Political Survival, Local Accountability, and Long-Term Development:

Evidence from an Authoritarian Country[*]

Hanming Fang,[a] Linke Hou,[b] Mingxing Liu,[c] Lixin Colin Xu,[d] and Pengfei Zhang[e]

Abstract. We examine how local accountability shapes the policy choices of officials and affect local development in a one-party authoritarian country, China. We argue that county leaders from the strong faction were less likely to pursue pro-development policies because their political survival relied on loyalty to the provincial leader than on grass-root support. By contrast, the political survival of county leaders from the weak factions depended on grassroots support, which induced local accountability and facilitated better local development. In addition, a guerrilla presence in a county further improved development performance because of the natural connections between guerrilla-affiliated cadres and local population. We find supporting evidence using county-level performance in Fujian Province in China. Being from the weak faction and/or having guerrilla presence, by improving local accountability, is associated with sizable long-term benefits including economic growth, private-sector development, local population's education levels and survival rates during the Great Famine. Being with the strong faction and adopting pro-local policies are associated with higher likelihood of political survival.

Keywords: Local Accountability; Political Survival; Policy, Development Performance; Famine

JEL Classification Code: O1, O43, H70, D72

1. Introduction

Local accountability has been viewed as being crucial for development (Bardhan 2002, 2016). The past decades have witnessed large countries such as China and India embracing decentralization, commonly considered a prerequisite for achieving local accountability. International organizations such as the World Bank have viewed it a critical governance reform (World Bank 2000). Indeed, local governments are widely viewed as having information advantage over upper-tier governments due to their proximity to local residents (Bardhan 2002), and having local accountability allows local officials to have stronger incentives to understand such needs and deliver what local citizens want (Seabright 1996).

The literature on local accountability is large and growing (for surveys, see Bardhan 2002, 2016, and Mansuri and Rao 2013). Most of the studies focus on how elections or citizen participation schemes affect service and public goods delivery. For instance, Besley and Burgess (2002) show that having a more informed and politically active electorate strengthens the incentives for governments to be responsive to citizens' preferences. Martinez-Bravo et al. (2021) show that autocrats can use citizens' informational advantage in local election to keep local officials accountable when their bureaucratic capacity is low. Björkman and Svensson (2009) offer causal evidence that citizen involvement improves health providers' delivery of health services.[1]

While this literature is informative, it has large holes to be filled. We know very little about how local accountability works in non-democratic countries: are there some forms of local accountability without elections? If so, what are the origins of such accountability? What are the effects of local accountability in such countries? Such knowledge is crucial because *de facto* one-party rule has been quite common in the world. Indeed, at the country level over the past four decades, about 45 percent of country-years (among a sample of 179 countries) can be characterized as having *de facto* one-party rule (Cruz, Keefer, and Scartascini, 2016).

We address the above questions by documenting how history-shaped local accountability generated differences in a rich array of development outcomes in counties of Fujian Province after the communists took power in 1949, where local politicians in some counties tended to represent

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[1] Mansuri and Rao (2013) provide a comprehensive overview of the theory and evidence for development strategies that are based on local community empowerment.

the grassroots' interest to curry their supports for political survival. Fujian is a mostly mountainous province on the southeast coast of China, separated from Taiwan by the narrow Taiwan Strait. It has an area of 120 thousand square kilometers; today it is home to a population of nearly 40 million. When the reform started in 1978, Fujian ranked in the bottom 7 out of the 30 provinces then; in 2017, it ranked in top 6 among all provinces.[2] In 2016, its GDP per capita is 11,247 USD (and 21,339 in Purchasing Power Parity, PPP). Thus, within the Chinese economic growth miracle, Fujian has been a superstar performer, having experienced the most complete reversal of fortunes.

We investigate the role of local accountability in explaining the large variations in the development performance across counties in Fujian Province. The set of county-level development outcomes we examine in this paper includes: the economic growth rates between 1952 and 1998, and in the post-reform period (i.e., 1978 to 1998); the improvement in educational attainment between 1952 and 1990; the level of private-sector development; and net birth rates and death rates during the Great Chinese Famine between 1959-1961. We also empirically examine whether political survival is part of our story.

We then shed light on the underlying mechanisms that link the local accountability, and the development outcomes at the county level. The intuition is as follows. When the Communist armies took over Fujian province from the Nationalist control circa 1949, the designated county leaders consisted of cadres mainly from two army factions - namely, the Third Field Army (FA3, henceforth), and the Yangtze-River Detachment (YRD). These cadres were commonly known as "southbound cadres" because they came from northern provinces. The Fujian Provincial Standing Committee of the Communist Party, however, had always been dominated by members from FA3, which we refer to as the "strong faction," during the period we examine. We argue that county leaders' incentives regarding local development depended on whether they were from the strong faction (FA3) that dominated the provincial government. If a county leader belonged to FA3, then he was less likely to pursue policies that were friendly to local development because, as a political incumbent, his political survival depended more on his connections to the provincial leaders. On the other hand, if a local leader belonged to the weaker faction, his political survival depended more on local grassroots support, which could be best secured if he focused on local economic

development. In addition, the guerrilla presence in the county also improved development performance for two reasons: it facilitated local accountability of the county leader because guerrilla-affiliated leaders also did not have connections with the strong faction; and it better facilitated the communication between local cadres and local residents. We argue that the above mechanisms explain our finding that counties with leaders from the weaker political factions (i.e., those with YRD cadres or guerrilla-related cadres) have significantly better development outcomes in almost all the measures we examined.

Fujian Province offers a particularly suitable place to examine how local accountability affects long-term development. Due to exogenous historical reasons, some counties were governed by cadres with strong connections to provincial leaders, while others were governed by cadres with weak connections. Moreover, a significant share of counties had a Communist guerrilla presence before the 1949 takeover. Intuitively, local leaders with weak connections and those in charge of counties in which guerrilla factions were present likely had to depend more on grassroots support for political survival, and, thus, their development-related political choices should have resulted in systematical differences in long-term development. Finally, Fujian is a southeastern province distant from Beijing and less exposed to the intervention from the central authority, which likely offered more room for the cadres with weak connections to survive.

A challenge for identifying the effects of local accountability (weak faction or guerrilla) is that they may not be exogenous to long-term development. Better local accountability may facilitate long-term development, while development itself may increase local accountability (Bardhan 2002). We do our best to ensure that the outcomes indeed reflect causal effects. First, we provide institutional background that how different counties in Fujian Province ended up being connected to provincial leaders is likely exogenous with respect to our indicators of long-term development. Indeed, we find that local accountability is not systematically related to initial income levels or population levels; they do appear to be related to some extent to geography, which we control for in our empirical specifications. Second, in assessing the impact of local accountability, we control for initial income, population, and local geography. The differences that we find are, thus, not a result of geography. Clearly, these counties shared the same legal system, religion, and culture. Because we also control for the initial level of economic development in the county, the results

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cannot be attributed to conditional convergence. Third, the estimates of the effects of the two key variables are remarkably stable regardless of the amount of control, which is suggestive of exogenous assignment (Angrist and Pischke, 2009). Fourth, the key results remain robust when we only use the geographically neighboring-county pairs with different affiliation. We also test the key assumptions behind our story. For instance, our framework asserts that political survival would be higher when the county leader was affiliated with the strong faction or had grassroots support; indeed, we find support by using evidence of political survival during the Cultural Revolution. We also find counties with weak-faction leaders and a local guerrilla presence adopted stronger pro-local policies, as demonstrated by lower death rates during the Great Famine around 1960, greater private-sector development, and greater advances in schooling attainment before and after the power change in 1949.

Our empirical results yield coherent findings consistent with our expectation. First, counties with weak-faction leadership have an annual growth rate premium (in gross value of output) of 0.9 percentage points in the 1952-1998 period, and this premium increases to 1.9 percentage points in the two post-reform decades. Similarly, counties with a guerrilla presence have an annual growth premium of 0.5 (1.5, respectively) percentage points in the 1952-1998 (1978-1998, respectively) period. The effects are especially pronounced when a county had both weak-faction leadership and a guerrilla presence; counties with this combination experienced a growth rate premium (relative to strong-faction counties) that was often double that of counties that had weak-faction leadership but no guerrilla presence. The growth effects of being affiliated with the weak faction and having guerrilla presence are much more pronounced during the dynamic reform period of 1994 to 1998. Second, weak-faction counties had significantly lower death rates and smaller reduction in birth rates during the Great Chinese Famine around 1960. Third, the change in average schooling levels for affected cohorts after the power change was positive and significantly larger – by around 37.5 percentage points – in counties with weak-faction leaders and a guerrilla presence (relative to the strong-faction counties). Fourth, weak-faction counties were more conducive to private-sector development. State-owned enterprise (SOE) shares as measured by sales revenue in a county were about 22 percentage points lower in weak-faction counties than in strong-faction counties. Fifth, we provide evidence to directly support the political survival mechanism. In particular, in counties

with the strong-faction leadership or with lower death rates during the Great Chinese Famine, leaders who were purged during the initial years of the Cultural Revolution tended to be reinstalled earlier or, were more likely to be reinstalled. This suggests that both affiliation with the strong faction and grassroots support are central for political survival in the autocratic regime. Finally, we offer further checks – such as whether fiscal transfers explain the differences in development outcomes – which allow us to exclude this alternative interpretation. In general, our results are remarkably robust to specifications with different controls, to outlier concerns, and to using only the neighboring-county treatment-control pairs.

Our paper is related to several strands of literature in political economy. First, it is related to a recent literature on the effect of local accountability on development, which focuses on the role of elections and local political participation in facilitating public goods delivery and local welfare (Besley and Burgess 2002; Bjorkman and Svensson 2009, Bardhan 2002, 2016; Mansuri and Rao, 2013; Martinez-Bravo et al. 2021; Shen and Yao 2008). The literature on local accountability in nondemocratic countries other than on local elections is relatively small, and the focus is generally on upward accountability (i.e., accountability to the superiors) for the purpose of promotions (Li and Zhou 2005).[3] In our paper, local guerrilla presence prior to the Communist takeover and the lack of strong connection to upper-tier governments serve as proxies for local accountability. We find that local accountability plays an important role in regulating the behavior of local politicians to be more favorable to local economic development in a non-democratic setting. We show that local accountability is positively associated with many different aspects of development (i.e., growth, education, private-sector development, and the extent of famine) and at different stages of half a century of political and economic transformation in China. These results suggest that local accountability is a powerful, robust, and balanced mechanism for ensuring long-term development. To the best of our knowledge, this paper is the first to consider the presence of guerrillas as well as the lack of connections to upper-tier governments as the historical origins of local accountability, and to study its comprehensive impact on local economic growth and other pro-local policies. We

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[3] Few exceptions exist in the literature. Among these exceptions is Li (2014), who shows that provincial leaders in China tend to implement policies more in favor of the citizens in response to intensified labor disputes, thus suggesting evidence for downward accountability. Another example is Distelhorst and Hou (2017), whose study of the responsiveness of Chinese city government officials to appeals from putative citizens finds that average responsiveness is comparable to that in democracies.

also add nuances to the local governance literature. While the literature typically assumes that local governance results in more responsible and locally-accountable local governments (Bardhan 2002), we provide evidence that whether this was true depend on the connections between local officials and upper-tier governments. Furthermore, this literature emphasizes the tradeoff involved in local governance, with the benefits of better local information and local accountability, and the costs of potential local capture by local elites after decentralization (Bardhan 2016). Our finding of strong positive effects of local accountability in our context is suggestive that where the upper-tier government power is strong, the benefits of local accountability could heavily outweigh its costs.

Second, our paper is related to the literature on the role of accountability for political survival in autocracies. The main idea from the literature is that in autocracies, concerns about political survival drive the political leader to satisfy the demands of the citizens in order to avoid large-scale revolutions (Acemoglu and Robinson 2001, 2006; Smith 2008; Bueno de Mesquita and Smith 2008, 2010). In the context of China, Zhang et al. (2021) provide evidence that historical elite cleavages motivated marginalized local cadres to protect local entrepreneurs and facilitated vibrant private economic activities. Our paper focuses on the survival incentives of local leaders rather than those of national leaders. In our setup, local leaders can increase their chances of political survival either by strengthening their ties to higher-level officials, or by mobilizing grassroots support from within their jurisdiction, and we provide direct evidence from the power purge and reinstatement during the Cultural Revolution. Moreover, we emphasize the role of local accountability in shaping local leaders' policy-making incentives.

