

Policy-making in China: Innovation, Learning, and Diffusion

Kaicheng Luo	Shaoda Wang	David Yang
Harvard	U Chicago	Harvard

ASSA Meeting
Jan 7, 2023

Introduction

- ▶ Determining which policies to implement is essential to government's decision making.
(Hayek 1978; North 1990; Roland 2000; Mukand and Rodrik 2005)

Introduction

- ▶ Determining which policies to implement is essential to government's decision making.
(Hayek 1978; North 1990; Roland 2000; Mukand and Rodrik 2005)
- ▶ Increasingly challenging:
 - ▶ Policy low-hanging-fruits are diminishing;
 - ▶ Socioeconomic conditions become more complicated;
 - ▶ Regional heterogeneity requires local tailoring;

Introduction

- ▶ Determining which policies to implement is essential to government's decision making.

(Hayek 1978; North 1990; Roland 2000; Mukand and Rodrik 2005)

- ▶ Increasingly challenging:
 - ▶ Policy low-hanging-fruits are diminishing;
 - ▶ Socioeconomic conditions become more complicated;
 - ▶ Regional heterogeneity requires local tailoring;
 - ▶ In non-democratic regimes, information gathering and bottom-up participation in policy-making may be constrained.

Introduction

- ▶ Determining which policies to implement is essential to government's decision making.
(Hayek 1978; North 1990; Roland 2000; Mukand and Rodrik 2005)
- ▶ Increasingly challenging:
 - ▶ Policy low-hanging-fruits are diminishing;
 - ▶ Socioeconomic conditions become more complicated;
 - ▶ Regional heterogeneity requires local tailoring;
 - ▶ In non-democratic regimes, information gathering and bottom-up participation in policy-making may be constrained.
- ▶ *This project:* in China, where do policy ideas come from?
How do central and local governments innovate and learn?

Policy-making in China: data sources

We aim to identify and trace all policies — national and local — implemented in China during the past two decades.

- ▶ We combine two datasets of the Chinese government:
 1. 150,000 laws, regulations, policy directives issued by the central government;
 2. 2.3 million local (provincial) government policy documents and annual work reports.
- ▶ We extract (and synthesize) policy keywords, and cross-match them among all central and local government documents.
- ▶ *Current progress:* over 2005-2020, we identify 10,102 policies.

Overview

1. Tracing the origin of policies.
2. Policy experimentation: what do they look like?
3. Policy experimentation: when do they occur?
4. Local government's policy innovation.
5. Local government's policy learning from peers.

1. Tracing the origin of policies

- ▶ 4,414 (43.69%) policies were first introduced by the central government. Among them ...
 - ▶ 4,077 became national policies right away.
 - ▶ 368 were introduced as policy experimentation.

1. Tracing the origin of policies

- ▶ 4,414 (43.69%) policies were first introduced by the central government. Among them ...
 - ▶ 4,077 became national policies right away.
 - ▶ 368 were introduced as policy experimentation.
- ▶ 5,688 (56.31%) policies were first introduced by the local government. Among them ...

1. Tracing the origin of policies

- ▶ 4,414 (43.69%) policies were first introduced by the central government. Among them ...
 - ▶ 4,077 became national policies right away.
 - ▶ 368 were introduced as policy experimentation.
- ▶ 5,688 (56.31%) policies were first introduced by the local government. Among them ...
 - ▶ *Diffusion among local governments*: 3,411 were “one-offs”: only implemented in the province where the policy was initiated; 2,277 were diffused to at least one other locality.

1. Tracing the origin of policies

- ▶ 4,414 (43.69%) policies were first introduced by the central government. Among them ...
 - ▶ 4,077 became national policies right away.
 - ▶ 368 were introduced as policy experimentation.
- ▶ 5,688 (56.31%) policies were first introduced by the local government. Among them ...
 - ▶ *Diffusion among local governments*: 3,411 were “one-offs”: only implemented in the province where the policy was initiated; 2,277 were diffused to at least one other locality.
 - ▶ *Diffusion to central government*: 1,149 became national policies (right away); 115 became policy experiments initiated by central government (and 53.0% ended up become national policies).

