RESEARCH

Implementation of a Single Transferable Vote system for local elections in Wales (summary)

To explore the introduction of a Single Transferable Vote (STV) system in future local elections in Wales as laid out in the Local Government and Elections (Wales) Bill 2021.

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Research aims and methodology

This report was commissioned by the Welsh Government to explore the introduction of STV in future local elections in Wales as laid out in the Local Government and Elections (Wales) Act 2021.

The aims of this research were to assess the relative merits of different variants of STV and its implementation. The report focuses on six aspects of STV electoral systems in detail.

1. Quota system
2. Transfer system
3. Counting method
4. Ballot structure
5. District magnitude
6. Voter and stakeholder understanding

The research employed a mixed-methods approach including a review of existing academic and grey literature; semi-structured interviews with stakeholders, including election officials, academics, former politicians and lobbying groups; and simulations of election outcomes under different variants of STV electoral systems. The simulations focused specifically on the quota system

used (Hare vs Droop) and the transfer method for allocating preferences (random transfer method, Simple Gregory, Inclusive Gregory, and Weighted Inclusive Gregory).

Main findings

Quota system

The quota sets a threshold number of votes a candidate must reach in order to be elected. The research focused on the use of two quota variations: The Hare quota and the Droop quota. The Droop quota produces a lower threshold for candidates to meet compared to the Hare quota.

The Droop quota is the most widespread quota used in STV electoral systems and has almost universally replaced the Hare quota. This includes within the UK, where elections in Northern Ireland and local election in Scotland both employ the Droop quota. The simulations found almost no substantive difference in electoral outcomes when either quota is used. Given its use in elections in the UK already, we therefore recommend the adoption of the Droop quota.

Transfer method

The transfer method refers to the way voters' preferences are transferred once a candidate is elected or eliminated. This report explores the use of four transfer systems: a random transfer method such as that used in the Republic of Ireland, the Simple Gregory Method used in Northern Ireland, the Inclusive Gregory Method used in several Australian elections, and finally the Weighted Inclusive Gregory Method which is used in Scottish local elections.

Our research identifies two methods suitable for use in local elections in Wales: The Weighted Inclusive Gregory Method and the Simple Gregory Method.

Weighted Gregory was identified by interviewees and in existing literature as the optimal method. Here, all preferences from an elected candidate's surplus are

transferred but at a fraction of their original value. Preferences are also weighted to prevent ballots increasing in value as the count progresses. It is considered to produce the 'fairest' electoral outcomes. However, the calculations required mean that it is dependent on the use of computer assisted counting. It is not suitable for hand counting.

Simple Gregory Method was recommended by interviewees as an alternative to the Weighted Gregory Method if manual counting was adopted. This method only transfers the most recently received ballots on an elected candidate's pile but at a fraction of their original value. In simulations, it produced less errors than the random transfer method and the Inclusive Gregory Method, but more than Weighted Gregory. If electronic counting is not adopted, we recommend the use of this method.

Counting method

There was consensus in both the existing literature and among interviewees that electronic counting was preferable to manual hand counting of ballots. Electronic counting was argued to increase the legitimacy of electoral outcomes by reducing the likelihood of human error in the counting process, and to improve efficiency by providing results swiftly. Electronic counting also has additional benefits to election agents and parties as it can provide standardised accurate data for each polling place. As noted above, it would also enable the adoption of the Weighted Inclusive Gregory method.

Our analysis also highlighted several downsides to electronic voting. Foremost among these are the considerable start-up costs incurred in procuring the necessary hardware and software needed to compute the count and provide results, the training required to operate these systems, and necessary cyber and network security measures. This may be prohibitively expensive for individual local authorities to procure. Additionally, there are ramifications for designing, producing, and filling in ballots that can be read accurately by electronic counting software.

However, the conclusion from qualitative research was that electronic voting, while costly, was worth the investment to ensure the voters had confidence in

the system. It was suggested that a central fund should be created from which local authorities could draw down from to fund electronic counting.

