

Bruegel

# Countries' perceptions of the BRI: A big data analysis

Alicia García-Herrero Jianwei Xu Robin Schindowski



## Agenda

1 Intuition

**2** Descriptive statistics

**3** Empirical analysis



# 1. Intuition



#### 1. Intuition

Fact Sheet BRI

- First announced in 2013 by then newly inaugurated President Xi Jinping.
- Promises of \$1 trillion in investment until 2027.
- Setup of dedicated institutions: Asia Infrastructure Investment Bank (AIIB) and the Silk Road Fund.
- The BRI has produced **offspring**: The Digital Silk Road (DSR), the Green Silk Road (GSR), and a Health Silk Road (HSR).



#### 1. Intuition

#### The BRI is at a crossroad

The BRI has faced many **headwinds** since the start of the pandemic:

#### Foreign

- Decreased lending activity since the China-US trade war.
- Unprofitable projects and debt distress abroad.

#### **Domestic**

- Domestic headwinds related to Covid.
- Real estate sector in debt distress.
- Consumer and business confidence has taken a hit.







Research question

The Chinese government's vision of the BRI is a win-win but...

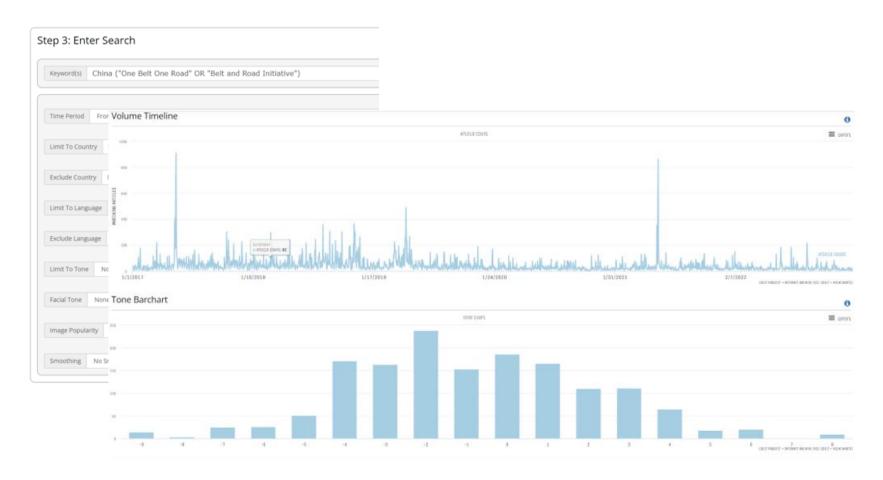


How does the rest of the world, both BRI countries and non-BRI countries see it?

Previous evidence is based on case studies and discourse analysis...



#### The GDELT database





Media sentiment in BRI and non-BRI countries









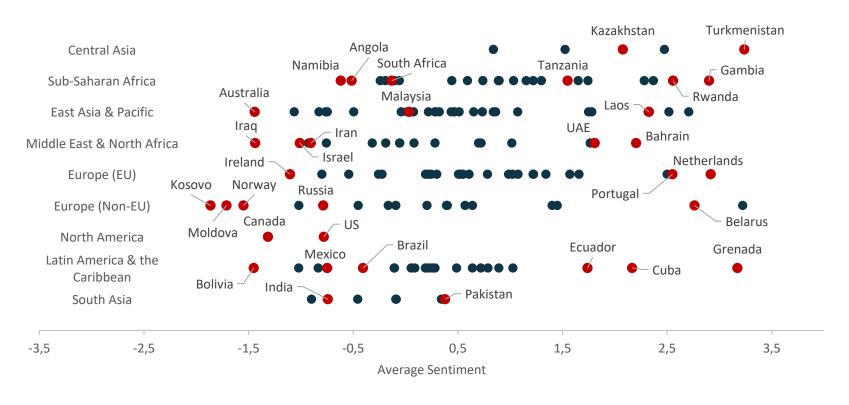
There is great inter-regional disparities in sentiment

Figure 3: Regional Comparison of tone of media coverage of the BRI 2,5 2 1,5 0,5 0 -0,5 -1 Average Sentiment —World Average



