Is the Chinese Anti-Corruption Campaign Effective?

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Corruption is Associated with Poverty

- Corruption varies widely around the world and is closely associated with poverty.
  - In theory, corruption is not necessarily bad, similar to tax.
    - Leff (1964), Lui (1985), Acemoglu and Verdier (2000).
  - Corruption distorts incentives and causes low output equilibrium.
    - Murphy, Shleifer, and Vishney (1993), Shleifer and Vishney (1993).
  - Empirical evidence is pretty one-sided in that corruption negatively impacts economic growth.
    - Mauro (1995), Bardhan (1997), Wei (2000), Svensson (2003), Reinikka and Svensson (2004).

- Although there have been substantial anti-corruption campaigns…
  - Many may just be attempts to consolidate power.
  - Few are successful.

Unprecedented Anti-Corruption Campaign

- Corruption problem is severe in China, and Chinese firms exhibit substantial questionable behaviors.
  - Chen, Firth, Gao, and Rui (2006), Jiang, Lee, and Yue (2010), Chen, Li, Su, and Sun (2011), Fan, Guan, Li, and Yang (2014)
  - Pei (2007) estimates the direct costs to corruption at 3% of GDP per year.

- Eight-point Regulation on December 4, 2012
  - Over 200,000 people investigated, with a 99% rate of conviction, including several national leaders and hundreds of high-ranking government officials: Forbes (2016)

- The campaign spreads to China's corporate world.
  - Lin Song, former Chairman of China Resources and "50 Most Influential Business Leaders", was indicted on bribery and embezzlement in 2014.

Q1: Is the campaign targeting more corrupt firms?

- The investigated firms have
    - Lower CEO pay-performance sensitivity and more near-retirement CEOs.
    - Worse corporate governance.
    - Higher indicators of self-dealing.
    - Greater inefficiencies in growth and investments.
    - More corruption postings from online investor forum.

- It appears that the campaign is indeed investigating more questionable firms.
    - It is difficult to know the underlying motivations of the investigation.

Q2: Does the campaign contain political favoritism?

- Spillover effect: Campaign could target firms benefiting from their political connections.
  - Firms with general government connections are more likely to be investigated.
  - Firms connected to investigated national leaders are more likely to be investigated.

- Protection effect:
  - Firms connected to non-investigated national leaders are less likely to be investigated.

- The corporate campaign do not seem to be simply driven by political factors.
  - The corruption measures still reliably predict corporate investigations after controlling for political investigations.

Main Findings

Q3: How effective is the campaign?

- Measures for questionable behaviors such as self-dealing and regulation breaches do not improve dramatically in 2013-15 compared to 2011.

- The only exception is the dramatic decline in entertainment expenditure.

- The campaign does not seem to have positive effects on earnings manipulation, information environment of the financial markets, or foreign investment.

Overall:

The anti-corruption campaign seems a positive step but it may take much broader legal and regulatory changes to tackle corruption in China.

# Literature on China's Anti-Corruption Campaign

- **There has been a fast growing literature on the Anti-Corruption Campaign.**
    - Ang, Bai, and Zhou (2016): Positive relation between yield of municipal bonds and local government corruption.
    - Lin, Morck, Yeung, and Zhao (2016): Positive market price reactions to eight-point regulation, but negative reactions for firms who likely benefit from corruption.
    - Qian and Wen (2015): The campaign reduced imports of luxury goods by 55%, But no effect on luxury goods that can be consumed away from public view!
    - Ke, Liu, and Tang (2016): The campaign reduced consumption of luxury goods by luxury-goods-consumption firms, but no increase in their firm value.

