

On the Prevalence of Condorcet's Paradox

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The Condorcet paradox has been a significant focus of investigation since Kenneth Arrow rediscovered its importance for economic theory. Recent research on this phenomenon has oscillated between simulation studies, probability calculations based on hypothetical voter preferences, and empirical analyses often limited by unsatisfactory data. This paper presents the first comprehensive evaluation of 253 electoral polls conducted across 59 countries. Our findings demonstrate that the Condorcet paradox has virtually no empirical relevance: with only one exception, we find no evidence of cyclical majorities in any of the 253 elections. This result remains robust after statistical inference testing. Furthermore, this study provides insights into which parties are particularly likely to emerge as Condorcet winners and explores how these Condorcet winners assert themselves after elections.

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1. Introduction

The ideal of democracy demands that collective decisions reflect majority judgments. An alternative x should be chosen over y if more voters prefer x to y . A *Condorcet winner*—an alternative that defeats all other contestants in pairwise majority comparisons—has intuitive appeal as it aligns with the principle of majority decision (Sen, 2017, Ch. 5). However, such a winner may not exist. Even when voters have transitive preferences, majority amalgamation can produce intransitive outcomes, a phenomenon known as the *Condorcet paradox* (Condorcet, 1785, p. lxj (76)). A simple example involves three voters and three candidates: Voter 1 ranks $A \succ B \succ C$, Voter 2 ranks $B \succ C \succ A$, and Voter 3 ranks $C \succ A \succ B$. Here, A beats B by majority, B beats C , and C beats A , violating transitivity.

The Condorcet paradox, intensely discussed during the French Revolution, faded into obscurity for nearly 150 years (Rothschild, 2005; McLean, 2019, p. 99) until Arrow’s groundbreaking impossibility theorem revived its importance. Arrow (1950) demonstrated that adherence to majority principles risks indeterminate outcomes, while ensuring decisiveness requires abandoning the majority principle and possibly accepting a majority-defeated winner. In economic theory, the Condorcet paradox challenges the core stability (Moulin, 2014).

Despite its theoretical significance, the empirical relevance of the paradox in democratic elections remains insufficiently substantiated. The most recent survey concluded that its empirical relevance is far from settled (Van Deemen, 2013), largely due to a persistent lack of reliable data. Most results on the occurrence of Condorcet paradoxes are based on simulated data (Lepelley and Martin, 2001; Gehrlein, 2006; Sauermann, 2022), or on non-political elections, like electing the head of an academic association (Chamberlin *et al.*, 1984; Feld and Grofman, 1992; Regenwetter *et al.*, 2007; Tideman, 2009; Popov *et al.*, 2014).

Empirical studies of real-world (democratic) elections have primarily focused on single elections (Kurrild-Klitgaard, 2018; Darmann *et al.*, 2019; Potthoff and Munger, 2021), or on country-specific case studies (i.e., multiple elections within a single country) (Abramson *et al.*, 1995; Van Deemen and Vergunst, 1998; Kurrild-Klitgaard, 2001, 2008). Although instances of the Condorcet paradox have been identified, these studies have failed to provide conclusive insights into its prevalence. So far, empirical research has largely relied on small survey datasets or limited samples. Some studies were based solely on plurality data (e.g., Riker, 1988) or voting intentions (e.g., McDonald *et al.*,

2012), requiring the preference orderings to be estimated. Adding to the challenge is the observation that most studies refrain from making claims about statistical inference. Notable exceptions include Desai and Kalandrakis (2025); Regenwetter *et al.* (2007); Darmann *et al.* (2019), with the latter two explicitly assessing the robustness of their findings through bootstrap methods.

Eminent economists have recently advocated for electoral reforms in favour of the Condorcet method, even beyond the academic realm (Maskin and Sen, 2016, 2017b,a). In this public discourse, the Condorcet paradox is the unresolved core issue, as it is—alongside the debate over whether cardinal information should be considered—the main argument against the practical implementation of the Condorcet method.

Sen (2017, Ch. 10.2) highlighted the necessity of determining the relevance of the Condorcet paradox through a comprehensive empirical analysis as a basis for advancing discussions on electoral reforms. Such a study should ideally cover various points in time and different societies. Motivated by this research desideratum, our work presents a comprehensive study that examines the occurrence of the Condorcet paradox across numerous elections, spanning multiple countries and time periods.

We analyse data from 253 elections across 59 countries, using nationally representative election studies provided by the Comparative Study of Electoral Systems (CSES, 2024). In total, our analysis incorporates responses from approximately 425,000 survey participants. On average, each election includes data from around 1,730 individuals. Our findings indicate that the Condorcet paradox has virtually no empirical relevance, a conclusion that remains robust even after accounting for statistical inference.

Beyond this, we provide insights into who the Condorcet winners are and evaluate the extent to which different electoral systems succeed in bringing these winners to office (in candidate elections) or into government (in parliamentary elections). We also examine which parties, identified as Condorcet winners, fail to win elections. Thus, for the first time, we offer insight into the identification and success of Condorcet winners.

2. Data and Methods

We use survey data from the Comparative Study of Electoral Systems (CSES, 2024). The dataset includes party and candidate ratings on an 11-point like-dislike scale (*integer sympathy scales*) for up to nine political parties and candidates, widely utilized in related research (e.g., Kalandrakis, 2022; Desai and Kalandrakis, 2025). Following an established procedure (most recently: Lachat and Laslier (2024)), we convert the

ratings into individual preference orderings.¹ For example, if voter i rates party A with +2, party B with +4, and party C with +1, this information is transformed into binary preference relations $B \succ_i A$, $A \succ_i C$. If two parties are rated equally, we consider this as indifference. We use respondents' party ratings to infer their preference orderings in parliamentary elections and their candidate ratings to infer preference rankings in presidential elections.

In total, we analyze data on 212 parliamentary elections and 41 presidential elections. Restricting the CSES data to respondents who rated at least one party or candidate leaves us with 424,413 individual-level observations.² We only include elections in which more than three parties or candidates were evaluated in the dataset. As a result, we had to exclude a few elections from the analysis. This primarily affects presidential elections in the United States. While multiple candidates ran in these elections, 'like-dislike' ratings were only collected for two candidates in each case.

We treat the election survey as a representative sample of voter preferences within a single national district to determine whether a Condorcet paradox existed at a specific election. This simplification of the national electoral system is valid for our purposes because our primary interest is not in analysing how paradoxes occur while processing preferences into electoral outcomes. Instead, we focus on whether the pattern of voter preferences would lead to a Condorcet paradox if amalgamated most simply and directly, irrespective of geographic boundaries and electoral stages.

We identify the Condorcet winner and loser party for each parliamentary election. For presidential elections, we identify the Condorcet winner and loser candidate inferred from candidate ratings when possible.³ We first construct party and candidate preference profiles from the rating data, as explained earlier. We then apply the Condorcet method to these preference profiles for each election separately.⁴ Specifically, we calculated how many voters strictly prefer candidate A over B and vice versa. If a respondent rated B but not A , we assume they prefer B , and the same logic applies in reverse. With κ candidates, the procedure is repeated for all $\binom{\kappa}{2}$ pairwise contests, such as A vs. C and B vs. C , and so on. A party or candidate that wins each pairwise contest is identified

¹Based on a comprehensive dataset for Germany, where respondents provided both their ranking and their thermometer rating, [Barbaro and Specht \(2024\)](#) showed that the orders generated by the thermometer variables have a very high correlation (measured in Kendall's τ) with the directly reported orderings.

²37,504 respondents reported no ratings, which is less than ten percent of our dataset. Respondents with incomplete ratings are included in our analysis.

³If candidate ratings are not available, we rely on party ratings instead.

⁴We used the `condorcet` function in R's `vote` package ([Raftery et al., 2021](#)).

as the Condorcet winner. An election is classified as exhibiting a Condorcet paradox if no such winner exists due to cyclical majorities, as described in the Introduction. Conversely, a party or candidate that loses all pairwise contests is referred to as the Condorcet loser.

To account for the uncertainty surrounding our survey-based results, we generate 10,000 bootstrap replications from the preference profiles of each election. Specifically, for each election we draw with replacement 10,000 samples of size n from the original sample of n individuals and apply the Condorcet method to each replication. For every single replication, we determine whether a Condorcet winner exists. This process results in 10,000 outcomes per election, where a Condorcet winner either exists or does not. In this way, we generate 2.53 million profiles. With this approach, we adopt a method very similar to that employed by [Darmann *et al.* \(2019\)](#).

