The relationship between press freedom and political participation: a cross-country analysis

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Introduction

Government attempts to influence the nature of information reaching their citizens has long been studied under the social sciences. Researchers examining media freedom have tested its relationship with several indicators. Some have found that private media ownership is correlated with better social outcomes such as greater life expectancy than state owned media (Djankov et al., 2003). In the same vein, Coyne et al. (2004) have found that greater government control of media reduces accountability of the government and thus reduces economic development. Similarly, higher access to globalizing information networks has been found to promote higher rates of political participation (Kuznetsova and Tolbert, 2023)

Thus, we want to look at whether the degree of press freedom in a country can predict the rates of political participation in that country. We use the 'Reporters without borders' press freedom index, and the Economist Intelligence Unit's political participation scores to quantify this relationship. Leeson (2008) has previously measured the effect of media freedom on political knowledge and participation rates, and we try to extend their analysis by using different datasets with more up-to-date data.

Are higher press freedom scores correlated with greater political participation across countries?

Data and Methods

Independent variable
The press freedom level is selected from 'RSF's World Press Freedom' dataset, which covers years 2002-2022. The measurement is evaluated under five categories: political pressure, the legal framework, the economic context, the sociocultural context, and the journalist's safety in the country (Reporters Without Borders, 2023). Press freedom ranges from 0 to 100. A higher score means the country enjoys a relatively high degree of press freedom, i.e. free flow of information and less control over the press and media in the country

Dependent variable
We pick the political participation index from the 'Economist Intelligence Unit', which covers the years between 2006 and 2022. The variable measured the extent to which the citizens could participate in politics, ranging from 0 to 10 (most active).

Data cleaning and wrangling
We cleaned the data to remove unnecessary strings, unnecessary columns, and also changed the data class of some columns. Political participation scores were missing for some years, so we interpolated them based on the year after and before. After merging the two datasets, we decided to pick the years from 2013 to 2022 as our project focus (subset), as there are different calculation methods in the press freedom dataset in older years (2012 or older). We also merged the data with the 'continents' dataset from 'Our World in Data' to represent our analysis continent-wise.
We found that 12 countries are missing in political participation in the period of 2013-2022 are as follows:

Andorra, Belize, Brunei, Darussalam, Kosovo, Liechtenstein, Maldives, OECS, Samoa, Seychelles, Somalia, South Sudan, Tonga

We did not further analyse the result, as these missing data were from economically and geographically diverse countries, and we estimated that the data may be missing due to features in the data collection infrastructures in these countries instead.

Exploratory data analysis

Political participation level in 2022 (Figure 1)
- Top five: are Norway (10), New Zealand (10), Israel (9.44), United States (8.89), Iceland (8.89)
- Bottom five: Laos (1.67), Central African Republic (1.67), Myanmar (0.56), Eritrea (0.56), Afghanistan (0)

Press freedom score in 2022 (Figure 1)
- Top five: are Norway (92.65), Denmark (90.27), Sweden (88.84), Estonia (88.83), and Finland (88.42)
- Bottom five: Myanmar (25.03), Turkmenistan (25.01), Iran (23.22), Eritrea (19.62), North Korea (13.92)

