

NATIONAL ASSEMBLY
ELECTORAL REFORM



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INTRODUCTION

The Constitutional Court's judgment and order in *New Nation Movement*¹ require a change in South Africa's electoral legislation. It would be possible to take a minimalist approach – to change the present system as little as possible to meet the Constitutional Court's requirement. However, as will be seen below, neither the Executive nor the National Assembly's Home Affairs Portfolio Committee favour a minimalist approach, with both calling for a thorough review and reform in the light of the experience of this and other countries.

A thorough review will require attention to two fundamental questions:

1. Does electoral reform need a constitutional amendment?
2. Should electoral reform introduce a constituency system?

This document is premised on the assumption that the answer to the first question is 'no', and the answer to the second question is 'yes'. Arguments in respect of both positions are presented below. At this point, it should be noted that the assumption means that only options that are consistent with it are considered here. The document is therefore primarily addressed to those who share both the components of the assumption, though others may find some of the points made in it are relevant to their concerns.

There are two further limitations to this study. First, it considers electoral reform only in so far as it relates to the National Assembly. Secondly, it does not consider the question of whether local government elections should be held at the same time as national and provincial elections, or whether the existing staggered arrangement should continue.

This document is lengthy because a great deal has to be considered. No electoral system is perfect and choices may entail subtle and not so subtle differences in the balance between desirable goals and criteria. The broad framework advanced here is that of a mixed-member proportional system. Within this broad framework, there remains room for alternatives at the level of detail.

The document is divided into two main parts. The first builds up the rationale for our proposal. The second considers procedures and discusses what can and cannot be known in advance about the outcome of reform.

¹ *New Nation Movement NPC v President of the Republic of South Africa* [2020] ZACC 11 (*New Nation Movement*).

RATIONALE

Abstract

This section discusses the rationale for a mixed-member proportional system in five main stages:

- I. The historical background to the debate about the electoral system from the Interim and Final Constitutions, through the report of the 2002 Electoral Task Team (ETT) to the report of the High Level Panel on the Assessment of Key Legislation and the Acceleration of Fundamental Change.*
- II. The implications of the Constitution for the electoral system.*
- III. Lessons from Germany and New Zealand, two countries with mixed-member proportional electoral systems.*
- IV. The Constitutional Court's judgment and order in New Nation Movement and the National Assembly's response to it.*
- V. An update of the ETT's majority proposal, an assessment of its complexity and an assessment of its likely effect on political behaviour and culture.*

An annexure presents a list of electoral systems in use around the world.

The argument presents an account of possibilities by tracing the reasons for decisions that have been made, the framework for the electoral system established by the Constitution, the structure of mixed-member proportional electoral (MMP) systems in two countries that have them, the recent re-opening of the debate about the most desirable electoral system for contemporary South Africa, and a proposal for an MMP system and an assessment of its effects.

Historical background

The framework for the 1994 election was specified in Schedule of the Constitution of the Republic of South Africa Act, 200 of 1993 (the 'interim constitution'). This schedule established the closed party list proportional representation system, which has persisted until the present.

When the interim constitution was replaced by the Constitution of the Republic of South Africa Act, 108 of 1996 (the 'Constitution'), Schedule 6 set out transitional arrangements. Section 6 of the Schedule dealt with elections of the National Assembly and specified that the first election be held after the passing of the Constitution (i.e. the 1999 election) and that it be held in terms of Schedule 2 of the interim constitution.

The framework for elections in the long term is set out in Section 46 of the Constitution:

- 1. The National Assembly consists of no fewer than 350 and no more than 400 women and men elected as members in terms of an electoral system that –*
 - a. is prescribed by national legislation;*
 - b. is based on the national common voters roll;*
 - c. provides for a minimum voting age of 18 years; and*
 - d. results, in general, in proportional representation.*
- 2. An Act of Parliament must provide a formula for determining the number of members of the National Assembly.*

Accordingly, the Electoral Act, 73 of 1998 was passed. It is accompanied by the Electoral Commission Act, 51 of 1996 and regulations made under both Acts. These acts and regulations constitute the law on elections.²

It was constitutionally possible to reconsider the electoral system after the 1999 election. On 20 March 2002, the Cabinet resolved to establish the ETT to draft new electoral legislation. The ETT was to consult stakeholders, including political parties. It was chaired by Dr van Zyl Slabbert. The ETT submitted its report in January 2003. The Team reported both a majority and

a minority view. The majority view was that the country should be divided into multi-member constituencies. The number of representatives to be elected in such a constituency would vary, depending on the number of voters, from three to seven for a national election, and 300 of the 400 members of the National Assembly would be elected from closed constituency lists in this way. A further 100 representatives would be allocated from closed national lists in order to restore overall proportionality. The minority view was that the system should remain unchanged. The government never responded to the report, implicitly adopting the minority view.

The government has introduced a system of constituency offices and members of the National Assembly are assigned to them. Members of the public may approach these offices for assistance and to make representations to them. But there are no constituencies to accompany the offices.

The norms in the Electoral Task Team report

All participants in the ETT accepted that the key values that an electoral system should embody are fairness, inclusiveness, simplicity and accountability. *Fairness* requires that every eligible voter should have the opportunity to vote and that, as far as possible, all votes should be of equal value. Fairness also lies in the closeness of the relationship between votes cast and the composition of the body elected. *Inclusiveness* means that, given the demographic, ethnic, racial and religious diversity of the South African voting population, every attempt should be made to allow the widest possible degree of participation by various political preferences in the representative legislatures. It follows that no legal threshold for representation should be applied. *Simplicity* means that the system has to be accessible to practically every voter, easy to understand and easy in which to participate. It is not simply the act of voting that is important; voters must also understand the results. The ETT gave primacy to fairness, inclusiveness and simplicity.

² A compendium can be found at <http://www.elections.org.za/content/Elections/Laws-and-Regulations-Elections>, reflecting the position on 8 March 2019.



Accountability was the most debated value within the ETT. The ETT reported that, with very few exceptions, submissions to it identified a lack or a perceived lack of accountability as a problem in the current system. A public opinion survey commissioned by the ETT found that 71% of respondents felt that candidates should come from the area they represent, which was seen as a means of improving their individual accountability. Certainly, the existing system allows a party to be rewarded or punished by voters at election time, but this usually comes around only every five years. The question then becomes: Is there nothing else an electoral system can do to make a contribution to political accountability? A recurring theme in submissions was that an electoral system should at least put a face to a party, somebody who has representative responsibility for a designated area, somebody who is identifiable and accessible in the period between elections. Collective accountability at periodic intervals was seen as insufficient. Some form of individual accountability had to be provided by an electoral system. The majority saw this as a real challenge in proposing an electoral system.

The majority and minority views within the Electoral Task Team

The ETT majority saw the existing system as already being a multi-member constituency system, with provinces as constituencies. Its proposed amendment was to subdivide provinces into 69 smaller constituencies. The majority also held that the only way to increase individual accountability significantly would be to create the possibility for a candidate to be rejected without concomitant rejection of a party. This could best be achieved by using open rather than closed party lists, with voters influencing the order of candidates. They would do this either by ranking candidates or by selecting a number of preferred candidates listed next to the emblems of their respective parties. Should the order of candidates, as decided by a party, be acceptable to a voter, however, then a mark need merely be made against the name of the party. Open lists would not only improve the accountability of individual candidates dramatically but would also substantially increase voter participation in the democratic process. It would not be possible to

use such a system if provinces were constituencies, but it would be possible if the constituencies were to return between three and seven members, as would be possible with the 69 constituencies.

The majority considered the possibility that its proposal was too complex and would prove too costly. The majority view was that voters have become used to multi-balloting and to distinguishing between voting for individual candidates and for parties in municipal elections. It also believed that any additional cost of printing and distributing constituency ballot papers would be small. It would take more work by parties to ensure that, taken together, candidate lists reflect desired global balances – for instance by gender. But it would not be impossible. To the ‘if it ain’t broke, don’t fix it’ argument, the majority responded that there was an opportunity to improve an already good system by introducing an evolution in the electoral system, with great potential benefits in allowing South Africans in both urban and rural areas to feel much more closely involved in the democratic process.

The ETT minority view was that it could not support the electoral system proposed by the majority, for the following reasons:

- (a) The very strong case made out for the retention of the present system in submissions to the ETT and at the conference.
- (b) Its own conviction that the retention of the present system is essential to support reconciliation, nation building, peace, stability and good governance.
- (c) Nothing had been said on why the present system should not be retained or what would be the evils that would befall the country if it were retained.

It took a different view on the impact of potential problems with the majority’s proposal, regarding local authority boundaries as an irrational starting point for the delimitation of constituencies. It also saw the majority proposal as undermining simplicity, as creating difficulties for parties, as significantly more costly than the existing system. It also did not believe that at the time that the ETT did its work, South Africa should promote national political contestation on a regional basis, compromising, in the minority’s view, nation building and racial and ethnic harmony.

The High Level Panel

In November 2017, the High Level Panel on the Assessment of Key Legislation and the Acceleration of Fundamental Change (Panel) published its report. It contained a section on the electoral system. Having outlined the ETT report and its majority recommendation, it observed that:

The primary argument in support of this proposal is that it is the best electoral model to ensure individual accountability. One of the major challenges with the current electoral system is the weakness of the PR system in holding politicians to account to the electorate. Members of Parliament are appointed not directly by voters, but rather by their party, based on candidate lists submitted to the Electoral Commission ahead of the elections. This makes them beholden to the party and its leadership rather than voters and places party politics and loyalties ahead of effectiveness and delivery. By contrast, a constituency system will hold politicians more directly accountable to the voters and will better ensure that election promises are kept for fear of being voted out. Such a system will serve to limit the power of individual party leaders and encourage MPs to vote in accordance with the needs and desires of their constituencies rather than only following party lines. In addition, the proportional representation system distances Parliament from the people. Although constituency offices do exist, most people are unaware of their constituency representatives or of the existence of such offices. A constituency-based system would bridge this gap by ensuring that people directly elect the representatives they want in a multi-member constituency-based system. Such a system would also enable citizens to exercise their constitutionally guaranteed right to stand for public office independently at a national and provincial level.³

The Panel recommended that Parliament should amend the Electoral Act to provide for an electoral system that makes Members of Parliament accountable to defined constituencies on a proportional representation and constituency system for national elections.

Constitutional constraints on electoral reform

The Constitution provides that the electoral system regulating national elections must be prescribed by national legislation.⁴ The Constitutional Court has recognised that it follows from this that the electoral system is “a matter that lies peculiarly with Parliament’s constitutional remit”.⁵ Parliament has the “constitutional authority and duty” to design the electoral system.⁶ The details of the electoral system are, thus, left to Parliament.⁷

Nevertheless, Parliament’s chosen electoral system must be compliant with the Constitution.⁸ This is because the Constitution is our supreme law⁹ and enjoins courts to vindicate the supremacy of the

Constitution by declaring law inconsistent with the Constitution invalid to the extent of its inconsistency.¹⁰

The ETT agreed that it should not contemplate constitutional change, and the majority proposal did not imply any such change. Proposed electoral reforms must therefore be assessed for consistency with the Constitution as it stands.

The Constitution imposes constraints on Parliament as it undertakes the process of electoral reform in a number of important respects. First, as mentioned above, the Constitution provides some special requirements for our electoral system. Most pertinently, the Constitution requires that members be elected to the National Assembly in terms of an electoral system that “results, in general, in proportional representation.”¹¹ The Constitution implicitly recognises that there are a variety of electoral systems that will yield proportional outcomes and is, thus, not prescriptive as to which electoral system should be adopted.¹² However, an electoral system that leads to an unacceptable level of disparity between a party’s share of the vote and its seats in the Legislature will be unconstitutional.

Secondly, Parliament must comply with the principle of legality in amending the legislation prescribing the electoral system. In *New National Party*, the majority of the Constitutional Court held that Parliament is constrained by the principle of legality in determining the details of the electoral system. It held that there must be a rational relationship between the electoral scheme which Parliament adopts and the achievement of a legitimate government purpose.¹³ The absence of a legitimate government purpose or of a rational relationship between the measure and that purpose will result in the measure being unconstitutional.¹⁴

Thirdly, the design of the electoral system must not unjustifiably infringe any constitutional rights. The electoral system is meant to facilitate the exercise of a number of political rights enshrined in section 19 of the Constitution. These include the right to make political choices, the right to free, fair and regular elections, the right to vote and the right to run for and, if elected, hold office. In *New National Party*, the Constitutional Court explained that a legislative measure designed to facilitate the exercise of a political right would, in fact, limit that right if those who desire to exercise the right are unable to do so even though they “act reasonably in pursuit of the right”.¹⁵ To avoid infringing rights, the design of the electoral system must facilitate the exercise of political rights, without imposing unreasonable burdens on citizens.

And finally, the design of the electoral system must not undermine any of the founding constitutional values enshrined in section 1 of the Constitution. In *UDM II*, the Constitutional Court said that our founding values “set positive standards with which all law must comply in order to be valid”.¹⁶ It further said that laws that

³ High Level Panel Report at 525-526.

⁴ Section 46(1)(a) of the Constitution.

⁵ *AParty v The Minister for Home Affairs, Moloko v The Minister for Home Affairs* [2009] ZACC 4; 2009 (3) SA 649 (CC); 2009 (6) BCLR 611 (CC) at para 80.

⁶ *Id* at para 5.

⁷ *United Democratic Movement v President of the Republic of South Africa* [2002] ZACC 21; 2003 (1) SA 495 (CC); 2002 (11) BCLR 1179 (CC) (*UDM II*) at para 47.

⁸ *UDM II id* and *New Nation Movement* above n 1 at para 15 and 75.

⁹ Section 2 of the Constitution read with section 1(c).

¹⁰ Section 172(1)(a) of the Constitution. See *Public Protector v South African Reserve*

Bank [2019] ZACC 29; 2019 (9) BCLR 1113 (CC); 2019 (6) SA 253 (CC) at para 247.

¹¹ Section 46(1)(d) of the Constitution.

¹² Fick “Elections” in Woolman et al (eds) *Constitutional Law of South Africa Service* 6 (2014) at 17.

¹³ *New National Party v Government of the Republic of South Africa* [1999] ZACC 5; 1999 (3) SA 191; 1999 (5) BCLR 489 at para 19.

¹⁴ *Id*.

