

STV 4+: A Proportional System for Malta's Electoral Process

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Abstract

A recurring problem in Malta's Single Transferable Vote (STV) is the mismatch between the percentage of first preference votes a party wins nationwide and the corresponding percentage of seats it ends up with in parliament. In this paper we discuss how 'disproportionality' arises and propose the STV 4+ system, to restore proportionality whilst retaining STV as the basis for electing candidates. We describe how the divisor method can be used to implement an STV 4+ system, whereby a Maltese General Election is implemented conceptually as an Additional Member System (AMS). The Maltese General Election of 2008 is taken as an example. We believe that this fair system can be implemented in Malta and other countries that have experience with STV elections.

Keywords: Single Transferable Vote; Proportionality; Additional Member Systems; Malta

1 Introduction

In many types of electoral systems the number of parliamentary seats gained by a given party is not always proportional to the number of votes gained by that party. Some parties will receive disproportionately few seats compared to their votes while others will receive disproportionately many. The outcome of such an election is often accepted, yet the result may be considered unfair.

There is a debate in Malta at the moment as to whether the Single Transferable Vote (STV)

system, used to elect the country's national legislatures, should be abandoned. The STV method currently employed in the island combines proportional representation and preferential voting. However, a recurring problem with this electoral system is the fact that it leads to "disproportionality". In fact, four out of the last six general elections held since 1981 resulted in a mismatch between the percentage of first count votes polled nationwide by a given party and the corresponding percentage of parliamentary seats gained by that party [14]. Although the constitution was amended twice to ensure that the party with the majority of first count votes would be given a majority of seats in Parliament, there is constant speculation that a repeat of the 1981 constitutional crisis, which will be discussed further below, is still possible. This in turn is casting doubts on the legitimacy of Malta's entire electoral system. For this reason, the present Prime Minister of Malta proposed that the electoral law should be reviewed and amended.

2 The Aim of This Study

The aim of this study is to provide a feasible solution that would overcome the 'disproportionality' problem that STV is facing in Maltese general elections. In this paper we discuss how this lack of proportionality arises and we propose the STV 4+ method. This electoral system falls into the category of additional member systems, which are used in many countries and have advantages that are well known to political analysts around the world. We illustrate how the STV 4+ system can be adopted in Malta to achieve nationwide representation without making changes to the existing STV ballot structure that was adopted in 1921.

3 Background

In this section we will provide background information about Malta and its electoral system.

3.1 Malta

The Republic of Malta lies at the centre of the Mediterranean Sea, 93 km South of Sicily and 288 km North of Africa, and has area of 316 km². It consists of an archipelago: Malta, Gozo, Comino and three other smaller, uninhabited islands. The climate is Mediterranean, with hot/dry summers and mild winters. Malta currently has 395,742 inhabitants [15], thus making it the second most densely populated country in Europe with 1,309 persons per km². Most residents of Malta are Maltese citizens, Catholic and can speak both Maltese and English. Malta receives around 1.2 million tourists per year, coming mainly from Europe. Malta became a member of the European Union (EU) in 2004.

3.2 The Electoral System in Malta

An electoral system is part of the electoral law which specifically determines “the means by which votes are translated into seats in the process of electing politicians into office.” [9].

According to the Maltese constitution, the parliament consists of the President of the Republic and the House of Representatives. The House of Representatives should consist of 65 members of parliament (MP’s) elected by means of the STV system, and a parliamentary term should not exceed five years. Currently, Malta is divided into 13 electoral districts and each district elects five MPs. However, when the party with the largest number of first count nationwide votes fails to obtain the largest number of seats, the Constitutional Amendments (CAs) of 1987 and/or 2007 can be invoked in order to restore the election to proportionality. In this case, the legislature will consist of more than 65 seats.

To eliminate any possible effect due to district size, the number of voters in each district should be within $\pm 5\%$ of the average district size. However, a recent CA provides an exception to this rule for the island of Gozo, which is

allowed to be a single district. Malta has the highest non-compulsory voting turnout in the world, and with a 93.3% turnout in the last election (2008) it ranks fifth in the world when including countries that are bound by law to vote [13]. Therefore, not voting in Malta can be considered a form of strong affirmative political action [11].