If no paradox is observed in the original sample, we reject the null hypothesis ('no Condorcet paradox occurs') if a paradox emerges in more than 5% of the bootstrap replications for the respective election. Conversely, if cyclical majorities are observed in an election, we reject the null hypothesis (which assumes a paradox exists) if more than 5% of the bootstrap replications exhibit transitive preferences.

Using the bootstrap method, we address the randomness of the sample. In addition to the bootstrap approach, we also applied a random-noise method to account for the uncertainty in the rating data. In this approach, we add a random number from the interval $[-1, 1]$ to each rating of parties or candidates. In doing so, we generated 10,000 new rating matrices for each election, which were then converted into preference orders using the procedure described above and subsequently evaluated for the presence of cyclical majorities. Thus, we obtained approximately 2.53 million replications, this time as random-noise replications.

This procedure effectively resolves any indifference between two parties or candidates. For example, if a respondent rated two parties equally, the random-noise approach ensures that, in half of the replications, one party is rated as the better alternative. We chose this approach because the possibility of indifferences reduces the likelihood of Condorcet Paradoxes. Effectively, this allows us to test whether our central result is robust when we assume anti-symmetric (strict) preferences instead of reflexive ones.

3. Results

We do not find a single instance of a Condorcet paradox among the 212 parliamentary elections. Among the 41 presidential elections, for which the dataset provides ratings on more than two viable candidates, we identify one case of cyclical majorities, namely the Peruvian presidential election in 2011.

The overall picture remains robust across all bootstrap replications. With the exception of two parliamentary elections, none of the 10,000 replications conducted for each election reveal a Condorcet paradox. In one case, the phenomenon occurs in 1.1% of the replications, while in another election, it is observed in only two out of 10,000 replications.

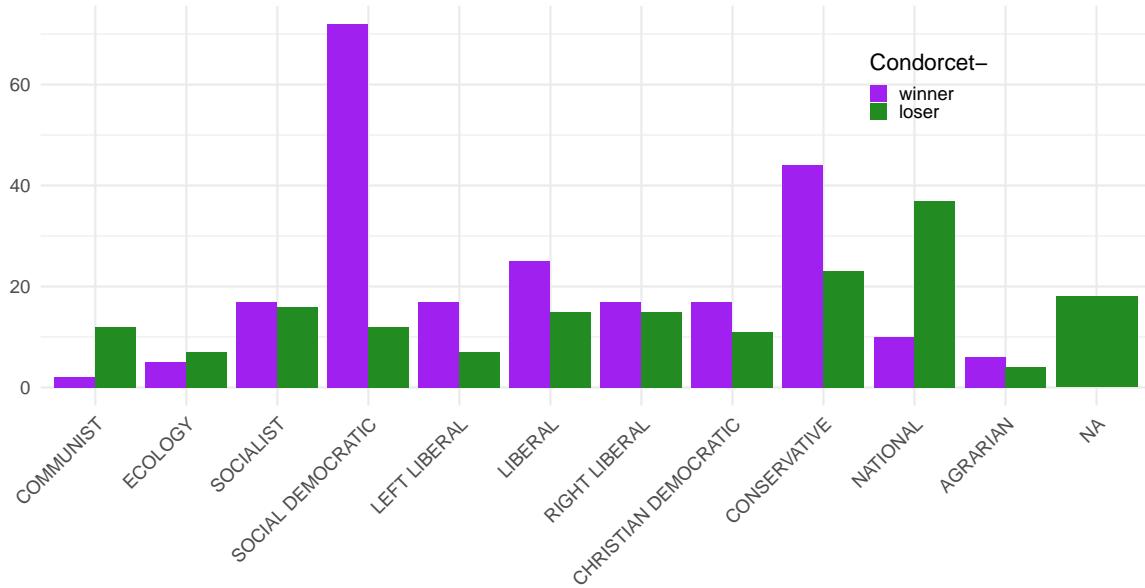
A similar pattern emerges for the presidential elections. In 39 out of 41 elections, none of the respective bootstrap replications reveal a case of cyclical majorities. Even in the instance where we identified a Condorcet paradox in the sample (Peru 2011), the vast majority of replications (69.53%) do not exhibit cyclical majorities. Consequently, we must reject the hypothesis of a Condorcet paradox occurring in this election. On the other hand, in a subsequent election in Peru in 2021, we detected Condorcet paradoxa in approximately eleven percent of the bootstrap replications. To the extent that we must reject the hypothesis of an existence of a paradox in 2011, we must equally reject the hypothesis of non-existence in 2021. In both cases, there is a strong likelihood (69 – 31, 89 – 11) that no paradox is present.

A very similar pattern emerges from the evaluation of the 2.53 million random-noise replications. In the vast majority of cases, we find no Condorcet Paradox across the 10,000 replications for each election. In the few elections where cyclical majorities do occur in the replications, they account for less than 1% of the total replications. For no election do we find that a Condorcet Paradox occurs in more than 5% of the replications. Exceptions, as was the case with the bootstrap analysis, are the Peruvian elections.

The literature distinguishes between a *strong* and a *weak* Condorcet winner (Barberà and Bossert, 2023). While the former wins every pairwise comparison, the latter does not lose any pairwise comparison (due to ties). Except for two cases, we find strict Condorcet winners in every election.

It should be noted that the presence of a Condorcet winner in an election does not necessarily imply a transitive order. Cyclical majorities can still occur even when a Condorcet winner exists. This happens when cyclical majorities appear in the middle or lower ranks. In our analysis, we observe such cases four times, including the election in

Figure 1: *Frequency of Condorcet winner and loser parties by party family*



Finland in 2005, which is the only instance where no Condorcet loser is present. Overall, our findings indicate that collective preferences are almost universally transitive. Note that accounting for cyclical majorities in cases with a Condorcet winner does not dilute the overall result. On the contrary, in each election, we have $\binom{\kappa}{3}$ triplets. Summed across all elections, we analyse 8,099 triplets. Among these, we find cyclical majorities in five cases (0.06%).

Thus, we arrive—also through this approach—at the rather surprising finding that cyclical majorities are practically irrelevant from an empirical perspective. The drawback of this sharp result is that an analysis of why the Condorcet Paradox occurs so rarely is hardly possible. As is well known, empirical analyses require variance, which we do not observe. Therefore, we do not address the question of why cyclical majorities are virtually non-existent but instead encourage future research to explore this question.

Given that Condorcet winners exist in virtually all of the elections under study, we subsequently focus on descriptive results on these winner parties and candidates. Figure 1 plots the frequency of Condorcet winners and losers by party family.⁵ It shows that Condorcet winners are most often social-democratic parties. National parties are the most common among the Condorcet losers. A full list of Condorcet winner and loser par-

⁵We use the classification of party families as provided by the CSES. It is based on expert judgments of the CSES national collaborators as to which ideological family each party belongs to.

ties is presented in the (Online-)Appendix (for the review process, the appendix is attached to this file). Table 1 provides an extract from the full list, covering the G7 countries only.

This list yields some interesting insights. For example, although Condorcet-winner parties are often centrally located within the party system, they are not necessarily large parties. In the Netherlands, for instance, the liberal party 'Democrats 66' (D66) was the Condorcet-winner party in 2010, 2017, and 2021, despite its low vote share of only 7%, 12%, and 15%, respectively. In the 2010 election, it was only the sixth-largest party in terms of votes and parliamentary seats. In 2017, it ranked fourth, and in 2021, it ranked second. In an earlier study for the election year 1994—which our dataset does not extend back to—Van Deemen and Vergunst (1998) had already found that D66 emerged as the Condorcet-winner party. Even then, the vote share of 15.5% did not reflect the broad support for the D66 party among the electorate. We also find a correspondence with the results from two Danish elections in 1998 and 2001, as identified by Kurrild-Klitgaard (2008) (using a different dataset than the one we employed).

For Great Britain, our data show that the Condorcet winners can indeed vary but generally align with the winners under the First-Past-The-Post system. An exception is 2017, when the Tories narrowly won the general election, but the Labour Party emerged as the Condorcet winner. The 2005 election is not included in our dataset; however, Abramson *et al.* (2013) identified the Liberal-Democrats as the Condorcet winner for that election.

Our (Online-)Appendix presents the values for all other countries.