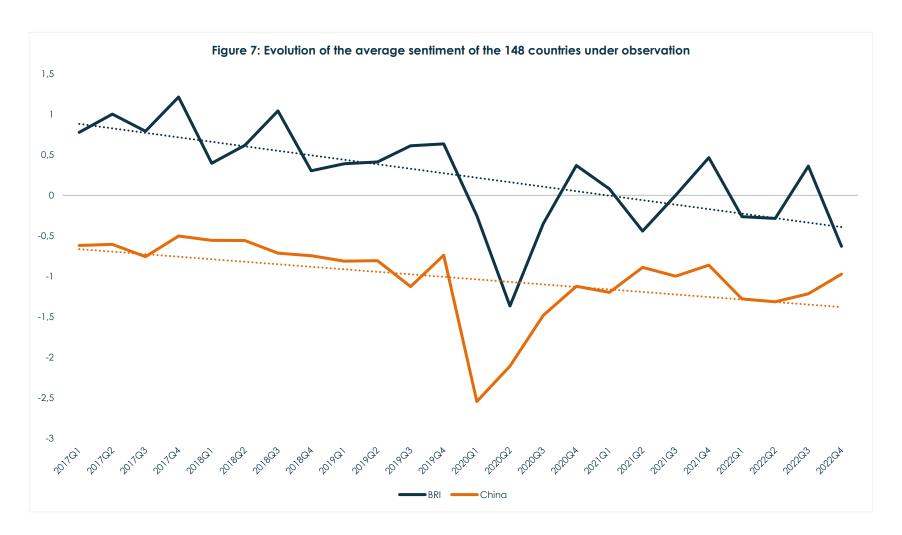
There is great intra-regional disparities in sentiment

Figure 4: Distribution of sentiment across 148 countries and regions





Sentiment for the BRI is higher than for China, but deteriorating...





Sub-Saharan Africa and Central Asia are still positive towards the BRI.

Figure 3: Regional Comparison of tone of media coverage of the BRI 4 3 -1 -2 ■ Average 2017 Average 2021/22





Research question



What are the main determinants of sentiment towards the BRI?



Regression analysis: Methodology

Fixed effects model, unbalanced panel dataset:

- 1 Other sentiment variables (using GDELT)
  - Investment
  - Trade
  - China

 $brisent_{it} = \theta_0 + \theta_1 tradesent_{it} + \theta_2 invsent_{it} + \theta_3 cnsent_{it} + \theta_5 controls_{it} + \varepsilon_i$ 

- (2) Real economic variables
  - GDP (WB)
  - FDI from China (CEIC)
  - Trade balance vis-à-vis China (UNCTAD)
  - Export concentration to China (UNCTAD)
  - Import concentration from China (UNCTAD)

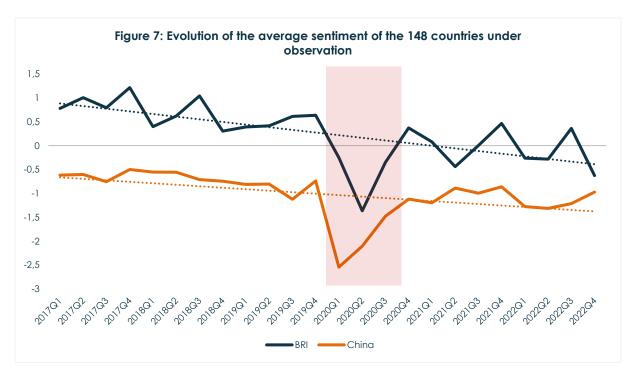
 $brisent_{it} = \theta_0 + \theta_1 lng dp_{it} + \theta_2 f di_{it} + \theta_3 balance_{it} + \theta_4 exconc_{it} + \theta_5 imconc_{it} + \theta_6 controls_{it} + \varepsilon_i$ 



Sentiment for the BRI is higher than for China, but deteriorating...



We add a dummy variable to both of the models that controls for the year 2020.





