POLITICS SYMPOSIUM

Forecasting the 2025 Federal German Election

A Political-Economy Forecast of the 2025 German Federal Elections: Merz wins but the Grand Coalition is back

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In February 2025, German voters will vote for the fifth time since 1949 in early federal elections. For the years 1972 and 2005, the minority position of Willy Brandt and Gerhard Schröder, in the Bundestag respectively, led to new elections. In 1990, the elections were triggered by reunification and the fall of the Berlin Wall. Finally, in 1983, the early elections were the result of a change of alliance by the FDP. It is impossible to draw a general law on the effect of a dissolution on the electoral score of the outgoing Chancellor's party, since the incumbents were only re-elected two times out of four. In 2024, the departure of the FDP due to disagreement, among other things, on economic policy, put an end to the "tricolor" or “traffic light” SPD-Grune-FDP coalition. For forecasters, these elections represent a real challenge because of their unexpected nature; but also due to multiplication of parties in the German political landscape.

While the study of voting functions in the German case had been the subject of little work, from 1998 onwards we regularly proposed political-economic forecasts of the Bundestag elections, whether in press articles such as in Le Figaro (Jérôme, Jérôme and Lewis-Beck, 1998,

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2002) or in other media, audiovisual or websites (Jérôme-Speziari, 2005; Jérôme, Jérôme and Lewis-Beck, 2009). As these innovative works had a certain success, we invested in peer-reviewed outlets, notably through publications in this journal (Jérôme, Jérôme and Lewis-Beck, 2013, 2017 and 2021). Looking at the seven elections from 1998 to 2017, on five occasions our political-economic models correctly predicted the winners, as well as the nature of the coalitions, e.g., in 2009 and 2017 when Angela Merkel governed "in a grand coalition" with the SPD. However, we failed in 2002 and 2021. In 2002, when our single-equation voting function did not anticipate the narrow victory of the Greens over the FDP; and in 2021, when Olaf Scholz's SPD won by "surprise".

Our modeling strategy has had to adapt to the changes in the party structure of German parties over the past 25 years. In 2013, we attempted to better integrate the institutional features of proportional representation (PR) and the multiparty system, which has become more complex, with new parties likely to win seats. Of course, this increases the number of hypothetical coalitions. We therefore turned to a SUR (seemingly unrelated regression) model (see Zellner, 1962). This approach, which explicitly takes into account both large and small parties, was particularly beneficial in 2017, when the more extreme parties of the Alternative for Germany (AFD) and the Left Party won almost 22% of the vote, forcing the SPD and CDU/CSU to form a "grand coalition".

However, in 2021, the SUR model had placed the CDU/CSU in the lead, followed by the SPD and the Greens. Everything suggested that the grand coalition would be renewed. Instead, Scholz's SPD narrowly beat the CDU/CSU led by Angela Merkel's successor Armin Laschet, who was preferred to the more popular Bavarian Prime Minister Markus Söder. In the end, the SPD would build a "traffic light" coalition with the Greens and the liberal democrats of the FDP.

Still the model's early forecast (June 2021) was unable to record certain phenomena that had accumulated a month before the election. The indicator of preference for the chancellor, the only popularity variable available for the voting functions of the camp belonging to the outgoing chancellor (INCMAIN) and his main challenger (OPPMAIN), saw the trend reverse between Scholz and Laschet, who collapsed following numerous communication errors that ruined his credibility. Furthermore, from mid-August 2021, the voting intentions of Annalena Baerbock's Greens and the Linke Parteï collapsed in favor of Olaf Scholz. On the right, the CDU/CSU suffered from the progress of the AFD (Alternative für Deutschland) and the FW[1], a diverse right-wing sovereignist party initially created in Bavaria in 2009 (which achieved its best score in 2021, with 2.4%). Finally, the FDP, a pivotal party in German political life, obtained 11.5% of the vote.

This last-minute fluidity between the electorates of ideologically similar parties has been described by political scientist Eric Dupin (1989) as a phenomenon of "cousin electorates". Thus, in 2021, our main equations, INCMAIN and OPPMAIN (see Table 1 p. 9 and appendix p. 2-3), did not include the voting intentions for the outgoing SPD and its main challenger CDU/CSU[2], alongside the popularity indicator for the chancellor. Below, we consider steps taken to overcome these challenges.

