. They are also useful in taking into account the fact that the Chinese government has highlighted three Southern prefectures in Xinjiang as the main destinations for the campaign of poverty alleviation and development since the 1990s. The fixed effects can account for the bargaining power of county officials in demanding poverty alleviation transfers. As suggested by previous studies (Su and Yang, 2000), provincial officials with political connections with the central government may receive more subsidies than their unconnected peers. Finally, the fixed effects will also be useful to capture any unobserved migration trend that was not fully recorded by the available data.

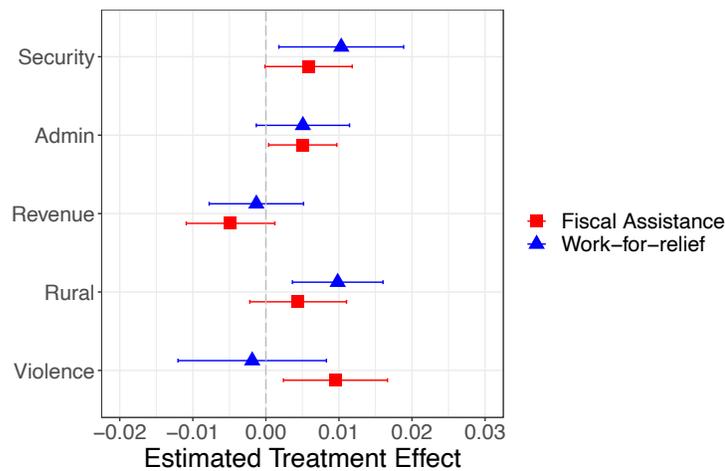
<sup>19</sup>The estimation of CBPS weights should render the treatment marginally correlated with all observed confounding covariates after weighting. We present the diagnostics in the appendix.

<sup>20</sup>The complete regression tables are available in the appendix.

dependent variables to capture the unobserved trend in the dependent variables over time. As shown in Figure 4, the results are similar, although including lagged dependent variables slightly improves the efficiency of estimation.



(a) No Lagged DV



(b) Include Lagged DV

Figure 4: Estimated effects of poverty-alleviation transfers (CBPS estimations). The error bars show 95% confidence intervals.

The first two outcomes concern the effect of poverty alleviation transfers on the government's security and administrative capacity. To begin, both poverty alleviation payments have a positive effect on the rate of change in per capita spending on public security. The point estimates are consistently statistically significant with and without the lagged dependent variable. In contrast, with 95% confidence intervals, the effects of poverty alleviation

on per capita spending on administrative management are only statistically significant when the treatment is per capita fiscal assistance. Altogether, the transfers under the 8-7 Plan appear to boost local government’s capacity on public security and, to a lesser degree, administrative management. Given that per capita fiscal assistance and work-for-relief grants grew by seven times and by 50% respectively before and after the 8-7 Plan, the estimated coefficients suggest that fiscal assistance and work-for-relief transfers, respectively, accounted for about 10% and 15% of the increases in per capita security and administrative spendings.

Next, neither poverty-alleviation program has a conclusive effect on the rate of change in per capita local fiscal revenue. For both treatments, the estimated effects are not statistically different from zero. This result is consistent with the “building capacity” hypothesis – as government agencies and functionaries build up their ruling capacity at the grassroots level, there can be a time lapse before they can fully take control of the local tax base for resource extraction.

Finally, while poverty alleviation appears to have positive effects on building the government’s security and administrative capacity, its impact on rural development and conflict reduction is mixed or even negative. First, while the estimated effect on the rate of change in per capita agricultural production is always positive, the estimated effect becomes statistically different from zero only in the case of work-for-relief grants. The two programs demonstrate opposite effects on the prevention of ethnic conflicts. On the one hand, the work-for-relief grants seem to undermine it (although the effect is not statistically significant); on the other hand, fiscal assistance appears to intensify ethnic violence.<sup>21</sup>

To illustrate, several policy campaigns that took place at the same time as the 8-7 Plan indeed align with our quantitative findings. As documented by the yearbooks of Xinjiang, first, we found that the provincial government was involved in a series of campaigns to increase its presence at the grassroots level, particularly by establishing a large number of service points of civil affairs across the province. The official attempts of community building started with

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<sup>21</sup>In the appendix, we use the frequencies of ethnic violence for robustness check; the results are similar to those based on the dummy variable.

