Title: Anti-defection rules and party switching in the Italian Parliament

Abstract: Despite considerable progress in the study of party switching, scholarly interest in institutional constraints explicitly designed to limit or penalise inter-party mobility remains limited in the literature. This paper contributes to the emerging scholarship on party switching and legal institutional constrains by assessing the effectiveness of the new anti-defection regulations introduced in the Italian Senate starting from 2018. To evaluate the impact of this intervention, we develop two quasi-experimental research approaches that take advantage of the bicameral structure of the Italian Parliament and the fact that the anti-defection regulations were only implemented in the Senate and not in the Chamber of Deputies. Our results indicate that anti-defection regulations failed both to limit inter-party mobility and the formation of new legislative parties. However, they are effective in influencing the timing of party switching, concentrating it in the phases of government formation and dissolution.

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Introduction

Political parties are central actors in democratic regimes, especially in parliamentary democracies, where parties exercise strong control over candidacies, administer almost all electoral campaign funds, and constitute the building block of governments, which life inevitably depends on their support. Given the importance of parties for both the functioning of democracies and the careers of legislators, politicians who win seats are expected to remain loyal to the party they are affiliated with after the elections. This expectation, however, does not describe the reality of the representative process in a number of countries (Volpi 2019a; Klein 2021), for which party switching − conventionally defined as an "umbrella label for any recorded change in party affiliation on the part of a politician holding […] elective office" (Heller and Mershon 2009, 10) − is a common feature of legislative politics, so much so that rules have been implemented in some of them to limit it. Yet, the impact of these rules on legislators' switching behaviour is an aspect that has not received sufficient attention in the literature.

While several works have analysed legislators' switching decisions, focusing mainly on the interaction between institutional features − such as electoral systems − party characteristics − such as ideology − and legislators' ambition (Heller and Mershon 2009; Klein 2021), scholarly interest in institutional constraints explicitly designed to limit or penalise inter-party mobility remains restricted in the literature (Mershon and Shvetsova 2013b; Nikolenyi and Shenhav 2015; Nikolenyi 2019, 2022). On the one hand, the small number of these regulations in established democracies explains the scant attention devoted to them by scholars (Janda 2009). On the other hand, given the relevant implication of anti-defection rules for party cohesion and discipline (Bowler, Farrell and Katz 1999), it becomes important to study each new case that is added to the list of democracies that in some way restrict party switching. To this end, this paper aims at assessing the effectiveness of the new anti-defection regulations introduced in the Italian Senate from the 18th legislature (2018-2022), thus contributing to the emerging literature on party switching and legal institutional constrains.

The Italian Parliament is one of the most studied cases within the literature on party switching (Heller and Mershon 2005, 2008, 2009) and represents an outlier among Western European party systems due to the high frequency of changes in party affiliations (Klein 2021, 334) recorded from legislatures 12th (1994-1996) and 13th (1996-2001) (Verzichelli 1996; Pinto 2015). In this context, characterised by a high degree of fluidity in terms of inter-party mobility, the Senate approved in December 2017 a wide-ranging reform of the Rules of Procedures, including norms designed to discourage defections by limiting the formation of new parliamentary party groups (PPGs) in the inter-electoral period (Curreri 2018; Lupo 2018). Have these rules been successful in keeping the parties united and limiting the fragmentation of the legislative party system?

In order to answer the research question, we consider the implementation of the new anti-defection norms in the Italian Senate as a natural experiment (Leatherdale 2019). To assess the impact of this intervention, we develop two quasi-experimental approaches that take advantage of the bicameral structure of the Italian Parliament and the fact that the anti-defection regulations were only implemented in the Senate and not in the Chamber of Deputies. The first approach is a pre-post-test longitudinal research design in which participants in the intervention group are identified among senators who served in both the 17th (2013-2018) and 18th (2018-2022) legislatures. Similarly, the control group is chosen among the same members of the Chamber of Deputies who served in both electoral periods and for whom there are no restrictions on party switching. The differences in the switching rate between the intervention and the control group before and after the introduction of the new regulations are then compared. The second strategy develops a post-test-only quasi-experimental design in which the switching rate for all members of the Senate is compared over the same years (2018-2022) with that of members of the Chamber of Deputies. As the most significant part of the reform of the Rules of Procedures of the Senate lies in a series of innovations concerning the requirements for the formation of new PPGs in the inter-electoral period, we introduce an element of novelty into our analysis by modelling not only the risk of generic party switching, but also of forming new legislative parties (Golder et al. 2022; Kemahlıoglu and Sayari 2017; Volpi 2019b). Our findings

indicate that anti-defection regulations failed both to limit party switching and the formation of new PPGs. However, they result to be effective in influencing the timing of party switching, concentrating it in the phases of government formation and dissolution.

The argument and evidence presented in this paper are structured as follows. The second section offers a review of the literature on party switching. The third section develops a brief discussion about party-switching and legal institutional constraints, deriving our main expectations about the impact of the anti-defection regulations introduced in the Italian Senate on inter-party mobility. In In the fourth section, data, research design and methods are described. The fifth section offers an illustration of the main results. The concluding section draws out the implications of our study.

Transaction costs for party switching

The existence of legislative parties lies on a basic trade-off: autonomy in exchange for membership in a stable and identifiable party label (McMenamin and Gwiazda 2011). This understanding of legislative parties derives from the game-theoretic tradition of presenting institutions as a basic result of transactions. When legislators join a PPG they agree to sacrifice part of their independence for the sake of the collective action (Aldrich 1995). This is because successful cooperation serves both party leaders and rank-and-file members to create and maintain a valuable label. For the former, a valuable label increases the influence in coalition negotiations and in policy making (Ceron 2016); for the latter, it represents a necessary condition for realizing their ambitions (Heller and Mershon 2008, 2009). As a result, parties help legislators to link legislative achievements with party labels, thus securing electoral rewards, potential office benefits and policy payoffs for individual MPs.