Trade sentiment	0.145		0.267*	0.130		0.255*
	(1.00)		(1.91)	(0.91)		(1.85)
Investment sentiment	0.416***		0.319**	0.419***		0.287**
	(2.98)		(2.15)	(3.16)		(2.05)
China sentiment	0.279**		0.197*	0.135		0.0631
	(2.34)		(1.75)	(1.04)		(0.55)
Log GDP		1.071	0.444		-0.599	-0.117
		(1.31)	(0.53)		(-0.63)	(-0.13)
FDI from China		0.525**	0.895***		0.520*	0.759***
		(2.39)	(4.31)		(1.89)	(3.23)
Trade balance China		8.090	11.77		12.65*	12.90*
		(0.86)	(1.59)		(1.70)	(1.82)
Export concentration		-7.889**	-7.717**		-7.469**	-7.588**
		(-2.16)	(-2.26)		(-2.23)	(-2.23)
Import concentration		-5.397	1.988		2.210	3.508
		(-1.17)	(0.52)		(0.58)	(0.95)
у2020				-0.407**	-0.886***	-0.407*
				(-2.05)	(-5.65)	(-1.92)
Constant	0.913***	-24.96	-9.521	0.823***	16.37	4.358
	(5.00)	(-1.21)	(-0.45)	(4.52)	(0.68)	(0.19)
Governance controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.165	0.0657	0.215	0.175	0.178	0.227
N. of observations	668	509	508	668	509	508

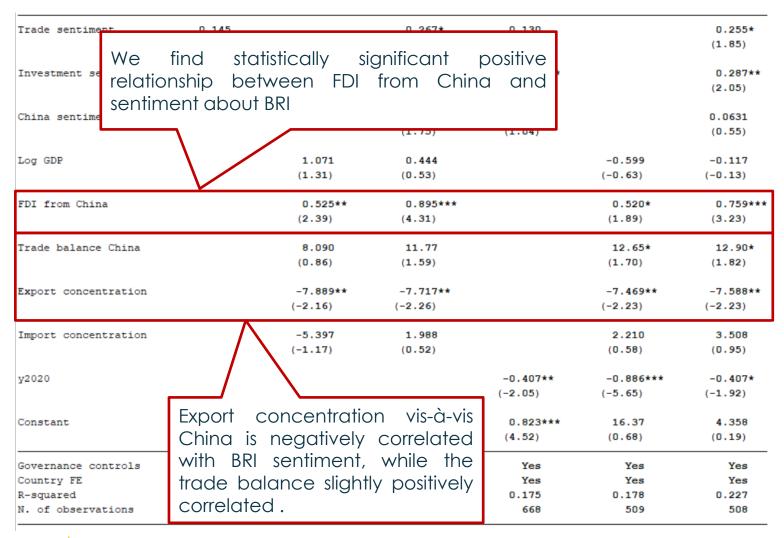


Trade sentiment	0.145 (1.00)		0.267* (1.91)	0.130 (0.91)		0.255* (1.85)
Investment sentiment	0.416*** (2.98)		0.319** (2.15)	0.419*** (3.16)		0.287** (2.05)
China sentiment	0.279** (2.34)	$\overline{\bigcap}$	0.197* (1.75)	0.135 (1.04)		0.0631 (0.55)
Log GDP		71	0. <b>444</b> (0.53)		-0.599 (-0.63)	-0.117 (-0.13)
FDI from China			0.895*** (4.31)		0.520* (1.89)	0.759*** (3.23)
Trade balance China				investment sentiment bu	(4.70)	12.90* (1.82)
Export concentration	_	•	ent about		-7.469** -2.23)	-7.588** (-2.23)
Import concentration		-5.397 (-1.17)	1.988 (0.52)		2.210 (0.58)	3.508 (0.95)
y2020				-0.407** (-2.05)	-0.886*** (-5.65)	-0.407* (-1.92)
Constant	0.913***	-24.96	-9.521	0.823***	16.37	4.358
	(5.00)	(-1.21)	(-0.45)	(4.52)	(0.68)	(0.19)
Governance controls	(5.00) Yes	(-1.21) Yes	(-0.45) Yes	(4.52) Yes	(0.68) Yes	(0.19) Yes
Governance controls Country FE						
	Yes	Yes	Yes	Yes	Yes	Yes



