

# The Fiscal Foundation of Bureaucratic Power Sharing in late Qing China

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# Motivation

- ▶ How did fiscal resources affect the de facto political power of subnational leaders in late imperial China?
  - ▶ The enforcement of rules and the allocation of authority are contingent on various factors (Bolton and Dewatripont, 2013) and change over time (Li, Matouschek, and Powell, 2017).
  - ▶ How do changes in the control over incomes affect authorities within an organization?
  - ▶ Wars against external enemies strengthen the state (e.g., Tilly 1985, Besley and Persson 2010, Dincecco and Prado 2012), while civil wars weaken the state (Besley and Persson 2010). However, increased state capacity did not lead to a stronger state in late imperial China (Bai, Jia, and Yang, 2023).
  - ▶ How did the allocation of fiscal incomes lead to a weakened state?

## What I have done

- ▶ Create a database for the resumes of bureaucrats who became a Lieutenant Governor between 1869 and 1908 based on Wei (1977), Qian (1980), and multiple original records compiled by Qin (1997) or scanned by Academia Sinica.
- ▶ Digitize *Likin* incomes and expenditures data from Luo (1935).
- ▶ Use a two-way fixed effects model with province and year fixed effects.
- ▶ Find that higher *Likin* incomes were correlated with higher chances of promotion and lower promotions of subnational leaders in the following year.
- ▶ Use instrumental variables to show that the relationship between *Likin* incomes and political turnovers was causal.
- ▶ The relationship was not driven by the contribution and loyalty to the central government, but by private connections between subnational leaders.

# Contribution to the literature

- ▶ Authority within organizations
  - ▶ De facto authority changes over time, depending on the values of members to the organization (Pfeffer and Salancik, 1978), and cannot be arranged ex ante (Bolton and Dewatripont, 2013).
  - ▶ We use publicly available imperial records in history to show how the control over income affects the allocation of authority within an organization.
- ▶ Political power-sharing
  - ▶ Not only de jure political institutions but also de facto political power affect economic outcomes (Acemoglu and Robinson, 2008). The distribution of political power affects the impacts of fiscal incomes on state administrative capacity (Bai, Jia and Yang, 2023).
  - ▶ We discuss how fiscal income sources affect de facto power distribution in a bottom-up way. This paper adds to the understanding of why civil wars weakened the state, even when fiscal capacity increases.

## Theoretical framework

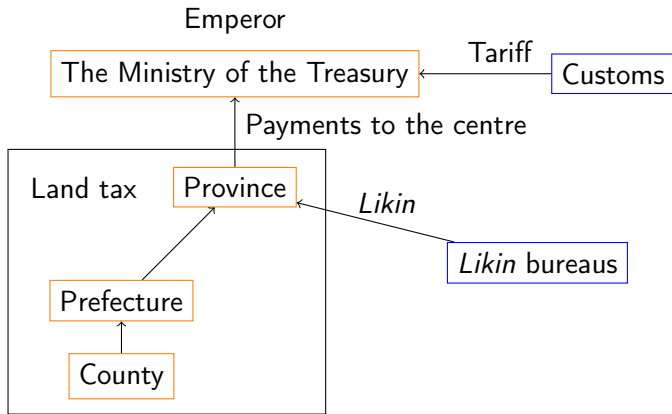
- ▶ We adopt a theoretical framework similar to that illustrated in Li, Matouschek and Powell (2017).
- ▶ In an infinite period principal-agent setting, the principal allocates an agent to the local government to conduct projects that yield a payoff to the principal. The agent also realizes its private payoff which is not perfectly aligned with that of the principal's.
- ▶ The principal decides the allocation of power between it and the agent and they work together to figure out what projects to conduct.
- ▶ Trade-off: Future misuse of possible larger power and present misuse of power
- ▶ If the bureaucrat has the ability to provide high payoffs to the central government, he or she receives power within the bureaucracy system as a reward.
- ▶ In contrast, the bureaucrat loses power if he or she does not provide high payoffs to the central government.

1. Introduction
2. Background and Data
3. Estimation Results
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## Likin, a domestic commodity tax

- ▶ During the Taiping Rebellion which started in 1850 and lasted 14 years, the imperial government found it impossible to collect enough fiscal income from traditional land taxes or sales of honorary titles.
- ▶ Generals began to collect *likin*, a new commodity tax, to support the armies since 1853. After the wars ended, *likin* was regulated but remained an important fiscal income source for provincial governments.
- ▶ Provincial governments were to report to the Ministry of the Treasury twice every year about *likin* incomes and pay to the ministry when the central government needed.
- ▶ Likin incomes amounted to about 15 million silver taels each year on average in the 1880s and 1890s (Luo, 1936) while the total fiscal income per year of the Qing Empire was about 80 million silver taels.