Building on Müller and Strøm's (1999) classification of political goals, ambition has been modelled by scholars in terms of electoral, office and policy seeking motivations. Legislators constantly evaluate all the possible strategies to maximize electoral support, to take advantage of the benefits of retaining office, and to influence policy outcomes according to their ideological views. To

fulfil their ambitions, legislators strategically use the party to which they belong. However, in trading individual autonomy for the benefits of the party label, legislators face a classic collective action problem: on the one hand, in order to fulfil their wishes, MPs need to guarantee the integrity of the party label as a collective good; on the other hand, the efforts required to maintain it can become an obstacle for the pursue of personal ambitions (Kato 1998; Heller and Mershon 2008). When legislators realize that they cannot achieve their desires in a given PPG, they may consider changing their affiliation and join a party that further increases their benefits. Thus, if they want to be re-elected, then MPs are expected to defect from parties that experienced losses in vote share in the last election (Desposato 2006; Desposato and Scheiner 2008; Reed and Scheiner 2003; Thames 2007) or that are expected to lose votes as indicated by either the performance registered in the coming election (O'Brien and Shomer 2013) or opinion polls (McMenamin and Gwiazda 2011). Conversely, to advance their position within the government and relevant parliamentary bodies, legislators should defect from parties that do not have potential for patronage and are not able to offer them prestigious offices (Desposato 2006). Finally, an MP may switch from a party that frustrated her/his policy preferences either because there is ideological incompatibility or as a consequence of excessive party discipline (Heller and Mershon 2005, 2008; Pinto 2015; Reed and Scheiner 2003). It is no coincidence, therefore, that PPGs that have experienced one or more defections show greater ideological cohesion following them, as Ceron and Volpi (2021) have shown by analysing the implications of switching on parties.

The literature has provided us with empirical support for most of the expectations outlined above. Empirical evidence shows that legislators use parties for electoral, distributive or ideological purposes, switching to more ideologically compatible parties that can also maximise their re-election prospects and office distribution. In doing this, however, legislators may upset voters (Desposato 2006). If we assume, in particular, that voters value loyalty in a legislator's attachment to a party, then there is the possibility that they can punish disloyal incumbents for their betrayal of the party

label in the coming elections (Mershon and Shvetsova 2013a, 2013b).[1] The probability of punishment should therefore be higher in systems where votes for the candidate also generally contribute to party votes, suggesting that the electoral system influences the costs and benefits of party switching. However, the results concerning the impact of electoral systems on party switching are contrasting. While Mershon and Shvetsova (2013a) have shown that switching is more likely in proportional systems, other studies have found the opposite (Thames 2016). O'Brien and Shomer (2013) have observed a greater probability of changing party affiliation in candidate-centred systems, while Klein (2016, 2018) has demonstrated that the incentives provided by electoral rules only matter if the re-election of legislators is endangered. Other features shaping the transaction costs of switching include the institutionalization of the party system and party ideology. While in new democracies party switching is mainly driven by vote and office concerns, legislators in advanced democracies are more likely to switch on policy grounds (Klein 2021). Finally, ideologically extreme and authoritarian parties are associated with a higher number of switching (Volpi 2019a).

Party switching and legal institutional constraints

Alongside institutions, such as electoral systems, that are supposed to indirectly influence party switching, there are others specifically designed to reduce the frequency of changes in party affiliation by penalising defectors. This is the case of anti-defection rules. Anti-defection regulations are more common in new, unstable or non-democracies and countries with weak party systems (Janda 2009; Nikolenyi and Shenhav 2015). These kinds of norms also vary extensively in their severity (Mershon and Shvetsova 2013b, 154-161). Nikolenyi (2022, 645) recognizes four types of regulations on the basis of their conditionality and whether or not they entail the loss of the seat for defectors, identifying a continuum ranging from permissive measures, measures of intermediate severity and punitive measures. Measure against inter-party mobility can be further divided according to whether they are

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[1] Ceron and Volpi (2022) have shown that the loss of image and credibility that defectors would suffer from switching parties can also have repercussions for sending parties.

included in national constitutions, ordinary laws or standing orders of the parliaments (Janda 2009; Mershon and Shvetsova 2013b, 155; Nikolenyi 2022, 645).

Despite considerable cross-country variations, anti-defection regulations share the common element of affecting legislators' switching behaviour. However, this does not necessarily mean that they are effective in reducing inter-party mobility. For example, analysing anti-defection laws in the few democracies that have implemented them (India, Israel and New Zealand), Nikolenyi (2022) showed that this kind of rules are not a universal remedy against defections, but they do matter because represent a source of stability for governments against party splits or massive party switching that can undermine cabinet stability. A detailed study of the consequences of the Israeli anti-defection legislation further suggests that these regulations have not reduced the scope of switching but changed its nature, inducing legislators to defect more as a group than individually and shifting the timing of switching (Nikolenyi 2019).

The empirical relationship between anti-defection regulations and changes in the nature and the timing of party switching is theoretically relevant because, according to the literature, both may shed light on legislators' motivations to change party affiliation during the legislative term. Exploring the dynamics underlying factional and individual switches in Turkey, Kemahlıoglu and Sayari (2017) found that group defections are mainly dominated by policy factors. In contrast, a comparative analysis of several Western European countries conducted by Volpi (2019b) suggests that factional splits are a way of sharing the costs associated with defection when these are too high due to specific political and institutional factors.

A different perspective on the way legislators prioritise potential costs and benefits of party switching has been provided by Mershon (2008) and Mershon and Shvetsova (2008, 2013b), who developed a model in which ambitious legislators strategically evaluate the potential gains or losses from changing party affiliation depending on which pay-offs (electoral, office and policy) are most salient during the legislative term. The parliamentary cycle can be depicted as a sequence of stages in time − affiliation, government formation, committee assignment, active policy-making and

7

(second-order) elections − each of which provides different incentives for switching parties and, consequently, highlights different motivations on the part of the legislator (Mershon and Shvetsova 2008). These so-called "active" phases should emphasise electoral, office- and policy-seeking goals over the "dormant" phases, i.e. the residual set of intervals between the active stages. Since it is relatively more valuable for legislators to change parties in the active stages − because MPs can advance their re-election prospects, improve their careers or pursue policy goals − the dormant intervals should be characterised by relatively low levels of changes in party affiliation. As a result, Mershon and Shvetsova (2013b, 16) shows that defections "occur at irregular intervals during the parliamentary cycle, over the course of an entire term".

