The Rise of Government Venture Capital in China

Ruilin Cheng (Peking University)
Yiran Xu (University of Oxford)
Dilan Yang (University of Oxford)

PEKING UNIVERSITY

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Motivation

- Industrial policy has resurged globally as a central tool of economic statecraft (Juhász et al., 2024)
- The debate has shifted from ***"whether"*** to ***"how"*** — which instruments, in which contexts (Rodrik, 2009)
- Existing literature focuses on traditional ***transfer-based*** tools: subsidies, tax breaks, tariffs (Aghion et al., 2015; Kalouptsidi, 2018)
- But a new ***equity-based*** instrument has emerged: **Government Venture Capital** (Colonnelli et al., 2024)

Research Question

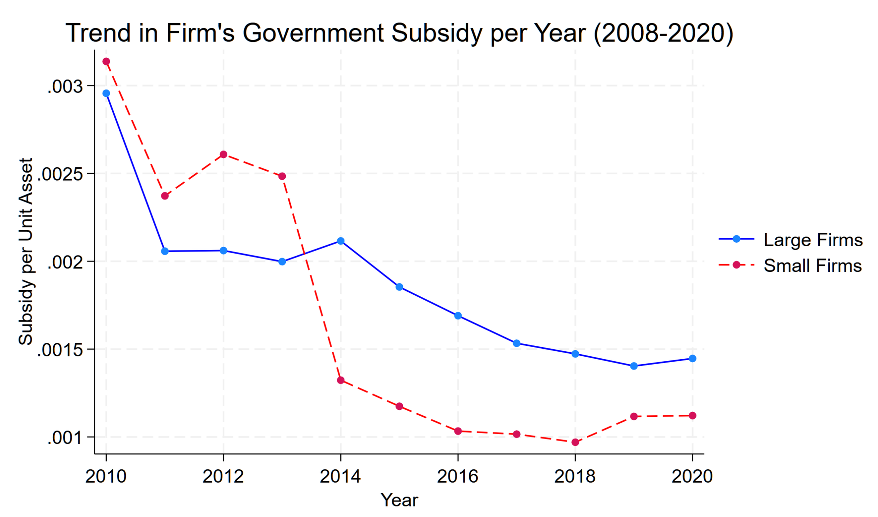
Can government VC substitute for direct subsidy as an industrial policy tool?

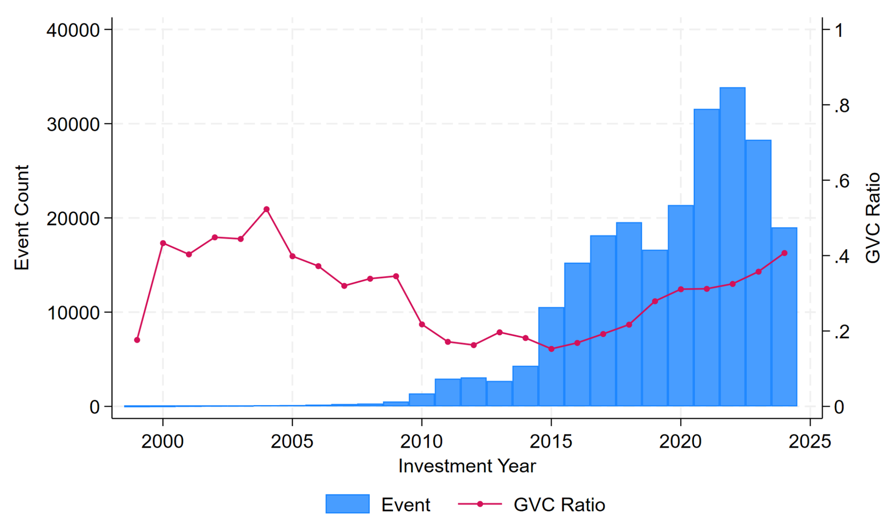
- Subsidies are simple and politically discretionary, but diffuse and weakly screened — often funding low-quality, rent-seeking firms (Aghion et al., 2015; Kalouptsidi, 2018; Barwick et al., 2025)
- Government VC differs along welfare-relevant dimensions: GP screening replaces government targeting, equity stakes embed accountability, and risk is shared with private LPs.(Lerner, 2009; Lerner & Tåg, 2013; Brander et al., 2015)
- **Hypothesis**: Compared to subsidy, government VC can raise entrant quality and crowd in private VC capital.