¹⁵ *Id* at para 23.

¹⁶ *UDM II* above n 7 at para 19.

undermine the founding values will be invalid.¹⁷ This can be understood as giving the founding values stand-alone legal effect. In enacting legislation, Parliament must realise the founding values to an adequate level – below which the legislation may be invalidated for inconsistency with the Constitution. However, it is important to note that there is no legal obligation on Parliament to optimise the founding values.

Thus, while Parliament has a wide latitude in choosing the design of our electoral system, there are clear constitutional constraints by which Parliament must be guided.

The continuing relevance of the norms of fairness, inclusiveness, simplicity and accountability in light of the Constitution

The values identified by the ETT are firmly grounded in constitutional rights and values. They, therefore, continue to bear relevance when assessing reforms to our electoral system.

FAIRNESS

Fairness as a constitutional value is derived from the founding values of human dignity and equality in section 1(c).¹⁸ Treating people with human dignity and with respect for their equal worth, requires giving all eligible voters¹⁹ an equal say in who will represent us in our legislatures. The value of fairness can also be derived from the founding value of universal adult suffrage in section 1(d), which commits us to a vision of society in which all adult citizens are entitled to vote.

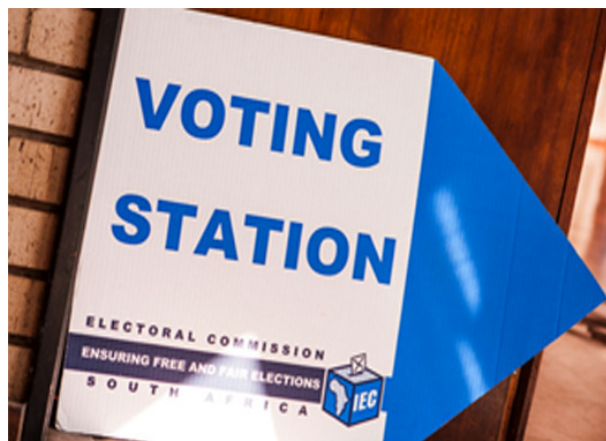
This was eloquently expressed by the Constitutional Court in *August*:

“The vote of each and every citizen is a badge of dignity and personhood. Quite literally, it says that everybody counts. In a country of great disparities of wealth and power it declares that whoever we are, whether rich or poor, exalted or disgraced, we all belong to the same democratic South African nation; that our destinies are intertwined in a single interactive polity.”²⁰

The value of fairness is, moreover, given effect by section 19 of the Constitution, which confers on all citizens the right to “free, fair and regular elections” and confers on all citizens the right to vote in elections.

Fairness bears special importance in our electoral system in light of our history of disenfranchisement and exclusion as well as the transformative mandate of our Constitution. In his dissenting judgment in *New Nation Movement*, Justice Froneman explains the transformative role of the value of fairness, which he terms “equality in political voice”, in our electoral system. He states:

“The ‘never again’ impulse of section 19 is therefore not merely that whole categories of citizens must not be disenfranchised, but also that never again



must some people’s voices count more than others in our representative democracy. The rationale thus goes beyond disenfranchisement, to the distortion of equality in political voice.”²¹

INCLUSIVITY

The value of inclusivity can be derived from section 1(d) of the Constitution, which enshrines a “multi-party system of democratic government” as a founding constitutional value. In *UDM II*, the Constitutional Court explained the meaning of multi-party democracy in section 1(d). It said that multi-party democracy “clearly excludes a one-party state, or a system of government in which a limited number of parties are entitled to compete for office.”²² The Court further explained that “[a] multi-party democracy contemplates a political order in which it is permissible for different political groups to organise, promote their views through public debate and participate in free and fair elections.”²³ However, the Court recognised that the participation of different political groups in elections “may be subjected to reasonable regulation compatible with an open and democratic society.”²⁴

However, it is not clear that the maximum minority representation contended for by the ETT is constitutionally required. This may have been more influenced by pragmatic considerations of nation-building and social cohesion in the early years of our democracy than constitutional requirements.²⁵

The value of inclusivity should also encompass the inclusion of women and minorities in the legislatures.²⁶ Our legislatures should be broadly representative of the South African population in light of the fact that the Constitution enshrines non-racialism and non-sexism as founding constitutional values²⁷ and enshrines a fundamental right to equality.²⁸

SIMPLICITY

Although simplicity is not a constitutional value, a simple balloting procedure may be essential to facilitating the exercise of the right to vote enshrined in section 19(2) of the Constitution. An overly complicated

¹⁷ Id at para 26.

¹⁸ James and Hadland “Shared aspirations: The imperative of accountability in South Africa’s electoral system” in *Electoral Models for South Africa: Reflections and Options – Electoral Task Team Review Roundtable* (2003; Konrad Adenauer Foundation) at 19.

¹⁹ Eligible voters must be defined non-restrictively. Section 19(2) of the Constitution confers the right to vote on all South African citizens. The Constitution further prescribes a minimum voting age of 18 years.

²⁰ *August v Electoral Commission* [1999] ZACC 3; 1999 (3) SA 1; 1999 (4) BCLR 363 at para 17.

²¹ *New Nation Movement* above n 8 at para 221.

²² *UDM II* above n 7 at para 24.

²³ Id.

²⁴ Id at para 26.

²⁵ See James and Hadland above n 18 at 20-1 and Lodge “Electoral options and core values: A summary” in *Electoral Models for South Africa: Reflections and Options – Electoral Task Team Review Roundtable* (2003; Konrad Adenauer Foundation) at 44.

²⁶ Molokomme “The Impact of an Electoral System on Women’s Representation” in *Electoral Models for South Africa: Reflections and Options – Electoral Task Team Review Roundtable* (2003; Konrad Adenauer Foundation) at 30.

²⁷ Section 1(b) of the Constitution.

²⁸ Section 9 of the Constitution. In addition, sections 46(1) and 105(1) of the Constitution provide that our National Assembly and Provincial Legislatures consist of “women and men”.

balloting procedure that does not enable all eligible voters, of varying education levels, to vote without too much difficulty may infringe the right to vote. It could lead to the voices of some not being counted through reduced voter participation or an increased number of spoiled ballots.

The legislative provisions prescribing the balloting procedure are intended to facilitate the exercise of the right to vote.²⁹ However, these provisions may end up infringing the right to vote, if those who desire to exercise the right are unable to do so even though they “act reasonably in pursuit of the right”.³⁰ In *Richter*, the Constitutional Court explained that in determining what would constitute reasonable steps in pursuit of the right to vote, courts should bear in mind “both the fact that the process of voting inevitably imposes burdens upon a citizen as well as the important democratic value of fostering participation in elections”.³¹ The need for simplicity is not a static requirement since it is linked to literacy and education levels, and to familiarity with the electoral process. These factors should be taken into account in assessing what steps may reasonably be required of citizens.

ACCOUNTABILITY

Accountability is enshrined as a founding democratic value in section 1(d) of the Constitution. This is because accountability is central to what it means for a society to be a democracy in which government is based on the will of the people. While the focus of the ETT clearly centred on accountability, section 1(d) of the Constitution provides that South Africa is founded on the values of “universal adult suffrage, a national common voters roll, regular elections and a multi-party system of democratic government, to ensure *accountability, responsiveness and openness*”. The Constitution thus envisages electoral mechanisms that will ensure a government that accounts to the nation for its actions, responds to the needs of the people and openly explains the reasons for its decision-making.³³

Parliament must design the electoral system in such a way so as to ensure an adequate level of accountability.³⁴ An electoral system that does not provide adequate accountability to the electorate would be fundamentally inconsistent with representative democracy and our constitutional scheme. This is bolstered by a consideration of the Constitutional Court’s decision in *Glenister II* dealing with Parliament’s obligation under section 7(2) of the Constitution to respect, protect, promote and fulfil the rights in the Bill of Rights when enacting legislation.³⁵ The Court in *Glenister II* held that Parliament has to act “reasonably and effectively” when taking steps to respect, protect, promote and fulfil constitutional rights.³⁶ The Court derived from this an obligation to establish adequately independent oversight mechanisms. This was because establishing an oversight mechanism that lacked

adequate independence “would not constitute a reasonable step”.³⁷ Similar reasoning can be applied to reach the conclusion that, in designing the electoral system, Parliament has an obligation under section 7(2) of the Constitution to ensure that the design ensures an adequate level of accountability to the electorate. This is because accountable governance is necessary for the fulfilment of many rights in the Bill of Rights.

These key values are the guiding lights on which Parliament must focus as it embarks on the process of electoral reform. However, since not every value can be optimised by the electoral system, it will fall to Parliament to make important trade-offs between values.

Is Parliament constitutionally required to adopt a mixed member proportional representation system in order to give effect to the value of accountability?

At no point did the ETT argue that there might be more constitutional support either for the majority proposal, or for no change. It is pertinent to consider whether the Constitution requires a change.

While the Constitution clearly permits the adoption of an electoral system which better realises accountability, it does not require it. Whether a particular electoral system would better realise the value of accountability is a political rather than a legal question.³⁸ This is starkly demonstrated by the Constitutional Court’s judgment in *New Nation Movement*. The Court refused to engage with the argument raised by the applicants that a constituency-based electoral system is preferable on the basis that it would better give effect to accountability.³⁹ The Court held that this question fell exclusively within Parliament’s remit.

Although a mixed system may better give effect to accountability, it cannot be said that our current system undermines accountability in a manner that is inconsistent with the Constitution.⁴⁰ A holding that our current system – which was constitutionally entrenched for the 1994 and 1999 elections – undermines accountability would impermissibly introduce an internal contradiction into the Constitution. There also appear to be indications in the text of the Constitution that accountability is given greater importance in local government elections whereas fairness carries more weight in national elections. While section 46(1)(d) of the Constitution requires proportional outcomes for national elections,⁴¹ section 157(2) expressly provides Parliament with a choice of a mixed electoral system for local elections (combining proportional representation and a system of ward representation).⁴²

Parliament is thus empowered to determine whether a trade-off in fairness, inclusivity and simplicity is warranted in order to optimise accountability.

²⁹ Tlakula “The Electoral System and Human Rights” in Electoral Models for South Africa: Reflections and Options – Electoral Task Team Review Roundtable (2003; Konrad Adenauer Foundation) at 28.

³⁰ *New National Party* above n 13 at para 23.

³¹ *Richter v The Minister for Home Affairs* [2009] ZACC 3; 2009 (3) SA 615 (CC); 2009 (5) BCLR 448 (CC) at para 58.

³² Preamble to the Constitution.

³³ Roux “Democracy” in Woolman et al (eds) *Constitutional Law of South Africa Service 6* (2014) at 64.

³⁴ *UDM II* above n 7 at paras 19 and 26.

³⁵ *Glenister v President of the Republic of South Africa* [2011] ZACC 6; 2011 (3) SA 347 (CC); 2011 (7) BCLR 651 (CC) (*Glenister II*).

³⁶ *Id* at para 189.

³⁷ *Id* at para 194.

³⁸ *UDM II* above n 7 at para 11 and *New Nation Movement* above n 8 at para 15.

³⁹ *New Nation Movement* *id* at para 15.

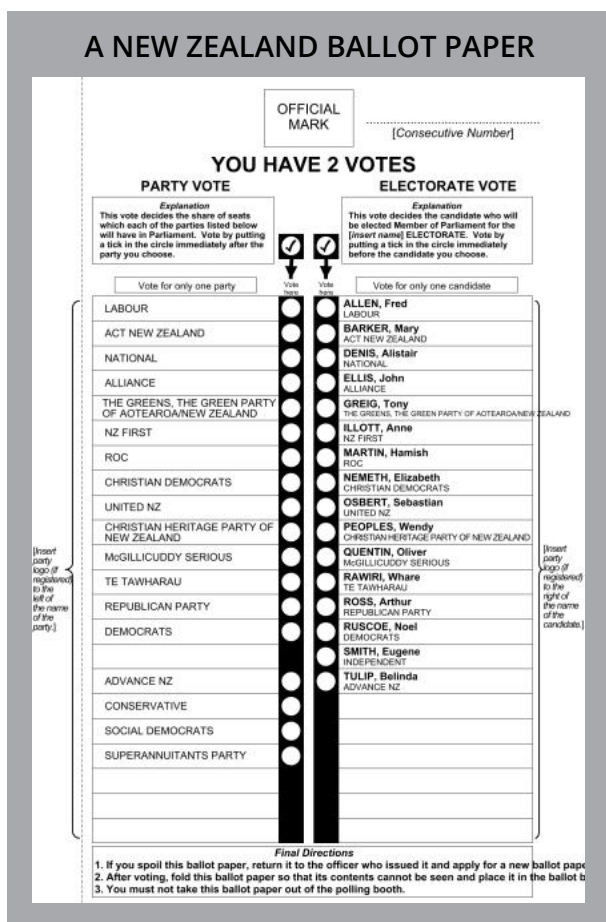
⁴⁰ In *S v Rens* [1995] ZACC 15; 1996 (1) SA 1218 (CC); 1996 (2) BCLR 155 (CC) at para 17, the Constitutional Court held that “[i]t was not to be assumed that provisions in the same constitution are contradictory” and that constitutional provisions “ought, if possible, to be construed in such a way as to harmonise with one another”. See also *New Nation Movement* *id* at para 18; and *Doctors for Life International v Speaker of the National Assembly* [2006] ZACC 11; 2006 (6) SA 416 (CC); 2006 (12) BCLR 1399 (CC) at para 48.

⁴¹ *New Nation Movement* *id* at paras 224-5 (Justice Froneman’s dissent).

⁴² *Id* at para 226 (Justice Froneman’s dissent).

Lessons from Germany and New Zealand

Germany and New Zealand have electoral systems similar to, but not identical with, the ETT majority proposal. In both cases, voters have two votes: one for an individual and one for a party. In both cases, there are single member constituencies, differing from the ETT majority proposal for multi-member constituencies. In the case of what Germany calls direct candidates and New Zealand calls electorate (their term for constituency) candidates, the successful candidates are those receiving the plurality of votes in their constituencies. On the other hand, the party votes are aggregated across the country and determine the distribution of seats by party in the legislature. The balance is achieved by the use of ranked party lists. In the New Zealand parliament, there are 71 electorate MPs and 49 party list MPs. Germany has 299 direct MPs and, in the first instance, the same number of party list MPs.