Methodological changes compared to 2021[3]

[1] Freie Wälher parteï (Free Voters party).
[2] See appendix p.2
[3] For a detailed review of the changes between 2025 et 2021 models, see appendix p.17

In view of the early election of 2025, we made some modifications to try to capture the unexpected changes in voter preferences. This first led us to insert the voting intentions (one quarter before the election) for the party of the incumbent chancellor (POPINC) and the main opponent (POPOPP), respectively, in equation (1) of the incumbent vote (INCMAIN) and in equation (2) of the challenger vote (OPPMAIN). To take into account the increasing electoral weight of the AFD, we then made the voting function (6) of the far right (FARIGHT) autonomous, while it had been merged into the equation (7) of the other parties (OTHERS) in 2021. (It should be noted that the far right has been present in German legislative elections since 1949.)

We then reestablished a "classical" political economic model by returning to the system of voting equations (now seven) followed by a system of swing ratios transforming votes into seats. In 2021, the direct forecast of the percentage of seats made it possible to reduce the size of the cumulative errors, but it had two drawbacks. It did not make it possible to predict whether certain parties risked being eliminated from the distribution of seats by not crossing the 5% threshold. It also did not allow estimation of the premium (or discount) in seats resulting from the proportional system with double voting (Erststimme and Zweitstimme). We now turn to the practical aspects of the modeling exercise.

The political-economic model: foundations and operationalization of variables.

The underlying theory of our model bases itself on the hypothesis of government responsibility, which sets up a punishment/reward logic for the candidates (Key; 1966). Depending on the economic and political results attributed to it, which constitute its record, the

outgoing government receives an electoral bonus in the event of good performance and suffers an electoral cost in the event of poor performance. The modeling of the chancellor's party and the opposing party most closely reflects this idea of retrospective reward-punishment. The specification of our equations aligns with standard voting functions containing macroeconomic data and survey measures of the popularity of the executive (Lewis-Beck and Stegmaier, 2013). The final form of the model can, however, be considered synthetic since we incorporate voting intentions for political parties (see Lewis-Beck, Nadeau and Bélanger; 2016).

In the German case, the endogenous variable of the main party of the incumbent coalition (INCMAIN) measures the percentage of votes of the party of the chancellor CDU/CSU or SPD (or of the candidate designated by his camp). Similarly, the dependent variable of the main opposition party (OPPMAIN) measures the percentage of votes of the main opponent of the outgoing chancellor. As for the explanatory economic variable, we use the variation of the unemployment rate (ΔUQ-2 measured two quarters before the election, over the duration of the elapsed mandate); when variation is positive, the main outgoing party suffers an electoral cost while the main opponent receives an electoral bonus.

Referencing the work of Norpoth and Gschwend (2010), the exogenous variable of preference for the incumbent chancellor ($KANZ_{Q-1}^{INC}$; see appendix p.2), or the representative of his camp, measures one quarter before the election, the electoral premium for the latter resulting from the benchmark with his main challenger. (Note that in this article we have chosen not to use this variable in equation (2) OPPMAIN, considering that this type of evaluation is ambiguous since the challenger does not have a record.)

Our SUR voting model (see appendix p.6-8), estimated on the elections from 1961 to 2021, consists of a system of 7 equations, starting with the two endogenous variables mentioned

above (1 and 2), which constitute the two "classic" equations, one expressing the votes obtained by the main incumbent party (the SPD in 2025) and the other to explain the main opposition party (the CDU/CSU in 2025). The other equations explain the percentage of votes for the (3) FDP (Free Democrats), (4) the Greens (GRUNE), (5) the far left (FARLEFT, mainly the LINKE, ex-PDS)[4], (6) the far right (FARIGHT), whose main component is the AFD, and the (7) other parties (OTHERS).

According to Powell and Whitten's (1993) hypothesis on "clarity of government responsibility," small parties should be considered less responsible for the results of the outgoing government. It follows that voting for the FDP should be more prospective than retrospective. Voters will then express their wish (or not) to see it included in a new coalition. (The FDP, often a pivotal party, means this variable has been measured by German pollsters for fifty years). We will therefore distinguish the case where the FDP is outgoing with the CDU (COINCFDP/CDU), or with the SPD (COINCFDP/SPD), and the case where it is in opposition with the CDU (COOPPFDP/CDU). Regarding the other parties, here are the main characteristics of the equations, below.