STV is a proportional representation electoral system conducive to multi-party politics. It has been used in all the 22 general elections held in Malta since 1921, but since 1964 it has evolved into a two-party system. The two dominating parties are the right-of-centre Nationalist Party (PN) and the moderately leftist Malta Labour Party (MLP) [1]. Since 1993, STV has been used to elect the members of the Local Councils and as from 2004 to elect the Maltese representatives in the EU parliament [7]. Apart from Malta, other countries that use STV include the Republic of Ireland (parliamentary elections, European elections, local government elections), Northern Ireland (regional assembly elections, European elections, local government elections), Scotland (for local government elections), Australia (where two forms of STV are used – the Hare-Clark Proportional Representation in the Tasmania House of Representatives and in the Australian Capital Territory Legislative Assembly and the Group Voting or Ticket-Voting Proportional Representation in the Australian Senate and in the legislative councils of Victoria, Western Australia, South Australia and New South Wales), United States (e.g., in city council and school committee elections as in Cambridge, Massachusetts) and New Zealand (e.g., in local government elections in Dunedin and the Wellington local health board elections).

In the STV ballot, Maltese voters can rank as many candidates as they wish in order of personal preference (1st, 2nd, 3rd, 4th, etc.). Voters are also free to float from one party to another and can select candidates for reasons other than party affiliation. However, since in Malta party influence is very strong, there are very few vote transfers between candidates of different parties (approximately, 1%).

An important quantity in STV is the Droop quota (also known as the Hagenbach-Bischoff quota), which is the number of votes required for a candidate to be elected. This is defined as follows:

Droop quota = 1 + integer part of
[(no. of valid votes cast) ÷ (no. of seats + 1)]

Additionally, the Droop quota can easily give the number of seats due to a party on the basis of the votes gained. If one assumes, as is almost always the case in Malta, that votes are always transferred to candidates of the same party, then within any district:

No. of seats gained by a party = integer part of
[(no. of votes polled by party) ÷ (droop quota)]

In the counting process, the first preference (FP) votes are examined first and the candidates who reach a quota of FP votes are elected. If a candidate exceeds the quota, each surplus vote is transferred at full value to the candidate indicated on the ballot as the voter's next ranked choice. A second count is made to see whether other candidates reached the quota through surplus votes. If not, the candidate with the lowest number of votes is eliminated and his or her votes are transferred to other candidates, provided the voters indicated their next preferred candidate on the ballot papers. This counting process continues until 5 candidates have been elected in each of the 13 districts. Since candidates can contest the elections in two districts, those who are elected in both districts must resign from one of the districts and a casual election is held. In this election, "the winner is determined by applying the STV procedures to the ballot papers credited to the vacating candidate in the general election" [12].

This system encourages parties to include many candidates in their rosters since a greater variety of candidates may help them attract more votes. After all, the trend is that the votes of the least popular candidates are not lost but transferred to other candidates of the same party. This results in severe competition among the candidates of the same party within each district.

Although theoretically the STV method should produce more proportional results than other electoral systems and is designed to minimise "wasted" votes, the mismatch between the percentage of FP votes a party wins nationwide and the corresponding percentage of seats it ends up with in parliament has been a recurring problem in Malta. In a detailed analysis of election results between 1921 and 2008, Lane argues that this "disproportionality"

is not particularly surprising and is mainly due to the rule of five seats per district. He argues that "the two major parties usually divide the seats in a 3 to 2 ratio and the vote totals never quite produce a corresponding 60% to 40% ratio" [14]. This is indeed true as in Malta, there are no landslide victories in general elections; when the PN and the MLP obtained 51.8% and 46.5% of the first count votes respectively in the 1992 general election, it was considered by many to be a massive victory for the PN.

The most striking anomalous result in Maltese general elections occurred in 1981. In fact, the MLP won the election since it obtained a majority of seats in parliament [FP votes = 105,854 (49.1%), seats = 34]. However, it was the PN that obtained the majority of FP votes [FP votes = 114,132 (50.9%), seats = 31]. Lane attributes this discrepancy to the Droop quota, since "when all candidates in a constituency have been declared elected, there will remain some candidate(s) with accumulated votes who will not be elected and whose votes cannot be transferred" [14]. Buhagiar also reported that the vote-to-seat ratio in this election was 3235 for the MLP and 3682 for the PN. So, on average, the PN required 450 more votes than the MLP to elect a seat [4].