Noteworthy, there are instances where Condorcet-loser parties gain a significant number of votes and seats. Polarising parties on the far-right fringe, in particular, benefit from this imbalance. For example the 'Sweden Democrats' were the Condorcet-loser party in 2006, 2014, and 2018. Yet, they increased their vote share to 12.9% in the 2018 election, becoming the third-largest party out of eight in the 2014 and 2018 parliaments. In Germany, the Condorcet loser AfD became the third-largest faction in the Bundestag in 2017 with 12.5% of the vote, surpassing three parties that had each won their pairwise comparison against the AfD. An even more extreme case is the Swiss 2011 election, where the Swiss People's Party gained the largest vote share while emerging as the Condorcet loser, according to the data.

Table 2 provides a systematic overview of the empirical *Condorcet efficiency*⁶ of elec-

⁶The term Condorcet efficiency refers to the conditional probability that a voting rule selects the Condorcet winner, given that one exists (Gehrlein and Lepelley, 1998).

Table 1: *List of Condorcet winner and loser parties/candidates in G7 countries*

| Country | Year | Condorcet Winner Party | Condorcet Loser Party |
|---------------|------|---------------------------------|--------------------------------|
| Canada | 1997 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2004 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2008 | Conservative Party (CP) | Bloc Quebecois (BQ) |
| Canada | 2011 | Conservative Party (CP) | Bloc Quebecois (BQ) |
| Canada | 2015 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2019 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| France | 2002 | Jacques Chirac (PS) | Jean-Marie LePen (FN) |
| France | 2012 | Francois Hollande (PS) | Francois Bayrou (MoDem) |
| France | 2017 | Emmanuel Macron (LaREM) | Marine Le Pen (FN) |
| Germany | 1998 | Soc. Dem. Party (SPD) | Left Party (DIE LINKE) |
| Germany | 2002 | Soc. Dem. Party (SPD) | The Republicans (REP) |
| Germany | 2005 | Soc. Dem. Party (SPD) | Nat. Dem. Party of Germ. (NPD) |
| Germany | 2009 | Christ. Dem. Party (CDU) | Left Party (DIE LINKE) |
| Germany | 2013 | Christ. Dem. Party (CDU) | Alt. for Germany (AfD) |
| Germany | 2017 | Christ. Dem. Party (CDU) | Alt. for Germany (AfD) |
| Germany | 2021 | Soc. Dem. Party (SPD) | Alt. for Germany (AfD) |
| Great Britain | 1997 | Labor (Lab) | Conservatives (Con) |
| Great Britain | 2005 | Labor (Lab) | Conservatives (Con) |
| Great Britain | 2015 | Conservatives (Con) | UK Independence Party (UKIP) |
| Great Britain | 2017 | Labor (Lab) | Plaid Cymru (PC) |
| Great Britain | 2019 | Conservatives (Con) | Plaid Cymru (PC) |
| Italy | 2006 | National Alliance (AN) | Communist Refoundation (PRC) |
| Italy | 2018 | Five Star Movement (M5S) | Free and Equal (LeU) |
| Japan | 1996 | Liberal Democratic Party (LDP) | New Party Harbinger (NPH) |
| Japan | 2004 | Democratic Party of Japan (DPJ) | Jap. Communist Party (JCP) |
| Japan | 2007 | Democratic Party of Japan (DPJ) | Jap. Communist Party (JCP) |
| Japan | 2013 | Lib. Dem. Party (LDP) | Green Wind |
| Japan | 2017 | Lib. Dem. Party (LDP) | Japanese Communist Party (JCP) |
| USA | 1996 | Democratic Party | Reform Party |
| USA | 2004 | Democratic Party | Reform Party |

toral systems. We calculate how frequently Condorcet winners emerge as electoral victors (i.e., as the largest parliamentary faction) and examine how often they are included in the subsequent government following the election. The results are presented by election type and electoral formula. At the end of this section, we also report the Condorcet efficiencies of two additional voting rules. The first row of Table 2 highlights the frequency⁷ at which Condorcet winners become the largest electoral party, revealing significant variation across election types and systems. Condorcet winners are most successful in presidential elections (82%) and parliamentary elections with mixed electoral systems (81%), but their success rate is lowest in parliamentary elections using proportional representation (62%).

The second row in Table 2 reports how often Condorcet winners win the prime minister’s office or the presidency. It shows that in parliamentary systems with plurality or proportional rules, Condorcet winners obtain government leadership even if they are not the largest electoral party, increasing their success rate to 89% resp. 66%. This is not the case in any of the mixed systems in our data. Since the most-vote getter in presidential elections typically also win the presidency, the rate is identical to the first row. Our findings concerning parliamentary elections align with those of Desai and Kalandrakis (2025), who used OLS regressions to show that weak Condorcet winners (core parties) are about 24 percentage points more likely to appoint the prime minister, with even higher probabilities for strong Condorcet winners.

Condorcet winners may still hold government offices, e.g., as a junior coalition partner. The results reported in the third row indicate that this is often the case: the government participation rates are significantly larger than the election winner rates and the prime minister/presidency rates. Again, there is variation by election type and system, with plurality and mixed electoral systems in parliamentary elections showing the largest Condorcet efficiency in government participation (97% and 98%). Proportional rules in parliamentary elections are less efficient in selecting Condorcet winners into government than plurality and mixed systems (88%). Overall, the government formation period that follows upon parliamentary elections enhances the Condorcet efficiency of parliamentary systems, superseding presidential elections in terms of government posts for Condorcet winners.

Another aspect by which to evaluate the Condorcet efficiency of electoral systems is to ask for how often the government participation of the Condorcet loser is prevented. The

⁷The values in square brackets indicate the confidence interval of Agresti-Coull binomial tests (Agresti and Coull, 1998) (values in percentages and at a 90% significance level).

Table 2: *Condorcet efficiency by type of election (parliamentary vs. presidential and by electoral systems.*

| Condorcet Winner | Parliamentary | | | Presidential |
|--|-------------------|-----------------------|-----------------|----------------|
| | Plurality N=30 | Proportional N=135 | Mixed N=51 | N=46 |
| largest elect. party / candidate | 71% [56-83] | 62% [54-68] | 81% [70-88] | 82% [71-89] |
| prime minister/ president | 89% [75-96] | 66% [58-73] | 73% [61-82] | 82% [71-90] |
| part of government | 97% [85-100] | 88% [82-92] | 98% [91-100] | |
| Condorcet Loser part of government / president | 0% | 16% [11-22] | 8% [2-19] | 4% [0-12] |

bottom row in Table 2 indicates that proportional electoral systems are most prone to the 'Condorcet-loser-turns-winner' (Van Deemen, 1993) or Borda paradox (named after the Chevalier de Borda, who identified the paradoxical situation that a Condorcet loser can emerge as plurality winner). From a normative standpoint, this may be justified, as one of the premisses of proportional systems is to enable ethnic, religious or other minorities to have their legitimate share of power, so as to prevent the 'tyranny of the majority'. However, our results indicate that in only three out of 20 instances in which Condorcet losers obtain cabinet posts, it is ethnic parties. Most often (4 out of 20 cases), the Condorcet loser party that enters government is a national party.

The other Borda-paradox case is the 2000 Mexican presidential election, at which Vicente Fox won the plurality vote, but was a Condorcet loser. The Condorcet winner was Cuauhtémoc Cárdenas Solórzano, who ranked third at the election.

Finally, we applied our data to the Borda rule and Single Transferable Vote (STV). The Borda rule is a positional voting system that assigns weights to alternatives based on their rank-order positions. STV, a proportional voting system, also allows voters to rank candidates by preference, with seats allocated through the redistribution of votes from elected or eliminated candidates until all positions are filled (Tideman, 1995). STV is used in several countries with Anglo-Saxon legacies, such as Ireland, Australia, and Malta. We compare the winners under both electoral rules with the Condorcet method and assess how often the Borda and STV winners coincide with the Condorcet winner.

The results show that 93.4% of Borda winners and 92.6% of STV winners are also Condorcet winners. Both methods demonstrate higher Condorcet efficiency compared to the plurality rule (see Table 2).

If a party is the Borda winner but not the Condorcet winner, this discrepancy arises from differences in preference intensities. The Condorcet method adheres to Arrow’s Independence of Irrelevant Alternatives (IIA), which excludes any consideration of preference intensities (Sen, 2017, Ch. 7). In contrast, the Borda rule accounts for preference intensities through ordinal information (Maskin, 2025). Assume that 60% of the electorate prefers $A \succ B \succ C$, while 40% prefers $B \succ C \succ A$. In this case, A emerges as the Condorcet winner, while candidate B becomes the Borda winner. The reason lies with candidate C : their middle ranking in the minority group suggests that the preference intensity between B and A in the smaller group is stronger than the preference intensity between A and B in the majority group.

