How Increased Chinese Exports Drive Media Slant? Evidence from U.S. Local Newspaper over 1998-2017

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1 Literature Review

1.1 Adverse Effects of Trade Liberalization with China

International trade with China has become a contentious issue in the United States with the surging goods trade deficit with China. Despite of the various benefits stemming from the latest globalization initiated by China's joining the World Trade Organization, the increased imports from China have resulted in adverse effects in different aspects of American society. In the U.S. labor market, rising exposure slugs manufacturing employment, lowers labor force participation, and reduces worker' wages, particularly in industries where tariffs declined the most (Autor et al., 2013; Pierce and Schott, 2016). Concretely, Acemoglu et al. (2016) estimated a net job losses of 2.0 to 2.4 million due to the rise in import competition from China over the period 1999 to 2011. The high unemployment rate is accompanied by a deterioration in public health. Low-wage workers out of manufacturing industries sustain life by obtaining public disability benefits (Autor et al., 2014). Whites and males who disproportionately occupy the manufacturing employment exhibit higher injury and suicide rate, and experience more related causes of death (McManus and Schaur, 2016; Pierce and Schott, 2020).

Apart from the limits of trade liberalization brought about by the unbalanced redistribution mechanisms, recent works have shown that the boosting Chinese imports significantly affect voting results in the U.S as well. Autor et al. (2016) and Che et al. (2016) discovered that congressional districts open to increased Chinese import penetrations are less favorable of a moderate representative in office during the 2000s, but more supportive of a Democrat who prefers imports-limiting legislation and economic assistance. Evidence also suggests in presidential elections, counties with greater trade shocks shifted towards the Republican candidate, which aligns with the fact that in the 2016 presidential election, the Republican nominee Donald Trump who took a strong position in protecting the U.S. economy from foreign trade gained the majority of vote shares.

On top of influencing people's material interest, Chinese imports have also altered

American society's perception of China, which can be not only reflected by but also further amplified by the U.S. media coverage of China. Ramirez and Rong (2012) indicated that the spectacular exposure to imports from China is closely associated with an exacerbating image of China, with "China-bashing" becoming increasingly popular in both media coverage and election campaign strategies.

1.2 Sources and Measurements of Media Slant

A newspaper, subject to space limitation, commonly displays its attitudes through the selection of topics, i.e. the agenda setting behavior, and the expressions such as word choices. By increasing the coverage of an issue, a newspaper can convince its readers the importance of such topic and the shape the reality it tries to project (McCombs and Shaw, 1972).

There is an emerging literature highlighting the sources and measurements of media slant. A comprehensive literature review is provided by Strömberg (2015). In terms of theory, Mullainathan and Shleifer (2005) proves that reader heterogeneity plays a more essential role than the market competition per se in the accuracy in media coverage. Specifically, on topics where readers' prior beliefs are divergent, newspapers segment the market and slant toward extreme positions. Gentzkow and Shapiro (2006) first build a model confirming that media slant arises from firms' desire to build a reputation for accuracy, which is inclined to readership's prior beliefs and consumer preferences for confirmatory information. Gentzkow and Shapiro (2010) later finds that readers have significant similarities for like-minded news and that firms' responses to consumer's preferences roughly contribute to 20 percent of the variations in media slant. It is not until recently that the advancement of computational methods that enables researches to perform empirical analysis on the measurement of media slants. Le et al. (2017) proposed a method to scalably measure the political slant of news articles towards Republicans and Democrats by analyzing the social connectivity of users who tweet about the news. Misra and Basak (2016) presented a deep learning algorithm, LSTM network, to detect the bias between the liberal and conservative point of view on a multitude of socio-economical and environmental issues, even if

there are no specific words present in the text that obviously relates to the two political ideologies. Shun (2019) implemented machine learning (ML) and natural language processing (NLP) from build-in Python libraries to investigate political media bias on the direct quotations of parliamentary speeches. However, most existing studies merely measure the media slant from the perspectives of politics, not the overall aspects including but not limited to economics, culture, and so on.

It is noteworthy that the present literature rarely takes into consideration the dynamic changes in newspapers over time. This paper is henceforth committed to addressing the two abovementioned problems.