A constitutional crisis emerged when the PN refused to accept the outcome of the 1981 election and walked out of parliament. They claimed that this was a result of gerrymandering (the practice of drawing constituency boundaries with the intention of producing an inflated number of seats, generally for the governing party) by the MLP government and to make sure this never happened again, a CA was approved in 1987 such that the party with an absolute majority (over 50%) of first preference votes is topped-up with bonus seats to ensure a majority of seats in parliament. These provisions were in fact invoked in the elections of 1987 and 1996. However, the constitution was again amended in 2007 because it was believed that with the emergence of the third party, the green party known as *Alternattiva Demokratika* (AD), neither of the two major parties would obtain the absolute majority. So, this time, the new CA allowed top-up seats to be given to the party with the majority of FP votes, provided that only two parties secure seats in Parliament. This prediction materialised in the 2008

election as neither party obtained an absolute majority. The PN (FP votes = 143,468 (49.3%), seats = 31) obtained more FP votes but a smaller number of seats than the MLP (FP votes = 141,888 (48.8%), seats = 34), while the AD (FP votes = 3,810 (1.3%) FP votes, 0 seats) obtained no seats in Parliament. So the provisions of the 2007 CA were invoked and the PN was awarded 4 bonus seats for a total of 35 seats. During the election, a lot of tension was building up as regards to a possible situation in District 10, where an AD candidate had a possible chance of winning a seat after inheriting votes, even though the AD got a small number of FP votes nationwide. If this occurred, the 2007 CA could not be invoked and the party with the majority of seats and a smaller number of FP votes (i.e., the MLP) would have gained control of parliament, and the 1981 constitutional crisis would have repeated itself.

Now more than ever, smaller political parties such as the AD are complaining that the system is biased against them, particularly due to the fact that the major parties tell their supporters that it is ‘dangerous’ to vote for a smaller party or to transfer preferences from one party to another. There is also the general feeling among voters that improper practices and gerrymandering are still at play. Once again, in the last election, the vote percentages did not mirror the number of parliamentary seats and substantial discrepancies are still evident, particularly when one examines the results within the various districts [14]. Since another constitutional crisis is still a possibility, there is growing consensus among the political class and the public that the electoral law should be amended whilst at the same time retaining STV as the basis for electing candidates. This was one of the briefs of the Commission on Electoral Reform in 1994 [10]. One must acknowledge that STV is a sophisticated instrument which combines diverse preferences of voters and which transforms their preferences into parliamentary representation. In STV, it is entirely up to the public rather than the political parties to decide who has a seat in Parliament and who does not [12]. Besides, anomalous results are not limited to Malta or STV only, but happen quite frequently in any electoral system in any part of the world [9]. For this reason it would be unwise to scrap STV. Instead we need to find ways of averting another constitutional crisis,

while preserving the good qualities of the STV method. In previous studies, the party-wise method [2] and the priority queue [3, 5] were proposed and although both these methods restore proportionality between parliamentary seats and FP votes, they assume no voter will ever mix parties. This might be unfair to a party that happens to have its votes in a district split among two or more hopeful candidates. In this paper we propose the STV 4+ system, whereby a Maltese general election is implemented conceptually as a new type of Additional Member System (AMS).

4 The Proposed Solution

In this section we describe a divisor method for assigning seats to parties or candidates and illustrate how this method can be used to achieve proportionality in our elections. We also describe how the divisor method can be used to implement an STV 4+ system whereby a Maltese general election is implemented conceptually as a new type of AMS.

4.1 The D’Hondt Divisor Method

This procedure for allocating seats to candidates in party-list proportional representation elections was invented by the Belgian mathematician Victor D’Hondt in 1878. It is widely used in Europe (e.g. Austria, Finland, Netherlands and Spain) and is based on the principle of the highest average. Once all votes are counted, the number of votes obtained by each party is divided successively by a series of divisors (1, 2, 3...) and the party with the highest quotient is allocated the next seat until the total number of seats available is consumed. The D’Hondt set of divisors is known to favour large parties while other popular sets such as the St. Laguë set (1, 3, 5...) make it progressively easier for the smaller parties to gain seats [17]. Since elections in Malta are dominated by two major parties, it seems more appropriate to adopt the D’Hondt divisor method. Furthermore, this method is relatively easier to follow.