In a mixed-member proportional system of this kind, a problem arises when the number of directly elected MPs from a party exceeds the number that the party would be entitled to on the basis of the party vote. This is known as the overhang problem. It is not desirable to fail to allocate a seat in parliament to any directly elected candidate, so both systems enlarge parliament. New Zealand simply increases the number of MPs by the extent of the overhang, departing slightly from proportionality when overhangs occur. It has only ever had to add one MP, so the deviation is slight. Germany, by contrast, restores proportionality by adding party list candidates. In 2013, this involved the expansion of the Bundestag by 31 seats.

The comparison of the German and New Zealand systems with the ETT majority proposal raises two questions. The first is whether, in the proposed multi-member system the first vote, for individuals, should permit one choice only, or more than one choice. The ETT majority proposal is short-winded on this question. It contemplated more than one choice as evidenced by this passage:

This could best be achieved by using open rather than closed party lists, with voters influencing the order of candidates. They would do this either by ranking candidates or by selecting a number of preferred candidates listed next to the emblems of their respective parties... [However], in the short to medium term it will not be possible to have open lists in the proposed multi-member constituencies. Present literacy rates simply make this impractical... Even if closed candidate lists are used for the foreseeable future, the 69 multi-member constituency option is a much better prospect. Given that the lists will be short (three to seven names) and that candidates will have to campaign in their constituencies and represent them afterwards, there will clearly be a face to representation and a much closer link with the electorate than is presently the case. Putting a face to politicians seems to be the only way to increase accountability significantly at the present time.⁴³

Consider the options:

- A. Each voter votes for only one constituency candidate.
- B. Each voter votes for a maximum of a fixed number of constituency candidates, say three (the minimum number of candidates in any constituency).
- C. Each voter votes for a maximum number of candidates, the maximum being the number of constituency seats in each constituency.

As the ETT report noted, Options B and C could allow for ranking or simple approval voting (selecting a number of preferred candidates listed next to the emblems of their respective parties). On grounds of simplicity, approval voting would be preferable. Option A meets the requirement of fairness. Options B and C do not, if each selection counts equally, since some, but not all, voters will vote for fewer candidates than the maximum allowed. It does not seem desirable to require all voters to vote for the maximum number, since some will not want to do so. The way of reconciling choice with fairness would be to use a $1/n$ weight for voters making n selections. For instance, under Option C a voter in a seven seat constituency making seven selections would give $1/7^{\text{th}}$ of a vote to each candidate selected, while a voter making only one selection would give a full vote to the candidate selected.

Option A is simplest, but it would force voters who want to vote the party ticket to select only one member from it. It could be argued that this desirable. But, in a constituency where one member is markedly better known or more popular, many more votes than required for election could pile up for him or her, to the detriment of other party candidates and therefore party representation across constituency seats. Option C would avoid this problem, but it is less simple for voters.

⁴³ ETT Report at 23-24.

It should be noted that all three options would require parties to make strategic decisions about how many candidates to field in each constituency. Fielding too many candidates would dilute votes making the weakest candidates unelectable, while fielding too few would over-concentrate votes, leading to fewer candidates being elected than possible. This is unavoidable in a multi-member constituency system. Candidates compete not only between parties but within them.

A multiple transferable vote system would be an alternative to an approval vote system. It would remove the need for parties to strategize about the numbers of constituency candidates it should field. However, it would require ranking and the capacity to shovel valid ballots into computers. Also, unlike an approval system, it is not transparent to voters where their vote would end up.

How would independent candidates participate in this system? There are two options:

- D. Independent candidates could stand for election in individual constituencies.
- E. Paradoxical as this may sound, they may stand, effectively as parties, as party list members.

These options could be run in tandem, with candidates given the choice of the route they wish to take. Option D would be suitable for independent candidates with a geographical base in a particular constituency. They would only gather votes from the constituency and would concentrate their campaigns there. Option E would be suitable for candidates with support spread out over the country. If Option E is chosen, the independent candidate would have to nominate a couple of associates who would also be elected to parliament if the votes garnered were sufficient.

Note that Option D would not be available unless a constituency system is chosen. Since some independent candidates can be expected to have concerns relating to a specific geographical area, one argument for a constituency system is that it would accommodate such candidates. By itself, this consideration does not dispose of the debate about whether a constituency system is desirable or not, but it should be borne in mind.

The recent Constitutional Court ruling

It is against this background that the judgment and order in *New Nation Movement* handed down by the Constitutional Court on 11 June 2020 has to be understood. The applicants in the case successfully sought to remove the Electoral Act restriction that candidates for election to the National Assembly and provincial legislatures must stand for and, if elected, hold office as members of political parties. In its order, the Constitutional Court declared that:

The Electoral Act 73 of 1998 is unconstitutional to the extent that it requires that adult citizens may be elected to the National Assembly and Provincial Legislatures only through their membership of political parties.⁴⁴

The Electoral Act will have to be amended to cure this defect, and the Constitutional Court has given Parliament 24 months to do so.⁴⁵

The Constitutional Court's order, in itself, does not require the adoption of a system resembling that recommended by the ETT majority. The implications of the Constitutional Court's order are limited in that the case deals with a narrow issue – the right of individuals to stand for and, if elected, hold office as independent candidates under section 19(3)(b) of the Constitution. Although a mixed-member proportional system may be seen as more compatible with independent candidates, the Court's order is not prescriptive as to the way in which independent candidates should be accommodated. One could simply add Option E above to the existing system. But we have a second, and rare, opportunity to reconsider the ETT majority proposal. It should not be missed.

Parliamentary developments since the Constitutional Court ruling

The Home Affairs portfolio committee discussed matters relating to electoral reform in the following meetings. The proceedings can be summarised as follows:

1. *The 25 June 2020 meeting on the implications of Constitutional Court ruling allowing independent candidates to be elected to the National Assembly and Provincial Legislatures.*

At this meeting, a legal opinion from Parliament's Constitutional and Legal Services Office (Office) was tabled and a presentation was made by the Independent Electoral System.⁴⁶

The view of the Office was that it would not suffice to simply add the phrase "independent candidate" to wherever the Electoral Act refers to a party. Instead, the entire existing electoral system needs to be reconsidered. Making provision for an independent candidate will entail considering:

1. how they are nominated;
2. how they are registered;
3. who would be responsible for compiling the list of independent candidates;
4. how ballot papers are drawn up and whether there should be separate ballot papers for independent candidates;
5. how the allocation of seats in the National Assembly and Provincial Legislatures will work;
6. what will happen when an independent candidate no longer qualifies for the seat that they won, or dies during his or her term and the seat becomes vacant, or conversely wins a number of votes equivalent to multiple seats; and
7. whether a constituency system or a hybrid system would be better suited to the inclusion of independent candidates.

The IEC presentation took the portfolio committee through the Constitutional Court's judgment and order in detail. It also pointed out how tight the timeline is if a new electoral system is to be ready for implementation in the 2024 national and provincial elections. Matters that would have to be dealt with by the IEC include ICT Business Applications (nominations, results and logistics systems), number and size of ballot papers, possible delimitation of constituencies, re-training of staff, possible re-configuration of local offices, counting

⁴⁴ *New Nation Movement* above n 8 at para 128[4].

⁴⁵ *Id* at para 128[5].

⁴⁶ Both available at <https://pmg.org.za/committee-meeting/30545/>

⁴⁷ *Electoral Commission v Mhlope* [2016] ZACC 15; 2016 (8) BCLR 987 (CC); 2016 (5) SA

and declaration of results, modalities of voting, and costs of elections. Moreover, it takes the Municipal Demarcation Board 24 months to draw municipal wards. This means that Parliament needs to move at speed and complete its work by June 2022 in line with the Constitutional Court's order.

The Minister of Home Affairs concurred that Parliament had to act as swiftly as possible. Cabinet has decided the Department of Home Affairs (DHA) should create a document explaining the judgment, and choose a Committee of Ministers to advise Cabinet on the issue. The Minister had also received a letter from the Parliamentary Legal Advisor requesting a legislative amendment plan. The DHA would begin work immediately.

Summing up, the Chairperson noted the need for the timeframe to be determined. An integrated roadmap would be needed. The Committee would allow every political party, civil society organization or member of the public to put their views on the table.

2. The 16 July 2020 meeting, which discussed the issue of completeness of addresses on the voters roll.

This flows from the Constitutional Court order in *Electoral Commission v Mhlope*,⁴⁷ handed down on 22 November 2018. The order required the IEC to obtain and record by 30 November 2019 all addresses that were reasonably available as at 17 December 2003, and to report at specified dates the number of post-December 2003 addresses of registered voters it has obtained and recorded.

The IEC presented the progress it has made. Of the 26.5 million registered voters, 24.1 million or 91% had complete addresses, 4% had an incomplete address which could be rural addresses, and 5% had no address at all, and those people were largely in informal settlements in high density provinces and former homeland areas. The portfolio committee welcomed the announcement that the IEC has plans to investigate the 1.1 million people with incomplete addresses and the 1.2 million without addresses on the voters roll. Furthermore, the committee welcomed the initiative to use geo-coding of addresses to confirm that location is within wards of registration. The ability of the IEC to determine residence by ward is necessary for local government elections and by constituency for

national and provincial elections if a constituency system is chosen.

3. The 21 July 2020 meeting at which the IEC presented an overview of electoral systems around the world and a framework for understanding them.

Notable was the statement by the Minister of Home Affairs that he wanted to the committee to take the opportunity to come up with a new electoral system while looking at the entire Constitution in the light of experience over the last 26 years. This view implies that constitutional change, as well as amendment of ordinary legislation, may form part of the Executive's agenda. Parliament also needed to examine the Constitution, not to take away the right for independents to stand for election, but because ever since the Constitutional Court judgment, people were seeing all the challenges in the system. If constitutional change is contemplated, then everything is at stake, including issues as diverse as the method of the electing the president, or a possible return to the pre-1994 single member constituency system without proportional representation.

The committee decided to hold a symposium where its members could delve into the details of electoral systems. The Chairperson stated that the committee was not going to wait for the Executive to come to it. There had to be a serious effort to have a conversation with the electorate.

4. The 18 August 2020 meeting at which timelines for the legislative process were submitted and discussed.

Four scenarios were considered:

- (1) A Section 76 Bill (which would have to be approved by the National Council of Provinces) introducing constituencies.
- (2) A Section 75 Bill introducing constituencies.
- (3) A Section 76 Bill that does not introduce constituencies.
- (4) A Section 75 Bill that does not introduces constituencies.

The table indicates the latest dates envisaged for early stages of the process. All timelines were constructed to meet the Constitutional Court's requirement that the entire legislative process be completed with 24 months.

Stage	Latest date			
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Publication of draft Bill for public comment	1 Jan 21	25 Nov 20	16 Jan 21	1 Jan 21
Submission to Cabinet for approval	5 Feb 21	23 Dec 20	20 Feb 21	29 Jan 21
Introduction of Bill to the National Assembly	23 Feb 21	17 Jan 21	10 Mar 21	23 Feb 21

1 (CC).

5. *The 9 February 2021 meeting, at which the Minister of Home Affairs outlined the progress made by the Executive, and the Congress of the People (COPE) presented its proposals.*

The Minister said that a draft policy document had been produced outlining possible choices which comply with the Constitutional Court judgment. Consultation had begun and it was expected that that the matter would come before Cabinet in the second week of March. Changes would be required to the following legislation:

- The Electoral Act, 76 of 1998
- The Public Funding of Represented Political Parties Act, 103 of 1997
- The Electoral Commission Act, 51 of 1996
- The Local Government Municipal Demarcation Act, 27 of 1998
- The Political Party Funding Act, 6 of 2018

The Department of Home Affairs is working on the legal aspects of the choices.

COPE presented its proposal for amendment of the Electoral Act and the Electoral Commission Act and the justification for the proposal. COPE advocates a mixed member proportional electoral system, with the 44 district councils and eight metros as constituencies.

An update of the ETT majority proposal

Part B of this document will present a simulation of the effects of an updated version of the ETT majority proposal using the results of the 2014 and 2019 national elections. Here the updated version is presented, followed by an account of how it differs from the ETT majority proposal in some details, and why.

The outline of the update is as follows.

1. Each voter would be issued with two ballot papers. The first would require a choice between candidates in his or her constituency and the second would require a choice between parties contesting the election. The first vote represents voter preferences about representation by individuals. The second represents voter preferences about representation by parties.
2. Seats in the National Assembly would be divided into two categories: those filled from constituency elections and those filled from party lists.
3. The number of the party list seats would be twice the number of constituencies and the number of the constituency seats would be 400 minus the number of party list seats. For example, if there were 55 (multi-member) constituencies, there would be 110 party list seats and 290 constituency seats. Most members would be elected by defined groups of constituents and would be dependent on continuing constituent support.
4. Two party list MPs would be assigned to each constituency, using an algorithm designed to maximize the probability that voters have at least one of the MPs associated with their constituency belonging to the party they support. The allocation of individual party list MPs to constituencies would be decided by party caucuses in Parliament. Alternatives are possible and they are discussed in Section B.

5. Each constituency would be allocated a number of seats proportional to the number of registered voters in it. Constituency candidates would be ordered by the number of votes received and seats allocated going down the list until all constituency seats are filled.
6. Constituencies should follow metro and district authority boundaries as far as possible to avoid delimitation disputes. Some sparsely populated districts would need to be combined into single constituencies and the five large metros would need subdivision.
7. Each party contesting the election would draw up an ordered list of party list candidates, as they do at present, up to a maximum of the number of party list seats.
8. Parties would be represented in proportion to the votes cast for them on the second ballot paper. The number of seats party representatives would occupy would be 400 minus the number of independents elected on a constituency basis. Thus if four independent candidates choosing Option E were elected and a party received 50% of the second ballot vote, it would be allocated 198 seats in total.
9. Independent candidates would be allowed to choose between Options D and E above.
10. The number of party list seats allocated would be the total allocation of seats minus the number of constituency seats won by members of that party. Thus, if the party in point 8 won 150 constituency seats, it would be entitled to fill a further 48 seats from its party list.