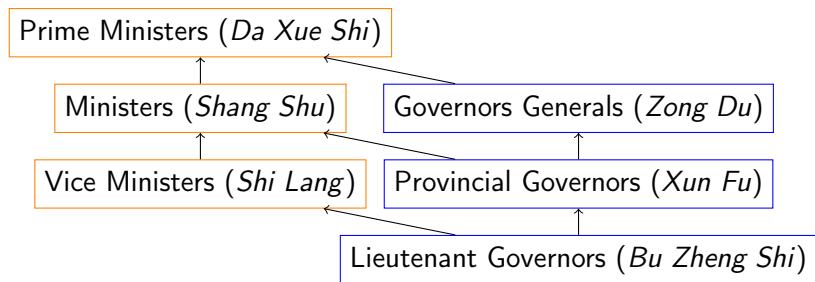
## Control over fiscal incomes



- ▶ *Likin* was collected by bureaux set up by subnational leaders who directly controlled the personnel of *likin* bureaux.
- ▶ There was an established system of land tax quotas in the Qing Dynasty.
- ▶ The customs were directed by Sir Robert Hart and paid the tariff directly to the Ministry of the Treasury.



## Promotion of high-rank bureaucrats



- ▶ The main bureaucrats in provincial governments included Provincial Governors and Lieutenant Governors in charge of fiscal issues.
- ▶ Governors General led 2 to 3 provinces.
- ▶ We define promotion and demotion according to the positions of bureaucrats and disregard honorary titles.

## Data

- ▶ The political turnovers of Provincial Governors (*Xun Fu*) and Lieutenant Governors (*Bu Zheng Shi*) in late Qing China between 1869 and 1909.
- ▶ *Likin* incomes and expenditures at the provincial level from Luo (1936) between 1869 and 1908.
- ▶ Bureaucrat Characteristics and Province time-varying controls
  - ▶ Ethnicities (bannermen or not)
  - ▶ *Jinshi* (passed the highest level of the imperial exam), Elite *jinshi* (*Shu ji shi*)
  - ▶ The number of years in the current position
  - ▶ Belonging to the factions of important prime ministers (Zeng Guofan, Zuo Zongtang, and Li Hongzhang)
  - ▶ Experiences of wars against rebellions and uprisings, experiences in the central decision-making bureau (*Jun ji chu*), experiences in the diplomatic department (*Zong li ya men*)
  - ▶ Having uprisings in province  $i$  in year  $t$ .

# Testable Hypotheses

1. Increasing income leads to promotion and avoids demotion
  - ▶ *likin* incomes  $\uparrow \Rightarrow \text{Pr}(\text{Promotion}) \uparrow \text{Pr}(\text{Demotion}) \downarrow$
2. Promotion was used to encourage contribution/ prevent rebellion.
  - ▶ If promotion was used to encourage contribution (prevent rebellion), then loyalty (potential disloyalty) to the Emperor would increase the impacts of *likin* incomes
3. After *likin* was introduced, subnational leaders had the discretion of following the orders from the central government or not.
  - ▶ If promotion was used to encourage contribution (prevent rebellion), then loyalty (potential disloyalty) to the Emperor would increase the impacts of *likin* incomes

## Empirical strategies

$$\mathbb{1}(Promotion_{i,j,k,t+1}) = \beta_0 + \beta_1 \times \ln(Likin_{i,t}) + x'_{i,k,t}\gamma + \delta_i + \eta_t + \varepsilon_{i,j,t} \quad (1)$$

- ▶  $\mathbb{1}(Promotion_{i,j,k,t+1})$  is the dummy variable that is 1 if individual  $k$  in the position  $k$  in province  $i$  was promoted in year  $t+1$ .
- ▶  $\ln(Likin_{i,t})$  is the natural logarithm of the *likin* incomes in province  $i$  in year  $t$ .
- ▶  $x'_{i,k,t}$  are controls including the personal characteristics of bureaucrats and time-varying controls of provinces.
- ▶  $\delta_i$  includes province fixed effects and  $\eta_t$  includes year fixed effects. I cluster the standard errors at the province level in the baseline estimation.