In some countries, a threshold (e.g. 5% on a national or regional basis) is set such that a party that does not reach that threshold will not be allocated any seats even if it has enough

votes to secure a seat. Those in favour of such thresholds generally argue that this promotes stable governments by preventing splinter parties from getting into parliament. However, others claim that the threshold is undemocratic; on one hand we say that the electorate is sovereign and on the other hand, with a 5% threshold in place, we tell 4.99% of the electorate that their vote is not as valid and hence they do not have the same voting rights as other members of the electorate [16]. A threshold also sends the message that major parties do not want anyone to try to compete with them in the election. However, thresholds are set in many electoral systems worldwide (e.g., Belgium 5%, Israel 2%, Russia 7%). In fact, in some systems, small parties combine their lists together to form a cartel in an attempt to overcome the election threshold. In other systems, cartels are assigned a separate threshold, while some parties may decide to avoid this cartel threshold by forming coalitions before the election.

4.2 The Additional Member System (AMS) and Other Variants of STV

Many voting systems such as STV or First-Past-the-Post (FPTP) often give a result in which the number of seats a party gains in parliament is not proportional to the percentage of the party vote nationwide. For this reason, methods have been implemented to restore such an election to proportionality. One such electoral process that has been receiving particular attention in electoral methods is the AMS.

Although several variants of the AMS have been proposed, they are basically combinations of the FPTP system and party list voting. The purpose is to retain the best features of FPTP, while introducing proportionality between parties through party list voting. Each voter casts two votes; one vote for a single candidate via FPTP, and one for a regional or national party list. Half the seats or more are allocated to the single-member constituencies and the rest to the party list. The percentage of votes obtained by the parties in the party list vote determines their overall number of representatives. The party lists are used to top up the FPTP seats gained by the party to the required number. So if a party has won one seat in the constituencies, but in proportion to its votes should have

three, the first two candidates on its list are elected in addition. The AMS has been adopted in many countries, including Germany, Italy, Scotland, Wales and New Zealand.

In Britain, in 1998, The Independent Commission on the Voting System, chaired by Lord Jenkins, proposed an AMS to replace the FPTP in the UK General Elections. The new system was called the Alternative Vote Top-up (AV+). AV+ is a mixed system composed of two elements: a constituency element and a top-up. Voters have two votes, one to elect a candidate from a district and the other to select the party of choice. The constituency MPs are elected by the Alternative Vote (AV), whilst the 'top-up' MPs are elected on a corrective basis from open party lists [18]. The proposed AV+ has not yet been implemented in Britain or anywhere else.

Just as an AMS can be used to make the FPTP or the AV more proportional, an AMS can be used to improve proportionality in the local STV election. After all, the AV method is a special case of the STV method.

Wichmann [19] suggested another variant of STV which retains single member constituencies whilst at the same time avoiding the non-proportionality of AV. The election proceeds in two stages. In the first stage, each constituency is considered individually using STV (which degenerates to AV), and in the second stage those votes which have not been used to elect a candidate are forwarded to the "county vote" (the aggregate of about six districts). The county vote eliminates those candidates elected at the first stage and the votes used to elect them, and then uses STV on the remaining votes from all districts in the county to fill the county seats.

The retention of single member constituencies is considered to be very important in any reform of the electoral system in the UK, since the British political class and the general public are strongly in favour of such constituencies. Conversely in Malta, constituencies elect at least five candidates. For this reason, there is no need for such a two-tier system in Malta, and the STV4+ method proposed in this paper would be more appropriate in the Maltese context.

4.3 Implementing the STV 4+ System

Conceptually, the STV 4+ system (an AMS) can be implemented quite easily in Malta, since it is a natural extension of the current STV process. The electorate can vote in the usual manner, with a Droop quota based on five candidates per district. However, instead of electing five MPs from each of the 13 districts, we propose that four MPs are elected from each district (by using the quota for electing five) while the remaining 13 MPs are topped up from a list of unelected candidates who gained the highest proportion of higher count votes. Certain provisions are added in order to guarantee that there will always be five representatives per district. More details on the eight steps required to implement the STV 4+ method are provided below.

STEP 1: Determine the number of seats each party should be assigned from a total of 65 seats by using the D'Hondt divisor method on the basis of their first count vote throughout the whole country. This is the nationwide distribution and so it gives the total number of seats a party should get in the election.

STEP 2: In each district, apply the usual STV procedures, but instead of electing five representatives, elect four with the quota for five.

STEP 3: Determine the number of top-up seats each party should be assigned. The number of top-up seats represents the difference between the nationwide calculation of seats and the districtwise results of seats for each party.