Finally, our paper is related to the literature political incentives in communist China.[4] Most of the studies on factions in China focus on the post-reform period. Shih (2008) provides a systematic analysis of political ties based on networks of leaders, and studies the impact of elite politics on monetary and banking policies. Shih, Adolph and Liu (2012) examine the role of political ties with top leaders in the promotion to the Central Committee of the Chinese Communist Party. Francois, Trebbi and Xiao (2017) model political ties in China and present empirical regularities. Few papers study the impact of political ties based on military affiliations. One

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[4] The literature on political ties in general is large. See, for instance, Persico, Rodriguez-Pueblita, and and Silverman (2011), and Dewan and Squintani (2016).

exception is Zhang and Liu (2019), who examine a possible causal relationship between a region's communist revolutionary legacy before 1949 and the variation in private-sector development after 1949 in Zhejiang province. Our paper delves more deeply and more systematically into the broad impact on a variety of development performance measures of the counties led by southbound cadres from different military affiliations. Political incentives in China have been perhaps the most influential area of economic study on China, with most existing work focusing on the promotion incentives of top-level government officials (Maskin, Qian and Xu, 2000; Li and Zhou, 2005; Shih, Adolph and Liu, 2012; Jia et al., 2015). Our paper differs in offering the complementary perspective of the importance of incentives for political survival for local government officials—after all, for most politicians, they do not get the chance to be promoted, and keeping their power is their key concern. We find that at the county level, local leaders with historical ties with the provincial government achieve lower growth performance than those without such upper-tier connections. We also differ in shedding light on incentives that exist outside the formal Communist hierarchy: local accountability that stemmed from the relationship between local officials and local citizens inherited from their revolutionary history. Our paper thus complements Persson and Zhuravskaya (2015), which find that top provincial leaders' prior experience within the province is associated with more public expenditures on education and health, and less on construction, which are both consistent with the goal of improving local welfare. They suggest that a channel for their findings is that provincial leaders with local work experience tend to cater to local elites, who in turn exert positive spillover to the local population. Our paper complements theirs in underscoring the importance of local accountability of the local leaders for the spillover effects to benefit the local population, and in showing that local accountability represented a positive force for economic growth, protection of citizen lives at the time of Great Famine, improving local education, and successful dealing with economic turbulence, with magnitudes indicating first-order importance.[5]

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[5] Relatedly, Jia et al. (2015) offer evidence in the short period of 1993-2009 that, at the *provincial* level, the central government does not reward performance (i.e., growth) per se, but reward such performance only when the provincial leaders are connected to top powerful leaders. Our results may seem at odds with Jia et al. (2015), but they are not. First, it could be the case that our province, Fujian, was not connected to the central government in this period, in which case the provincial leaders could focus on other non-growth performance instead. Second, Jia et al (2015) deals with provincial governments for the period of 1993-2009, while our study covers counties in a province from 1952 to 1998. We also specifically look at the sub-period of 1994 to 1998, a period of strong economic disturbances, and found our results to be robust and even more pronounced. Third, there is no strong rationale that the findings at the provincial level about the complementarity between growth

The remainder of the paper is structured as follows. In Section 2 we present a simple example to highlight effect on development performance of local accountability and derive its implications. In Section 3 we provide institutional background on army affiliations and local guerrilla movements in the post-civil-war county and provincial governments of Fujian Province. In Section 4 we describe our data sources, and present summary statistics for some of the key variables of interest. In Section 5 we present our empirical results, as well as robustness checks and alternative explanations. Section 6 offers conclusions.

2. Political Survival, Local Accountability, and Economic Performance: The Hypothesis

In this section we first present a simple example to illustrate the main forces that local (i.e., county) leaders face in their decision making to ensure political survival. Consider two factions, w and s, representing weak and strong affiliations with the upper-tier government (i.e., the province), respectively. The provincial government is controlled by the strong faction; indeed, the control of the provincial government is what makes the "strong faction" strong. We focus on the incentives of the county-level leaders.

A leader from faction f (i.e., either w or s) faces an exogenous baseline probability ρ_f of being stripped of power. It is reasonable to assume that $\rho_s < \rho_w$. However, whether the county leader will be stripped of power depends both on his affiliation and the policy actions he chooses. A leader's affiliation is exogenously given and cannot be changed. He can choose from two possible policy actions: the first is pro-local economic development, which we denote by L; and the second is anti-local (or, pro-upper) policy, which we denote by U. We can interpret L as extracting fewer local resources to send to the provincial government, and instead focusing on providing more local public goods; or L could represent taking economic policies that are more suitable to the local conditions instead of following the policies preferred by the central leaders --such as making poor-equality steel to satisfy the central government's determination to overtake Great Britain in steel production

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and connection would necessarily apply at the county level, as inter- and intra-provincial level politics can be quite different. Fourth, Jia et al. (2015) focuses on current connection with the central government, but we focus on historical connections with upper government. It is plausible that in the early decades, growth was not the key targets of local officials, and initially-assigned county leaders with strong connections with the provincial leaders were good at tasks other than local economic growth, and the persistence of leadership traits in subsequent selection process thus results in selection of non-growth-focused county leaders in later decades.

during the Great Leap Forward. Taking action L will endear the county leader to the local citizens, which helps protect him from being purged of power. Taking action U, in contrast, will curry favor from the provincial leaders, but whether it translates into protection against being purged depends on whether the local leader belongs to the strong or the weak affiliation.

Suppose that the actual probability that a county leader will lose power, and face dismissal is represented by the following matrix, where $\rho_w > \rho_{wU} > \rho_{wL}$, and $\rho_s > \rho_{sL} > \rho_{sU}$. Here ρ_{wU}, for instance, means the probability of losing power when faction w chooses pro-upper policy U. These assumptions say that for the local leaders belonging to the weak affiliation, adopting policy L, which is more likely to gain local support, is a better power-protection strategy than currying favor with the provincial leaders; by contrast, for local leaders in the strong affiliation, currying favors from the provincial leader offers a more effective strategy for political survival. It is clear that the optimal action choice of a local leader whose goal is to maximize his probability of political survival will then depend on his affiliation: if he belongs to the weak faction, he will choose pro-local action L; and if he belongs to the strong affiliation, he will choose the anti-local policy U.

This example highlights the trade-offs that local leaders of different affiliations may face in their choices of whether to adopt pro- or anti-local policies. Because of the lack of connections with and support from the upper-tier government, the weak-faction local leaders have to resort to the grassroots for political support. Since local accountability is represented broadly by Seabright (1996) as "reduced probability that the welfare of a given locality can determine the re-election of the government" (Bardhan 2002)—"re-election" could of course be viewed as political survival in our context—weak-faction-affiliated local governments have stronger local accountability.

As discussed in the next section, some Fujian counties had guerrilla forces that participated in the local Communist takeover, and their cadres also had participated in local governments without having the support of the strong faction in the upper-tier government. We thus expect similar effects of guerrilla presence in the county as those of the county government being led by weak-faction cadres—that is, guerrilla presence in a country also implies stronger local accountability. Furthermore, guerrilla presence could imply additional benefits. After all, guerrillas must rely on the support of local residents for their survival; as such, guerrillas must foster a close and synergistic relationship with the local population. Such natural connections between local citizens and initial

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guerrilla officials in the local government should facilitate communications on citizen needs. Moreover, local citizens' history of mobilizing for collective actions should make them better at realizing their demand. The presence of guerrillas for the Communist takeover should thus have additional benefits, and may amplify the pro-local benefits of being affiliated with weak factions. The pro-local benefits can come in many forms, such as better provision of public goods, more freedom to engage in private sector activities, resistance of too harsh grain quotas to be delivered for the central government's need of industrialization, as well as long-term development.

To summarize the implicit assumptions and the implications, our hypothesis is that (i) counties affiliated with weak factions and having guerrilla presence should have better provision of public goods, and enjoy better social and economic development; (ii) both affiliation with the strong faction and grassroot support should facilitate political survival.

3. Institutional Background

In this section, we present the historical and institutional background of Fujian Province for the period under our consideration. Fujian Province is a particularly suitable province to study how local accountability may shape local development performances. First, during the early periods of the Chinese Civil War (July 1946 - October 1949) between the Nationalist (Kuomintang, henceforth, KMT) and the Communist armies (People's Liberation Army, henceforth, PLA), local Communist guerrillas had a presence in the region, which was under the formal rule of the Nationalist government. Importantly, the presence of the guerilla forces varied significantly across the counties within the Province. Second, after the Communist takeover, well-defined army-based affiliations existed among the county-level leaders in Fujian Province. These army-based affiliations grew out of two different forces within the PLA. These PLA affiliations jointly took over the administration of the province after the defeat of the KMT.

The liberation of Fujian Province from the KMT control experienced two phases. From May to July 1949, the PLA's Second Field Army (FA2) led by Liu Bocheng and Deng Xiaoping entered Fujian Province from the Southwest of neighboring Zhejiang Province and the Northeast of neighboring Jiangxi Province. This campaign played an important role in liberating the ten counties in northern Fujian Province. However, FA2 was immediately mobilized to fight in Southwestern

China. From June to October 1949, the PLA's Third Field Army (FA3), led by Chen Yi, replaced FA2 as the major military force in Fujian Province to attack the KMT forces that were then still controlling part of the Fujian Province. The 10th Battalion of FA3, led by Ye Fei, entered from the eastern part of Fujian Province, eliminated the main KMT forces defending the province, and took control of the major cities of Fuzhou, Zhangzhou, and Xiamen. At the same time, the guerilla forces that were active along the borders of Fujian, Zhejiang, Jiangxi, and Guangdong provinces actively participated in the liberation of counties in central Fujian (including Pu Tian, Xian You) and western Fujian (including Shang Hang, Ming Nan and Ping He, among others). By May 1950, the Communists had taken control of Fujian Province, except for the outpost islands of Jing Men and Ma Zhu, which were (and are still today) under the control of the military force associated with Taiwan. The two different army forces that played a role in the liberation of Fujian Province became the basis of the army affiliations that we study in this paper.

County-level Government. Once in power, the Communist government needed to quickly appoint cadres at all levels of the bureaucracy. The bureaucracy consists of two parallel apparatus: the Communist Party organization ("the party"), and the People's Government ("the state"). Below the central government are two hierarchical ladders at the local level: the provincial and the county leadership. At both levels, the party is headed by a party secretary; and the People's Government is headed by a chief (governor at the provincial level and county chief at the county level). Of course, there were hundreds of other positions at lower levels to fill. Building a bureaucracy from scratch was a demanding task because the Communist government could not use any of the officials of the previous regime to staff these positions due to ideological differences and concerns about sabotage.

The government thus staffed these cadre positions by heavily drawing from the armies that liberated Fujian Province. These new cadres, commonly known as "southbound cadres" (because they were mostly from the Chinese Communist Party's power base in northern China), played an important role in the governance of the new China. While both FA2 and FA3 played key roles in liberating Fujian Province, FA2 had been deployed to fight elsewhere before the PLA assumed full control of Fujian. However, members drawn from FA2's bases in Hebei and Shanxi provinces were assembled into a unit, known as Yangtze-River Detachment (YRD hereafter), and YRD members were sent to Fujian to take up these leadership positions. As a result, the two major army affiliations

from which the Fujian cadres were drawn were FA3 and YRD. Specifically, FA3-affiliated cadres took over the top positions in the two major cities in Fujian Province – Fuzhou and Xiamen – as well as a total of 11 of the 59 Fujian counties, including Long Yan, and Yong An counties. YRD-affiliated cadres, organized into six units, took over the remaining 48 counties, including Jing Jiang, Jian Yang, Nan Ping, and counties surrounding the provincial capital of Fuzhou such as Fu Qing, Ping Tan and Pu Tian, Zhang Zhou, and Fu An counties.[6] Figure 1 summarizes the geographic distribution of county types in cadre composition.

As discussed earlier, another variation relevant to the governance of counties was whether a local guerrilla force was present and participated in the liberation. When a local guerrilla force participated in the liberation of the county in the fight against the KMT, the local government often included members from that guerrilla force. The presence of guerrilla cadres in a county would make the county's policies more transparent to local citizens due to the pre-existing links between guerrilla cadres and local population, and facilitates accountability of local government to citizens. We thus expect that the local guerilla presence contributes to greater local accountability.

Provincial Level Government. At the provincial level, the Fujian Chinese Communist Party (CCP) Committee was the highest decision-making body. Within that CCP Committee, the key members were those of the CCP Standing Committee, which controlled key policies and decisions on political, personnel and economic matters. Historically, the Standing Committee consisted of 13 members. As expected, the Standing Committee members were mostly either from FA3 or YRD, and the cadres from these two factions were the major political forces in the post-liberation Fujian Province for decades. Figure 2 depicts the fraction of members from FA3 and YRD in the Fujian Standing Committee from 1950 to 1993. The FA3 faction was the dominant force in the Standing Committee relative to the YRD faction. FA3 members accounted for 40-50% of Standing Committee members until the mid-1980s, and, in the early 1950s, their representation had been as high as over 60%. The share by YRD members hovered around 20%. Other dynamics of the power structure present in Fujian Province are pertinent. Ye Fei, the aforementioned commander of the 10th Battalion of FA3 that fought the KMT forces in Fujian Province, was appointed as the Fujian CCP Party Secretary from 1954 until 1967. Also, the Fujian Standing Committee marginalized

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[6] Source: Jing De, Tie Min and Zhi Wan (2010).

cadres from local guerrilla forces. Before the Cultural Revolution (1967-1976), only two Standing Committee members had come from the local guerrilla forces, one of which was removed in 1955. After the 1978 economic reform, only two people with experience in the local guerrillas during the Civil War were on the Standing Committee. Thus, cadres from the local guerrilla forces were not powerful in the government, and guerrilla-related cadres should also be considered as belonging to weak factions.