The percentage of votes for the Greens depends mainly on the strength of their opposition (POPGRUNE), as measured in the polls (IFD Allensbach and ZDF-Politbarometer). Added to this are the "preferred coalitions" when the Greens are in power with the SPD (COINCSPD/GRUNE. (When the Greens are included in a preferred coalition with the SPD, while they are in power, they should receive a bonus from the incumbent)[5]. As for the far left

[4] In 2025 forecast, FARLEFT variable will include the BSW (*Bündnis Sahra Wagenknecht - Für Vernunft und Gerechtigkeit*) a new far Left party created on January 2024.

[5] The electoral premium comes from voters wishing to see the Greens once again in a coalition with the SPD. It turns out that, in terms of opinion, they benefit from a positive image. In 2002, according to our data, 22% of respondents wish to see again the Greens in a coalition with the SPD. In 2005, they are still 15%. However, these figures are still high compared with other outgoing parties. This is partly reflected in the voting figures. Between

(FARLEFT), POPFARLEFT (see appendix p.5) measures the strength of voting intentions in the polls (IFD Allensbach and ZDF-Politbarometer). The dummy NEWLEFT measures the average electoral bonus garnered by the "new" parties of the "left of the left" from 2005 to 2021 and which are competitors of the SPD and the Grune.

At this stage, our modeling of the far right (see appendix p. 5) can only be preliminary given the youth of the AFD created in 2013; thus, we evaluate the premium for the far right in general via a dummy variable (AFD1321). The main variable in this function will be the voting intentions for the extreme right including the AFD. Finally, the share of other parties in the polls (OTHERS) is to be explained by the voting intentions in the polls for other parties (POPOTHERS), (knowing that the free voters of the FW now occupy an important place in this bloc, IFD Allensbach).

In addition to the theoretical specifications of the equations mentioned above, we must take into account some specificities of the electoral rules in the German case. One of them is the threshold of 5% of the votes. In general, parties that do not exceed the threshold of 5% of the votes cannot obtain seats. Besides the AFD, this situation affected the FDP in 2013 and the PDS in 1994. In the case of the FDP, to account for this, we used the dummy variable FDPINF5. As well, other indicator variables were used to indicate that the Greens and Die LINKE did not participate in the elections (i.e. NOGRUNE from 1961 to 1976 and NOLINKE from 1961 to 1987).

Besides the consequences of electoral rules, changes in the nature of coalitions, electoral strategies or institutional changes have sometimes modified the results at the ballot box. For

1998 and 2002, the Greens gained 1.9% of the vote. Between 2002 and 2005, they lost only 0.5%. On average, this results in a (slightly) positive coefficient and a small gain in votes.

example, when the Grune are in opposition, this has a negative effect on the SPD's votes. The creation and rise of the AFD also had a negative effect on the votes of both the Chancellor's party and the main opposition party. Furthermore, the early elections of 1972 (DUM72), following Willy Brandt's defeat in the Bundestag. had a negative impact on Willy Brandt's SPD incumbents even though the SPD was re-elected.

On the one hand, in 2005 (DISSOL05), the defeat of G. Schroeder, who according to some wanted to provoke a "strategic" dissolution before the end of the term, cost the CDU/CSU points. On the other hand, the outgoing chancellor had not imagined that the FDP would overtake its GRUNE allies. Still, with regard to the FDP, the prospect of becoming a supporting party in 2021 (DUM21) brought it an average electoral bonus of 4.16% of the votes, to the detriment of the CDU. Finally, a major political change occurred with the reunification (REUNIF) in 1990, which gave birth to the Greens, whose presence has been maintained until today. Such complexities obviously pose challenges for estimating the modeling outcomes, a task we undertake below.

The SUR model estimates

Using the above equations and variables, we estimated the SUR model for each of the voting functions. The estimated coefficients serve as the basis for our forecasts of the parties' votes for the February 2025 elections. The SUR model is presented as follows, in Table 1. The coefficients of determination indicate the strength of the equations. For the two main equations predicting support or opposition to the main parties (INCMAIN and OPPMAIN), SPD and CDU/CSU, the adjusted R^2 are 0.98 and 0.92, respectively. Similarly, their regression standard errors (SER) are satisfactory, from 0.78 points to 2.22 points, respectively. For the small parties,

these statistics are also solid, with the adjusted R^2 ranging from 0.93 to 0.56 and the SER from 1.09 to 1.52. The equation for the other parties (OTHERS) is certainly the least predictable.

