

Coalitions, Retaliation, and Whistleblowing: Evidence from Memorials of Qing China

Meng Miao (RUC) Thomas Noe (Oxford) Xiao Yan (UIBE)

May 21, 2025

Motivation: Failure of Formal Institutions

- Frequent Cases of Financial Fraud and Expropriation (Simon et al., 2000; Parsons et al., 2018)
 - External monitoring is difficult...
 - Example: Enron, WorldCom, General Electric scandal
- Whistleblowing as key mechanism
 - Whistleblowers are critical for curbing illegal activities, especially in the absence of external oversight or access to internal information (Olken, 2007; Pan and Chen, 2018; Chassang and Gérard, 2019)
 - Whistleblowers can expose activities such as corruption, mafia infiltration, and financial fraud (Jonas Heese et al., 2022; Choo et al., 2019)

Motivation: Failure of Formal Institutions

- Frequent Cases of Financial Fraud and Expropriation (Simon et al., 2000; Parsons et al., 2018)
 - External monitoring is difficult...
 - Example: Enron, WorldCom, General Electric scandal
- Whistleblowing as key mechanism
 - Whistleblowers are critical for curbing illegal activities, especially in the absence of external oversight or access to internal information (Olken, 2007; Pan and Chen, 2018; Chassang and Gérard, 2019)
 - Whistleblowers can expose activities such as corruption, mafia infiltration, and financial fraud (Jonas Heese et al., 2022; Choo et al., 2019)

Motivation: Challenge

- The Question: Is the Whistleblowing System Truly Effective, or What Prevents It from Being So?
 - Most studies focus on the role of external incentives.
 - Dyck et al. (2010): Financial rewards help explain employee whistleblowing behavior but have limited effects.
 - Joana (2019): Designed a system where company consumers act as tax auditors, leading to increased corporate tax reporting.
 - Limited understanding of whistleblowers' main concern: Retaliation.
- Main challenge: confidentiality and availability of data.
- A Paradox: Confidentiality enables whistleblowing but obstructs its study.

Motivation: Challenge

- The Question: Is the Whistleblowing System Truly Effective, or What Prevents It from Being So?
 - Most studies focus on the role of external incentives.
 - Dyck et al. (2010): Financial rewards help explain employee whistleblowing behavior but have limited effects.
 - Joana (2019): Designed a system where company consumers act as tax auditors, leading to increased corporate tax reporting.
 - Limited understanding of whistleblowers' main concern: Retaliation.
- Main challenge: confidentiality and availability of data.
- A Paradox: Confidentiality enables whistleblowing but obstructs its study.

Motivation: Challenge

- The Question: Is the Whistleblowing System Truly Effective, or What Prevents It from Being So?
 - Most studies focus on the role of external incentives.
 - Dyck et al. (2010): Financial rewards help explain employee whistleblowing behavior but have limited effects.
 - Joana (2019): Designed a system where company consumers act as tax auditors, leading to increased corporate tax reporting.
 - Limited understanding of whistleblowers' main concern: Retaliation.
- Main challenge: confidentiality and availability of data.
- A Paradox: Confidentiality enables whistleblowing but obstructs its study.

Institutional Setting

- A unique setting: Confidential Memorials in Qing Empire (ended in 1912)
- Ministers' direct private communication with the emperor; 1v1. No third party could access or open the memorials.



- Widely use and rich information: Military, Agriculture, Finance, etc.
- Since 1720s until the end of Qing

Institutional Setting

- A unique setting: Confidential Memorials in Qing Empire (ended in 1912)
- Ministers' direct private communication with the emperor; 1v1. No third party could access or open the memorials.

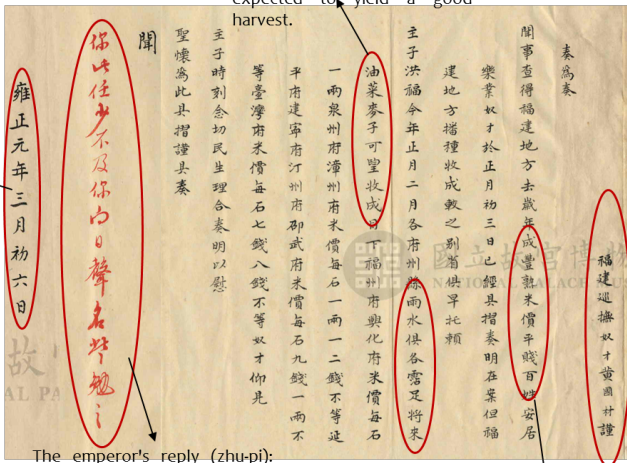


- Widely use and rich information: Military, Agriculture, Finance, etc.
- Since 1720s until the end of Qing

Institutional Setting-fold example

Content: With adequate rainfall, the rape and wheat crops are expected to yield a good harvest.