	0.145 (1.00)		0.267* (1.91)	0.130 (0.91)		0.255* (1.85)
Investment sentiment 0.416*** (2.98)			0.319** (2.15)	0.419*** (3.16)		0.287** (2.05)
China sentiment	0.279** (2.34)		0.197* (1.75)	0.135 (1.04)		0.0631 (0.55)
Log GDP		1.071 (1.31)	0.444 (0.53)		-0.599 (-0.63)	-0.117 (-0.13)
he high correlation between			0.895*** (4.31)		0.520* (1.89)	0.759***
entiment about bout BRI actually	disappear	s when	11.77 (1.59)		12.65* (1.70)	12.90* (1.82)
ve introduce a tim	ie dummy f	or 2020 (-2.16)	-7.717** (-2.26)		-7.469** (-2.23)	-7.588** (-2.23)
Import concentration		-5.397 (-1.17)	1.988 (0.52)		2.210 (0.58)	3.508 (0.95)
y2020	· ·			-0.407** (-2.05)	-0.886*** (-5.65)	-0.407* (-1.92)
				0.000+++		4.050
Constant	0.913*** (5.00)	-24.96 (-1.21)	-9.521 (-0.45)	0.823*** (4.52)	16.37 (0.68)	4.358 (0.19)
Constant  Governance controls Country FE						







#### 3. Conclusions

- Countries with a positive sentiment about China's inbound investment are more likely to have a positive sentiment about the BRI. This is less true for trade.
- Sentiment towards China seems to influence sentiment about BRI but only in the year of the pandemic (2020).
- The larger the FDI received by a certain country form China, the more positive is the sentiment about the BRI.

• The more positive a country's trade balance with China the more likely it is to have a positive sentiment about BRI. At the same time, when exports are too concentrated to China, sentiment about BRI tends to be worse.



# Thank you!





- Banerjee, D. (2016). China's one belt one road Initiative—An Indian perspective. Perspective, 14(2016), 1-10. Retrieved from https://web5.iseas.edu.sg/images/pdf/ISEAS\_Perspective\_2016\_14.pdf
- Bogdan, O., Najdov, E. (2020). Belt and Road Initiative: Azerbaijan Country Case Study. World Bank, Washington, DC. Retrieved from https://openknowledge.worldbank.org/handle/10986/34329
- Breuer, J. (2017). Two belts, one road? the role of Africa in china's belt & road initiative. Asienhaus.De, Blickwechsel, 1-8. Retrieved from https://www.asienhaus.de/uploads/tx\_news/Blickwechsel\_OBOR-Afrika\_01.pdf
- Brînză, A. (2022). What Happened to the Belt and Road Initiative?. The Diplomat, September 06, retrieved from: <a href="https://thediplomat.com/2022/09/what-happened-to-the-belt-and-road-initiative/">https://thediplomat.com/2022/09/what-happened-to-the-belt-and-road-initiative/</a>
- Cadenas-Santiago, G., García-Herrero, A., Ortiz, A., & Rodrigo, T. (2015). An empirical assessment of social unrest dynamics and state response in Eurasian countries. Eurasian Journal of Sciences, 3(3), 1-29.
- Casarini, N. (2015a). Is Europe to benefit from China's belt and road initiative. Istituto Affari Internazionali, 15, 1-10.
- Chaziza, M. (2020). China-Bahrain relations in the Age of the Belt and Road Initiative. Institute for National Security Studies, Strategic Assessment 10/21.
- Chen, A. Y. (2009). China's role in infrastructure development in Botswana. SAllA Occasional Paper, 44, 1-20.
- Dadabaev, T. (2018). "Silk road" as foreign policy discourse: The construction of Chinese, Japanese and Korean engagement strategies in central Asia.
   Journal of Eurasian Studies, 9(1), 30-41.
- Davies, M., Edinger, H., Tay, N., & Naidu, S. (2008). How China delivers development assistance to Africa. Stellenbosch: Centre for Chinese Studies, University of Stellenbosch, 1-68.
- Dobler, G. (2017). China and Namibia, 1990 to 2015: how a new actor changes the dynamics of political economy, Review of African Political Economy, 44(153), 449-465
- Freymann, E. (2021). One Belt One Road: Chinese Power Meets the World. Harvard East Asian Monographs, Harvard University Asia Center, Boston, United States.