Power Conflicts. The CCP has undergone numerous power struggles since 1949. The best-known example for such political struggles is the experience of Deng Xiaoping, who later became the architect of Chinese economic reforms and the paramount leader of China after the death of Mao Zedong. Deng's political career after the founding of the new China had several ups and downs. In July 1952, Deng assumed the posts of Vice Premier and Deputy Chair of the Committee on Finance, and shortly afterwards, he took the posts of Minister of Finance and Director of the Office of Communications. Yet in 1954, he was removed from these positions, holding only the post of Deputy Premier. In 1956, he became the Head of the Communist Party's Organization Department and a member of the powerful Central Military Commission. In Mao's Anti-Rightist Movement of 1957, Deng acted as Secretary General of the Secretariat and ran the country's daily affairs with President Liu Shaoqi and Premier Zhou Enlai during the Great Leap Forward of 1957-1960. Yet, during the Cultural Revolution, Deng was twice purged. Only in 1974 was Deng brought back to politics as the First Vice-Premier. He was purged again in 1976. He re-emerged as the *de facto* leader of China following the death of Chairman Mao and the purge of the Gang of Four in October 1976.[7]

Deng's political rollercoaster was re-played at local levels. Within Fujian, power struggles took place between cadres from FA3 and local guerilla forces. One of the only two provincial CCP Standing Committee members with a local guerrilla background was removed in 1955. In 1957, many of the local leaders with a guerrilla background were purged. In 1959, the provincial government witnessed the purge of the Acting Party Secretary of Fujian, Jiang Yizhen, and then Vice Governor of Fujian Province, Wei Jinshui, both having local guerrilla connections.[8]

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[7] See Vogel (2011) for a detailed account of Deng's life and his influence on China.
[8] In 1962, Jiang Yizhen's career was rehabilitated, and in 1964, he became China's Acting Minister of Agriculture.

The political struggles among the provincial leadership had serious implications on the fortunes of local leaders. Under constant power struggles, local leaders faced serious risks of being purged. As shown below, local leaders from the weak YRD tended to adopt policies more protective of local economic development in their areas of jurisdiction. Many of these decisions were driven to mobilize grassroots support to increase their chances of political survival.

Examples of Local Leaders' Discretion in Economic Policies. We provide examples from three counties in Fujian Province, Shang Hang, Dong Shan, and Jing Jiang, that differed in the county leaders' affiliations and in whether there was a guerrilla presence, to illustrate how local leaders chose economic policies that were more or less friendly to local economic development.

The leaders of Shang Hang county belonged to the FA3 affiliation. For most of the post-liberalization years up to the dawn of the reform (i.e., 1978), FA3 cadres held the top leadership position there. During the multitude of political movements in this era, the local cadres from FA3 adopted leftist, collectivist economic policies. For example, during the Great Leap Forward (1958-1962), the local cadres adhered to the quotas imposed on grain procurement. This led to severe famine there. In addition, the local leaders adopted strictly the centralized economic policies, with the share of state-owned enterprises (SOEs) in the local economy rising steadily to 88% in 1978. In 1985, SOEs still accounted for 56% of the total local industrial output. It was not until 1991 that individual and private ownership began to surpass 30%.

In contrast, Dong Shan County was governed largely by YRD-affiliated and local cadres. They were more reserved in implementing the leftist policies imposed from the central- and provincial-level governments. During the Great Leap Forward, the local cadres did not succumb to the calls for farmers to "go all in" to produce steel in the "backyard furnace," as did in many leftist regions. Instead, they encouraged residents to plant trees, and to finish several large-scale civil engineering projects, e.g., constructing dikes, implementing the drinking water program, and claiming land from sea. These projects greatly facilitated local development and won local support. Moreover, through self-financing and financing from overseas, the county established many small collective- and privately owned firms. In 1988, the share of industrial output attributed to SOEs in Dong Shan was only 24%, compared to 36% for collective firms, and 37% for privately owned firms.

A third county is Jing Jiang County which was led by YRD-affiliated cadres, and had a strong

local guerrilla presence before 1948. In fact, within the county administrative structure, local guerrilla leaders tended to hold important positions, such as County Chief (1949-1958), and party secretary (1972-1976). Before the Cultural Revolution, the YRD cadres and local-guerrilla-related cadres allowed non-state economic activities to continue. Even in 1974, village-level firms (most of which were privately owned) accounted for 41% of the county-level industrial output; by 1987, this ratio had grown to 80%.

4. Data Sources and Descriptive Statistics

4.1 Data Sources

County/Provincial Leaders' Affiliations and County's Guerrilla Presence. We rely on information from two primary sources: (1). "History of the Communist Party in Fujian Province, 1926-1987"; (2). "Recollections on Yangtze-River Detachment". We use these two primary sources to determine whether a county was assigned cadres affiliated with the FA3 or with the YRD around 1949 and 1950.

In addition, we hand-collected the resume of every member of the Fujian Provincial Communist Party Standing Committee from 1950-1993. We identified whether a member was affiliated with FA3 or YRD based on his working experiences listed on his resume. To determine whether a local guerrilla force had strong presence in the counties during the pre-communist liberation period, we hand checked various county gazettes (as of May 1948).

Throughout our empirical analysis, a county's affiliation and guerrilla presence are both treated as being stable. The affiliation is treated as stable because the initial cadre base during the liberation period tended to remain intact for subsequent decades. Furthermore, those initial cadres likely promoted like-minded subordinates to take their positions if and when they left their posts. Indeed, in the early 1980s, the governments at various levels all adopted the Third Ladder programs (by the Organizational Department of CCP) that systematically selected next-generation cadres based on the incumbent cadres' taste (Yan, 2017). Thus it is plausible for us to assume that both the initial affiliation and initial guerrilla presence would have persistent effects. The literature also proposes several additional channels of persistence, such as institutions, group reputation and norms, and beliefs. Acemoglu, Johnson and Robinson (2001) offer evidence that initial institutions

that stemmed from settler mortality for colonists led to long-term persistence in institutions. Tirole (1996) suggests that when individual track record is observed with noise, a leader's reputation would depend on the group reputation before him. In our context, grassroots support for a new county leader (after the initial leader left) might depend on the collective reputation of past local leaders; and if there was strong grassroots support in the past, new leaders would have stronger incentives to continue cultivating the grassroots support. Guiso, Sapienza and Zingales (2016) offer evidence that self-government experience of city-states in Italy in the Middle Ages had long lasting effects on current civil capital, and a key channel is the self-efficacy beliefs that have been transmitted across generations.

County-Level Development Performance from 1952 to 1998. We now examine development performance of counties from 1952 to 1998. First, measures of economic growth and other economic outcomes are from "Statistical Information on 50 Years of Fujian Province" and "Regional Economies in Fujian," which covers 1952 to 1998 for all the counties in Fujian. We use this data set to construct the average annual real growth rate of gross value of output for agriculture and industries, separately for 1952 to 1998 (the whole sample period) and for 1978 to 1998 (the post-reform period).

We further construct two measures related to the Great China Famine (1959-1961). The first measure, famine control, following Meng, Qian and Yared (2015), is defined as the ratio of the number of surviving births (per year) in the county during 1959-1961 relative to the number of surviving births (per year) in the same county during 1954-1957, as observed in the 1% sample of the 1990 China Population Census. The higher this ratio, the more successful the county was at controlling the famine. The second measure is the county-level death rates (deaths per thousand) during the Great China Famine. The number of deaths at the county level is collected from the population statistical books published by the provincial Statistics Bureaus in the 1980s.[9]

Scope of Study. Our analysis is restricted to the 59 counties or county-level cities in Fujian Province.[10] We also restrict our analysis up to 1998 for two reasons: first, the government initiated

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[9] The data are compiled by Kasahara and Li (2018), who provide details about the data construction and cross-validation with the other provincial-level death statistics. We are grateful to Bingjing Li for generously sharing the data with us.

[10] In the administrative system in China, there are also prefecture-level cities (such as Fuzhou, Xiamen, and Zhang Zhou), which are often treated differently in the statistical yearbooks, with many of the key economic

extensive redrawing of the county boundaries in 1998; second, the government initiated its housing reform from 1998, which also drastically blurred the rural-urban boundaries.[11] The changes in county boundaries will lead to inconsistencies in the growth rate comparisons.

4.2 Descriptive Statistics

Among the 59 counties (or county-level cities) in our study, 11 were led by cadres affiliated with the FA3, among which 3 had a local guerrilla presence; 48 were led by cadres affiliated with YRD, among which 22 had local guerrilla presence. We now provide some descriptive statistics.

To control for the differences in the initial conditions across counties, we construct the following variables: (1) The log of the average agricultural and industrial output per capita in 1952 (or 1978), denoted by Ln_GVOPC52 (or Ln_GVOPC78); and (2) The log of the total population in 1952 (or 1978), denoted by Ln_Pop52 (or Ln_Pop78).

We construct two measures of the county's geography that may be relevant to economic performance.[12] The first is the share of plains (%) in the county's total land areas where flat land is defined as land with less than 15 degrees of incline. This captures the amount of land that can be used as science/industrial parks or for agriculture production. The second is the distance to Taiwan, which is a key source of foreign direct investment (FDI). We proxy this by using the distance to Xiamen, the city directly across the Taiwan Strait from Taiwan. The distance is calculated based on the location, as determined by the Global Positioning System (GPS) designation, of the centroid of each county to the centroid of Xiamen City. This variable may also capture access to the commercial hubs of Fujian province, investment from Taiwan, and other potential benefits, such as better access to business personnel and technology.

Table 1 provides summary statistics of the variables in our analysis. From 1952 to 1998, the annual real growth rate ranged from -0.03% to 7.9%, with a mean of 2.9% and a standard deviation of 1.5%. During the post-reform period from 1978 to 1998, the annual growth rate ranged from

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indicators only collected at the prefecture level (instead of at the district level within the prefecture-level city, which would be more comparable to counties or county-level cities).

[11] See Fang et. al. (2015) for a detailed discussion about the institutional details of China's housing reform.

[12] We have also tried to use as one measure the distance to Fuzhou, the provincial capital; however, because the coefficient estimate of this measure is never statistically significant, we thus opt not to include it to avoid multicollinearity in light of the few observations that we have. Because Fujian Province is a coastal province, we have also tried controlling for the length of the seashore within the county; again, it is never significant, and thus we exclude it too.

1.5% to 22.5%, with a mean of 7.1% and a standard deviation of 3.9%. Similarly, the Famine Control variable also shows large variations across counties, with a mean of 0.78 and a standard deviation of 0.14. That is, during the 1959-1961 famine period, the drop in live births averaged to an astounding 22%. Similarly, the death rates during the Great Chinese Famine ranged from 5.8‰ to 33.8‰ with a mean death rate of 13.4‰ and a standard deviation of 5.8‰.

4.3 Affiliations, Local Accountability, and Annual Growth

We first compare the annual growth rates of real agricultural and industrial output per capita (also known as gross value of output per capita, or GVO per capita, henceforth) in counties led by YRD- and FA3-affiliated cadres. We also compare the annual growth rates in counties with and without a local guerrilla presence prior to 1948.[13] We have comprehensive data from 1952 to 1998 for our counties. To consider structural changes after the reforms, we present the above comparisons both for the entire study period (1952-1998) and for the post-reform period.

In Table 2, we summarize the differences in the average annual real GVO growth rates between the counties led by cadres affiliated with FA3 and YRD, and between counties with and without guerrilla presence for the two periods (1952-1998 and 1978-1998).[14] Based on Panel A, from 1952 to 1998, the average real GVO growth rate was 2.1 percent for FA3 counties, and 3.1 percent for YRD counties; the difference between YRD and FA3 counties was 0.99 percentage points, which is about 0.7 standard deviations (SDs) of the mean growth rate of 2.9 percent. The difference in the growth rates between YRD and FA3 counties is statistically significant. However, if we focus on 1978-1998, the difference is more striking: the average annual real GVO growth rate for FA3 counties was 4.4 percent, and that for YRD counties was 7.7 percent. The 3.2 percentage points per year YRD advantage in growth rate (about 0.8 SDs), is statistically significant.[15]

In Panel A in Table 2, we examine the differences in growth rates among counties with and without a guerrilla presence as of May 1948. These differences are striking. The guerrilla-present

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[13] We use the GDP deflator to compute the real growth rates.

[14] In Fang et al. (2019), we also present the distribution of the growth rates by the governance indicators, and in general the conclusions are similar as in Table 2, and suggest that the differences by the governance status were not driven by outliers but are rather manifested in the whole distributions.

[15] Some might argue that the central government was overall more interested in enhancing local welfare after 1978, so that the performance gap between counties with different affiliation should become narrower in this period. The empirical results here are the opposite to this view. A plausible interpretation is that post-1978 reform the local cadres' hands were less tied in what types of policies they could pursue to enhance local welfare, so that the preference of local cadres was more effectively expressed.

counties had an advantage in growth of 0.9 percentage points (or 0.6 standard deviations) during the 1952-1998 period, and 3.7 percentage points (or 0.95 standard deviations) in the 1978-1998 period. Both differences are significant at the 5 percent level.

In Panel B, we examine the differences in average annual real GVO growth in guerrilla and non-guerrilla counties within the groups of counties led by FA3- or YRD-affiliated cadres. During the 1952-1998 period and within the group of FA3 counties, there is no difference in growth rates with respect to the local guerrilla presence. In contrast, within the group of YRD-affiliated counties, those with guerrilla presence outgrew those without one by roughly one percentage points (or 0.7 standard deviations). Similarly, during the 1978-1998 period and within the group of FA3 counties, no significant differences in annual GVO growth rates emerge between those with and without a guerrilla presence – though the grow rates remain higher in counties that had a guerrilla presence. In contrast, within the group of YRD counties, those with a guerrilla presence outgrew those without one by 3.7 percentage points (or 0.95 SDs).[16]

4.4 Affiliations, Local Accountability and Famine Severity during 1959-1961

Our second piece of descriptive evidence on the impact of local accountability on development is how counties fared during the Chinese Great Famine (1959-1961). An estimated total of 16.5 million (Coale, 1981) to 45 million (Dikotter, 2010) individuals, mostly rural residents, died or failed to be born in the three-year period.

