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.
  - Corruption distorts incentives and causes low output equilibrium.
  - Empirical evidence is pretty one-sided in that corruption negatively impacts economic growth.

- 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.
  - 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.
• There has been a fast growing literature on the Anti-Corruption Campaign.
  - 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 1A: Distribution of Firms: SOEs vs. Non-SOEs

Number of Firms

Year

2012

2013

2014

2015

SOE

Non-SOE

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Figure 1B: Distribution of Manager Positions
Figure 1C: Distribution of Corrupt Behaviors

- Receiving Bribes
- Embezzling Funds
- Benefiting Family Members
- Bribing Others
- Unspecified

Number of Firms

Corruption Behaviors

- SOE
- Non-SOE
Research Question 1

• **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.
Figure 2: Corruption Measures of Event Firms before Corruption Investigations

- **CEO Pay-for-Performance**
  - Graph showing CEO Pay-for-Performance across different time periods (t-2, t-1, t).
  - Measures are compared for Event and Matched firms.

- **CEO Near-Retirement**
  - Graph showing CEO Near-Retirement across different time periods (t-2, t-1, t).
  - Measures are compared for Event and Matched firms.

- **CEO Compensation**
  - Graph showing CEO Compensation / Asset across different time periods (t-2, t-1, t).
  - Measures are compared for Event and Matched firms.

- **Monitor by Large Shareholder**
  - Graph showing Monitor by Large Shareholder across different time periods (t-2, t-1, t).
  - Measures are compared for Event and Matched firms.

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Figure 2: Corruption Measures of Event Firms before Corruption Investigations

- **Related-Party Sales**
  - t-2: 0.05
  - t-1: 0.10
  - t: 0.20

- **Related-Party Loans**
  - t-2: 0.00
  - t-1: 0.02
  - t: 0.02

- **Other Receivables from Parent**
  - t-2: 0.01
  - t-1: 0.06
  - t: 0.11

- **Number of Regulation Breaches**
  - t-2: 0.15
  - t-1: 0.20
  - t: 0.25

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Figure 2: Corruption Measures of Event Firms before Corruption Investigations

**Business Entertainment Expenditure**

- **Sales Growth – Income Growth**

- **Investment Inefficiency**

- **Corruption Postings**

![Graphs showing measures of business entertainment expenditure, sales growth, income growth, investment inefficiency, and corruption postings.](image-url)
Table 3: Probit Regressions of Investigation

<table>
<thead>
<tr>
<th>Dependent Variable: Dummy of Corruption Investigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables (t-1)</td>
</tr>
<tr>
<td>CEO Pay for Performance</td>
</tr>
<tr>
<td>-0.772</td>
</tr>
<tr>
<td>(-1.34)</td>
</tr>
<tr>
<td>CEO Near-Retirement Dummy</td>
</tr>
<tr>
<td>(2.53)</td>
</tr>
<tr>
<td>CEO Compensation</td>
</tr>
<tr>
<td>(1.68)</td>
</tr>
<tr>
<td>Monitor</td>
</tr>
<tr>
<td>(-2.25)</td>
</tr>
<tr>
<td>Related-Party Sales</td>
</tr>
<tr>
<td>(1.91)</td>
</tr>
<tr>
<td>Related-Party Loans</td>
</tr>
<tr>
<td>(1.85)</td>
</tr>
<tr>
<td>Other Receivables from Parent</td>
</tr>
<tr>
<td>(1.58)</td>
</tr>
<tr>
<td># Regulation Breaches</td>
</tr>
<tr>
<td>(0.09)</td>
</tr>
<tr>
<td>Bus. Ent. Expenditure</td>
</tr>
<tr>
<td>(-0.20)</td>
</tr>
<tr>
<td>Sales Growth - Income Growth</td>
</tr>
<tr>
<td>(2.57)</td>
</tr>
<tr>
<td>Investment Inefficiency</td>
</tr>
<tr>
<td>(2.04)</td>
</tr>
<tr>
<td>Corruption Postings</td>
</tr>
<tr>
<td>(1.98)</td>
</tr>
</tbody>
</table>

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

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

- 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

<table>
<thead>
<tr>
<th>Independent Variables (t-1)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association w/ Yongkang Zhou</td>
<td>0.872*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth Conn. w/ Investigated Nation Leaders</td>
<td>0.533*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth Conn. w/ Non-Investigated Nation Leaders</td>
<td></td>
<td>-0.105**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Conn. w/ Investigated Nation Leaders</td>
<td>-0.024</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Conn. w/ Non-Investigated Nation Leaders</td>
<td></td>
<td>-0.031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ. Affiliation w/ Investigated Nation Leaders</td>
<td>0.409</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Univ. Affiliation. w/ Non-Investigated Nation Leaders</td>
<td>-0.012</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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.
Research Question 3

Q1: Is the campaign targeting more corrupt firms?

