

**Elite Cleavage and the Rise of Capitalism under Authoritarianism:
A Tale of Two Provinces in China**

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Abstract: A great challenge for capitalist development under authoritarian regimes is to effectively constrain predatory behavior. Beyond existing frameworks of the dictator's time horizon and institutionalized power sharing, we introduce an alternative perspective—elite cleavage. We argue that the systematic vulnerability of marginalized local cadres motivated them to ally with grassroots constituents and protect local economic interests in order to increase the odds of political survival. Difference-in-differences analysis of counties in two Chinese provinces shows that the upheaval of the Cultural Revolution created a moment of political decentralization which enabled marginalized local elites to protect local entrepreneurs against national-level radical policies, resulting in much more vibrant private economic activities in some regions. Further empirical evidence shows that elite cleavages formed in the 1940s had a long-lasting impact on economic performance in the reform era.

This draft: 1/3/2018

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1. Introduction

Among authoritarian regimes, and even within one country at subnational levels, some authoritarian elites are predatory and stall the rise of a capitalist class, while others tend to refrain from predation and foster vibrant capitalism. A central question in the political economy of authoritarianism is: under what circumstances do authoritarian elites refrain from predatory behaviors and nurture capitalism?

The existing literature on authoritarianism advances two mechanisms that constrain autocrats' predatory behaviors. McGuire and Olson (1996) argue that “stationary bandits,” autocrats with a long-time horizon, are sufficiently motivated to refrain from predatory behaviors. Recent scholarship emphasizes the role of formal political institutions—such as legislatures, political parties, and elections—as another way to credibly tie the autocrat's hands against predatory actions, at least against small groups of elites (Magaloni 2008; Gandhi 2008). However, because of the uncertain and brutal nature of authoritarianism and the absence of independent third party to enforce contracts among key actors (Wintrobe 1998; Svobik 2012), authoritarian leaders are unlikely to be self-constrained as stationary bandits. And the credibility of authoritarian institutions to materialize the power sharing between ruling elites and make binding commitments to economic actors is open to doubt (Pepinsky 2014; Svobik 2012).

Given the limitations of “stationary bandits” and “institutional constraints” in authoritarian settings, some scholars have emphasized *de facto* checks and balance against potential predatory forces, especially the alliance between different social groups and political actors (e.g., Duvanova 2013; Haber et al. 2003; Markus 2015). However, business groups in this strand of literature are, or are assumed to be, well-organized and have the *de facto* economic power to

check against state predation. Such explanations, therefore, may not be applicable to authoritarian settings where social forces are too weak relative to the state to deter government predation (Hoff and Stiglitz 2004).

In this article we develop a novel coalition theory to explore the conditions under which a group of local political elites within a strong state would have the incentive to make an alliance with their grassroots constituents in a weak society. Under such circumstance, even if the national-level government was by and large predatory and sought to eradicate capitalist practices, some political elites still had the incentive to shield local capitalist practices from state predation. For such an alliance to emerge, a key condition was elite cleavages which excluded or marginalized some local officials from the patron-client networks formed by higher level elites. The marginalized elite had to refrain from predatory behaviors and protect local economic interests in exchange for popular support to mitigate their vulnerability to political attack. Localities with such alliances tended to preserve entrepreneurship and nurture capitalism, paving the way for long-term economic growth.

We test the observable implications of our theory by examining the spatial variations in the spread of capitalism as captured by non-state sector development in China's Zhejiang province and Jiangsu province during the Cultural Revolution (CR, 1966-1976), when capitalist economic activities were prohibited by the socialist state.¹In both provinces, the trajectories of the

¹ Both provinces are coastal and are adjacent to Shanghai and to each other. Both were taken over by the Communists in 1949 and had similar levels of non-state sector activities immediately after 1949. Both provinces had similar income levels and similar levels of private sector economic activities in the early 1950s, thus making them comparable in terms of their initial economic conditions. In 1952, private firms accounted for 57 percent of sales value in the retail

Communist revolution prior to 1949 led to a power configuration in which the local elite after 1949 was divided into two main groups. In both provinces, one group had extensive ties to the power holders at the provincial and even national level, while the other group was marginalized and relegated to lower level positions. More importantly, the marginalized group in one province happened to be dominant group in the other province, thus providing an ideal natural experiment to test our theory. We find marginalized elites were motivated to make concessions to grassroots constituents, leading to *de facto* protection of capitalist economic activities and vibrant entrepreneurship in some localities. In contrast, local political elites in counties governed by politically dominant factions depended on the satisfaction of high-level patrons and thus imposed policies in line with the latest political trends from higher levels, even predatory ones. Eventually, capitalist economic activities tended to take off and flourish in counties governed by marginalized elites during the CR, and in part because of path dependence, these counties also performed better economically than the counties dominated by entrenched elites during the reform era.

This research sheds light on the rise of capitalism under a socialist state (Oi 1999; Tsai 2007; Huang 2008; Whiting 2001) and attributes it to the alliance between a segment of the political elite and social forces which tie the grabbing hands of local agents of the authoritarian state (e.g., Duvanova 2013; Markus 2015; Haber et al. 2003). Our analysis also enriches the literature that links economic development to historical legacies (e.g., Acemoglu et al. 2001; Mahoney 2010). Moreover, while the scholarship on local accountability or elite capture in developing world focuses on social embeddedness of local elites (Oi 1999; Mattingly 2016; Tsai 2007; Xu and Yao

sector in Jiangsu and 60 percent in Zhejiang. The per capita GDP in 1952 in Zhejiang and Jiangsu were 131 Yuan and 112 Yuan, respectively. Cited from Huang (2008: 263).

2015), our study complements this strand of literature by emphasizing the power status of local elites within the regime in driving local elites' behaviors.

2. Making Local Alliance Work: Elite Cleavage and Political Survival

In an authoritarian regime where there is no credible commitment to power-sharing among the ruling elites (e.g., Svobik 2012) and elites are composed of competing factions (e.g., Nathan 1973; Shih et al, 2012), there likely exists some elites who are endowed with significantly less political resources and thus are marginalized within the regime. These marginalized elites are loosely connected to higher-level officials so that they have difficulty credibly signaling their loyalty to higher authorities and their career advancement can hardly rely on established patron-client networks. Worse still, they are vulnerable to political attack from the entrenched elites because of never-ending political competition and struggle. Because of their weak status within the regime, marginalized elites are likely to make political or economic concessions to subordinates or grassroots constituents in society to mitigate their vulnerability to political attack.² Given their limited political resources, however, marginalized elites are unable to provide a continual stream of material benefits to their supporters (Bueno de Mesquita et al. 2003). Instead, they can form a *de facto* alliance with their subordinates and grassroots supporters by committing against expropriation and protecting the latter's economic interests.