We examine two measures of famine severity at the county level. The first, based on Meng, Qian and Yared (2015), proxies the famine severity by the birth cohort size of survivors observed in 1990 census. The logic for this measure is that "famine increases infant and early childhood mortality rates, and lowers fertility rates such that a more severe famine results in smaller cohort sizes for those born shortly before or during the famine." Specifically, we seek to measure "famine control," by which we mean the degree to which a region was able to limit or offset the severity of the famine's effects. We thus calculate county-level famine severity as the ratio of the number of surviving births (per year) in the county during the 1959-1961 period relative to the number of surviving births (per year) in the same county during the 1954-1957 period, as observed in the one

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[16] It should be noted that, as shown in the last two columns in Panel B, the numbers of counties in the FA3 group with and without a guerrilla presence are small, three and eight, respectively.

percent sample of the 1990 China Population Census:

$$Famine\ Control_c = \frac{Surviving\ births\ per\ year\ from\ 1959\ to\ 1961\ in\ county\ c}{Surviving\ births\ per\ year\ from\ 1954\ to\ 1957\ in\ county\ c} \quad (1)$$

The *higher* the measure, the *less severe* the famine was in county *c*. Meng, Qian and Yared (2015) point out that a birth-cohort-size measure of famine severity is not vulnerable to misreporting because it is less influenced by the government's desire to understate famine severity. The second measure is the newly compiled county-level death rates, the number of deaths per thousand.

In Table 3, we compare the two famine-severity measures, famine control and death rates in the 1959-1961 period, between the counties led by FA3- and YRD-affiliated counties, and between the counties with and without a guerrilla presence (Panel A), as well as the interaction effects between affiliation and guerrilla presence on famine severity (Panel B). We find that YRD counties had significantly higher levels of famine control by 11 percentage points (or 0.8 standard deviations), a large effect. We also find that counties led by YRD-affiliated cadres had a significantly lower death rate, with 7.6 fewer deaths per thousand people, or a rate that is 1.3 standard deviations lower than those counties led by FA3-affiliated cadres. Furthermore, the counties with a guerrilla presence as of May 1948 also had a higher levels of famine control than counties without a guerrilla presence, though the difference is statistically insignificant. The death rates in counties with a guerrilla presence is significantly lower, 2.65 fewer per thousand people, or 0.46 standard deviations lower, than the death rates in those counties without a guerrilla presence.

Panel B of Table 3 shows the effects of local accountability. Within FA3-affiliated counties, there is no statistically significant difference in either famine control or death rates between counties with and without a guerrilla presence. However, within the group of YRD-affiliated counties, those with a guerrilla presence had statistically significant higher famine control levels, and statistically significant lower death rates, than those without a guerrilla presence.

Better famine control and lower death rates in counties led by a YRD-affiliated leader and in counties with a local guerrilla presence are suggestive evidence that the leaders in these counties undertook more pro-local policies during the Great Famine period. As has been pointed out in the literature (Meng, Qian and Yared, 2015; Fan, Xiong and Zhou, 2016), local officials' incentives to exaggerate their actual grain production in their attempt to meet the procurement quota from the

central government played an important role in the magnitude of famine. The argument in our paper is that the local officials are driven by their incentives for political survival. These incentives are, in turn, intimately related to their affiliations with the provincial-level governments and their local accountability. County leaders whose political survival depends on grassroots support would tend to adopt policies that are more likely to blunt the devastating impact of the famine.

5. Empirical Results

The descriptive evidence so far is suggestive that the drastic differences in economic growth and famine severity are related to the differences in the policy choices made by local leaders, either because of their political affiliation or because of the presence or absence of guerrillas. In this section, we present systematic evidence of this connection in order to account for the possible differences in other factors.

5.1 Initial Assignment: Testing for Randomness

Before examining the effect of local accountability, we examine how YRD-led counties and guerrilla-present counties differ from other counties in basic characteristics. This sheds light on what variables we should control for, and whether selection issues are serious.

In Table 4, we present a linear probability model of the YRD and of the guerrilla dummy to basic county characteristics such as initial income and population, and geography. Our income and population variables are dated in 1952, the earliest numbers we can find.[17] The regression results suggest that YRD-led counties had similar initial income levels and population, but they had a somewhat higher share of plains. On average, the distance to Xiamen does not differ much between YRD- and FA3-led counties. Guerrilla-present counties were more populous, but they did not differ from other counties systematically in terms of initial income levels and geography.

In the last two columns in Table 4, we report the multinomial Logit results with the three states of FA3-affiliated leadership (i.e., the default), YRD-affiliated leadership without a guerrilla presence, and YRD-affiliated leadership with a guerrilla presence.[18] Again, neither initial income

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[17] Ideally, we would have preferred values that preceded 1949.
[18] We do not distinguish an FA3-led county with and without a guerrilla presence because we have few observations (i.e., 11) for FA3-led counties.

nor geography matters for the assignment of the three groups in 1950. The only variable significant marginally is initial county population. To summarize, it is credible, at least as a first pass, to treat the county's assignment to YRD- or FA3-affiliated cadres, or the assignment to guerrilla presence, as close to random, especially after we control for the initial conditions and geography variables. In Section 5.5, we further address this issue by focusing only on bordering counties.

5.2 Affiliations, Local Accountability and Economic Growth

We now report our regression results on the effect of local accountability on local economic growth rates. In Table 5, we estimate the effect of YRD and FA3 affiliations on county-level annual growth rates, for the whole period (1952-1998) and for the post-reform period (1978-1998) separately. In Columns (1) and (4), we do not control for any variables, and the estimates of YRD coefficients simply replicate the raw differences in annual growth rates between the YRD- and FA3-led counties we reported in Table 3: YRD-affiliated counties on average grew by roughly one percentage points faster than FA3-affiliated counties during the whole sample period, and by 3.2 percentage points faster in the post-reform period. In Columns (2) (Column (5), respectively), we also add controls for the log of the initial GVO per capita, and initial population size, in 1952 (in 1978, respectively). In Columns (3) and (6) we further control for measures of geography and the distance to Xiamen.[19] Given our small sample, we do not want our results to be driven by a few outliers. Thus, in Columns (7) and (8), we trim the tail 5 percent of the dependent variable to ensure the robustness of our results.

The results are remarkably robust. Consider the results in Columns (3) and (6) where we include all the controls of initial economic condition, population and geography. Between 1952 and 1998, relative to FA3 counties, YRD counties had an advantage of 0.9 percentage points per annum. Based on Columns (7) and (9), the YRD advantage stays at the same ballpark (i.e., 0.8 to 1.0 percentage points) even after we trim 5 percent of the tails or using the robust regression. Focusing on 1978 to 1998, the advantage of the YRD-led counties is more than 2.1 percentage points per annum, and this advantage does not shrink much as we consider the outliers. Not surprisingly,

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[19] In unreported checks, we have also tried adding the distance to the provincial capital of Fuzhou, and the logarithm of the length of the coastline of the county. The qualitative results on our key variables are similar, while the additional geography variables tend to be statistically insignificant. To save space, and to reduce multicollinearity in light of our limited number of observations, we do not add these two additional geographical variables in our reported tables.

initial income is associated with a lower growth rate, consistent with a conditional convergence hypothesis; having a higher share of plains is associated with higher growth, and a closer proximity to Xiamen (and Taiwan) is associated with a higher growth rate.

In Table 6 we add the dummy of guerrilla presence and study the separate effects of YRD leadership and guerrilla presence on growth rates. Now both YRD and guerrilla dummies have significant and positive effects on annual growth rates. Based on Columns (3) and (6), where we include the full controls with the full sample, relative to FA3-led counties, YRD-led counties had a 0.9 percentage point higher average annual growth rate (or 0.6 standard deviations higher) in 1952-1998, and 1.9 percentage points advantage (or 0.5 standard deviations higher) in 1978-1998. The effect of a guerrilla presence is also strong: the average annual growth rate is 0.5 percentage point (or 0.4 standard deviations) higher in 1952-1998, and 1.5 percentage points (or 0.4 standard deviations) higher in 1978-1998. The results remain significant and quantitatively similar when we consider the outlier issues through either trimming or the robust regressions.

In Table 7, we include YRD × GuerrillaYes and YRD × GuerrillaNo.[20] If there is an additional boost from being led by cadres from the weak YRD affiliation in counties with strong local accountability as proxied by local guerrilla presence, the effect of YRD × GuerrillaYes should be significantly larger than YRD × GuerrillaNo. We find this to be true and robust. Focusing on Columns (3) and (7), counties in which the local leaders were affiliated with YRD but without guerrilla participation had a growth rate that was 0.7 percentage points (or 0.5 of a standard deviation) higher from 1952 to 1998, and 1.5 percentage points (or 0.4 of standard deviation) higher from 1978 to 1998, than FA3 counties. In contrast, counties with a YRD leader and guerrilla presence had growth rates that were 1.3 percentage points (or 0.9 of a standard deviation) higher from 1952 to 1998, and 3.2 percentage points (or 0.8 of a standard deviation) higher from 1978 to 1998, than FA3 counties with no guerrilla presence. The Wald tests for the hypothesis that the coefficients for YRD × GuerrillaYes and YRD × GuerrillaNo terms are equal is rejected in Columns (3) and (7). Thus, being led by cadres in a weak faction could imply faster local economic growth, but when coupled with guerrilla presence, its effects more than double.

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[20] In principle, we may also include FA3 GuerrillaYes. However, only three counties fit this category. Indeed, we have tried to include this term in the regression [see Columns (4) and (8) in Table 8], and found the estimate to be, not surprisingly, statistically insignificant.

5.3 Affiliations, Local Accountability and Growth at Times of Turbulence and Reforms

A concern is that the growth results for the post-reform period of 1978-1998 reflects the fact that China was fiscally decentralized, and connection with the provincial government could just reflect variations in local fiscal conditions under fiscal decentralization. For example, a strong connection of FA3-affiliated counties with the provincial government might render stronger provincial control over the counties, resulting in higher tax collection and lower growth rate. A related concern is that the 1978-1998 period masks great local variations in underlying economic policies so that the counties are not sufficiently comparable in omitted policy environment.

To address this concern, we take advantage of China's fiscal-centralization reform in 1994 to conduct a sub-sample analysis for the 1994-1998 period, which represents critical years in China's transition. First, the fiscal-centralization reform in 1994 made counties significantly less fiscally decentralized, and made taxation more uniform across counties. Second, due to the dire financial performance of the whole state-owned enterprise (SOE) sector in the mid-1990s, the central government implemented SOE corporatization and privatization under the slogan of "Grab the Big and Let Go the Small." Both the fiscal centralization reform and the SOE reforms resulted in variations in local economic performance. This is apparent in the summary statistics of growth in GVO per capita over the years: during 1978-1998, the median (standard deviation) is 4.6 (3.9) percent, and it ranges from 1.5 to 22.5 percent; during 1994-1998, the median (standard deviation) is 2.3 (10.7) percent, and it ranges from -20.8 to 20.8 percent with roughly half of the counties' growth rates in the red. It is thus useful to see how the weak-faction affiliation and the guerrilla presence affect growth in this period of dynamic adjustment. If the YRD effect reflects variations of fiscal decentralization among the YRD and the non-YRD counties, it should not be significant for the post-1994-tax-reform years. We thus use the 1994 to 1998 sub-sample to examine how the growth effects of our key variables change in this specific policy environment. The results are reported in Table 8.

For 1994 to 1998, instead of weakening the effects of YRD and of guerrilla presence, the results become many times stronger, and robustly so. When examining the effects of YRD alone, its effect on economic growth between 1994 and 1998 is about 10 percentage points, roughly five-fold the average effects in 1978-1998. Similarly, the effect of guerrilla presence is more than three

times in 1994-1998 than in 1978-1998. Similar to the pattern observed during 1978-1998, the joint effect of having guerrilla and being in the weak affiliation is twice as large as that of having no guerrilla presence and being in the weak faction in 1994-1998, but the effects in 1994-1998 is more than four times larger in magnitude than those in 1978-1998. Moreover, the results are robust when we discount the weight of outliers with the robust regressions. Echoing the findings in the western countries that decentralized firms did better after the turbulence of the recent Great Recession, the results here suggest that more locally-oriented local governments do much better in time of turbulence and uncertainty, perhaps because they are better at utilizing local knowledge to respond to changing local policy environments (Hayek 1945, Van Reenen et al. 2017).

5.4 Affiliations, Local Accountability and Famine Severity from 1959 to 1961

We have found a strong association between local accountability and economic growth; and we have offered evidence that counties with stronger local accountability had higher growth rates in the post-reform period and in the five decades after the founding of the new China. However, the nature of our empirical exercise suggests that it is impossible to establish impeccable causality. In Tables 5-7 above, we have controlled for geography and initial conditions; and in Tables 4, we have shown that there does not seem to be significant correlations of the YRD or guerrilla status of a county with the county's observables in terms of initial economic conditions and geography. But there may still be other omitted factors that drive our findings.