1.3 The Most Relevant Works

One of the most closely related paper Ramirez and Rong (2012) finds that the total number of "bad news" reports, which is defined as news touching the areas like human rights, child labor, democracy and repression, in U.S. newspaper and website contents from *Factiva* rise sharply three to four months after a trade deficit shock to the US-China bilateral trade balance, and then dies off slowly. Their time-series analysis is exclusively based on the keyword search method to measure media slant.

Lu et al. (2018) extends on the methodology of Ramirez and Rong (2012) and explores variations across individual local newspapers over 1998-2012. They show that newspapers whose circulation counties face greater exposure to Chinese imports report more negative news about China, which hold with two identifications strategies, three measures of media slants and a series of robustness checks. The paper further suggests that in U.S. House and Senate elections between 2000 and 2012, media slant is linked to a growing amount of voting shares for the Democratic party, who are traditional champions for the poor and opposed to globalization. However, the paper only considers observations from 1998 to 2012, which might fail to capture the relationship between the continuous increased Chinese imports and the politically polarized media slant pattern in recent years. The measurement of media slant is derived from calculating the ratio of the number of China-related news articles containing negative keywords from a self-constructed dictionary to the total number

of news reports that cover Chinese issues. Keyword detection is not reliable because of the subjectivity in constructing the negative-word dictionary, and its ambiguity - not all articles mention the "negative keywords" intend to stigmatize China.

Therefore, this paper aims to extend the time intervals with five more years, from 1998 to 2017, and intentionally excludes the impacts of the China-United States trade war commencing from 2018. It is expected to integrate the NLP-based sentiment analysis approach for the media slant measurement, which might allow better identification of the effect of U.S. counties' exposure to Chinese imports on its local newspaper's media slant.

References

Acemoglu, Daron, David Autor, David Dorn, Gordon H Hanson, and Brendan Price, "Import competition and the great US employment sag of the 2000s," *Journal of Labor Economics*, 2016, *34* (S1), S141–S198.

Autor, David H, David Dorn, and Gordon H Hanson, "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *The American Economic Review*, 2013, pp. 2121–2168.

_ , _ , _ , and Jae Song, "Trade adjustment: Worker-level evidence," *The Quarterly Journal of Economics*, 2014, *129* (4), 1799–1860.

_ , _ , Gordon Hanson, Kaveh Majlesi et al., "Importing political polarization? The electoral consequences of rising trade exposure," 2016.

Che, Yi, Yi Lu, Justin R Pierce, Peter K Schott, and Zhigang Tao, "Does trade liberalization with China influence US elections?," Technical Report, National Bureau of Economic Research 2016.

Gentzkow, Matthew and Jesse M Shapiro, "Media bias and reputation," *Journal of political Economy*, 2006, *114* (2), 280–316.

_ and _ , "What drives media slant? Evidence from US daily newspapers," *Econometrica*, 2010, *78* (1), 35–71.

Le, Huyen Thi Thanh, Zubair Shafiq, and Padmini Srinivasan, "Scalable news slant measurement using twitter," in "Eleventh International AAAI Conference on Web and Social Media" 2017.

Lu, Yi, Xiang Shao, and Zhigang Tao, "Exposure to Chinese imports and media slant: Evidence from 147 US local newspapers over 1998–2012," *Journal of International Economics*, 2018, *114*, 316–330.

McCombs, Maxwell E and Donald L Shaw, "The agenda-setting function of mass media," *Public Opinion Quarterly*, 1972, *36* (2), 176–187.

McManus, T Clay and Georg Schaur, "The effects of import competition on worker health," *Journal of International Economics*, 2016, *102*, 160–172.

Misra, Arkajyoti and Sanjib Basak, "Political Bias Analysis," 2016.

Mullainathan, Sendhil and Andrei Shleifer, "The Market for News," *American Economic Review*, 2005, *95* (4), 1031–1053.

Pierce, Justin R and Peter K Schott, "The surprisingly swift decline of US manufacturing employment," *American Economic Review*, 2016, *106* (7), 1632–62.

_ and _ , "Trade liberalization and mortality: evidence from US counties," *American Economic Review: Insights*, 2020, *2* (1), 47–64.

Ramirez, Carlos D and Rong Rong, "China Bashing: Does Trade Drive the "Bad" News about China in the USA?," *Review of International Economics*, 2012, *20* (2), 350–363.

Shun, Shen Yan, "Measuring Political Media Slant Using Textual Data: Evidence from Singapore," 2019.

Strömberg, David, "Media and politics," *economics*, 2015, *7* (1), 173–205.