

Formative Moments in Women's Political Representation in Denmark: The Role of Voters, Parties and Women's Movements

- the importance of closed versus open electoral lists

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Paper presented at the Fourth European Conference on Politics and Gender, University of Lausanne, 8-10 June 2017.

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Abstract

Are open electoral list better for women's representation than closed lists? Previous research on the effects of different electoral systems for women's representation has been cross-national comparative analyses, often at one point in time. This paper present an analysis based on data on individual candidates for the Danish parliament since World War 2. The Danish electoral system represents a natural experiemnt, since as one of the few countries in the world, the Danish electoral law allows the political parties to choose between different ballot structures with different degrees of openness, even within the same party.

The open versus closed lists question can be tracked back to a more fundamental question: *Are the voters or the political parties* the most supportive of increasing women's representation? In the first case, women's rights advocates should not only recommend proportional representation electoral systems, but in addition recommend open lists, while in the latter case the decision power should be left to the parties, that is, closed lists.

Research so far has disagreed on the effect of the degree of openness of the lists for women's representation partly because of the many different forms of list structure even under PR systems. Some older studies have concluded that open or semi-open lists favour women's representation, while newer research have concluded that closed lists are the most favorable. Other researchers point to the importance of contextual factors.

This paper presents an analysis based on electoral statistics on success rates of female and male candidates under different ballot structures, in various selected elections. Further, the impact of preferential voting under different ballot structures is scrutinized. The conclusion is that there is no universal answer to this question, independent of party and historical period.

Introduction

«Finally then, we pulled ourselves together», wrote a women's Magazine, *Tidens Kvinder*, in 1945, when women's parliamentary representation in Denmark increased from 1 % to an all-time high of 5 percent in the first general election after World War 2. This quote represents a general trend of blaming *women* for their under-representation, an argument still heard in many parts of the world. It is not clear, whether this 1945-statement referred to women as potential candidates or to women voters, or may be both.

Forty years later, when women's representation had started to take-off in Denmark, reaching 26 percent in 1984, the Gender Equality Council (Ligestillingsrådet), a public agency, argued that the increase was the result of interventions in favour of women candidates on the part of the *voters*. But is this true?

In general, these explanations miss the third, and probably the most important actor, *the political parties*, who in most party systems control the nominations of candidates for the election. , The point of departure of this paper is the well-known thesis in contemporary gender & politics research that the political parties are the main *gatekeepers* to elected positions, and also to most political appointments - yet most UN declarations on gender equality in politics disregard the political parties.

Women's movements, including women's sections and groups within the political parties, through their campaigns for more women in politics, today for *parity*, have been the most important pressure groups on this issue. When in certain historical periods women's movements have succeeded in stirring comprehensive public debates on the issue of women's underrepresentation, their campaigns have been important for voters' reaction to the gender composition of the electoral lists and for the parties' perceptions of voters' preferences, which again influence their nomination decisions.

The aim of this paper is to contribute to the international discussion about the role of *institutional factors* for women's parliamentary representation with a focus on electoral systems and especially the gendered effect of *open versus closed electoral lists*. Are open lists or closed lists best for women's representation? There is no agreement in the literature on this point. This is also a complex research area, which calls for analyses of both party nominations and voters' preferential voting and the dynamics between these two factors.

Denmark's electoral system represents a natural experiment. The Danish electoral system offers unique opportunities for this kind of studies, since as one of the very few countries in the world, the Danish electoral laws since 1920 have allowed the political parties to decide the degree of openness of their electoral lists themselves – from one election to the next, and even with local variations within the same party in one election. One additional question raised in this study is thus, if the Danish parties' more widespread use of open or semi-open lists since the 1970s has been a contributing factor to the historical increase in women's parliamentary representation, placing Denmark together with the other Nordic countries at the top of the world ranking order, although with a recent stagnation (www.ipu.org).

The open versus closed lists question can be tracked back to a more fundamental question: Are *the voters or the political parties* the most supportive of increasing women's representation? In the first case, women's rights advocates should not only recommend proportional representation electoral systems, but in addition recommend open lists, while in the latter case the decision power should be left to the parties, that is, closed lists. However, there might be no universal conclusion to this question, independent of party, historical periods and location.

The paper is structured as follows. Section 1 contains a discussion of previous research in the field and sketches the theoretical framework of the paper. The section further describes the data set and the methodology of this study. Section 2 brings an overview over the development of women's parliamentary representation in Denmark, and gives a short summary of an investigation of the first general elections after the introduction of universal suffrage 1915. Further, the complex Danish electoral system is presented. Section 3 presents the first part of the empirical analysis, which focusses the chances of women and men to be nominated and elected in selected historical periods according to different ballots formats (the degree of openness). Section 4 extends the analysis to the political parties, analyzing differences of female and male candidates' success rates and probability of being elected according to degree of openness among four selected Danish political parties. In section 5 the voters' preferential voting under different ballot formats is added. Section 6 completes the analysis with a multivariate model which incorporate the institutional factors analyzed so far.

1. Theoretical and methodological considerations.

Any model of what is important for the level of women's political representation starts with the socio-economic and cultural context at large, followed by characteristics of the political system, including the party system and the electoral system. The present investigation operates at the latter level with special focus on the structure of the electoral lists, in the following called *the ballot format*. To what extent closed or open lists are best for increasing women's representation is a returning theme in the gender and politics literature.

The parties' role as gatekeepers

The political parties, who in party systems usually monopolize nominations, are supposed to choose their candidates for election and place them in 'good' or 'bad' seats for that particular party, firstly based on considerations for the voters' assumed preferences (vote maximizing), but secondly also in order to satisfy various groups or fractions within the party, e.g. ideological fractions or women's groups, and thirdly, to secure the election of specific candidates, often by giving priority to the incumbent MP.

It is argued here, that in general voters are not well-informed about how the names of the candidates they see on the ballot when voting are selected and who are in control of the nomination procedure. In quite a lot of countries, the names of the candidates are not even printed on the ballot, only the names and symbols of the parties. In PR electoral systems, which allows for some type of preferential voting, the voters in most cases, we argue, have little idea about the effects of the personal voting, and to what extent they as voters have the power to alter the order of candidates elected by their voting.

Consequently, all candidates are not nominated with the purpose of being elected. Following the contemporary global discourse on the importance of parity in political representation, which, when achieved, can contribute to a country's global image as 'democratic' and 'modern'(Dahlerup forthcoming), it is considered a good strategy for a party to under PR to present a diversity of candidates, especially in terms of gender, but also age, ethnicity and social background. However, the literature in the field seems to neglect that because it is difficult for voters to see the effects of their voting under non- open ballot structures, a party might present a diverse group of candidate list simply a *showcase* of being modern and inclusive, while they in reality have secured the election of the candidate(s) they prefer, for instance the incumbent, usual male MP.