In this subsection, we provide additional evidence to support the causal impact of local accountability on economic performance. In particular, we examine whether counties led by leaders with stronger local accountability had better protection of local residents in the Great Chinese Famine (1959-1961), a key event in modern Chinese history in which about 30 million people died due to a combination of natural disasters and radical central policies (Coale, 1981; Dikotter, 2010). While one cause for the Famine was no doubt natural disaster, a key determinant was likely the implementation of radical policies to procure grains for the rapid industrialization that was favored by Mao Zedong, then top leader.[21] This literature has focused on either the role of provincial

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[21] For instance, the incidence of famine was higher in grain-rich areas (Meng, Qian and Yared, 2015), which implies that it was grain procurement rather than the inadequacy of grain production that caused famine. Indeed, Li and Yang (2005), Meng, Qian and Yared (2015) argue that the key factors behind the famine were the inelastic and regressive procurement policies. Yang (1996) and Kung and Lin (2003) offer evidence that radical policies were behind the widespread famine in China even though the average grain output was sufficient to support the whole population. Fan and Shi (2013) offer evidence that the Great Leap Forward industrialization

leaders (such as how career incentives influenced their decisions), or the policies at the central level (such as the grain procurement policies). We complement this literature by zeroing in on the incentives of the county-level cadres, the role of local accountability.

Famine Control (Birth Rates). In Table 9 we relate famine control at the county level to whether a county's leader was affiliated with the weaker faction of YRD, with the same sequences of controls as in the case of annual growth rates reported in Table 4. The results on the effect of YRD leadership are robust, with the coefficient estimates ranging from 0.11 to 0.12 when outliers are not trimmed. When outliers (i.e., tail 5%) are trimmed, however, the YRD coefficient becomes statistically insignificant, though the magnitude is similar. The results based on the robust regression are very similar to those based on the regressions. These results suggest the mechanism that led to better famine control among counties with YRD-affiliated leaders was likely an ability to reduce extreme famine.

To check this, we create a dummy variable taking the value of one if a county's famine control measure is in the bottom quartile among all counties. This indicator captures the possibility of extreme local famine. The results in Column (6) of Table 9 show that YRD-led counties had a 42 percent lower likelihood of extreme local famine, suggesting that being led by cadres from the weaker YRD affiliation was effective in containing famine disasters.

In Table 10, we allow the local guerrilla presence to play a role. In the left panel, we let the YRD affiliation and a guerrilla presence have separate effects; and in the right panel, we let YRD affiliation interact with a guerrilla presence. When these two variables are included separately, YRD matters much more than the guerrilla presence, with the former being largely statistically significant, while the latter is never statistically significant. Because the procurement policy was a top-down mandate, it is not surprising that YRD affiliation would be more important in reducing famine since its cadres served as the link between the provincial government and the county governments, and thus could have a stronger say on how much grain was to be procured. Local guerrilla cadres did

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movement and the details of the procurement policies contributed to the famine. Kung and Chen (2011) provide evidence that provincial leaders with stronger career incentives (i.e., alternative members of the central committee versus full central committee members) were more radical in implementing the grain procurement policy despite the large scale of the natural disaster. Those alternative members had an incentive to work harder to try to please Mao by, for example, procuring grains aggressively, because their political positions were more precarious, and their career trajectories depended on pleasing superiors. Fan, Xiong and Zhou (2016) argued that inflation of the grain production by local officials was partly responsible for the severity of the famine.

not have a direct link to the provincial government, and thus they could not push back the central mandate. Similar to Table 10, Columns (4) and (5) of Table 11 suggest that YRD-affiliated counties were able to substantially reduce extreme famine. In unreported robust regressions, the results are qualitatively and quantitatively similar to Column (3).

In Columns (6)-(10), we allow YRD's effect to hinge on whether the county had a guerrilla presence. Now counties with a guerrilla presence and being also led by cadres affiliated with the weak faction achieved much better famine control with the coefficient around 0.15 to 0.17. In contrast, YRD-led counties without a guerrilla presence did not have significantly better famine control, though the magnitude remains consistently positive.

In Column (10) we focus on whether a county had a disastrous famine control (i.e., was in bottom quartile). We find that it is 36.9 percentage (49.9 percent) less likely for YRD-led counties without guerrilla presence (with a guerrilla presence) than for FA3 counties.

Death Rates. Another measure of famine severity is the county-level average death rates (per thousand) during 1959-1961. In Table 11, we present the estimates of the impact of faction affiliation on death rates. Based on Column (4), which controls for the county's initial conditions and geography variables, counties led by YRD-affiliated cadres had death rates that were 7.8‰ (about 1.4 standard deviations) lower. Based on Columns (5) and (6), YRD-leadership affiliation is associated with lower local death rates, both at the extreme end of the distribution and in the middle part of distribution: when the 5 percent of the tail observations is trimmed, having a YRD-affiliated cadre is still associated with death rates that are 4.2‰ lower; and that YRD affiliation reduces the likelihood of being among the most impacted counties (i.e., in the top quartile in death rates) by 39 percent. In Column (7), the robust regression results yield similar results with a smaller magnitude.

In Table 12, our analysis of death rates incorporates the effects of a guerrilla presence in the county. Similar to Table 11, Table 13 includes the guerrilla presence both separately from YRD affiliation [Columns (4)-(5)] and interacted with YRD affiliation [Columns (6)-(10)]. When guerrilla presence is included in the regression separately, its coefficients are not statistically significant, while the coefficient estimates on YRD affiliation remain negative and significant at around -7.8‰˙When we interact guerrilla presence with YRD affiliation, both YRD-led counties with and without a guerrilla presence have significantly lower death rates than FA3-affiliated

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counties. There is also strong evidence that YRD affiliation joint with guerrilla presence reduces the probability of the county experiencing extreme famine severity (in terms of the county's death rates being among the highest quartile among all counties) by about 40 percent.

5.5 Robustness Checks: Border Counties

Some may argue that, given the uneven geographical distribution of YRD- and FA3-led counties in the province (see Figure 2), the difference in development outcomes we have documented may reflect difference in other unobserved differences in geography or aspects not captured by our limited controls, such as the share of plains in the county and the distance to Xiamen.

A useful robustness check would thus be to hold these unobserved geographic elements or other aspects as constant as possible. To this end, when we estimate the effect of YRD leadership, we only keep FA3- and YRD-led counties that are neighbors. Since counties are geographically small, neighboring counties tend to be similar in geography (and culture). This stringent control results in a much smaller sample of 15 counties (versus 57 counties in the full sample). When we estimate the effect of a guerrilla presence (and its interactive effect with YRD), we keep only counties with a guerrilla presence and their neighboring counties. The restricted sample has 51 counties.[22] Since our results are robust across various sets of controls, we present the specification with the comprehensive controls. The results on annual growth rates when restricted to the border counties are presented in Table 13, and those on famine control and death rates are in Table 14.

In Columns (1) and (4) in Table 13, we examine the YRD effect on border-sharing counties with observations from only 15 border-sharing counties. The results, both qualitatively and quantitatively, are similar to those from the full sample. For instance, the YRD-leadership effect on annual growth rates in the 1978-1998 period is now 1.96 percentage points (compared to 2.10 percentage points in Column 6 of Table 6); the YRD-leadership effect on the growth rates in the whole 1952-1998 period 0.97 percentage points (vs. 0.91 percentage points in Column 3 of Table 6). This is remarkable since the sample is now only a quarter of the previous, already small, sample.

In Columns (2) and (5), we use the 51 neighboring counties with and without a guerrilla presence. When we examine the effect of both YRD affiliation and a guerrilla presence, again, we

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[22] With sufficiently large sample, adding matched-county pair FE might be preferred, but with such a small sample, we cannot afford to lose more degrees of freedom.

find the results qualitatively and quantitatively similar for the growth rates in both periods. For instance, the effect of YRD leadership on the growth rate in the 1978-1998 period is 1.55 percentage points (vs. 1.93 percentage points in Column 6 of Table 7); the effect of a guerrilla presence is 1.37 percentage points (vs. 1.52 percentage points in Column 3 of Table 7).

In Columns (3) and (6) we allow for the interactive effect of YRD and a guerrilla presence, and some differences in results emerge. Relative to FA3-led counties, YRD counties without a guerrilla presence no longer have a significant advantage in growth rates – though the advantage remains, and the magnitude remains sizable: 0.98 (vs. 1.46 in Column 7 of Table 8) for the 1978-98 period. However, relative to FA3-led counties, YRD-led counties with a guerrilla presence still exhibit sizable and significant advantages in growth, 1.06 (vs. 1.29 in Column 3 of Table 8) for the 1952-98 period, and 2.65 (vs. 3.18 in Column 7 of Table 8) for the 1978-1998 period.

Table 14 shows similar results for both famine control and death rates over 1959-1961 using border-sharing counties only. From Column (1), the YRD effect on famine control becomes more pronounced. The coefficient of YRD affiliation is 0.17 (vs. 0.12 in Column 3 of Table 10). When we include both YRD-affiliation and guerrilla-presence effects, the YRD effect becomes 0.17 (vs. 0.12 in Column 3 of Table 11). The effect of guerrilla presence remains insignificant. Column (3) examines the interaction effect of YRD affiliation and guerrilla presence, the coefficient of YRD × GuerrillaYes is now 0.20 (vs. 0.16 in Column 8 of Table 11); that of YRD × GuerrillaNo is now 0.15 and statistically significant (vs. 0.09 and statistically insignificant in Column 8 of Table 11).

Columns (4)-(6) contain the results for death rates with the sample of only border-sharing counties. In Column (4), the coefficient of YRD affiliation on death rates during the Great Chinese Famine is still negative at -3.55‰, but it is no longer statistically significant. When we include both YRD affiliation and guerrilla presence in Column (5), however, the YRD-affiliation effect is -10.5‰ and significant, and the effect of guerrilla presence is negative but insignificant. In Column (6), the interaction effects of YRD × GuerrillaYes and YRD × GuerrillaNo are both negative and statistically significant; the magnitude of these estimates is larger than those in Table 12.

The robust results in Tables 14 and 15, using a smaller set of neighboring counties, render strong support to the positive role of local accountability in facilitating local development.

5.6 Were the Local Leaders from the Stronger Affiliation Starved of Resources?

Why do strong-faction-affiliated counties perform worse than the weak-faction-affiliated counties? Is it possible that counties led by the strong faction did not receive as much resource as the counties led by the weak faction? To assess this question, we regress the average fiscal expenditure over fiscal revenue ratio for 1950 and 1957 on the YRD dummy in Table 15. The ratio is about 26.8 percentage points lower (Column 3) for YRD-led counties than for FA3 counties when we include all the controls. However, trimming the 5 percent tail of outliers renders the YRD dummy insignificant even though the point estimate is still negative, suggesting that YRD-led counties are more prone to extreme resource extraction by the upper-tier governments. Even though YRD-led counties were prone to experience resource extraction by the upper-tier governments, the counties led by YRD-affiliated cadres were still able to achieve a better development performance for their counties. This suggests that the underlying mechanisms must be more efficient resource allocations in the YRD-affiliated counties.

5.7 Affiliation, Local Accountability, or Something Else?

Another concern is that the results may be driven by the differences in skills in managing economic affairs among cadres affiliated with FA3 and YRD affiliations. After all, FA3 cadres specialized in fighting wars because they spent most of their careers in the troops led by the CCP. In contrast, YRD cadres may have been more experienced in working with locals because they originated from the revolutionary bases in Hebei and Shanxi provinces. If this were the case, the difference in the growth rates for these two groups of counties can be driven by skill differences of the local leaders, not by political survival incentives.

To address this concern, we argue that, if either skills and/or knowledge in economic development are important driving forces behind the differences in the development performances of FA3- and YRD-affiliated counties, then the growth gaps between these two groups of counties should decrease (and eventually disappear) over time: as FA3-affiliated cadres obtained more experience on their positions, the skills of initial local cadres should matter less.

We thus replicate the regressions in Tables 6-7, but replace the dependent variable with the annual real growth rate between 1984 and 1998.[23] We find that for every specification, the coefficient estimate for YRD affiliation is larger in the 1984-1998 period than that in the overall

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[23] Due to space constraint, we have opted not to report the table here. See Fang et al. (2019) for the table.

1978-1998 period. Thus, the main factors explaining growth gaps between FA3- and YRD-led counties do not seem to be skills and/or knowledge on the job.

5.8 Evidence of Pro-Local Policies

Improvement in Local Educational Achievement. We now present evidence that the YRD-affiliated counties indeed adopted pro-local policies. Education, a key component of human capital, can be an important source of local growth. Table 16 regresses the log changes in the average years of schooling for individuals born between 1950 and 1972 from those born prior to 1930, as observed in the 1990 Census, on the county's YRD affiliation, guerrilla presence, and their interactions. As before, we control for the initial conditions and geography. Note that those born prior to 1930 would have been 22 years old in 1952, and would mostly have finished their formal schooling by then. Similarly, cohorts born between 1950 and 1972 would be at least 18 by 1990, and would have completed their formal schooling by then. We use the log differences in the average schooling of the 1950-1972 cohorts and the cohorts prior to 1930 as the proxy for the improvement in local education under local Communist leaders.

Based on Columns (1) and (2), which includes all the counties in the analysis, counties with YRD affiliations and with a guerrilla presence are associated with larger increases in educational achievement, though the differences are not significant. When we interact the YRD and guerrilla dummies, as shown in Column (3), we find that counties with both YRD affiliation and a guerrilla presence are associated with an average education level that is 37.5 percentage points higher; the effect is statistically significant at the 10 percent level.