2. Policy experimentation: what do they look like?

2. Policy experimentation: what do they look like?

1. Widespread positive selection of experimentation sites:
 - ▶ >90% of experiments implemented in richer localities.

2. Policy experimentation: what do they look like?

1. Widespread positive selection of experimentation sites:

- ▶ >90% of experiments implemented in richer localities.

2. Politicians' strategic effort during experimentation:

- ▶ Being part of a successful experiment strongly associated with promotion;
- ▶ Local politicians with stronger promotion incentives allocate more resources to ensure success of experiment;
- ▶ Such additional resources absent during policy national roll-out.

2. Policy experimentation: what do they look like?

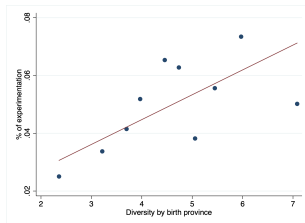
1. Widespread positive selection of experimentation sites:
 - ▶ >90% of experiments implemented in richer localities.
2. Politicians' strategic effort during experimentation:
 - ▶ Being part of a successful experiment strongly associated with promotion;
 - ▶ Local politicians with stronger promotion incentives allocate more resources to ensure success of experiment;
 - ▶ Such additional resources absent during policy national roll-out.
3. Central government does not fully account for sample selection and strategic effort:
 - ▶ Naive estimates (pre vs. post) of exp. effects strongly predict policies' national roll-out, but more sophisticated estimates (e.g., synthetic control) do not;
 - ▶ Ntl. policies originated from unrepresentative exp. exhibit smaller effects, and favor regions similar to exp. sites.

3. Policy experimentation: when do they occur?

1. Important policies (mentioned in national five year plans) are substantially more likely to be implemented as experimentation.

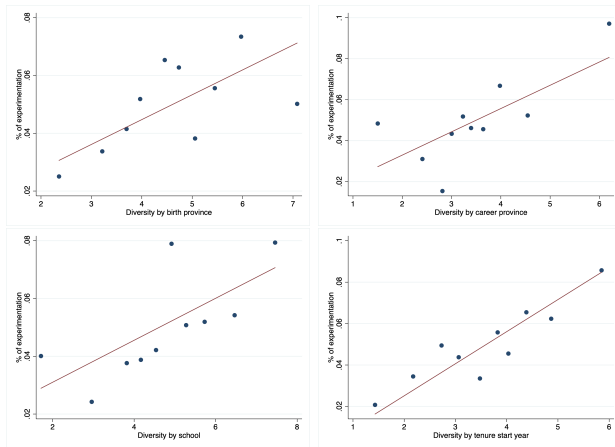
3. Policy experimentation: when do they occur?

1. Important policies (mentioned in national five year plans) are substantially more likely to be implemented as experimentation.
2. Diversity in ministerial members (measured in HHI) strongly associated with more experimentation (controlling for year and ministry FEs).



3. Policy experimentation: when do they occur?

1. Important policies (mentioned in national five year plans) are substantially more likely to be implemented as experimentation.
2. Diversity in ministerial members (measured in HHI) strongly associated with more experimentation (controlling for year and ministry FEs).



4. Local government's policy innovation

Policy innovation $I_{pt} = \sum_{i \in U} \frac{\# \text{ of provinces implementing policy } i \text{ after } t}{\# \text{ of provinces implementing policy } i \text{ before } t}$

where U is set of non-central policy that province p carried out at year t

(akin to Gerrish and Blei 2010; Kelly et al. 2021)

4. Local government's policy innovation

Policy innovation $I_{pt} = \sum_{i \in U} \frac{\# \text{ of provinces implementing policy } i \text{ after } t}{\# \text{ of provinces implementing policy } i \text{ before } t}$

where U is set of non-central policy that province p carried out at year t

(akin to Gerrish and Blei 2010; Kelly et al. 2021)

- ▶ Example: local policy innovation spiked during Xi Jinping's tenure as Zhejiang's Party Secretary ($I = 445.2$). New policies initiated during 2006 include:
 - ▶ fiscal expenditure performance evaluation (became national policy in 2011);
 - ▶ animal and plant epidemic prevention and quarantine (became national policy in 2013);
 - ▶ subsidized hospitalization (diffused to 9 other provinces).