The ways in which this differs from the ETT majority recommendation are as follows:

1. The number of constituencies is smaller than the ETT majority proposal. In large measure, this is because the proposal contained the recommendation that each metro be divided into four constituencies. However, this division is not required by the limitation of the maximum number of constituency candidates to seven. Only three metros (Johannesburg, Cape Town and Ethekwini) would require four constituencies, two more would require three (Ekurhuleni and Tshwane) and the three small metros (Nelson Mandela Bay, Buffalo City and Manguang) one each.
2. In line with the German and New Zealand systems, the purpose of the two votes would be clearly demarcated: the first for an individual (or individuals) and the second for the balance of parties and independents in the National Assembly.
3. Following the present practice of assigning MPs to constituency offices, party list MPs would be assigned to constituencies. Two per constituency would be needed. Overhang problems would be more likely if there were only one party list MP per constituency. More than two would limit constituency MP representation than necessary.
4. Independent candidates would be explicitly catered for, in line with the Constitutional Court's order in *New Nation Movement*.



In line with the ETT majority proposal, only multi-member constituencies are considered. The ETT majority rejected single member constituencies, largely on technical grounds of the relationship between national and provincial elections. An earlier version of this study simulated single-member as well as multi-member constituencies, and found that a single-member system performed less well on three criteria: the algorithms for seat allocation are more likely to encounter problems, the number of constituency MPs would be lower, and the proportion of voters who would have an MP of their own party in their constituencies would be lower. There were no offsetting superiorities of the single-member system and no attention will be paid to it in this document.

Complexity

Is the system outlined above too complex? This prompts a further question: too complex for whom? In descending order of importance, three groups can be identified:

- Voters
- Parties and candidates
- The IEC, as administrator of elections.

Voters. Voters will vote for a party (party includes independent candidates choosing Option E). This they do in the existing system, which works. The new feature is that they will vote for one or more individuals. Recall that there are three possible ways ('system options') of defining how this can be done. The first is to require voters to vote for one candidate only. The second is to vote for at least one candidate and at most the number of candidates in the constituency, using approval voting (i.e all choices have the same status). The third is to vote for at least one candidate and at most the number of candidates in the constituency, using ranked voting and a multiple transferable vote system to select candidates.

The third system option is the most complex for voters. It is more difficult to rank the complexity of the first and the second options. The first will frustrate the voter who wishes to approve the entire list (or most) of the candidates standing under the banner of a party. The second avoids this problem, but entails the clear

understanding that the number of approvals may not exceed the number of seats in the constituency, a number which will vary across constituencies.

Parties and candidates. Multiple member constituencies mean that constituency candidates compete with one another not only across parties but within parties. This raises strategic questions for parties and candidates, which will vary according to the system option chosen. The third system option raises them in the least severe form. As the multiple transferable vote (MTV) algorithm proceeds step by step, the strongest candidates will be elected and the weakest candidates will be eliminated, with votes, or fractions of them, transferred. This means that parties can field up to the maximum number of candidates (the number of seats in a constituency) and not worry about the dilution of the party vote. If either of the first two system options are chosen, parties will need to make an assessment of their likely support by constituency and choose the numbers of candidates they field accordingly. Field too few candidates and a party will gain fewer constituency seats than it might have. Field too many and a party will put itself at a disadvantage in relation to other parties which have made an optimal choice.

The second strategic issue will be the composition of the slate of party candidates in each constituency. Again, this will not be a concern if the third system option is chosen. But if either of the first two system options are chosen, it would be to a party's advantage to choose candidates of roughly equal attractiveness. Otherwise, votes would pile up for the most attractive candidate, weakening the chances of election of the least attractive. Given the geographical extent of constituencies, parties may choose to have individual candidates concentrate their campaigns in different parts of them.

The Independent Electoral Commission. For the administrators of the election, the first system option would be easiest. Each ballot would be cut into two and the halves could be counted separately by hand. Both the second and the third options would require that ballots are machine readable, with computers programmed to implement the selection algorithm.

Electoral systems, incentives, accountability, political culture, political behaviour and circumstances

It is sometimes thought that political culture and political behaviour are independent, and that accountability is the outcome of the actions of people rather than the influence of institutions. These views are naïve and false. Political institutions create a system of incentives and these in turn influence how actors behave and think about their actions. An example is the post-war German electoral system, which has had an influence on the stability of the political system and the way in which governments are formed, with related influence on concrete political objectives and behaviour. So what would be the incentives and their impact if an electoral system of the type favoured by the ETT majority is introduced?

Some have taken the view that it would increase the independence of Parliament from the Executive. Thus stated, the view is imprecise and needs refinement. To start, note that political parties would have to adopt constituency candidates as well as compile party lists. The basis for party discipline remains. Defying the party line is currently rare and would remain so. It risks the attraction of sanctions of increasing severity as the importance of the issue to the party leadership increases. Considerable defiance on important issues creates a crisis for the party or, at least, for the party leadership. Since party leadership can shape party candidates, the power of the President in relation to the legislature tends to peak at the beginning of a second term of office, when presidential power over the party has been consolidated, though there may be countervailing influences. It was indicated by a supine Parliament in the early years of the Zuma second term. It took public outrage, powerfully aided by the Gupta leaks, to change the situation. In any event, the constitutional term limit means that the inevitable contest for leadership towards the end of a second presidential term means that presidential power starts to wane again.

One may develop the analysis by considering the effect of reform on the incentives of those contemplating a career as a member of the National Assembly. Unlike now, this would depend on cultivating a relationship with a constituency, or at least a substantial part of one, as well as with party structures. A record of community service would help, as would be the ability to interact with leaders of local civil society and economic interests. This relationship of cultivation and dependence on a constituency would introduce new dynamics within parliamentary caucuses and between parliamentarians and party headquarters, countervailing the tendency for parliamentarians to be one way transmission belts for party headquarters talking points. This would only be undesirable if the sense of place became secessionist. But secession of any part of the country has been wholly impractical since 1910. Apartheid merely confirmed the impossibility of dismemberment. And secessionist sentiment and rhetoric is now less than it was 25 years ago, notwithstanding the Republic of Hout Bay, Orania, the Ingonyama Trust, and the concerns of the ETT minority about reconciliation, nation building, peace, stability and good governance. What is really at stake here is the basis for discursive formation of party will and programme and its day to day relationship with public opinion. The closer the integration, the more consolidated our democracy will be. This is the overarching interest which should trump narrower and particular interests.

South Africa has had a single dominant party since 1994. It may remain dominant for many years to come, or it may not. Either way, a mixed-member proportional system will serve the country well. It will increase the diversity of interests effectively represented in Parliament. In the event that no party gains 50% of the National Assembly seats, it will, like all proportional systems, allow for incremental shifts through coalition formation.

ANNEXURE - ELECTORAL SYSTEMS

Type	Description	Constituencies	Single/ Multiple member	Proportional (constituency)	Proportional (national)
Plurality	Plurality (first past the post)	Yes	Single	No	No
Plurality	Ranked system (Condorcet and other methods)	Yes	Single	No	No
Plurality	Block voting Limited voting Single vote Party block voting Dowdall system	Yes	Multiple	No	No
Majoritarian	Ranked voting Instant runoff voting Two round system	Yes	Single	No	No
Proportional	Party list proportional – closed (highest average)	No			Yes
Proportional	Party list proportional – closed (largest remainder)	No			Yes
Proportional	Party list proportional – open	No			
Proportional	Single transferable vote	Yes	Single	Yes	No
Proportional	Multiple transferable vote	Yes	Multiple	Yes	No
Mixed	Parallel voting	Yes	Single	No	No
Mixed	Mixed-member proportional	Yes	Single	Possibly	Yes
Mixed	Mixed-member proportional	Yes	Multiple	Approximately	Yes
Mixed	Reserved seats	Yes	Yes	No	No

Source: Wikipedia article on Electoral Systems

Note: Existing and proposed South African systems highlighted in red



CONSTITUENCIES, ALGORITHMS, SIMULATIONS, PROBLEMS AND ASSESSMENT

Abstract

This section considers implications of the electoral system proposed in Section A. The analysis has six main components:

- I. Preliminaries (main text and maps).*
- II. The algorithms¹ necessary to operate the proposed system (main text and annexure).*
- III. Simulation of outcomes using the 2014 and 2019 election results (main text and tables).*
- IV. A discussion of the problems associated with the system.*
- V. Splitting the vote: evidence from the 2016 local government elections.*
- VI. Conclusions.*

The exposition necessarily involves arithmetic, particularly in Components II, III and V. A brief summary of the contents of each of these components is provided here:

Component II: *Four algorithms are needed by the system: the first to allocate constituency seats across constituencies, the second to determine winners of constituency seats, the third to determine the total number of seats by party in the legislature and therefore the number of party list seats by party, and the fourth the allocation of party list seats across constituencies, if desired. The algorithms have been tested, and they work.*

Component III: *Historical simulations show that in both 2014 and 2019, the metros would have had 162 seats (120 constituency and 42 party list seats) between them and the other parts of the country would have had 238 seats (170 constituency and 68 party list seats) between them, had the proposed system been in operation, with allocation of party list members to constituencies. In both years, competition for metro constituency seats would have been greater than in other parts of the country. This component also estimates the proportion of voters by party which would have at least one representative of the party they voted for, both with and without allocation of party list members to constituencies to determine the gain from such an allocation. The percentage of voters without an MP of their own party drops from 15.8% to 9.8% in 2014 and from 16.8% to 8.5% in 2019. Moreover, without assignment, no voters in seven out of thirteen parties have an MP of their own party in their constituencies in 2014 and eight out of fourteen parties in 2019.*

Component V: *The proposed system allows for vote splitting, i.e casting votes for constituency candidates from one party, and casting a vote for a different party. The local government election of 2016 shows some vote splitting occurred, and it creates the expectation that vote splitting is likely to occur in national elections if held using the proposed system.*

The purpose of this section

The purpose of this section is to test how the electoral system outlined in Section A would work in practice, using historical and hypothetical data. It outlines an approach to the definition of constituencies. It sets out algorithms for determining outcomes in the detail necessary for system operation. To the extent possible, the analysis explores problems which may emerge. It also reports what the outcome of the 2014 and 2019 elections would have been had the system been in place. Finally, it assesses findings in the light of criteria set out in the next but one sub-section.

Definitions

The fundamental principle of a revised system is that each voter in a national election would have two votes instead of one.

The choice in the first vote, referred to as the '**individual or constituency vote**' below, would be between individuals seeking election to represent the constituency. Election would depend on the number of votes cast for each individual. In a multiple member constituency with, for example, five members, the five individuals with the highest numbers of votes would be elected.

The choice in the second vote, referred to as the '**party vote**' would be between parties. No individuals would appear on the voting form.

Necessary and desirable features of a national electoral system

These are:

1. It must comply with the Constitution as it stands. A new system would require only a change in the Electoral Act 73 of 1998.
2. It must work, in the sense that the algorithms it uses for processing valid votes yields a constitutionally conforming outcome.
3. The number of MPs accountable to constituencies should be as large as possible.
4. The percentage of voters having an MP of the party they support in their constituency should be as large as possible.
5. The extent to which MPs are rooted in the constituencies they represent should be as great as possible.

The size of the National Assembly is assumed to be 400 throughout the analysis.

¹ An algorithm is a step by step procedure to solve logical and mathematical problems.

Limitations of this section

The analysis in this section has three principal limitations:

1. It is not possible to simulate the effect of inclusion of independent candidates using the historical data from national elections, since none could stand in past elections.
2. If a voter is required to make two choices, the possibility of split votes exists, where the party affiliation of constituency candidates, of any, differs from the party selected in the party vote. This possibility did not exist in past national elections, so it is not possible to simulate the effect of split votes from data from these elections. However, it is possible to split votes in local government elections and a sub-section will consider data from the 2016 local government election.
3. Since a single vote in historical elections will have to do the duty of two in the historical simulations, it is not necessary to decide between Options A and C, or between them and a multiple transferable vote system, in the determination of the election of constituency candidates. For the purpose of conceptualization, it is easiest to consider Option A, in which a voter selects a single individual.

General assumptions

These are:

1. In line with the ETT majority proposal, the country is divided into constituencies containing between three and seven individually elected MPs. Each party could enter candidates up to the number of individually elected MPs assigned to particular constituencies.
2. As outlined in Section A, the number of party candidates will be twice the number of constituencies. Thus, if there were 55 constituencies, 110 MPs would be chosen from party lists and 290 would be chosen on the basis of individual votes.
3. To ensure that individually elected MPs are rooted in their communities, candidates for individual election must be usually resident in the constituencies in which they stand.
4. Party MPs are assigned to constituencies. The assignation increases the probability that voters would have at least one MP in their constituencies who belong to the party they support.

Constituency definition

Demarcation of constituencies would be assisted by the Independent Electoral Commission, the Municipal Demarcation Board and Statistics South Africa. The analysis here divides the country into constituencies using a Geographical Information System and the 2014 and 2019 lists of registered voters by local authority, and ward in the metropolitan areas.

The following principles have been adopted in the constituencies as demarcated here:

1. Each constituency is a consolidated geographical block.
2. Except in the five large metros, no local municipality is divided between constituencies. In the five large

metros, constituencies are aggregations of wards.

3. Registered voters divided by the number of individually elected MPs are as close to constant across constituencies as possible. Table A1 in the Appendix sets out information on registered voters by constituency in 2014 and 2019. It turns out the same constituencies can be used for simulations from the 2014 and the 2019 elections, while keeping numbers of constituency MPs in each constituency between three and seven. The number of individual candidates assigned to some constituencies varies slightly between the two years. A histogram of constituencies by constituency MPs in 2014 and 2019 is presented in Figure 1.
4. Constituencies are aligned with district authority boundaries as far as possible. In some cases, constituencies contain more than one district authority, because individual districts are too sparsely populated to sustain constituencies. In others, district authorities have been subdivided, because they are too heavily populated for one constituency. Table A2 in the Appendix sets out a schedule of constituencies and their relationship to local government entities. Table 1 provides summary statistics from Table A2. It should be stressed that alternatives are possible, when it comes to the splitting and merging of districts and the subdivision of metros.