Indeed, in authoritarian contexts, politically weak or marginalized elites within the regime had the incentive to make concessions to their supporters outside the regime to advance their political interests and secure their political survival (O'Donnell and Schmitter 1986). The

² "Grassroots constituencies" include community level political or commercial elites, who may further mobilize individual members of a community. In the context of China, this term refers to officials or merchants from county level down to urban district level.

grassroots support gives certain leverage to marginalized elites. For instance, it provides marginalized elites with more room to maneuver to mitigate the risk of being purged by their political rivals. When they were under political attack, they could discourage grassroots supporters to cooperate with their rival factions, which would substantially increase the costs of politicized investigation. More importantly, political elites with popular support are more capable of mobilizing mass collective action e.g., protests, strikes, or passive resistances against state policies, which can deter outside infringement on the political ecosystem of a locality (Liu 1992; Markus 2015). By the same virtue, the capacity of mobilizing collective action constitutes a critical source of *de facto* political power, which in turn enhances the bargaining power of the marginalized in the regime and enables them to become indispensable problem solvers for certain social issues.

Compared with marginalized elites, entrenched elites from the dominant factions however, have less incentive to ally with grassroots elites and protect their economic interests, especially the non-state economic activities in a socialist state. For one thing, their political careers depend largely on loyalty to high-level patrons. Political mandates propelled them to follow the latest political signal emanating from the higher authorities, including carrying out radical policies to display their loyalty. In addition, entrenched political elites strive to maintain vested interests through “distributional coalitions” (Olson 1982). In a country of socialist economy, entrenched elites have monopolized the state sector and could deliver benefits to political allies and crucial constituents (Shleifer and Vishny 1998). Yet capitalist development could empower social groups and thus posed a great threat to their entrenched interests (Acemoglu et al. 2006).

There is a rich literature in China studies on local elites’ implicit protection of local private businesses (Tsai 2002, 2007, Oi 1999). We argue that one plausible driving force underlying such

de facto protection of economic interests could be the local alliance between marginalized elites and grassroots supporters especially during the take-off stage of Chinese capitalism. Unlike advanced capitalism underpinned by the rule of law, the protection of Chinese capitalist activities afforded by the local alliance was at best an implicit contract between the marginalized elite and their supporters, which was neither enforced by independent third-parties, nor by the threat of voting reneging marginalized elites out of office (e.g., Weimer 1997; Frye 2004). Instead it was sustained by compatible incentives between marginalized local elites and their supporters. As long as the marginalized elite's political vulnerability persisted, the marginalized elites would have little incentive to engage in predatory behaviors at the expense of their grassroots constituencies. Nor was it possible for them to simultaneously please higher authorities and their grassroots supporters because of the incompatibility between the political mandate of eradicating capitalist practices and the popular desire for better economic well-being through capitalist activities.

Notably, the viability of the alliance is also contingent on the overall political environment, which determined the extent to which marginalized elites could seize “the window of opportunity” to pursue their interests. More specifically, in a centralized state like China, when the central government imposed a clear line of top-down authority and made unambiguous policy demands on local governments, the alliance between the politically marginalized elites and their grassroots constituents remained dormant. The situation changed dramatically, however, when serious divisions within the dominant factions emerged e.g., during the Cultural Revolution (CR) between 1966-76 (MacFarquhar and Schoenhals 2006). Therefore, the CR as a political shock provided a window of opportunity for local elites to openly organize and recruit their followers and supporters to engage in power competition, raising the urgency of winning

over support from below for the marginalized elites. During the CR and into the early reform period, the latent alliance between marginalized elites and community leaders came to the surface and shielded nascent capitalism from state intrusions, thus paving the way for the non-state sector development and long-run economic growth in localities governed by marginalized elites, as detailed in subsequent sections.

3. The Emergence of Marginalized Elite: Revolution and Its Legacies

In both Jiangsu and Zhejiang provinces, the trajectories of the revolution prior to 1949 led to the emergence of disparate groups of local officials. While the dominant groups in these provinces had ties to higher level patrons at the provincial and central levels, marginalized groups, for various reasons, did not have access to such power networks. These two groups were clearly distinguishable and were represented in various degrees in sub-provincial localities, which shaped local politics in these two regions.

In Jiangsu, the local revolutionaries in the central part of the province managed to establish large base areas, which eventually became a core component of the Central China Revolutionary Base Area (hereafter the CCRBA) during the Sino-Japanese War (1937-1945). During the Civil War (1946-1949), the Third Field Army emerged out of CCRBA guerilla fighters and took over the whole province in 1949. In the post-1949 communist regime, as a result, the Jiangsu provincial standing committee (PSC)—the paramount decision making body of the province--was dominated by Jiangsu's native military elite who originally had served in the CCRBA (hereafter the CCRBA cadres). In contrast, non-CCRBA cadres constituted the minority in the

PSC throughout much of the Mao era (Jiangsu Organization Department et al. 2001).³ In fact, the share of CCRBA cadres in the Jiangsu PSC held steady at more than 70 percent in most years between 1950 and 1965, whereas the share of non-CCRBA cadres remained around 20 percent or so during this time (Jiangsu Organization Department et al. 2001).

As in Jiangsu, strong local guerrilla forces took root and flourished in Zhejiang during the Sino-Japanese War. Unlike Jiangsu, however, Zhejiang's local guerrillas mostly fought in isolation prior to 1949 such that guerrilla leaders were not absorbed into the networks formed by powerful figures in the Party. When the Chinese Civil War came to end in 1949, local guerrillas liberated one third of counties in Zhejiang by themselves. In the meantime, the field armies from northern China marched into Zhejiang in 1949 and took over some localities where local guerrillas had never taken root. Similar to Jiangsu, the post-1949 provincial power in Zhejiang was shared by two groups: the first group was the local guerrilla fighters (hereafter guerrilla cadres), while the second group was composed of the Field Army cadres and the civilian southbound cadres (*nanxia ganbu*) arriving in the wake of the CCP regular forces which took over the province in 1949 (hereafter southbound cadres). The power distribution in the new Zhejiang provincial leadership obviously tilted toward southbound cadres because of their strong ties to the Party center, while the local guerrillas were grudgingly included in lower level positions. From 1950 to 1966, southbound cadres on average held around 80 percent of the seats in the PSC, while the local guerrilla group held less than 20 percent of the seats (Zhejiang Organization Department 2006).