Table 1 – VOTE FUNCTIONS - SUR ESTIMATES

(1) $INC^{MAIN} = 12.20 + 0.61.POP^{INC} - 0.27.\Delta U_{Q-2} - 8.78.\ GCOAL^{09/21} + 0.12.KANZ_{Q-1}{}^{INC} - 2.46.AFD1321$

(10.35) (24.73) (-3.54) (-19.54) (9.97) (-5.97)

$- 3.22.DUM72 - 5.15.STRAUSS80$

(-6.00) (-8.98)

Adj R^2 = 0.98; SER = 0.78; N = 17 (1961-2021)

(2) $OPP^{MAIN} = 26.80 + 0.34.POP^{opp} + 1.44.U_{Q-2} - 10.12.\ DISSOL05 - 4.97.AFD1321 - 4.53.\ GRUNE^{OPP}$

(6.36) (3.66) (5.82) (-6.03) (-2.98) (-3.69)

Adj R^2 = 0.92; SER = 2.22; N = 17 (1961-2021)

(3) $FDP = 4.98 + 0.12.\ CO_{INC}{}^{FDP/CDU} + 0.09.\ CO_{INC}{}^{FDP/SPD} + 0.20.\ CO_{OPP}{}^{FDP/CDU} - 2.39.FDPINF5 + 4.16.DUM21$

(9.21) (7.59) (5.96) (9.68) (-2.66) (4.50)

$- 3.61.FDP02$

(-3.89)

Adj R^2 = 0.80; SER = 1.16; N = 17 (1961-2021)

(4) $GRUNE = 2.65 - 2.57.\ NOGRUNE + 0.55.\ POPGRUNE - 3.41.REUNIF + 0.05.CO_{INC}{}^{SPD/GRUNE}$

(5.45) (--4.92) (12.97) (-5.02) (1.96)

Adj R^2 = 0.93; SER = 1.18; N = 17 (1961-2021)

(5) $FARLEFT = 2.10 + 0.47.\ POPFARLEFT\ -2.12.\ NOLINKE + 3.06.NEWLEFT0521$

(3.01) (3.29) (-2.81) (3.50)

Adj R^2 = 0.90; SER = 1.27; N = 17 (1961-2021)

(6) $FARIGHT = 0.59 + 1.10.\ POPFARIGHT + 2.62.AFD1321$

(2.21) (8.75) (3.12)

Adj R^2 = 0.90; SER = 1.09; N = 17 (1961-2021)

(7) $OTHERS = 0.98 + 0.43.\ POPOTHERS + 2.73.FW1321$

(1.95) (2.79) (3.05)

Adj R^2 = 0.56; SER = 1.52; N = 17 (1961-2021)

Note : t-stats (two-tail) are between brackets

The Forecasts for 2025 (February)

To carry out seats share forecast for the parties[6], we have inserted into the equations these current values, below:

ΔU_{Q-2}= 0.1% (Change June (t) – June (t-4)); $KANZ_{Q-1}{}^{INC}$ = 43% (O. Scholz); POP^{INC} = 15% (SPD); POP^{OPP} = 37% (CDU-CSU); $CO_{INC}{}^{FDP/CDU}$= 0% ; $CO_{INC}{}^{FDP/SPD}$= 0% ; $CO_{OPP}{}^{FDP/CDU}$= 0% ; POPGRUNE = 10% ; $CO_{INC}{}^{SPD/GRUNE}$ = 11%; POPFARLEFT=7.5% ; NEWLEFT0521=3.06; POPAFD = 17; DUMAFD = 2.62; POPOTHERS = 9.5%; FW1321 = 2.73

As for the forecast calculation method, we proceeded in four stages. First, we generated the estimated coefficients of the seven equations of the SUR equation system, which we applied to the values shown in the box above. As is often the case with this type of estimate, the total of predicted votes is often different from 100, so we obtained raw vote results whose total turned out to be greater than 100. In the second stage, we then normalized these results, bringing them back to a total of 100. The third step is to estimate a system of swing ratio equations (SUR) to transform our votes into seat percentages (see appendix p.13-15). We then applied the estimated swing ratio coefficients to the normalized voting data (see figure 1). Finally, in a last step, we normalized the seat percentages obtained before calculating the predicted seats at the Bundestag for each bloc (see figure 2) on the basis of the 2021 total seats (e.g. 736). (see appendix p.15).