In short, empirical evidence indicates that legal constraints on party switching can have consequences that go far beyond simply reducing the phenomenon, while theory suggests that by increasing the cost of defection, these measures may change the way legislators assess the potential advantages and disadvantages of switching parties during the legislative term, with implications on the nature and the timing of defections. However, the precise direction of these changes depends on the specific provisions included in the anti-defection rules. The most significant part of the reform of the standing order of the Italian Senate lies in a series of innovations to the regulation of the conditions for the formation of PPGs, which no longer consist only of numerical requirements, but also of political-electoral requirements.

Before the reform, it was always possible to form a PPG in the Senate even during the legislature, provided it consisted of at least ten senators: with the only requirement of this threshold, any political party formed after the election could create a PPG, with advantages in terms of visibility, time allocation during floor debates and financial resources.[2] After the 2017 reform, the revision of Article 14(4) of the standing order continues to require a minimum threshold of ten senators, but specifies that each group "must represent a political party or movement, including those resulting

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[2] G. Maestri, *Il nuovo gruppo "Psi-Italia viva" al Senato: le falle della riforma "antiframmentazione" del Regolamento*, in laCostituzione.info, September 19 2019.

from the aggregation of several political parties or movements, that has presented candidates for election to the Senate under the same label, and has elected senators". Article 15(3) further specifies that "new parliamentary groups may only be formed during the legislature if they are the result of the aggregation of already existing groups". In other words, for a PPG to be formed, it is no longer sufficient to have a threshold of ten senators, but the group must also represent a political party that has presented and elected its own candidates under the same label in the last Senate elections. It follows that the new reform introduces a limit to the formation of new PPGs during a legislature, unless they are directly linked to existing parties. To complete this, chairpersons, deputy-chairpersons and secretaries of parliamentary committees are further punished with the loss of their office in case of party switching (Curreri 2018; Lupo 2018). From this discussion, it is clear that the new measures enacted in the Senate are mainly aimed to reduce the fragmentation of the legislative party system, bringing it to reflect the results of the elections as closely as possible, without restricting the freedom of MPs to change party affiliation, which is also protected by the Italian Constitution (art. 67): MPs remains free to abandon the group corresponding to the party under which they were elected and join another group or the independents.

This brief review of the literature on party switching and institutional legal constraints, along with the main features of anti-defection regulations implemented starting from 2018, suggest at least three testable hypotheses about MPs' switching behaviour. First, as anti-defection rules are expected to generally increase the cost of exit, we should observe a lower individual risk of changing party affiliation for senators of the 18th legislature (2018-2022). Second, since the main goal of the reform of the standing order of the Senate is to reduce the fragmentation of the legislative party system, we should expect, after the intervention, a lower risk of collective defections aimed at forming new PPGs in the inter-electoral period. Finally, as anti-defection norms may change the way MPs assess potential costs and benefits of changing party affiliation over the legislative term, we should observe differences in the timing of switching before and after the intervention. Given the increased exit costs due to the implementation of the new rules, we should observe changes especially when the benefits

are such that they balance the costs. If, according to the model described above, change should be particularly concentrated during active phases, then we should detect for senators of the 18th legislature a more pronounced trend during stages that reveal positions and affiliations that promise or pay electoral, office and policy benefits. Although we have no specific expectation that switching should be more likely to occur at one specific stage than another, the literature suggests that party switching in advanced democracies can be better understood as policy-driven (Kemahlıoglu and Sayari 2017; Klein 2021). For this reason, we should expect that, compared to the 17th legislature, during the 18th the dynamics of switching in the Senate should be more clearly synchronised with the phases of government formation and dissolution and active policy-making, when policy objectives are more predominant.

Data, research design and methods

Data

The analysis presented in this paper takes individual MPs as the unit of analysis and develops a modelling strategy designed to estimate the underlying risk of changing party affiliation over the parliamentary cycle. Thus, our main dependent variable is time until an event occurs.[3] The events considered here are of two types: generic party switching, i.e. all the episodes of defections, and innovative party switching, i.e. collective defections aimed at the formation of new PPGs. Following the definition of Heller and Mershon (2009, 10), generic party switching is operationalised as any recorded change in party affiliation on the part of MPs, as reported in the records of the Chamber of Deputies and the Senate. Building on the classification provided by Golder et al. (2022), the second event identifies, within the group of generic episodes of party switching, only innovative defections,

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[3] For a similar strategy see: McMenamin and Gwiazda 2011; Mershon and Shvetsova 2008, 2013b; Pinto 2015.

i.e. those involving more than one MP switching on the same day, resulting in the creation of a new PPG and consequently in the innovation of the legislative party system.[4]

To build our dependent variable, each MP was tracked from the day she/he chose the parliamentary group for the first time (day 0) to the last day of life of the legislative body, registering for each one the timing of party switching (generic or innovative) in case the event occurs.[5] Legislators who never changed parliamentary group have only one record that starts from day 0 to the last day of the legislature, and then they are right censored. On the contrary, those who changed party affiliation during the period of observation have multiple records, each one corresponding to one event. For example, an MP who left her/his party on day 1000 to join another group on the following day has two records with start-stop times set at 0-1000 and 1001-the end of the term. At the end of the second period the legislator is right censored, while at the end of the first period a generic party switching is coded, but not an innovative defection.[6] As a result, this MP will contribute to the risk pool for the first event, but not for the second one. Conversely, an MP who left her/his party on day 1000 to form a new PPG with other switchers will contribute to the risk set of both events.[7]

The alluvial plots in Figure 1 graphically show changes in switching flows over time in the Senate and the Chamber of Deputies and can be useful for identifying patterns and trends in the 17th and 18th legislatures, which in part also reflect the political context characterising the two electoral periods. Both share similarities and differences. Both are characterised by the rise of challenger

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[4] Golder et al. (2022) identifies different types of party switching based on three dimensions: the origin of switchers, their destination and the level of coordination. In our analysis we employ a simplified version of this typology, considering only the level of coordination and the destination of defectors.

[5] Parliamentary records simply report the changes occurred in the composition of parliamentary groups, regardless the reasons behind these changes. The inability to isolate the individual choice from other episodes − e.g., the ex-officio dissolution of a group that for whatever reason falls below the legal threshold required in order to form a parliamentary party group − may create distortions in the overall assessment of the extent of the phenomenon. However, even if unvoluntary, these episodes represent a concrete manifestation of the evolution of the parliamentary party groups that are worth analysing according to the goal of this study.