Table 1

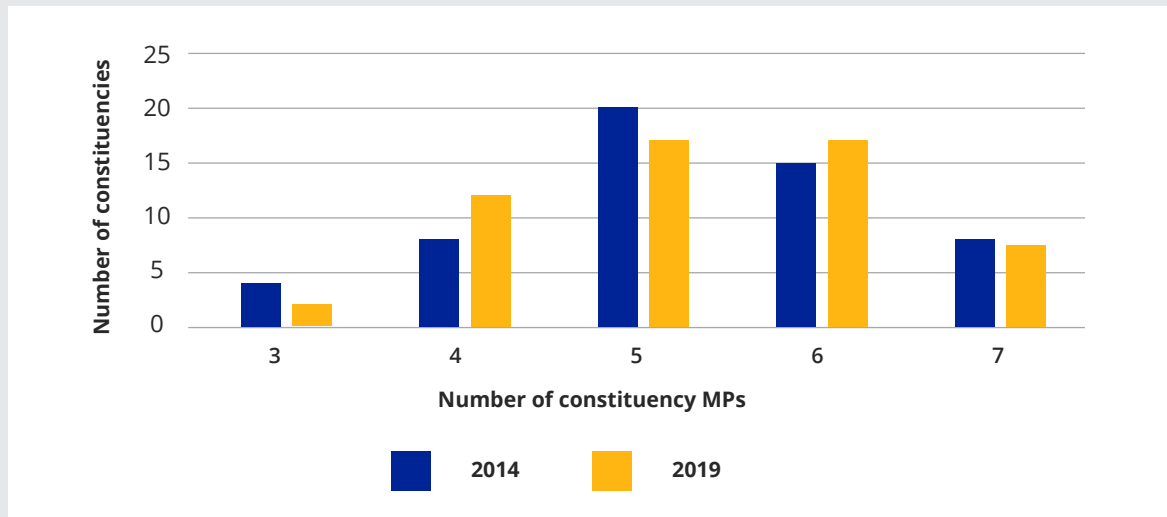
Constituency composition	Number of constituencies
Single district	18
Parts of districts	6
Multiple districts	8
Single district plus part of a second district	2
Metros	21
Total	55

The three smallest metros each contain one constituency, Ekurhuleni and Tshwane have three constituencies each, and Cape Town, Ethekwini and Johannesburg four each, making 21 metro constituencies in all. There are 34 constituencies outside the metros, making a total of 55 constituencies throughout the country.

The maps in the Atlas display the constituencies used in this study.

As a practical matter, since registration of voters closes shortly before the election process starts, the number of people eligible to register as voters (the population age 18 and above) could be used instead as the basis for defining constituencies. Statistics South Africa could be asked to provide estimates when required.

FIGURE 1 - Constituencies by number of constituency MPs



Algorithms

Three algorithms are needed to:

1. Determine the number of constituency MPs for each constituency.
2. Determine the elected constituency MPs.
3. Determine the elected party list MPs.
4. Assign party list MPs to constituencies.

1. The number of constituency MPs for each constituency

The procedure has the following steps:

- a. Divide the number of all registered voters by the total number of constituency seats (290) to determine a quota.
- b. Divide registered voters by the quota in each constituency. This will yield numbers which consist of an integer (whole number) part and a fractional part.
- c. Allocate first pass constituency MPs according to the integers in each constituency. This procedure will allocate at most all constituency seats and usually a smaller number. The second pass allocation allocates the difference

between all constituency seats and the first pass allocation. Call this number N.

- d. List constituencies by descending order of the number calculated in (b), and allocate an additional constituency MP to the first N constituencies.

This is the largest remainder method, and it is used to allocate seats to parties in the current system. It is not the only method for dealing with problems of this type. Alternatives are the d'Hondt method (see https://en.wikipedia.org/wiki/D%27Hondt_method) and the Webster/Sainte-Laguë method (see https://en.wikipedia.org/wiki/Webster/Sainte-Lagu%C3%AB_method). Indeed, there are variations within the largest remainder method itself. These methods may give slightly different results.

An example may make the procedure clearer.

Table 2

Consider a country with 1 000 registered voters and three constituencies. Suppose there are 10 seats to be allocated. Then the calculation proceeds as follows:

$$\text{Quota} = 1000/10 = 100$$

Constituency	Registered voters	Registered voters/quota	Integer	Fraction	First pass	Second pass	Total
A	444	4.44	4	0.44	4		4
B	303	3.03	3	0.03	3		3
C	253	2.53	2	0.53	2	1	3
Total	1 000				9	1	10

2. Elected constituency MPs

The two most attractive algorithms are approval voting with a 1/n rule and multiple transferable voting. The approval voting algorithm is described in Section A. The N with the greatest number of votes would be elected as constituency MPs in constituencies with N constituency seats. Transferable vote systems are more complicated, especially in multi-member constituencies and no attempt will be made to describe them here. An account can be found at: https://en.wikipedia.org/wiki/Single_transferable_vote

For the purpose of historical simulations, there is no need to decide between them here, since there is data only on party votes.

3. Elected party list MPs

The total number of seats by party ('party' including independents choosing Option E as described in Section A), would be allocated solely in light of the party votes cast. The number of seats allocated would be 400 minus the number of elected independents choosing Option D (i.e. standing within constituencies) and the allocation would be done using the largest remainder method. The number of party list MPs for each party would be its total allocation minus its number of constituency seats.

Since there were no independents in past elections, the historical simulations cannot include them. If the fate of small parties contesting the 2019 election is considered, it might be concluded that few independents will be elected when this becomes possible. Of the 48 parties participating in the election, only 14 gained representation in the National Assembly.

4. Assignment of party list MPs to constituencies

As indicated in Part A, there are options, which can be described as follows:

Option F. Allocate all party list members to constituencies. The rationale for the assignation is the maximisation of the number of voters in each constituency who have an MP in that constituency belonging to the same party as themselves. In this case, all MPs would have offices in constituencies. Party list MPs have a fixed abode. The Annexure sets out a method of allocation.

Option G. Do not assign party list MPs to constituencies, but expect them to respond generally to party supporters who have no MP of their party in their constituencies. In this case, constituency MPs would have constituency offices, whereas party list MPs would have travel budgets enabling them to consult with supporters with issues. They would be roving party list MPs. The advantage of not assigning party list candidates to constituencies is that the number of party list MPs would not be rigidly tied to two per constituency.

Option H. This option is a mixed system, whereby party list members would all be assigned initially to constituencies, but party caucuses could decide to convert some or all of their party list members from fixed abode to roving status. This might appeal to small parties with geographically dispersed support.



Historical simulation results

The complete set of simulated results from the 2014 and 2019 elections is presented in Table A3. (Table A3 is not printed in this document, but the spreadsheet can be accessed here: <https://hsf.org.za/publications/special-publications/table-a3.pdf>)

















Table 3 presents a summary.

Table 3

Party	2014					2019				
	Metro		Non-metro		Total	Metro		Non-metro		Total
	Constituency	Party list	Constituency	Party list		Constituency	Party list	Constituency	Party list	
 ACDP		3			3		3		1	4
 AFRICAN INDEPENDENT CONGRESS		2		1	3				2	2
 ANC	67	24	123	35	249	61	30	112	27	230
 APC		1			1					
 AGANG SA				2	2					
 AIM									2	2
 ANC							1			1
 COPE		1		2	3		1		1	2
 DA	42	3	25	19	89	39		24	21	84
 EFFSC	11		11	3	25	18		21	5	44
 GOOD							1		1	2
 IFP		3	5	2	10		3	9	2	14
 NFP		2	4		6			1	1	2
		1			1		1			1
			2	2	4			1	1	2
 VF		2		2	4	2	2	2	4	10
Total	120	42	170	68	400	120	42	170	68	400

The effect of assignation of party list candidates to constituencies on the percentages of voters having at least one MP of their party in their constituencies can be seen in Table 4.

Table 4

Party	2014		2019	
	No Assignment	Assignment	No Assignment	Assignment
 ACDP	0.0%	9.8%	0.0%	18.8%
 AFRICAN INDEPENDENT CONGRESS	0.0%	6.4%	0.0%	6.5%
 ANC	98.3%	100.0%	98.4%	100.0%
 APC	0.0%	1.3%	0.0%	
 AGANG SA	0.0%	5.6%		
 AFRICAN NATIONAL CONGRESS			0.0%	9.0%
 COPE			0.0%	8.9%
 COPE	0.0%	2.8%	0.0%	1.9%
 DA	80.3%	99.6%	79.2%	99.8%
 EFF	50.6%	54.4%	69.0%	82.8%
 EFF			0.0%	7.6%
 IFP	31.7%	32.6%	34.1%	49.7%
 NFP	19.8%	28.3%	1.3%	3.7%
 NFP	0.0%	6.4%	0.0%	1.3%
 NFP	15.4%	15.9%	0.6%	13.3%
 VF Plus	0.0%	7.1%	4.9%	29.6%
All	84.2%	90.2%	83.2%	91.5%

The aggregate gain looks modest until one considers the percentage of voters without an MP of their own party. This drops from 15.8% to 9.8% in 2014 and from 16.8% to 8.5% in 2019. Moreover, without assignment, no voters in seven out of thirteen parties have an MP of their own party in their constituencies in 2014 and eight out of fourteen parties in 2019. Small parties in particular, might seek to improve their connectedness with voters by designating some or all of their party list candidates as 'roving' rather than 'fixed abode' if offered a choice, as described above.

Dealing with the overhang problem

Overhangs do not arise in the historical simulations, but a provision in a revised Electoral Act must be made for dealing with them if they occur in future elections. The German and New Zealand solution of enlarging parliament are ruled out by Section 46(1) of the Constitution which places an upper limit of 400 on membership in the National Assembly. The following alternative two step procedure is suggested:

1. *Tolerate small deviations from proportionality.* Section 46(1)(d) of the Constitution requires that members be elected to the National Assembly in terms of an electoral system that “results, in general, in proportional representation”. The wording of the section appears to permit some deviation from proportionality. The section implicitly recognises that there are a variety of electoral systems that will yield proportional outcomes.² This is bolstered by the fact that the Constitution did not entrench our existing electoral system beyond the first election under the Constitution.³ Nevertheless, it is unclear what level of disproportionality will be constitutionally acceptable. While small deviations from proportionality resulting from the overhang problem would likely fall within constitutional bounds, this has not yet been tested in the courts. However, there are measures that could be taken to limit the extent of the deviation so as to minimise the risk of constitutional inconsistency, such as specifying the maximum tolerance of deviation in the Electoral Act.
2. *If the overhang is too large to be ignored, use a revised party list system to determine the outcome.* The procedure would be to revise party lists by placing all initially chosen constituency MPs on party lists in order of percentage votes they received in their constituencies, all ahead of candidates on the original party list. Then go down each party list until the number of candidates reaches the party entitlement to seats, each independent or independent list being regarded as a separate party. This would amount to applying the existing system to the revised party list. It would imply that some constituency winners would be unelected, undesirable in itself, but inevitable in a parliament with a fixed upper limit on membership.

Replacement of members of the National Assembly

MPs may die, become incapacitated, resign or become ineligible to continue during the life of a National Assembly. How should they be replaced? In the case of a party list member, the procedure would be the same as at present: the replacement would come from the relevant party list or short list of alternatives in the case of an independent. In the case of a constituency member, it may seem appropriate to hold a by-election in the relevant constituency. However, a by-election would not necessarily result in the election of an MP from the same party as the departing MP and may therefore distort proportionality in the National Assembly as a whole. The better solution would be to make a replacement from the relevant party list, or short list of alternatives in the case of an independent, with the replacement assigned to the relevant constituency.

Demarcation: what is, and is not, at stake

It may be pointed out that determination of municipal and ward boundaries by the Municipal Demarcation Board have, on occasion, led to objections in some occasions and even to conflict on the ground. If so, why would constituency demarcation not cause the same difficulties? And if it does, is this not a major reason why a constituency system should not be adopted?

Two replies may be made:

1. Constituency boundaries have no effect at all on aggregate seats by party (including Option E independents) in the National Assembly, determined solely by the party ballots aggregated nationally. Gerrymandering – manipulation of the boundaries of constituencies so as to favour or disadvantage a party – can have a substantial effect on outcome in a first past the post, non-proportional electoral system. In an MMP system, the incentive to gerrymander is much reduced.
2. The principle of having constituency boundaries not crossing local municipality/small metro boundaries and conforming to district authority boundaries as far as possible, will keep contestation of constituency boundaries to a minimum. Some potential conflict will have been worked through already as a part of the Municipal Demarcation Board's determinations.

Splitting the vote: lessons from the 2016 local government election⁴

Voters in local government elections are given two ballot papers: one to elect a ward councillor (the ‘ward vote’) and the other to indicate support of a party within the municipality the ‘PR vote’). The party to which the ward councillor belongs need not be the same as that indicated on the party ballot paper, creating the possibility of a split vote.

Using the results of the 2016 local government election, one can answer two questions:

1. What was the extent and nature of vote splitting in that election? In order to get a precise answer to that question, one would need individual voting returns which could never become available given the confidentiality of voting. The next best thing is to use the results of the election at the smallest units at which they are available: individual voting districts. Considering differences in party outcomes at this level will lead to an estimation of a lower bound on vote splitting. Some individual voters may have split their votes in such a way that the splits are not identifiable from voting district data.

The steps in the estimation procedure are as follows:

- (a) Estimate the minimum number of voters who were issued with ballot papers at each voting station. This is the maximum of valid votes plus spoilt votes for wards (A) and valid voters plus spoilt PR votes for parties (B).
- (b) Usually there is a discrepancy between A and B. When there is, add a number of blank votes to either the ward or party votes, so as to make the totals equal. Why there is a discrepancy is not clear.

A blank paper placed in a ballot box should count as a spoilt votes, so either there are discrepancies in counting votes or (as should not happen) voting papers are not placed in boxes. But one has to impute blank votes in order to keep the accounting straight.

- (c) Add up total votes by party, adding spoilt and blank votes as categories, for ward and PR votes separately.
 (d) The lower bound estimate of split votes can be calculated from both the ward and the PR sides as shown in the following example.

Suppose we have three parties A, B and C and the voting pattern is as shown:

Party	Ward votes	PR votes	Total	Minimum Ward vote split	Minimum Party vote split
A	55	57	112	0	2
B	28	31	59	0	3
C	9	4	13	5	0
Spoilt	6	8	14	0	2
Subtotal	98	100			
Blank	2	0	2	2	0
Minimum voters	100	100	200	7	7

Note that the split pattern differs from which side one starts, but the total splits must be identical. In this case, seven voters are estimated to have split their vote.