When the Condorcet winner belongs to the socialist/social democratic or liberal party families, they also tend to be the Borda winner in 98% of cases. In contrast, this coincidence is lower for the conservative/Christian democratic party family, at 85%. Under STV, the highest overlap between Condorcet and STV winners occurs for socialist/social democratic parties (95.5%), followed by liberal parties (93.2%), which is lower than their overlap under the Borda rule. Conservative/Christian-democratic parties show the lowest coincidence with Condorcet winners (91.8%).

4. Conclusion

Two hundred and forty years ago, the Marquis de Condorcet introduced the paradox that now bears his name to the French Academy of Sciences. Ever since, it has been recognised as a profound challenge within the social sciences. In recent decades, researchers have sought in various ways to assess the prevalence of the Condorcet paradox. However, it has always been clear that only a comprehensive empirical analysis across different countries and dates could provide a substantive answer to the question of its empirical relevance. This study leverages the availability of comparative data and advanced computational capabilities to conduct the first empirical investigation in this vein. Our findings reveal that the Condorcet paradox holds virtually no empirical relevance.

We find a Condorcet winner in almost every country and at almost every point in time. Moreover, we are able to identify who these Condorcet winners are and the party families to which they belong. Our results are encouraging in that Condorcet winners

frequently succeed in becoming part of the governing coalitions. However, the degree of Condorcet efficiency varies significantly between electoral systems.

Our analysis also demonstrates that Condorcet losers nearly always exist. A concern raised by the Chevalier de Borda regarding the plurality rule was that Condorcet losers could emerge as plurality winners—a phenomenon known as the Borda paradox. We observe this paradox twice at presidential elections, but not once at parliamentary elections that use plurality rule. Our findings reveal that proportional electoral rules are the least effective in ensuring electoral victory and government participation for Condorcet winners, while simultaneously being the least effective at preventing Condorcet losers from participating in government. These insights should be carefully considered in ongoing debates about electoral reform.

Moreover, our work can be understood as academic endorsement for advocates of electoral reforms favouring the Condorcet method ([Maskin and Sen, 2016, 2017b,a](#)). While these advocates emphasise its axiomatic advantages, they are, of course, mindful of the paradox’s challenges. Our findings suggest that, in weighing the strengths and weaknesses of the Condorcet method, its principal shortcoming should not be overemphasized. In this sense, this study aims not only to make an academic contribution but also to inform and inspire current and future debates on electoral reform.

References

- Abramson, P.R., Aldrich, J.H., Diskin, A., Houck, A.M., Levine, R. and Scotto, T.J. (2013). ‘The British general election of 2010 under different voting rules’, *Electoral Studies*, vol. 32(1), pp. 134–139, doi:<https://doi.org/10.1016/j.electstud.2012.10.002>.
- Abramson, P.R., Aldrich, J.H., Paolino, P. and Rohde, D.W. (1995). ‘Third-party and independent candidates in American politics: Wallace, Anderson, and Perot’, *Political Science Quarterly*, vol. 110(3), pp. 349–367, doi:<https://doi.org/10.2307/2152568>.
- Agresti, A. and Coull, B.A. (1998). ‘Approximate is better than ‘exact’ for interval estimation of binomial proportions’, *The American Statistician*, vol. 52(2), pp. 119–126, doi:[10.1080/00031305.1998.10480550](https://doi.org/10.1080/00031305.1998.10480550).
- Arrow, K.J. (1950). ‘A difficulty in the concept of social welfare’, *Journal of Political Economy*, vol. 58(4), pp. 328–346, ISSN 0022-3808, doi:[10.1086/256963](https://doi.org/10.1086/256963).
- Barbaro, S. and Specht, A. (2024). ‘Condorcet method, independence of irrelevant alternatives, and the size of the Bundestag’, *German Politics*, vol. 33(3), pp. 611–639, doi:[10.1080/09644008.2022.2120611](https://doi.org/10.1080/09644008.2022.2120611).
- Barberà, S. and Bossert, W. (2023). ‘Intermediate Condorcet winners and losers’, *SSRN Electronic Journal*, ISSN 1556-5068, doi:[10.2139/ssrn.4320762](https://doi.org/10.2139/ssrn.4320762).
- Chamberlin, J.R., Cohen, J.L. and Coombs, C.H. (1984). ‘Social choice observed: Five presidential elections of the American Psychological Association’, *Journal of Politics*, vol. 46(2), pp. 479–502, ISSN 0022-3816, doi:[10.2307/2130971](https://doi.org/10.2307/2130971).
- Condorcet, J. (1785). *Essai sur l’application de l’analyse à la probabilité des décisions rendues à la pluralité des voix ([Reprod.]*), The French Revolution Research Collection / Les archives de la Revolution Francaise, Oxford: Pergamon Press.
- CSES (2024). ‘CSES integrated module dataset (IMD) [dataset and documentation]. february 27, 2024 version.’, *The Comparative Study of Electoral Systems.*, doi:[10.7804/cses.imd.2024-02-27](https://doi.org/10.7804/cses.imd.2024-02-27).
- Darmann, A., Grundner, J. and Klamler, C. (2019). ‘Evaluative voting or classical voting rules: Does it make a difference? Empirical evidence for consensus among voting rules’, *European Journal of Political Economy*, vol. 59, pp. 345–353, doi:[10.1016/j.ejpoleco.2019.04.003](https://doi.org/10.1016/j.ejpoleco.2019.04.003).
- Desai, Z. and Kalandrakis, T. (2025). ‘The core of the party system’, *The Journal of Politics*, vol. (forthc.), doi:[10.1086/734262](https://doi.org/10.1086/734262).
- Feld, S.L. and Grofman, B. (1992). ‘Who’s afraid of the big bad cycle? Evidence from 36 elections’, *Journal of Theoretical Politics*, vol. 4(2), pp. 231–237, ISSN 0951-6298, doi:[10.1177/0951692892004002007](https://doi.org/10.1177/0951692892004002007).

- 351 Gehrlein, W.V. (2006). *Condorcet's Paradox*, vol. 40 of *Theory and Decision Library*,
352 Berlin: Springer, ISBN 9783540337980, doi:10.1007/3-540-33799-7.
- 353 Gehrlein, W.V. and Lepelley, D. (1998). 'The Condorcet efficiency of Approval Voting
354 and the probability of electing the Condorcet loser', *Journal of Mathematical Eco-*
355 *nomics*, vol. 29(3), pp. 271–283, doi:10.1016/s0304-4068(97)00020-7.
- 356 Kalandrakis, T. (2022). 'One-dimensional scaling without apologies', *The Journal of*
357 *Politics*, vol. 84(4), pp. 2034–2048, doi:10.1086/720309.
- 358 Kurrild-Klitgaard, P. (2001). 'An empirical example of the Condorcet paradox of vot-
359 ing in a large electorate', *Public Choice*, vol. 107(1/2), pp. 135–145, doi:10.1023/a:
360 1010304729545.
- 361 Kurrild-Klitgaard, P. (2008). 'Voting paradoxes under proportional representation: Ev-
362 idence from eight Danish elections', *Scandinavian Political Studies*, vol. 31(3), pp.
363 242–267, doi:10.1111/j.1467-9477.2008.00205.x.
- 364 Kurrild-Klitgaard, P. (2018). 'Trump, Condorcet and Borda: Voting paradoxes in the
365 2016 Republican presidential primaries', *European Journal of Political Economy*,
366 vol. 55, pp. 29–35, doi:10.1016/j.ejpoleco.2017.10.003.
- 367 Lachat, R. and Laslier, J.F. (2024). 'Alternatives to plurality rule for single-winner
368 elections: When do they make a difference?', *European Journal of Political Economy*,
369 vol. 81, p. 102505, doi:10.1016/j.ejpoleco.2024.102505.
- 370 Lepelley, D. and Martin, M. (2001). 'Condorcet's paradox for weak preference or-
371 derings', *European Journal of Political Economy*, vol. 17(1), pp. 163–177, doi:
372 10.1016/s0176-2680(00)00034-3.
- 373 Maskin, E. (2025). 'Borda's rule and Arrow's independence condition', *Journal of Po-*
374 *litical Economy*, vol. 133 (forthc.), doi:10.1086/732892.
- 375 Maskin, E. and Sen, A. (2016). 'How majority rule might have stopped Donald Trump',
376 The New York Times, April 28, 2016.
- 377 Maskin, E. and Sen, A. (2017a). 'A better way to choose presidents', The New York
378 Review; June 8, 2017.
- 379 Maskin, E. and Sen, A. (2017b). 'The rules of the game: A new electoral system', The
380 New York Review; January 19, 2017.
- 381 McDonald, M.D., Budge, I. and Best, R.E. (2012). 'Electoral majorities, political parties,
382 and collective representation', *Comparative Political Studies*, vol. 45(9), pp. 1104–
383 1131, doi:10.1177/0010414011434008.
- 384 McLean, I. (2019). 'Voting', in (R. Wilson and A. Moktefi, eds.), *The Mathematical*
385 *World of Charles L. Dodgson (Lewis Carroll)*, pp. 121–140, Oxford: Oxford University
386 Press, doi:10.1093/oso/9780198817000.003.0005.