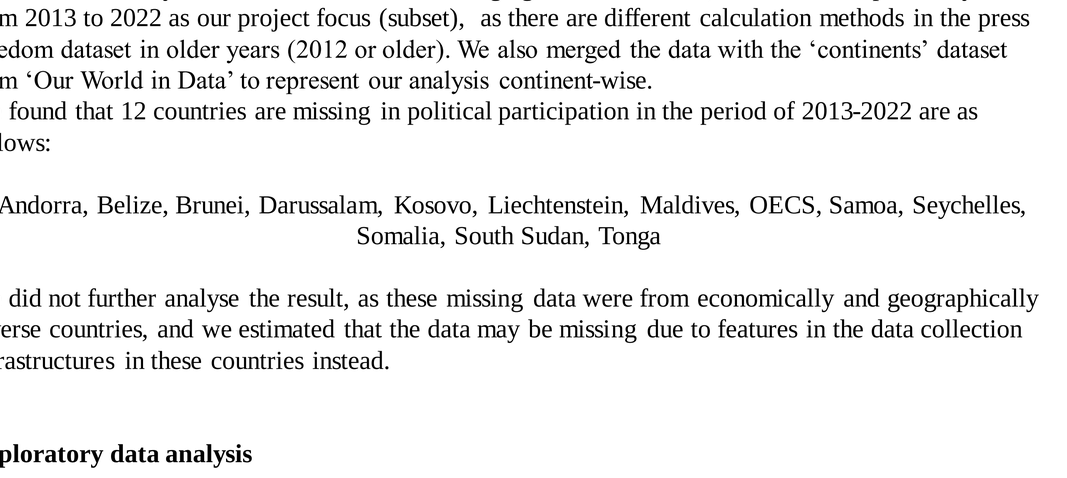
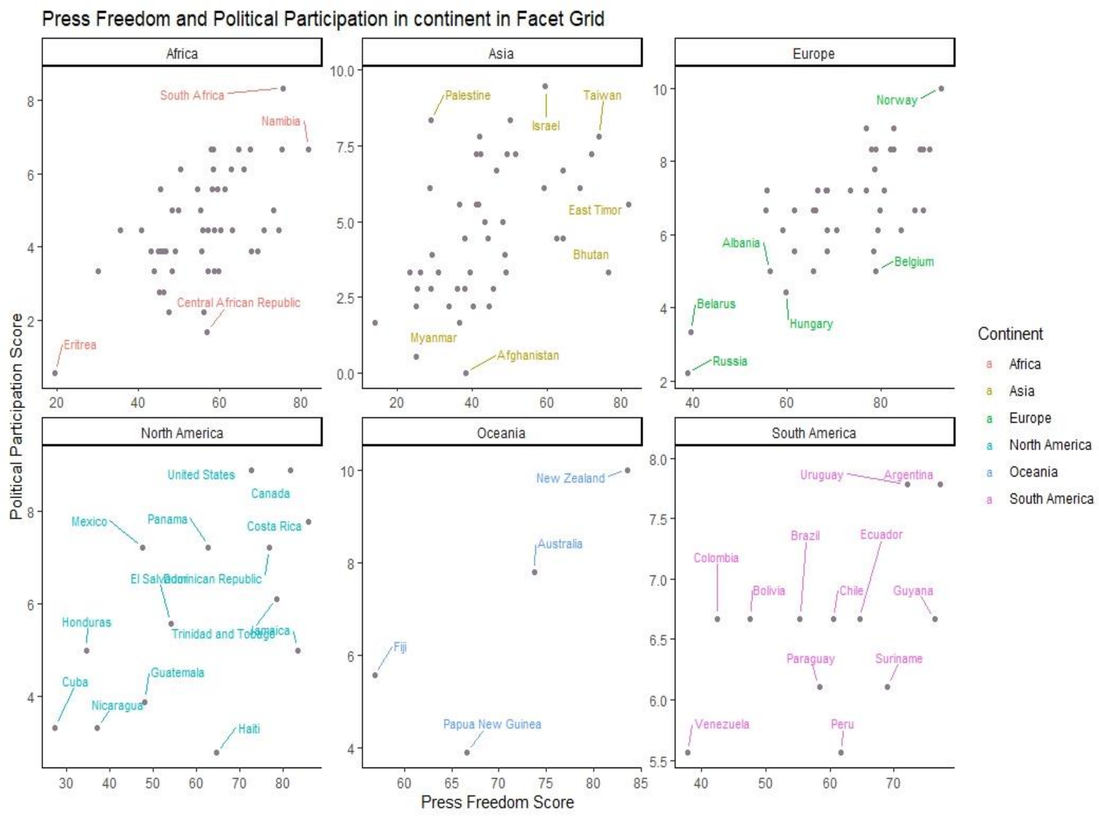


Figure 1. Press freedom score and Political politicization level in countries in 2022

Figure 2: Scatterplot showing political participation and press freedom across countries (by region) for the year 2022



Before conducting simple linear regression, we wanted to see how countries are positioned on a scatterplot accounting for both variables. Figure 2. partly supports our hypothesis that higher press freedom scores align with higher political participation scores, for instance, in the Africa plot, South Africa seems to have a top right position, indicating higher figures for both, and the same goes for New Zealand, in the Oceania figure. But some interesting observations are that in South America, political participation for a lot of countries are in the 6.8 (out of 10) range, for countries with vastly varying press freedom scores. Mexico is an outlier too, with a high political participation core despite being in the 'difficult situation' range for press freedom. But overall, since there are no countries in the bottom right corner, and the top left corners, meaning that 'having a disproportionately high or low score in one aspect and not the other' was not found, making linear regression a viable route.