Date: March 6th, 1723



Reporter: Governors in Fujian Province, Huang Guocai

The emperor's reply (zhu-pi):
You should report more often like this in the future

Content: Stable food prices

Institutional Setting

- Around 200 000 folds stored in the First Historical Archives of China, Beijing
- A substantial portion of these memorials are routine communications
- Focus on: Natural Disaster Reporting
 - The availability of accurate information about the true state of the locality
 - Smallholder Economy:
 - The emperor paid close attention to detailed reports of agricultural conditions and natural disasters in local areas.
 - Local official's obligation to provide detailed reports on agriculture, particularly regarding crop yields, pest infestations, and adverse weather conditions.

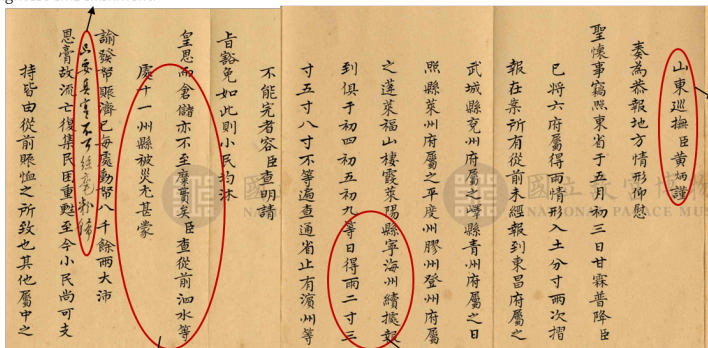
Institutional Setting

- Around 200 000 folds stored in the First Historical Archives of China, Beijing
- A substantial portion of these memorials are routine communications
- Focus on: Natural Disaster Reporting
 - The availability of accurate information about the true state of the locality
 - Smallholder Economy:
 - The emperor paid close attention to detailed reports of agricultural conditions and natural disasters in local areas.
 - Local official's obligation to provide detailed reports on agriculture, particularly regarding crop yields, pest infestations, and adverse weather conditions.

Institutional Setting - fold example 2

• Prediction and relief of agricultural disasters

The emperor's reply: As long as it is truthful, there must not be the slightest embellishment.



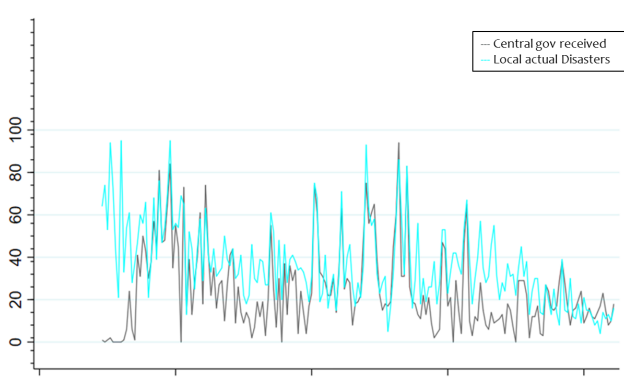
Reporter: Governors in Shandong Province, Huang Binjin

Content: Eleven places, including Sishui, were severely affected by the flood

Content: Rainfall depth across different regions

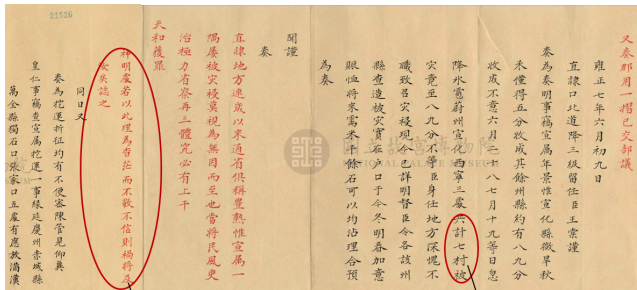
Institutional Setting

- The central government seeks to know vs. local governments conceal
- 54.7% of disasters were concealed
- The Emperor discovered locusts within the Forbidden City, yet ministers insisted that there were no locust plagues.



Intuition: What prevents whistleblowing?

- Imperial Perception: Negative (incompetent or bad news messenger?)
 - Officials' Evaluations Tied Directly to the Emperor



The emperor's reply: Other regions under governance experience no disasters, but the area under your administration suffers—this reflects a lack of reverence for the divine.

Content: Seven villages, including Weizhou, Xuanhua, and Xining, have been affected by the disaster

Colleague Retaliation

Intuition: What prevents whistleblowing?

- Imperial Perception: Negative (incompetent or bad news messenger?)
 - Officials' Evaluations Tied Directly to the Emperor
- Colleague Retaliation
 - Example: The Cao Xibao vs. He Shen's retainer - Cao was demoted.
- Stable Informational Coalition
 - governors-general(tsung-tu), governors(hsun-fu), Provincial Administration Commissioner(pu-cheng-shi)
 - Not all provinces have all three positions. - Covering 80% of reports sent to the emperor

Intuition: What prevents whistleblowing?