- 387 Moulin, H. (2014). *Cooperative Microeconomics*, Princeton Legacy Library, Princeton:
388 Princeton University Press, ISBN 9780691608082.
- 389 Popov, S.V., Popova, A. and Regenwetter, M. (2014). ‘Consensus in organizations: Hunt-
390 ing for the social choice conundrum in APA elections.’, *Decision*, vol. 1(2), p. 123,
391 doi:10.1037/dec0000010.
- 392 Potthoff, R.F. and Munger, M.C. (2021). ‘Condorcet loser in 2016: Apparently Trump;
393 Condorcet winner: Not Clinton?’, *American Politics Research*, vol. 49(6), pp. 618–636,
394 doi:10.1177/1532673X2110094.
- 395 Raftery, A.E., Ševčíková, H. and Silverman, B.W. (2021). ‘The vote Package: Single
396 Transferable Vote and Other Electoral Systems in R’, *The R Journal*, vol. 13(2), pp.
397 673–696, doi:10.32614/RJ-2021-086.
- 398 Regenwetter, M., Kim, A., Kantor, A. and Ho, M.H.R. (2007). ‘The unexpected em-
399 pirical consensus among consensus methods’, *Psychological Science*, vol. 18(7), pp.
400 629–635, doi:10.1111/j.1467-9280.2007.01950.x.
- 401 Riker, W.H. (1988). *Liberalism Against Populism*, Prospect Heights, Ill: Waveland Press,
402 ISBN 0881333670.
- 403 Rothschild, E. (2005). ‘Axiom, theorem, corollary &c.: Condorcet and mathemati-
404 cal economics’, *Social Choice and Welfare*, vol. 25(2–3), pp. 287–302, doi:10.1007/
405 s00355-005-0004-z.
- 406 Sauermann, L. (2022). ‘On the probability of a Condorcet winner among a large number
407 of alternatives’, doi:10.48550/ARXIV.2203.13713.
- 408 Sen, A. (2017). *Collective Choice and Social Welfare*, Cambridge, Massachusetts: Har-
409 vard University Press, ISBN 978-0-674-97160-8.
- 410 Tideman, N. (1995). ‘The single transferable vote’, *Journal of Economic Perspectives*,
411 vol. 9(1), p. 27–38, doi:10.1257/jep.9.1.27.
- 412 Tideman, N. (2009). *Collective Decisions and Voting*, Aldershot: Ashgate, ISBN
413 9780754647171.
- 414 Van Deemen, A. (1993). ‘Paradoxes of voting in list systems of proportional repre-
415 sentation’, *Electoral Studies*, vol. 12(3), pp. 234–241, ISSN 0261-3794, doi:10.1016/
416 0261-3794(93)90025-f.
- 417 Van Deemen, A. (2013). ‘On the empirical relevance of Condorcet’s paradox’, *Public
418 Choice*, vol. 158(3–4), pp. 311–330, doi:10.1007/s11127-013-0133-3.
- 419 Van Deemen, A. and Vergunst, N.P. (1998). ‘Empirical evidence of paradoxes of voting
420 in Dutch elections’, *Public Choice*, vol. 97(3), pp. 475–490, doi:https://doi.org/10.
421 1023/A:1005098111179.

422 **Appendices**

423 Note: The appendix is proposed to be published online. We add the appendices to the
424 main text in line with the submission guidelines.

A. Countries and Election Years Included in Analysis

| | '96 | '97 | '98 | '99 | '00 | '01 | '02 | '03 | '04 | '05 | '06 | '07 | '08 | '09 | '10 | '11 | '12 | '13 | '14 | '15 | '16 | '17 | '18 | '19 | '20 | '21 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Albania | | | | | | | | | | x | | | | | | | | | | | | x | | | | |
| Argentina | | | | | | | | | | | | | | | | | | | | x | | | | | | |
| Australia | x | | | | | | | | x | | | x | | | | | | x | | | | | | x | | |
| Austria | | | | | | | | | | | | | x | | | | | x | | | | x | | | | |
| Belarus | | | | | | x | | | | | | | x | | | | | | | | | | | | | |
| Belgium | | | | x | | | | x | | | | | | | | | | | | | | | | x | | |
| Brazil | | | | | | | x | | | | x | | | | x | | | | x | | | | x | | | |
| Bulgaria | | | | | | x | | | | | | | | | | | | | x | | | | | | | |
| Canada | | x | | | | | | | x | | | | x | | | | | | | x | | | | x | | |
| Chile | | | | x | | | | | | x | | | | x | | | | | | | | x | | | | |
| Costa Rica | | | | | | | | | | | | | | | | | | | | | | | x | | | |
| Croatia | | | | | | | | | | | | x | | | | | | | | | | | | | | |
| Czech Republic | x | | | | | | x | | | | x | | | | x | | | x | | | | | | | | |
| Czechia | | | | | | | | | | | | | | | | | | | | | | x | | | | x |
| Denmark | | | x | | | x | | | | | | x | | | | | | | | | | | | x | | |
| El Salvador | | | | | | | | | | | | | | | | | | | | | | | | x | | |
| Estonia | | | | | | | | | | | | | | | | x | | | | | | | | | | |
| Finland | | | | | | | | x | | | | x | | | | | | | | x | | | | x | | |
| France | | | | | | | x | | | | | x | | | | | x | | | | | x | | | | |
| Germany | | | x | | | | x | | | x | | | | x | | | | x | | | | | x | | | x |
| Great Britain | | x | | | | | | | | x | | | | | | | | | | x | | x | | x | | |
| Greece | | | | | | | | | | | | | | x | | | | | | 2 | | | | x | | |
| Hong Kong | | | x | | x | | | | x | | | | x | | | | | x | | | x | | | | | |
| Hungary | | | x | | | | x | | | | | | | | | | | | | | | | x | | | |
| Iceland | | | | x | | | | x | | | | x | | x | | | | x | | | x | x | | | | |
| India | | | | | | | | | | | | | | | | | | | | | | | | x | | |
| Ireland | | | | | | | x | | | | | x | | | | | | | | | x | | | | | |
| Israel | x | | | | | | | x | | | x | | | | | | | x | | | | | | | x | |
| Italy | | | | | | | | | | | x | | | | | | | | | | | | x | | | |

[illegible]