- García-Herrero, A., & Xu, J. (2017). China's belt and road initiative: Can Europe expect trade gains? China & World Economy, 25(6), 84-99.
- Greenfield, C. (2019). Vanuatu to seek more Belt and Road assistance from Beijing: PM. Reuters, May 22, retrieved from <a href="https://www.reuters.com/article/us-pacific-china-vanuatu-idUSKCN1SSOR7">https://www.reuters.com/article/us-pacific-china-vanuatu-idUSKCN1SSOR7</a>
- Gokoluk, S., Almeida, H. (2022). Two more African nations fall into debt distress as debt risks rise. Bloomberg, July 20, retrieved from https://www.bloomberg.com/news/articles/2022-07-20/two-more-african-nations-fall-into-distress-as-debt-risks-rise
- Gómez, A. (2017). Financial Sovereignty or New Dependency? How China is Remaking Bolivia. Asociación Ambiente y Sociedad, Inversiones chinas en América Latina, 08/17, retrieved from https://www.chinaenamericalatina.info/financial-sovereignty-or-a-new-dependency-how-china-is-remaking-bolivia/
- Kratz, A., Mingey, M., D'Alelio, D. (2021). China's Belt and Road: Down but not Out. Rhodium Group, Note, retrieved from <a href="https://rhg.com/research/bridown-out/">https://rhg.com/research/bridown-out/</a>
- Langendonk, S. (2020). Discourse Power as a Means to 'Struggle for Position': a Critical Case Study of the Belt and Road Narrative's Effects on Foreign Policy Formulation in the Netherlands. Journal of Chinese Political Science, 25(2), 241-260.
- Hallgren, H., & Ghiasy, R. (2017). Security and economy on the belt and road: Three country case studies. SIPRI Insights on Peace and Security, 4, 1-12.
   Retrieved from <a href="https://www.sipri.org/sites/default/files/2017-12/sipriinsights1712\_.pdf">https://www.sipri.org/sites/default/files/2017-12/sipriinsights1712\_.pdf</a>
- Hlatshwayo, S., Oeking, A., Ghazanchyan, M. M., Corvino, D., Shukla, A., & Leigh, M. L. Y. (2018). The measurement and macro-relevance of corruption: A big data approach. IMF Working Paper, 18/195, 1-72. Retrieved from <a href="https://www.imf.org/~/media/Files/Publications/WP/2018/wp18195.ashx">https://www.imf.org/~/media/Files/Publications/WP/2018/wp18195.ashx</a>
- Horn, S., Reinhart, C.M., Trebesch, C. (2022). Hidden Defaults. Policy Research Working Paper; No. 9925. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/36965 License: CC BY 3.0 IGO.
- Hurley, J., Morris, S., & Portelance, G. (2018). Examining the debt implications of the belt and road initiative from a policy perspective. CGD Policy Paper,
   121, 1-39. Retrieved from https://www.cgdev.org/sites/default/files/examining-debt-implications-belt-and-road-initiative-policy-perspective.pdf