Data and Sample Construction

- Search listed firms with top managers investigated for corrupt behaviors during the campaign (Dec. 12 – Dec. 15).
  - Obtain managerial turnovers from CSMAR, and identify corruption-related events by searching news and managerial biographies.
  - CPC's Commission of Discipline Inspection's list of high-level party members investigated, including executives of large SOEs.
  - Key word search on CNINFO Database (all corporate announcements) and Genius Database (>300 business newspapers).
- Sample: 150 listed firms with total market capitalization of RMB 5.29 trillion ($805 billion).
  - 5.1% of Chinese stock market in number, and 18.1% in market cap.
- Stock and financial data from CSMAR and WIND (counterpart of Bloomberg in China).
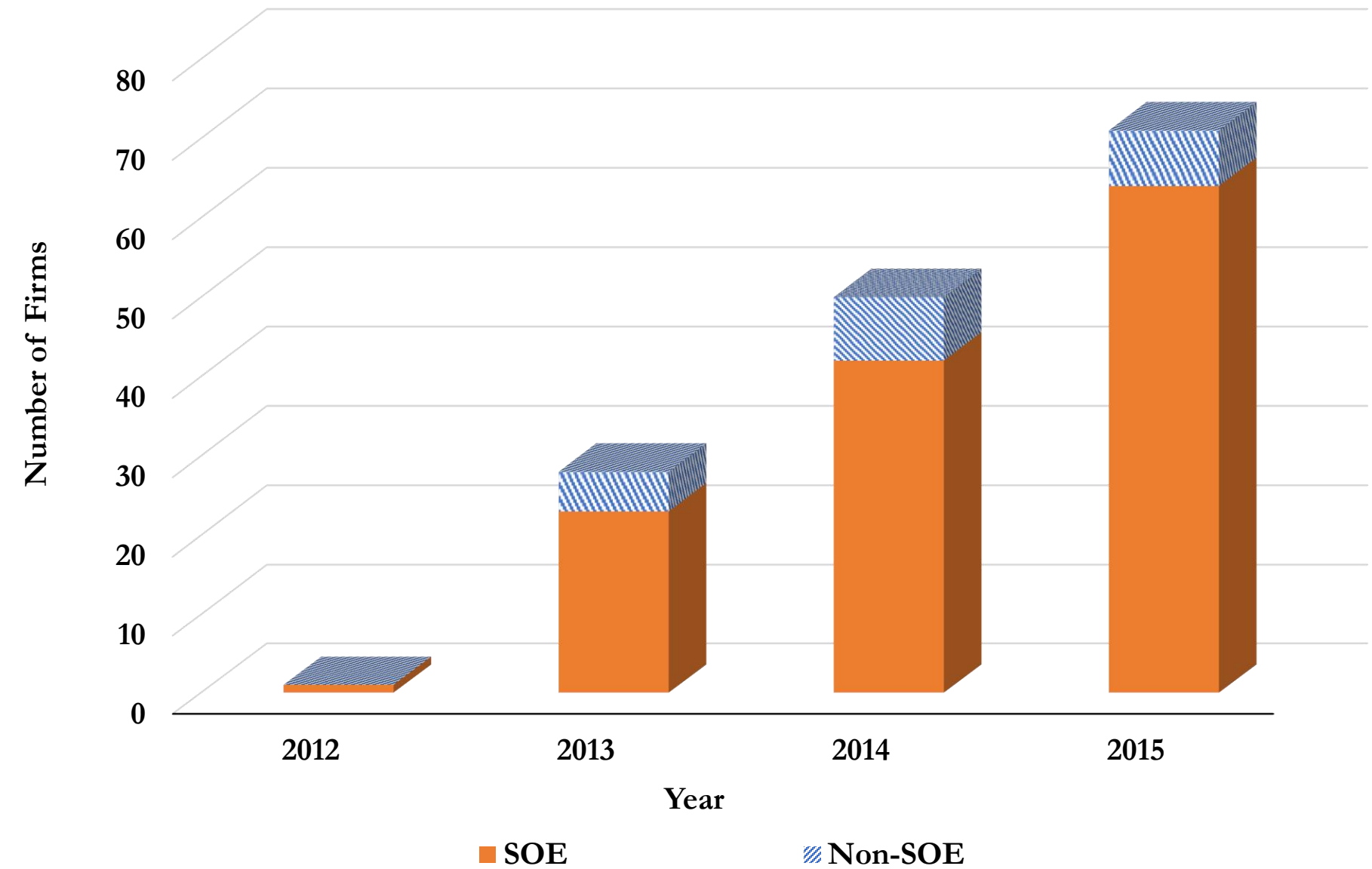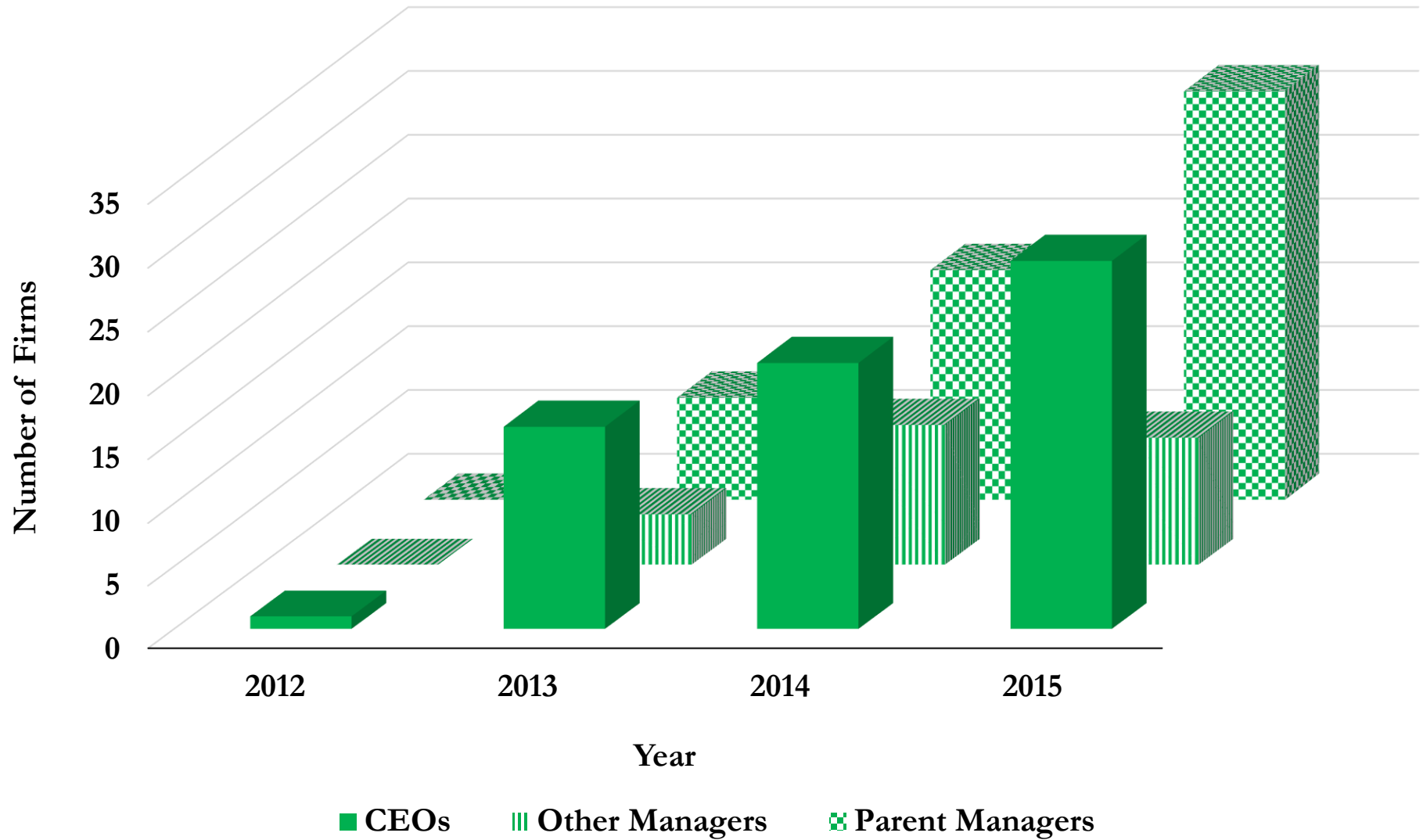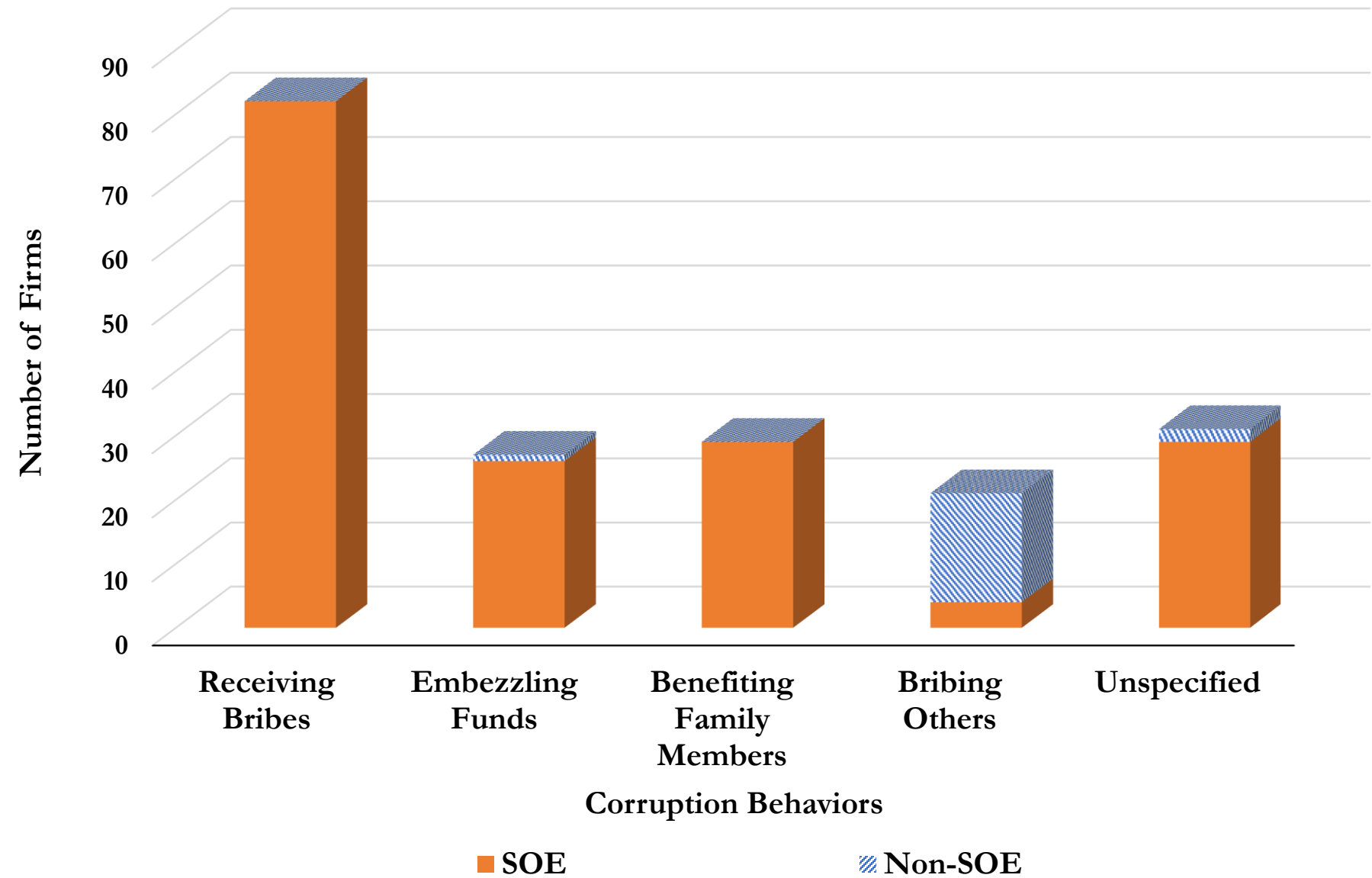
Figure 1C: Distribution of Corrupt Behaviors

- **Q1:** Is the corporate campaign actually targeting more corrupt firms?