STEP 4: Select the top-up seats from either (a) closed party lists, (b) open party lists, or (c) the district candidates who are as yet unelected. In Malta, we propose the adoption of the last option since it can be implemented quite easily.

STEP 5: In each district, continue as in an STV election, but with the provision that no one else will get elected. Make sure that all surpluses of the four elected candidates get distributed, continue eliminations and vote transfers as long as there are candidates with less than half a quota, eliminate those with even larger quotas unless they are the last candidates for their parties, and stop when there is no more

than one unelected candidate standing for each party in each district.

STEP 6: Declare elected every candidate who remains the only standing contestant for the fifth seat in the district. Once the fifth candidate is elected, the candidates from all the other parties from the same district are eliminated. Before progressing, move to the central level. Examine the seat allocation and see if there is one or more party that does not have enough standing candidates to get its allocated seats. If so, reallocate seats to other parties. Alternatively, one could allocate from party lists (which would cause some districts to have six representatives while others would end up with four) or else prevent a party's last candidate from being eliminated at the district level, no matter how few votes the candidate had.

STEP 7: Determine the proportion of higher count votes polled by the standing candidates in the districts they contested, to avoid any bias associated with unequal district sizes or voting rates. Sort these proportions in descending order in order to establish priority for the assignment of the top-up seats. To guarantee that there will always be five representatives per district, once a fifth candidate is selected from a district, the candidates from all other parties from that district are eliminated. Furthermore, as soon as the number of a party's candidates in the final reckoning is down to the number the party was assigned, all are elected.

STEP 8: Since candidates in Malta can contest the elections in two districts, those who are elected in both districts must resign from one of the districts and a casual election is held. In this election, the winner is determined by applying the STV procedures to the ballot papers credited to the vacating candidate in the general election.

The principles of the system can be applied when the number of seats in a district is some number other than 5. A polity that has S seats per district rather than 5 would elect $S - 1$ in each district and elect one per district from the top unelected candidates.

4.4 Applying the STV 4+ System

To illustrate the proposed STV 4+ system, we consider the Maltese General Election of 2008 (see [7] for election results). In Table 1 (see Appendix), the D'Hondt divisor is used to determine how the 65 seats available are assigned to the various parties on the basis of their nationwide FP votes. No threshold is assumed in this case and to elect 65 seats, the largest 65 numbers are chosen from the columns. These 65 numbers are marked with an asterisk and the smallest of these numbers represents the quota for the divisor method. Here, it is equal to 4348, and corresponds to the 33rd seat of the PN. All the other numbers represent seats not won. So, the number of seats assigned to candidates in the nationwide distribution should be 33 seats for the PN and 32 seats for the MLP. Similarly, if 52 seats are to be allocated, then Table 1 shows that 26 seats are to be allocated to the PN and 26 seats to the MLP.

In each district, four candidates are elected, using the quota for electing five. Table 2 (see Appendix) exhibits the names of the first 52 elected candidates, the political party they represent and the total number of seats won by each party in each district and nationwide. The first 52 seats were distributed as follows: 24 seats for the PN and 28 seats for the MLP.

After assigning 52 seats from the 65 available seats, the next step is to assign the remaining 13 'top-up' seats. The difference between the nationwide calculation and districtwise results indicates that the PN should be provided with nine top-up seats ($33 - 24 = 9$) and the MLP with four top-up seats ($32 - 28 = 4$).

Table 3 (see Appendix) shows that in the final count, 18 candidates (with not more than one hopeful candidate for each party per district) were left standing, and eight particular districts produced a single standing contestant for the fifth seat. So, these eight sole contestants (five from the PN and three from the MLP) were automatically elected and these districts were declared closed. Since both parties had enough standing candidates to get their allocated seats, no reallocation of seats was necessary.

The remaining 10 hopeful candidates were placed in order of the percentage of higher count votes polled in their respective district.

This priority queue list for these remaining standing candidates is presented in Table 4 (see Appendix). So, at this stage, we need to allocate four ($9 - 5 = 4$) top-up seats to the PN and one ($4 - 3 = 1$) top-up seat to the MLP.

With eight top-up seats already assigned, the ninth top-up seat was awarded to Fredrick Az-zopardi (PN) who obtained 21.22% of the higher count votes in District XIII and who was first in the priority queue list of the remaining hopeful candidates. Thus, the other candidate in this district (Joseph Cordina, MLP) was automatically eliminated. The second candidate in the priority queue list was Jesmond Mugliett (PN) who obtained 20.19% of the higher count votes in District IV. He was elected while the other hopeful candidate contesting this district (Owen Bonnici, MLP) was eliminated. This process continued until the fifth candidate for each remaining district was determined. A summary of the elected candidates together with the district they were elected from is presented in Table 4 (see Appendix).