Urumqi and were later expanded to other prefectures such as Aksu, Bortala, Ili, and Kashgar toward the end of the 8-7 Plan. During the same period, the public security bureau of Xinjiang also carried out various endeavors to strengthen the government’s control of the population in the province. More specifically, these endeavors aimed to boost the provincial government’s surveillance over household registration (especially in the countryside), as well as the issuing of identity documents.

#### 4.4 Counterarguments and Robustness Checks

We carry out several additional tests to evaluate the robustness of the main findings and address rival arguments. All results are available in the appendix.

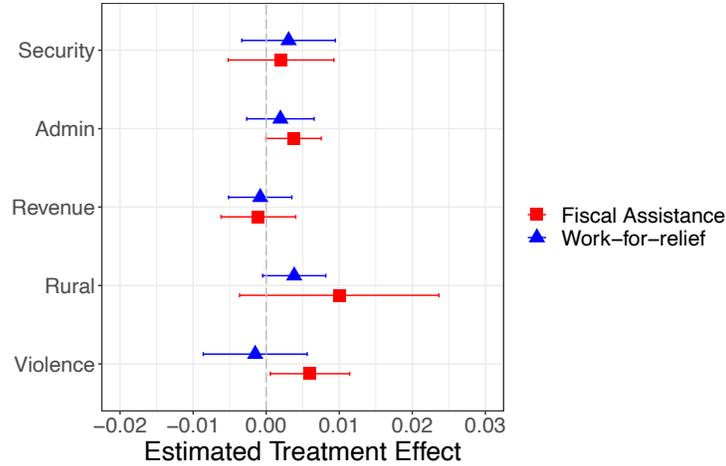
One may contend that poverty alleviation transfers may merely increase the government’s overall spending instead of boosting security and administrative capacity. We have conducted another analysis with non-capacity government spending as the outcome variable and find that neither relief payment has a statistically significant effect on government spending on categories unrelated to administrative management and public security (Table [A9](#)). The results also suggest, while one may contend that our outcome variables represent patronage ([Ang, 2016](#)), the spending for other categories that might be used for patronage (e.g., fixed asset construction) seems unaffected. Likewise, one may argue that poverty alleviation is only a part of Beijing’s financial support in Xinjiang. As a result, the effects of relief transfers are trivial. We conduct another test to estimate the effects of per capita non-relief intergovernmental transfers and find that they do not have any noticeable impact on the main outcome variables (Table [A10](#)). We have also conducted a separate analysis to see whether poverty alleviation transfers, to facilitate local state-building, have impacted telecommunication within Xinjiang. As shown in Table [A11](#), we do not find any statistically significant results. The results, however, are not surprising given that, during the 8-7 Plan, poverty alleviation in the province primarily focused on the construction of agricultural production facilities. We have also estimated whether the 8-7 Plan had any impact on the growth of GDP per capita, which does not yield consistently significant results (Table

[A12](#)) – that said, in the case of work-for-relief transfers, poverty alleviation appears to have a negative impact. One may argue that poverty alleviation in Xinjiang meant to create government jobs for the Han Chinese even though these transfers were for designated infrastructure projects. We have carried out two tests to examine whether the 8-7 Program had any impact on the size of the Han population, as well as the size of the fiscally dependent population, which includes local officials. We do not find any statistically significant results (see Tables [A13](#) and [A14](#)). While these two dependent variables may not rule out the possible changes in the presence of Han officials in Xinjiang brought by poverty alleviation transfers, we believe that increasing the presence of the Chinese Han in the government is still consistent with our argument. That is, poverty alleviation in Xinjiang has largely strengthened the control of the Han-dominated Chinese state.