Electoral systems and women's political representation.

Previous research on the effects of different electoral systems for women's representation use to be cross-national comparative analyses, often at one point in time. It has been shown repeatedly that Proportional Representation systems (PR) are more favourable to women than plurality/majoritarian systems with mixed systems in between¹. In most P/M systems there is only one candidate per party in each constituency (single-member districts, SMD), and the winner takes all. In PR systems each party presents a list with many candidates in each constituency, which opens up for women and minorities, since the nominating parties can compose lists representing diversity without eliminating the male incumbent candidates. In P/M systems the nominating local party may fear a negative reaction from (male?) voters if the party's only candidate is a woman. This logic is, however, more based on assumptions than actual empirical research of the motives and actions of the nominating bodies. Kittelson & Schwindt-Bayer even come up with a different explanation: That the PR system supports a greater number of competitive parties with effect for the mobilization of women (2012: 20-21).

Longitudinal analyses can qualify the assumed effect of PR systems. If PR electoral systems are better for women's representation, why did it take such a long time even for the forerunner countries such as Sweden, Denmark and the Netherlands, all with PR elections, to pass the 10-percent threshold: 32, 48 and 55 years since suffrage, respectively (Dahlerup & Leyenaar 2013:239). Obviously, PR systems do not assure a high representation of women, but because of its plurality of candidates, the PR system can be said to be *more open* than P/M to cultural changes, including changing attitudes towards women and minorities as candidates.

While there is a general agreement among researchers that there are gendered effects of the major forms of electoral systems (Kittelson & Schwindt-Bayer, 2012), the variations within PR systems need much more attention. Within the PR system, some researchers have pointed to the importance for women's representation of large electoral districts, just to be contradicted by other researchers, who point out the obvious that the most important is party magnitude, i.e. to be nominated for parties that will get many candidates elected in each constituency (Matland & Studlar 2002). However, in challenging 'conventional wisdom' Gregory Schmidt (2008) shows that large effective magnitude might even work against women under a system of open list PR, since the voters might have a preference for male candidates. ⁱ Schmidt criticizes that most conclusions

¹ Women's representation worldwide was 25% under PR systems, 14 % under mixed systems and 18 % in majority/plurality systems (2012 figures, *Atlas*, p.23).

in this field derives from closed list systems, and consequently, he recommends that more attention is paid to flexible or open list formats, which is exactly what we will do in this paper.

The research so far on the effect of the degree of openness of the lists for women's representation is non-conclusive, partly because of the many different forms of list structure even under PR systems. Some older studies have concluded that open or semi-open lists favour women's representation (Taagepera, 1994; Rule & Shugart, 1995), while newer research have concluded that closed lists are the most favorable (Htun & Jones, 2002; Matland, 1998; Norris 2004). Schmidt points to the newer use of electoral gender quotas, most effective in close list systems, as a possible explanation. In his study of 54 democratic countries with different list structures under PR systems Schmidt concludes that it is the *contextual* factors rather than institutional factors such as the list format which explains variations in women's parliamentary representation – with the exception of the strong effect of placement mandates (quotas with rank ordering) adopted by law, as in Belgium (the two first candidates on the list cannot be of the same gender) or as voluntary party quotas as in Sweden ('zipper system').

However, Schmidt's categorization of countries into countries with 'closed lists', 'flexible lists' and open lists can be criticized. He placed a number of countries with very different degrees of openness for their list structure. In the flexible category we find for instance Sweden, which semi-closed system, only dating from 1998 (until then the lists were closed), which gives the voters extremely few chances of altering the parties' list order, while Denmark, which is placed in the same category has a much more liberal, however, ambiguous approach to voter influence on the selection of candidates. Thus, the study of Danish elections offers an opportunity to challenge even Schmidt's conclusion.

The gendered effect of preferential voting is also included in this analysis, even if we are well aware of the fact that the impact of voters' personal voting is among the most difficult to estimate as argued by Katz (1986). Comparing the effect of preferential voting (open lists) in Norway and Latvia, Matland and Lilliefeldt conclude that the interaction between the voters' perspective and the parties' perspective is crucial to the outcome (2014). This study's analysis of preferential voting under different ballot formats, even within one party, may add new knowledge to this research field, even if the dynamics between voters and parties need supplementary case studies.

Data and methodology

The official electoral statistics on parliament elections in Denmark is of high quality, and dates back to the first democratic elections for men in 1849. Data on nominated and elected by party and electoral district is available from the start. After the introduction of universal suffrage in 1915 (with some reservations such as convicts and people received poor law benefits), it is possible to distinguish the gender of the elected and listed in the electoral statistics as elected by studying their first names. But in additions, the Statistical Department usually brings its own calculated overviews over nominated and elected by sex, party for party, and usually divided by the main parts of the country.

For most elections, it is also possible to identify the *ballot format (ballot structure)*, which the political parties have opted for in various elections and part of the country. Consequently, we are able to scrutinize the impact on women's representation of the degree of openness of different ballots formats. The official Danish electoral statistics even include *preferential voting*, e.g. votes received by individual candidates, earlier only for those elected, but today for both candidates and elected. However, only since 1945 has it been possible to distinguish the votes casts for the party in a constituency from the votes cast for the individual candidates. A data base with these informations have been constructed as part of the GRIP-project (The Danish Gender Equality Regime).

The advantages of this dataset compared to the usual cross-country comparisons of elected women and men, is that we here operate with data at the individual candidate level, and in some of the analyses we are even able to include both candidates and elected.

In terms of methodology, the paper analyses the distribution of male and female candidates and elected according to the main four ballot formats, which represent different degrees of openness, see the description below, and according to parties, calculating the *probabilities of men versus women being elected* under different ballot structures. Since there has been a move over time from more closed lists to more open lists, the analysis is based on selected years since 1945, all representing periods of increase in women's representation (formative years), with the exception of the last period, 2011-15, which saw some stagnation in women's parliamentary representation. The gendered effect of the preferential voting is also scrutinized (around half the voters use their right to vote for an individual candidate on a party lists, instead of just voting for the party list as such). Finally, key factors of supposed importance for the election of women seen in relation to men, is then tested by means of a multivariate model which incorporate both institutional and some contextual factors such as towns versus countryside. All through the paper we will discuss

the limits of the analysis with a particular focus on the difficulties in distinguishing the influence of the voters from that of the parties and their choice of ballot formats. The incumbent factors, also strong in the Danish elections, together with the parties placement of female and male candidates in more or less 'safe seats' will be analyzed in a later paper.