[6] Our model is estimated in "elapsed time", i.e. the time from each unit's entry into the observation set. This can be interpreted as MPs are developing a risk of switching not only the first time they join a group but also a second or third time from the time of their first choice (Box-Steffensmeier and Zorn 2002).

[7] Operationally, we treat the two events as different censoring regimes in a competing risk framework (Box-Steffensmeier and Jones 2004).

parties – in particular the M5S – and by the decline of mainstream parties – such as the PD and FI. In both legislatures, we can count several inter-electoral governments. Overall, the average duration of governments is quite similar − 586 days for the 17th legislature and 492 for the 18th − however, it should be noted that the latter lasted almost one year less than the former. Legislative party fragmentation (measured at the beginning of the term) is also similar across legislatures, with around four effective parties in both houses of Parliament. Despite these similarities, empirical analyses have also revealed differences between the 17th and 18th terms, especially with regard to the salience of the main dimensions of conflict, parties' policy positions and the structure of party competition in general (Giannetti, Pedrazzani and Pinto 2022), which was further modified by the different exogenous shocks − one for all the Covid-19 pandemic − that affected the two legislatures (Russo and Valbruzzi 2022).

Each column in Figure 1 represents the distribution of MPs in the different parliamentary groups observed at a specific time. Flows show how legislators regroup in parliamentary parties from year to year. Figure 1 provides useful pieces of information about the patterns of party switching in the Italian parliament. First, in all chambers and legislatures the size of the Mixed group increases over time.[8] Second, it is quite common for some parliamentary groups to disappear and others to form during the inter-electoral period. Third, next to splinters (the thickest flows), we see a series of thinner flows, representing individual or small group switches. Finally, figure 1 brings initial evidence that the new Rules of Procedures of the Senate introduced in the 18th legislature have failed to prevent the formation of new PPGs in the inter-electoral period. In the Chamber of Deputies – where there are no limitations to party switching − trends are quite similar to those observed in the Senate.

[Figure 1 about here]

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[8] The Mixed group includes independents and several political sub-groups which do not reach the legal threshold to form a parliamentary group (20 MPs in the Chamber of Deputies and 10 in the Senate).

Research design

A more robust research method for determining the impact of anti-defection rules on the risk of switching is provided by natural experiment methodology (Leatherdale 2019). However, the specific nature of the rule change studied here requires further discussion as to why it can be considered a natural experiment, since anti-defection provisions are not entirely exogenous, having been voted by senators themselves. In July 2017, the President of the Senate instructed four members of the Select Committee on Rules, representing the four largest parliamentary groups, to draft a proposal to amend the Rules of Procedure, which was discussed and approved by the Select Committee in October 2017. Subsequently, the draft approved by the Select Committee was presented in the plenary in December 2017, concluding its process with the approval of the four articles that made up the reform with only few modifications (Carboni and Malagotti 2018). This brief description highlights the centrality of the Select Committee on Rules – a restricted committee of only ten senators – which was the cornerstone of the entire process of revisions, having the power to formulate a final draft that the assembly then had to vote on. In other words, although senators voted the reform, the overwhelming majority did not participate in its definition, which was instead attributable to a restricted committee and the President of the Senate.

Figure 2 outlines the two quasi-experimental research designs that we use for evaluating the natural experiment − i.e. the introduction of anti-defection regulations in the Senate from 2018 − along with relevant information about the two branches of the Italian Parliament and the legislatures under examination. More specifically, we employ first a longitudinal pre-post design, comparing the difference in the pre-intervention to post-intervention switching behaviour in the intervention group (77 senators who served both in the 17th and 18th terms) relative to the control group (194 deputies who served both in the 17th and 18th terms). Unfortunately, although this strategy proves quite robust in providing some useful insight for understanding the potential impact of new legal constrains, the few events recorded for innovative party switching make it inadequate for evaluating all our hypotheses. For this reason, we further employ a post-test-only quasi-experimental design which

focuses on comparing the differences in switching behaviour between all members of the Senate (intervention group) and members of the Chamber of Deputies (control group) serving in the 18th legislature.

Although quasi-experimental research methods have proven to be quite strong with regard to internal validity, both approaches have their limitations (Leatherdale 2019, 25). As MPs are not randomly assigned to either the intervention or control group, both remain vulnerable to potential threats to internal validity, as pre-existing differences between them could be misattributed to the introduction of the anti-defection rules. In addition, the absence of longitudinal data in the post-test-only design may further increase the bias associated with the problem of confounding variables, as many elements that can possibly affect switching might have changed from one legislature to the following one. However, we believe that combining both approaches – a longitudinal one focused on the same MPs that served before and after the introduction of the new rules and a cross-sectional design centred on an extended population observed after the intervention − may increase the robustness of the results.

[Figure 2 about here]

Methods

To test empirically our hypotheses, we employ flexible parametric survival models, also known as Royston-Parmar models (Royston and Parmar 2002). The Royston-Parmar approach can be viewed as a generalisation of the standard parametric survival models, but with an important difference: they use a smooth function to model for a transformation of survival time.[9] As a result, they allow the estimation of complex shapes of baseline hazard functions, i.e., the shape of the hazard rate of a specific event over time. In this way, flexible parametric models represent an attractive middle ground

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[9] Typically, natural splines are used as the default smoother (Royston and Parmar 2002).

between standard parametric models and non-parametric ones, such as the Cox regression. Compared to the former, the Royston-Parmar approach allows greater flexibility in the characterisation of time dependence, overcoming all the problems arising from a misspecification of the distribution function of failure times (Royston and Lambert 2011). As for the latter, the Cox model is explicitly designed to estimate hazard ratios without having to estimate the baseline hazard function (Box-Steffensmeier and Jones 2004), so it less effective for investigating the timing of switching.

Results

This study aims at evaluating the impact of institutional legal constraints on the individual risk of party switching. To this end, we estimated a series of flexible parametric models using the logit link to estimate the hazard rate from a linear combination of covariates, time and regression parameters (Royston and Lambert 2011).[10] To test the difference between the intervention and the control group in the two research designs described above, we include a dummy identifying senators in all models.