Results

	pol_part_score		
Predictors	*Estimates*	*CI*	*p*
press_freedom_score	0.07 ***	0.07 – 0.07	**<0.001**
Observations	1670		
R^2 / R^2 adjusted	0.385 / 0.385		
	* *p*<0.05	** *p*<0.01	*** *p*<0.001

The coefficient for press freedom scores is 0.0705. This means that for every increase in press freedom scores by one unit, the expected increase in political participation scores is 0.0705. The coefficient is statistically significant, so we can reject the null hypothesis that the corresponding coefficients are equal to zero. The R-squared value is 0.3852, indicating that approximately *38.52% of the variability in the political participation scores is explained by the press freedom scores.*
The F-statistic tests the overall significance of the model. **With a large F-statistic of 1045 and a very low p-value (< 2.2e-16), it suggests that the overall model is statistically significant**.
The residual standard error is 1.489 , and gives an idea of the average distance between the observed values and the values predicted by the model.

Conclusion and Limitations

These results show that there is a strong positive correlation between the level of press freedom in a country and its political participation rates. However, this does not prove that the causality chain runs from press freedom to political participation. For instance, a reverse relationship may also be true, and compatible with these results, that lower political participation encourages governments to restrict press freedom. *The results here are thus of a suggestive nature, supporting our thesis that governments which suppress press freedom would also restrict its citizens' political participation.* Our results would have been stronger if we had used control variables such as the regime type as the level of democratisation strongly affects both these variables.

A more serious limitation of our study is that in the countries where press freedom may be suppressed to greater degrees, this could generate the conditions for alternative ways of action from residents. These alternative actions may not have been measured by the political participation index.

Thirdly, our regression analysis was based on data that combined cross-country and time-series data. And the regression entailed estimating the coefficients for a best fit equation to represent the relationship between dependent variable (press freedoms score) and independent variable (political participation score). This analysis was on the assumption that the pattern found is common across all the countries in our dataset. Generally, the heterogeneity across countries often makes it difficult to quantify the link between political indicators on a cross-country basis, as context specificity is important. For instance, Israel's score for press freedom is 59, which is termed by RSF as a 'difficult situation', while it has one of the top five places in political participation. We can speculate that this is because of factors such as exclusion of Palestinian people from the political participation surveys, and possibly because state control of Israeli media is not a polarising issue in Israeli society. This goes to show that our model cannot account for context specificity as it assumes a common pattern.

References

Coyne, C. J., & Leeson, P. T. (2004). Read all about it! Understanding the role of media in Economic development. *Kyklos*, *57*(1), 21–44. https://doi.org/10.1111/j.0023-5962.2004.00241.x
Djankov, S., McLiesh, C., Nenova, T., Shleifer, A. (2003). Who Owns the Media?. ***Journal of Law and Economics***, *University of Chicago Press*, 46(2), 341-381. https://ideas.repec.org/a/ucp/jlawec/y2003v46i2p341-81.html
Kuznetsova, D., & Tolbert, C. J. (2023). Globalizing information networks, social media, and participation. *Social Science Quarterly*, *104*(4), 505–520. https://doi.org/10.1111/ssqu.13287
Leeson, P. T. (2008). Media Freedom, Political Knowledge, and Participation. *The Journal of Economic Perspectives*, *22*(2), 155–170. http://www.jstor.org/stable/27648246
Reporters Without Borders. (2023). *World Press Freedom Index*. doi: https://rsf.org/en/index
Economist Intelligence Unit (2023). Economist Intelligence Unit 2021 via gapminder – processed by Our World in Data. https://ourworldindata.org/grapher/political-participation-index-eiu

Division of Labor

Both of us cooperate in data cleaning, data wrangling, and data visualization