B. Full List of Condorcet Winner and Condorcet Loser Parties in Parliamentary Elections

| Country | Year | Condorcet winner candidate/party | Condorcet loser candidate/party |
|------------------|------|--|--|
| Albania | 2005 | Democratic Party of Albania (PD) | Agrarian Party (PAA) |
| Albania | 2017 | Socialist Party of Albania (PS) | Libra Party (LIBRA) |
| Argentina | 2015 | Front for the Victory (FPV) | Progressives (Pro) |
| Australia | 1996 | Liberal Party (LP) | Australian Greens (AG) |
| Australia | 2004 | Liberal Party (LP) | One Nation Party (ONP) |
| Australia | 2007 | Australian Labor Party (ALP) | National Party of Australia (NPA) |
| Australia | 2013 | Liberal Party (LP) | Australian Greens (AG) |
| Australia | 2019 | Liberal Party (LP) | One Nation Party (ONP) |
| Austria | 2008 | Soc. Dem. Party of Austria (SPO) | Dinkhauser List |
| Austria | 2013 | Soc. Dem. Party of Austria (SPO) | Alliance for the Future of Austria (BZO) |
| Austria | 2017 | Soc. Dem. Party of Austria (SPO) | Peter Pilz List (PILZ) |
| Austria | 2017 | Austrian People's Party (OVP) | United Civil Party |
| Belarus | 2001 | Communist Party of Belarus | United Civil Party |
| Belarus | 2008 | The BNF Party | United Civil Party |
| Belgium-Flanders | 1999 | Live Differently (AGALEV) / Green | Flemish Block/ Importance (VB) |
| Belgium-Wallonia | 1999 | Confederated Ecologists (ECOLO) | National Front (FN) |
| Belgium | 2003 | Socialist Party Differently (SP) | Confederated Ecologists (ECOLO) |
| Belgium-Flanders | 2019 | Christian Democratic - Flemish (CD-V) | Flemish Block (VB) |
| Belgium-Wallonia | 2019 | Confederated Ecologists (ECOLO) | People's Party (PP) |
| Brazil | 2002 | Workers Party (PT) | Brazilian Labor Party (PTB) |
| Brazil | 2006 | Workers Party (PT) | Brazilian Labor Party (PTB) |
| Brazil | 2010 | Workers Party (PT) | Democrats (DEM) |
| Brazil | 2014 | Workers Party (PT) | Republic Party (PR) |
| Brazil | 2018 | Workers Party (PT) | Brazilian Republican Party (PRB) |
| Bulgaria | 2001 | National Movement for Stability and Progress (NDS) | Euroleft (BE) |
| Bulgaria | 2014 | Citizens for European Development of Bulgaria (GERB) | Movement for Rights and Freedoms (DPS) |
| Canada | 1997 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2004 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2008 | Conservative Party (CP) | Bloc Quebecois (BQ) |
| Canada | 2011 | Conservative Party (CP) | Bloc Quebecois (BQ) |
| Canada | 2015 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Canada | 2019 | Liberal Party (LIB) | Bloc Quebecois (BQ) |
| Chile | 2005 | Party for Democracy (PPD) | Independent Democratic Union (UDI) |
| Chile | 2009 | Christian Democratic Party (PDC) | Communist Party of Chile (PCCh) |
| Chile | 2017 | National Renewal (RN) | Political Evolution (Evopoli) |
| Costa Rica | 2018 | Citizens' Action Party (PAC) | Social Christian Republican Party (PRSC) |
| Croatia | 2007 | Croatian Democratic Union (HDZ) | Croatian Democratic Alliance of Slavonia and Baranja (HDSSB) |
| Czech Republic | 1996 | Civic Democratic Party (ODS) | Communist Party of Bohemia and Moravia (KSCM) |
| Czech Republic | 2002 | Czech Social Democratic Party (CSSD) | Communist Party of Bohemia and Moravia (KSCM) |
| Czech Republic | 2006 | Green Party (SZ) | Communist Party of Bohemia and Moravia (KSCM) |
| Czech Republic | 2010 | Public Affairs (VV) | Communist Party of Bohemia and Moravia (KSCM) |
| Czech Republic | 2013 | Action of Dissatisfied Citizens (ANO 2011) | Civic Democratic Party (ODS) |
| Czech Republic | 2017 | Action of Dissatisfied Citizens (ANO 2011) | TOP 09 (TOP 09) |

| Country | Year | Condorcet winner party | Condorcet loser party |
|----------------|------|--|---|
| Czech Republic | 2021 | Action of Dissatisfied Citizens (ANO 2011) | Czech Pirate Party (Pirati) |
| Denmark | 1998 | Social Democrats (Sd) | Danish People's Party (DF) |
| Denmark | 2001 | Venstre, Denmark's Liberal Party (V) | Unity List - Red-Green Alliance (EL) |
| Denmark | 2007 | Social Democrats (Sd) | Unity List - Red-Green Alliance (EL) |
| Denmark | 2019 | Social Democrats (Sd) | The New Right (NB) |
| Estonia | 2011 | Social Democratic Party (SDE) | Estonian People's Union (ER a) |
| Finland | 2003 | Social Democratic Party of Finland (SDP) | Swedish People's Party in Finland (RKP - SFP) |
| Finland | 2007 | Center Party of Finland (KESK) | Left Alliance (VAS) |
| Finland | 2011 | Social Democratic Party of Finland (SDP) | Christian Democrats (KD) |
| Finland | 2015 | Center Party of Finland (KESK) | |
| Finland | 2019 | Social Democratic Party of Finland (SDP) | Blue Reform (SIN) |
| France | 2007 | Union for a Popular Movement (UMP) | National Front (FN) |
| Germany | 1998 | Social Democratic Party (SPD) | Left Party (DIE LINKE) |
| Germany | 2002 | Social Democratic Party (SPD) | The Republicans (REP) |
| Germany | 2005 | Social Democratic Party (SPD) | National Democratic Party (NPD) |
| Germany | 2009 | Christian Democratic Party (CDU) | Left Party (DIE LINKE) |
| Germany | 2013 | Christian Democratic Party (CDU) | Alternative for Germany (AfD) |
| Germany | 2017 | Christian Democratic Party (CDU) | Alternative for Germany (AfD) |
| Germany | 2021 | Soc. Dem. Party (SPD) | Alternative for Germany (AfD) |
| Great Britain | 1997 | Labor (Lab) | Conservatives (Con) |
| Great Britain | 2005 | Labor (Lab) | Conservatives (Con) |
| Great Britain | 2015 | Conservatives (Con) | United Kingdom Independence Party (UKIP) |
| Great Britain | 2017 | Labor (Lab) | Plaid Cymru (PC) |
| Great Britain | 2019 | Conservatives (Con) | Plaid Cymru (PC) |
| Greece | 2009 | Pan-Hellenic Socialist Movement (PASOK) | Popular Orthodox Rally (La.O.S) |
| Greece | 2012 | Democratic Left (DIMAR) | Golden Dawn (LS - XA) |
| Greece | 2015 | Coalition of the Radical Left (SYRIZA) | Golden Dawn (LS - XA) |
| Greece | 2019 | New Democracy (ND) | Greek Solution |
| Hong Kong | 1998 | Democratic Party (DP) | Citizen's Party |
| Hong Kong | 2000 | Democratic Party (DP) | Citizen's Party |
| Hong Kong | 2004 | Democratic Party (DP) | Democratic Alliance for Betterment of Hong Kong (DAB) |
| Hong Kong | 2008 | Civic Party (CPP) | League of Social Democrats (LSD) |
| Hong Kong | 2012 | { Democratic Party (DP) AND Hong Kong Federation of Trade unions (HKFTU) } | People Power (PP) |
| Hong Kong | 2016 | Democratic Party (DP) | ALLinHKG |
| Hungary | 1998 | Fidesz-Hungarian Civic Party Alliance Party (Fidesz - MPP) | Hungarian Justice and Life Party (MIEP) |
| Hungary | 2002 | Hungarian Socialist Party (MSZP) | Hungarian Justice and Life Party (MIEP) |
| Hungary | 2018 | Fidesz - KDNP | Democratic Coalition (DK) |
| Iceland | 1999 | Independence Party (Sj) | Liberal Party (FF) |
| Iceland | 2003 | Independence Party (Sj) | Liberal Party (FF) |
| Iceland | 2007 | Independence Party (Sj) | Icelandic Movement (IL) |
| Iceland | 2009 | Social Democratic Alliance (Sam) | Liberal Party (FF) |
| Iceland | 2013 | Progressive Party (F) | Pirate Party (Pi) |
| Iceland | 2016 | Left-Green Movement (VG) | Progressive Party (F) |
| Iceland | 2017 | Left-Green Movement (VG) | Center Party (M) |
| India | 2019 | Indian People's Party (BJP) | All India Trinamool Congress (AITC) |
| Ireland | 2002 | Fianna Fail (FF) | Sinn Fein (SF) |
| Ireland | 2007 | Fianna Fail (FF) | Sinn Fein (SF) |