Although this work mainly focuses on assessing the impact of anti-defection rules on party switching and not on systematically testing the determinants of this behaviour, on the basis of the existing empirical literature, we collect additional information on representatives and their parties to control for potential confounders and thus increase internal validity. In particular, we created a variable measuring party size in terms of the percentage of seats of the parliamentary party to which a legislator belongs. (Desposato 2006; O'Brien and Shomer 2013). A second relevant covariate included in the analysis is a dummy indicating whether a party belongs to the executive coalition (Heller and Mershon 2008). Finally, we include a further dummy indicating whether or not an MP belongs to the Mixed group (Pinto 2015). Moving to individual level variables, we include the log of age, gender and four dummies. The first dummy indicates whether a legislator is merely a rank-and-

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[10] The logit link function implies a proportional odds metric. This metric does not assume a proportional hazard, which is often unreasonable (Box-Steffensmeier, Reiter and Zorn 2003, 34). On the contrary, the proportional odds assumption is far more reasonable as the effect of covariates are expected to decline as time increases. Models have been estimated using the *flexsurv* package in R.

file member or holds positions of responsibility in the parliamentary group (president, vice-president, secretary or treasurer). The second one distinguishes legislators at their first mandate (newcomers) from incumbents (Heller and Mershon 2005). Since anti-defection rules specifically punish chairpersons, deputy-chairpersons and secretaries of parliamentary committees, we include a third dummy that identifies deputies occupying these positions. For legislature 18th, we collect one more dummy classifying legislators elected in single-member districts (SMDs) with plurality rule (Klein 2018, 2021; Mershon and Shvetsova 2013a; O'Brien and Shomer 2013).

Table 1 presents results for each model. Coefficients can be interpreted as log odds-ratios with positive and negative values indicating an increased or a decreased risk of switching. In order to take into account unobserved factors which may systematically affect the hazard of switching, the models are estimated with random effects at individual level. Based on the quasi-experimental pre-post longitudinal design, Models 1 and 2 aim to test for differences in the hazard of generic party switching for both the intervention (77 senators) and the control group (194 deputies) before (Model 1) and after (Model 2) the introduction of the anti-defection rules. We also break data by chamber and legislature, running four further models which results are reported in the Appendix. According to the logic underlying the quasi-experimental post-test-only design, Models 3 and 4 extend the analysis to the entire parliament, including data on generic (Model 3) and innovative (Model 4) party switching of all MPs in the Senate (intervention group) and Chamber of Deputies (control group) after the intervention (legislature 18th).

[Table 1 about here]

Switching rate

Our first hypothesis states that we should observe a decline in the hazard rate of switching after the introduction of anti-defection rules. If it were corroborated by the data, we should then observe a negative and statistically significant coefficient of the dummy "Senators" in Model 2, which, all

16

things being equal, test the average difference in the risk of switching between the intervention (77 senators serving in both 17th and 18th legislatures) and the control group (194 deputies serving in both 17th and 18th legislatures). On the contrary, we should observe no statistical difference before the introduction of anti-defection rules (Model 1). While the latter result is corroborated by the data, we continue to observe no difference even during legislature 18th, thus indicating that the new anti-defections rules failed to reduce the risk of changing party affiliation. This finding is also corroborated by Model 3 – which assess the difference in switching behaviour between all senators (intervention group) and members of the Chamber of Deputies (control group) after the intervention – thus proving to be quite robust to different tests.

The nature of party switching

Our second hypothesis concentrates on a different and more specific type of risk, namely collective party switching aimed at forming new PPGs. In order to test this expectation, we rely on Model 4, which compares the risk of innovative party switching for all senators, after the introduction of the new anti-defection rules, and deputies, for whom there are no restrictions on the formation of new PPGs during the legislature. Also in this case, the coefficient of the dummy identifying senators is not statistically significant, suggesting that, when controlling for other variables, the presence or absence of anti-defection rules does not matter in shaping the risk of innovative defections.[11]

This result is quite surprising, since the new legislation explicitly prohibits the creation of new PPGs in the absence of specific numerical and political requirements, i.e. ten senators and a direct link to party lists that participated in the election. However, this outcome can be likely explained by two factors: the capacity of parties to anticipate the consequences of the new regulations by including numerous party labels under a common list in the election, and a rather soft interpretation of the new

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[11] The quasi-experimental longitudinal pre-post research design does not allow to properly test the differences in the risk of innovative party switching due to the low number of such defections in both the intervention and the control group. However, simplified models that include only a few covariates to allow the models to converge indicate that there are no significant differences in the two groups before and after the intervention.

rules by the Senate itself (Russo 2021). The formation of the PPG of IV is illustrative. In September 2019, immediately after the birth of the Conte II government (September 2019-January 2021), 14 senators of the PD led by its former secretary Matteo Renzi left the party and founded a new one called IV. According to the new rules of the Senate, IV did not meet the political requirements to create a PPG, but by including in the group the only senator of the socialist party, elected within the PD list, it was finally allowed to form.

The timing of party switching

Our third expectation is related to differences in the timing of switching between the intervention and the control group before and after the introduction of anti-defection measures in the Senate. In order to test this hypothesis, we run four models, one for each chamber and legislature included in the analysis, which results are reported in the Appendix. Based on these models, we estimate the hazard rate of switching with 95% confidence intervals for the same group of senators and deputies who served in both legislatures 17th and 18th.[12] The hazard curves displayed in Figure 3 have been adjusted using the median value for party size and MPs' age and according to specific values of the remaining covariates: male incumbents (only for legislature 17th as MPs are all incumbents by definition in the next one) elected in MMDs (only for legislature 18th when the new mixed electoral system was applied for the first time), members of opposition parties other than the Mixed group, without positions of responsibility in the party to which they belong or in parliamentary committees (when the variable is not dropped from the analysis due to no variation in the outcome). The rates are expressed using months as a time-unit and are referred to the whole group of incumbent senators or deputies (77 and 194 respectively). Switching hazard rate can thus be interpreted as the underlying intensity of switching events that the intervention and the control group is exposed to per month, or

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[12] The shape of the curves depends on the number of knots to be used in the analysis. As suggested by Royston and Lambert (2011), both the Akaike and Bayesian Information criteria (AIC and BIC) have been used as a general guide to select between different number of knots.

put differently, the expected number of changes in party affiliation occurring per month in the group of MPs included in the quasi-experiment longitudinal pre-post-test.