³ Non-CCRBA cadres included military and civilian cadres from Shandong Province and Jiangsu natives from non-CCRBA area who were sent to take over the non-CCRBA area during the Chinese Civil War.

The revolutionary legacies had shaped the post-1949 political landscapes profoundly in both provinces. In Jiangsu, CCRBA cadres and their loyalists dominated counties which hosted communist bases during the revolution, whereas non-CCRBA cadres tended to exert greater influence in counties which had not been communist strongholds. In Zhejiang, southbound cadres were able to exert a firm control over counties that were less penetrated by local guerillas before 1949, whereas guerilla cadres maintained their influence over counties where they had fought guerilla warfare as early as in the Sino-Japanese War. The counties in both provinces thus can be categorized into dominant faction counties (DFCs) and marginal faction counties (MFCs). In sum, DFCs were governed by CCRBA cadres in Jiangsu and by southbound cadres in Zhejiang, and MFCs were governed by non-CCRBA cadres in Jiangsu and by guerilla cadres in Zhejiang, as Figure 1 illustrates.

[Figure 1 about here]

More crucially, the status of DFCs or MFCs led to divergent incentives to protect capitalist activities at the county level. When the majority of county leaders were embedded in patron-client networks in the provincial government and relied heavily on higher level patrons to advance their careers, county officials in DFCs paid close attention to political signals emanating from the provincial capitals and from Beijing. They had strong incentive to display their loyalty to their patrons at the higher authorities by implementing radical economic policies desired by their patrons. In contrast, the county leadership in MFCs had only tenuous and often volatile relationships with the dominant groups at the provincial level. Thus, the marginalized groups' upward mobility was largely blocked, and very few of them were able to get promoted to higher levels after 1949. In consequence, local officials in the marginalized groups were reluctant to

undermine their own local political support base for stymieing capitalist economic activities.⁴ Instead, they had the motivation to protect the economic interests of grassroots elites and shield business activities from predatory policies mandated by higher level authorities.

Despite the divergent incentives between the dominant and the marginalized factions at the local level, the economic contrast between DFCs and MFCs was not so pronounced until the outbreak of the CR. Political atmosphere prior to the CR did not allow local officials in the MFCs to pursue economic strategies that were too deviant from the Party's official line. After all, there was a clear line of authority from the provincial level to the county and township levels, and provincial governments regularly sent work teams to inspect policy implementation at lower levels (White 1989). Furthermore, the ideological campaigns launched by the Party center before the CR provided easy excuses for the dominant factions to demonize and then purge the weak factions, which left the latter very little space to maneuver (Forster 1990: 17).

3.3 The CR as a Shock to the Dominant Factions and Its Consequences

The CR impacted political elite of different camps in different manners. Unlike the campaigns prior to the CR which primarily targeted the marginal factions, during the CR the incumbent power holders suffered an unexpectedly bitter blow. Although dominant factions never lost their dominance at the provincial level in these provinces, they became completely

⁴ Without the mass and grassroots cadres' cooperation, even the dominant faction would find it was difficult, if not entirely impossible, to purge their targets during power struggle. For example, during the Four-cleanups (*Siqing*) campaign in the early 1960s in Zhejiang province, a county's southbound leadership sent an investigation team to villages to collect evidence against guerilla cadres by charging them with embezzlement and abuse of collective public fund. These charges, if proven true, presumably would have eradicated guerilla cadres from the county's leadership. Although the local guerilla cadres were unable to overtly sabotage the investigations, they asked villagers not to cooperate with the investigation team and to collectively complain to the investigation team about the baseless nature of the accusation. After three months of investigations, the team left the village due to the lack of evidence. Interview by the authors in Wenzhou, July-August 2008.

preoccupied by attacks from radicals from Beijing and from the provincial capitals who heeded Mao's call to overthrow the provincial power structure (Forster 1990: 30; MacFarquhar and Schoenhals 2006: 316).

The dominant factions' fortune in both provinces ebbed and flowed primarily with the evolution of their power struggle and bargaining at the Party center.⁵ Even amidst fierce factional infighting at the provincial level, provincial leaders still had to implement the radical economic policies from Beijing resolutely. Their local followers had to follow the radical line set forth by the provincial authorities, else face charges of committing the error of "economism" (*jing ji zhuyi*) (Forster 1990: 27-28).⁶ Local officials in the Huzhou district of Zhejiang province, for example, showed no hesitation in prohibiting peasants from planting cash crops and from conducting businesses activities in order to implement the directives on focusing on grain production. In fact, any profit seeking activity was snuffed out due to the label of "conducting capitalism."⁷

For the marginalized cadres, the CR actually intensified the threat to their survival since they now had to contend with Red Guard and military challengers to their power, as well as the incumbent dominant factions. On the other hand, for the first time since 1949, the marginalized political forces had the ideological justification to build up their grassroots political foundations, which bestowed them an opportunity that had never existed to resort to collective action to openly "rebel" against the dominant factions (MacFarquhar and Schoenhals 2006). By resorting

⁵ For how the central politics and the intervention from the center affected the direction the CR in the two provinces, see Forster (1990) and Dong and Walder (2010).

⁶ During the CR, it was natural for political elites to resort to means including increasing wages to transfer material benefits to masses as a strategy of mobilization, as the marginalized elite did. However, such a strategy, much less allowing non-orthodox economic activities like private businesses, was labelled as "economism" and prohibited by the authority. Therefore, the selection of the strategy was endogenous to local elites' political calculations.

⁷ See Deqing County Gazetteer, p. 21. Also see Huzhou City Gazetteer, p. 529.

to mass mobilization of their grassroots constituents, local cadres in marginalized faction counties indeed amassed sufficient strength to engage in armed battles with their rivals. In Yueqing County, for example, marginalized cadres successfully defended their power by mobilizing their supporters to fight against the southbound leadership and even military units dispatched by the provincial authorities to restore order. Similar scenarios were found in other localities in Zhejiang.⁸ In other words, local cadres in MFCs survived the CR not because of the weakened state control, but because they were able to mobilize grassroots support.