# Empirical strategies

- ▶ Instruments
  - ▶  $\ln(\text{overseas trade}) \times \text{population}$
  - ▶  $\ln(\text{overseas trade}) \times \text{population} \times \mathbb{1}(\text{Port}_i)$
- ▶ Intuition: Commodity taxes were affected by commercial activities, depending on business cycles and population.
- ▶ Exogeneity assumption: Total trade of China with the rest of the world was not affected by factors that affected the promotion of subnational bureaucrats.
- ▶ Exclusion restriction: The changes in trade did not affect the promotion of bureaucrats via channels other than *Likin* incomes.

# Summary Statistics

Table 1 Summary Statistics

	Variable	Obs	Mean	SD	Min	Max
(1)	1(Promotion)	1080	0.118	0.322	0	1
(2)	1(Demotion)	1080	0.0934	0.291	0	1
(3)	1(Banner)	1080	0.226	0.418	0	1
(4)	1(Jinshi)	1080	0.494	0.500	0	1
(5)	Tenure	1080	2.400	1.713	1	11
(6)	ln( <i>Likin</i> )	560	13.359	1.228	10.51729	15.17111
(7)	1(Faction Zeng)	1080	0.152	0.359	0	1
(8)	1(Faction Zuo)	1080	0.047	0.212	0	1
(9)	1(Faction Li)	1080	0.014	0.117	0	1
(10)	1(Local conflict)	560	0.039	0.194	0	1

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# Baseline Results

Table 2 Baseline estimation results

	(1)	(2)	(3)	(4)
	1(Promotion)		1(Demotion)	
ln(Likin)	0.125*** (0.0412)	0.123** (0.0460)	-0.0534*** (0.0156)	-0.0617** (0.0217)
Observations	1,080	1,080	1,080	1,080
Province & Year FEs	Yes	Yes	Yes	Yes
Bureaucrat Characteristics	No	Yes	No	Yes
Standardized B	0.476	0.470	-0.204	-0.236



## 2SLS Estimation Results

Table 3 2SLS estimation results

	(1)	(2)	(3)	(4)
	1(Promotion)		1(Demotion)	
Panel A: 2SLS estimation				
ln(Likin)	0.337*** (0.0903)	0.349*** (0.103)	-0.194* (0.106)	-0.166* (0.0923)
Panel B: First Stage Results				
ln(Trade) X Pop	0.644** (0.250)	0.640** (0.244)	0.644** (0.250)	0.640** (0.244)
ln(Trade) X Pop X 1(Port)	-0.0825** (0.0342)	-0.0726** (0.0312)	-0.0825** (0.0342)	-0.0726** (0.0312)
Observations	1,080	1,080	1,080	1,080
KP F Statistics	20.28	16.21	20.28	16.21
Hansen p value	0.312	0.479	0.566	0.530
Province & Year FEs	Yes	Yes	Yes	Yes
Bureaucrat Characteristics	No	Yes	No	Yes

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# Mechanisms

- ▶ Potential threats but not loyalty to the Emperor increased the impacts of *Likin* incomes.
  - ▶ Connections to important Han prime ministers increased the impacts of *likin* on promotion.
  - ▶ *Likin* incomes spent on central purposes unrelated with promotion or demotion in the future.
- ▶ *Likin* incomes affected the chances of promotion to connected areas.
  - ▶ Higher *Likin* incomes increased the chances of being promoted to the provinces led by the same Governor-General.
- ▶ The introduction of *likin* gave subnational leaders discretions to ignore the orders of the central government.
  - ▶ Transfers to other provinces were decided by the central government before 1850 (Zhou, 2000) but depended on personal connections of subnational leaders after the rebellion.

## Mechanism 1: Prevention of Rebellions

- ▶ In the Qing Dynasty, Bannermen were perceived as more loyal (Xi, 2019) to the Emperor than the Han Chinese.
- ▶ Many officials rose to high positions during the Taiping Rebellion by working for Zeng Guofan, a Han prime minister, or leading local armies recruited from Han Chinese.
- ▶ High-rank bureaucrats that possessed the title of *Jinshi* were more likely to be loyal than other bureaucrats who usually relied on war experiences.
- ▶ The impacts of *likin* incomes could be due to the selection of loyal officials or avoiding rebellions.
- ▶ Contribution to the central government did not help promotion or avoid demotion.
- ▶ The central government rewarded bureaucrats with higher *likin* incomes to avoid rebellions.