It is also of interest to distinguish between the three largest parties (ANC, DA and EFF) and the plethora of smaller, often regional, parties contesting local government elections. Applying the method above, and aggregating to the national level, the lower bound estimate of split votes as a percentage of total voters is as follows:

Split type	PR votes	Ward votes
Cross-party: Big 3	2.78	1.61
Cross-party: Other	1.79	3.29
Party-blank	0.66	0.56
Party-spoilt	0.49	0.27
All	5.72	5.72

One may additionally calculate the percentage of voters who vote for any of the Big 3 party candidates on the ward ballot and vote differently on the party ballot (including spoilt and blank votes) and the corresponding percentage of voters who vote for small parties on the ward ballot.

	Big 3	Small parties
Split votes	1.86%	28.64%
Total votes	13 199 603	1 757 440

These results indicate that political party affiliation is consistent for the Big 3 parties, but that voters supporting candidates for small parties on the ward ballot may often decide not to vote on the PR ballot, or to vote for one of the Big 3 parties on that ballot. The extent of split voting will then depend on the number of, and support for, small parties.

2. What would have the outcome of the 2016 local government election have been if, in accordance with the German and New Zealand systems, the total number of councillors by municipality had been determined by the PR vote alone, rather than by the sum of the ward and PR votes?

The outcome would have been little different. There would have been no change at all in the distribution of seats by party in 136 out of 212 local and metro municipalities, and a change of only one seat between parties in 63 municipalities, a change of two seats between parties in 11 municipalities and a change of three seats in 2 municipalities.

In party political terms, the Big 3 parties represented in Parliament would have sustained a small loss across all municipalities, the smaller parties represented in Parliament would have gained, and local parties not represented in Parliament would have lost.

Party	Change in seats	All local government seats (existing system)	Per cent change
REPRESENTED IN PARLIAMENT			
Big 3	-30	7704	-0.4%
Small parties	35	706	5.0%
NOT REPRESENTED IN PARLIAMENT			
Parties	-5	208	-2.4%
Independents	0	27	0.0%

Conclusions

Under the proposed system:

1. Well over half of MPs will be directly elected by their voters in their constituencies, and the rest of them will be assigned to constituencies in accordance with a defined procedure. Nearly all voters will have at least one MP of the party they support in their constituencies. The system is in line with recommendation 6.8 in the *Report of the High Level Panel on the Assessment of Key Legislation and the Acceleration of Fundamental Change*:

The Panel recommends that Parliament should amend the Electoral Act to provide for an electoral system that makes Members of Parliament accountable to defined constituencies on a proportional representation and constituency system for national elections.
2. The creation of a record of public service in the constituency which an aspirant MP would seek to represent would be encouraged. Each directly represented and fixed abode party list MP would open a constituency office in a place of his or her choice within his or her constituency, in order to both report back and carry out constituency work.
3. The MS system would diffuse the system of candidate choice. Parties would decide on their list of individually elected candidates at the constituency level. Central party lists would be shorter, and would have to be compiled taking constituencies into account. Party lists could be chosen in such a way as to conform to party norms about the balance of its candidates by specific characteristics, such as gender.
4. The representation of parties proportional to the votes on the party ballot only. This creates a cleaner distinction of intentions than the current local government election system, which bases party representation on the sum of ward and party list votes. In the first ballot, voters would be choosing the individual they wish to elect to the National Assembly. In the second ballot, voters would be choosing the representation of parties in the National Assembly. Evidence from the 2016 local government election suggests that the result would not be a lot different if the local government system were used.

ANNEXURE

Method for allocating party list members to constituencies

The party list MP allocation works as follows:

- A. Create a bucket in each constituency capable of holding two party list MPs.
- B. Divide parties represented in the National Assembly into four categories as follows:
 1. Parties with no constituency candidates.
 2. Parties with constituency candidates, with no more party list MPs than constituencies within which they have no constituency MPs.
 3. Parties with constituency candidates, with more party list MPs than constituencies within which they have no constituency MPs.
 4. The largest party.

Table 2 sets out parties represented in the National Assembly by category.

- C. Sort parties by category, then by number of seats in the National Assembly, then by lot.
- D. Start with the first party in Category 1 and list constituencies by descending level of party support. Put one party list MP to each constituency bucket, going down the list until all party list MPs are allocated.
- E. Continue in like manner with all other parties in Category 1. As soon as a constituency bucket is full, remove the constituency from further allocations.
- F. Repeat D and E for Category 2, but this time skip constituencies where the party has a constituency MP.
- G. For each Category 3 party, allocate one member to each constituency in which the party does not have a constituency MP to the constituency bucket. This will not exhaust all the party list MPs, so allocate the remainder using the steps in D and E.
- H. Use the party list MPs from the Category 4 party (the largest party) to fill the remaining buckets.

Complex, but it works.

A worked example follows.

Table 1

Constituency	Constituency seats					Party list votes				
	Party A	Party B	Party C	Party D	Total	Party A	Party B	Party C	Party D	Total
I	0	0	2	3	5	23	22	50	160	255
II	0	0	1	5	6	35	25	85	200	345
III	0	1	2	2	5	18	23	45	130	216
IV	0	1	0	3	4	14	40	35	95	184
Total	0	2	5	13	20	90	110	215	585	1000
Quota						125				
Party list votes/quota						0.72	0.88	1.72	4.68	
Party list seats						1	1	2	4	8

Step B	Party A	Party B	Party C	Party D
Category	1	2	3	4

Position after Step D

Constituency	Party A	Party B	Party C	Party D	Bucket
I					
II	1				1
III					
IV					
Total	1	0	0	0	1



Position after Step F

Constituency	Party A	Party B	Party C	Party D	Bucket
I					
II	1	1			2
III					
IV					
Total	1	1	0	0	2

Position after Step G

Constituency	Party A	Party B	Party C	Party D	Bucket
I			1		1
II	1	1			2
III					
IV			1		1
Total	1	1	2	0	4

Position after Step H

Constituency	Party A	Party B	Party C	Party D	Bucket
I			1	1	2
II	1	1			2
III				2	2
IV			1	1	2
Total	1	1	2	4	8



Table 2

Category	2014	2019
Category 1	African Christian Democratic Party African Independent Congress African People's Convention Agang South Africa Congress of the People Pan Africanist Congress of Azania Vryheidsfront Plus	African Christian Democratic Party African Independent Congress African Transformation Movement Al Jama-Ah Congress of the People GOOD Pan Africanist Congress of Azania
Category 2	Economic Freedom Fighters Inkatha Freedom Party National Freedom Party United Democratic Movement	Economic Freedom Fighters Inkatha Freedom Party National Freedom Party United Democratic Movement Vryheidsfront Plus
Category 3	Democratic Alliance	Democratic Alliance
Category 4	African National Congress	African National Congress

APPENDIX

Table A1

Province	Constituency	2014			2019		
		Constituency seats	Registered Total	Population Per seat	Constituency seats	Registered Total	Population Per seat
METRO CONSTITUENCIES							
Eastern Cape	Buffalo City	5	413 576	82 715	5	421 247	84 249
	Nelson Mandela Bay	7	592 749	84 678	7	607 134	86 733
Free State	Mangaung	5	416 327	83 265	5	425 263	85 053
Gauteng	EKU_1	6	512 668	85 445	6	536 905	89 484
	EKU_2	6	517 341	86 224	6	539 904	89 984
	EKU_3	6	512 919	85 487	6	554 247	92 375
	JHB_1	6	518 836	86 473	6	553 811	92 302
	JHB_2	7	591 885	84 555	7	650 502	92 929
	JHB_3	6	540 872	90 145	6	540 199	90 033
	JHB_4	6	532 470	88 745	6	546 787	91 131
	TSH_1	5	425 252	85 050	5	457 549	91 510
	TSH_2	6	513 185	85 531	6	540 519	90 087
	TSH_3	6	517 245	86 208	6	559 156	93 193
KwaZulu-Natal	ETH_1	5	431 655	86 331	5	463 316	92 663
	ETH_2	5	431 477	86 295	5	470 336	94 067
	ETH_3	5	425 744	85 149	5	453 247	90 649
	ETH_4	6	550 340	91 723	6	574 507	95 751
Western Cape	CPT_1	5	418 197	83 639	5	463 321	92 664
	CPT_2	6	530 224	88 371	6	544 368	90 728
	CPT_3	5	434 363	86 873	5	455 029	91 006
	CPT_4	6	519 270	86 545	6	545 525	90 921
Total		120	10 346 595	86 222	120	10 902 872	90 857

Table 1

		Constituency seats	Registered Total	Population Per seat	Constituency seats	Registered Total	Population Per seat
OTHER CONSTITUENCIES							
Eastern Cape	Alfred Nzo	4	3770229	94 307	4	412 014	10 3004
	Amathole	5	440 311	88 062	5	448 264	89 653
	Eastern Cape A	4	389 737	97 434	4	399 214	99 804
	Eastern Cape B	5	396 590	79 318	4	408 528	102 132
	O.R.Tambo	7	629 867	89 981	7	666 169	95 167
Free State	Free State A	7	636 209	90 887	7	638 833	91 262
	Thabo Mofutsanyane	5	396 952	79 390	4	398 412	99 603
Gauteng	Sedibeng	5	457 965	91 593	5	469 137	93 827
	West Rand	5	417 469	83 494	5	432 504	86 501
KwaZulu-Natal	KwaZulu-Natal A	3	290 239	96 746	4	335 787	83 947
	KwaZulu-Natal B	5	464 387	92 877	5	507 474	101 495
	KwaZulu-Natal C	5	419 617	83 923	5	452 619	90 524
	KwaZulu-Natal D	7	630 440	90 063	7	679 489	97 070
	Ugu	4	348 683	87 171	4	372 479	93120
	Uthungulu	5	453 125	90 625	5	485 948	97 190
	Zululand	4	362 998	90 750	4	393 736	98 434
	iLembe	3	304 519	101 506	4	335 728	83 932
Limpopo	Capricorn	6	541 528	90 255	6	581 414	96 902
	Mopani	6	520 073	86 679	6	556 009	92 668
	Sekhukhune	5	480 438	96 088	6	513 390	85 565
	Vhembe A	4	326 162	81 541	4	345 961	86 490
	Vhembe B	3	260 191	86 730	3	278 790	92 930
	Waterberg	4	309 888	77 472	4	332 896	83 224
Mpumalanga	Ehlanzeni A	5	395 801	79 160	5	425 922	85 184
	Ehlanzeni B	4	356 797	89 199	4	379 012	94 753
	Gert Sibande	5	480 648	96 130	5	498 101	99 620
	Nkangala	7	627 588	89 655	7	648 741	92 677
North West	Bojanala A	3	297 364	99 121	3	315 273	105 091
	Bojanala B	5	439 648	87 930	5	451 121	90 224
	Dr Kenneth Kaunda	4	340 576	85 144	4	341 647	85 412
	North West A	7	591 761	84 537	6	594 687	99 115
Northern Cape	Northern Cape	7	601 080	85 869	7	626 471	89 496
Western Cape	Western Cape A	6	546 243	91 041	6	589 568	98 261
	Western Cape B	6	483 661	80 610	6	530 756	88 459
Total		170	15 015 784	88 328	170	15 846 094	93 212
Grand Total		290	25 362 379	87 456	290	26 748 966	92 238

Table A2

Province	Municipality	District Name	Constituency	Notes
Eastern Cape	Matatiele	Alfred Nzo	Alfred Nzo	Single district
	Mbizana			
	Ntabankulu			
	Umzimvubu			Single district
	Amahlathi	Amathole	Amathole	
	Great Kei			
	Mbhashe			
	Mnquma			
	Ngqushwa			
	Raymond Mhlaba			
North West	Kgetlengrivier	Bojanala	Bojanala A	Single district split
	Rustenburg			
	Madibeng		Bojanala B	Single district split
	Moretele			
	Moses Kotane			
Eastern Cape	Buffalo City	Buffalo City	Buffalo City	Metro
Western Cape	City of Cape Town	City of Cape Town	Cape Town	Metro
Limpopo	Blouberg	Capricorn	Capricorn	Single district
	Lepele-Nkumpi			
	Molemole			
	Polokwane			
North West	JB Marks	Dr Kenneth Kaunda	Dr Kenneth Kaunda	Single district
	Maquassi Hills			
	Matlosana			
Eastern Cape	Blue Crane Route	Cacadu	Eastern Cape A	Single district plus single district split
	Dr Beyers Naude	Chris Hani		
	Enoch Mgijima			
	Inxuba Yethemba			
	Kouga	Cacadu		
	Kou-Kamma			
	Makana			
	Ndlambe			
	Sundays River Valley			
	Elundini	Joe Gqabi		Eastern Cape B
Emalahleni	Chris Hani			

Province	Municipality	District Name	Constituency	Notes
Eastern Cape	Engcobo	Chris Hani	Eastern Cape B	
	Intsika Yethu			
	Sakhisizwe			
	Senqu	Joe Gqabi		
	Walter Sisulu			
Mpumalanga	Bushbuckridge	Ehlanzeni	Ehlanzeni A	Single district split
	Nkomazi			
	City of Mbombela		Ehlanzeni B	Single district split
	Thaba Chweu			
Gauteng	Ekurhuleni	Ekurhuleni	Ekurhuleni	
KwaZulu-Natal	eThekweni	eThekweni	eThekweni	Metro
Free State	Kopanong	Xhariep	Free State A	Three districts merged
	Letsemeng			
	Mafube	Fezile Dabi		
	Masilonyana	Lejweleputswa		
	Matjhabeng			
	Metsimaholo	Fezile Dabi		
	Mohokare	Xhariep		
	Moqhaka	Fezile Dabi		
	Nala	Lejweleputswa		
	Ngwathe	Fezile Dabi		
	Tokologo	Lejweleputswa		
	Tswelopele			
Mpumalanga	Chief Albert Luthuli	Gert Sibande	Gert Sibande	Single district
	Dipaleseng			
	Dr Pixley Ka Isaka Seme			
	Govan Mbeki			
	Lekwa			
	Mkhondo			
	Msukaligwa			
KwaZulu-Natal	KwaDukuza	iLembe	iLembe	Single district
	Mandeni			
	Maphumulo			
	Ndwedwe			
Gauteng	City of Johannesburg	City of Johannesburg	Johannesburg	Metro