- Jiang, J.Y. (2021). The future of the Belt and Road Initiative in Australia, Asia and Pacific Policy Society, Policy Forum.
- Jyoti Das, H. (2022). Critical Assessment of BRI Projects in Iraq, Vivekananda International Foundation, 07/22, retrieved from https://www.vifindia.org/article/2022/july/07/critical-assessment-of-bri-projects-in-iraq
- Lain, S. (2018). The potential and pitfalls of connectivity along the silk road economic belt. In Marlene Laruelle (Ed.), China's belt and road initiative and its impact in central Asia (pp. 1-10). Washington, D.C.: The George Washington University, Central Asia Program.
- Li, Y. (2018). The greater Eurasian partnership and the belt and road initiative: Can the two be linked? Journal of Eurasian Studies, 9(2), 94-99.
- Li, C. (2022). The Belt and Road Initiative in Oceania: Understanding the People's Republic of China's Strategic Interests and Engagement in the Pacific, Department of Defense, Center for Excellence in Disaster Management & Humanitarian Assistance, Report by the University of Hawai'i at Mānoa, Department of Asian Studies
- Machado, P. (2021). Assessing China and Angola relations: The implications of the 'Angola model' of economic development. Centro de Investigação do Instituto de Estudos Políticos, Working Paper 01/2021.
- Narita, M. F., & Yin, R. (2018). In search of information: Use of google trends' data to narrow information gaps for low-income developing countries.
   IMF Working Paper, 18/286, 1-51. Retrieved from https://www.imf.org/~/media/Files/Publications/WP/2018/wp18286.ashx
- Ramachandran, S. (2020). Has India Won the Match Over the Maldives? The Diplomat, August 19, retrieved from https://thediplomat.com/2020/08/has-india-won-the-match-over-maldives/
- Reuters (2018). Gambia president tells China previous Taiwan ties a 'huge mistake'. Reuters, September 6, retrieved from https://www.reuters.com/article/us-china-africa-gambia-idUSKCN1LM1HV
- Sato, J., Shiga, H., Kobayashi, T., & Kondoh, H. (2011). "Emerging donors" from a recipient perspective: An institutional analysis of foreign aid in Cambodia. World Development, 39(12), 2091-2104.



- Sheng, J. (February 2018). Analyzing the risks of china's 'One belt, one road' initiative. Paper presented at the The 8th International NASD Conference on Economic and Legal Challenges, L'viv, Ukraine. 1-9.
- Shopov, V. (2022). Mapping China's rise in the Western Balkans. European Council on Foreign Relations, 03/22, retrieved from <a href="https://ecfr.eu/special/china-balkans/">https://ecfr.eu/special/china-balkans/</a>
- Shrestha, M. B. (2017). Cooperation on finance between china and Nepal: Belt and road initiatives and investment opportunities in Nepal. The Journal of Finance and Data Science, 3(1-4), 31-37.
- Synergia (2017). China's strategic move in Grenada. Synergia Foundation, Expert Insights, 12/17, retrieved from https://www.synergiafoundation.org/insights/analyses-assessments/china-s-strategic-move-grenada
- The Journal (2021). New poll shows deep distrust of Chinese government among Irish public. The Journal, The Good Information Project, May 22, retrieved from <a href="https://www.thejournal.ie/ireland-thinks-china-5442873-May2021/">https://www.thejournal.ie/ireland-thinks-china-5442873-May2021/</a>
- Winters, M. S., Dietrich, S., & Mahmud, M. (2017). Perceptions of foreign aid project quality in bangladesh. Research & Politics, 4(4), 1-6.
- Woods, N. (2008). Whose aid? whose influence? china, emerging donors and the silent revolution in development assistance. International Affairs, 84(6), 1205-1221.
- Yonamine, J. E. (2013, April 12). Predicting future levels of violence in Afghanistan districts using GDELT. Retrieved from http://data.gdeltproject.org/documentation/Predicting-Future-Levels-of-Violence-in-Afghanistan-Districts-using-GDELT.pdf
- Yuan, Y. (2017). Modeling inter-country connection from geotagged news reports: A time-series analysis. Paper presented at the International Conference on Data Mining and Big Data, Fukuoka, Japan. 183-190.
- Zhang, P. (2019). Belt and Road in Latin America: A regional game changer?. The Atlantic Council, Issue Brief, 10/2019, retrieved from <a href="https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/belt-and-road-in-latin-america-a-regional-game-changer/">https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/belt-and-road-in-latin-america-a-regional-game-changer/</a>