- **Q2:** Does the campaign contain political favoritism?

- **Q3:** Has the campaign been effective at reducing corruption-related behavior?

Measures of Potential Corruption: I

- Managerial incentive.
  - Pay-for-performance sensitivity (e.g., Bergstresser and Philippon 2006): Low pay-performance sensitivity can cause agency problem and potentially corruption.
  - Near-retirement dummy: CEO age >=59.

- Corporate governance.
  - CEO compensation (Coles, Daniel, and Naveen 2014): Poor governance leads to high CEO compensation.
  - Monitoring by large shareholders (Chen et al. 2012): Ownership of 2nd to 5th largest shareholders.
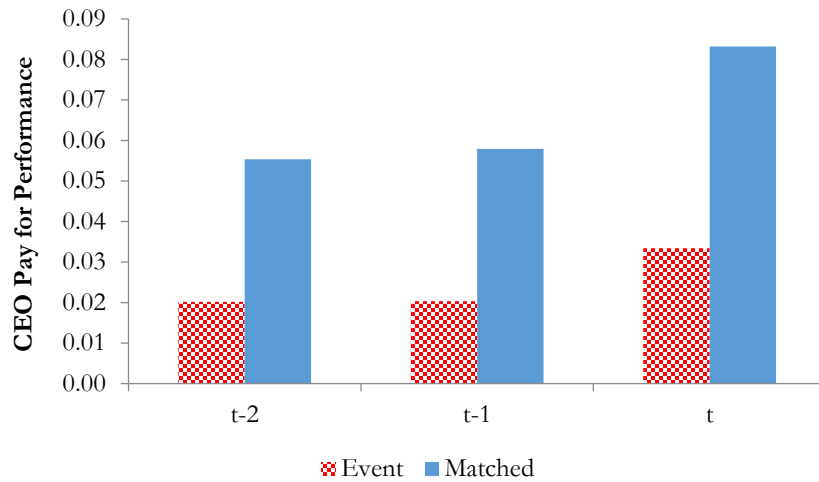
Measures of Potential Corruption: II

- Related-party transactions.
    - Related-party sales (Jian and Wong 2010): Chinese firms use related party sales to prop up earnings.
    - Related-party loans (Jiang, Lee, and Yue 2010): "Tunneling" behavior where controlling shareholders exploit the firm by borrowing at very low or even no costs.
    - Other receivables from parent (Jiang et al. 2010): Another measure of "tunneling behavior"

- Regulation breaches and entertainment expenditure.
    - Regulation breaches: Number of material breaches per year (excluding common accounting errors) .
    - Business entertainment expenditure (Cai, Fang, and Xu 2011): Widely considered related to corruption in China.

Measures of Potential Corruption: III

- Inefficiencies in growth and investment.
  - Sales growth – NI growth: Chinese media often mentions corrupted firms have slower income growth than sales growth.
  - Investment inefficiency (Biddle, Hilary, and Verdi 2009): Deviation of a firm's corporate investment from the level corresponding to the firm's growth.

- Corruption discussion.
  - Guba ("Stock Bar"): One of the most popular investment forums (10 million users, 6 million new posts per day).
  - Corruption postings: Percentage of posts discussing corruption for a firm.
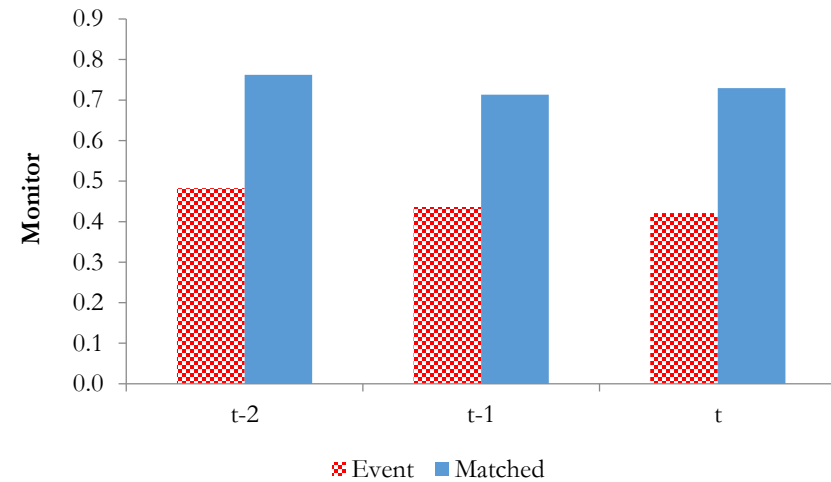
CEO Pay-for-Performance
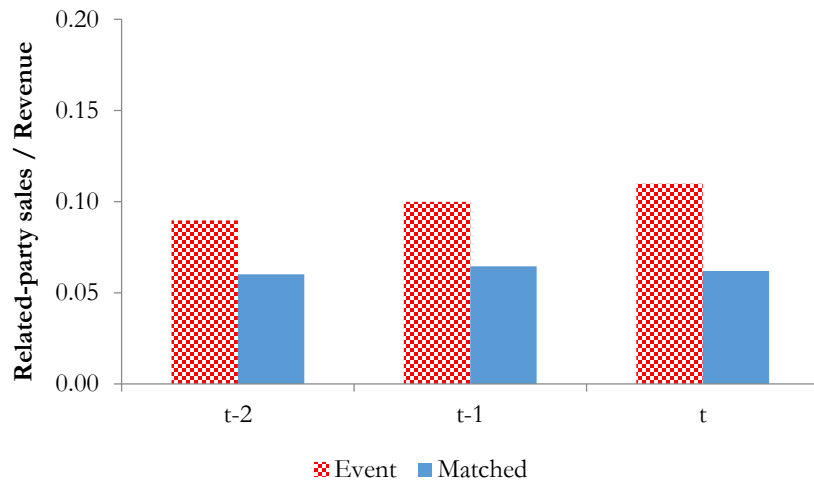
CEO Near-Retirement
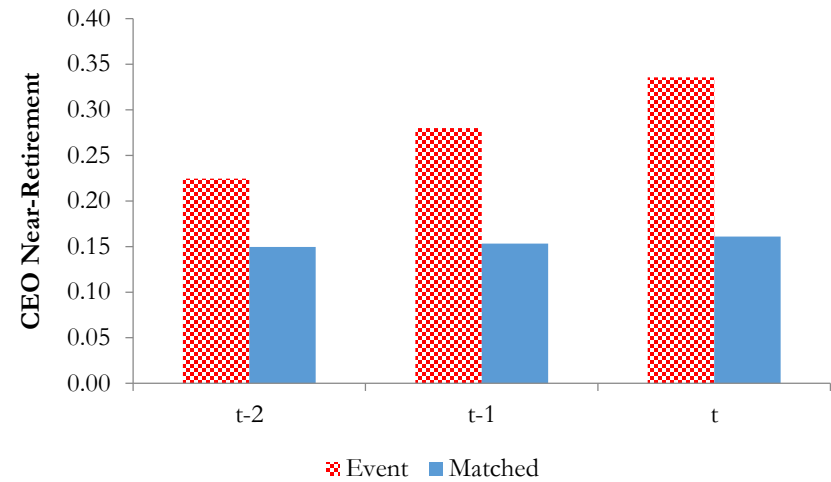
CEO Compensation
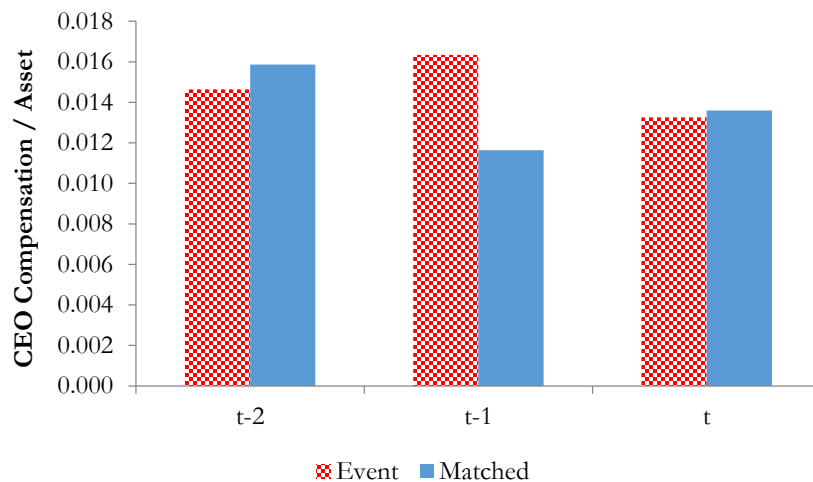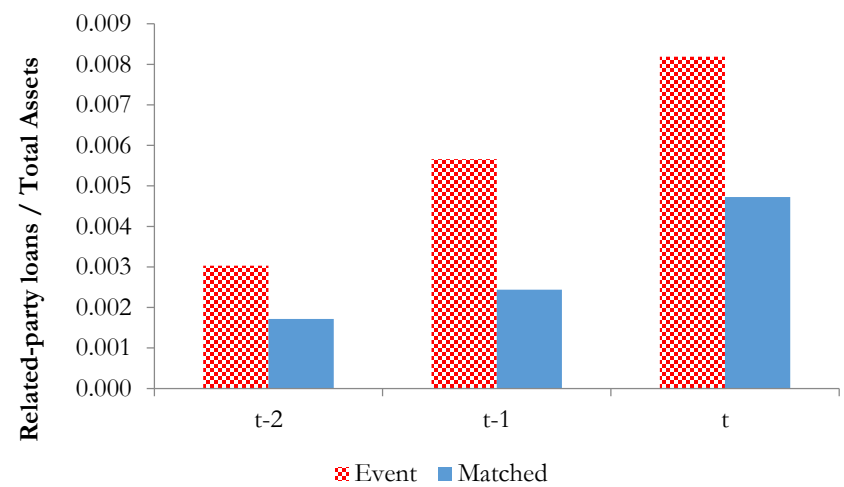
Monitor by Large Shareholder