Empirical Strategy

- Empirical challenge: the choice of policy tool is endogenous
- A supply-side shock: 2014 budget law reform, which results in more local government budget constraints and curtailed prefectural governments' ability to provide subsidies
- Yet GDP growth remained central to official promotion (Li & Zhou, 2005) — forcing localities to find alternative, permitted industrial policy tools
- DID design with a continuous treatment intensity:

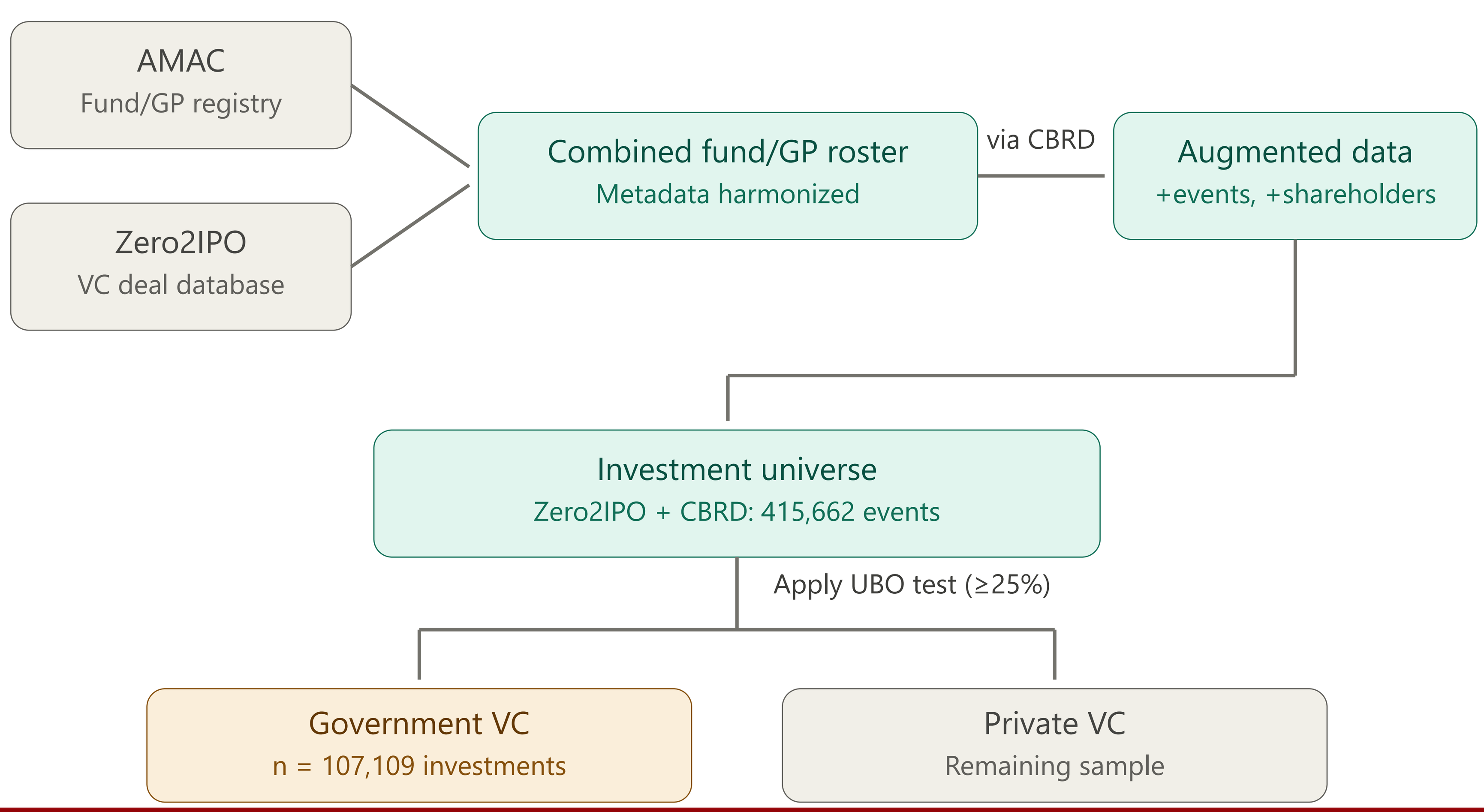
$$y_{it} = f\Big(\alpha_i + \tau_t + \sum_{j\neq 2014} \beta_j(\ln(Subsidy_i)\times \text{Year}_t^j) + \sum_{j\neq 2014} \Omega_j X_i' \times \text{Year}_t^j + \epsilon_{it}\Big)$$