The final distribution of seats obtained by the PN and MLP in each district is presented in Table 5 (see Appendix). This table also shows that in the actual 2008 Maltese General Election, *via* STV, the MLP obtained 34 seats while the PN obtained 31 seats. Since the PN had a majority of FP votes (PN = 49.33%, MLP = 48.90%), the CA of 2007 was invoked and so the PN was awarded 4 additional seats ($31 + 4 = 35$) to enable it to have an absolute majority of seats in parliament. All these issues would have been resolved if STV 4+ was implemented on the same election results.

Table 6 provides the results of the STV 4+ system implemented on the Maltese General Elections since 1981. This table also reveals that in the actual election results, the CAs were invoked three times – in the elections of 1987, 1996 and 2008. It is therefore clear that the STV 4+ system addresses the discrepancy between a party's FP votes and its parliamentary seats assigned and hence avoids the lack of proportionality which is so persistent in Maltese general elections. An interesting feature in Table 6 is that in 1992, according to the nationwide calculation of seats, the AD would have earned their first seat in Parliament, since they obtained 1.69% of the FP votes ($N = 4186$). However, the highest number of FP votes

obtained by the AD in the districts was 421 (District XI) and all the AD candidates were eliminated by the 11th count. Hence the AD did not have enough votes for one representative and so this seat would have been awarded to the MLP. This also happened in the actual election of 1992 under the STV system currently in use.

5. Countering Possible Objections and Problems

Electoral systems are required to satisfy a wide spectrum of desirable properties and it is often not possible to satisfy them all at the same time [6]. In this section we will discuss possible objections and problems the proposed STV 4+ system is likely to encounter from the electorate and/or by those who might decide to implement it.

5.1 What Changes Will Occur to the Districts and to the STV Ballots?

The districts remain the same as before, and the voters will be required to vote exactly as they did in the past. The change from the usual STV to STV 4+ should be transparent to the electorate.

5.2 Will the Top-Up Candidates be Attached to Districts or Not?

Top-up candidates are generally selected from closed party lists, open party lists or from district candidates who are still unelected. In this particular implementation, the top-up MPs are extracted from the unelected district candidates of the parties contesting the election. In this way, the general objection that the top-up candidates are not attached to any district does not hold.

5.3 The Electorate is Used to Having 5 MPs Elected from Each District. Will This Change?

Although in the STV method an equal number of seats (i.e., five seats) is assigned to each of the 13 districts, when CAs are invoked (as was the case in the elections of 1987, 1996 and

2008) and top-up seats are added to the party that has a minority of parliamentary seats but a majority of FP votes, then the number of seats assigned to each district does not remain the same. In fact, Table 5 shows that in the 2008 general election, Districts I, II, X and XI were assigned six seats instead of five after the 2007 CA was invoked. Thus STV, due to its enduring problem of disproportionality, produces an unequal number of elected candidates across districts, but each district is guaranteed five parliamentary seats.

In the STV 4+ method proposed in this paper, each district is guaranteed to have exactly five representatives, as confirmed in Table 5.

5.4 Will the Proposed Additional Member System Encourage the Proliferation of Small Parties and Favour Coalitions?

It is generally acknowledged that the presence or otherwise of small parties in a parliament depends more on the mood of the electorate rather than on the electoral system adopted. Small parties were quite popular in Malta under STV up to the election of 1962. In 1947, for instance, the Gozo and Jones parties, with their exclusive basis in one district, gained 5 seats with a minimal share of the nationwide vote (3.47% and 5.21% respectively). The Malta Workers Party also managed to elect a good number of MPs in the 1950's [14]. The STV did not preclude small parties from gaining seats if the electorate demanded it. After 1971, however, the small parties did not remain popular with the Maltese public. Since then, no small party managed to get more than 2% of the national vote or to gain a single seat in parliament.