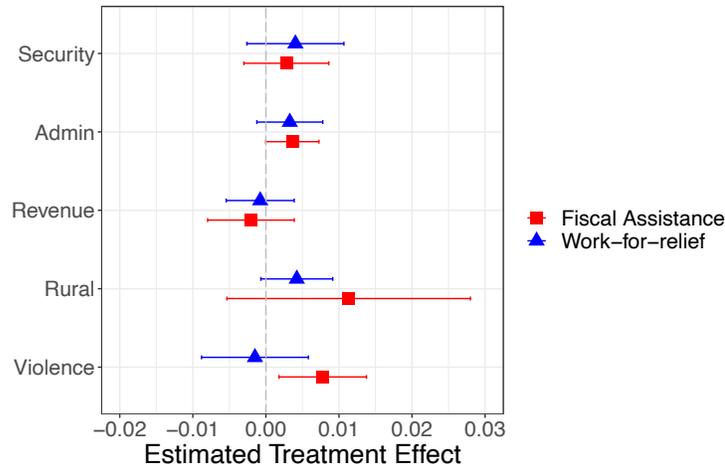
Finally, we have also conducted an additional test based on a longer panel dataset that includes all variables until 2004. The findings shown in Figure [5](#) are mostly similar to the main findings – the only notable exception is that the estimated effects on the growth of per capita security spending are no longer significant, although they remain positive as hypothesized. The exception here, however, should be received with caution as it is important to point out that the Chinese government changed the way spending on public security was recorded during the 2000-2001 fiscal year.

#### 4.5 Alternative Identification

We conduct an alternative analysis with all variables being first-differenced to address model endogeneity, as suggested by [Berman, Shapiro, and Felter \(2011\)](#) (Section [A3](#)). Meanwhile, we aggregate our observations by county and instrument the treatment with per capita relief between 1990 and 1993. Here we assume that the 8-7 Plan mostly reorganized and continued the previous campaign of poverty alleviation in the late 1980s and early 1990s rather than targeting a different set of localities, an assumption that is plausible based on our review above. The results still support our main hypotheses. We find that changes in poverty alleviation transfers, especially work-for-relief grants, are positively correlated with changes



(a) No Lagged DV



(b) Include Lagged DV

Figure 5: Estimated effects of poverty-alleviation transfers (CBPS estimations), 1994-2004. The error bars show 95% confidence intervals.

in per capita security spending. The instrumental variable (IV) estimations suggest that poverty relief under 8-7 only had a significantly positive effect on per capita spending on public security and government administration (Section [A4](#) in the appendix).

In sum, the empirical results align more closely with the proposed “building capacity” hypothesis of poverty reduction. We find that poverty alleviation under the 8-7 Plan in Xinjiang appears to focus more on strengthening the government’s ruling capacity to maintain security and order with the presence of public administration.

## 5 Increases in Central Command Over Provincial Transfers

The results above suggest that poverty alleviation under the 8-7 Plan mainly focused on strengthening the security and administrative capacity of local governments in Xinjiang. One may still wonder how the presence of more capable local governments contributes to the central government’s control.

We conduct an ordinary least square (OLS) test to study the relationship between fiscal assistance and work-for-relief grants. In the following analysis, *Concurrent aid* is the key explanatory variable.<sup>22</sup> The estimated coefficients, if positive, will imply that these two programs “reinforce” each other. In contrast, a negative coefficient will indicate these two programs “substitute” for each other, as a locality will receive less support from one program if it receives more from the other program. In addition to *Concurrent aid*, we control for lagged GDP per capita (log), lagged fiscal dependence, lagged economic growth rate, a binary indicator of previous ethnic violence, the proportion of Uyghur population, and population density:

$$\text{Per capita transfer}_{i,t,p} = \alpha + \beta(\text{Concurrent aid})_{i,t-1} + \mathbf{X}\gamma + \kappa_i + \tau_t + \epsilon_{i,t}, \quad (2)$$

where  $i$  and  $t$  refer to individual county and year respectively. The matrix  $\mathbf{X}$  denotes the control variables;  $\gamma$  is the vector of their corresponding coefficients. The model also includes county- ( $\kappa$ ) and year-fixed effects ( $\tau$ ) to account for additional unobserved location-specific and time-invariant factors. We cluster the standard errors by county to account for within-county correlation of errors over time. The main coefficient of interest is  $\beta$ .