| Country | Year | Condorcet winner party | Condorcet loser party |
|-------------|------|---|--|
| Ireland | 2011 | Fine Gael (FG) | United Left Alliance (ULA) |
| Ireland | 2016 | Fine Gael (FG) | Sinn Fein (SF) |
| Israel | 1996 | Israeli Labor Party (MHH) | Sfarad's Keepers of the Torah (Shas) |
| Israel | 2003 | Likud - The Consolidation (L) | Sfarad's Keepers of the Torah (Shas) |
| Israel | 2006 | Forward (Kadima) | Sfarad's Keepers of the Torah (Shas) |
| Israel | 2013 | There is a Future (YA) | Sfarad's Keepers of the Torah (Shas) |
| Israel | 2020 | Likud - The Consolidation (L) | Joint List |
| Italy | 2006 | National Alliance (AN) | Communist Refoundation Party (PRC) |
| Italy | 2018 | Five Star Movement (M5S) | Free and Equal (LeU) |
| Japan | 1996 | Liberal Democratic Party (LDP) | New Party Harbinger (NPH) |
| Japan | 2004 | Democratic Party of Japan (DPJ) | Japanese Communist Party (JCP) |
| Japan | 2007 | Democratic Party of Japan (DPJ) | Japanese Communist Party (JCP) |
| Japan | 2013 | Liberal Democratic Party (LDP) | Green Wind |
| Japan | 2017 | Liberal Democratic Party (LDP) | Japanese Communist Party (JCP) |
| Kenya | 2013 | The National Alliance (TNA) | United Democratic Front (Forum) (UDFP) |
| Latvia | 2010 | Union of Greens and Farmers (ZZS) | For Human Rights in United Latvia (PCTVL) |
| Latvia | 2011 | Unity (V) | Latvia's First Party/ /Latvian Way (LPP/LC) |
| Latvia | 2014 | Union of Greens and Farmers (ZZS) | Latvian Association of the Regions (LRa) |
| Latvia | 2018 | Union of Greens and Farmers (ZZS) | Latvian Russian Union (LKS) |
| Lithuania | 2016 | Lithuanian Farmers and Greens Union (LVZS) | (Lithuanian) Poles Election Action Christian Families Alliance |
| Lithuania | 2020 | Homeland Union-Conservatives / Lithuanian Christian Democrats | (Lithuanian) Poles Election Action - Christian Families Alliance |
| Mexico | 1997 | Democratic Revolution Party (PRD) | Cardenista Party (PFCRN) |
| Mexico | 2000 | Alliance for Change | Authentic Party of the Mexican Revolution (PARM) |
| Mexico | 2003 | National Action Party (PAN) | Citizen's Movement (MC) |
| Mexico | 2006 | National Action Party (PAN) | Soc. Dem.Party (PSD) |
| Mexico | 2009 | Institutional Revolutionary Party (PRI) | Soc. Dem.Party (PSD) |
| Mexico | 2012 | Institutional Revolutionary Party (PRI) | New Alliance Party (PANAL) |
| Mexico | 2015 | Institutional Revolutionary Party (PRI) | Citizen's Movement (MC) |
| Mexico | 2018 | National Regeneration Movement (MORENA) | Institutional Revolutionary Party (PRI) |
| Montenegro | 2012 | Coalition "For a European Montenegro" | Croatian Civic Initiative (HGI) |
| Montenegro | 2016 | Democratic Party of Socialists (DPS) | Bosniak Party (BS) |
| Netherlands | 1998 | Labor Party (PvdA) | Reformed Political Alliance (GPV) |
| Netherlands | 2002 | Christian Democratic Appeal (CDA) | Reformed Political Party (SGP) |
| Netherlands | 2006 | Christian Democratic Appeal (CDA) | Party for Freedom (PVV) |
| Netherlands | 2010 | Democrats 66 (D66) | Party for Freedom (PVV) |
| Netherlands | 2017 | Democrats 66 (D66) | Party for Freedom (PVV) |
| Netherlands | 2021 | Democrats 66 (D66) | Forum for Democracy (FvD) |
| New Zealand | 1996 | Labor Party (Lab) | Christian Coalition |
| New Zealand | 2002 | Labor Party (Lab) | Jim Anderton's Progressive Party (PP) |
| New Zealand | 2008 | National Party (NP) | Jim Anderton's Progressive Party (PP) |
| New Zealand | 2011 | National Party (NP) | MANA Movement (MANA) |

| Country | Year | Condorcet winner party | Condorcet loser party |
|--------------------|------|--|---|
| New Zealand | 2014 | National Party (NP) | Internet MANA (IP - MANA) |
| New Zealand | 2017 | National Party (NP) | MANA Movement (MANA) |
| New Zealand | 2020 | Labor Party (Lab) | Conservative Party (CP)/ New Conservative (NC) |
| Norway | 1997 | Labor Party (Ap) | Progress Party (FrP) |
| Norway | 2001 | Conservative Party (H) | Progress Party (FrP) |
| Norway | 2005 | Labor Party (Ap) | Red Electoral Alliance (RV) |
| Norway | 2009 | Labor Party (Ap) | Red Party (R) |
| Norway | 2013 | Conservative Party (H) | Red Party (R) |
| Norway | 2017 | Conservative Party (H) | Red Party (R) |
| Peru | 2000 | Possible Peru | Peruvian Aprista Party (PAP) |
| Peru | 2001 | Possible Peru | Andean Renaissance / National United Renaissance |
| Peru | 2006 | Peruvian Aprista Party (PAP) | National Restoration (RN) |
| Peru | 2011 | Peru Wins (UPP) | Peruvian Aprista Party (PAP) |
| Peru | 2016 | Popular Force (FP) | Direct Democracy |
| Peru | 2021 | Popular Action (AP) | Popular Renewal (RP) |
| Philippines | 2004 | Lakas - Christian-Muslim Democrats (LAKAS-CMD) | Democratic Action (AD) |
| Philippines | 2010 | Liberal Party (LP) | New Nation- Volunteers for a New Philippines (VNP) |
| Philippines | 2016 | Philippine Democratic Party (PDP-LABAN) | People's Reform Party (PRP) |
| Poland | 1997 | Solidarity Electoral Action (AWSP) | Movement for Reconstruction of Poland (ROP) |
| Poland | 2001 | Coalition Of The Alliance Of The Democratic Left - The Union of Labor | Solidarity Electoral Action (AWSP) |
| Poland | 2005 | Law and Justice (PiS) | Democratic Party (PD) |
| Poland | 2007 | Civic Platform (PO) | Left and Democrats (LiD) |
| Poland | 2011 | Civic Platform (PO) | Palikots Movement |
| Poland | 2019 | Law and Justice (PiS) | Confederation Liberty and Independence |
| Portugal | 2002 | Socialist Party (PS) | Portuguese Communist Worker's Party (PCTP/MRPP) |
| Portugal | 2005 | Socialist Party (PS) | Democratic and Social Centre - People's Party (CDS-PP) |
| Portugal | 2009 | Socialist Party (PS) | Unitarian Democratic Coalition (CDU) |
| Portugal | 2015 | Socialist Party (PS) | Democratic Republican Party (PDR) |
| Portugal | 2019 | Socialist Party (PS) | Democratic and Social Centre - People's Party (CDS-PP) |
| Republic of Korea | 2000 | Millennium Democratic Party (MDP) | New Korean Party of the Hope (NKPH) |
| Republic of Korea | 2004 | Our Party | National Integration 21 |
| Republic of Korea | 2008 | New Frontier Party (NFP) | New Progressive Party (NPP) |
| Republic of Korea | 2012 | Democratic United Party (DUP) | |
| Republic of Korea | 2016 | Democratic Party of Korea (DP) | Justice Party (JP) |
| Romania | 1996 | Romanian Democratic Convention (CDR) | Democratic Union of Hungarians in Romania (UDMR) |
| Romania | 2004 | Democratic Party (PD) | Democratic Union of Hungarians in Romania (UDMR) |
| Romania | 2012 | Social Liberal Union (USL) | Democratic Union of Hungarians in Romania (UDMR) |
| Romania | 2016 | Romanian Party of Social Democracy (PSD) | Our Romania Alliance (ANR) |
| Russian Federation | 1999 | Unity Inter-Regional movement | Zhirinovsky Bloc |
| Serbia | 2012 | Serbian Progressive Party (SNS) | Liberal Democratic Party (LDP) |
| Slovakia | 2010 | Direction - Social Democracy (Smer) | Party Of The Hungarian Coalition (SMK) |
| Slovakia | 2016 | Slovak National Party (SNS) | Network (S) / Slovak Conservative Party (SKS) |
| Slovakia | 2020 | We are family (SR) | Kotleba - People's Party Our |