[Figure 3 about here]

Following Mershon and Shvetsova (2008, 2013b), we track for each term the dates that correspond with the beginning of each post-electoral or inter-electoral government (dashed lines), the final vote on the annual budget law (dotted lines), European elections (short-dashed lines), and the biennial renewal of committees (dot-dashed lines). If our hypothesis is correct, *ceteris paribus*, we should observe a tighter synchronisation of the dynamics of switching close to these events, especially in the Senate during legislature 18th, where the higher costs of switching imposed by anti-defection rules need to be compensated by immediate gains in terms of office and policy pay-offs allocated during active stages in the parliamentary cycle. As mentioned in the theoretical part, we have no specific expectations as to which stage matters more than the others, but if we assume the predominance of policy goals, then government formation and dissolution and budget laws should witness higher peaks in party switching, particularly in the Senate after the intervention.

The graphical inspection of the hazard curves displayed in Figure 3 reveals that before the introduction of the anti-defection regulations they are quite similar for both the intervention and the control group. In contrast, after the intervention the two patterns diverge. While during legislature 17th the estimated switching rate is constant throughout most part of the term for both senators and deputies, without revealing any specific pattern, in legislature 18th the hazard rate function describes a serpentine curve for senators, alternating periods of intense switching activity with periods of no activity at all. In particular, the risk of switching increases in the phases of transition from one government to another during the inter-electoral period: the intensity in the switching activity is particularly high close to the formation of the Conte II government (September 2019) and the formation of the cabinet led by Mario Draghi (February 2021), which took office shortly after the

vote on the 2021 budget. For deputies in legislature 18th, however, there is no particular pattern: the switching rate is constant with an increase towards the end of the legislature. Overall, our results show that the new provisions seem to have modified senators' switching behaviour, encouraging them to consider party switching in particular during the phases of government formation and dissolution, where office and policy benefits are mostly relevant. The same is not true for deputies, to whom the restrictions of the new rules do not apply.

Control variables

Although this analysis is not aimed to systematically test the determinants of party switching, our models allow to test the impact of the variables described above on the overall risk of changing party affiliation. In the comments below, we focus in particular on Models 3 and 4. All things being equal, members of parties supporting the government have a lower risk of both generic and innovative switching. However, the impact of the variable "executive coalition" is much stronger in the latter case than in the former. On the contrary, party size is associated with a higher risk of both types of switching. Members of the mixed group have a significant higher risk of innovative party switching, while rank-and-file legislators of changing party affiliation in general. For both events, age – that can be considered as a proxy of experience − is associated with a lower hazard of switching. Finally, no significant impact is found for the other variables, including those identifying specific subjects who might lose their office in the event of switching as a consequence of the new rules, such as committee chairpersons, deputy-chairpersons and secretaries.

Conclusions

Electoral systems and other features, such as the institutionalization of the party system and party ideology, are a powerful incentive to explain party switching by elected politicians. However, in countries that somehow restrict or penalise inter-party mobility, such elements are only a part, albeit an important one, of the casual mechanism behind this behaviour. In these cases, anti-defection

measures represent a further set of legal institutional constraints that are expected to exert a crucial impact on the transaction costs of party switching. Using Italy as a case study, the main contribution of this article was to shed light on the role of anti-defection rules in shaping inter-party mobility in the legislative context. With the exception of Nikolenyi's work (2019, 2022) (which focused mainly on Israel), this is a research gap in the subfield of party switching. By expanding this line of enquiry to the Italian case, this work has thus offered an important contribution that may be of interest to scholars in comparative politics, legislators and policymakers. Moreover, the focus on Italy provided an opportunity to revisit and reinterpret one of the most studied cases in the literature on party switching, the empirical analysis of which is associated with influential theoretical models (Heller and Mershon 2005, 2008).

Taking advantage of different quasi-experimental research designs, in this paper we presented three empirical results about party switching and the interplay between legal institutional constraints, individual ambition and time. Altogether, despite the potential limitations of quasi-experimental research methods regarding internal validity, they help us to evaluate the effectiveness of the anti-defection regulations introduced in the Senate starting from 2018 and identify their consequences and implications for party switching. First, our analysis shows that anti-defection measures failed to be a deterrent against defections as we do not find any difference in the individual risk of changing party affiliations between the same group of senators and deputies in office both before and after the intervention, or between all senators and members of the lower chamber, where there are no rules limiting defections. Second, the reform of the standing order of the Senate was equally unsuccessful in limiting the fragmentation of the legislative party system during the legislature, although the new provisions were mainly intended to reduce this kind of risk. Also in this case, our results show no reduction in the risk of forming new parties for the senators of the 18th legislature. Finally, the introduction of anti-defection rules results to have an important consequence regarding the timing of party switching as we observe, exclusively for senators in the 18th electoral period, a higher risk of

changing party affiliation during the phases of transition from one government to another in the inter-electoral period.

Although focused on a single case study, this paper has broader implications for the comparative study of party switching, legislative behaviour and formal rules. First, by showing that the introduction of anti-defection measures changes the way MPs prioritise party switching during the parliamentary cycle, this paper recommends a closer look at the unintended consequences of formal rules. While our analysis does not resolve the question why these unintended consequences may arise, it offers strong evidence that rules can be circumvented when the stakes require. Second, by linking party switching with the process of government formation and dissolution, our results contribute to cast light on the motivation behind legislator' decision to change party and at the same time suggest that inter-party mobility can be conceived as an endogenous product of the process of party competition itself. In this sense, party switching accompanies legislative party system change with potential implications on the bargaining structure in which parties and legislators interact. Although these topics have been tentatively addressed in this research, they require more accurate theoretical efforts and more systematic empirical tests.