2. Women's representation in the liberal Danish electoral system.

The Danish Electoral System.

The Danish electoral systems has been based on proportional representation with additional mandates ever since 1920. Before the constitution of 1915, the system was, however, based on the First-Past-The-Post system (plurality/majoritarian). It is interesting that the constituency-system from this FPTP-system to some extent has survived after the introduction of PR in multimember electoral districts. Up to this day, candidates are nominated in each their constituency or nomination district ("the constituency candidate"), which still is part of the formal electoral system, even if the voters since 1920 have been allowed to choose among all candidates nominated in the larger district (consisting of several constituencies). The constituency candidate are also attached to one single constituency during the interval between elections. The ballot paper looks different in each constituency.

Once at the polling station, Danish voters may tag a party or one of the candidates listed by a party. Today, almost all candidates are nominated by a party, and independent candidates are rare. How important the preferential voting is depends, however, on the complex ballot structure and the ways votes are added.

The distinction usually made in the literature between open lists and closed lists with PR-systems is insufficient (see i.g. Htun & Jones, 2002). The open list category, however, clearly needs further elaboration, and consequently, Shugart (2008) distinguishes between two types of preferential list proportional representation systems (PLPR), the open and the flexible lists, also used by Schmidt (2008), leaving three categories: open lists, flexible lists and closed lists, of which the latter is far the most common in PR electoral systems. Flexible formats covers ballot formats, "which give both party leaders and voters some say in the allocation of seats among its candidates" (Cox, 1997:61 in Schmidt 2018:191). The problem with this use of the term 'flexible' is, however, that it is not a

relevant term seen from the point of view of the voters, as 'open lists' are, so this will not be used here.

Elklit has a elaborate discussion on how to place the Danish system in these international classifications, (2011), which is not an easy task.. It should be noted that totally closed lists has not been an option for Danish parties under the PR systems (except for the Capital area 1918, see below). It should also be noted that the ballot paper looks different in each constituencies within the district, and no matter the ballto structure, all candidates are still somewhat contradictory listed as belonging to a special constituency on the ballot..

Four main ballot formats for Danish parties to choose between, from semi-closed to totally open:

1. Prioritized Party Lists (PPL)

Under this ballot format, the political parties present a rankordered candidate list for the whole district. The voters can change the order, but it is rather difficult and happens only occasionally. Consequently, this is not a total closed system. In Danish "partylist/partiliste"

2. Constituency Lists (CL)

This rather complex ballot format is a reminiscence of the pre-1915 single-member district system, since the constituency candidate receive not only the personal votes cast on her/him, but also all the votes cast on the party as such in the constituency. Consequently, it is vital to stand in a traditional stronghold for the party. Even if the voters can cast their vote for all candidates in the whole district, most voters vote for their constituency candidates, however to a different degree for varuious parties. Social-Democratic voters has, for instance, until recently been among the most loyal to the constituency candidate. In Danish "constituency standing/kredsviis opstilling".

3. Open lists with Constituency Nomination (Open lists CN).

This is an open list system, where the voters alone decide the allocation of seats among the candidates. However, the party chooses to underline a particular candidates by placing this candidate on the top of the list, followed by the rest in alphabetic order (allowed since 1971). In Danish "parallel standing/sideordnet med nominering".

4. Open Lists.

The votes cast by the voters alone decide the allocation of seats among the candidates. The candidates are listed alphabetically for each party at

the district level. In Danish this ballot structure is called “parallel standing/sideordnet opstilling”.

Prioritized Party Lists (PPL) has primarily been used by left parties, but is seldom used today, since the parties have been under pressure to leave the decision to the voters. Today, open lists are seen as more democratic. The Open Lists with Constituency Nomination (Open Lists CN), which has been a possible option for the parties since 1971, has become more and more widespread. It is a way for the parties to keep at least some control, since it is commonly known that voters are inclined to vote for the top candidate on the list.

We have not found any evidence that gender has been part of the considerations, when a local party chooses one list format over others – even if the local party leaders probably often take into consideration the chances for election of a specific person, often the incumbent. What we can do is to analyze what has been the consequence of their choices for the gender profile of the different political parties (ballot format as the independent variable).

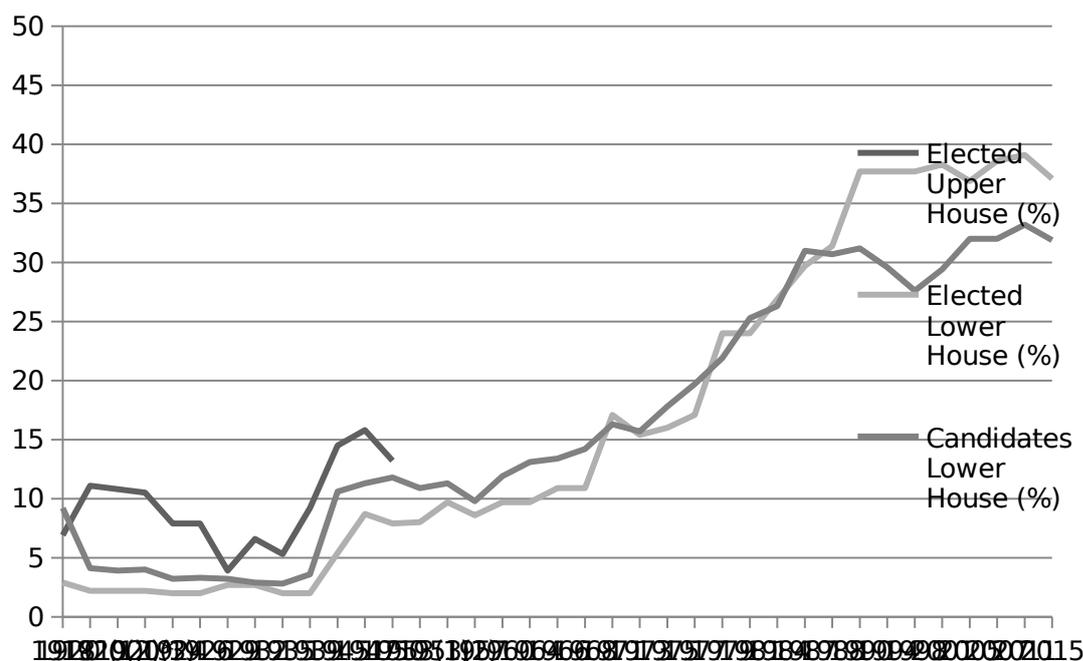
Overview over women’s representation in Denmark

Figure 1 demonstrates the historical development in the women’s share of the candidates and of those elected from the first parliamentary elections after women’s enfranchisement and until today .