Cadres of the MFCs won over grassroots support largely by turning a blind eye to underground businesses and household or collective factories, which dramatically improved the economic welfare of the ordinary people who engaged in these activities. Local officials of the MFCs in both provinces felt free to disregard existing policies and to support non-state economic activities. For instance, although Zhejiang had prohibited peasants from engaging in any form of private businesses during the CR,⁹ thousands of private businessmen in Wenzhou County regularly participated in a black market located in Lingdi Township to trade lumber and other goods. On several occasions, the authorities attempted to shut down the black market but always failed because local cadres allowed the market to open as soon as the investigation teams left. Ultimately, Lingdi Market became one of the largest black markets in Zhejiang, if not in all of China, during the CR, embodying the vigor of capitalism under the protection of local cadres.¹⁰ By the same virtue, household factories and rural markets emerged on a large scale in some MFCs, including Wenzhou, Taizhou, and Ningbo. Many local officials themselves participated in “capitalist activities” in the enterprises of their supporters. Similarly, in Jiangsu’s Su’nan area, local cadres made every effort to support the development of collective firms in defiance of the

⁸ Interview by the authors in Zhejiang province during 2008-2010.

⁹ See Zhejiang Province in Contemporary China, pp. 100-101.

¹⁰ See Zhejiang Market Gazetteer, Beijing: Fazhi Press, 2000, p. 558, p. 603.

directives from higher-levels dictating the priority of state sector development. By late 1970s, collective firms in Su'nan had become pillar industries in the local economy.

Even when provincial governments sent investigation teams to MFCs to prevent the spread of private and collective industries in these areas, local officials in MFCs openly undermined these inspections, allowing the non-state sector to flourish. A prime example was Jiangsu's implementation of the central policy of "Grain as Core Task" (*yi liang wei gang*), which demanded farmers to place grain production above all other activities. In Su'nan area, where industrial production was emphasized over grain production, the provincial authority ordered the county leadership to organize struggle meetings to denounce cadres who supported local industries. However, a large scale purge of local cadres never came to fruition in the MFCs because both cadres and residents boycotted these meetings, which were organized by the provincial work teams.¹¹ The farmers and local cadres formed a natural alliance. Similar scenarios took place in Zhejiang's suppression of local private businesses.¹²

The historical evidence from interviews and archives above suggests that the CR afforded the elite in the MFCs with the unprecedented opportunity to enhance the symbiotic relationship with their grassroots constituents and to protect local economic interests. We thus have a testable hypothesis that in both provinces, non-state sector development—the hallmark of capitalism—took off and flourished in MFCs but was highly restricted in DFCs during the CR. In the next section, we test the hypothesis using quantitative data.

4. Empirical Tests and Results

To test our hypothesis, we first present evidence suggesting that the ownership composition of industrial firms at marginalized faction counties (MFCs) experienced a

¹¹ Interview with local historians at Su'zhou by the authors, May 2010.

¹² Interview at Lingdi Village of Yueqing city, July 2010.

fundamental transformation during the CR, whereas firms in dominant faction counties (DFCs) did not. We construct a novel county level dataset which includes the share of non-state industrial output and the level of non-state industrial output per capita (logged) as dependent variables to proxy for capitalist economic activities.¹³ Due to extensive interruption in data collection during the Cultural Revolution, we are only able to collect this series before the beginning of the CR in 1965 and after the end of CR in 1978. In order to gauge the long term impact of shocks during the CR, we also examine the share of non-state industrial output in 1998. We also gauge whether the divergent power structure within these provinces exerted a long-lasting effect on the variation in intraprovincial growth patterns in the post-CR period, which is measured as the average annual GDP per capita growth rate during 1978-1998.

Our analysis also includes a set of economic variables as controls such as total industrial output, GDP, total population and so forth. The county level data for Zhejiang are derived from *New Compilation of Statistics in Zhejiang: 1949-1999* (Zhejiang Statistical Bureau 2000). The county level data of Jiangsu province come from *Fifty Years of Jiangsu Province and Fifty Years of Jiangsu Rural Economy* (Jiangsu Statistical Bureau 2000). All variables are deflated to constant 1998 prices. We also control for some geographic variables including the length of coastline along a county's border, altitude, and the proportion of flat ground in total county area. Summary statistics of the dependent variables are reported in Table 1(see control variables in Appendix Table 1A).

[Table 1 about here]

¹³ Non-state firms include both township and village enterprises (TVEs) and private enterprises. While conventional wisdom treats TVEs as collectively-owned firms, Huang (2012) convincingly argues that the vast majority of TVEs were in fact private rather than public from the very beginning.

The strength of revolutionary forces prior to 1949 is the key to identifying the political status—MFC or DFC—of a county, which constitutes the key explanatory variable. Through a detailed historical analysis in the previous section, we show that in Zhejiang province, counties with strong guerrilla forces prior to 1949 were governed by marginalized elites during post-1949 era, whereas in Jiangsu province counties without major CCRBA forces prior to 1949 tended to be governed by marginalized elites after 1949. Such a difference arose from the fact that cadres with southbound background in Zhejiang and cadres with CCRBA background in Jiangsu had been dominant at the provincial level, respectively, while their counterparts with guerrilla background in Zhejiang and those with non-CCRBA background in Jiangsu had been marginalized at the provincial-level authority. Thus, counties with stronger guerrilla forces prior to 1949 in Zhejiang and counties without CCRBA presence in Jiangsu can be identified as MFCs. Given this definition, we expect that in both provinces, after the onset of the Cultural Revolution, marginal faction counties would have had higher levels of non-state industrial development and more rapid economic growth than the dominant faction counties.

For Zhejiang Province, we use a dummy variable to code the MFCs. Based on the information collected by the authors from *The Organizational History of CCP in Zhejiang:1922—1987* as well as various county gazetteers, we coded a dummy variable that takes the value “1” if a county maintained its own independent guerrilla forces from 1945 to 1948, “0” otherwise. Through interviews, we learned that in these counties, former guerilla fighters filled the ranks of lower echelon officials, which put them in positions to carry out market-friendly policies.¹⁴

¹⁴ Interviews in Yueqing County, May 2009; interviews in Yongjia County February 2007.

In Jiangsu’s case, counties with a CCP-led government likely had strong military forces belonging to the CCRBA prior to 1949. Therefore, if a county established a CCP-led government in the CCRBA area from 1945 to 1947, we regard this county as a DFC, coded as “0”. Otherwise, counties without CCP-led government are regarded as MFCs, coded as “1” (Party History Work Office 2001).

It is worth noting that counties were unlikely to self-select into the treatment status—MFCs in our study. The formation of MFCs/DFCs in both provinces and the provincial power configurations were outcomes shaped by the Sino-Japanese War and the Chinese Civil War, which involved strategic interactions between the Kuomintang (then the ruling party), the CCP, and Japan in different periods. For instance, the decision to send troops by the Party center to certain regions was primarily based on military and strategical needs that had little to do with the local economy. Similarly, the timing of the CR was also an exogenous political shock that had to do with Mao’s growing distrust of his anointed successor Liu Shaoqi (MacFarquhar and Schoenhals 2006). Therefore, historical shocks and contingencies alleviate the concern of selection bias in our research design.