| Country | Year | Condorcet winner party | Condorcet loser party |
|--------------|------|---|---|
| Slovenia | 1996 | | Slovakia (LsNS) |
| Slovenia | 2004 | Social Democratic Party (SDS) | Christian Democrats (SKD) |
| Slovenia | 2008 | Social Democrats (SD) | New Slovenia - Christian People's Party (NSi) |
| Slovenia | 2008 | United List of Social Democrats (ZLSD) | New Slovenia - Christian People's Party (NSi) |
| Slovenia | 2011 | Social Democrats (SD) | New Slovenia - Christian People's Party (NSi) |
| Slovenia | 2011 | United List of Social Democrats (ZLSD) | Slovenian National Party (SNS) |
| South Africa | 2009 | African National Congress (ANC) | Slovenian National Party (SNS) |
| South Africa | 2014 | African National Congress (ANC) | Freedom Front Plus (VF Plus) |
| Spain | 1996 | Spanish Socialist Workers' Party (PSOE) | Freedom Front Plus (VF Plus) |
| Spain | 2000 | People's Party (PP) | Basque Nationalist Party (PNV) |
| Spain | 2004 | Spanish Socialist Workers' Party (PSOE) | Basque Nationalist Party (PNV) |
| Spain | 2008 | Spanish Socialist Workers' Party (PSOE) | People's Party (PP) |
| Sweden | 1998 | Sweden's Social Democratic Worker's Party (SAP) | Republican Left of Catalonia (ERC) |
| Sweden | 2002 | Sweden's Social Democratic Worker's Party (SAP) | Liberal People's Party (FP) / Liberals (L) |
| Sweden | 2006 | Sweden's Social Democratic Worker's Party (SAP) | Moderate Party (M) |
| Sweden | 2014 | Sweden's Social Democratic Worker's Party (SAP) | Sweden Democrats (SD) |
| Sweden | 2018 | Sweden's Social Democratic Worker's Party (SAP) | Sweden Democrats (SD) |
| Switzerland | 1999 | Radical Democratic Party (FDP / PLR) | Sweden Democrats (SD) |
| Switzerland | 2003 | Social Democratic Party (SP / PS) | Green Party (GPS / PES) |
| Switzerland | 2007 | Christian Democratic People's Party (CVP / PDC) | Swiss People's Party (SVP / UDC) |
| Switzerland | 2011 | Christian Democratic People's Party (CVP / PDC) | Evangelical People's Party (EVP / PEP) |
| Taiwan | 1996 | Kuomintang of China (KMT) | Swiss People's Party (SVP / UDC) |
| Taiwan | 2001 | Democratic Progressive Party (DPP) | New Party (NP) |
| Taiwan | 2012 | Kuomintang of China (KMT) | New Party (NP) |
| Taiwan | 2016 | Democratic Progressive Party (DPP) | People First Party (PFP) |
| Taiwan | 2020 | Democratic Progressive Party (DPP) | Taiwan Solidarity Union (TSU) |
| Thailand | 2001 | Thai Rak Thai Party (TRT) | People First Party (PFP) |
| Thailand | 2007 | People's Power Party (PPP) | Justice and Freedom Party |
| Thailand | 2011 | For Thais Party (PPT) | Referendum Party |
| Thailand | 2019 | For Thais Party (PPT) | Power of Choburi Party |
| Tunisia | 2019 | Heart of Tunisia | People's Nation Party |
| Turkey | 2011 | Justice and Development Party (AKP) | Dignity Coalition |
| Turkey | 2015 | Justice and Development Party (AKP) | Peace and Democratic Party (BDP) |
| Turkey | 2018 | Justice and Development Party (AKP) | Patriotic Party (VP) |
| Ukraine | 1998 | Communist Party of Ukraine | Peoples' Democratic Party (HDP) |
| USA | 1996 | Democratic Party (DEM) | Social-Democratic Party |
| USA | 2004 | Democratic Party (DEM) | Reform Party (REF) |
| USA | 2008 | Democratic Party (DEM) | Reform Party (REF) |
| USA | 2012 | Democratic Party (DEM) | Republican Party (GOP) |
| USA | 2016 | Democratic Party (DEM) | Republican Party (GOP) |
| USA | 2020 | Democratic Party (DEM) | Republican Party (GOP) |
| Uruguay | 2009 | Broad Front (FA) | Republican Party (GOP) |
| Uruguay | 2019 | Broad Front (FA) | Popular Assembly |
| | | | Open Cabildo |

C. Full List of Condorcet Winner and Condorcet Loser Candidates/Parties in Presidential Elections

| Country | Year | Condorcet winner candidate/party | Condorcet loser candidate/party |
|-------------|------|--|---|
| Argentina | 2015 | Daniel Scioli (FPV) | Nicolas del Cano (FIT) |
| Belarus | 2001 | Aljaksandr Lukaschenka (BNF) | Vladimir Goncharik (UDO) |
| Brazil | 2002 | Luiz I. Lula da Silva (PT) | Jader Barbalho (PMDB) |
| Brazil | 2006 | Luiz I. Lula da Silva (PT) | Christovam Buarque (PDT) |
| Brazil | 2010 | Dilma Rousseff (PT) | Ciro Gomes (PSB) |
| Brazil | 2014 | Dilma Rousseff (PT) | Ronaldo Caiado (DEM) |
| Brazil | 2018 | Jair Bolsonaro (PSL) | Henrique Meirelles (MDB) |
| Chile | 1999 | Ricardo Lagos (PPD) | Gladys Marín Millie (PCCh) |
| Chile | 2009 | Marco Enríquez-Ominami (MEO) | Jorge Arrate (PCCh) |
| Chile | 2017 | Sebastian Pinera (RN) | Eduardo Artes (UPA) |
| Costa Rica | 2018 | Carlos A. Quesada (PAC) | Rodolfo H. Gómez (PRSC) |
| El Salvador | 2019 | Nayib Bukele (GANA) | Josué Alvarado (Vamos) |
| France | 2002 | Jacques Chirac (PS) | Jean-Marie Le Pen (FN) |
| France | 2012 | François Hollande (PS) | François Bayrou (MoDem) |
| France | 2017 | Emmanuel Macron (LaREM) | Marine Le Pen (FN) |
| Kenya | 2013 | Uhuru Kenyatta (TNA) | Musalisa Mudavadi (UDFP) |
| Lithuania | 1997 | Valdas Adamkus (Independent) | Rimantas Smetona (JL) |
| Mexico | 2000 | Cuauhtémoc C. Solórzano (PRD) | Vicente Fox (PAN) |
| Mexico | 2006 | Felipe Calderón Hinojosa (PAN) | Roberto Campa Cifrián (PANAL, PNA) |
| Mexico | 2012 | Enrique Peña Nieto (PRI) | Gabriel Ricardo Quadri de la Torre (PANAL, PNA) |
| Mexico | 2018 | Andrés M. López Obrador (PRD / MORENA) | Jaime H. Rodríguez Calderón (Independent) |
| Peru | 2000 | Alberto Fujimori (Peru 2000) | Abel Salinas (PAP) |
| Peru | 2001 | Lourdes Flores Nano (UN) | Ciro Galvez (Andean Renaissance) |
| Peru | 2011 | — | Verónica Mendoza (Frente Amplio / JP) |
| Peru | 2016 | Pedro Castillo (PL) | Cesar Acuna Peralta (APP) |
| Peru | 2021 | Hernando de Soto (AvP) | Daniel Urresti (PP) |
| Philippines | 2010 | Benigno Cojuangco Aquino III (LP) | Jesus N.P. Perlas (Independent) |
| Philippines | 2016 | Rodrigo Roa Duterte (PDP-LABAN) | Jejomar Binay (UNA) |
| Romania | 1996 | Emil Constantinescu (CDR) | Mircea Ionescu-Quintus (PNL) |
| Romania | 2009 | Mircea Geoana (PSD) | Hunor Kelemen (UDMR) |
| Romania | 2014 | Klaus Werner Iohannis (PNL) | Hunor Kelemen (UDMR) |
| Serbia | 2012 | Tomislav Nikolić (SNS) | Čedomir Jovanović (LDP) |
| Taiwan | 1996 | Lee Tung-Hui (KMT) | Peng Ming Min (DPP) |
| Taiwan | 2004 | Lai Ching-te (DPP) | New Party (NP) |
| Taiwan | 2008 | Ma Ying-Jeou (KMT) | Frank Hsieh (DPP) |
| Taiwan | 2012 | Ma Ying-Jeou (KMT) | James Soong (PFP) |
| Taiwan | 2016 | Tsai Ing-Wen (DPP) | Eric Chu (KMT) |
| Taiwan | 2020 | Tsai Ing-Wen (DPP) | Han Kuo-Yu (KMT) |
| Tunisia | 2019 | Nabil Karoui (Heart of Tunisia) | Zouheir Maghzaoui (People's Movement) |
| Turkey | 2018 | Recep Tayyip Erdoğan (AKP) | Pervin Buldan (HDP) |
| Uruguay | 2009 | José Mujica (FA) | Raúl Rodríguez L. da Silva (Popular Assembly) |
| Uruguay | 2019 | Luis Lacalle Pou (PN) | Ernesto Talvi (Colorado Party) |