In Table 16, we also trim the tail 5 percent of the counties from the analysis. Based on Column (4), relative to counties led by FD3 cadres, those led by YRD cadres had a greater increase by 30.1 percentage points in average schooling levels. Column (5) includes both YRD and guerrilla dummies in the regression. Now the YRD premium in education increase is 28.7 percentage points. Guerrilla presence is also associated with an education increase of 13 percentage points, though it is not statistically significant. Column (6) includes the interactions of YRD leadership and a guerrilla presence. Most of the YRD effect on educational improvement results from the counties led by YRD-affiliated cadres that also had guerrilla presence; the premium is 38 percentage points (relative to FA3 counties). In counties led by YRD-affiliated cadres without a guerrilla presence,

the educational achievement growth is also faster than that of FA3 counties (by 22 percentage points), but the coefficient estimate is not statistically significant.

The results in Table 16 confirm that counties led by cadres from the weak faction that also had guerrilla presence pursued policies that led to faster improvements in local educational achievement. Improving education is a likely lever through which local accountability impact local development.

State-Owned Enterprise (SOE) Shares in the Local Economy in 1998. Another pro-local policy that county leaders might have undertaken was to encourage the development of the private sector. We thus now examine whether counties led by YRD-affiliated cadres and counties with guerrilla presence were more conducive to private-sector development. China started its large-scale SOE reform in 1998 (see Hsieh and Song, 2015), and the top-down nature of that SOE reform likely would hide the footprint of the locally initiated private-sector development after 1998 (Huang et al., 2017); thus, we focus on the share of the SOE in the county economy as of 1998. We use two measures of SOE share in the economy: the SOE share of the county's total sales revenues, and the SOE share in terms of the number of firms.

In Panel A of Table 17, we regress the SOE sales-revenue share in 1998 on the county's YRD affiliation, guerrilla presence, and their interactions, after controlling for the initial conditions and geography. Columns (1)-(3) include the full sample; Columns (4)-(6) trim the tail 5% of the counties. In Column (1), relative to counties with FA3 affiliations, counties with YRD affiliations are associated with a 22 percentage points lower SOE sales-revenue share in the county's economy in 1998. In Column (2), which includes both YRD and guerrilla dummies, the YRD coefficient barely changed, while the guerrilla presence is not significantly associated with the SOE share. In Column (3), where we interact YRD and Guerrilla dummies, counties with both a YRD affiliation and a guerrilla presence are associated with 25.3 percentage point lower SOE sales-revenue share, and counties with a YRD affiliation but without a guerrilla presence are associated with 21.3 percentage point lower SOE sales-revenue share; both effects are statistically significant. These effects are similar when we trim the tail 5 percent of the counties. Panel B of Table 17 replicates the results using the share of SOEs in terms of the total number of firms in 1998, and reaches qualitatively similar results.

The results in Table 17 confirm that counties led by cadres with stronger local accountability

pursued policies that were more conducive to private-sector development. Because the private sector is more productive than the SOEs (Shleifer 1998; Megginson and Netter, 2001), a lower SOE share in the local economy tends to be associated with faster local economic growth. We believe that this is another lever through which local accountability impact local development.

5.9 Limits to Pro-Local Policies

A relevant question is how much discretion county-level cadres have in choosing pro-local policies in an authoritarian regime. It is reasonable to hypothesize that there are limits to what local leaders can do to promote local interest, and that the pro-local policies that local leaders may implement are limited to those not easily observed by upper-level leaders. Because the higher-level government holds the power of promotion, demotion and even political purge, the local leaders dare not overtly disobey the center. Therefore, we implicitly assume that YRD cadres are likely to enact policies favorable to local residents only when doing so does not openly defy their superiors. In other words, two types of cadres will perform in the same way when they implement tasks that are easily monitored by the upper-level authority. To examine this issue, in an early version, we have examined how local accountability affected the adoption of the one-child policy that was launched by the central government in 1979, and the timing of the adoption of the Household Responsibility System in early 1980s. Both policies were easily observed by upper-tier governments. We found that the local accountability variables are not significantly correlated with the two policy outcomes.[24] There was thus a limit on how much local leaders were willing to go against the central government in their desire to adopt pro-local polices. In counties with local accountability, leaders would choose more pro-local policies; at the same time, their political instincts would also limit the degree to which they would defy the central government, particularly if the policy in question were clearly observable to the higher-level governments.

5.10. Affiliations, Grassroots Support, and Political Survival: Some Direct Evidence

We have implicitly assumed that local politicians' decisions about what types of local development policies to pursue are shaped by their incentives for political survival, and that their chances of political survival depend on the support from higher-tier governments as well as the grassroots

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[24] To save space, we have opted not to report the results here. See Fang et al. (2019) for details.

support from local citizens. Local cadres from the strong faction may find it advantageous in terms of political survival to cater to the policies desired by higher-level officials instead of pro-local policies; by contrast, local cadres from the weak faction may find pro-local development policies to enhance their political survival. Providing direct evidence for this mechanism is not easy, as the career paths of the county-level cadres were impossible to track. In this section, we exploit a unique historical event, the Cultural Revolution of 1966 to 1976, to provide direct evidence about and a rare glimpse into the mechanisms that relate the affiliation with the upper-tier government, grassroots support, and political survival.

After the initiation of the Cultural Revolution in 1966, county-level Communist Party committees gradually lost power amid the chaos. To sustain political order, the central authority launched the so-called Movement of "Support the Left, Support the Peasants, Support the Workers; Military Training, Military Control" in 1967, which facilitated military cadres to organize the Core Leading Group of the County Revolutionary Committee to be in charge of local administrations. In essence, the military purged local cadres from power. The county Core Leading Group stayed in power until late in 1970, when the county party committees were reestablished, and military cadres gradually retreated from the county leadership. That is, the county party committees attempted to regain their leadership around the end of 1970. We expect that those counties that either kept a close connection with the provincial leaders, or had strong grassroots support were likely to regain their power faster from the military-led Core Leading Group after 1971.

Table 18 directly examines the association between the two potential sources of a local leader's support -- the connection to the higher-level government and to grassroots backing -- with the ability of a faction (i.e., YRD or FA3) to regain power from the military Core Leading Group. The dependent variable here is the speed of regaining power by the original faction in the county between 1971 and 1979, as captured by the number of years to regain power during the period. We use FA3 and Famine Control during the Great Chinese Famine (1959-1961) to proxy the connection to the provincial leaders and grassroots support, respectively. In Column (1), the negative OLS coefficient estimates of FA3 and Famine Control mean that FA3-affiliated counties and counties with strong grassroots support regained power faster. Interestingly, in Column (2) we find that the interaction term FA3 × Famine Control is positive, suggesting that counties that already had strong

connections to the higher-level government benefit less from pro-local policies in terms of their speed in regaining power; however, the coefficient estimate is not statistically significant.

The results from Table 18 provide direct evidence that connections to strong affiliations and grassroots support both helped the local cadres to regain power from the military Core Leading Group more quickly. In addition, grassroots support is not as effective in speeding this process for the strong FA3 affiliation as for the weak YRD affiliation.

6. Conclusion

How does local accountability affect development performance? Does local accountability exist in authoritarian countries, and if so, what is its origin? Do local leaders make economic policies with their own political survival in mind, taking into account the degree of local accountability they face? Moreover, do the policy decisions made by leaders in response to these incentives have long-lasting consequences? In this paper, we investigate the role of local accountability in explaining the enormous local variations in development performance. Our evidence comes from the county-level variations within Fujian Province in China. When the Communist armies took over Fujian Province circa 1949, cadres from two different army affiliations –FA3 and YRD – were assigned as county leaders. Counties also differed in another key respect: whether a local guerrilla presence existed prior to the Communist takeover. Members of FA3 (the "strong faction") dominated the Fujian Provincial Standing Committee of the Communist Party. We argue that local leaders' incentives regarding development policies depended on whether they were from the strong faction in the provincial government. County leaders from the strong faction were less likely to pursue policies friendly to local development because their political survival depended more on their loyalty to the provincial leader above than on the grassroots support from local residents below. By contrast, in a situation similar to that encountered by politicians facing stronger electoral competition in democratic countries, the political survival of county leaders from the weak faction was based to a greater extent on local grassroots support, which could be best secured if these leaders focused on local development. In addition, the presence of guerrillas in a county further improved development performance because it intensified local accountability of the county leader, and/or because it better facilitated the communication between the local government and local residents and improved the

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provision of local public goods beneficial to development.

We offer robust evidence that counties led by cadres affiliated with the weak political faction (YRD) and counties with a local guerrilla presence tended to experience a less severe degree of famine during the Great Chinese Famine (1959-1961). These counties had significantly faster real annual economic growth rates in the whole period (1952-1998), and, especially, in the post-reform period (1978-1998). We also find positive interaction effects between weak affiliations and guerrilla presence: counties that had both a guerrilla presence and a leadership from cadres affiliated with the weak faction tended to grow the fastest and suffered the least severe levels of famine. The magnitudes of these effects also imply first-order importance: counties that were led by the weak faction and that also had a guerrilla presence had annual growth rates from 1978 to 1998 that were 3.3 percentage points higher (or 0.85 standard deviations higher). In addition, the growth enhancing effect of being affiliated with the weak faction and having guerrilla presence is more pronounced in magnitude during the dynamic reform periods of 1994 to 1998. We provide further evidence that two potential mechanisms for such long-term effects could be improvement in local education, and the development of the private sector. Our findings underscore the important roles played by political competition and local accountability in shaping local leaders' policy choices. Such choices may in turn have drastic implications for economic growth, education, private-sector development, and citizens' lives and deaths (both literally and figuratively).

We believe that the insights we uncovered from Fujian Province, the superstar performer even in the miracle-growth environment during the three post-reform decades in China, are robust and general in settings of one-party-ruled authoritarian countries, where political purges and turnovers are important concerns for politicians. Our insights regarding the importance of political competition and local accountability for local development may also be relevant for democracies. In future work, we will continue to examine the connections between political competition, local accountability, political survival, and local development in other provinces in China.

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Figure 1: Geographic Distribution of County Types in Fujian Province in 1950.
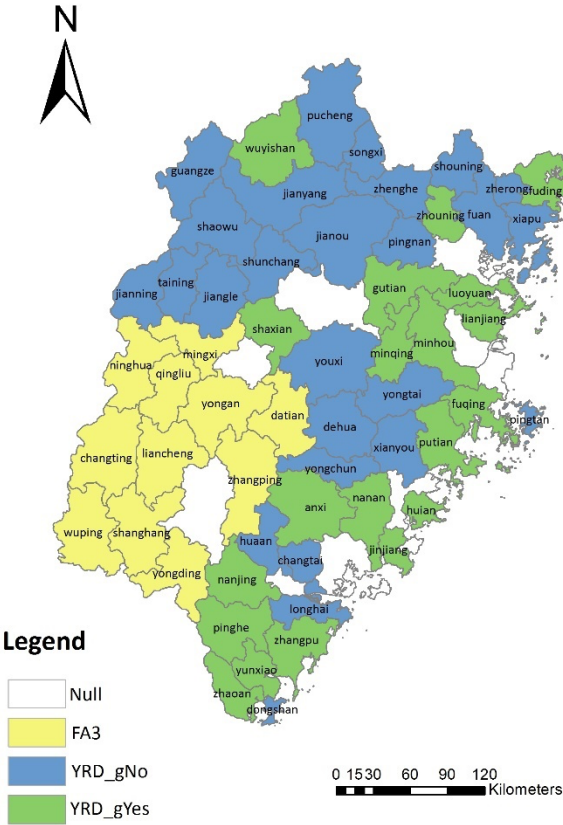
Figure 2: Share of FA3 and YRD in Provincial Party Standing Committee in Fujian Province during 1950-1993.
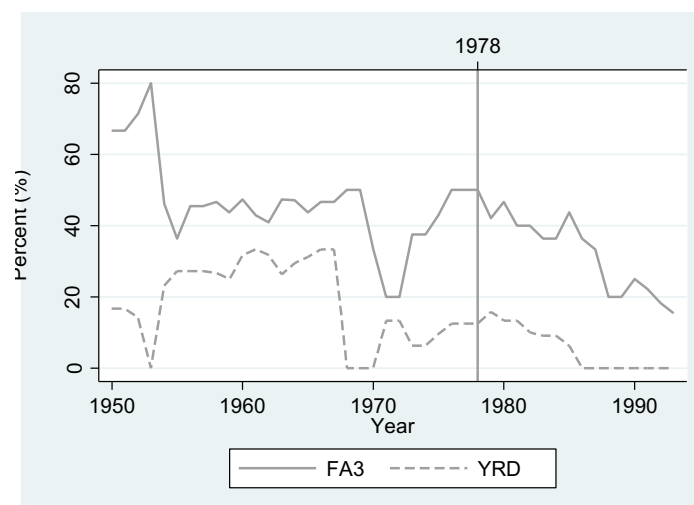
Notes: We calculate the shares of FA3 and YRD in the Provincial Party Standing Committee as follows: First, we read resumes of all Standing Committee members and identify whether they had working experience in the FA3, or if they were members of the YRD. We then divide the number of Provincial Standing Committee members from the FA3 and the YRD, respectively, by the total number of provincial Standing Committee members year by year.