Table 1 presents the results. The *Concurrent aid* coefficients for fiscal assistance and work-for-relief grants are all statistically significant and positive. However, while the positive correlation between the two programs suggests some degree of mutual reinforcement between

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<sup>22</sup>To illustrate, when the dependent variable is per capita fiscal assistance, the model will control for per capita work-for-relief grants.

the central and provincial governments, the size of coefficients is smaller in the case of work-for-relief grants. Using the coefficients from the full model (Models 4 and 8), a 1% increase in work-for-relief grants on average corresponds to a 0.4% increase in fiscal assistance, while a 1% increase in fiscal assistance only corresponds to a 0.2% increase in work-for-relief grants. Therefore, work-for-relief grants, compared with fiscal assistance, seem less complementary. Moreover, the estimated coefficients from Models (1) to (4) reveal that fiscal assistance, after taking into account possible explanatory factors, is only correlated with the work-for-relief grants allocated by the central government in Beijing.

	Fiscal assistance				Work-for-relief			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Concurrent aid	0.422*** (0.094)	0.438*** (0.098)	0.437*** (0.098)	0.420*** (0.094)	0.183*** (0.037)	0.214*** (0.041)	0.213*** (0.041)	0.181*** (0.037)
Lagged GDP per capita (log)	-0.892 (1.592)			-0.822 (1.568)	-1.848** (0.804)			-1.862** (0.813)
Fiscal dependence (percent)	4.742 (3.997)			4.562 (3.947)	8.848*** (2.318)			8.975*** (2.333)
Economic growth (percent)	-0.226 (0.239)			-0.228 (0.235)	0.228* (0.129)			0.246* (0.127)
Riot (=1)		0.405 (0.480)		0.308 (0.447)		0.341 (0.390)		0.456 (0.377)
Share of Uyghur (percent)			15.962 (29.431)	21.495 (31.794)			14.628 (15.584)	-6.990 (15.095)
Population density (log)	-0.423 (3.939)	-0.212 (3.248)	-0.176 (3.221)	-0.430 (3.838)	-0.732 (1.972)	-1.287 (2.189)	-1.257 (2.202)	-0.827 (1.938)
Constant	1.069 (21.552)	-5.301 (8.731)	-6.514 (8.029)	-0.916 (21.040)	9.859 (7.324)	0.357 (5.802)	-0.746 (5.861)	10.623 (7.256)
Observations	570	587	587	570	570	587	587	570
Adjusted R <sup>2</sup>	0.566	0.560	0.560	0.566	0.812	0.784	0.785	0.812

Note: \* p<0.1; \*\* p<0.05; \*\*\* p<0.01

Table 1: Correlation between the two poverty alleviation programs. All models include county and year fixed effects with robust-cluster standard errors by county.

We then study how the correlation between the two programs evolved over time. We run the tests that let the *Concurrent aid* coefficients vary by year. As shown in Figure 6, at the beginning the estimate is negative for fiscal assistance, which suggests that Urumqi mostly allocated fiscal assistance to localities that were not covered by work-for-relief grants. Put differently, fiscal assistance started as a substitute for work-for-relief grants, although it appears that work-for-relief grants also attempted to complement fiscal assistance. After 1997, however, the two programs became clearly positively correlated, suggesting that they began to complement each other. Interestingly, this change is consistent with the observation that poverty alleviation in Xinjiang during the 8-7 Plan grew primarily under Beijing's command. In 1997, the National Development and Reform Commission (NDRC) in Beijing began to

participate in the management of fiscal assistance (Meng, 2000). This change coincided with the year in which the central government convened a Politburo Standing Committee meeting, which demanded the central government’s more active command over poverty alleviation in Xinjiang (Tong, 2010). As the central government commanded the distributive allocations of poverty relief transfers, empowering the local state seems to, accordingly, have increased the central state’s ruling capacity in Xinjiang through infrastructure-oriented transfers.