We employ a generalized DID approach to compare the effects of CR on non-state economic development between MFCs and non-MFCs. The model specification is as follows:

$$y_{it} = \alpha + \sum_{t=1978,1998} \beta_t \cdot MFC_i \cdot I_t + \sum_{t=1978,1998} \lambda_t \cdot control_i \cdot I_t + \eta_i + \theta_t + \varepsilon_{it} \quad (1)$$

where i indexes county and t indexes year; η_i is the county fixed effect; θ_t is the year fixed effect parameter; and ε_{it} is the error term. By controlling county fixed effects, we can eliminate the effects of time-invariant or slow-changing factors on the outcome variable. Given the plausibility of geographic and cultural factors in accounting for economic development, the

fixed effects model allows us to take into account these alternative hypotheses. y_{it} is our dependent variable, i.e., the share of non-state industrial output in total industrial output and the level of non-state industrial output per capita (logged); MFC_{it} denotes a dummy for MFC county, which is defined by its revolutionary experience prior to 1949; I_t is an indicator variable that is equal to 1 in the years 1978/ 1998, leaving the year 1965 (one year before the outburst of the CR) as the omitted category. The coefficient β_t of the interaction term between MFC_{it} and I_t is of our quantity of interest, which captures the effect of revolutionary legacies on the outcome variables at the year t (1978 and 1998), relative to the year 1965. It is worth noting that the constituent terms MFC_{it} and I_t are absorbed by the fixed effects and the estimated coefficients of these two variables are not our quantity of interest.

$Control_i$ includes a set of time-invariant control variables such as the length of coastline, altitude and the proportion of flat ground in total county area. While fixed effects capture the constant effects of these time-invariant characteristics, the interaction terms between these time-invariant variables $Control_i$ and year dummies I_t in the model take into account the time-varying effects these variables may exert on the outcome variables. The coefficient λ_t captures the effect of a set of time-invariant features on the outcome variables at the year t (1978/1998), relative to the year 1965.

Estimation Results

The Rise of Non-State Industry during the CR

Table 2 reports the effect of MFC status on the share of non-state industrial output in total industrial output after the CR. Columns (1)-(2) present regression results for Zhejiang province. In column (1), we see that the estimated coefficient of the interaction term between MFCs and the year 1978 dummy is 0.11 and significant at 10% level (p-value=0.077). The results suggest that the difference in the share of non-state industrial output between MFCs and

non-MFCs is 11% in 1978, relative to the difference in the year 1965. Put differently, counties governed by political elites from the marginalized faction in Zhejiang province had developed more vibrant non-state industry than non-MFCs governed by political elites from the dominant faction during the CR. In addition, the estimated coefficient of the interaction term between MFCs and the year 1998 dummy is -0.038 and insignificant, indicating that the share of non-state industry in MFCs and non-MFCs converged to a similar level during the post-1978 era, relative to their difference in the year 1965. In column (2), we control for the length of coastline (logged), altitude (logged) and the proportion of flat ground in total county area interacted with year dummies to account for the effect of these three geographical factors on the share of non-state industrial output over time. The estimated results in columns (2) remain fairly robust. Notably, the magnitude of the treatment effect becomes larger.

Turning to the Jiangsu province results, column (3) suggests that the share of non-state industrial output of MFCs is 13.4 % higher than that of DFCs in 1978, taking into account their difference in the year 1965. This result is again consistent with our theoretical prediction: counties governed by marginalized elites in Jiangsu were more likely to develop a vibrant non-state industrial sector during the CR. Similar to Zhejiang's case, the difference in the share of non-state industry between MFCs and non-MFCs became minuscule and insignificant by 1998. In columns (4), we control for a set of geographic factors and the results are quantitatively similar and remain robust. One key assumption of DID framework is "parallel change", which implies that in the absence of shock, the outcome of the treatment group would have moved in tandem with the outcome in the control group. We cannot conduct additional tests to verify this assumption directly largely because non-state industry data at the county level before 1965 are not available. However, it is worth noting that the difference between MFCs and DFCs in our

key dependent variable, i.e., the share of non-state industry output in total industry output, is small and insignificant in 1965 (p-value=0.22 for Zhejiang province and p-value=0.94 for Jiangsu province), as Table 1 illustrates. Thus, we have more confidence of the validity of the parallel change assumption. From the historical perspective, private property and capitalist production were virtually wiped out with the collectivization movement in the late 1950s. We have little reason to believe that the development of capitalist economies had diverged prior to the CR.

[Table 2 about here]

One concern of the above analysis is that the increase in the share of non-state industry simply may be driven by the decline of state industry as opposed to the development of non-state industry during the CR. To address this concern, we use the *level* of non-state industrial output per capita (logged) as the dependent variable and similar DID model specifications to estimate the effect of the CR on non-state economic activities. The results are reported on Table 3. In column (1), the estimated coefficient of the interaction term between MFC dummy and the year 1978 dummy is approximately 0.33, suggesting that the level of non-state industrial output per capita of MFCs is 33% higher than that of non-MFCs in 1978 relative to the difference in the non-state industrial output per capita (logged) in the year 1965. Moreover, the estimated coefficient of the interaction term between MFCs dummy and the year 1998 dummy is approximately 0.45. This result indicates that the level of non-state industrial output per capita of MFCs is 45% higher than that of non-MFCs in 1998 relative to the difference in the non-state industrial output per capita (logged) in the year 1965.

Taken together, the results show that the level of non-state industrial output per capita between MFCs and non-MFCs in Zhejiang diverged during the CR and continued to enlarge during the post-1978 era, although the share of non-state industry tended to converge to a high

steady state in 1998 (over 90% in this case, see Table 1) as privatization swept through Zhejiang in the 1990s. In column (2), we control for a set of geographic variables interacted with year dummies as we have used in the previous analysis. Furthermore, we also control for the non-state industrial output per capita level in 1965 interacted with year dummies to account for the changing effects of initial non-state industrial output. This strategy arguably can mitigate the concern of “parallel trend” assumption of DID model. In column (3), we use weighted regressions to give greater weight to changes in the densely populated counties. The regressions are weighted by counties’ total population in 1965. This strategy can avoid the problem that the changes in a few small counties may drive the overall results. Reassuringly, after controlling for potential confounding variables and taking into account the size of counties, the results remain fairly robust.