Figure 1 shows a remarkable parallel development between women’s share of the candidates and of the elected. This points to the importance of the selection of candidates by the political parties – the gatekeepers to elected positions. There are, however, two exceptions to this general finding: The very first period after women’s entry into parliament, where, as Figure 1 shows, women’s relative number of the candidates considerably exceeded their share of the elected. The very last decades represent the opposite feature, namely that women’s share of those elected exceeded their share of the candidates. This demonstrates the need of an examination of party nominations and voters’ influence: Have the voters during the last decades strengthened their support for women candidates, or have the parties started nominating women for better positions – or both?

Figure 1. Women Candidates and Women Elected to the Danish Parliament, 1918-2015.

- percentages



Source: Official Electoral Statistics. The Upper House was abolished in 1953. The first elections after women's suffrage

In an earlier study published in Danish on the occasion of the centenary 1915 of women's suffrage (Dahlerup 2015, in Danish), the actions by the political parties in this new situation were analyzed based on electoral statistics from the first two elections, 1918 and 1920, and archive studies of party protocols. The electoral system was subject to many changes during these years, which had considerable influence, it is argued, on the (lack of) election of women. The conclusion was, however, that no matter the ballot format, the political parties secure during the whole interwar period the election of one woman each, who was supposed to represent the 'women voters'.

3. Women's representation and the ballot format/degree of openness

This section presents the results of an empirical analysis of the gender distribution among elected and nominated candidates in the liberal Danish electoral systems according to ballots formats (the degree of openness), and the probability of getting elected in various periods. As described in section 2, the preferred ballot formats varied between parties, but also changed over time - with a move from more closed to more open lists. Also the total number of candidates increases over time, however with a considerable decrease for the latest period because of a reduction in the number of electoral districts. Consequently, the following tables should

be read both horizontally (within one period) as well as vertically (between periods).

Table 2 demonstrates that in general most *candidates* were nominated at constituency lists in the periods 1945-1947 and 1968-1973, whereas in the period 1979-1981 most candidates were nominated at open list with constituency nomination as was also the case for the elections 2011-2015.

Table 2. Number and percentages of female and male candidates in four selected periods, by ballot formats

	Prioritized Party Lists		Constituency Lists		Open Lists (CN) *		Open Lists	
	Men	Women	Men	Women	Men	Women	Men	Women
1945-1947	416	45	835	100	N/A	N/A	115	24
	90,24 %	9,76%	89,30%	10,70%	N/A	N/A	82,73 %	17,27%
1968-1973	535	88	1153	217	520	89	366	73
	85,87 %	14,13%	84,16%	15,84%	85,39 %	14,61%	83,37 %	16,63%
1979-1981	370	177	404	113	803	185	44	22
	67,64 %	32,36%	78,14%	21,86%	81,28 %	18,72%	66,67 %	33,33%
2011-2015	137	72	0	1	728	371	186	72
	65,55 %	34,45%	0,00%	100,00%	66,24 %	33,76%	72,09 %	27,91%

* Open list with constituency nomination first became an option from the election of 1971.

The Atlantic nominated candidates are not included in the table. Each period combine two elections, except 1968-73, which includes three elections.

Source: Own calculations on the basis of the official Danish electoral statistics.

Table 2 shows the number and the percentage of nominated female and male candidates according to ballot formats in selected, formative

periods. As shown in Figure 1 above, women's share of the candidates increased gradually over time since World War 2. Table 2 demonstrates that the proportion of female candidates increases over time for every ballot formats, however with some variations, but never reached more than one third for any of the ballot formats². The highest proportion was 34,45 % with Prioritized Party Lists (PPL) in 2011-2015, at that time mostly used by the smaller leftist parties.

Are relatively more women than men being nominated for open lists in one election? The experience from the 1918-1920 elections rather indicates the opposite: that the parties limited the number of women candidates when the lists were opened in 1920, probably in order to secure their incumbent male MPs. Read horizontally, table 2, however, does not support either of these theories, since the relative distribution of female and male candidates turns out to be rather identical for all ballot formats in a period. In Section 4 we will return to this question, when we scrutinized the individual parties.

However, it should be noted that the lowest proportion of female nominated candidates through all the periods is within the Constituency Lists (CL) with proportions of women between 10,70-21,86 %, . The highest proportion for all the periods is with Open Lists, which is between 16,63-33,33 %.

The result for the *elected* candidates shown in Table 3 differs from that of the nominated: Now we see a more pronounced difference according to ballot format for all the selected election periods: The highest proportion of elected female candidates is with Open lists (CN) in 2011-2015 (38,54 % - yet, 40% for totally open lists, but just a small number), and this is also the ballot format where the proportions for all periods are highest (between 15,30-38,54 %) for elected female candidates. The lowest proportions of elected female candidates are with PPL in 1945-1947 and 1968-1973, where it is 7,69 % and 7,50 %.

It is remarkable that the number of elected candidate in general, and especially women candidates with Open Lists is extremely low - only 9 women candidates have been elected in all the nine selected general election from 1945-2015 - out of a total of 191 nominated, see Table 2.

Table 3. Number and percentage of elected men and women by ballot formats

² The 100 % for Constituency Lists (CL) in 2011-15 represents just one candidate, a woman! The constituency format was

	Prioritized Party Lists		Constituency Lists		Open Lists (CN) *		Open Lists	
	Men	Women	Men	Women	Men	Women	Men	Women
1945-1947	120	10	137	8	N/A	N/A	18	3
	92,31%	7,69%	94,48%	5,52%	N/A	N/A	85,71%	14,29%
1968-1973	74	6	170	35	155	28	43	4
	92,50%	7,50%	82,93%	17,07%	84,70%	15,30%	91,49%	8,51%
1979-1981	19	10	53	21	189	53	1	0
	65,52%	34,48%	71,62%	28,38%	78,10%	21,90%	100,00%	0,00%
2011-2015	21	10	-	0	193	121	3	2
	67,74%	32,26%	N/A	N/A	61,46%	38,54%	60,00%	40,00%

* Open list with constituency nomination first became an option from the election of 1971

- indicates not used by the party in the period.

The 4 Atlantic seats are not included in this study.

Source: Own calculations on the basis of the official Danish electoral statistics.

1945-1947: 148 candidates elected at each elections - 296 in total

1968-1973: 175 candidates elected at each elections - 525 in total. 10 of the candidates were nominated at a different ballot format than the four in the table and are not included

1979-1981: 175 candidates elected at each elections - 350 in total. 4 of the candidates were nominated at a different ballot format than the four in table and are not included

2011-2015: 175 candidates elected at each elections - 350 in total

The general move towards more open lists complicates a horizontal reading, comparing formats within one period, and the result is in general non-conclusive. Using the measurement of success rates can help the interpretation.

Table 4 demonstrates variations in success rate, according to gender and ballot formats. We saw in Figure 1 that women's share of the candidates and of those elected developed in parallel, except for the first elections, where there were many more women among the candidates than among those elected - and contrariwise for the latest election. Table 3 can now show the variations according to ballot format. For description of the success rates we use the terminology slightly, moderate and strong, which denotes success rate \pm less than 5 percentages point (slightly), \pm between 5 and 15 percentages point (moderate), and \pm above 15 percentage point (strong).

The highest success rate for women is with Open Lists in 2011-2015 (12,09 percentage point), which denotes that the proportion of elected female candidates is 12,09 percentage point higher than the proportion of nominated. The success rate is high for women, because only 3 male candidates were elected with Open Lists in 2011-2015 and 186 were nominated, while 2 female candidates were elected and only 72 nominated.

What should be noted is that it is only with Open Lists (CN) that the success rates for women are positive in all the three last periods, which means that with Open Lists (CN) relatively more women are elected than nominated. Further the success rate increases through the year with Open Lists (CN) from 0,69 percentage point in 1971-1973 to 3,18 percentage point in 1979-1981, and to 4,78 percentage point in 2011-2015, where the vast majority of MPs, also among the women MPs were elected on Open list (CN).

With Constituency Lists the success rate for women is positive in 1968-1973 and 1979-1981 (1,23 and 6,52 percentages points), which denotes that relatively more female candidates are elected than nominated. The lowest success rate for women is with Open List in 1979-1981, where it is -33,33 percentage points. This success rate is low since 22 female candidates are nominated but none elected in the period.

Table 4. Success rate, according to gender and ballot formats

	Prioritized Party Lists		Constituency Lists		Open Lists (CN)*		Open Lists	
	Men	Women	Men	Women	Men	Women	Men	Women
1945-1947	2,07	-2,07	5,18	-5,18	N/A	N/A	2,98	-2,98
1968-	6,63	-6,63	-1,23	1,23	-0,69	0,69	8,12	-8,12

1973									
1979-1981	-2,12	2,12	-6,52	6,52	-3,18	3,18	33,33	-33,33	
2011-2015	2,19	-2,19	-	-	-4,78	4,78	-12,09	12,09	

* Open list with constituency nomination first became an option from the election of 1971.

- indicates not used in the period.

Success rate is defined as elected in % minus nominated in %, separate for each gender. The values are in percentage points

Table 5 demonstrates the logistic regressions' average marginal effects, e.g. the average change in probability of getting elected as a female candidate compare with a male candidate. The result follows what has already been indicated above, that there are only marginal differences between men and women according to ballot formats, and that the only significant difference found between the probability of getting elected as a women compare with a man is when the candidates are nominated on Constituency Lists in 1945-1947 and on Open List (CN) in 2011-2015.

Table 5. Probability of getting elected on gender, ballot formats and formative periods

	Prioritized Party Lists		Constituency Lists		Open Lists (CN) a)		Open Lists	
	dy/dx b)	P-value	dy/dx	P-value	dy/dx	P-value	dy/dx	P-value
1945-1947	-0,0707	0,349	-0,0610	0,032 *	N/A	N/A	-	0,0335 0,696
1968-1973	-0,0875	0,076	0,0135	0,600	0,0164	0,753	-	0,0790 0,126
1979-1981	0,0051	0,802	0,0505	0,144	0,0490	0,145	-	-
2011-2015	-0,0146	0,781	-	-	0,0597	0,033 *	0,0105	0,559

a) Open list with constituency nomination first became an option from the election of 1971.

b) dy/dx is the average marginal effects e.g. the average change in the probability of getting elected ($p(y=1)$) as a female candidate compare with a male candidate.

*significant at the 0,05 level.

The overall conclusion based on the success rates and logistic regressions in this section is that we found only minor differences according to ballot structure. The insignificant result challenges both camps of researchers in the international dispute on to what extent open or closed lists are best for the elected of women. However, firstly we have to point to the limit, which derives from the small numbers observations e.g. with the nine observations of elected female candidates on Open Lists, a little more on PPL. Consequently, we will now turn to the political parties.

4. Variations between political parties

We will now add an examination of variations between the political parties to the analysis. We know that women's representation in general varies considerably between parties within the same country, which points to the important of the ideological factors. Such a variation is also found in Denmark, even if today no parliamentary group has less than 25 percent women.

Based on a selection of Danish parties, this section will examine party differences in the female candidates' success rates according to different ballot formats and in different periods. As mentioned, the liberal Danish electoral system allows the political parties to choose between different more or less open ballot formats from election to election, and even with variations between local branches within one party. In general, the left more than the right wing parties have opted for more closed lists, even if there have been a general move towards more open lists over time. This analysis of the political parties can contribute to our understanding of the importance of the degree of openness for women's representation. Like in section 3 the tables should be read both horizontally (within one period) as well as vertically (between periods).

The four parties to be examined here are the Social Democratic Party (established 1871) and the Danish Liberal Party (established 1870), selected because they have been the two major political parties in Denmark in all the election years examined here. Further, we have selected two smaller parties, the Danish Social-Liberal Party (established 1905) and Socialist People's Party (established 1959 and therefore not represented in the period 1945-1947). The Social-Liberal Party, because it has a long historical record of being supportive for gender equality, while the Socialist People's Party has been selected for this analysis, because of the party's change from a male dominated party at its formation to the first political party with a female majority in its group in parliament (1979).

Best to be a candidate in the Socialist People's Party, worst in the Liberal Party.

We have shown (section 3) that women's success rates differ between periods and ballot format. The result of the party analysis, see *Table 6* and *Table 7*, is that there are notable differences between the political parties. Most remarkable is that women's success rates for the Socialist People's Party are almost all positive – and mostly strongly positive, as illustrated in table 6, while the opposite is the case with the Liberal Party, see table 6.

Table 6. Women's success rates for the Social Democratic Party and the Liberal Party

	Prioritized Party Lists		Constituency Lists		Open Lists (CN)		Open Lists	
	Soc. Demo.	Liberal s	Soc. Demo.	Liberal s	Soc. Demo.	Liberal s	Soc. Demo.	Liberal s
1945-1947	-3,10	-	33,33 ^a	-5,17	N/A	N/A	-	0,00 ^a
1968-1973	-1,67	-	33,33 ^a	0,50	-1,52	-8,98	50,00 ^a	-18,63
1979-1981	-	-	-	0,38	3,30	-15,38	-	-
2011-2015	-	-	-	-	6,25	11,26	-	-40,00 ^a

Notes: Success rate is defined as elected in % minus nominated in % and the values are in percentage points

^a: cases with fewer than 5 nominated candidates in the category, since the success rate is more susceptible to one extra candidate.

- means not used by any party. Open list with constituency nomination (CN) was not an option for the parties until the election of 1971 and onwards.

Note to the Liberal Party: 7 candidates are nominated and 1 candidate is elected at a different ballot format than the four in the table and are not included.

Table 7. Women's success rates for the Social-Liberal Party and the Socialist People's Party

	Prioritized Party Lists		Constituency Lists		Open Lists (CN)		Open Lists	
	Social-Liberals	Socialists	Social-Liberals	Socialists	Social-Liberals	Socialists	Social-Liberals	Socialists
1945-1947	-	N/A	-9,00	N/A	N/A	N/A	64,71	N/A
1968-1973	-	-	0,41	1,56	11,10	17,21	5,86 ^a	-
1979-1981	-	18,18	-28,75	25,21	25,22	56,00	-	-
2011-2015	-	-5,81	-	-	14,87	19,93	-	-

Success rate is elected in % minus nominated in % and the values are in percentage points

Notes: ^a: Cases with fewer than 5 nominated candidates. '-' indicates not used by the party in the period.

Open list with constituency nomination (CN) was not an option for the parties until the election of 1971 and onwards.

Of the eight success rates for female candidates in the Social Democratic Party three are slightly negative and five of them are positive. The Social-Liberal Party is more in line with the Socialist People's Party, since six of the women's success rates are positive and two of the negative, however, some of the positive success rates are slightly and moderate positive compare to the strongly positive cases of the Socialist People's Party.

The success rate for women is therefore highest in the Socialist People's Party, follow by the Social-Liberals, the Social Democrats and lowest for the Liberal Party. This implies that women candidates nominated by the Social People's Parties have much higher chances of being elected than female candidates in the Liberal Party.

We can add that the anti-immigration Danish People's Party, which was establish in 1995, nominates their candidates on Open Lists (CN), and for 2011-2015 had a slightly positive success rate for women of 4,14 percentage points.

By ballot format and party

The analysis of ballot formats used by different political parties and women's success rates results in a diverse picture. Within the Socialists and the Social-Liberals parties, the more open ballot formats contributes to higher success rate for female candidates in all periods. It is, however, not possible to conclude in general, that open lists are better for women than closed lists, as some part of the international literature suggests, since the result for the Social-Democrat Party and the Liberal Party are mixed, but with an overall negative success rates for women under all ballot formats during the first two periods. What should be noted that the Social Democrats, see Table 5, primarily used party priority lists (PPL) in 1945-1973, and Open Lists (CN) in 1979-2015, which makes a horizontal comparison difficult. Also the Liberal party shifted their preferred ballot format, in this case from Constituency Lists to Open Lists (CN).

Is it possible to conclude that the success rates for women have increased over the years when the use of open ballot formats has become more frequent? In general the answer is yes, even if the direction of causality is still open. Read vertically the theory is supported by the Social Democrats³ and the Liberals, table 5, since the strongest positive success rate for women is in the period 2011-2015 with Open Lists (CN). However, the female candidates from the Social-Liberals and Socialists both had an earlier and stronger positive success rate than female candidates from the Social Democrats and Liberals, which points to the importance of *period* – e.g. of forerunners in an otherwise rather negative period for female candidates.

The conclusion so far is that we cannot on basis of the Danish data conclude, whether open or closed ballot formats are the best for having more women elected. The analyses are all examples of how various degree of openness may influence women's success rate in different ways. The ballot format is not the only relevant factor for women's success rates; it also depends on the time period and the dynamic interaction between political parties and voters.

A high success rate can be obtained, even if a party has few female candidates, if these are placed in good constituencies for that particular party. Conversely, a fall in the success rate can occur, if the share of female candidates increase, without more women being elected, as was the case for the Social Liberals in the 1970s.

Since the Danish case gives us a unique possibility to study the effect on women's representation of various ballot formats within the same party,

³ Only considering the main ballot formats that the Social Democratic Party are using, PPL and Open Lists (CN)

we bring in Table 8 an additional analysis of the overall negative success rates result, which was shown in Table 6 for the Liberal Party.

Table 8. Women candidates and women elected in the Liberal Party, according to periods and ballot formats

	Nominated women		Elected women	
	Constituency Lists	Open Lists & Open Lists (CN)	Constituency Lists	Open Lists & Open Lists (CN)
1945-1947	15 7,73%	2 16,67%	2 2,56%	1 16,67%
1968-1973	25 15,06%	30 17,05%	7 15,56%	1 2,50%
1979-1981	16 24,62%	21 16,41%	4 25,00%	0 0,00%
2011-2015	- -	52 27,96%	- -	26 32,10%

Note: The two versions of open lists are added in one category. The percentages are women in relation to men in each category. In 1979-1981 no woman, but 26 male candidates were elected on Open Lists or Open Lists (CN) for the Liberal Party.

Table 8 shows that in the first period after World War 2, 1945-47 neither constituency lists nor the open lists returned many women, only 2 and 1 respectively, which reminds of the few women elected during the whole interwar periods. When women's representation started to grow in general, yet more slowly in the Liberal Party, the increasing number of open lists proved at first to be a dangerous field for the female candidates in the two periods 1968-73 and 1979-61, while the periods 2011-2015 was more positive. This points to the importance of a third factor, the support for female candidates in various parties and periods through the personal voting, to which we will now turn.

5. Preferential voting

We will now add the impact of preferential voting to the analysis. The assumption behind the theory that open lists are better for women's representation than closed lists is that *voters* when casting their vote increase women's chances of getting elected. Around half of the Danish voters use their right to cast their vote for an individual candidate instead of just voting for the party. We also know that voters' use of the personal votes differs between political parties, e.g. the Social-Democratic voters use to be among the most loyal to the constituency candidate, even if they have the right to choose any candidate within the larger electoral district. This implies that nomination in large and traditional strong constituencies is crucial. The literature stresses the difficulties in estimating the effect of personal voting seen in relation to the power of the political parties when nominating their candidates in 'good' or 'bad' constituencies or districts for that particular party. The Danish case is an example of such difficulties.

Firstly, we will scrutinize the importance of preferential voting for women's representation in different political parties. Previous research covering a limited number of elections has shown that the number of personal votes for women and men are not the same for the different political parties or in different periods (Wamberg, 1990, 1991). Secondly, we will study the relation between personal voting and ballot format. It was mentioned in Section 2 that under open ballot formats - Open Lists and Open Lists (CN) the voters alone decide the allocation of the seats among the candidates, and consequently, the personal votes have a greater influence on the election of candidates under Open Lists, smaller influence under the traditional Constituency Lists and very limited influence under Prioritized Party Lists. The analysis is based on the four political parties studied in section 4, hereof the two largest parties during these elections.

Do female candidates get more votes than male candidates?

We found (Section 4) that there was notable difference between women's success rate according to party, and that the success rate was best for women candidates in the Socialist People's Party and worse in the Liberal Party.

Considering the mean of the personal votes in the four selected parties, *Table 9* and *Table 10* show that in general the women candidates are doing well in terms of personal votes. The mean of the female elected candidates are higher than the those of the male candidates in all the periods for the Social-Democrats and Social-Liberals, while the mean is higher for male candidates only in one period, 1968-1973 within the

Socialists, a splinter party from the Communist Party, and totally male dominated at the beginning. Again the Liberal differs from the other parties, being the only of the four parties with a higher average for male candidates when all periods are taken together.

In general, the means of personal votes should be interpreted cautiously, since a few well-known and popular candidates may attract many votes. Previous, such candidates were mostly men, but today we also see some women getting very high number of personal votes, in both cases with a the so-called 'vacuum cleaning effect', with the result that other candidates for the party in the same district can be elected on rather few personal votes.

Table 9. Personal votes for elected candidates within the Social Democratic party and the Liberal Party

		The Social Democratic Party				The Danish Liberal Party			
		Obs.	Mean	Min	Max	Obs.	Mean	Min	Max
1945-1947	Men	101	5.570,06	1.331	37.415	81	4.977,95	1.844	11.864
	Women	4	8.148,50	4.048	14.670	3	4.084,33	2.967	5.678
1968-1973	Men	159	5.483,21	765	25.636	77	5.428,81	815	16.897
	Women	19	5.926,37	1.981	13.194	9	6.190,33	436	11.348
1979-1981	Men	100	6.783,03	1.749	31.459	38	6.589,95	2.748	15.463
	Women	27	8.268,30	2.672	27.027	4	7.104,25	4.877	8.837
2011-2015	Men	57	8.818,97	4.121	32.119	55	9.738,47	1.333	56.285
	Women	34	9.694,56	2.962	42.412	26	9.014,92	3.130	30.910
Average for all the periods	Men	104,25	6.663,82	1.991,50	31.657,25	62,75	6.683,80	1.685,00	25.127,25
	Women	21	8.009,	2.915,	24.325,	10,5	6.598,	2.852,	14.193,

n	43	75	75	0	46	50	25
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Table 10. Personal votes for elected candidates within the Social-Liberal Party and the Socialist People's Party

		The Danish Social-Liberal Party				Socialist People's Party			
		Obs.	Mean	Min	Max	Obs.	Mean	Min	Max
1945-1947	Men	19	2.931,26	1.049	7.148	N/A	N/A	N/A	N/A
	Women	2	3.500,50	2.821	4.180	N/A	N/A	N/A	N/A
1968-1973	Men	58	3.480,59	396	23.395	31	3.902,87	802	15.095
	Women	16	3.561,13	867	11.852	8	1.195,13	377	2.207
1979-1981	Men	13	2.825,54	508	5.896	16	2.363,38	269	15.345
	Women	6	6.744,50	1.888	15.316	16	4.863,88	1.047	14.003
2011-2015	Men	11	4.999,55	1.500	14.505	11	3.925,64	1.003	12.954
	Women	14	5.160,00	1.227	23.793	12	5.032,75	1.334	9.597
Average for all the periods	Men	25,25	3.559,24	863,25	12.736,00	19,33	3.397,30	691,33	14.464,67
	Women	9,50	4.741,53	1.700,75	13.785,25	12,00	3.697,25	919,33	8.602,33

Measured in terms of minimum and maximum votes received according to gender, Table 9 and 10 demonstrates that the highest score is found among male candidates, but also the lowest - probably a result of a higher number of well-known and popular male candidates (the high maximum), and the larger number of male candidates in general (the low minimum),

especially during the first periods. The difference between male and female candidates diminishes over time for Social- Democrats, Social-Liberals and Socialists with the smallest difference in the period 2011-2015. However for the Liberals the picture is quite the contrary. The differences of the minimum between genders increases and is the largest in the periods 1979-1981 and 2011-2015.

Looking at the minimum of personal votes for the elected candidates there is only one period for each party where the elected male candidates' minimum of personal votes is higher than the one of the elected female candidates. However, the tables show some differences according to when elected male candidates' minimums of personal votes have been higher than the female candidates'. For the Social Democrats and Social-Liberals it was in 2011-2015 and for the Liberals and Socialists it was in 1968-1973. Both the Social- Democrats and Social-Liberals primarily used Open Lists (CN) in the period (2011-2015), while in 1968-1973 the Socialist used Constituency Lists and Open Lists (CN) and the Liberals used CL, Open Lists (CN) and Open Lists.

The conclusion of the preferential voting and the political parties is that the Liberals in general differs from the other three parties, in which the difference between the votes received by male and female candidates diminishes over times, while the largest difference between genders in the Liberal Party derives from last two periods. The question is if the Liberal voters prefer male candidates and vote in favour of them or if the male candidates are nominated in constituencies, which traditionally are more "safe" - or both? Our data cannot answer this question, but this area no doubt needs more attention in future research.

By ballot formats and periods

Let's start with the average personal votes for women and men under the different ballot structures. *Table 10 and 11* depicts the unexpected result that with the almost closed Party Lists (PPL), women's mean has been higher than men's mean for all the periods, while under Constituency Lists and Open Lists (CN) women's mean has only in one period been higher than men's. For Open Lists men's mean has been higher than the women's in all the periods. With Open Lists (CN), it is remarkable that female candidates need a higher amount of personal votes than males to get elected, and only in 1979-1981 is the mean of the personal votes highest for women.

Looking at the minimum-maximum of votes according to gender, the analysis shows interesting variations according to the degree of openness. Examining the elected candidates' minimum of personal votes, *Table 10*,

demonstrates that there is not a single period where a female candidate has been elected with a minimum of personal votes smaller than a male candidate in the same period under the two more closed ballot formats (Prioritized Party Lists and Constituency Lists). Within the two open ballot formats, see *Table 11*, in one of the periods⁴ the minimum of elected males' personal votes are higher than that of the female candidates': with Open Lists (CN) in 1971-1973 and with Open Lists in 2011-2015 (NB: small numbers).

High number of votes for female candidates can be seen as a sign of positive voter attitudes towards women candidates.⁵ However, this can also be expressed in a different way: Female candidates need a higher amount of personal votes to get elected - particular under more closed lists - which corresponds to the analysis in section 3 about ballot formats and success rates. In section 3 we found that women's success rate was negative under Party Lists (PPL) in three out of the four periods. This analysis of the preferential voting also indicates that it is harder to get elected as a female candidate than male candidates under Party Lists.

Looking at various periods, the differences between elected male and female candidates' minimum of personal votes varies. For PPL the difference is greater between genders in the two latest periods (1979-81 and 2011-15), while with Open Lists (CN) the difference is smaller than under PPL and more constant over the three periods. The gender difference with CL and Open Lists are in general greater for all the periods. Note, however, that with Open Lists the number of observations is small, particular in the last two periods.

Table 11. Elected candidates' personal votes on Prioritized Party Lists and Constituency Lists

		Prioritized Party Lists				Constituency Lists			
		Obs	Mean	Min	Max	Obs.	Mean	Min	Max
1945-1947	Men	120	5.861,18	1.331	37.415	137	4.428,91	670	24.721
	Women	10	6.689,00	1.533	14.670	8	3.482,50	2.053	5.678

⁴ The comparison rests on different periods.

⁵ Because of the lack of transparency for the voters of the ballot structure, it does make sense to include party prioritized lists in this analysis.

1968-1973	Men	74	3.996,6 5	339	29.086	170	4.184, 12	190	20.252
	Women	6	5.555,1 7	581	12.730	35	4.982, 09	716	11.852
1979-1981	Men	19	3.160,5 8	154	15.345	53	5.178, 42	348	24.386
	Women	10	5.618,2 0	1.116	14.003	21	4.743, 24	1.073	15.829
2011-2015	Men	21	2.012,4 3	530	4.340	0	-	-	-
	Women	10	12.118, 40	1.150	47.002	0	-	-	-
Average for all the periods	Men	58, 5	3.757,7 1	588,50	21.546, 50	90	4.597, 15	402,67	23.119, 67
	Women	9	7.495,1 9	1.095, 00	22.101, 25	16	4.402, 61	1.280, 67	11.119, 67

Table 12. Elected candidates' personal votes on Open Lists (CN) and Open Lists

		Open Lists with Constituency Nomination				Open Lists			
		Obs.	Mean	Min	Max	Obs.	Mean	Min	Max
1945-1947	Men	N/A	N/A	N/A	N/A	18	4.389, 50	1.619	10.906
	Women	N/A	N/A	N/A	N/A	3	4.148, 00	3.608	4.656
1968-1973	Men	155	5.635, 48	845	25.636	43	4.130, 91	396	22.160
	Women	28	3.673, 25	377	13.194	4	2.445, 25	809	6.707
1979-1981	Men	189	5.535, 43	270	31.459	1	3.692, 00	3.692	3.692
	Women	53	6.140, 544	544	27.027	0	-	-	-

n		36							
2011-2015	Men	193	7.844,8	1.08	57.371	3	2.239,	1.112	3.676
	Women	121	7.410,	1.227	46.131	2	856,00	639	1.073
Average for all the periods	Men	179	6.338,5	732,00	38.155,	16,2	3.613,02	1.704,	10.108
	Women	67,3	5.741,2	716,00	28.784,	5	2.483,08	1.685,	4.145,3

Can we conclude that women in general need more personal votes than men to get elected? The results indicates that within closed ballot formats female candidates need more personal votes than men - or just get more votes. Yet, under closed lists ballots, particularly under the Party Lists, the personal votes do not have an important impact on election of candidates. The higher minimum of personal votes for women can both be due their placement on the party lists, the constituency or the low number of nominated females. However, we found that also under open ballot formats did the female candidates receive a higher minimum of personal votes than male candidates, except in 1979-81 with Open Lists (CN) and 2011-15 with Open Lists. This seems to indicate a positive attitude among the voters towards women candidates, however, with complex variations according to party and period.

6. Conclusion: An integrated model.

Table 12 completes the analysis with a multivariate model which incorporate the institutional factors analyzed so far: gender, ballot format and personal votes.

Table 12. Probability of being elected

	Model 1		Model 2	
	<u>Odds Ratio</u>		<u>Odds Ratio</u>	
Constant	0.1723913	(0.01164 ***)	0.0220456	(0.00251 ***)
Gender	0.9883704	(0.07119)	0.8512354	(0.09487)

		96)		22)
Ballot formats				
<i>(Reference category PPL)</i>				
		(0.08673		(0.11773
CL	1.027.054	28)	0.9501857	81)
Open				
Lists	2.196601**	(0.17310		(0.10812
(CN)	*	22)	0.880472	49)
Open	0.5197059	(0.07175		(0.15350
Lists	***	33)	0.8076018	23)
			1.001248**	(0.00003
Personal votes			*	17)

*Significant at the 0.10 level (two-tailed); **significant at the 0.05 level (two-tailed); and ***significant at the 0.01 level (two-tailed).

The most important result shown in Table 12 is that *gender is not significant* for the probability of candidates getting elected. This corresponds to the finding that women's share of the nominated and the elected runs in parallel.

Further, table 12 shows the combined effect of ballot format and preferential voting. According to Model 1, the ballot format has proved to be significant. However, when the personal votes are included (Model 2), the effect of ballot format is no longer significant. This could indicate that the personal votes are the most important. This would, however, be a premature conclusion. The analysis of this paper should be seen as a first step. Further analyses are needed on the effect of the placement by the political parties of female and male candidates in 'strong' or 'weak' constituencies during various periods as well as of the damaging effect for women of the advantages of incumbency during the early periods since suffrage, a factors which today may have started to benefit women candidates as well.

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