- Imperial Perception: Negative (incompetent or bad news messenger?)
 - Officials' Evaluations Tied Directly to the Emperor
- Colleague Retaliation
 - Example: The Cao Xibao vs. He Shen's retainer - Cao was demoted.
- Stable Informational Coalition
 - governors-general(tsung-tu), governors(hsun-fu), Provincial Administration Commissioner(pu-cheng-shi)
 - Not all provinces have all three positions. - Covering 80% of reports sent to the emperor

Model

- This is a multi-period model, where in each period two officials are randomly paired, and they will not work together again in future periods.
- - If both officials send a signal, they each receive a payoff of d . - If only one sends a signal while the other does not, the signaling official receives b , and the other receives 0 . - If neither sends a signal, and the supervisor (or inspector) detects the disaster, they each receive u ; otherwise, the payoff is 0 .
- In the single-period model, when the probability of detection by the supervisor is low, a concealment equilibrium exists. - In the multi-period model, the likelihood of the concealment equilibrium increases.

Model prediction

- Cover up more likely in first year of than the second year of officials' overlapping tenure
- Cover up more likely when disasters are more likely
- Cover up more likely when the probability that whistleblower private correspondence is revealed
- Cover up less likely when the probability of exogenous separation is higher
- Cover up less likely when the net benefit of whistleblowing is larger, net benefit equals career rewards from exposing corruption less retaliation costs

Model prediction

- Cover up more likely in first year of than the second year of officials' overlapping tenure
- Cover up more likely when disasters are more likely
- Cover up more likely when the probability that whistleblower private correspondence is revealed
- Cover up less likely when the probability of exogenous separation is higher
- Cover up less likely when the net benefit of whistleblowing is larger, net benefit equals career rewards from exposing corruption less retaliation costs

Model prediction

- Cover up more likely in first year of than the second year of officials' overlapping tenure
- Cover up more likely when disasters are more likely
- Cover up more likely when the probability that whistleblower private correspondence is revealed
- Cover up less likely when the probability of exogenous separation is higher
- Cover up less likely when the net benefit of whistleblowing is larger, net benefit equals career rewards from exposing corruption less retaliation costs

Model prediction

- Cover up more likely in first year of than the second year of officials' overlapping tenure
- Cover up more likely when disasters are more likely
- Cover up more likely when the probability that whistleblower private correspondence is revealed
- Cover up less likely when the probability of exogenous separation is higher
- Cover up less likely when the net benefit of whistleblowing is larger, net benefit equals career rewards from exposing corruption less retaliation costs

Model prediction

- Cover up more likely in first year of than the second year of officials' overlapping tenure
- Cover up more likely when disasters are more likely
- Cover up more likely when the probability that whistleblower private correspondence is revealed
- Cover up less likely when the probability of exogenous separation is higher
- Cover up less likely when the net benefit of whistleblowing is larger, net benefit equals career rewards from exposing corruption less retaliation costs

Data

- 8,035 disaster-related secret memorials written by local officials to the emperor - from the First Historical Archives of China. - "hail," "insects," "earthquake," "wind," "drought," "fire," "flood," and "epidemic ." - titles, full texts, authorship, and dates.
- Match these records with reliable local disaster data from county and prefectural chronicles
- County features: population, area, terrain ruggedness
- Official features: their positions during their political careers, the timing of their imperial examinations, and their exam results.

Data

- 8,035 disaster-related secret memorials written by local officials to the emperor - from the First Historical Archives of China. - "hail," "insects," "earthquake," "wind," "drought," "fire," "flood," and "epidemic ." - titles, full texts, authorship, and dates.
- Match these records with reliable local disaster data from county and prefectural chronicles
- County features: population, area, terrain ruggedness
- Official features: their positions during their political careers, the timing of their imperial examinations, and their exam results.

Data

- 8,035 disaster-related secret memorials written by local officials to the emperor - from the First Historical Archives of China. - "hail," "insects," "earthquake," "wind," "drought," "fire," "flood," and "epidemic ." - titles, full texts, authorship, and dates.
- Match these records with reliable local disaster data from county and prefectural chronicles
- County features: population, area, terrain ruggedness
- Official features: their positions during their political careers, the timing of their imperial examinations, and their exam results.

Empirical specification

- Cover up more likely in first year of than the second year of officials' overlapping tenure

$$[Cover_up]_{ipt} = \alpha + \beta[YearstoRotation]_{pt} + X_i + G_{pt} + \theta_i + \mu_t + \epsilon_{ipt}$$

- $[Cover_up]_{ipt}$ denotes whether there was concealment of disaster information by senior officials in province p for county i in year t .
- $[YearstoRotation]_{pt}$ refers to the time distance to the next assessment for members of the information alliance of senior officials in province p during year t , expressed in years.

