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# Corrigendum: The 2021 Madrilenian regional election: how can the incumbent improve its results in times of crisis?

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## KEYWORDS

COVID-19, incumbent, retrospective voting, vote swift, mobilization, regional economic voting

## A corrigendum on

[The 2021 Madrilenian regional election: how can the incumbent improve its results in times of crisis?](#)

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In the published article, there was an error in [Table 2](#) and [Table 3](#) as published, due to an error in the data regarding the 2021 election, affecting only 21 observations (Madrid city' districts).

Regarding [Table 2](#), the error affected the first three rows, producing minor differences.

Regarding [Table 3](#), the problem affects all the table: the average income happens to be relevant and its coefficients (in the three models displayed by the table) are higher; the total cumulated COVID-19 incidence has no statistically significant relationship with the changes in PP's result, as well as the evolution of Ciudadanos' results; regarding the change in turnout, the coefficient is slightly affected, but the significance remains; the relative weight of the different age groups changes, only the presence of people between 18 and 24 years old is significant, its coefficient being smaller; the concentration of the other age groups is not significant, and the coefficients vary; the coefficient of the total population increases and remain significant; the interactions remain insignificant and their coefficient vary slightly; the Adjusted  $R^2$  is smaller in the three models displayed by the table.

These changes affect the results and therefore imply that modifications are needed in the Abstract, the Introduction, the Results (only the first part, about the aggregate-level analysis) and the Discussion.

The corrected [Table 2](#) and [Table 3](#) appear below.

The above-mentioned mistakes affect some parts of the Abstract, the Introduction, the Results, and the Discussion. Also, a non-related minor mistake was detected on the Data and method section. Here are the detailed corrections:

A correction has been made to the Abstract. The corrected sentence appears below:

**“Results:** There was a higher improvement in PP's results in areas with higher increase in the turnout rate, and both individual and aggregate-level data show that this improvement was also led by upper-class and young voters. However, there is no significant association with the cumulated cases of COVID-19 in the area.

**Discussion:** The article contributes to the understanding of the 2021 Madrilenian regional election, showing that, despite the politicization of the pandemic, there was no relationship between how hardly were the areas hit by the pandemic and the outcome of the election at the aggregated-level.”

A correction has been made to the Section 1. **Introduction**, paragraphs 5 and 6. The corrected text appears below:

“I run separate aggregate- and individual-level data to make a simple analysis of the factors that led to the improvement of PP’s results compared to 2019. Individual-level data shows that the major change that made the PP improve its results was the collapse of Ciudadanos, its competitor on the center-right spectrum. Other elements that contributed to its victory were the mobilization of previously abstentionist voters, as well as young people, and citizens less politicized and interested in politics. However, at the aggregate level there was no significant relationship between how hardly an area had been hit by the pandemic and the evolution of PP’s results in 2021 compared to 2019.”

A correction has been made to the Section 6. **Results**, “*Aggregate-level analysis*,” paragraphs 3–11. The corrected paragraphs appear below:

“The net average income per person shows a significant and positive relationship with the improvement of PP’s result, which contradicts E1. Indeed, this result shows that the PP improved its results in the wealthiest areas: 0.50 points for each extra 1,000€ average income per year in the area, on average.

There is no significant relationship between the impact of COVID-19 and PP’s improvement. Therefore, E2 is not confirmed, and we cannot argue that in the areas where the pandemic had a greater impact people voted more for the party that was promising the end of the restrictions.

Regarding E3, and following the previous paragraph, the relationship between COVID-19 and the evolution of PP’s results doesn’t change depending on the average income of the area, since the interaction between both variable is not significant. Therefore, we must also reject E3.

By contrast, the results support E4: an increase of 1 point in participation in the 2021 election compared to 2019 is associated with an increase of 1.02 in PP’s results, which gives support to the theory that Ayuso benefited from the higher mobilization.

E5 is not supported by the evidence: there is no significant relationship between the evolution of Ciudadanos’ results in 2021 compared to 2019 and the evolution of PP’s results.

The fact that at the aggregate-level, the drop in Ciudadanos’ results doesn’t have any significant relationship with the evolution of PP’s result is not necessarily a contradiction with what Figure 4 and previous literature show (García Lupato, 2021). Indeed, it is important to keep in mind that Table 3 shows aggregate-level data, and therefore does not allow us to know in detail what the individuals who voted Ciudadanos in 2019 decided to vote in 2021.

Finally, E6 is dismissed: The effect of the increase in participation over PP’s vote share was not greater in low-income zones than in high-income ones, since the interaction between these two variables is not significant, which again dismisses the idea that low-income areas responded more to the context.

Going to the other variables of the model, a higher concentration of young people from 18 to 24 years old was associated with a higher increase in PP’s results. While drawing conclusions from this could lead to an ecological fallacy, results with individual-level data in Table 4 will confirm this result, which supports the idea that young people, some of whom were socialized to politics under the pandemic, might have supported more Ayuso, who became very popular under the pandemic, but also that the age group less affected by the health consequences of the pandemic, and more hardly hit by the economic shock derived from them, might have supported the candidate who promised the end of restrictions. A higher concentration of any other age group is not significantly associated with any variation in PP’s results.