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Tables and figures

Table 1 – Flexible survival models of party switching in the Italian Parliament

	Pre-post design		Post-only design	
	Legislature 17th (generic switching)	**Legislature 18th (generic switching)**	**Legislature 18th (generic switching)**	**Legislature 18th (innovative switching)**
	(1)	**(2)**	**(3)**	**(4)**
Executive coalition	2.914***	-1.169**	-1.228***	-2.254***
	(0.491)	(0.367)	(0.201)	(0.355)
Party size	-0.084***	0.061***	0.0650***	0.104***
	(0.015)	(0.016)	(0.010)	(0.017)
Mixed	3.092***	0.574	0.278	1.114***
	(0.490)	(0.361)	(0.195)	(0.238)
Rank-and-file member	0.389	0.177	0.566*	0.093
	(0.587)	(0.417)	(0.288)	(0.427)
Age (log)	-2.509*	-2.617**	-1.651***	-1.938***
	(1.026)	(0.810)	(0.379)	(0.512)
Male	0.396	0.097	0.069	0.282
	(0.374)	(0.248)	(0.129)	(0.186)
Newcomer	-1.143[+]	–	0.087	-0.231
	(0.598)		(0.147)	(0.196)
Chairperson	-1.194	0.492	-0.266	–
	(0.820)	(0.645)	(0.385)	
SMD	–	-0.207	0.143	-0.143
		(0.264)	(0.131)	(0.193)
Senators (intervention group)	0.900	0.307	0.208	0.019
	(0.558)	(0.325)	(0.152)	(0.223)
Constant	2.482	4.041	-1.598	-0.051
	(3.822)	(3.196)	(1.481)	(2.086)
Switches	74	108	452	159
MPs	271	271	994	994
AIC	887	1248	5024	1936
BIC	945	1312	5121	2027
Knots	3	5	6	6
Random effects (MP)	Yes	Yes	Yes	Yes

Notes: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; [+] $p < 0.1$. Coefficients of natural splines and the theta for random effects at individual level are not reported. Standard errors in parentheses.

Figure 1 - **Party switching in the Italian Parliament (2013-2022)**
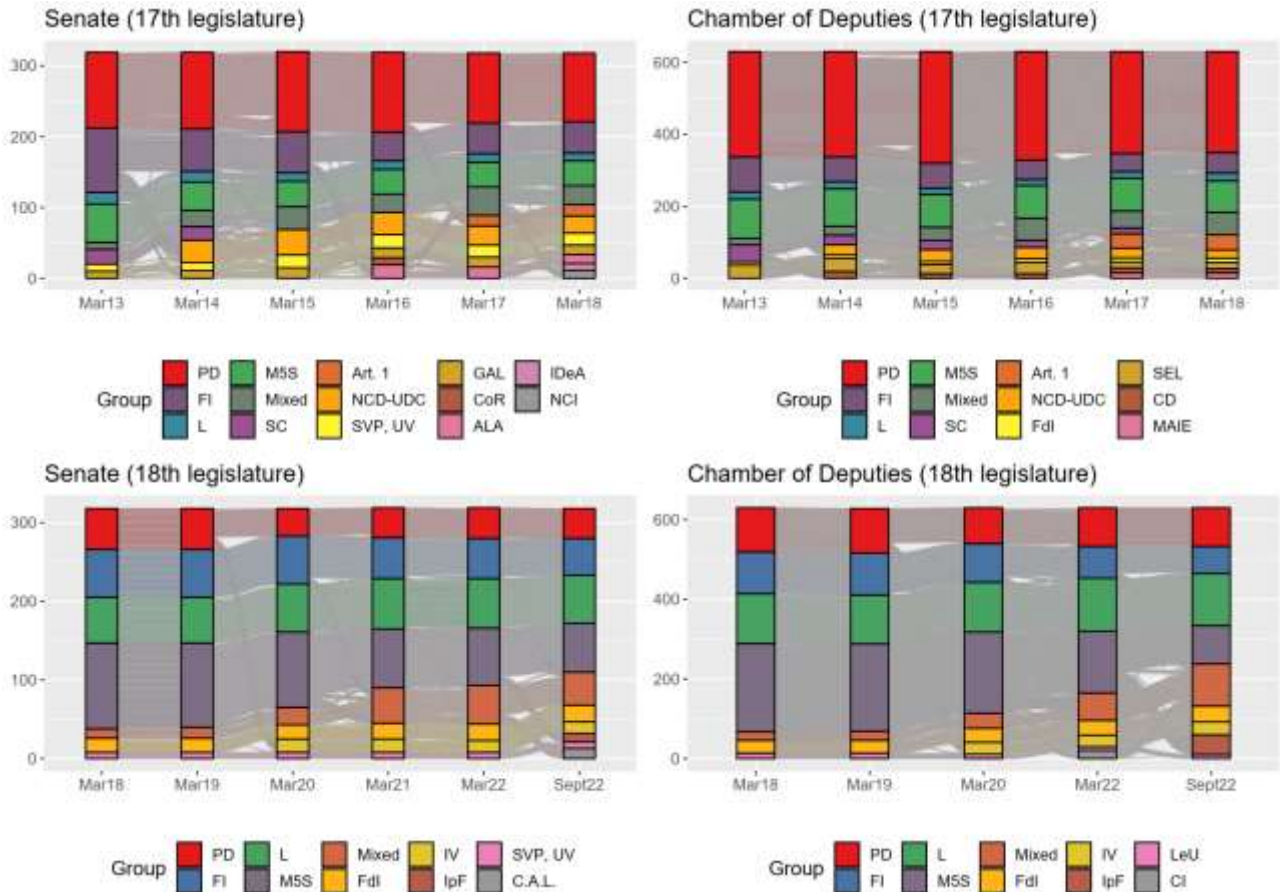
Notes: PD: Democratic Party; FI: Go Italy; L: League; M5S: Five Star Movement; Mixed: Mixed Group; SVP, UV: South Tyrol Peoples Party, Valdotanian Union; SC: Civic Choice; GAL: Great Autonomies and Freedom; NCD-UDC: New Centre-Right- Union of the Centre; CoR: Conservatives and Reformists; ALA: Liberal Popular Alliance; Art. 1: Article One; IDeA: Identity and Action; NCI: Us with Italy; FdI: Brothers of Italy; IV: Italy Alive; IpF: Together for the Future; C.A.L.: Constitution, Environment, Labour; LeU: Free and Equal; CI: Cheer up Italy; SEL; Left, Ecology and Freedom; CD: Democratic Centre; MAIE: Associative Movement of Italians Abroad.