With respect to Jiangsu province, the results in columns (4)-(6) display striking patterns. In column (4), we see that the estimated effects of the CR shock on MFCs on non-state industrial output per capita in 1978 and in 1998 are 0.29 and 0.69 respectively. Substantially, the results suggest that the non-state industrial output per capita of MFCs was 29% higher than that of non-MFCs in 1978, relative to their difference in 1965. Not surprisingly, the difference in the level of non-state industry between MFCs and non-MFCs became larger after 1978. In 1998, the non-state industrial output per capita of MFCs is 69% greater than that of non-MFCs. Again, the results are consistent with our hypothesis. In columns (5)-(6), we take into account the effect of geographic features and population size and the results show that the magnitude of estimated effects becomes even larger.

[Table 3 about here]

To further alleviate the concern regarding “parallel trend” assumption, we conduct a “placebo” test. As mentioned previously, the data on non-state industrial output prior to 1965 is unavailable. We thus investigate the trend of total industrial output per capita between MFCs and DFCs to provide some suggestive evidence (details in Appendix Table 2A). In addition, we conduct another “placebo” test to lend credence to the identified mechanism. We use state-owned industrial output per capita as the dependent variable to estimate the effects of the CR on state-owned economy. If both the state and non-state sectors had developed in MFCs after the CR, the growth of non-state industry in MFCs could be attributed to other structural factors rather than local officials’ incentives to refrain from predation and foster non-state economy. We find that state-owned industry did decline more in MFCs than DFCs so that we have more confidence of our theory (see Appendix Table 3A).

The Rise of Non-State Sector and Long-Term Economic Performance

Given the findings that the MFCs developed a larger non-state sector and faster during the CR, we expect the early start of the private sector there to have a long-lasting effect on non-state economy development, especially if the provincial power configuration remained largely unchanged. As we have discussed above, in both Zhejiang and Jiangsu, the provincial power structure created in 1949 remained basically unchanged, despite the temporary shock to it during the CR. In fact, the old provincial leadership established before the CR regained power in the mid-1970s and continued to dominate the top provincial positions in the 1980s. Moreover, as the factional leaders of the first generation began to retire, they elevated their close protégés to top provincial positions. Officials from marginalized groups were still discriminated against at the

provincial level in the 1980s.¹⁵ Given the socialist nature of the party state and the second-class citizen status of the non-state sector relative to the state sector until now (Huang 2008), MFCs, where the local elite still had incentives to protect the non-state sector, should have experienced faster economic growth in the reform era.

To test this, we use the average annual GDP per capita growth rate during 1978-1998 as the dependent variable and regress it on the dummy variable indicating MFCs. We control for the initial level of economic development measured as GDP per capita in 1978 (logged). We also control for a set of geographic variables that have been used in the previous analysis. Table 4 reports the estimation results. Columns (1) suggest that during the reform era, MFCs grew faster than DFCs in Zhejiang province on average by 1.78 percent every year. Columns (5) indicate that DFCs grew slower than MFCs in Jiangsu province by 4.28 percent. None of the geographical variables in regressions for Zhejiang are significant, indicating that geography-related factors were not important driving forces behind the long-term growth in Zhejiang. Similarly, among the control variables in regressions for Jiangsu, only distance to Shanghai is statistically significant, indicating that being close to Shanghai is associated with more economic

¹⁵ Throughout the 1980s in Jiangsu, for example, of the 33 provincial standing committee members, 17 (around 52 percent) belonged to the CCRBA group, while another 5 were their followers who had worked closely with senior members of the CCRBA group. In Zhejiang, likewise, most senior provincial officials in the 1980s and even the 1990s were promoted from regions that had been liberated by the southbound Field Army, including Hangzhou, Huzhou, and Jiaxing.

benefits to the local economy.¹⁶

[Table 4 about here]

We also examine the effects on levels of economic development in 1998 measured by GDP per capita, total industrial output per capita and satellite luminosity (Henderson et al. 2012). The results in Table 4 suggest that MFCs in both Zhejiang and Jiangsu provinces had higher levels of economic development than DFCs, controlling for the level of economic development in 1978 and a set of geographical variables. We also use matching methods to estimate the effects on economic growth and levels of economic development and find similar results (Appendix Table 4A).

Another implication of our theory is that MFCs are likely to have more spending in public goods than DFCs because local officials in MFCs are more concerned with local economic interests. We use public goods spending per capita (including the spending on science, education, culture and health) and productive expenditure per capita (including fixed investment in public goods related projects) in 1998 as dependent variables in OLS regression. We control for the population size in 1998, levels of economic development in 1978 (to mitigate post-treatment bias) and a set of geographic variables. Table 5 reveals that the government expenditure in public goods measured by two variables at MFCs is significantly higher than that at DFCs.

¹⁶ We also control for the size of arable land in 1952 to account for the initial agricultural endowments. In addition, we consider the effect of human capital on long-run economic growth. We collected the number of presented scholars (*Jinshi*) of during Ming and Qing dynasties in both provinces. For Jiangsu province, we cannot match this data to each county. As for Zhejiang province, we add this variable in the regression and find that the key results remain unchanged. These results are available upon request.

[Table 5 about here]

5. Conclusion

We have explored the political origins of the rise of capitalism under a socialist state by showing that even when capitalist economic activities were prohibited by the state and the rule of law was weak, elite cleavage at the local level, combined with a major disruption in the command structure of the ruling regime, provided some degree of protection for private businesses. For a less developed country where the sunk costs of starting new businesses were relatively low, this form of localized protection provided sufficient assurance to entrepreneurs. In other words, as long as elites felt insecure due to their marginalized status within the regime, they had the incentive to create conditions that protected local economic interests.

Moreover, we suspect that the mechanism in this research is common in the developing world, especially where historical shocks have produced elite cleavages similar to the ones identified in this research, e.g., the local natives versus newly arrived Kuomintang (KMT) in Taiwan and northerners versus southerners in Vietnam after the communist victory. Although such type of protection may be imperfect, for a less developed country where the sunk costs of starting new businesses were relatively low, this form of localized protection provided sufficient assurance to entrepreneurs. Future work can identify the types of businesses that can flourish under such geographically bounded but effective protection provided by elite cleavage.

Localized protection provided in our theory has its boundary conditions beyond local elites' control. For one thing, the effect of localized protection is contingent on the ebbs and flows of national politics, like the Cultural Revolution and policies adopted by Beijing since the 1980s, which created space for local elites to form alliances. Such maneuvering space can be undone by

policies from higher levels in a hierarchical authoritarian regime. More important, the marginalized elites within the regime provide protection to local economic actors but exert little influence in national level policy making, which is unlikely to compel national leaders to institutionalize property rights protection (Tsai 2007). While historical contingency can propel a handful of lucky regions into affluence, that window of serendipity may close at any time by national political shocks. Thus the symbiotic relationship between local elites and businessmen is at best viewed as a spatially limited solution, rather than the perfect substitute for national-wide *de jure* property rights protection in the long run.