There is no significant relationship between the relative weight of the other age groups and the evolution of PP’s results.

Finally, the increase of PP’s result was significantly lower in the more populated areas, even if the coefficient is very low: 0.07 less for every extra 1,000 inhabitants.”

A correction has been made to the Section 6. **Results**, “*Individual-level analysis*,” paragraph 9. The corrected paragraph appears below:

“When comparing the aggregate-level model of Table 3 with the individual one from Table 4, both come to the same conclusion regarding the relationship between PP’s improvement and both age (young people contributed to PP’s victory). Regarding the socioeconomic position, both the income at the aggregate-level and the occupation at the individual one show that the PP improved its results among upper-class citizens, while the education level at the individual level of analysis provides unclear results. Regarding the role of previous Ciudadanos’ voters in 2019, the individual-level evidence shows that such voters had a high propensity to switch to the PP in 2021, but at the aggregate-level, such pattern doesn’t exist. Meanwhile, both aggregate- and individual-level evidence show that previous abstentionists, as well as people living in small municipalities, contributed to the improvement of the PP in 2021.”

A correction has been made to Section 7. **Discussion**, paragraph 3. The corrected sentence appears below:

“Regarding the literature on the effects of COVID-19 on elections, this article does not allow to draw any conclusion about the effects of the latter over the former. Indeed, the aggregate-level analysis doesn’t show any significant relationship between the electoral results and the impact of the pandemic. However, individual-level data accounting for the impact of COVID-19 on respondents’ personal lives would be needed to fully assess the impact of the pandemic on the 2021 Madrilenian election.

A correction has been made to Section 5. **Data and methods**, paragraph 9, sentence 1. The corrected sentence appears below:

“To operationalize the concept of “lower class,” I use the education level and the occupation of the person who contributes the most income to the household of the respondent, following a 4-category scheme (skilled service sector worker, unskilled service sector worker, skilled manual worker, and unskilled manual worker).”

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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## References

- García Lupato, F. (2021). The 2021 Regional Election in Madrid. A New Step in The Reconfiguration of the Spanish Party System? *Pôle Sud*. 55, 153–170. doi: 10.3917/psud.055.0153

TABLE 2 Descriptive statistics at the aggregate level.

	N	Mean	Sd	Variance	Min	Max
Variation PP	199	31.031	10.13835	102.786	-16.16246	53.03734
Variation Cs	199	-10.661	3.531861	12.47404	-20.44364	-1.763537
Change in turnout (2019-2021)	199	4.304	5.663357	32.07361	-15.89201	14.38548
Average net income	199	13,736.281	3,226.467	1.04e+07	9,725	27,719
COVID-19 total cumulated cases (over 100,000)	199	8,964.878	2,831.016	8,014,654	1,111.11	26,027.4
% 18/24	199	6.916	1.594067	2.54105	0	11.46789
% 25/34	199	10.617	2.336107	5.457397	2.777778	21.46691
% 35/44	199	15.659	2.84119	8.072363	5.454545	24.28572
% 45/54	199	17.565	2.395483	5.738341	10.41667	25.68807
% 45/54	199	13.501	2.78797	7.772779	7.017544	28.36879
% >65	199	17.407	5.834024	34.03584	6.325882	49.09091
Total population	199	33,960.568	59973.32	3.60e+09	55	258,633

Source: INE, Assembly of Madrid, Community of Madrid, and the Madrid City Council.

TABLE 3 Linear regression model for explaining PP's increase in 2021 compared to 2019.

	1	2	3
Average income (by 1,000)	0.50**	1.83*	0.74*
	(2.69)	(2.34)	(2.11)
Total cumulated incidence per 100,000 (by 1,000)	0.15	2.03	0.15
	(0.88)	(1.86)	(0.92)
Increase in participation (2019–2021)	1.02***	1.02***	1.44**
	(8.14)	(8.22)	(2.64)
Evolution of Cs' results	−0.06	−0.02	−0.04
	(−0.31)	(−0.12)	(−0.23)
% 18/24	0.92*	0.84*	0.90*
	(2.16)	(1.99)	(2.12)
% 25/34	−0.09	−0.10	−0.15
	(−0.34)	(−0.36)	(−0.53)
% 35/44	0.40	0.36	0.30
	(1.10)	(1.00)	(0.80)
% 45/54	0.05	0.00	−0.06
	(0.16)	(0.00)	(−0.17)
% 55/64	−0.17	−0.17	−0.27
	(−0.71)	(−0.73)	(−1.00)
% >65	−0.29	−0.31	−0.34
	(−1.44)	(−1.57)	(−1.61)
Population (by 1,000)	−0.07***	−0.07***	−0.07***
	(−6.83)	(−6.94)	(−6.84)
Total cumulated incidence per 100,000 (by 1,000) # Average income (by 1,000)		−0.13	
		(−1.75)	
Increase in participation (2019–2021) # Average income (by 1,000)			−0.03
			(−0.80)
Observations	199	199	199
Adjusted R <sup>2</sup>	0.648	0.652	0.648

Source: INE, Assembly of Madrid, Community of Madrid, and the Madrid City Council.

\*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.