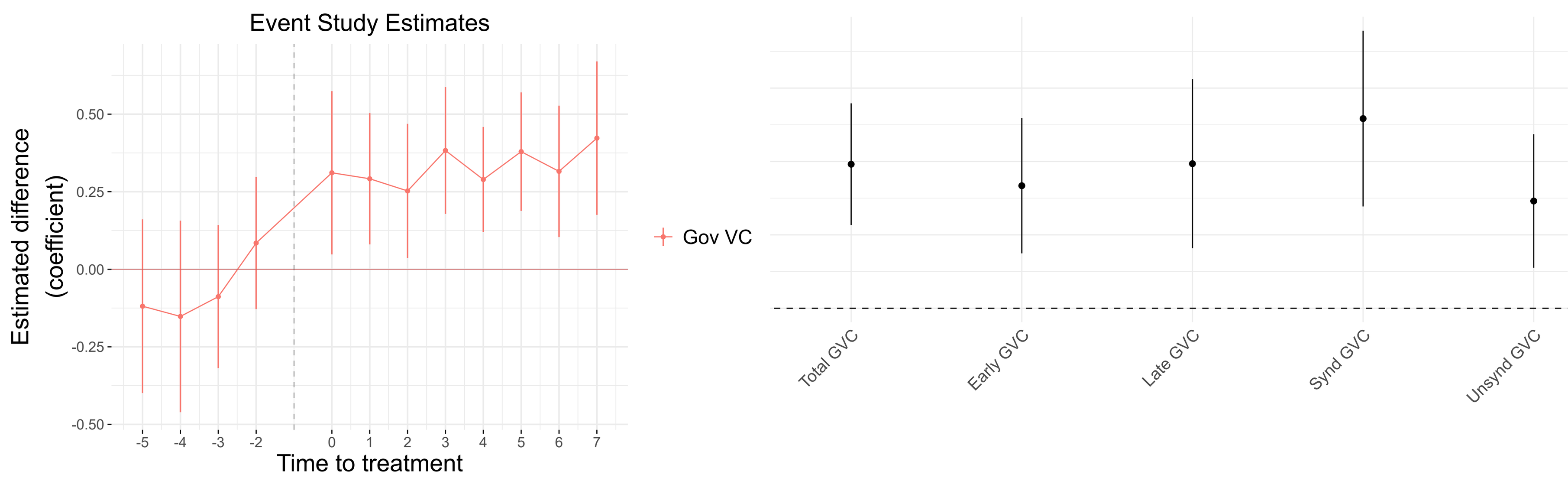
Data Construction

- We link three sources to trace ultimate VC fund ownership



Main Findings

- 1% ↑ pre-reform subsidy intensity → +0.38% GVC investments
- Across all investment stages and investment syndication



- Government VC raises the entry threshold, possibly leading to better average innovation outcomes

	Entry	Entry Reg Cap	Exit	Exit Reg Cap	Patent App	Patent Granted	Patent Cite
log(Subsidy)*Post	-0.080***	0.054*	-0.076	-0.127	0.061	0.236***	0.639***
	[0.024]	[0.032]	[0.082]	[0.095]	[0.075]	[0.089]	[0.194]
Controls	✓	✓	✓	✓	✓	✓	✓
City Fixed Effect	✓	✓	✓	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓	✓	✓	✓
Sample size	3562	3562	3556	3552	3301	3301	3193

Crowd-in Effect

- 1% ↑ pre-reform subsidy intensity → +0.35% PVC investments
- Across all investment stages and investment syndication

	PVC	Service PVC	Manu PVC	Early PVC	Late PVC	Syn PVC	Unsyn PVC
log(Subsidy)*Post	0.351***	0.366***	0.208**	0.311***	0.431***	0.570***	0.319**
	[0.115]	[0.123]	[0.094]	[0.107]	[0.144]	[0.174]	[0.125]
Controls	✓	✓	✓	✓	✓	✓	✓
City Fixed Effect	✓	✓	✓	✓	✓	✓	✓
Year Fixed Effect	✓	✓	✓	✓	✓	✓	✓
Sample size	3562	3562	3549	3562	3458	3120	3562

- Mechanism: syndication (early stage) and capital availability (late stage)

	PVC	Early PVC	Late PVC
log(Subsidy)*Post	0.065	0.078	-0.023
	[0.153]	[0.135]	[0.235]
log(Subsidy)*Post*SyndRatio	0.269*	0.290**	0.250
	[0.153]	[0.140]	[0.218]
log(Subsidy)*Post*PVCRatio	0.296*	0.183	0.595**
	[0.172]	[0.159]	[0.235]
Controls	✓	✓	✓
City Fixed Effect	✓	✓	✓
Year Fixed Effect	✓	✓	✓
Sample size	3086	3086	3049

Key Takeaways

- Equity may be a first-choice tool when the market failure is a financial friction
- Government VC acts as a **certifier**: government co-investment signals quality, reduces information asymmetry, and attracts private capital

Contact Information

Ruilin Cheng
- Email: rlcheng@pku.edu.cn
- Homepage: https://sites.google.com/view/ruilin-cheng