# Loyalty vs Threat

Table 4.1 How loyalty affects the impacts of *likin* incomes

	(1)	(2)	(3)	(4)
	1(Promotion)			
Panel A: Full Sample				
ln(Likin)	0.104* (0.0513)	0.115** (0.0483)	0.116** (0.0451)	0.116** (0.0498)
Interaction	0.0273* (0.0153)	0.0376 (0.0220)	0.0287 (0.0196)	0.0112 (0.0141)
Observations	1,080	1,080	1,080	1,080
Panel B: Before Sino-Japanese War				
ln(Likin)	0.175*** (0.0381)	0.182*** (0.0370)	0.181*** (0.0464)	0.197*** (0.0427)
Interaction	0.0298* (0.0138)	0.0446* (0.0212)	0.0398* (0.0190)	0.000155 (0.0172)
Observations	713	713	713	713
Interactive Term	Han	Faction of Zeng	Participation in wars	<i>Jinshi</i>
Province & Year FEs	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

## Contribution to the Emperor

Table 4.2 The impacts of *likin* expenditures on the central government

	(1)	(2)	(3)	(4)
	1(Promotion)		1(Demotion)	
ln(Central Exp)	0.0006 (0.0039)		-0.0001 (0.0046)	
ln(Transfers)		0.0023 (0.0023)		-0.0003 (0.0018)
Observations	722	1,080	722	1,080
Within R2	0.0104	0.0127	0.0309	0.0222
Province & Year FEs	Yes	Yes	Yes	Yes
Bureaucrat Characteristics	Yes	Yes	Yes	Yes

## Mechanism 2: Destinations of Promotion

- ▶ A Governor General led 2 to 3 neighbouring provinces.
- ▶ Separate promotion into promotion within the jurisdiction of the same Governor-General and promotion to positions outside.
- ▶ Multinomial Logit
  1. No Promotion
  2. Promotion within the jurisdiction of the same Governor-General
  3. Promotion to positions outside the jurisdiction of the same Governor-General
- ▶ Provincial Governors could only become the Governor General to stay in connected provinces: Lieutenant Governors and Full Sample.

# Destinations of Promotion

Table 5 The destinations of promotion

	(1)	(2)	(3)	(4)
	1(Promotion)			
	1(Lieutenant Governors)		1(Full Sample)	
Destination	Within	Outside	Within	Outside
ln(Likin)	1.495** (0.764)	0.813 (0.664)	1.424** (0.598)	1.151 (0.776)
Observations	600	600	1,080	1,080
Province & Year FEs	Yes	Yes	Yes	Yes
Bureaucrat Characteristics	Yes	Yes	Yes	Yes



## Mechanism 3: Ignorance of the imperial orders

- ▶ Before 1850, the Ministry of the Treasury decided transfers between provinces based on land tax quota and collection status (Zhou, 2000).
- ▶ The *likin* incomes were never controlled by the Ministry of the Treasury.
- ▶ Transfers depended on the private connections between subnational leaders, but not imperial orders.
- ▶ Similar in different cases: Postponing the imperial exam, Declaration of Independence in 1911.

# Transfers between Provinces

Table 6 The impacts of private connections on *likin* transfers

	(1)	(2)	(3)	(4)	(5)
	ln(Transfer from Province B to A)				
A's Governor-General worked in B before	0.153* (0.0841)				0.153* (0.0841)
A's Provincial Governor worked in B before		0.0752 (0.0587)			0.0761 (0.0590)
B's Governor General worked in A before			-0.0491 (0.0306)		-0.0545* (0.0314)
B's Provincial Governor worked in A before				-0.0164 (0.0586)	-0.0227 (0.0603)
1(Uprising in A)					0.0895 (0.0734)
Observations	12,880	12,880	12,880	12,880	12,880
Province Dyad FEs	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes

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## Conclusions

- ▶ Increases in *likin*, a tax controlled by subnational leaders, increased the probability of being promoted and lowered the chances of being demoted in the next year.
- ▶ The relationship was driven by the concession of the Emperor to subnational leaders that could pose threats to the Emperor.
- ▶ The introduction of new taxes increased fiscal capacity but lowered the control of the central government on subnational leaders.
- ▶ Policy implications: a tax-sharing reform like what PRC did in 1994 might be the key to change the equilibrium.