Figure 2: Corruption Measures of Event Firms before Corruption Investigations
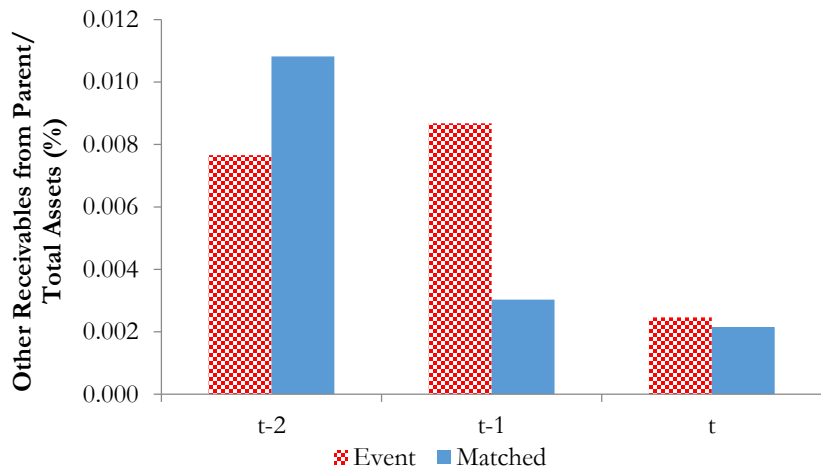
Related-Party Sales

Related-Party Loans
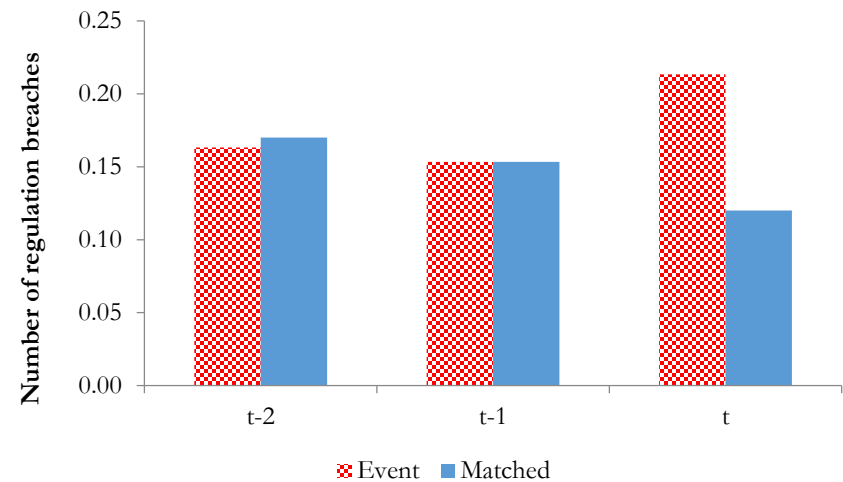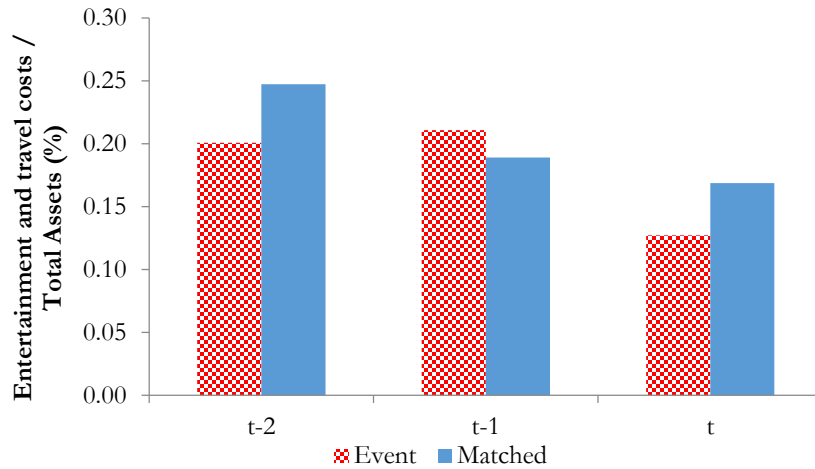