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Table 1: Summary Statistics of Main Variables

Variable	Obs.	Mean	SD	Min	Max
Annual Growth Rate 52-98 (%)	57	2.91	1.47	-0.03	7.94
Annual Growth Rate 78-98 (%)	57	7.11	3.89	1.47	22.49
Famine Control	58	0.78	0.14	0.46	1.11
Death Rate (Death Per 1000)	58	13.4	5.8	5.8	33.8
FA3	59	0.19	0.39	0	1
YRD	59	0.81	0.39	0	1
Guerrilla	59	0.42	0.5	0	1
YRD×GuerrillaNo	59	0.44	0.5	0	1
YRD×GuerrillaYes	59	0.37	0.49	0	1
Ln_GVOPC_52	58	7.95	0.45	5.99	8.66
Ln_GVOPC_78	58	7.9	0.48	5.99	9.23
Ln_Pop_52	59	2.67	0.69	1.34	4.33
Ln_Pop_78	58	3.36	0.66	1.99	4.96
Share of Plains (%)	59	10.96	9.7	1.53	41
Distance to Xiamen (Km)	59	184.2	90.01	21	342
Length of Liberating Time to Oct. 1, 1949 (Day)	59	-19.7	89.5	-145	231

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Table 2: Comparisons of Growth Rates across Counties in Fujian Province, by Affiliation and Guerrilla Presence (1952-1998 and 1978-1998)

	Panel A: FA3 vs. YRD, and Guerrilla vs. No Guerrilla						
County by	Growth Rate (%)		Sample	County by	Growth Rate (%)		Sample
Affiliation	1952-1998	1978-1998		Guerrilla Presence	1952-1998	1978-1998	
FA3	2.10	4.37		No	2.51	5.52	
	(0.86)	(1.60)	11		(1.16)	(2.44)	25
YRD	3.08	7.72		Yes	3.43	9.26	
	(1.54)	(4.03)	48		(1.72)	(4.52)	34
YRD-FA3	0.99*	3.17**		Yes-No	0.89**	3.72**	
	(0.50)	(1.25)			(0.38)	(0.93)	

	Panel B: Interactions of FA3, YRD with Guerrilla Presence							
County by	Growth Rate 1952-1998 (%)			Growth Rate 1978-1998(%)			Sample	
Affiliation\Guerrilla	Yes	No	Yes-No	Yes	No	Yes-No	Yes	No
FA3	2.05	2.11	0.06	5.82	4.08	1.7	3	8
	(0.69)	(0.97)	(0.63)	(0.125)	(1.69)	(1.01)		
YRD	3.63	2.65	0.98**	9.75	6.01	3.74**	22	26
	(1.74)	(1.18)	(0.43)	(4.63)	(2.44)	(1.07)		

Note: Standard errors in parentheses. *, ** and *** denote significance at 10 percent, 5 percent and 1 percent, respectively.

Table 3: Comparisons of Famine Control and Death Rates (per 1,000) Across Counties in Fujian Province, by Affiliation and Guerrilla Presence, 1959-1961.

			Panel A: FA3 vs. YRD, and Guerrilla vs. No Guerrilla		
County	Famine Control	Death Rate	County	Famine Control	Death Rate
FA3	0.688	19.7	No Guerrilla	0.754	14.57
	(0.158)	(2.6)		(0.153)	(5.36)
Obs.	11	10		25	25
YRD	0.798	12.1	Yes Guerrilla	0.807	11.92
	(0.132)	(0.6)		(0.125)	(6.08)
Obs.	48	48		34	33
YRD-FA3	0.11**	-7.6***	Yes-No	0.05	-2.65*
	[0.046]	[1.75]		[0.038]	[1.51]

	Panel B: Interactions of FA3, YRD with Guerrilla Presence					
	Famine Control			Death Rate		
Country	Guerrilla Presence			Guerrilla Presence		
	Yes	No	Yes-No	Yes	No	Yes-No
FA3	0.56	0.73	-0.17	24.3	17.8	6.5
	(0.09)	(0.16)	[0.097]	(9.5)	(7.5)	[5.55]
Obs.	3	8		3	7	25
YRD	0.84	0.76	0.08**	10.2	13.7	-3.47***
	(0.09)	(0.15)	[0.037]	(2.99)	(4.4)	[1.11]
Obs.	22	26		22	26	

Notes: The numbers in parentheses are standard deviations, and the numbers in square brackets are standard errors. *, ** and *** denote significance at 10 percent, 5 percent and 1 percent, respectively.

Table 4: Correlations of the Affiliations of Local Leaders in 1949 and Guerrilla Presence with County Characteristics in 1952

	OLS		Multinomial	
	YRD	Guerrilla	YRD_GuerrillaNo	YRD_GuerrilaYes
Initial Condition				
Ln_GVOPC$_{52}$	0.052	-0.048	0.586	0.317
	(0.565)	(0.651)	(0.579)	(0.776)
Lnpop$_{52}$	0.053	0.303***	-0.122	1.374*
	(0.472)	(0.000)	(0.870)	(0.100)
Geography				
Share of Plain (%)	0.009*	0.001	0.062	0.084
	(0.076)	(0.891)	(0.331)	(0.183)
Distance to Xiamen (KM)	0.001*	-0.001	0.008	0.005
	(0.067)	(0.353)	(0.123)	(0.353)
Constant	-0.012	0.126	-5.534	-7.334
	(0.987)	(0.897)	(0.558)	(0.468)
Obs.	58	58	58	
R^2 (Pseudo R^2)	0.070	0.253	0.159	

Notes: FA3 is the reference group in multinomial logit regression. White standard errors are in parenthesis. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 5: The Effect of YRD vs. FA3 Affiliations on Annual Growth Rates

	Full Sample						Trimming Tail 5%	
	1952-1998			1978-1998			1952-1998	1978-1998
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Power Structure								
YRD	0.987***	0.925***	0.980***	3.166***	2.103***	2.230***	0.872***	2.091***
	(0.345)	(0.321)	(0.305)	(0.766)	(0.700)	(0.701)	(0.281)	(0.504)
Initial Condition								
Ln_GVOPC_52		-1.876***	-2.134***				-1.963***	
		(0.290)	(0.238)				(0.270)	
Ln_GVOPC_78					-4.634***	-4.549***		-3.410***
					(1.148)	(0.970)		(0.644)
Ln_Pop_52		0.217	-0.300				-0.001	
		(0.296)	(0.337)				(0.246)	
Ln_Pop_78					0.839	-0.591		-0.684
					(0.807)	(0.934)		(0.807)
# days to liberation			0.002			0.003	0.002	0.002
to Oct. 1, 1949			(0.002)			(0.004)	(0.002)	(0.004)
Geography								
Share of Plains			0.051**			0.133**	0.039	0.073*
(%)			(0.023)			(0.056)	(0.025)	(0.044)
Distance to			-0.003**			-0.008**	-0.003*	-0.011***
Xiamen (Km)			(0.002)			(0.004)	(0.002)	(0.004)
Obs.	57	57	57	57	57	57	53	52
R^2	0.066	0.435	0.624	0.105	0.517	0.681	0.512	0.578

Notes: White standard errors are in parentheses. Intercepts are not reported. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 6: The Separate Effects of YRD and Guerrilla on Annual Growth Rates

	Full Sample						Trimming Tail 5%	
	1952-1998			1978-1998			1952-1998	1978-1998
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Power Structure								
YRD	0.867**	0.879***	0.939***	2.537***	1.981***	2.069***	0.855***	1.971***
	(0.356)	(0.323)	(0.286)	(0.658)	(0.697)	(0.638)	(0.277)	(0.458)
Guerrilla	0.818**	0.642**	0.550**	3.420***	1.652**	1.545**	0.508**	1.484**
	(0.390)	(0.305)	(0.256)	(0.959)	(0.742)	(0.623)	(0.252)	(0.577)
Initial Condition								
Ln_GVOPC_52		-1.860***	-2.103***				-1.951***	
		(0.281)	(0.243)				(0.276)	
Ln_GVOPC_78					-4.278***	-4.193***		-3.024***
					(1.164)	(0.981)		(0.631)
Ln_Pop_52		-0.001	-0.447				-0.137	
		(0.318)	(0.342)				(0.254)	
Ln_Pop_78					0.358	-0.973		-1.072
					(0.841)	(0.930)		(0.819)
# days to liberation			0.002			0.004	0.003*	0.002
(i.e.,) Oct. 1, 1949			(0.002)			(0.004)	(0.002)	(0.004)
Geography								
Share of Plains			0.051**			0.137***	0.039*	0.083**
(%)			(0.022)			(0.052)	(0.024)	(0.038)
Distance to			-0.003*			-0.007*	-0.002	-0.009***
Xiamen (Km)			(0.002)			(0.004)	(0.002)	(0.003)
Obs.	57	57	57	57	57	57	53	52
R^2	0.142	0.471	0.650	0.292	0.550	0.708	0.552	0.625

Notes: White standard errors are in parenthesis. Intercepts are not reported. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 7: The Interaction Effects of Affiliations and Guerrilla Presence on Annual Growth Rates

	Full Sample								Trimming Tail 5%	
	1952-1998				1978-1998				1952-1998	1978-1998
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Power Structure										
FA3×Guerrilla Yes				0.186				0.556		
				(0.435)				(0.856)		
YRD×Guerrilla No [b_0]	0.551	0.620*	0.747**	0.802**	1.458**	1.352*	1.579**	1.723**	0.640**	1.441***
	(0.353)	(0.323)	(0.306)	(0.406)	(0.688)	(0.702)	(0.695)	(0.840)	(0.277)	(0.497)
YRD×Guerrilla Yes [b_1]	1.528***	1.424***	1.362***	1.422***	5.198***	3.422***	3.291***	3.459***	1.265***	3.131***
	(0.464)	(0.382)	(0.352)	(0.444)	(1.122)	(0.873)	(0.811)	(0.958)	(0.327)	(0.649)
Ln_GVOPC_52		-1.855***	-2.105***	-2.104***					-1.946***	
		(0.279)	(0.245)	(0.247)					(0.278)	
Ln_GVOPC_78						-4.325***	-4.286***	-4.239***		-3.131***
						(1.102)	(0.946)	(0.972)		(0.604)
Ln_Pop_52		-0.028	-0.454	-0.458					-0.153	
		(0.314)	(0.338)	(0.344)					(0.249)	
Ln_Pop_78					0.272	-1.006	-1.015			-1.117
					(0.835)	(0.923)	(0.936)			(0.820)
# days to liberation			0.002	0.002			0.003	0.003	0.002	0.002
(i.e., Oct. 1, 1949)			(0.002)	(0.002)			(0.004)	(0.004)	(0.002)	(0.004)
Share of Plains			0.048**	0.049**			0.131**	0.133**	0.037	0.079**
(%)			(0.023)	(0.023)			(0.052)	(0.053)	(0.023)	(0.038)
Distance to			-0.003**	-0.003*			-0.008**	-0.007**	-0.002	-0.010***
Xiamen (Km)			(0.002)	(0.002)			(0.004)	(0.004)	(0.002)	(0.003)
Obs.	57	57	57	57	57	57	57	57	53	52
R^2	0.158	0.483	0.652	0.653	0.293	0.562	0.710	0.711	0.564	0.632
H_0: $b_0=b_1$	0.033	0.024	0.044	0.044	0.002	0.018	0.021	0.021	0.035	0.017

Notes: (1). White standard errors are in parenthesis. (2). Intercepts are not reported. (3). *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance. (4) The last row reports the p-values of the hypothesis that $b_0 = b_1$.

Table 8: The Effect of Power Structure on Growth Rates in Fujian during 1994-1998

	Full Sample			Trim 5%		
	(1)	(2)	(3)	(4)	(5)	(6)
YRD	10.700***	10.138***		10.094***	9.858***	
	(2.404)	(2.390)		(2.447)	(2.537)	
Guerrilla		5.673***			5.298**	
		(2.110)			(2.085)	
YRD×Guerrilla No[b_0]			8.273***			7.843***
			(2.537)			(2.684)
YRD×Guerrilla Yes[b_1]			14.780***			14.286***
			(2.732)			(2.617)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	58	58	58	54	54	54
R^2	0.500	0.552	0.559	0.549	0.607	0.622

Notes: White standard errors are in parentheses. Intercepts are not reported. Columns (1)-(3) use the full sample of counties; and Columns (4)-(6) exclude the 5% of the counties with outlier growth rates. Other control variables include Ln_GDPPC_94, Ln_pop_94 (Ln_pop_78), Share of Plains (%), Distance to Xiamen (Km) and Length of Liberating Time to Oct. 1, 1949 (Day). *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 9: The Effect of Affiliations on Famine Control during the Great Chinese Famine (1959-1961) in Fujian Province

	Full Sample			Trimming Tail 5%	Bottom 25%
	(1)	(2)	(3)	(4)	(5)
Power Structure					
YRD	0.109**	0.116**	0.136**	0.101*	-0.475***
	(0.050)	(0.054)	(0.054)	(0.053)	(0.174)
Initial Condition					
Ln_GVOPC_52		0.033	0.027	0.029	-0.076
		(0.036)	(0.036)	(0.036)	(0.096)
Ln_Pop_52		0.048**	0.062**	0.049*	-0.238***
		(0.022)	(0.027)	(0.026)	(0.087)
# days to liberation			0.000	0.000	-0.001
(i.e., Oct. 1, 1949)			(0.000)	(0.000)	(0.001)
Geography					
Share of Plains			-0.001	0.001	0.005
(%)			(0.002)	(0.002)	(0.007)
Distance to			0.000	0.000	0.000
Xiamen (Km)			(0.000)	(0.000)	(0.001)
Obs.	58	57	57	53	58
R^2	0.091	0.172	0.203	0.201	0.285

Notes: White standard errors are in parentheses. Intercept not reported. In Column (5), the dependent variable is a dummy variable, which take the value of one, if the county was in the bottom 25 percent of counties in terms of famine control (i.e., they are among top 25 percent of counties with the most severe famine effects from 1959 to 1961), and take the value of zero, otherwise. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 10: The Separate and Interaction Effects of Affiliations and Guerrilla Presence on Famine Control during the Great Chinese Famine in 1959-1961.