Figure 1: Power Configuration of Zhejiang and Jiangsu Provinces

Figure 1. 1 Zhejiang Province

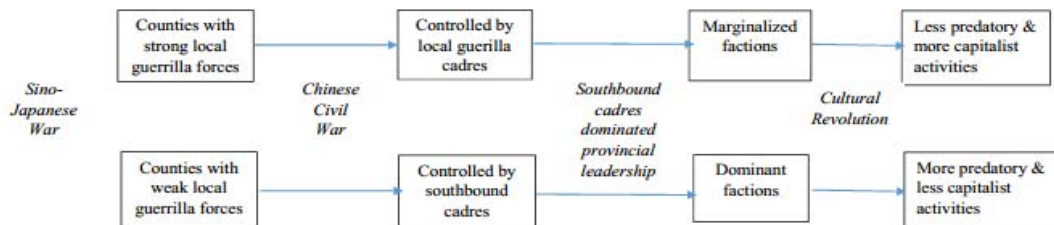


Figure 1. 2 Jiangsu Province

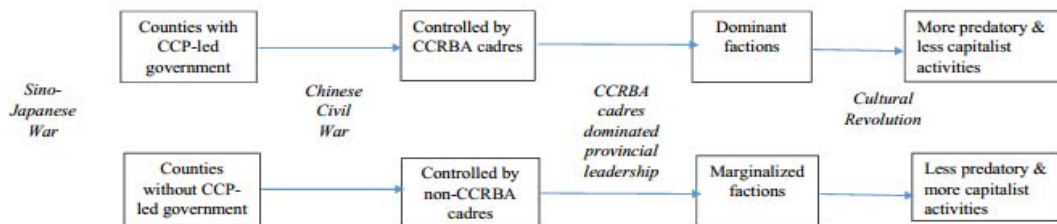


Table 1 Descriptive Statistics (Dependent Variables)

| Variables | OBS | Mean | Std dev. | MFCs | DFCs |
|---|------------|-------------|-----------------|-------------|-------------|
| Zhejiang Province | | | | | |
| Share of Non-State Industrial Output in 1965 | 52 | 0.319 | 0.173 | 0.341 | 0.280 |
| Share of Non-State Industrial Output in 1978 | 53 | 0.495 | 0.173 | 0.549 | 0.390 |
| Share of Non-State Industrial Output in 1998 | 61 | 0.946 | 0.054 | 0.950 | 0.936 |
| Non-State Industrial Output Per Capita in 1965 | 51 | 58.383 | 44.746 | 58.842 | 57.610 |
| Non-State Industrial Output Per Capita in 1978 | 52 | 299.382 | 208.081 | 312.280 | 275.020 |
| Non-State Industrial Output Per Capita in 1998 | 58 | 19668.340 | 13926.640 | 21465.990 | 16252.800 |
| Annual GDP Per Capita Growth Rate during 1978-1998(%) | 58 | 12.130 | 2.285 | 12.685 | 11.076 |
| GDP Per Capita in 1998 | 58 | 9622.397 | 4415.187 | 9913.053 | 9070.15 |
| Total Industrial Output Per Capita in 1998 | 58 | 20467.56 | 14075.26 | 22143.86 | 17282.58 |
| Luminosity(logged) | 57 | 1.453 | 0.754 | 1.466 | 1.429 |
| Public Goods Spending Per Capita | 58 | 103.408 | 52.059 | 111.627 | 87.792 |
| Productive Investment Per Capita | 58 | 25.235 | 16.022 | 27.917 | 20.139 |
| Jiangsu Province | | | | | |
| Share of Non-State Industrial Output in 1965 | 48 | 0.238 | 0.130 | 0.240 | 0.237 |
| Share of Non-State Industrial Output in 1978 | 50 | 0.507 | 0.183 | 0.592 | 0.467 |
| Share of Non-State Industrial Output in 1998 | 58 | 0.913 | 0.064 | 0.942 | 0.898 |
| Non-State Industrial Output Per Capita in 1965 | 47 | 27.802 | 25.660 | 47.294 | 18.665 |
| Non-State Industrial Output Per Capita in 1978 | 50 | 295.578 | 238.380 | 505.139 | 196.961 |

| | | | | | |
|--|----|-----------|-----------|-----------|-----------|
| Non-State Industrial Output Per Capita in 1998 | 58 | 22804.810 | 21941.030 | 46543.020 | 11240.050 |
| Annual GDP Per Capita Growth Rate during 1978-1998 | 58 | 11.574 | 2.623 | 14.391 | 10.201 |
| GDP Per Capita in 1998 | 58 | 9127.69 | 6958.333 | 16292.37 | 5637.205 |
| Total Industrial Output Per Capita in 1998 | 58 | 24371.94 | 22925.33 | 49213.1 | 12269.84 |
| Luminosity(logged) | 58 | 2.067 | 0.417 | 2.372 | 1.919 |
| Public Goods Spending Per Capita | 58 | 96.982 | 26.764 | 123.502 | 84.062 |
| Productive Investment Per Capita | 58 | 17.991 | 18.727 | 33.874 | 10.253 |

Table 2 Effects on Share of Non-State Industrial Output

| | <i>Dependent Variable: Share of Non-State Industrial Output</i> | | | |
|--------------------|---|---------|------------------|----------|
| | Zhejiang Province | | Jiangsu Province | |
| | (1) | (2) | (3) | (4) |
| MFC × 1978 | 0.110* | 0.171** | 0.134*** | 0.144*** |
| | (0.061) | (0.075) | (0.040) | (0.045) |
| MFC × 1998 | -0.038 | -0.000 | 0.049 | 0.084* |
| | (0.049) | (0.062) | (0.040) | (0.046) |
| Coastline × 1978 | | 0.003 | | -0.017* |
| | | (0.018) | | (0.010) |
| Coastline × 1998 | | -0.010 | | 0.018 |
| | | (0.016) | | (0.012) |
| Altitude × 1978 | | 0.028 | | -0.081** |
| | | (0.038) | | (0.038) |
| Altitude × 1998 | | 0.007 | | 0.042 |
| | | (0.051) | | (0.040) |
| Flat ground × 1978 | | 0.006** | | -0.000 |
| | | (0.002) | | (0.003) |

| | | | | |
|--------------------|-------|------------------|-------|------------------|
| Flat ground × 1998 | | 0.003 (0.003) | | 0.004 (0.002) |
| Observations | 166 | 166 | 156 | 156 |
| Adjusted R-squared | 0.887 | 0.896 | 0.908 | 0.921 |
| County FE | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |

Note: Robust standard errors clustered at the county level shown in parentheses.