We have implicitly mentioned the question of forecast accuracy by referring to the satisfactory level of SER in our voting equations. However, we can complete this indicator by calculating the RMSE (Root Mean Squared Error or Theil's U coefficient). In our appendix (p.15), we can observe the low average error affecting the vote forecast, according to this definition,

[6] Sources of the economic and political data are as follows : Arbeitsmarktstatistik der Bundesagentur für Arbeit, Nürnberg, Forschungsgruppe Wahlen e.V.,Mannheim, Zentralarchiv für empirische Sozialforschung (1961-2002), ZDF Politbarometer (for Koalitionspräferenz), IFD Allensbach.

ranging from 0.57 (INCMAIN) to 1.89 (OPPMAIN). The error affecting the other equations is less than 1.4. Over and above this overall observation, a study of the graphs comparing the respective patterns of forecast and actual votes (see appendix p. 9-12) for the seven political blocs reveals, however, that for OPPMAIN, FARIGHT, GRUNE and FARLEFT, forecasts deviate slightly more frequently from actuals at some recent dates. In the latter two cases, this may be a sign of porosity between the ecologist and non-social-democrat left-wing electorates. This argument is also valid in the first two cases, and underlines the fact that the CDU/CSU and the AFD will be battling for market share on the right until the end. This does not exclude last-minute variations in voting according to Dupin's hypothesis (see below).

At the time of writing (December 2024), the CDU/CSU led by Friedrich Merz is expected to win with 33.5% of the vote and 38.7% of the seats (i.e. 285 seats out of 736 in 2021) which remains far from the absolute majority (see figure 1 and 2). Contrary to the very pessimistic forecasts of the polls, Olaf Scholz should limit the damage with 22.4% of the votes and 28% of the seats, i.e. approximately the same number of 204 seats as in 2021. Given these proportions, and the goal of achieving a majority share in the legislature, it seems most likely, then, that the Grand Coalition will return to power.

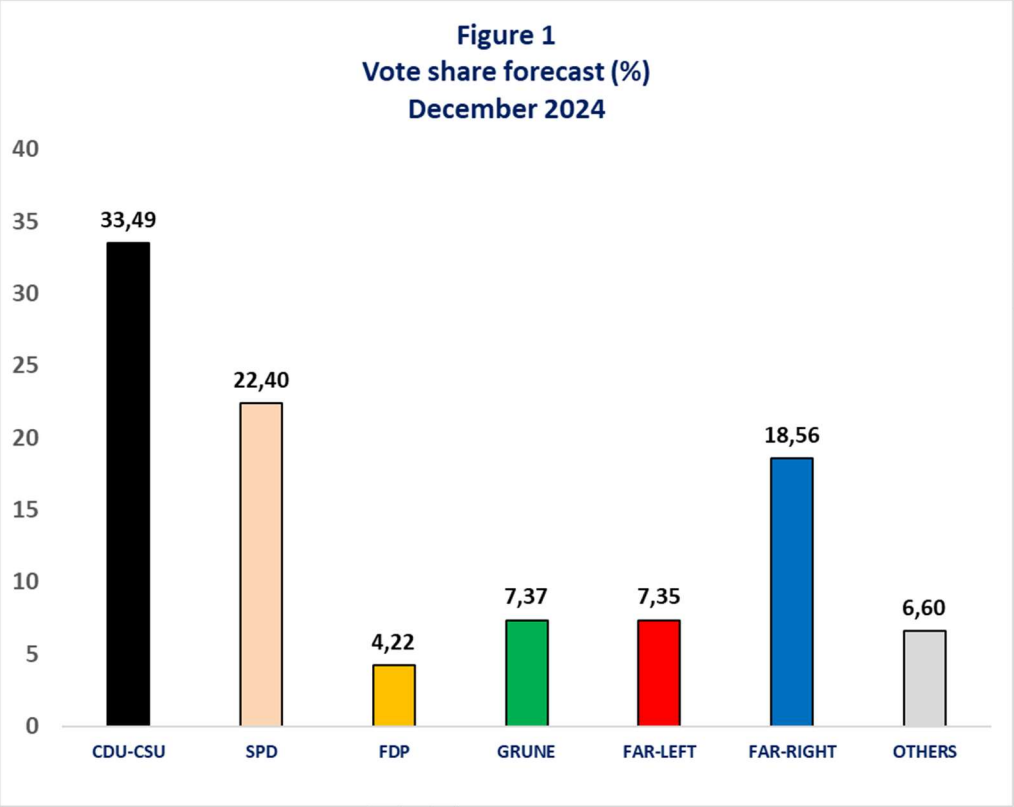


Figure 1
Vote share forecast (%)
December 2024
40
35
30
25
20
15
10
5
0
33,49
22,40
4,22
7,37
7,35
18,56
6,60
CDU-CSU
SPD
FDP
GRUNE
FAR-LEFT
FAR-RIGHT
OTHERS