4. Local government's policy innovation

Policy innovation $I_{pt} = \sum_{i \in U} \frac{\# \text{ of provinces implementing policy } i \text{ after } t}{\# \text{ of provinces implementing policy } i \text{ before } t}$

where U is set of non-central policy that province p carried out at year t

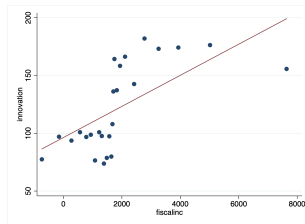
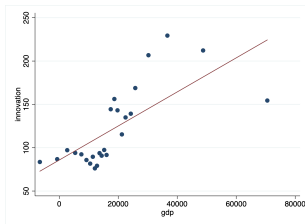
(akin to Gerrish and Blei 2010; Kelly et al. 2021)

- ▶ Example: local policy innovation spiked during Xi Jinping's tenure as Zhejiang's Party Secretary ($I = 445.2$). New policies initiated during 2006 include:
 - ▶ fiscal expenditure performance evaluation (became national policy in 2011);
 - ▶ animal and plant epidemic prevention and quarantine (became national policy in 2013);
 - ▶ subsidized hospitalization (diffused to 9 other provinces).
- ▶ Contrast with Hainan ($I = 26.2$) and Tibet ($I = 36.1$) in the same year, whose provincial heads devoted almost entire efforts implementing policies introduced by the central government.

4. Local government's policy innovation (*cont.*)

What predict local government's policy innovation?

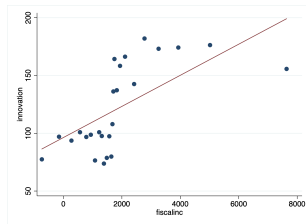
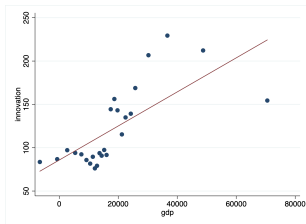
- Controlling for year FEs, richer provinces are more likely to innovate.



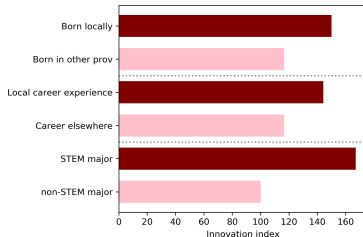
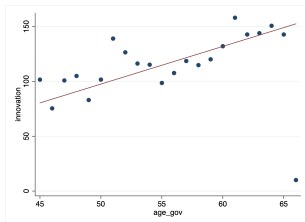
4. Local government's policy innovation (*cont.*)

What predict local government's policy innovation?

- Controlling for year FEs, richer provinces are more likely to innovate.



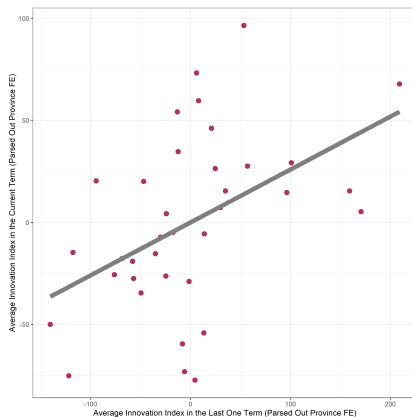
- Politicians with a STEM major, older in age (but with one more term left), and with stronger local attachment are more likely to innovate.



4. Local government's policy innovation (*cont.*)

Regional vs. politician characteristics

- ▶ As politicians rotate across localities, their tendency in policy innovation is transported (controlling for province FEs):



5. Local government's policy learning from peers

	Policy learning from peers	
	(1)	(2)
Panel A: Similarities in local characteristics		
– Δ GDP	0.025 (0.019)	0.109*** (0.023)
– Δ Fiscal income	0.057*** (0.019)	0.076*** (0.023)
Panel B: Connection among politicians		
Career connection	0.112** (0.045)	0.090** (0.037)
Birthplace connection	0.300*** (0.063)	0.133** (0.052)
Observations	13,006	13,006
Mean of DV	2.43	2.43
Year FE	Yes	Yes
<i>Student</i> province FE	No	Yes
<i>Teacher</i> province FE	Yes	Yes

Recap

In China, where do policy ideas come from? How do central and local governments innovate and learn?

1. Tracing the origin of policies.
2. Central government's policy innovation and learning:
 - ▶ Policy experimentation: what do they look like?
 - ▶ Policy experimentation: when do they occur?
3. Local government's policy innovation, and learning from peers.