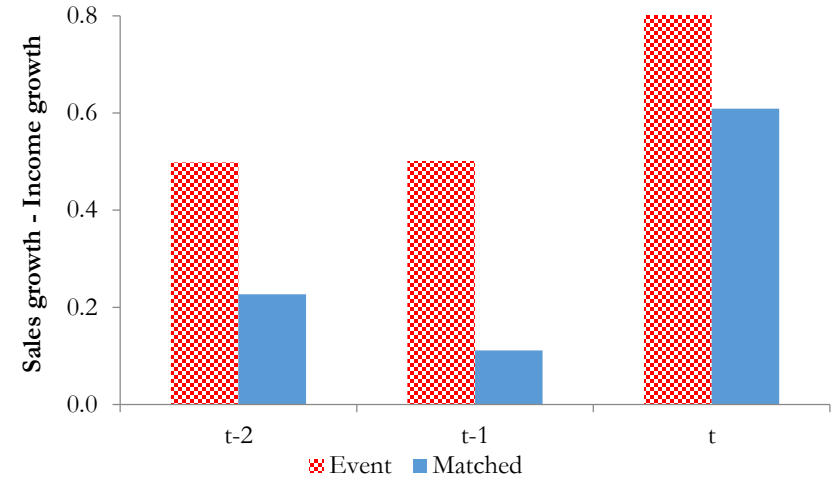## Other Receivables from Parent

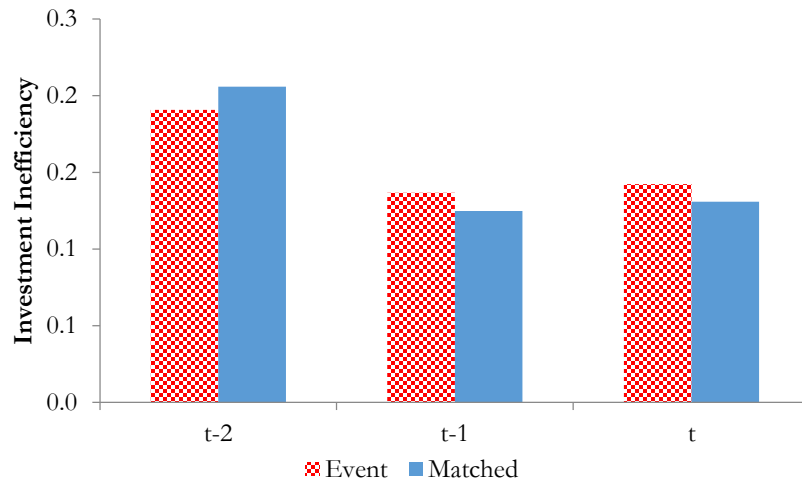## Number of Regulation Breaches
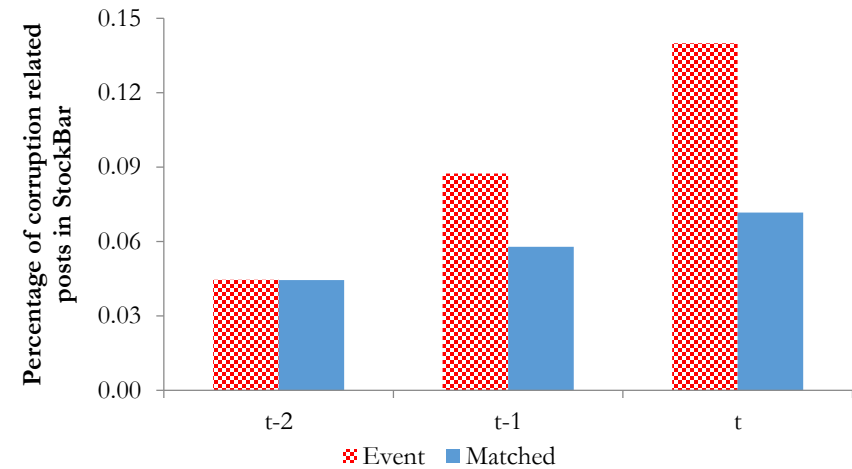
Business Entertainment Expenditure

Sales Growth – Income Growth

Investment Inefficiency

Corruption Postings

Table 3: Probit Regressions of Investigation

Independent Variables (t-1)	Dependent Variable: Dummy of Corruption Investigation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CEO Pay for Performance	-0.772						-0.849	-0.897
	(-1.34)						(-1.34)	(-1.47)
CEO Near-Retirement Dummy	**0.495****						**0.679****	**0.678*****
	(2.53)						**(2.56)**	**(3.11)**
CEO Compensation		**5.635***					5.677	**7.193****
		(1.68)					(1.49)	**(1.96)**
Monitor		**-0.166****					-0.165	**-0.205****
		(-2.25)					(-1.33)	**(-2.22)**
Related-Party Sales			**1.023***				**1.228***	**1.260****
			(1.91)				**(1.76)**	**(2.17)**
Related-Party Loans			**9.531***				**10.820***	**13.185****
			(1.85)				**(1.81)**	**(2.36)**
Other Receivables from Parent			0.768				**1.361***	**0.985***
			(1.58)				**(1.70)**	**(1.74)**
# Regulation Breaches				0.019			0.098	0.181
				(0.09)			(0.39)	(0.81)
Bus. Ent. Expenditure				-0.007			-0.029	
				(-0.20)			(-0.64)	
Sales Growth - Income Growth					**0.171****		**0.175***	**0.191****
					(2.57)		**(1.85)**	**(2.39)**
Investment Inefficiency					**2.277****		1.053	1.964
					(2.04)		(0.74)	(1.59)
Corruption Postings						**1.782****	1.795	**2.275****
						(1.98)	(1.23)	**(2.19)**

Overall, it seems like the campaign is affecting firms with higher potential corruption.

Research Question 2

- **Q1:** Is the corporate campaign actually targeting more corrupt firms?

- **Q2:** Does the campaign contain political favoritism?

- **Q3:** Has the campaign been effective at reducing corruption-related behavior?

Political Connections and Investigation

- Spillover effect: The campaign could target firms that are benefiting from their political connections.

  - General government connection: Dummy variable that equals one if a C-Suite executive of the company was a previous high-ranking government official [Fan, Wong, and Zhang (2007), Fisman and Wang (2015)].

- Protection effect: Political connections could protect the firms from being investigated.

  - University affiliation with top leaders: Dummy variable that equals one if a C-Suite executive of the company graduated from the same university as a member of the CPC's Politburo Standing Committee (PSC).

  - PSC: The most powerful decision-making body with seven members.

Table 4: Probit Regression of Investigation on Political Connections

Dependent Variable: Dummy of Corruption Investigation					
Independent Variables (t-1)	(1)	(2)	(3)	(4)	(5)
Government Connection	0.784***			0.650***	
	(4.37)			(2.91)	
Local Government Connection		0.859***			0.845***
		(4.43)			(3.43)
Central Government Connection		0.478			-0.114
		(1.41)			(-0.27)
University Affiliation: Top 7 Leaders			-0.760***	-1.295***	-1.258***
			(-3.09)	(-3.91)	(-3.77)

- The school affiliation effect is driven by Tsinghua and PKU.
  - It is possible that managers from the Universities, especially Tsinghua and PKU, are less corrupt.
  - Investigators may avoid challenging current leaders by targeting managers affiliated with Tsinghua or PKU.
  - Managers could build direct relations with national leaders through university affiliation.

Table 5A: Associations between Political Investigations and Corporate Investigations

Dependent Variable: Dummy of Corruption Investigation				
Panel A: Regressions on Measures of Associations with Political Investigations				
Independent Variables (t-1)	(1)	(2)	(3)	(4)
Association w/Yongkang Zhou	0.872*			
	(1.91)			
Birth Conn. w/ Investigated Nation Leaders		0.533*		
		(1.92)		
Birth Conn. w/ Non-Investigated Nation Leaders		-0.105**		
		(-2.33)		
Work Conn. w/ Investigated Nation Leaders			-0.024	
			(-0.15)	
Work Conn. w/ Non-Investigated Nation Leaders			-0.031	
			(-1.05)	
Univ. Affiliation w/ Investigated Nation Leaders				0.409
				(1.54)
Univ. Affiliation. w/ Non-Investigated Nation Leaders				-0.012
				(-0.31)

- Extend the politician sample to the 112 Chinese national leaders.
  - 6 investigated vs. 106 non-investigated.

Further Analyses on Associations with Political Investigations

- Additional Analysis 1: Conduct news search to identify if a corporate investigation is due to political investigations.
  - Only one-third of corporate investigations are likely associated with political investigations.

- Additional Analysis 2: The results on corruption measures hold after excluding these one-third events from the regression sample.

- Additional Analysis 3: The results on corruption measures also hold after controlling for political connection measures.