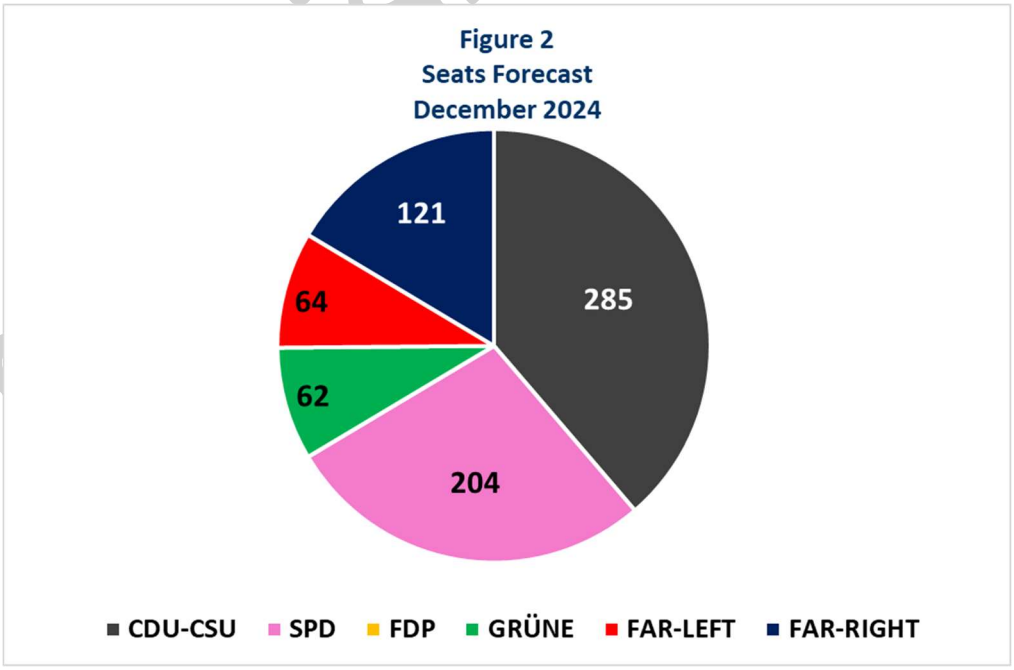


Figure 2
Seats Forecast
December 2024
121
285
64
62
204
CDU-CSU
SPD
FDP
GRÜNE
FAR-LEFT
FAR-RIGHT