Figure 2 – Research designs for evaluating the impact of anti-defection rules on party switching

Pre-intervention		Post-intervention	
Senate (17th)	Intervention	**Senate (18th)**	Intervention Group (Senate 18th, all MPs)
Start: 2013-03-19		Start: 2018-03-27	
Stop: 2018-03-22		Stop: 2022-09-26	
Months: 60		Months: 54	
MPs: 340		MPs: 334	
Generic switches: 248		Generic switches: 148	
Innovative switches: 96		Innovative switches: 45	
Anti-defection rules: No		Anti-defection rules: Yes	

Intervention Group (same MPs)

MPs: 77	MPs: 77
Generic switches: 22	Generic switches: 26
Innovative switches: 5	Innovative switches: 8

Chamber (17th)	No intervention	**Chamber (18th)**	Control Group (Chamber 18th, all MPs)
Start: 2013-03-19		Start: 2018-03-27	
Stop: 2018-03-22		Stop: 2022-09-26	
Months: 60		Months: 54	
MPs: 671		MPs: 660	
Generic switches: 318		Generic switches: 304	
Innovative switches: 110		Innovative switches: 114	
Anti-defection rules: No		Anti-defection rules: No	

Control Group (same MPs)

MPs: 194	MPs: 194
Generic switches: 52	Generic switches: 82
Innovative switches: 15	Innovative switches: 45

Key
- - - ▸ Pre-post quasi-experimental design

◂- - ▸ Post-test only quasi-experimental design

Notes: The number of MPs includes life senators and legislators who took over due to the resignation or death of colleagues. The end of the 18th legislature corresponds to the day after the national election of September 25, 2022.

Figure 3 – The timing of party switching in the Italian parliament (2013-2022)
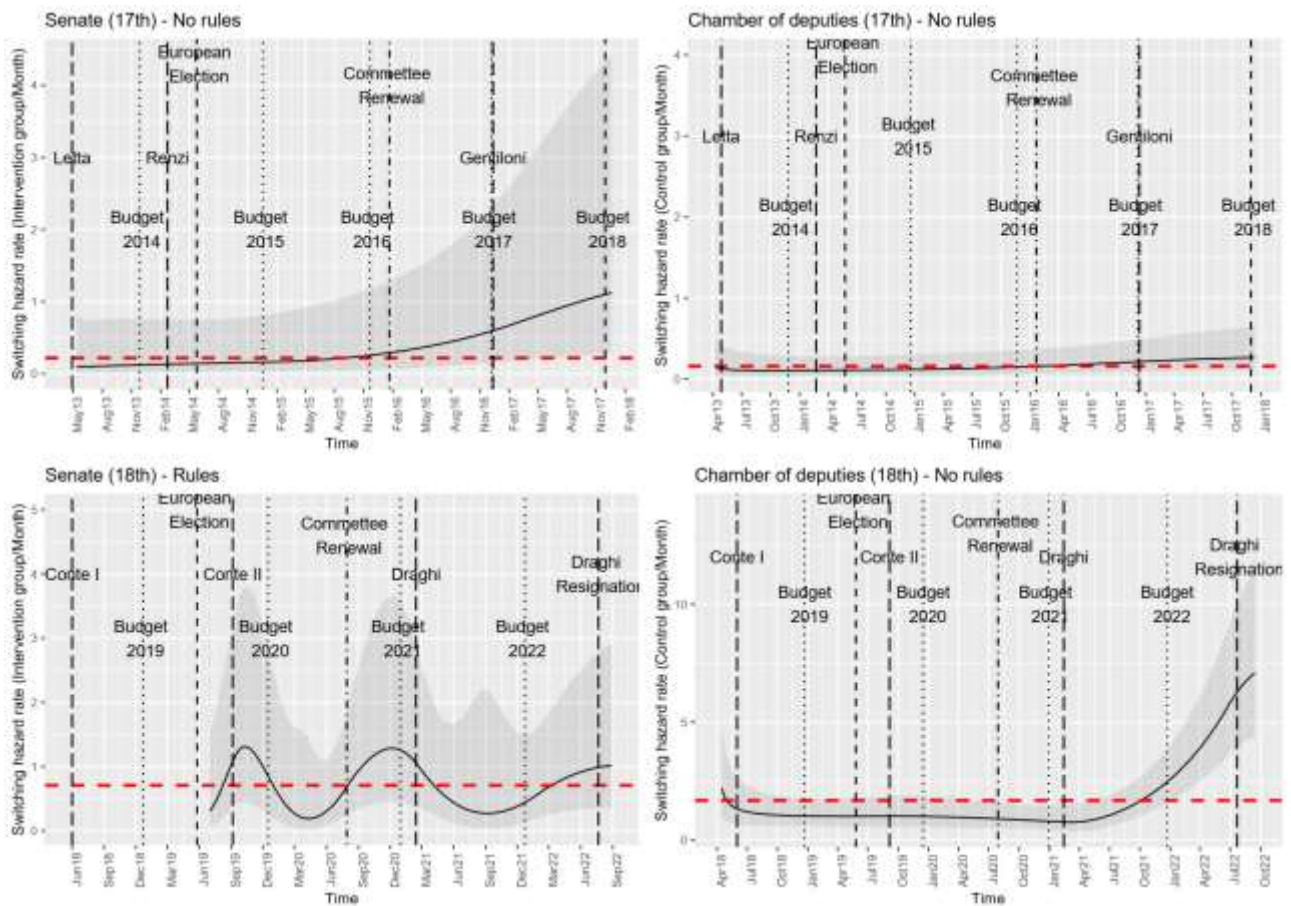
Notes: The curves represent the monthly hazard rate of switching in the intervention and the control group (77 senators and 194 deputies in office in both 17th and 18th legislatures). The curves are adjusted holding continuous variables at the median value. The other covariates are set at the following values: Executive coalition = 0; Mixed group = 0; Rank-and-file member = 1; Male = 1; Newcomer = 0; SMD = 0; Chairperson = 0. The dashed horizontal line represents the median hazard rate. Vertical lines identify key phases in the parliamentary cycle.