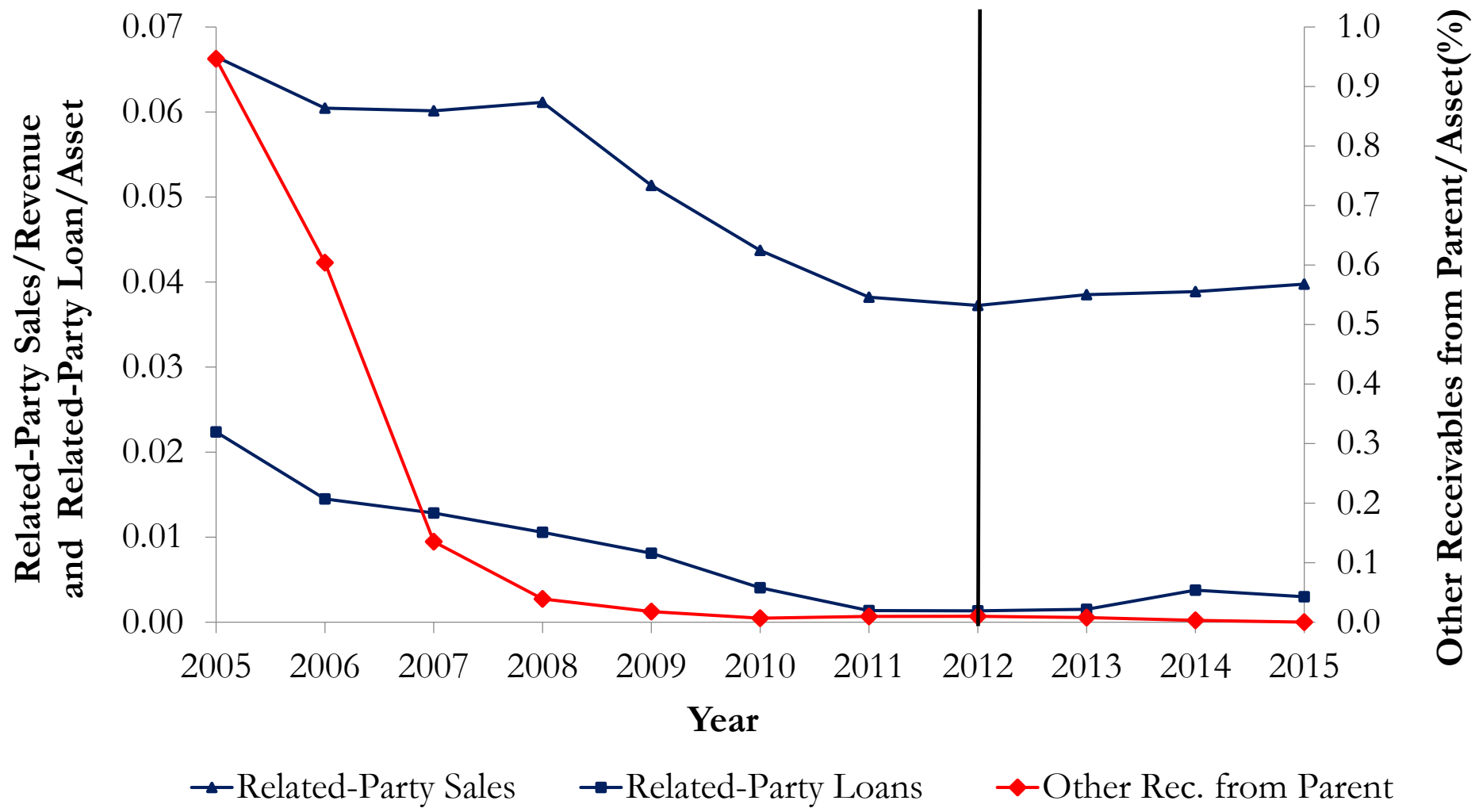- **The corporate campaign does not seem to be simply driven by politics.**

Q1: Is the campaign targeting more corrupt firms?

Q2: Does the campaign contain political favoritism?
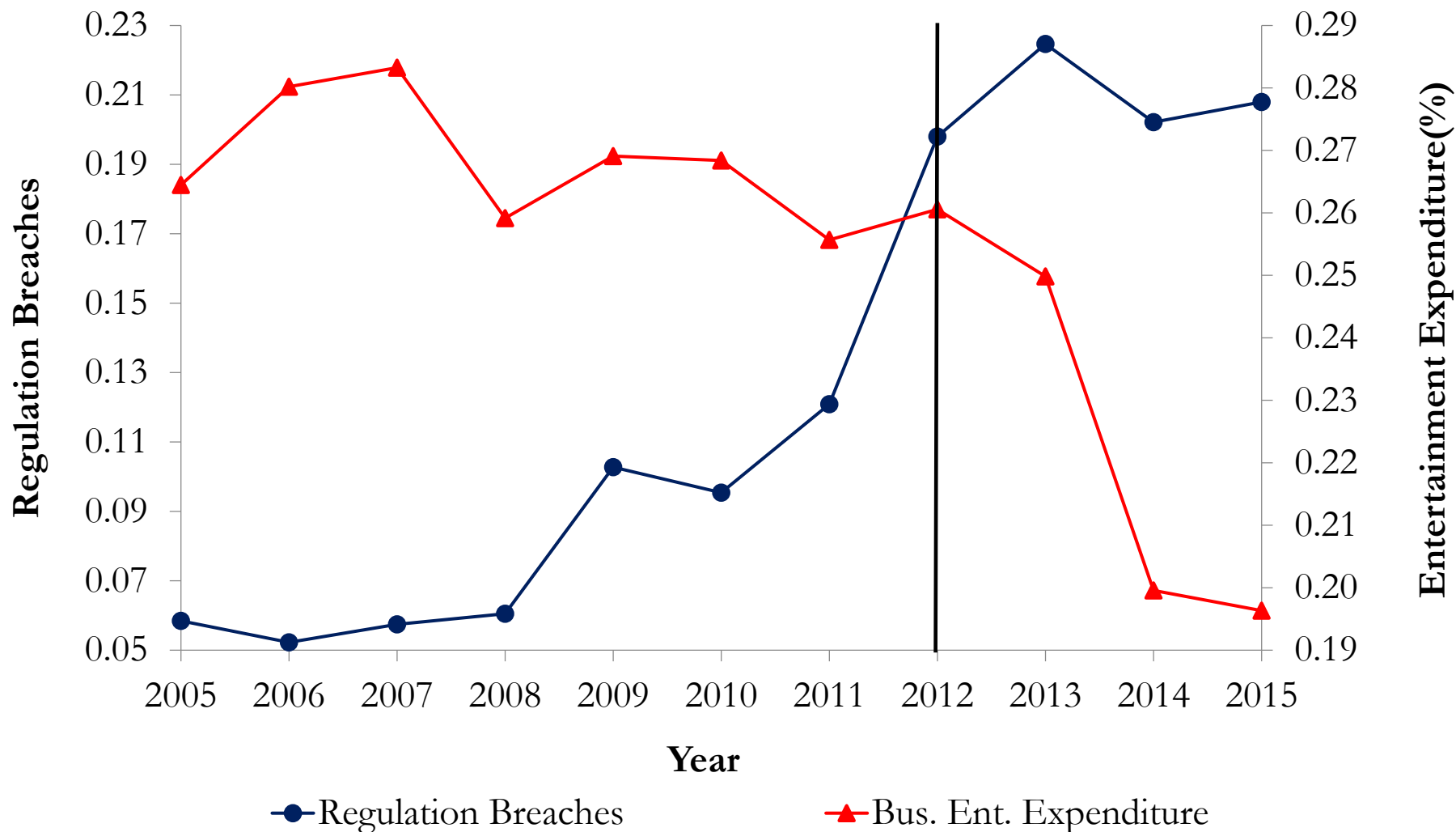
Q3: How effective is the campaign?