At the end of the day, the electorate is sovereign and there is nothing to stop the electorate from voting for other political formations [8]. In other words, if the small parties were to regain their popularity with the Maltese public, it will be difficult to keep them out of Parliament, whatever the electoral process employed. Thus, coalition governments are indeed possible under all methods of election. Even so, a coalition government need not necessarily be weak just as a single-party government need not necessarily be strong. In Malta for

instance, the single party governments of 1950 and 1996, as well as the coalition governments of 1951 and 1953 did not last longer than two years. On the other hand, most of the governments elected since 1945 in Germany were coalitions, but this, once again, depends to a large extent on the political mood of the electorate rather than on the electoral system employed. And once again, in the Republic of Ireland, all governments brought to power with the STV system as from 1989 onwards were coalitions. It is worth noting that both these countries have performed quite well economically under coalition governments.

5.5 What If a Party Obtains Seats Thanks to Second or Later Preferences?

A party with few or no first-count votes may inherit a substantial number of higher-count votes from other parties. A decision must be made as to whether such a party should retain its extra (or “overhang”) seats. If the party is allowed to retain these extra seats, the number of seats attained by each party can only be “broadly” rather than “strictly” proportional to the first-count votes. Additionally, a third party in Malta could get 2% of the vote in each of the 13 districts and have enough votes for one representative. To us, this seems not enough in a system with districts. We think that top-up candidates should be limited to those candidates who have at least half a quota after four candidates have been elected and candidates with smaller quotas have been eliminated.

6 Conclusion

Malta has been using STV to elect its national legislatures since 1921 and to abandon this electoral system now would be a severe blow to this method of conducting elections. In this study we proposed the STV 4+ system in an attempt to maintain the STV ballot structure and to increase the proportionality between the percentage of a party’s FP votes and its percentage of parliamentary seats. The STV 4+ system provides a swift indication of which party or coalition of parties will lead the parliament (since delaying the outcome would

increase unnecessary political tension during a general election) and it eliminates the gain from gerrymandering. Based on the above, we believe that the proposed STV 4+ is a fair system that can be adopted in Malta as well as in other countries that already have experience with STV elections.

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Appendix

Table 1: Nationwide distribution of seats using the D'Hondt divisor (Election of 2008)

	PN	MLP	AD	Others
Divide by	143,468	141,888	3,810	1,633
1	143,468*	141,888*	3,810	1,633
2	71,734*	70,944*	1905	817
3	47,823*	47,296*	1270	544
4	35,867*	35,472*	953	408
5	28,6934*	28,378*	762	327
6	23,911*	23,648*		
7	20,495*	20,270*		
8	17,934*	17,736*		
9	15,941*	15,765*		
10	14,347*	14,189*		
11	13,043*	12,899*		
12	11,956*	11,824*		
13	11,036*	10,914*		
14	10,248*	10,135*		
15	9,565*	9,459*		
16	8,967*	8,868*		
17	8,439*	8,346*		
18	7,970*	7,883*		
19	7,551*	7,468*		
20	7,173*	7,094*		
21	6,832*	6,757*		
22	6,521*	6,449*		
23	6,238*	6,169*		
24	5,978*	5,912*		
25	5,739*	5,676*		
26	5,518*	5,457*		
27	5,314*	5,255*		
28	5,124*	5,067*		
29	4,947*	4,893*		
30	4,782*	4,730*		
31	4,628*	4,577*		
32	4,483*	4,434*		
33	4,348*	4,300		
34	4,220	4,173		

Table 2: First Four Elected Representatives (Election of 2008)

District	PN Candidates	MLP Candidates	PN Seats	MLP Seats
I	Marco De Marco Austin Gatt	Alfred Sant Jose Herrera	2	2
II	Lawrence Gonzi	Michael Falzon Joseph Mizzi Stefano Buontempo	1	3
III	Mario Galea Carmelo Mifsud Bonnici	George Vella Carmelo Abela	2	2
IV	Jason Azzopardi	Silvio Parnis Karl J. Chircop Charles Mangion	1	3
V	Anthony (Ninu) Zammit Franco Debono	Karmenu Vella Marlene Pullicino	2	2
VI	John Dalli	Marie Louise Coleiro Charles Mangion Roderick Galdes	1	3
VII	Jeffrey Pullicino Orlando Joe Cassar	Noel Farrugia Anthony Zammit	2	2
VIII	Antonio Fenech Tonio Borg Beppe Fenech Adami	Alfred Sant	3	1
IX	Lawrence Gonzi Dolores Cristina	Leo Brincat Adrian Vassallo	2	2
X	Robert Arrigo Dolores Cristina	Michael Falzon Evarist Bartolo	2	2
XI	Jeffrey Pullicino Orlando Anthony Borg	Anthony Agius Decelis Angelo Farrugia	2	2
XII	Michael Gonzi Tonio Fenech	Evarist Bartolo Michael Farrugia	2	2
XIII	Giovanna Debono Christopher Said	Anton Refalo Justyne Caruana	2	2
Total			24	28

