Discussion on

Do Chinese Social Media Delineate the Optimistic Bias of Traditional Media?

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ABFER 7th Annual Conference

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HKUST
May 2019
Summary

• Research Question
  – whether social media (SM) delineate the bias of traditional media (TM) by supplying less biased information to the market in China

• Baseline result
  – the association between TM tone and SM tone is weaker when TM tone is positive

• Market reaction result
  – the stock return response to the TM tone is significantly reduced when it deviates positively from the SM tone.

• Conclusion: social media can serve as a benchmark against newspapers’ reporting bias in China.
Overall comments

• The topic is interesting
  – TM in China are optimistically biased (e.g., Piotroski, Wong, Zhang 2015; 2017; Qin, Strömberg, Wu 2018)
  – SM provide value-relevant information in democratic regimes (e.g. Blankespoor et al., 2013; Bartov et al., 2018)
  – It is important to understand whether social media in China, i.e., a different regime, can provide useful information to the market

• Setting is unique
  – Use comprehensive data of TM and SM covering 3,000 Chinese listed firms
  – 146 million posts of a social media from EastMoney Stock Message Board (Guba)
  – Nearly 4 million newspaper articles, 162 unique newspapers
Overall comments

• Issues
  – Concept
  – Design
  – H1

• Suggestions
What is media bias?

• Media bias could refer to
  – Selected coverage (coverage bias)
  – Biased reporting (reporting bias)
Coverage bias
Reporting bias

Skewed News  by Eric Perlin

The slant of a left-wing newspaper:  ONE MILLION CIVILIANS KILLED

The slant of a right-wing newspaper:  ONE MILLION BAD GUYS KILLED
What is TM bias in China

• “..., we assume that a positive tone reflects the government’s preference to either suppress negative information (that is, only good news events are covered) or inject a positive bias in the news industry’s coverage of listed firms.”
  – Piotroski, Wong, Zhang 2017 (JLE, p.184)

• So the TM bias in China is also about
  – coverage bias (cover only good news events)
  – reporting bias (add bias to bad news events)
What does this paper do?

• The topic of the paper is about whether SM delineate the positive bias in TM.

• It is not very clear what “delineate” means
  – (1) SM correct the coverage bias in TM?
  – (2) SM correct the reporting bias in TM for a given event?

• The paper seems talking about (2)
  – The paper talks a few times about reporting bias in TM for underlying events
  – but their results could be driven by (1)
Design

- The paper measures TM tone and SM tone for the same firm on the same day
  - This helps ensure that TM and SM cover the same events
  - This is important if the story is about SM delineates the reporting bias in TM

- The paper defines TM Bias = TM tone – SM tone
  - One implicit assumption is that TM & SM cover the same events
  - by definition Tone = News Event + Bias
Design

• The problem is that measuring SM tone and TM tone for the same firm on the same day is not adequate to control for news events
  – The difference in SM & TM tone can still reflect difference in (1) coverage bias and (2) reporting bias for a given event

• Let’s look at the distribution of the tone
  – Almost 80% of TM tone is positive
  – Almost 90% of SM tone is negative
Design

• Is the difference due to reporting bias?
• Is the difference due to coverage bias?
Design

• Coverage bias: TM and SM can cover different events, even for a same company on a same day.

• Example: BYD, a electric car maker in China
  – TM coverage vs SM coverage on 3/3/2015
BYD

• Newspaper coverage on 2015-03-03

<table>
<thead>
<tr>
<th>News Titles</th>
<th>Date</th>
<th>Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td>从比亚迪K9“远嫁”日本看酸葡萄心理 (BYD exported buses to Japan)</td>
<td>2015-03-03</td>
<td>北京商报</td>
</tr>
<tr>
<td>比亚迪纯电动公交登陆武汉 (BYD electric buses debut in Wuhan)</td>
<td>2015-03-03</td>
<td>深圳商报</td>
</tr>
<tr>
<td>比亚迪全新3系集智升级 (BYD 3 series technology upgrade)</td>
<td>2015-03-03</td>
<td>北京晨报</td>
</tr>
</tbody>
</table>

– This may be an incomplete list

• SM coverage (from GUBA)

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Posts</th>
<th>Positive Posts</th>
<th>Negative Posts</th>
<th>Neutral Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-03-03</td>
<td>145</td>
<td>53</td>
<td>70</td>
<td>22</td>
</tr>
</tbody>
</table>

– Only 5 posts are about BYD exporting buses to Japan, 80% of the posts discussed or tried to predict stock price performance
H1

- H1 argues that when TM tone is positive, TM is more optimistically biased
  - To support this argument, the paper further argues the cost of bias is lower when underlying event is positive

- Appendix I shows that TM bias monotonically increases in TM tone
  - This appears to support the above argument for H1
  - The problem is that TM Bias = TM tone – SM tone, where TM tone could be based on a positive event but SM tone could be based a negative event
### Traditional Media Tone and Traditional Media – Social Media Tone Difference

<table>
<thead>
<tr>
<th>Traditional Media Tone Decile</th>
<th>Mean of TM Bias (Traditional Media Tone-Social Media Tone)</th>
<th>Standard Deviation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.3794</td>
<td>0.3760</td>
<td>98,421</td>
</tr>
<tr>
<td>2</td>
<td>0.0287</td>
<td>0.3535</td>
<td>97,206</td>
</tr>
<tr>
<td>3</td>
<td>0.2889</td>
<td>0.3410</td>
<td>97,943</td>
</tr>
<tr>
<td>4</td>
<td>0.4654</td>
<td>0.3279</td>
<td>94,736</td>
</tr>
<tr>
<td>5</td>
<td>0.6061</td>
<td>0.3314</td>
<td>96,345</td>
</tr>
<tr>
<td>6</td>
<td>0.7229</td>
<td>0.3316</td>
<td>97,796</td>
</tr>
<tr>
<td>7</td>
<td>0.8421</td>
<td>0.3340</td>
<td>97,993</td>
</tr>
<tr>
<td>8</td>
<td>0.9648</td>
<td>0.3337</td>
<td>98,644</td>
</tr>
<tr>
<td>9</td>
<td>1.0683</td>
<td>0.3323</td>
<td>97,264</td>
</tr>
<tr>
<td>10</td>
<td>1.1415 ▶️ SM Negative</td>
<td>0.3294</td>
<td>94,634</td>
</tr>
<tr>
<td>Total</td>
<td>0.5732</td>
<td>0.5722</td>
<td>970,982</td>
</tr>
</tbody>
</table>

- A large bias could capture a large **coverage bias**, not reporting bias
- This supporting H1, but is confusing because H1 is talking about **reporting bias**
Suggestions

• Clarify the objective of the paper
  – is it about SM correcting coverage bias or reporting bias?

• If this is about correcting reporting bias, need to control for the underlying events

• Focus on a specific news event announced by firms, e.g., earnings news, where you can clearly define good or bad news
  – Add a filter to the newspaper title and SM posts to make sure they are both about the same news events

• It would be interesting to know whether SM correct the reporting TM bias in this refined setting
Suggestions

• If the paper is about whether SM delineate coverage bias
  – this is interesting too
  – but the paper is currently talking about reporting bias
  – may still need to distinguish coverage bias from reporting bias.

Thank You and Good Luck!