Q2: Does the campaign contain political favoritism?

Q3: How effective is the campaign?
Figure 3A: Corruption Measures for All Firms: 2005-2015

Related Party Transactions

- Related-Party Sales
- Related-Party Loans
- Other Rec. from Parent

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Figure 3B: Corruption Measures for All Firms: 2005-2015

Entertainment Expenditure & Regulation Breaches

Year

- Regulation Breaches
- Bus. Ent. Expenditure

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Figure 3C: Corruption Measures for All Firms: 2005-2015

Inefficiencies in Growth and Investment

Year

Sales Growth - Income Growth

Investment Inefficiency


Sales Growth - Income growth

Investment Inefficiency

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### Table 9: Corruption Measures of All Listed Firms: 2005-2015

<table>
<thead>
<tr>
<th>Year</th>
<th>Related Sales</th>
<th>Related Loans (%)</th>
<th>Other Receiv. (%)</th>
<th>Reg. Breaches</th>
<th>Entertain Exp. (%)</th>
<th>Sales Growth – Inc. Growth</th>
<th>Inv. Inefficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>0.038</td>
<td>0.136</td>
<td>0.010</td>
<td>0.121</td>
<td>0.256</td>
<td>0.300</td>
<td>0.303</td>
</tr>
<tr>
<td>2012</td>
<td>0.037</td>
<td>0.134</td>
<td>0.010</td>
<td>0.198</td>
<td>0.261</td>
<td>0.428</td>
<td>0.138</td>
</tr>
<tr>
<td>2013</td>
<td>0.039</td>
<td>0.152</td>
<td>0.008</td>
<td>0.225</td>
<td>0.250</td>
<td>0.415</td>
<td>0.178</td>
</tr>
<tr>
<td>2014</td>
<td>0.039</td>
<td>0.377</td>
<td>0.003</td>
<td>0.202</td>
<td>0.200</td>
<td>0.345</td>
<td>0.097</td>
</tr>
<tr>
<td>2015</td>
<td>0.040</td>
<td>0.299</td>
<td>0.000</td>
<td>0.208</td>
<td>0.196</td>
<td>0.595</td>
<td>0.121</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.001</td>
<td>0.142</td>
<td>-0.006</td>
<td>0.090</td>
<td>-0.051</td>
<td>0.154</td>
<td>-0.172</td>
</tr>
</tbody>
</table>

| t-stat | (-8.48) | (5.52) | (-20.07) |
| % Diff. | -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.**
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Figure 5: Distribution of Earnings for All Firms before and after Anti-Corruption Campaign Started

Earnings Distribution for all firms: 2005-2011

Figure 3A: Corruption Measures for All Firms: 2005-2014

Earnings Manipulation

Year


Absolute (Discretionary Accruals)

- Abs. (DACC)
- Earnings Discontinuity
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**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln (1 + Cumulative # Firms Investigated (t))</td>
<td>19.976**</td>
<td>4.683</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.59)</td>
<td>(0.79)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ln (1 + Cumulative # Firms Investigated (t-1))</td>
<td></td>
<td></td>
<td>30.099***</td>
<td>4.596</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2.99)</td>
<td>(0.57)</td>
</tr>
<tr>
<td>Provincial GDP (t-1)</td>
<td>47.372***</td>
<td>48.832***</td>
<td>115.439</td>
<td>197.658</td>
</tr>
<tr>
<td></td>
<td>(7.62)</td>
<td>(7.25)</td>
<td>(1.51)</td>
<td>(1.56)</td>
</tr>
<tr>
<td>Provincial GDP Growth (t)</td>
<td>259.806*</td>
<td>442.489**</td>
<td>141.172</td>
<td>145.852</td>
</tr>
<tr>
<td></td>
<td>(1.67)</td>
<td>(2.51)</td>
<td>(0.99)</td>
<td>(0.66)</td>
</tr>
<tr>
<td>Year Fixed Effects</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Provincial Fixed Effects</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td># Obs</td>
<td>124</td>
<td>93</td>
<td>124</td>
<td>93</td>
</tr>
</tbody>
</table>
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.