Province	Municipality	District Name	Constituency	Notes	
KwaZulu-Natal	Big Five Hlabisa	Umkhanyakude	KwaZulu-Natal A	Single district	
	Jozini				
	Mtubatuba				
	Umhlabuyalingana				
	Dannhauser	Amajuba	KwaZulu-Natal B	Two districts merged	
	Emadlangeni				
	Endumeni	Umzinyathi			
	Newcastle	Amajuba			
	Nqutu	Umzinyathi			
	Umsinga				
	Umvoti				
	Alfred Duma			Uthukela	KwaZulu-Natal C
Inkosi Langalibalele					
Mpofana	Umgungundlovu				
Okhahlamba	Uthukela	KwaZulu-Natal C			
uMngeni	Umgungundlovu				
uMshwathi					
Dr Nkosazana Dlamini Zuma	Sisonke	KwaZulu-Natal D			
Greater Kokstad					
Impendle	Umgungundlovu		Two districts merged		
Mkhambathini					
Msunduzi					
Richmond					
Ubuhlebezwe	Sisonke				
Umzimkhulu					
Free State	Mangaung		Mangaung	Mangaung	Metro
Limpopo	Ba-Phalaborwa		Mopani	Mopani	Single district
	Greater Giyani				
	Greater Letaba				
	Greater Tzaneen				
	Maruleng				
Eastern Cape	Nelson Mandela Bay	Nelson Mandela Bay	Nelson Mandela Bay	Metro	

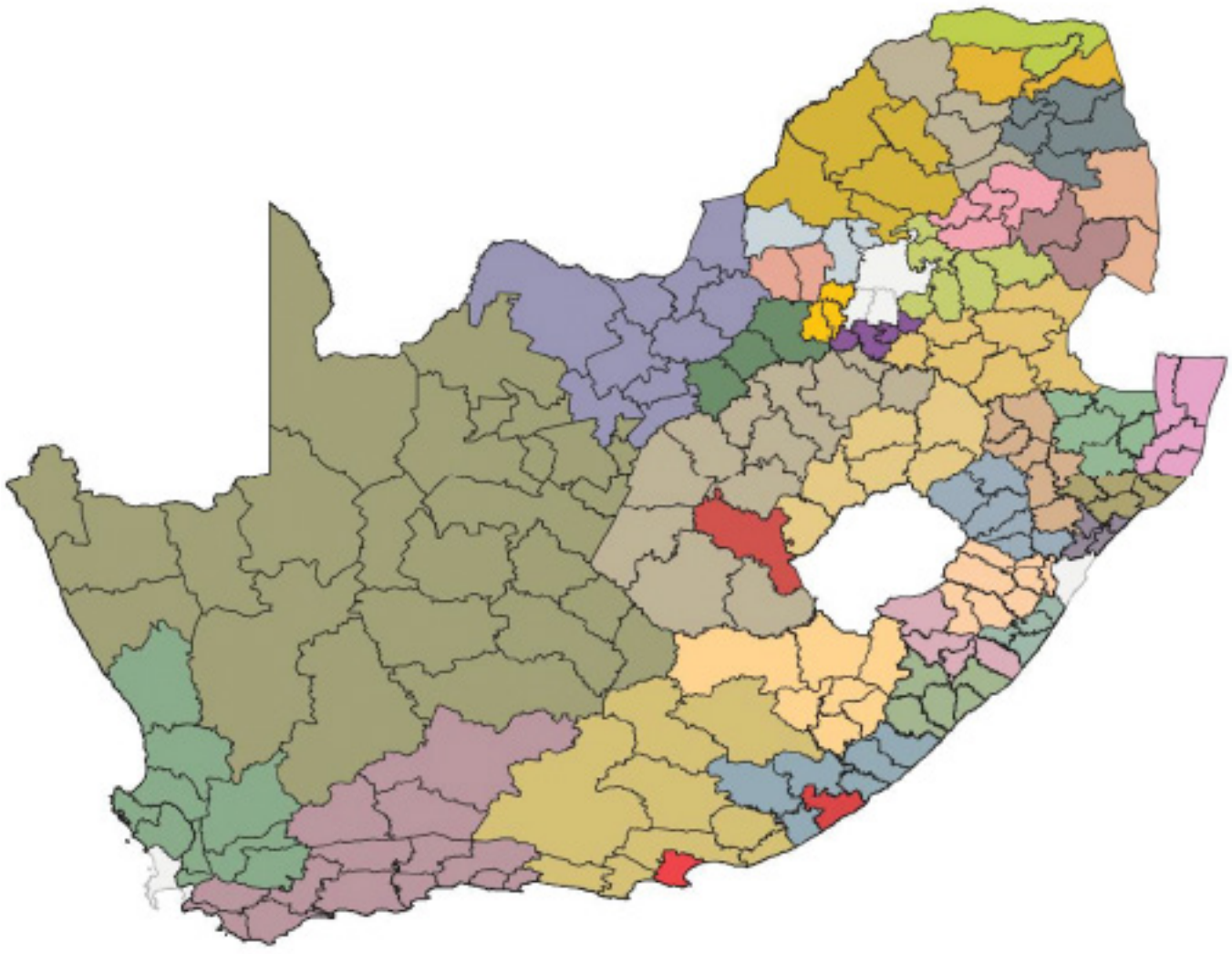
Province	Municipality	District Name	Constituency	Notes
Mpumalanga	Dr JS Moroka	Nkangala	Nkangala	Single district
	Emakhazeni			
	Emalahleni			
	Steve Tshwete			
	Thembisile Hani			
	Victor Khanye			
North West	Ditsobotla	Ngaka Modiri Molema	North West A	Two districts merged
	Greater Taung	Dr Ruth Segomotsi Mompoti		
	Kagisano/Molopo			
	Lekwa-Teemane			
	Mafikeng	Ngaka Modiri Molema		
	Mamusa	Dr Ruth Segomotsi Mompoti		
	Naledi			
	Ramotshere Moiloa	Ngaka Modiri Molema		
	Ratlou			
	Tswaing			
Northern Cape	!Kheis	Z F Mgcawu	Northern Cape	Five districts merged
	Dawid Kruiper			
	Dikgatlong	Frances Baard		
	Emthanjeni	Pixley ka Seme		
	Gamagara	John Taolo Gaetsewe		
	Ga-Segonyana			
	Hantam	Namakwa		
	Joe Morolong	John Taolo Gaetsewe		
	Kai !Garib	Z F Mgcawu		
	Kamiesberg	Namakwa		
	Kareeberg	Pixley ka Seme		
	Karoo Hoogland	Namakwa		
	Kgatelopele	Z F Mgcawu		
	Khai Ma	Namakwa		
	Magareng	Frances Baard		
	Nama Khoi	Namakwa		
	Phokwane	Frances Baard		
	Renosterberg	Pixley ka Seme		
	Richtersveld	Namakwa		
	Siyancuma	Pixley ka Seme		
Siyathemba				

Province	Municipality	District Name	Constituency	Notes
Northern Cape	Sol Plaatje	Frances Baard	Northern Cape	
	Thembelihle	Pixley ka Seme		
	Tsantsabane	Z F Mgcawu		
	Ubuntu	Pixley ka Seme		
	Umsobomvu			
Eastern Cape	King Sabata Dalindyebo	O.R.Tambo	O.R.Tambo	Single district
	Mhlontlo			
	Ngquza Hill			
	Nyandeni			
	Port St Johns			
Gauteng	Emfuleni	Sedibeng	Sedibeng	Single district
	Lesedi			
	Midvaal			
Limpopo	Elias Motsoaledi	Sekhukhune	Sekhukhune	Single district
	Ephraim Mogale			
	Fetakgomo Tubatse			
	Makhuduthamaga			
Free State	Dihlabeng	Thabo Mofutsanyane	Thabo Mofutsanyane	Single district
	Maluti a Phofung			
	Mantsopa			
	Nketoana			
	Phumelela			
	Setsoto			
Gauteng	Tshwane Metro	City of Tshwane	Tshwane	Metro
KwaZulu-Natal	Ray Nkonyeni	Ugu	Ugu	Single district
	Umdoni			
	uMuziwabantu			
	Umzumbe			
	Mthonjaneni	Uthungulu	Uthungulu	Single district
	Nkandla			
	Umfolozu			
	uMhlathuze			
uMlalazi				
Limpopo	Collins Chabane	Vhembe	Vhembe A	Single district split
	Makhado		Vhembe B	
	Musina			
	Thulamela			
	Bela-Bela	Waterberg	Waterberg	Single district
	Lephalale			
	Modimolle-Mookgophong			
	Mogalakwena			
Thabazimbi				

Province	Municipality	District Name	Constituency	Notes
Gauteng	Merafong City	West Rand	West Rand	Single district
	Mogale City			
	Rand West City			
Western Cape	Bergervier	West Coast	Western Cape A	Two districts merged
	Breede Valley	Cape Winelands		
	Cederberg	West Coast		
	Drakenstein	Cape Winelands		
	Langeberg			
	Matzikama	West Coast		
	Saldanha Bay			
	Stellenbosch	Cape Winelands		
	Swartland	West Coast		
	Witzenberg	Cape Winelands		
	Beaufort West	Central Karoo	Western Cape B	Three districts merged
	Bitou	Eden		
	Cape Agulhas	Overberg		
	George	Eden		
	Hessequa			
	Kannaland			
	Knysna			
	Laingsburg	Central Karoo		
	Mossel Bay	Eden		
	Oudtshoorn	Eden		
	Overstrand	Overberg		
	Prince Albert	Central Karoo		
	Swellendam	Overberg		
Theewaterskloof				
KwaZulu-Natal	Abaqulusi	Zululand	Zululand	Single district
	eDumbe			
	Nongoma			
	Ulundi			
	uPhongolo			

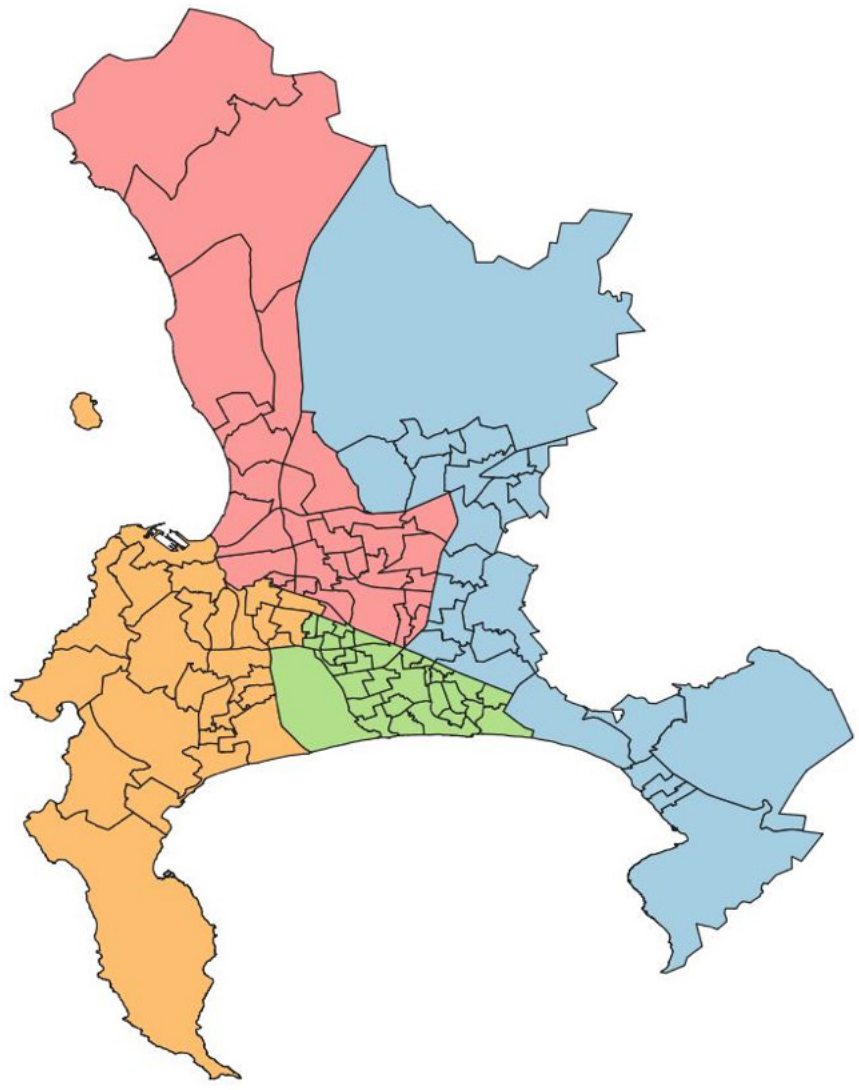
SOUTH AFRICA WITHOUT THE FIVE LARGE METROS

Constituencies are distinguished by blocks of colour
This map is divided into metros and local municipalities



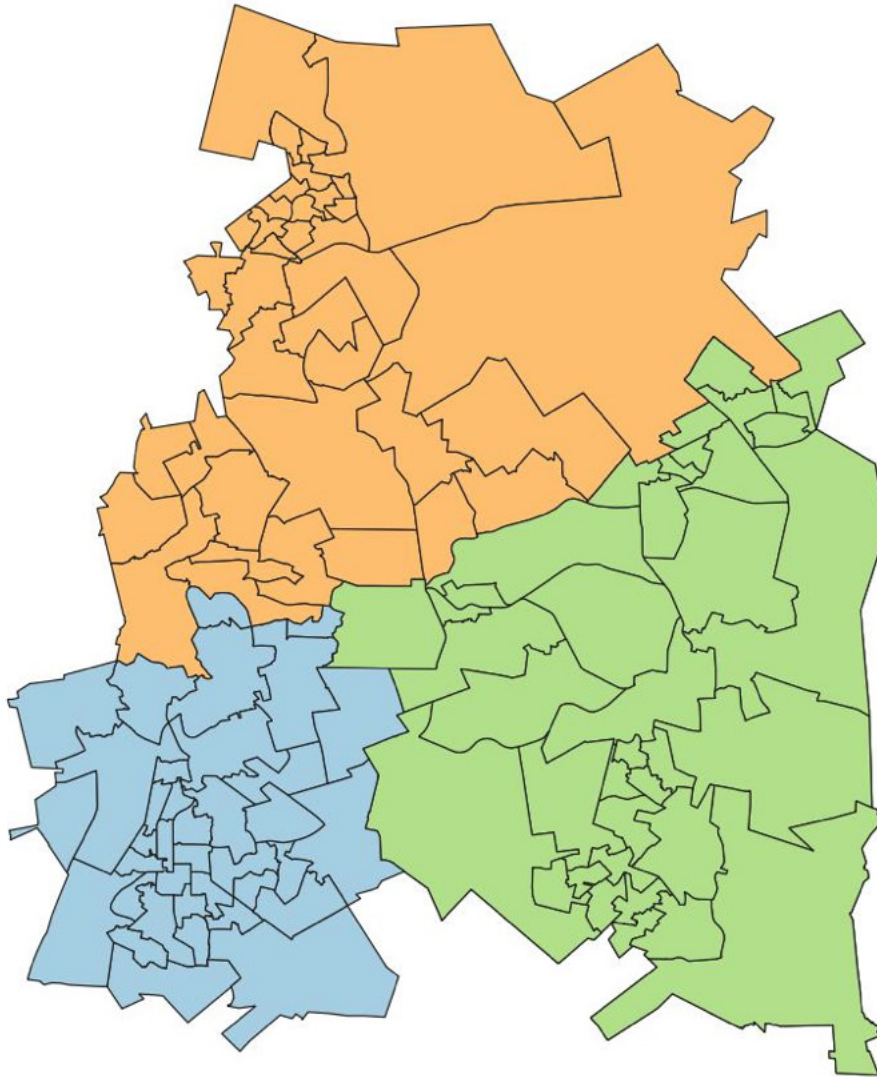
CAPE TOWN

Constituencies are distinguished by blocks of colour
The Metro maps are divided into wards