***Significance at 1% **Significance at 5% *Significance at 10%

Table 3 Effects on Non-State Industrial Output

| | <i>Dependent Variable: Ln(Non-State Industrial Output per Capita)</i> | | | | | |
|----------------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Zhejiang Province | | | Jiangsu Province | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| MFC × 1978 | 0.327* (0.183) | 0.528** (0.198) | 0.489** (0.186) | 0.285* (0.163) | 0.636*** (0.216) | 0.639*** (0.177) |
| MFC × 1998 | 0.450** (0.219) | 0.733*** (0.196) | 0.821*** (0.194) | 0.691*** (0.177) | 1.036*** (0.208) | 1.063*** (0.194) |
| Controls Coastline | | YES | YES | | YES | YES |
| Controls Altitude | | YES | YES | | YES | YES |
| Controls Flat ground | | YES | YES | | YES | YES |
| Controls Output 1965 | | YES | YES | | YES | YES |
| Weighted by Pop 1965 | | | YES | | | YES |

| | | | | | | |
|--------------------|------|------|------|------|------|------|
| Observations | 161 | 161 | 161 | 154 | 154 | 152 |
| Adjusted R-squared | 0.97 | 0.98 | 0.98 | 0.98 | 0.98 | 0.99 |
| County FE | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES |

Note: Robust standard errors clustered at the county level shown in parentheses. The regressions in column (3) and (6) are weighted by counties' total population in 1965

***Significance at 1% **Significance at 5% *Significance at 10%

Table 4 Effects on Long-run Economic Development

| | GDP per capita growth | Ln(GDP per capita) | Ln(Ind per capita) | Ln (luminosity) | GDP per capita growth | Ln(GDP per capita) | Ln(Ind per capita) | Ln (luminosity) |
|-----------------------|-----------------------|---------------------|---------------------|----------------------|-----------------------|---------------------|---------------------|--------------------|
| | Zhejiang Province | | | | Jiangsu Province | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| MFC | 1.749*** (0.486) | 0.313*** (0.087) | 0.393** (0.175) | 0.456*** (0.160) | 4.278*** (0.675) | 0.767*** (0.121) | 0.748*** (0.179) | 0.375** (0.172) |
| Ln (GDP per capita78) | -0.619 (0.794) | 0.890*** (0.142) | | 0.438** (0.194) | 0.574 (0.839) | 1.091*** (0.151) | | 0.541** (0.230) |
| Ln(Ind per capita78) | | | 0.593*** (0.163) | | | | 0.978*** (0.123) | |
| Ln(pop78) | 1.683*** (0.437) | 0.299*** (0.078) | 0.571*** (0.136) | 0.830*** (0.140) | 0.065 (0.770) | 0.008 (0.138) | -0.153 (0.144) | 0.173 (0.165) |
| Ln(altitude) | -0.987* (0.533) | -0.175* (0.095) | -0.107 (0.173) | -0.504*** (0.127) | -0.957** (0.404) | -0.172** (0.072) | 0.030 (0.107) | -0.141 (0.100) |
| Ln(coastline) | 0.019 (0.135) | 0.004 (0.024) | -0.006 (0.045) | 0.065** (0.029) | 0.088 (0.137) | 0.017 (0.024) | 0.045 (0.039) | -0.061* (0.031) |
| | -0.013 | -0.002 | 0.008 | 0.004 | -0.023 | -0.004 | -0.002 | -0.002 |

| | | | | | | | | |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Flat ground | (0.032) | (0.006) | (0.011) | (0.008) | (0.024) | (0.004) | (0.008) | (0.007) |
| Observations | 58 | 58 | 58 | 57 | 58 | 58 | 58 | 58 |
| Adjusted R-squared | 0.476 | 0.683 | 0.601 | 0.823 | 0.644 | 0.823 | 0.780 | 0.388 |

Note: Robust standard errors shown in parentheses. The average annual GDP per capita growth rate is measured from 1978 to 1998. The levels of GDP per capita, industrial output per capita, and luminosity are measured in 1998.

***Significance at 1% **Significance at 5% *Significance at 10%

Table 5 Effects on Public Spending in 1998

| | Panel A: Zhejiang Province | | | |
|-----------------------|----------------------------|---------------------|----------------------------|---------------------|
| | Ln(public goods spending) | | Ln(productive expenditure) | |
| | (1) | (2) | (3) | (4) |
| MFC | 0.193** (0.091) | 0.280*** (0.102) | 0.364** (0.175) | 0.218 (0.142) |
| Ln (GDP per capita78) | | 0.451*** (0.144) | | -0.128 (0.270) |
| Ln(pop98) | | -0.358** (0.135) | | -0.376** (0.173) |
| Ln(altitude) | | 0.214* (0.114) | | 0.245 (0.198) |
| Ln(coastline) | | 0.074*** (0.021) | | 0.190*** (0.048) |
| Flat ground | | 0.010 (0.007) | | 0.007 (0.012) |
| Observations | 58 | 58 | 58 | 58 |
| Adjusted R-squared | 0.046 | 0.339 | 0.059 | 0.353 |
| | Panel B: Jiangsu Province | | | |
| | Ln(public goods spending) | | Ln(productive expenditure) | |
| | (5) | (6) | (7) | (8) |

| | | | | |
|--------------------------|---------------------|---------------------|---------------------|---------------------|
| MFC | 0.391*** (0.053) | 0.342*** (0.076) | 1.171*** (0.190) | 0.737*** (0.238) |
| Ln (GDP per capita78) | | 0.178* (0.104) | | 0.721** (0.337) |
| Ln(Pop98) | | -0.070 (0.064) | | -0.261 (0.235) |
| Ln(altitude) | | -0.089* (0.046) | | 0.092 (0.098) |
| Ln(coastline) | | -0.009 (0.015) | | -0.035 (0.041) |
| Flat ground | | -0.001 (0.003) | | -0.005 (0.007) |
| Observations | 58 | 58 | 58 | 58 |
| Adjusted R-squared | 0.458 | 0.559 | 0.422 | 0.481 |

Note: Robust standard errors shown in parentheses.

***Significance at 1% **Significance at 5% *Significance at 10%

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