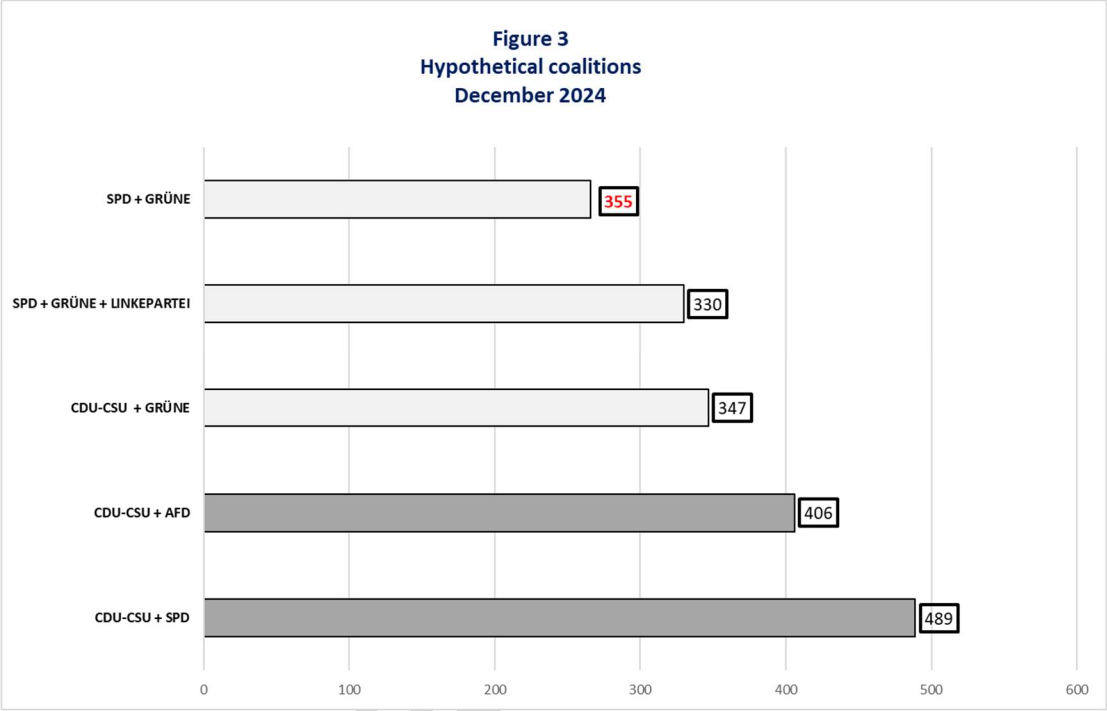
Furthermore, our forecast indicates (see figure 1 and 2) that the FDP with 4.2% of the vote would not cross the 5% mark and, therefore, would not be able to claim any seats. The Greens and the Far Left would be almost equal with 7.3% of the vote which would give them 64 and 62 seats respectively. Finally, there exists the extreme right, whose AFD would make a breakthrough, with 18.5% of the vote and nearly 121 seats in the Bundestag. It should be noted that the economy will play a slightly different role than usual in the upcoming election. The increase in unemployment over the past term is only 0.1%. The electoral cost for O. Scholz will thus be limited, as will the potential gain for F. Merz. Hence, everything will depend on the credibility of the outgoing Chancellor and the political parties. as well as on the desired coalitions.

Discussion

Looking at the various hypothetical coalitions (figure 3), we observe that only two coalitions could achieve an absolute majority if the FDP is eliminated. A right-wing "blue" CDU/CSU-AFD coalition would cross the majority threshold, with 406 seats. But even if Fridriech Merz is more conservative than his predecessors, the respective positions of the two parties on Europe make their convergence very delicate. It is worth noting that the FDP is at risk of being taken out of the game once again since 2013. According to the Politbarometer of November 2024, only 7% of Germans would like a CDU/CSU-FDP coalition and none of them want a coalition with the SPD alone or SPD-Grüne. The Free Democrats seem to pay dearly for their exit from the outgoing coalition.

On the other hand, a new “grand coalition” CDU/CSU-SPD could reach 489 seats. Incidentally, 30% of Germans want a such a configuration (Politbarometer of November 2024).

This coalition assumes that the SPD achieves a score in line with our political-economic forecast, which is not convergent with the polls of November 2024 where it collects 15% of the votes.



It should be noted, however, that in the preferred Chancellor popularity indicator, Olaf Scholz is now almost on a par with Fridriech Merz (43% versus 46% in favor; Politbarometer). This means that the SPD could do a little better than expected in terms of voting intentions. There remain what forecasters sometimes call the "black swans" and, in reference to Table 1, could also be called "uncontrolled exogenous shocks".[7]

In this sense, the Magdeburg attack of December 21, 2024 could have real electoral consequences in February 2025. It all depends on whether or not voters will hold the outgoing Chancellor accountable and, beyond that, the governing parties that preceded him also are held accountable. If that were the case, the AfD could grow even stronger, weakening the bloc of

[7] These shocks are captured in model errors, which can only be analyzed after the fact.

parties in government, whose base could fall below 50% of the votes. In such a circumstance, a coalition with the Greens would prove indispensable to prevent political deadlock, at the cost of probable political instability given the great divergences, both in terms of economic policy and on the question of immigration. or aid to Ukraine. But so far, the "Kenyan" coalition[8] has never been attempted at the national level.

CONFLICTS OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study have not yet been verified by PS's replication team. Data will be openly available at the Harvard Dataverse upon publication of the final article.

[8] A Kenyan coalition is a Black-red-green coalition (Schwarz-rot-grüne Koalition), e.g. a governing coalition among the parties of the Christian Democratic Union (CDU), Social Democratic Party (SPD) and the Green Party.

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