Table 3: Sole Contestants for 5th seat in District (Election of 2008)

Candidate Names	Party	District	Higher Count Votes %	Overall Top-Up Seat No.	PN Top-up Seat No.	MLP Top-up Seat No.
Helena Dalli	MLP	III	16.27	1		1
George Pullicino	PN	X	15.94	2	1	
Clyde Puli	PN	VI	15.78	3	2	
George Vella	MLP	V	14.96	4		2
David Agius	PN	XI	14.5	5	3	
Christian Cardona	MLP	VIII	14.23	6		3
Louis Deguara	PN	XII	13.94	7	4	
Robert Arrigo	PN	IX	13.88	8	5	

Table 4: Priority Queue list and assignment of the remaining nine top-up seats (Election of 2008)

Hopeful Candidate Name	Party	District	% Votes	Top-Up Seat No	PN Top-up No	MLP Top-up No
Fredrick Azzopardi	PN	XIII	21.22	9	6	
Jesmond Mugliett	PN	IV	20.19	10	7	
Helena Dalli	MLP	II	16.94	11		4
Charles Buhagiar	MLP	VII	16.67	*		
Luciano Busuttil	MLP	I	16.23	*		
Jean Pierre Farrugia	PN	I	15.94	12	8	
Francis Agius	PN	II	14.80	**		
Philip Mifsud	PN	VII	13.79	13	9	
Owen Bonnici	MLP	IV	11.65	**		
Joseph Cordina	MLP	XIII	9.99	**		

* district seat is available but the MLP used up the six assigned top-up seats. Candidate is eliminated

** district seat is unavailable. Candidate is eliminated.

Table 5: Actual Results and STV 4+ Results for MP seats by party and district (Election of 2008)

Election 2008	Proposed STV 4+ Results			Actual Election Results (STV)		
	PN	MLP	Total	PN	MLP	Total
I	3	2	5	2+1*	3	5+1*
II	1	4	5	1+1*	4	5+1*
III	2	3	5	2	3	5
IV	2	3	5	2	3	5
V	2	3	5	2	3	5
VI	2	3	5	2	3	5
VII	3	2	5	2	3	5
VIII	3	2	5	3	2	5
IX	3	2	5	3	2	5
X	3	2	5	3+1*	2	5+1*
XI	3	2	5	3+1*	2	5+1*
XII	3	2	5	3	2	5
XIII	3	2	5	3	2	5
Total	33	32	65	31 + 4*	34	65+4*

*Constitutional Amendment of 2007 was invoked

Table 6: Distribution of Seats *via* STV 4+ and in actual elections

Election	First Preference Votes (%)			STV 4+			Actual Election		
				Seats Assigned			STV Result CA top-up Total		
	MLP	PN	AD	MLP	PN	AD	MLP	PN	AD
1981	109,990 (49.07%)	114,132 (50.92%)	NA	32	33	NA	34 * 34	31 * 31	NA
1987	114,936 (48.87%)	119,721 (50.91%)	NA	32	33	NA	34 0 34	31 4 35	NA
1992	114,911 (46.5%)	127,932 (51.77%)	4186 (1.69%)	31	34	0**	31 NA 31	34 NA 34	0 NA 0
1996	132,497 (50.72%)	124,864 (47.80%)	3820 (1.46%)	33	32	0	31 4 35	34 0 34	0 0 0
1998	124,220 (46.97%)	137,037 (51.81%)	3208 (1.21%)	31	34	0	31 NA 31	34 NA 34	0 NA 0
2003	134,092 (47.51%)	146,172 (51.79%)	1929 (0.68%)	31	34	0	30 NA 30	35 NA 35	0 NA 0
2008	141,888 (48.79%)	143,468 (49.34%)	3810 (1.31%)	32	33	0	34 0 34	31 4 35	0 0 0

* Constitutional Amendment was not invoked in 1981 as it was as yet unavailable.

** AD lost the seat based on FP votes to the MLP since the AD candidates did not have enough votes for one representative. All the AD candidates were eliminated by Count 11.