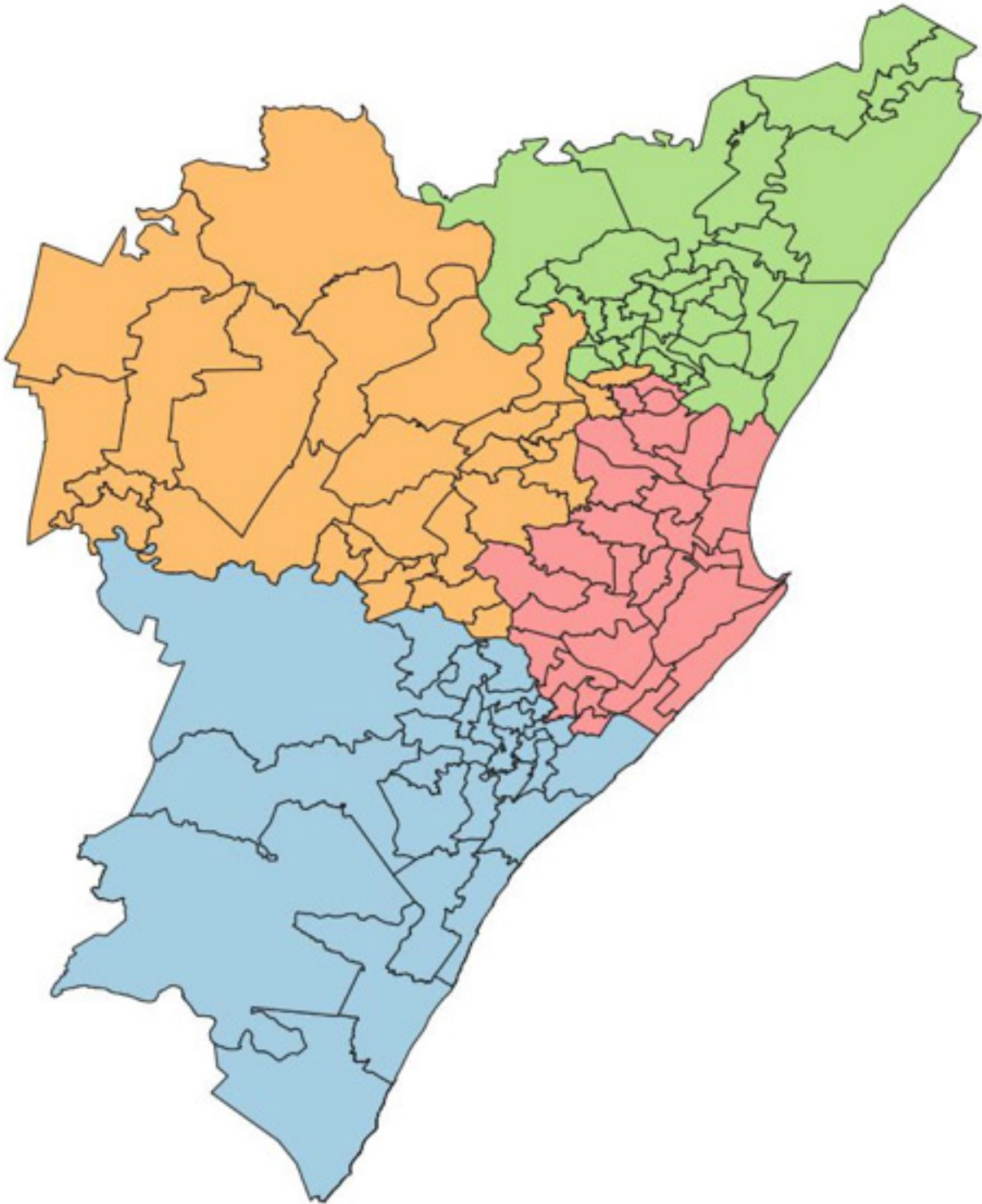
EKURHULENI

Constituencies are distinguished by blocks of colour
The Metro maps are divided into wards



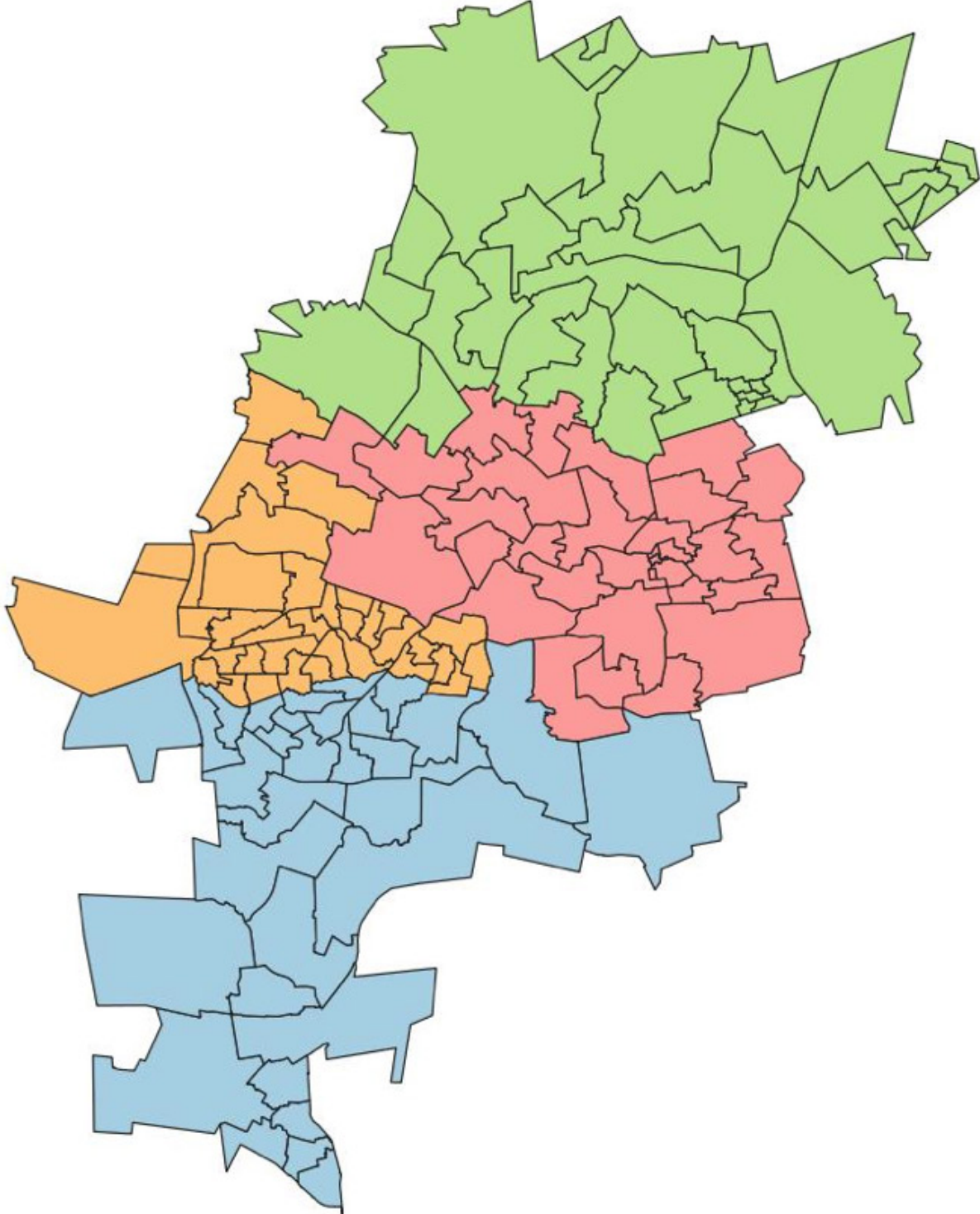
ETHEKWINI

Constituencies are distinguished by blocks of colour
The Metro maps are divided into wards



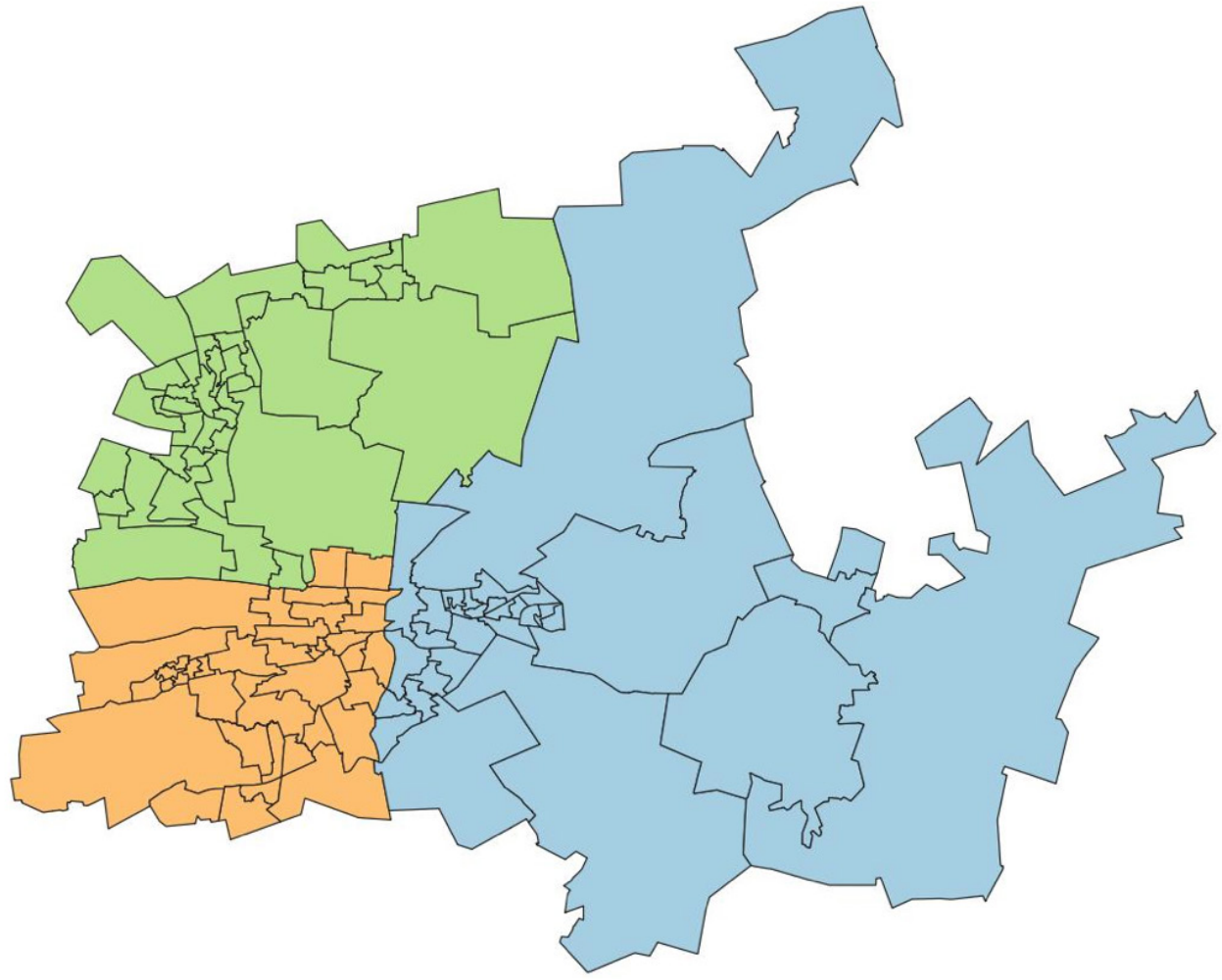
JOHANNESBURG

Constituencies are distinguished by blocks of colour
The Metro maps are divided into wards



TSHWANE

Constituencies are distinguished by blocks of colour
The Metro maps are divided into wards



SECTION C : ADDENDUM

Introduction

The purpose of this document is to add material to the analysis in the HSF's National Assembly Electoral Reform Report.

The focus here is on two issues:

1. How the overhang problem and split voting might affect the stability of the electoral system. The overhang problem occurs when the number of constituency MPs elected for a party exceeds the number of MPs to which a party is entitled, on the basis of either a party vote or a combined constituency/party vote. Split voting occurs when a voter votes for a constituency candidate representing a party other than the party voted for in the party vote. An additional theme here is split voting in the case of votes for independent candidates.
2. A consideration of the issues relevant to the decision about whether there should be single member or multiple member constituencies.

Overhang and split voting

There are two components to the analysis.

The first is a consideration of the German election of 2017. The German election is considered for two reasons. German elections usually produce overhangs and the last election was no exception. There is also extensive split voting in Germany.

The second is results from a quantitative model based on South African conditions.

The 2017 German Bundestag election

The initial size of the Bundestag is 598: 299 constituency seats and 299 party list seats. