

Additional information provided by the Electoral Reform Society Cymru following the evidence session on 9 November 2023:

- Modelling the potential outcomes of legislative gender quotas for Senedd elections
- Example of a letter sent to voters in Estonia providing information before elections.





Modelling the potential outcomes of legislative gender quotas

Approach to modelling LGQs

Dual approach:

- **Random election results constrained by the bounds of Senedd Reform**
 - **16 constituencies**
 - **6 seats in each**
- **Modelled election results based on 2021 Senedd regional list votes to allocate seats to parties in each new constituency**

Vertical Zipping

- **Adjacent candidates going down a party list may not be of the same gender**
- **Other names for vertical zipping include rank or placement mandate and zebra system**
- **Many countries use vertical zipping in their LGQ including: Bolivia, Costa Rica, Ecuador, France, Kenya, Republic of Korea, Lesotho, Libya, Mexico, Nicaragua, Senegal, Tunisia and Zimbabwe**

Position on list	Example 1	Example 2	Example 3
1	F	M	F
2	M	F	N
3	F	M	F
4	M	F	M
5	F	M	F
6	M	F	M

F – female, M – male, N – non-binary

Horizontal Zipping

- Horizontal zipping is more complex as there are several ways to zip party lists horizontally, but in essence it refers to alternating genders at the top of the list so that the first seat isn't always won by the same gender across the available constituencies
- This could be pre-specified by an electoral management board or similar and dictated to the parties
- Or parties could decide which candidates to put on top of the list where

Constituency	Example 1	Example 2	Example 3
Area 1	F	M	F
Area 2	M	M	N
Area 3	F	M	F
Area 4	M	F	M
Area 5	F	F	F
Area 6	M	F	M

F – female, M – male, N – non-binary

Horizontal Zipping

- This variability in approaches means outcomes could be different under different forms of horizontal zipping
- Countries that use horizontal (and vertical) zipping in their LGQs include Mexico, Costa Rica, Bolivia and Ecuador
 - Some require that women must be placed in 'winnable' seats based on the parties' results at the last election
- Latin America is leading in this element of quota design

Constituency	Example 1	Example 2	Example 3
Area 1	F	M	F
Area 2	M	M	N
Area 3	F	M	F
Area 4	M	F	M
Area 5	F	F	F
Area 6	M	F	M

F – female, M – male, N – non-binary

Random election methods

- 20 iterations, providing 20 sets of election results per number of parties winning seats
- Random number generator used to generate election results with following settings:
 - Sets of numbers per line specified between 4 – 6 representing the number of ‘parties’ winning seats in a given set of elections
 - Each individual number could vary between 0 – 6 (the minimum and maximum numbers of seats a ‘party’ could win in any given constituency) and all numbers in a given line had to sum to 6 (i.e. the number of seats available in any constituency)
 - 16 lines of numbers were produced in each iteration reflecting the 16 constituencies
- Different approaches to horizontal zipping (the alternating of genders at the top of the list across constituencies) were then applied to these election results
- Under all scenarios there was always vertical zipping down party lists

Random election example results

4 Party

Constituency	Seats won			
	Party A	Party B	Party C	Party D
1	3	0	2	1
2	1	0	0	5
3	0	3	1	2
4	3	1	2	0
5	1	3	2	0
6	4	0	1	1
7	1	3	2	0
8	0	3	2	1
9	3	0	1	2
10	2	4	0	0
11	0	0	4	2
12	3	2	0	1
13	0	0	5	1
14	3	0	1	2
15	0	2	1	3
16	0	4	1	1

5 Party

Constituency	Seats won				
	Party A	Party B	Party C	Party D	Party E
1	0	2	0	1	3
2	0	5	0	1	0
3	2	0	1	3	0
4	0	1	3	0	2
5	0	2	4	0	0
6	1	2	2	1	0
7	0	1	0	5	0
8	0	1	3	2	0
9	4	2	0	0	0
10	1	3	1	0	1
11	2	0	2	1	1
12	0	2	0	0	4
13	0	1	0	0	5
14	1	0	3	1	1
15	0	2	1	3	0
16	2	1	3	0	0

6 Party

Constituency	Seats won					
	Party A	Party B	Party C	Party D	Party E	Party F
1	2	4	0	0	0	0
2	0	1	0	3	0	2
3	1	0	0	0	5	0
4	3	0	2	0	1	0
5	0	0	2	0	3	1
6	2	1	1	1	1	0
7	5	1	0	0	0	0
8	1	0	0	2	3	0
9	2	0	1	0	3	0
10	1	0	0	3	2	0
11	0	1	0	5	0	0
12	0	3	2	0	0	1
13	0	5	1	0	0	0
14	1	0	1	2	1	1
15	1	1	1	1	2	0
16	3	0	2	0	0	1

Random election LGQ approaches

No horizontal zipping:

- Men on top of all candidate lists across all constituencies
- Women on top of all candidate lists across all constituencies

Party specified horizontal zipping:

- Women on top of candidate lists in constituencies where they will win proportionally less seats (0, then 2, 4, 6)
- Combinations of different numbers of parties placing women on top of lists in constituencies where they will win proportionally more seats, less seats and pre-specified ordering
- Women on top of candidate lists in constituencies where they will win proportionally more seats (1 then 3, 5)

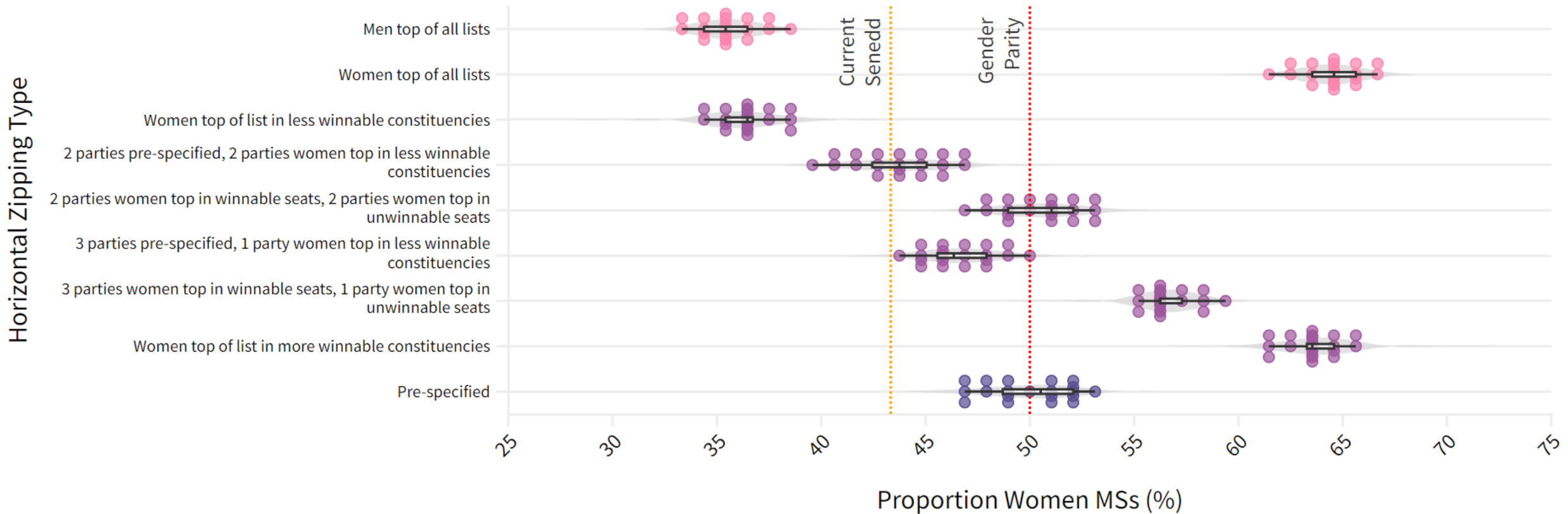
System mandated horizontal zipping:

- Pre-specified, parties are told who to put on top of lists where with genders alternating across constituencies in a strict way

Random election modelling results

4 party random election results

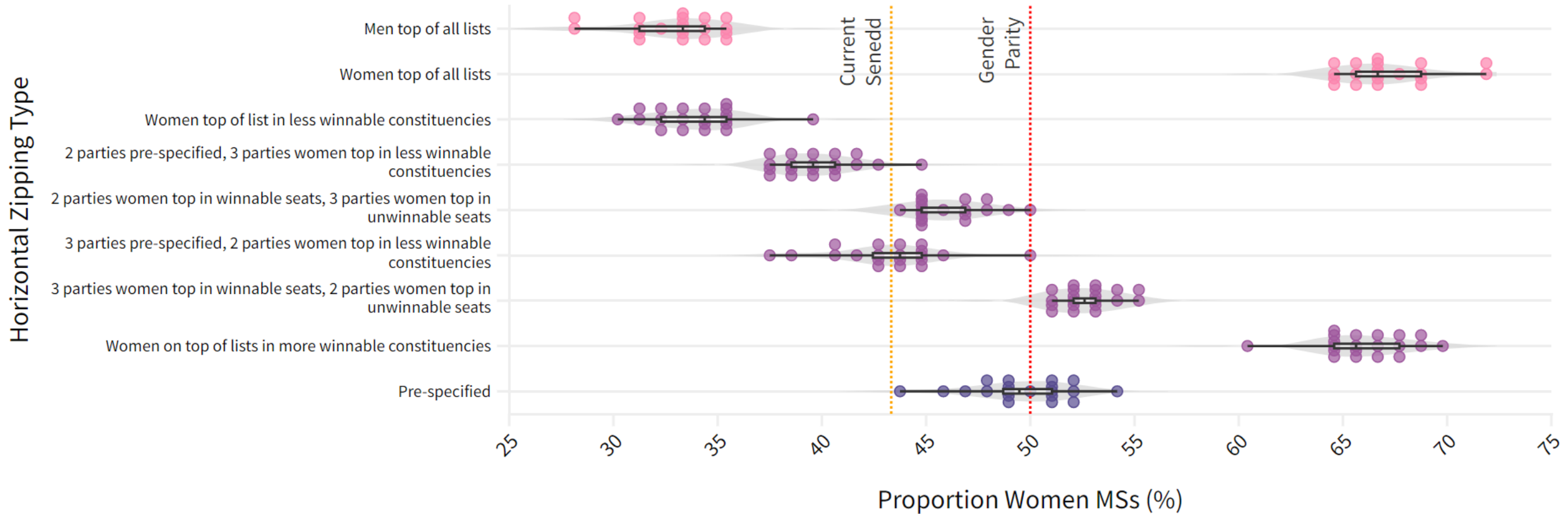
Horizontal Zipping ● System specified ● Party specified ● None



Random election modelling results

5 party random election results

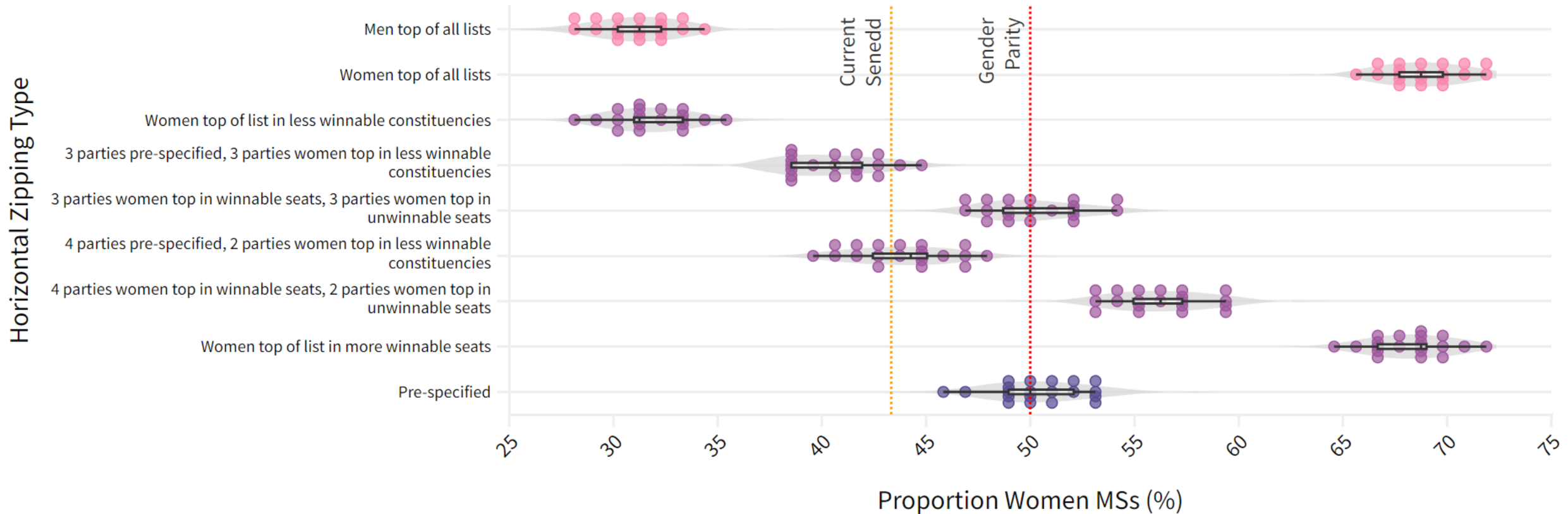
Horizontal Zipping ● System specified ● Party specified ● None



Random election modelling results

6 party random election results

Horizontal Zipping ● System specified ● Party specified ● None



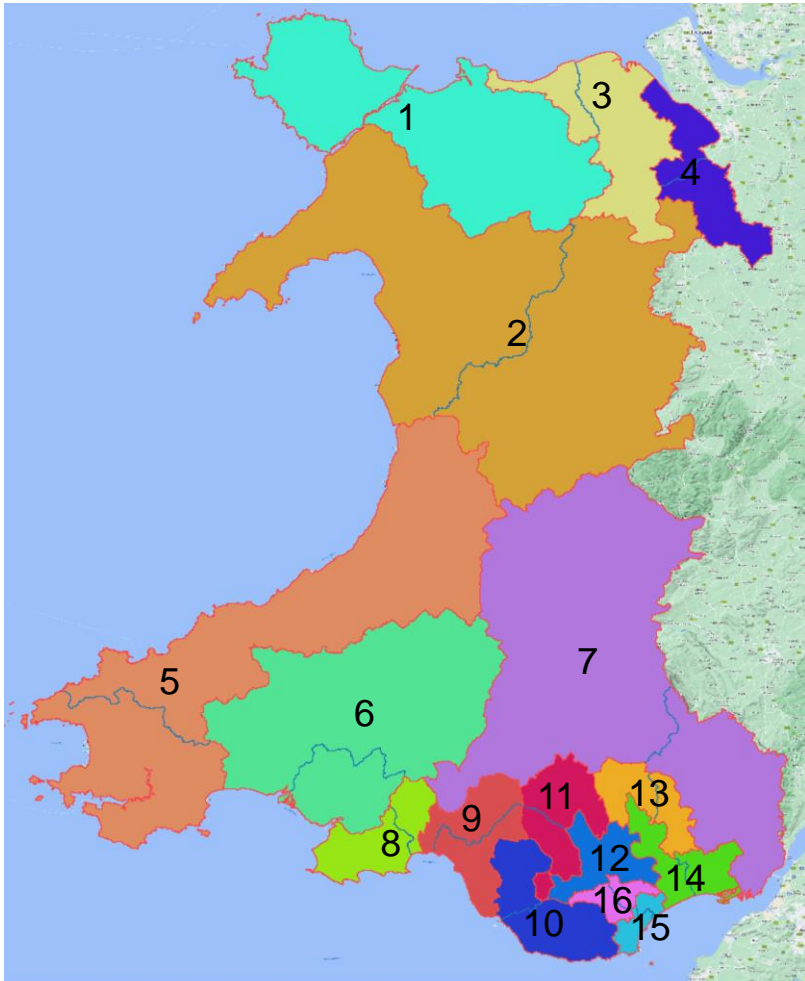
Conclusions from random election LGQ modelling

- **Wide range of outcomes from different horizontal zipping methods**
- **Some methods produce results that are less balanced than the current Senedd**
- **No approach guarantees exact parity across different election result iterations**
- **Number of parties winning seats in a given election also affects outcomes**

Modelled election results post-Senedd Reform - Methods

- **Caveats: all results are estimates based on the data available but cannot be considered accurate predictions of future election results**
- **Regional list votes from the 2021 Senedd elections were used as a base for the modelling**
- **Votes from the 40 current constituencies were projected onto the new 32 constituencies weighted using the proportions of electorate within each new constituency from the boundary commission reports**
- **The 32 constituencies were then paired into 16 new Senedd constituencies and votes summed across these pairings**
- **Seats were allocated to each party using the D'Hondt method in each of these 16 constituencies**

Modelled new constituency boundaries

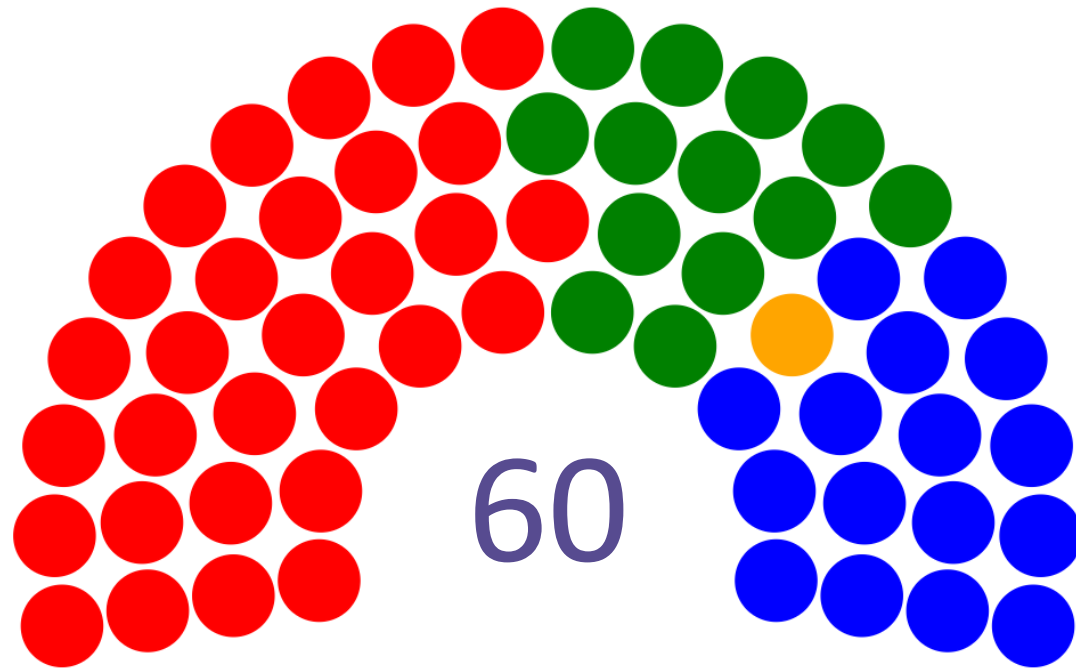


#	Constituency 1	Constituency 2
1	Bangor Aberconwy	Ynys Môn
2	Dwyfor Meirionnydd	Montgomeryshire and Glyndwr
3	Clwyd East	Clwyd North
4	Alyn and Deeside	Wrexham
5	Ceredigion Preseli	Pembrokeshire Mid and South
6	Carmarthen	Llanelli
7	Monmouthshire	Brecon, Radnor and Cwm-tawe
8	Gower and Swansea West	Swansea Central and North
9	Aberafan Porthcawl	Neath and Swansea East
10	Bridgend	Vale of Glamorgan
11	Merthyr Tydfil and Upper Cynon	Rhondda
12	Caerphilly	Pontypridd
13	Blaenau Gwent and Rhymney	Torfaen
14	Newport East	Newport West and Islwyn
15	Cardiff East	Cardiff South and Penarth
16	Cardiff North	Cardiff West

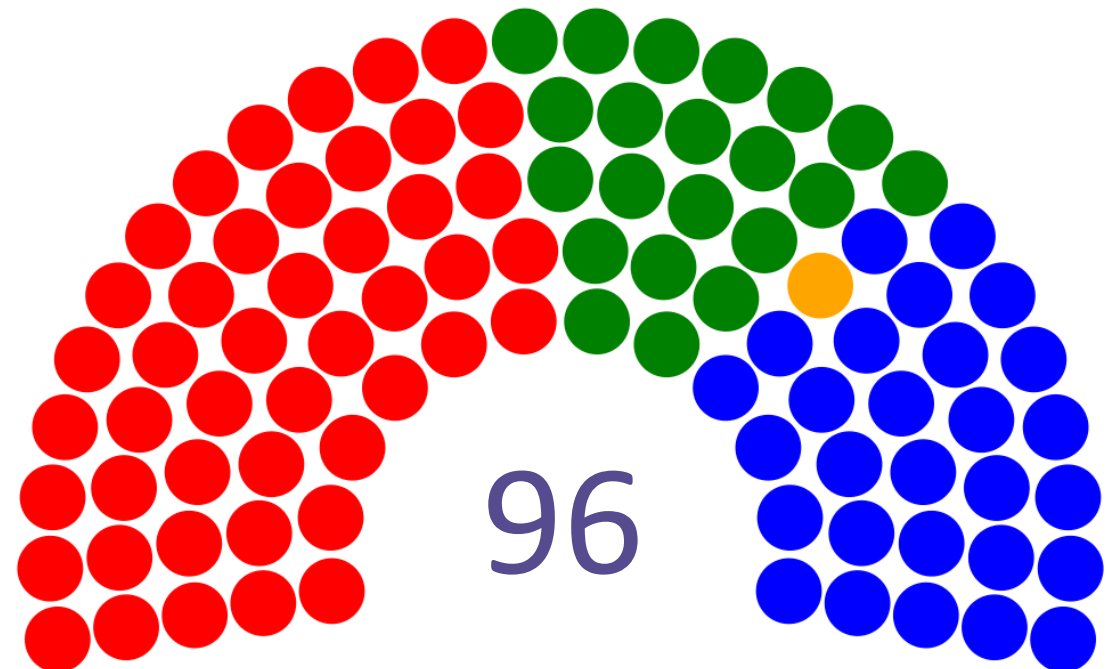
Modelled election results post-Senedd Reform - Results

Party	Number of seats	% Seats	% Votes (total across all constituencies)
Welsh Labour	46	48%	36%
Welsh Conservatives	28	29%	25%
Plaid Cymru	21	22%	21%
Welsh Liberal Democrats	1	1%	4%

Senedd 2021 results Senedd Reform model



Senedd 2021 results Senedd Reform model



Party	Senedd 2021 results	Senedd Reform model	Seat change
● Welsh Labour	30	46	↑ 16
● Plaid Cymru	13	21	↑ 8
● Welsh Liberal Democrats	1	1	0
● Welsh Conservatives	16	28	↑ 12

Modelled election LGQ approaches

No horizontal zipping:

- Men on top of all candidate lists across all constituencies
- Party specific % of women on top of lists based on candidate order for regional list in 2021 Senedd elections – placed in both more winnable and less winnable areas
- Women on top of all candidate lists across all constituencies

Party specified horizontal zipping:

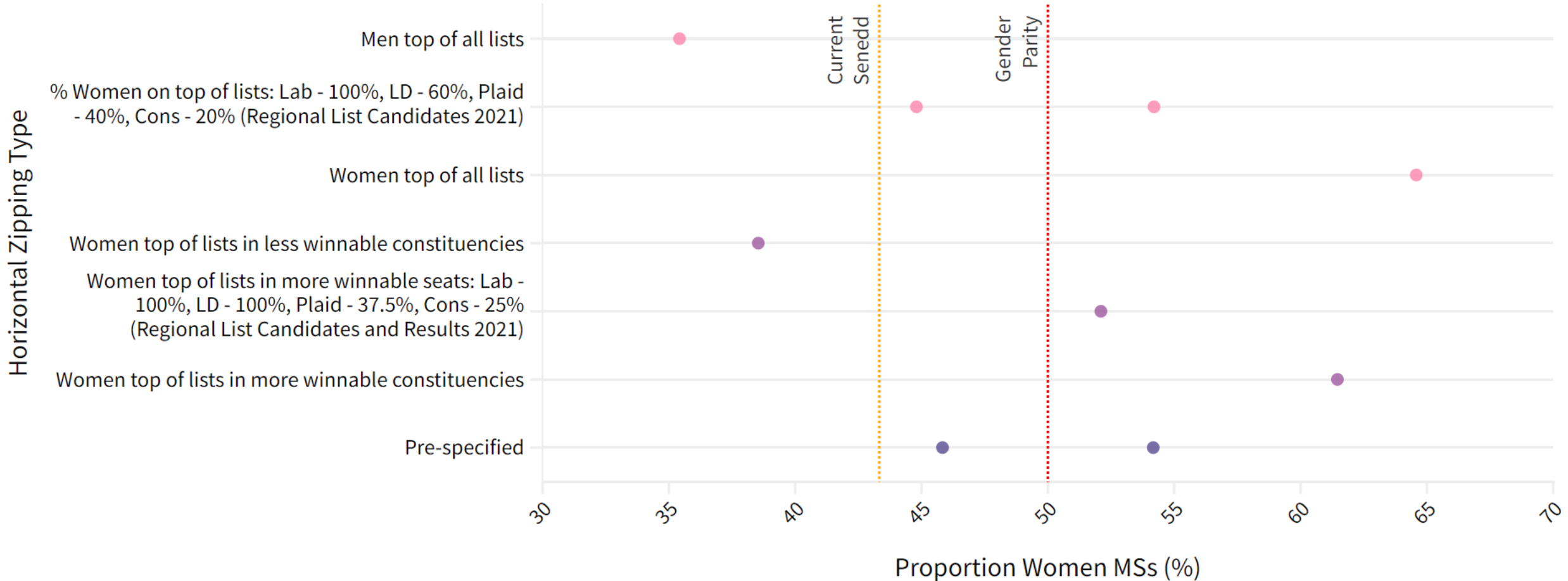
- Women on top of candidate lists in constituencies where they will win proportionally less seats (0, then 2, 4, 6)
- Party specific % of women on top of candidate lists in more winnable constituencies based on regional list results from 2021 Senedd elections
- Women on top of candidate lists in constituencies where they will win proportionally more seats (1 then 3, 5)

System mandated horizontal zipping:

- Pre-specified, parties are told who to put on top of lists where with genders alternating across constituencies in a strict way

Modelled election LGQ outcomes

Horizontal Zipping ● System Specified ● Party Specified ● None



Conclusions from modelled election LGQ outcomes

- Range of outcomes based on zipping method
- Vertical zipping only could produce proportions of women MSs as low as 35.4% if men are placed at the top of candidate lists by all parties across all constituencies
- Mandating horizontal, as well as vertical zipping improves outcomes could still be as low 38.5% women MSs if women are placed on top of lists in less winnable areas
- Strict pre-specified horizontal zipping produces outcomes from 46 – 54% but may not be possible under current competencies
- Even if vertical and horizontal zipping are mandatory then parties may still play a huge role in determining the outcomes through where individuals are placed on top of the list



ELECTIONS INFORMATION SHEET

GIVEN NAME SURNAME

Address

NB! Information sheets are sent to voters by e-mail. You have been sent a paper copy, as the Population Register does not know your e-mail address. In order to give your e-mail address, please go to rahvastikuregister.ee.

NB! If this person does not live at this address, the owner of the dwelling can contact the local government to rectify the data or you can give notice of it at rahvastikuregister.ee.

WHICH ELECTORAL DISTRICT CAN I VOTE IN?

Rural municipality/city: Electoral district No. - description.

WHO CAN I VOTE FOR?

You can view the candidates of your electoral district at valimised.ee.

The lists are also available at all the voting rooms during the voting period (11 to 17 October).

WHEN AND HOW CAN I VOTE?

PRE-ELECTION DAYS						ELECTION DAY
Mon 11 Oct	Tue 12 Oct	Wed 13 Oct	Thu 14 Oct	Fri 15 Oct	Sat 16 Oct	Sun 17 Oct
E-VOTING						
<p>You can vote at valimised.ee.</p> <p>Voting starts at 09:00 on 11 October and ends at 20:00 on 16 October. You can vote round the clock.</p> <p>In order to vote, you need a computer with an Internet connection and your ID card or Mobile ID with PIN codes.</p>						<p>No e-voting is available If you wish, you can change your previously given e-vote on the spot in the voting room.</p>
VOTING IN A VOTING ROOM						
<p>You can vote in <u>all</u> the voting rooms open at that time all across Estonia</p> <p>12:00 to 20:00</p> <p>Information about all the voting rooms in Estonia is available at https://jsk.valimised.ee/.</p>			<p>You can <u>only</u> vote in the voting rooms of your electoral district (see overleaf ↗)</p> <p>12:00 to 20:00 09:00 to 20:00</p>			
VOTING AT HOME WITH A BALLOT BOX						
<p>You cannot vote at home with a ballot box.</p>			<p>You can vote at home only with a ballot box ordered to your home (see overleaf ↗)</p> <p>09:00 to 20:00</p>			

VOTING ROOMS OF YOUR ELECTORAL DISTRICT FOR VOTING ON THE SPOT

WHERE CAN I VOTE?			WHEN CAN I VOTE?			
LOCATION	ADDRESS	PHONE <i>(used only during the voting period)</i>	11 to 14 Oct 12 to 20	15 Oct 12 to 20	16 Oct 12 to 20	17 Oct 09 to 20
Name	Address	Phone number	Toimub = Takes place			
Name	Address	Phone number				
Name	Address	Phone number				
Name	Address	Phone number				
Name	Address	Phone number				
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Name	Address	Phone number				
Name	Address	Phone number				



For information about the accessibility of voting rooms, please call 631 6633 or visit jsk.valimised.ee.

FURTHER INFORMATION

WHAT SHOULD I TAKE ALONG TO VOTING?

Take along a **personal identification document** (e.g. ID card, passport, residence permit card, driving licence).
You do not need to take along the elections information sheet.

HOW CAN I ORDER A BALLOT BOX TO MY HOME?

You can order a ballot box by phone from 15 to 17 October.
Ordering closes at 14:00 on 17 October.
To order it, **please call** *phone number*.

WHO DO I INFORM IN THE CASE OF AN ATTEMPT TO UNLAWFULLY INFLUENCE MY VOTING DECISION?

If an attempt is made to influence your voting decision by promising or giving property or other benefits, **immediately notify the police** by calling 112. This way, you contribute to ensuring the honest conduct of the elections.

WHERE CAN I GET FURTHER INFORMATION?

Elections info line: 631 6633

Elections e-mail: info@valimised.ee

Elections webpage: valimised.ee

Information on voting rooms: jsk.valimised.ee

COVID-19 information: kriis.ee

* Information about Population Register data (e.g. place of residence, e-mail): *phone number*

* More detailed information on the accessibility of voting rooms: lips.tallinn.ee

* Information only on the Tallinn information sheet