Related Party Transactions

Entertainment Expenditure & Regulation Breaches

Inefficiencies in Growth and Investment
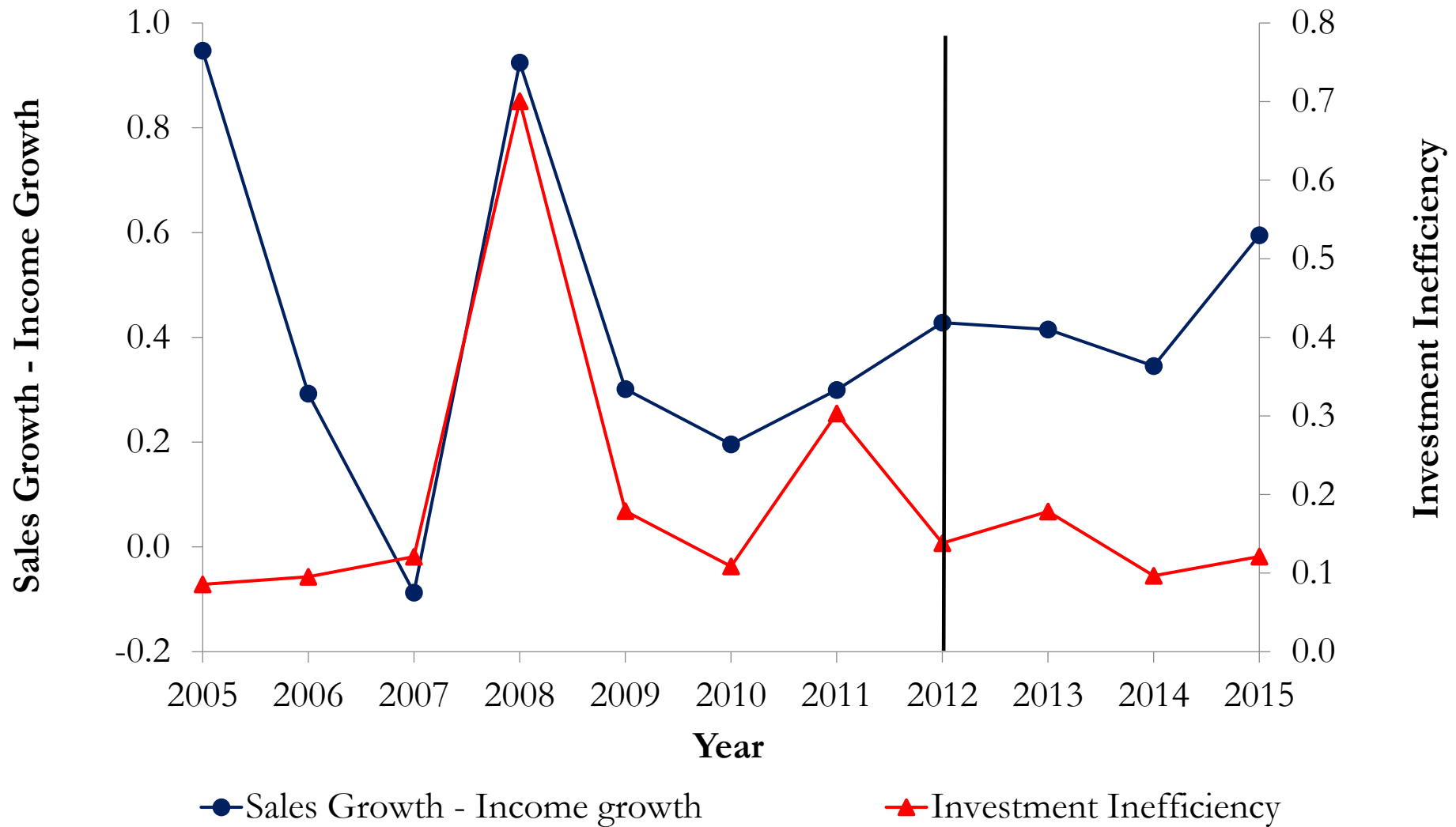
Table 9: Corruption Measures of All Listed Firms: 2005-2015

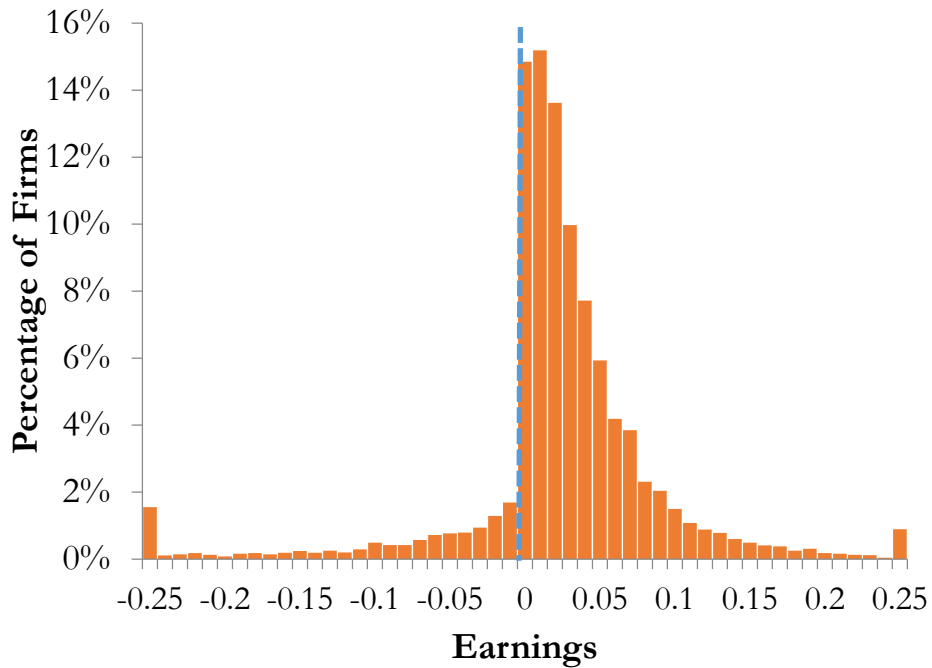| Year	Corruption Measures						
	Related Sales	Related Loans (%)	Other Receiv. (%)	Reg. Breaches	Entertain Exp. (%)	Sales Growth – Inc. Growth	Inv. Inefficiency
2011	0.038	0.136	0.010	0.121	0.256	0.300	0.303
2012	0.037	0.134	0.010	0.198	0.261	0.428	0.138
2013	0.039	0.152	0.008	0.225	0.250	0.415	0.178
2014	0.039	0.377	0.003	0.202	0.200	0.345	0.097
2015	0.040	0.299	0.000	0.208	0.196	0.595	0.121
2013~2015 - 2011 Diff.	0.001	0.142	-0.006	0.090	**-0.051**	0.154	-0.172
t-stat	0.52	(6.33)	(-4.34)	(9.15)	**(-8.48)**	(5.52)	(-20.07)
% Diff.	2.26%	104.14%	-64.05%	74.78%	**-19.91%**	51.52%	-56.75%

- Benchmarking analyses using Hong Kong firms.
  - Hong Kong firms share similar economic condition but do not experience anti-corruption campaign.
  - Diff-in-diff of corruption measures of Chinese firms benchmarked to Hong Kong firms using propensity matching approach: Little improvement in corruption measures for Chinese firms, either.

Further Analysis on the Impact of Campaign

- **Effect of investigation on event firms.**

  - Event firms experience negative abnormal return around investigations, especially in the short-term window.

  - Diff-in-diff analysis for event firms using propensity score matching: Event firms do not experience significant improvement in corruption measures.

- **Effects of the campaign on corporate culture and information environment of financial markets.**

  - Little improvement in earnings manipulation: Earnings discontinuity, Discretionary accruals.