Empirical specification

- Cover up more likely in first year of than the second year of officials' overlapping tenure

$$[Cover_up]_{ipt} = \alpha + \beta[YearstoRotation]_{pt} + X_i + G_{pt} + \theta_i + \mu_t + \epsilon_{ipt}$$

- $[Cover_up]_{ipt}$ denotes whether there was concealment of disaster information by senior officials in province p for county i in year t .
- $[YearstoRotation]_{pt}$ refers to the time distance to the next assessment for members of the information alliance of senior officials in province p during year t , expressed in years.

Finding

Table: Cover up more likely in 1st year than 2nd year

Variable	Base	Remove dem- oted officials	Remove Big Events	Control Local disaster count
Years to rotation	0.025** (0.013)	0.026** (0.013)	0.024* (0.013)	0.190*** (0.071)
Observations	6689	6599	6644	6689
county FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
#. clusters	749	746	748	749
Adj. R-squared	0.397	0.400	0.398	0.528

Finding

Table: Cover up more likely when disasters are more likely

Measured period	[-100,-1]	[-50,-1]	[-30,-1]	[-5,-1]	[-3,-1]
Disaster frequencies	0.0003** (0.000)	0.0008** (0.000)	0.0019*** (0.000)	0.0050** (0.002)	0.0154* (0.009)
Observations	6637	6637	6637	6637	6637
County FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES
#. clusters	747	747	747	747	747
Adj. R-squared	0.395	0.395	0.396	0.395	0.394

Finding

Table: Cover up more likely when the probability that whistleblower private correspondence is revealed increases

Variable	Two top leaders	Number of Grand Council Ministers	Relationship among Grand Council Ministers	The Grand Council has appointment authority
Key	0.120*** (0.042)	0.010** (0.004)	0.018 (0.014)	0.061*** (0.014)
Observations	6,501	6,326	6,069	6,689
county FE	YES	YES	YES	YES
Year FE	YES	NO	YES	NO
Controls	YES	YES	YES	YES
#. clusters	561	722	724	749
Adj. R-squared	0.399	0.151	0.409	0.150

Finding

Table: Cover up less likely when the probability of exogenous separation is higher

Variable	End of Career	Retirement	Time of Emperor Succession	Anti-Corruption Campaign	Literary Inquisition
Key	-0.087*** (0.026)	-0.031** (0.013)	-0.038*** (0.015)	-0.090*** (0.021)	-0.026* (0.015)
Observations	6,689	6,689	6,689	6,689	6,689
county FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES
#. clusters	749	749	749	749	749
Adj. R-squared	0.397	0.397	0.148	0.150	0.148

Finding

Table: Cover up less (more) likely when the net benefit (retaliation) of whistleblowing is larger

Variable	Manchu vs. Other Ethnic	Governor-General vs. Commissioner	Emperor's Tru- sted minister	Preventable Disaster	Disasters Were Reported Last Year
Key	0.013 (0.015)	0.183*** (0.027)	0.273*** (0.032)	0.032** (0.014)	0.011** (0.005)
Observations	6,689	6,689	6,689	6,689	6,637
county FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES
#. clusters	749	749	749	749	747
Adj. R-squared	0.396	0.400	0.398	0.397	0.395

Finding

Table: Cover up less likely when third parties participate in the disclosure process

Variable	Border Province	Disaster Hit Multiple Provinces	Active Censors	Number of local chin-shih
Key	0.279*** (0.050)	-0.184*** (0.061)	-0.202*** (0.014)	-0.086*** (0.032)
Observations	6,689	6,689	6,689	6,689
Lev FE	YES			
County FE		YES	YES	
Year FE	YES	YES		YES
Controls	YES	YES	YES	YES
#. clusters	749	749	749	749
Adj. R-squared	0.394	0.397	0.180	0.299

Alternative hypothesis

- Too small disasters to report: Officials might have considered the disaster too minor to trouble the emperor with.
- Report for relief: Officials might have reported the disaster primarily to obtain relief subsidies from the central government.
- Information isolation: It is possible that these officials themselves had not received the disaster information.

Implication

Table: Cover up increases famine and rebellion

Variable	Famine	Rebellion
Cover up	0.029** (0.005)	0.006** (0.003)
Observations	6689	6689
Country FE	YES	YES
Year FE	YES	YES
Controls	YES	YES
Number of clusters	749	749
Adjusted R-squared	0.239	0.0614

Contribution

- Whistleblowing Systems
 - Internal motivations: trade-offs between personal benefits and potential retaliation.
- Corruption, governance, and agency
- Centralization.
 - Centralization that relies on channels to extract local information may be suboptimal, as these channels can be rendered ineffective by information collusion.

Thank you!