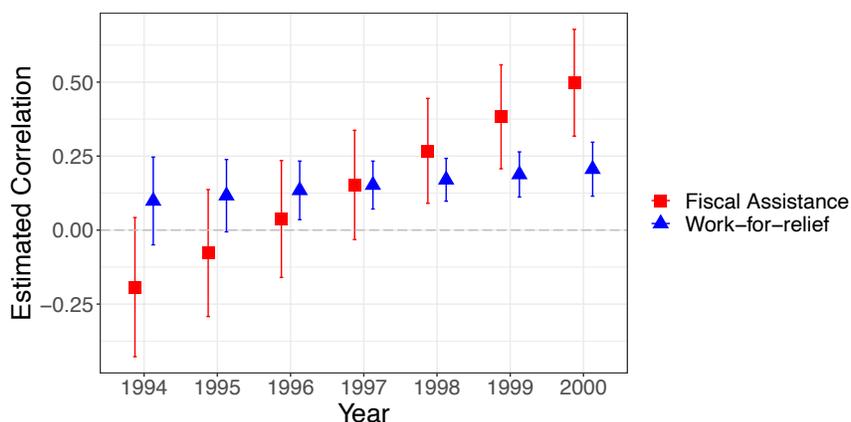


Figure 6: Correlation between the two poverty alleviation programs by year. The error bars represent 95% confidence intervals.

## 6 Conclusion

This article presents a systematic analysis of poverty alleviation transfers in Xinjiang during the 8-7 National Plan. Consistent with the hypotheses, we find that the relief payments have encouraged the local government to increase its spending, which facilitated the implementation of the assigned projects and increased political control in the long run. More specifically, the 8-7 National Plan appears to have the most salient impact on boosting the government’s security and administrative capacity through the construction of public infrastructure. As we examine how poverty alleviation leads to the enlargement of local state apparatus as part of broad state-building endeavors, our results align with recent reflections on the “hearts and minds” strategy as a means of conflict reduction (e.g., Hazelton, 2017).

In a broad vein, our findings reinforce the importance of the distinction between different

types of government goods and services. While much of the literature has focused on how particularistic anti-poverty payments can increase political elites' chance of political survival by improving beneficiaries' material well-being, we show that intergovernmental transfers that the government allocates to mitigate poverty through infrastructure construction can focus more on building the government's ruling capacity at the grassroots level. Recent studies on both democratic and non-democratic countries have discussed the difference between public patronage and more individual-oriented transfers, which can be present in specific contexts and yield different implications for political survival. These distinctions are crucial for those interested in authoritarian governance – more research is needed to understand the political and socioeconomic implications of an increasingly stronger administrative and security state. Will greater state capacity necessarily lead to better government service delivery and revenue collection, which can contribute to authoritarian durability without much use of repression? If yes, how long will it take?

Furthermore, our findings suggest the need to distinguish different types of *outcomes*. While the literature highlights that selective delivery of government goods and services contributes to political survival by improving recipients' well-being, we argue and demonstrate that these distributive allocations may also help to sustain political power by inducing the building of state capacity. To fully evaluate the effect of public goods and service provision, it is crucial to separate and take account of capacity- and welfare-related outcomes. In the case of Xinjiang, to construct the assigned production facilities, the county governments allocated additional funds to strengthen their administrative and security capacity, which in turn strengthened political control in the long run.

One can extend the current project to other ethnic autonomous regions, as well as other provinces, to see whether the same pattern seen in Xinjiang travels or not. The Chinese government may be preoccupied with redistribution between rich and poor areas in more stable but similarly poverty-stricken provinces. Local officials who seek to maximize their career prospects by achieving economic prosperity may also highlight economic efficiency by

focusing on fast growing localities governed by their upper-level allies when allocating fiscal transfers (e.g., Jiang, 2018). The statistical results in this article can be complemented by qualitative evidence to capture additional insights. For instance, if the objectives of resource allocation indeed vary between different levels of local jurisdictions, it will be enlightening to interview any government official who has personally experienced alternative distributive imperatives when serving in other provinces.

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