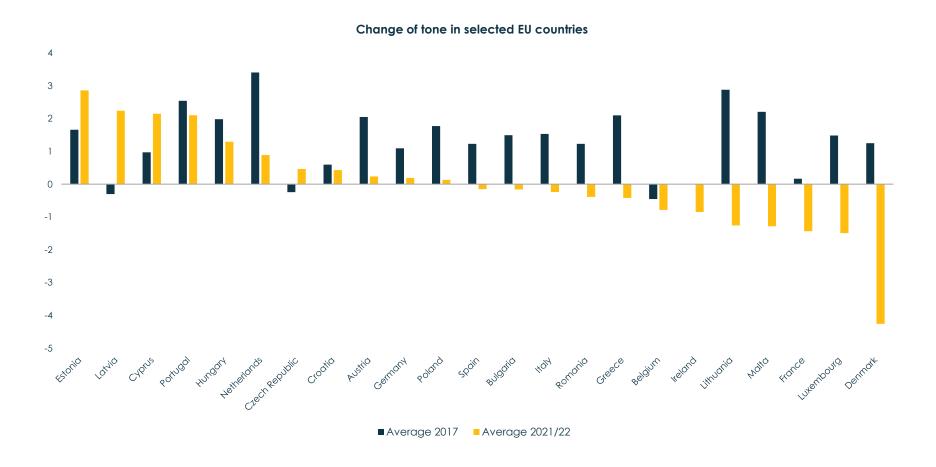




# **Appendix**

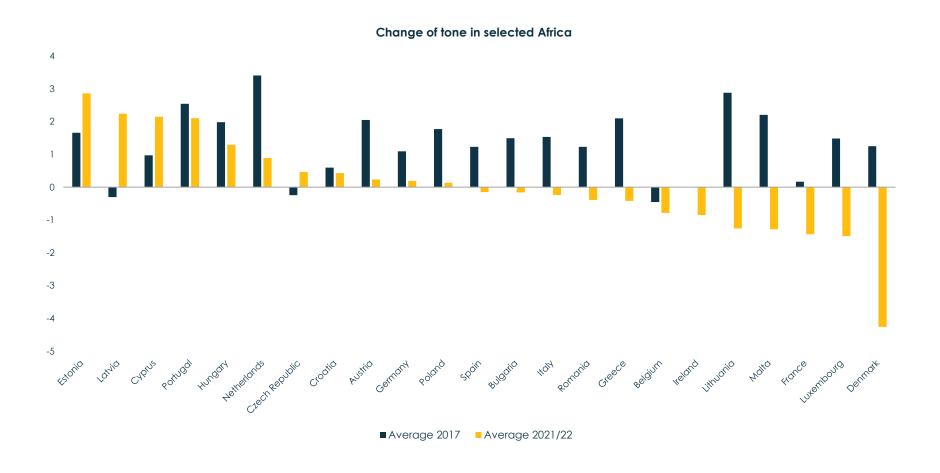


### Sentiment change in the EU





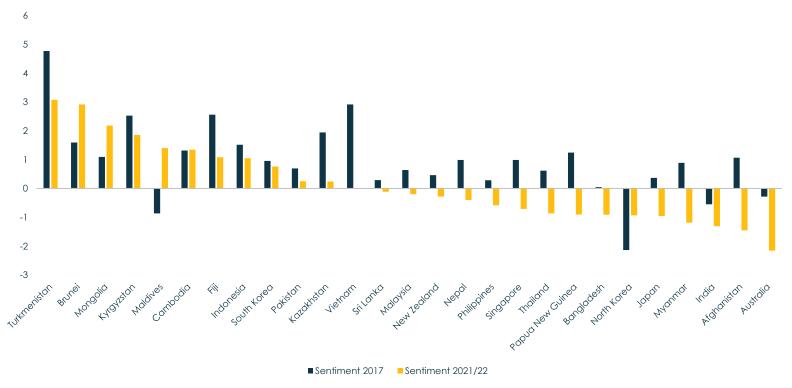
## Sentiment change in Africa





### Sentiment change in China's neighborhood







## Sentiment at the extremes per region (1/2)

	Best			Worst		
Region	Country	Reason	Country	Reason		
Sub-Saharan Africa	Gambia	Gambia broke diplomatic ties with Taiwan in November 2013, just one month after the BRI was announced. Since 2016, massive investment from China has flooded into the small West-African country. From then onwards, development cooperation has positively shaped sentiment in Gambia towards the BRI (Reuters, 2018).	Namibia	Since the early 2000s China's influence in Namibia has steadily grown with the construction sector playing a major role. The rents of projects mainly went to established elites and has reaffirmed the social and economic exclusion of large parts of the population, specifically those without beneficial political connections (Dobler, 2017).		
East Asia & Pacific	Tonga	The BRI's media sentiment in many Island States in the pacific has been positively shaped by heavy infrastructure investment from China, also in Tonga. In 2017, construction ended of the royal St. George palace, built by the Chinese SOE Shanghai Construction Group General Co. (Li, 2022).	Australia	The strongly negative sentiment in the Australian media originates from a general deterioration in bilateral relations with China. Cyberattacks, tariff on Australian exports, and Beijing involvement in the Australia's politics led to widespread Anti-Beijing resentment (Varano, 2021). The Australian government, initially cautiously open towards the initiative has turned its back on OBOR (Jiang, 2021).		
Middle East & North Africa	Bahrain	Bahrain embraces the BRI as an integrated part of its homemade Bahrain Economic Vision 2030 (BEV2030). Policy coordination, connectivity, trade and investment, and people-to-people-bonds have been identified as the cornerstones of China-Bahrain economic cooperation. This unusual degree of specificity has positively shaped the image of the initiative in the Kingdom (Chaziza, 2020)	Iraq	Economic cooperation with China has been controversial within Iraq. First, China imports oil from Iraq at a price of \$70 per barrel, while Iraq imports the same amount of gasoline at \$200. This trade imbalance has led to negative resentment within the country while China's approach to investment in exchange for energy supply goods has equally faced criticism (Jyoti Das, 2022).		