  - Little improvement in information environment of financial markets: Stock return volatility around earnings announcement.

- **Little evidence that the campaign encouraged foreign direct investment, either.**

Figure 5: Distribution of Earnings for All Firms before and after Anti-Corruption Campaign Started
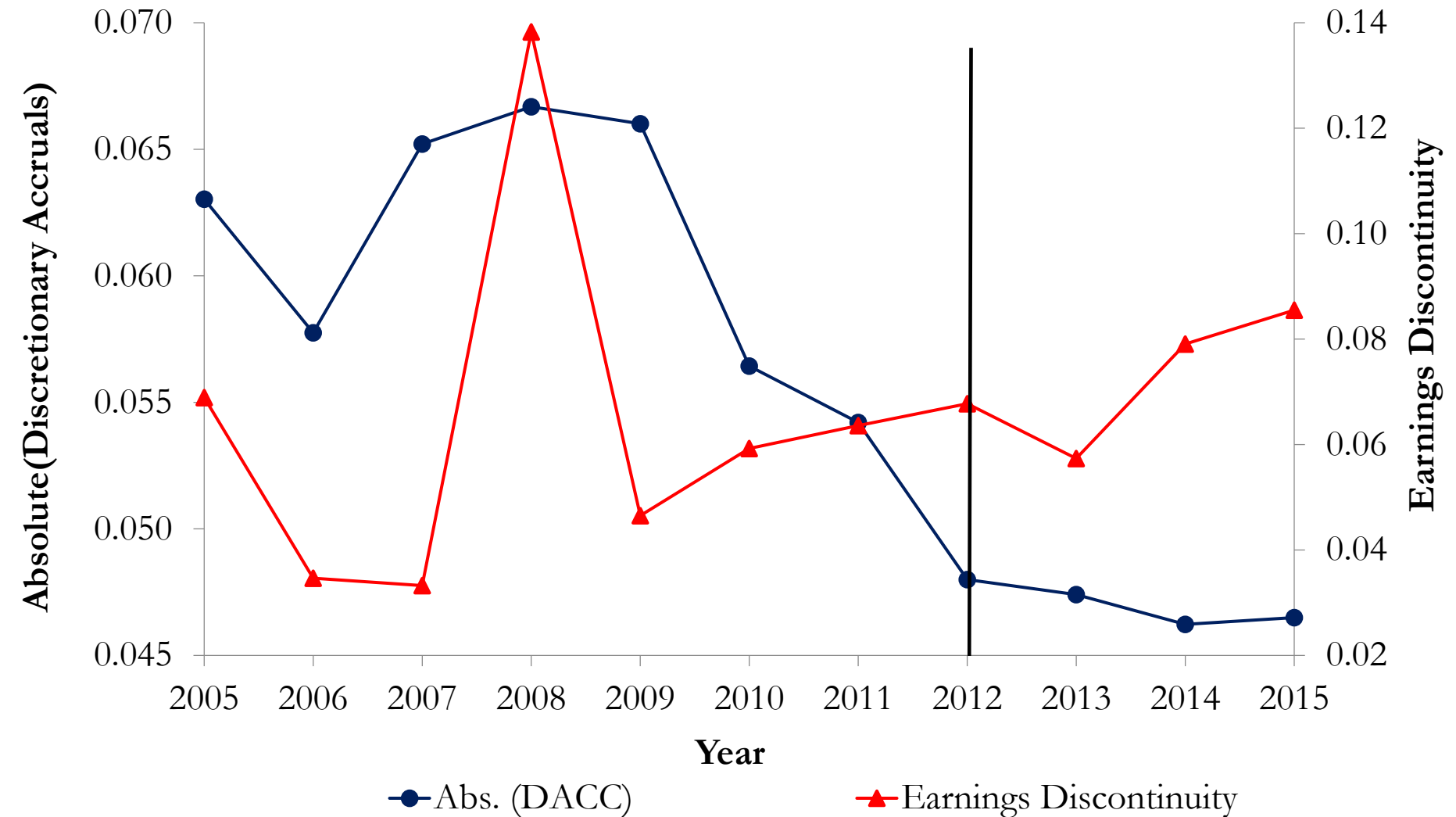
Earnings Distribution for all firms: 2005-2011

Earnings Distribution for all firms: 2013-2015
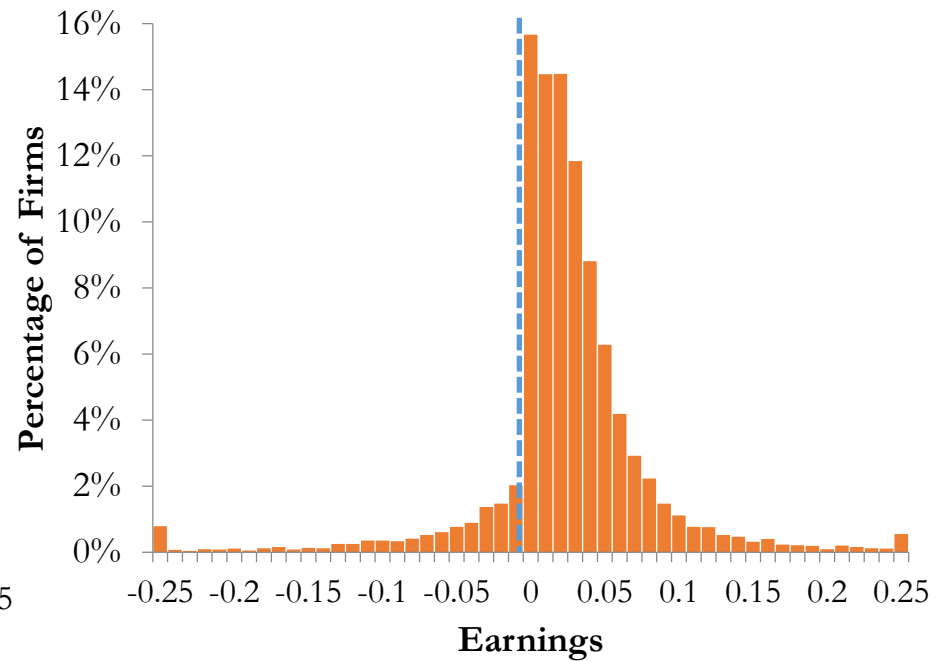
Earnings Manipulation

Table 1A: Regressions of Foreign Direct Investment on Corruption Investigations: Provincial Level Analysis

Panel A: Regressions of Provincial Foreign Direct Investment on the Number of Investigated Firms in the Province				
	(1)	(2)	(3)	(4)
Ln (1 + Cumulative # Firms Investigated (t))	**19.976****		4.683	
	(2.59)		(0.79)	
Ln (1 + Cumulative # Firms Investigated (t-1))		**30.099*****		4.596
		(2.99)		(0.57)
Provincial GDP (t-1)	47.372***	48.832***	115.439	197.658
	(7.62)	(7.25)	(1.51)	(1.56)
Provincial GDP Growth (t)	259.806*	442.489**	141.172	145.852
	(1.67)	(2.51)	(0.99)	(0.66)
Year Fixed Effects	No	No	Yes	Yes
Provincial Fixed Effects	No	No	Yes	Yes
# Obs	124	93	124	93

Conclusions

- Evidence suggests the Chinese anti-corruption campaign has affected firms that have more self-dealing and suspicious behavior.

- There may be an element of political favoritism.
  - Spillover effect vs. protection effect.
  - Corporate investigations are influenced by political investigations.

- Not much evidence that the campaign has caused improvements for Chinese firms overall.
  - Except in reducing conspicuous consumption.

- Overall, the anti-corruption campaign may be a right step but doesn't appear to be effective so far.
  - Svensson (2003): Experience from other anti-corruption campaigns suggests that extensive legal and regulatory changes may be necessary to achieve substantial reductions in corruption.