Ballot structure

Ballot papers should be designed in a way that does not induce any undue electoral advantage to a particular party or candidate over another. There are a number of alternative means of regulating the order of candidates for voters to express their electoral preferences in STV elections, each with their own knock-on effects.

Of primary concern to this report was the ordering of candidates on the ballot paper. Three substantial options were considered: alphabetical ordering of candidates within party clusters; allowing parties to order the candidates in their party cluster; and a form of randomisation of candidate order. The report recommends the second option as it removes the small but significant issue of candidate order effects. While randomisation removes the possibility of order effects, it creates additional accessibility challenges and requires electronic voting.

A final consideration regarding the ballot is how many candidates voters are obligated to vote for: whether they must provide a preference for all candidates, or a minimum number, and so on. Most interviewees justified their beliefs on first principles, that an electoral system should improve choice and fairness, and as such were broadly against setting a compulsory number of preferences.

District magnitude

District magnitude refers to the number of seats to be filled in a district (or ward). The consensus in both the literature and among interviewees was that greater district magnitude is preferable as it leads to more proportional electoral outcomes.

Greater district magnitude does come with challenges, however, especially in more rural districts where it may be difficult to find the necessary number of

candidates to stand. In these districts expanding the geographic size of districts to accommodate more potential candidates may not be desirable as it can erode a sense of locality and create greater barriers to candidate-orientated campaigns. As such, local authorities should allow for some variation in the district magnitude of wards.

The Local Government and Elections (Wales) Bill allows for district magnitude between three and six. We recommend a district magnitude of five or six, with a provision for rural areas to apply for districts with a magnitude of three or four.

Voter and stakeholder understanding

Neither the literature review nor interviews provided reason for concern regarding voter understanding of STV electoral systems. While the rate of ballots spoiled does increase as compared with FPTP systems, evidence from countries as diverse as Estonia, New Zealand and the Republic of Ireland shows that voter understanding of STV systems is relatively high. Instead, interviewees stressed the importance of election official and candidate understanding.

There was some concern in Scotland that there appears to be a higher proportion of rejected ballots in council wards experiencing greater levels of economic deprivation. Local authorities should take pre-emptive measures to address these concerns. Generally, interviewees stressed that it was not necessarily important for voters to understand the mechanics of a vote transfer method, but rather how to fill in a ballot correctly.

Recommendations

Based on the literature review, interviews and modelling conducted for this study, we make the following recommendations regarding the implementation of an STV system for local elections in Wales. Some of these recommendations are contingent on other decisions; particularly the relationship between transfer rules, counting method, and ballot structure. The full report therefore presents plausible combinations of transfer and counting method

Quota system

- Local elections in Wales should adopt the Droop Quota.

Transfer method

- Local elections in Wales should adopt the Weighted inclusive Gregory method.
- If e-counting is not used, the Simple Gregory Method should be adopted.

Counting method

- Local elections in Wales should adopt e-counting.
- Local elections in Wales should be supported by a central fund from which councils can draw down.
- If manual counting is adopted, Simple Gregory should be adopted as the transfer method.

Ballot structure

- Cluster candidates by party.
- Allow parties to order candidates within their cluster *or* order candidates alphabetically within their cluster.
- Do not adopt randomisation of candidate ordering.

District magnitude

- A district magnitude of five or six is the ideal point for local elections in Wales.
- Provision should be made for rural areas to apply for a lower district magnitude.

Voter and stakeholder understanding

- Significant effort should go into educating candidates and parties, which would typically be led by the Electoral Commission.
- Returning Officers in deprived areas should be provided with greater resources to proactively address any misunderstanding among voters.
- Voter educational material should focus on how to fill in a ballot and avoid discussion of transfers.

Contact details

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Views expressed in this report are those of the researchers and not necessarily those of the Welsh Government.

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