	Separate Effects					Interaction Effects				
	Full Sample			Trimming Tail 5%	Bottom 25%	Full Sample			Trimming Tail 5%	Bottom 25%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Power Structure										
YRD	0.101*	0.114**	0.134**	0.091*	-0.476***					
	(0.055)	(0.056)	(0.056)	(0.055)	(0.176)					
Guerrilla	0.041	0.021	0.022	0.056	0.004					
	(0.036)	(0.040)	(0.044)	(0.038)	(0.115)					
YRD×Guerrilla No [b_0]						0.072	0.091	0.112*	0.069	-0.424**
						(0.056)	(0.057)	(0.058)	(0.055)	(0.181)
YRD×Guerrilla Yes [b_1]						0.152***	0.154***	0.172***	0.149***	-0.558***
						(0.050)	(0.056)	(0.059)	(0.057)	(0.187)
Other controls	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Obs.	58	57	57	53	58	58	57	57	53	58
R^2	0.112	0.176	0.207	0.238	0.285	0.157	0.204	0.231	0.268	0.300
H_0: $b_0=b_1$						0.031	0.136	0.172	0.044	0.254

Notes: (1) White standard errors are in parentheses. (2) Intercepts are not reported. **Other controls** include Ln_GVOPC_52, Ln_Pop_52, # days to liberation, share of plains, and the distance to Xiamen (Km). (3) The last row reports the p-values of the hypothesis that b0 = b1. (5) In Columns (5) and (10), the dependent variable is a dummy variable that takes the value of one if the county was in the bottom 25 percent of famine control (i.e., they are among top 25 percent of counties with the most severe famine effects from 1959 to 1961), and take the value of zero, otherwise. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 11: The Effect of Affiliations on the Death Rates during the 1959-1961 Chinese Famine

	Full Sample			Trimming Tail 5%	Top 25%
	(1)	(2)	(3)	(4)	(5)
Power Structure					
YRD	-7.611***	-7.925***	-7.663**	-4.193**	-0.386**
	(2.576)	(2.853)	(3.003)	(1.995)	(0.186)
Initial Condition					
Ln_GVOPC_52		-2.095*	-1.501	-0.365	-0.041
		(1.199)	(1.055)	(0.747)	(0.104)
Ln_Pop_52		-3.077***	-1.511**	-1.379*	-0.100
		(0.765)	(0.688)	(0.759)	(0.080)
# days to liberation			0.003	0.001	0.001
(i.e., Oct. 1, 1949)			(0.008)	(0.006)	(0.001)
Geography					
Share of Plains			-0.112**	-0.090***	0.001
(%)			(0.046)	(0.034)	(0.004)
Distance to			0.010	0.010*	0.002***
Xiamen (Km)			(0.006)	(0.006)	(0.001)
Obs.	58	57	57	52	58
R^2	0.252	0.410	0.462	0.454	0.315

Notes: (1) White standard errors are in parentheses. (2) Intercepts are not reported. (3) *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 12: The Separate and Interaction Effects of Affiliations and Guerrilla Presence on Death Rates during the Great Chinese Famine (1959-1961)

	Separate Effects					Interaction Effects				
	Full Sample			Trimming Tail 5%	Top 25%	Full Sample			Trimming Tail 5%	Top 25%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Power Structure										
YRD	-7.298***	-7.886***	-7.660**	-4.182**	-0.390**					
	(2.769)	(2.916)	(3.053)	(2.046)	(0.188)					
Guerrilla	-1.982	-0.433	-0.037	-0.102	0.044					
	(1.350)	(1.330)	(1.302)	(0.985)	(0.117)					
YRD×Guerrilla No[b_0]						-6.021**	-7.093**	-7.028**	-3.859*	-0.380*
						(2.673)	(2.861)	(3.033)	(2.026)	(0.194)
YRD×Guerrilla Yes[b_1]						-9.491***	-9.045***	-8.528***	-4.692**	-0.396**
						(2.606)	(2.888)	(3.049)	(2.068)	(0.201)
Initial Condition										
Ln_GVOPC_52		-2.101*	-1.503	-0.370	-0.038		-2.131*	-1.572	-0.416	-0.041
		(1.204)	(1.059)	(0.764)	(0.105)		(1.191)	(1.084)	(0.763)	(0.106)
Ln_Pop_52		-2.925***	-1.501*	-1.354*	-0.112		-2.435***	-1.109	-1.171	-0.097
		(0.830)	(0.810)	(0.823)	(0.090)		(0.851)	(0.799)	(0.822)	(0.091)
Other Controls		No	Yes	Yes	Yes		No	Yes	Yes	Yes
Obs.	58	57	57	52	58	58	57	57	52	58
R^2	0.280	0.411	0.462	0.454	0.317	0.327	0.428	0.472	0.461	0.315
H_0: $b_0=b_1$						0.002	0.077	0.154	0.366	0.891

Notes: (1). White Standard Errors are in parentheses. (2). Intercepts are not reported. **Other controls** include # days to liberation, share of plains, and the distance to Xiamen (Km). (4) The last row reports the p-values of the hypothesis that b0 = b1. (5) In Columns (5) and (10), the dependent variable is a dummy variable, which takes the value of one, if the county was in the top 25 percent of death rate (i.e., they are among top 25 percent of counties with the most severe famine effects from 1959 to 1961), and take the value of zero, otherwise.
*, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 13: The Effect of Power Structure on Growth Rates in Fujian, Border-Sharing Counties Only

	1952-1998			1978-1998		
	(1)	(2)	(3)	(4)	(5)	(6)
YRD	0.862*	0.787***		1.518	1.718***	
	(0.499)	(0.276)		(1.047)	(0.621)	
Guerrilla		0.509*			1.411**	
		(0.265)			(0.646)	
YRD×Guerrilla No[b_0]			0.558**			1.144*
			(0.283)			(0.655)
YRD×Guerrilla Yes[b_1]			1.157***			2.795***
			(0.340)			(0.800)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	15	51	51	15	51	51
R^2	0.528	0.657	0.661	0.695	0.712	0.717
H_0: $b_0=b_1$			0.058			0.032

Notes: White standard errors are in parentheses. Intercepts are not reported. Columns (1) and (4) use a subsample of FA3-led counties and their border-sharing counties. Columns (2)-(3) and (5)-(6) use a subsample of counties with a guerrilla presence, and their border-sharing counties. Other control variables include Ln_GVOPC_52 (Ln_GVOPC_78), Ln_pop_52 (Ln_pop_78), Share of Plains (%), Distance to Xiamen (Km) and Length of Liberating Time to Oct. 1, 1949 (Day). *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 14: The Effect of Power Structure on Famine Control and Death Rates during the 1959-1961 Chinese Famine in Fujian, Border-Sharing Counties Only

	Famine Control			Death Rates		
	(1)	(2)	(3)	(4)	(5)	(6)
YRD	0.196***	0.175***		-4.211	-10.531***	
	(0.076)	(0.059)		(4.606)	(3.280)	
Guerrilla		0.019			-0.330	
		(0.041)			(1.246)	
YRD×Guerrilla No[b_0]			0.155**			-10.031***
			(0.062)			(3.311)
YRD×Guerrilla Yes[b_1]			0.204***			-11.134***
			(0.059)			(3.249)
Other Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	15	51	51	14	51	51
R^2	0.698	0.273	0.289	0.560	0.566	0.571
H_0: $b_0=b_1$			0.258			0.276

Notes: White standard errors are in parentheses. Intercepts are not reported. Columns (1) and (4) use a subsample of FA3 counties and their border-sharing counties. Columns (2)-(3) and (5)-(6) use a subsample of counties with a guerrilla presence, and their border-sharing counties. Other control variables include Ln_GVOPC_52 (Ln_GVOPC_78), Ln_pop_52 (Ln_pop_78), Share of Plains (%), Distance to Xiamen (Km) and Length of Liberating Time to Oct. 1, 1949 (Day). *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 15: The Effect of Affiliations on Average Expenditure-Revenue Ratios between 1950 and 1957

	Full Sample			Trimming Tail 5%
	(1)	(2)	(3)	(4)
Power Structure				
YRD	-0.357**	-0.266*	-0.268*	-0.186
	(0.151)	(0.140)	(0.156)	(0.149)
Initial Condition				
Ln_GVOPC_52		-0.317*	-0.319*	-0.254
		(0.160)	(0.175)	(0.168)
Ln_Pop_52		-0.206**	-0.212**	-0.147
		(0.083)	(0.101)	(0.090)
Geography				
Share of Plains (%)			0.001	-0.001
			(0.008)	(0.008)
Distance to			-0.000	0.000
Xiamen (Km)			(0.001)	(0.001)
Obs.	53	52	52	48
R^2	0.062	0.147	0.110	0.037

Notes: The dependent variable is the average expenditure-revenue ratios between 1950 and 1957 at the county level. White standard errors are in parentheses. Intercepts are not reported. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 16: The Effect of Affiliations and Guerrilla Presence on the Changes in the Average Years of Schooling for Individuals Born in 1952-1972 Relative to Those Born Prior to 1930

	Full Sample			Trimming Tail 5%		
	(1)	(2)	(3)	(4)	(5)	(6)
Power Structure						
YRD	0.273	0.262		0.301**	0.287**	
	(0.216)	(0.218)		(0.135)	(0.137)	
Guerrilla		0.162			0.130	
		(0.128)			(0.113)	
YRD×Guerrilla No [b_0]			0.209			0.220
			(0.248)			(0.142)
YRD×Guerrilla Yes [b_1]			0.375*			0.380**
			(0.201)			(0.152)
Initial condition						
Ln_GVOPC_52	-0.025	-0.014	-0.014	-0.055	-0.045	-0.041
	(0.128)	(0.125)	(0.124)	(0.116)	(0.113)	(0.111)
Ln_Pop_52	-0.254	-0.301	-0.293	-0.073	-0.113	-0.119
	(0.201)	(0.203)	(0.200)	(0.118)	(0.123)	(0.122)
Geography						
Share of Plains	0.011	0.011	0.011	-0.000	0.000	-0.001
(%)	(0.011)	(0.011)	(0.011)	(0.008)	(0.008)	(0.008)
Distance to	0.001	0.001	0.001	-0.000	-0.000	-0.000
Xiamen (Km)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Obs.	55	55	55	51	51	51
R^2	0.087	0.095	0.095	0.084	0.105	0.110
H_0: $b_0=b_1$			0.309			0.221

Notes: The dependent variable is the difference in log of the average education level of the cohort born between 1952 and 1970 and the log of the average education of the cohort born before 1930, as observed in the 1990 Census. Intercepts are not reported. In the right panel, the 5% tail observations are trimmed from the analysis. The last row reports the p-values of the hypothesis that $b_0 = b_1$. White standard errors are in parenthesis. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 17: The Effect of Affiliations and Guerrilla Presence on the Share of SOE in the County Economy in 1998

	Full Sample			Trimming Tail 5%		
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A: SOE Sales Revenue Share in the County in 1998					
Power Structure						
YRD	-22.866***	-22.610***		-20.370***	-20.353***	
	(6.494)	(6.585)		(6.304)	(6.407)	
Guerrilla		-2.547			-0.282	
		(6.196)			(6.322)	
YRD×Guerrilla No [b_0]			-21.343***			-19.706***
			(7.418)			(7.271)
YRD×Guerrilla Yes [b_1]			-25.320***			-21.454***
			(7.441)			(7.404)
H_0: $b_0=b_1$			0.597			0.818
	Panel B: SOE Count Share in the County in 1998					
Power Structure						
YRD	-15.965**	-15.157**		-13.110**	-12.723*	
	(6.697)	(6.784)		(6.464)	(6.644)	
Guerrilla		-8.046			-6.306	
		(5.295)			(5.490)	
YRD×Guerrilla No [b_0]			-11.735			-9.481
			(7.214)			(7.081)
YRD×Guerrilla Yes [b_1]			-22.782***			-19.031***
			(6.947)			(6.750)
H_0: $b_0=b_1$			0.071			0.131
Obs.	56	56	56	52	52	52
Controls for Initial Conditions	Yes	Yes	Yes	Yes	Yes	Yes
Controls for Geography	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable in Panel A is the SOE share of sales revenue in the county in 1998; the dependent variable in Panel B is the SOE share in terms of the number of firms (count share) in 1998. In the right panel, the 5% tail observations are trimmed from the analysis. All regressions control for the initial conditions and geography variables as in Table 18. White standard errors are in parentheses. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.

Table 18: The Effect of FA3 and Famine Control (1959-1961) on Retaking the Power during 1971 and 1979

	(1)	(2)
FA3	-3.238**	-6.042
	(1.254)	(6.308)
Famine Control	-6.224**	-7.078**
	(3.070)	(3.337)
FA3×Famine Control		4.019
		(8.863)
Constant	9.609***	10.292***
	(2.553)	(2.782)
Obs.	53	53
R^2(Pseudo- R^2)	0.116	0.103

Notes: The dependent variable is the speed of regaining power at the county level by the original affiliation in the county between 1971 and 1979. White standard errors are in parentheses. Intercepts are not reported. *, **, and *** respectively indicate 10 percent, 5 percent and 1 percent statistical significance.