## Sentiment at the extremes per region (2/2)

Europe (EU)	Netherlands	Despite the Netherlands tough stance on human rights issues in China, the Belt and Road Initiative enjoys a strongly positive image. This is most likely driven by business circles who report an increase in official visits from diplomats, investors, and business actors under the aegis of the BRI (Langendook, 2020).	Ireland	Ireland is not a participant of the BRI, nor is it located in a geographically relevant region. It is plausible that the negative sentiment towards China's initiative stems from a generally skeptical view towards China's rise. A study launched by <i>The Journal</i> found that the words most commonly associated with China's rise are "Worrying", "Scary", "Dangerous", and "Frightening" (The
Europe (Non-EU)	Bosnia and Herzegovina	Bosnia and Herzegovina has been the major recipient of Chinese investment having received 20% of all construction loans in central and eastern Europe in 2018 (ECFR, 2022). China comes at a strong supporter of the country even when Western nations have called the long-term stability of Bosnia and Herzegovina into question.	Kosovo	Journal, 2021).  China's strong push for the BRI in the Balkans did was not met with enthusiasm across the entire region. Kosovo does still not have official diplomatic relations with China, the latter refusing to recognize its status as a sovereign country, and to make matters worse, Serbia is the key ally of China in the region (ECFR, 2022).
Latin America & Caribbean	Grenada	Since Grenada recognized the People's Republic as the true China, relations between the two countries have improved significantly. In 2017, it became public that the Grenadian government was assisted by China in the crafting of its national development strategy (Synergia, 2017). This shows how trusted the economic relationship between the two countries has become.	Bolivia	Bolivia has been struck by several water crises in the last 25 years. At the same time, Bolivia possesses 60% of the world's lithium reserves (S&P Global, 2021). Intense mining activities by Chinese companies and their alleged diversion of water has led to protests against China's economic footprint in the country, with 86 communities having declared a "state of emergency" (Gómez, 2017).
South Asia  CHINA  ** HORIZONS  **	Pakistan	Pakistan enjoys a special place in the BRI with its own title, the China-Pakistan Economic Corridor (CPEC). Initially praised as an alternative trade route to the one through the Malacca strait, many projects have proven unprofitable and widespread debt restructuring is just a matter of time (Freymann, 2021). Nevertheless, Pakistan is the most optimistic country in South Asia, although only with an average sentiment of 0.38.	Maldives	Authoritarian president Yameen's corrupt business deals with China and his \$1.4bn in accumulated debt to China has driven sentiment towards the BRI into the red numbers. China's influence remains strong, with much of the industry depending on Chinese tourists and fishing exports. However, India is now contesting China's position with its own development commitments (Ramachandran, 2020)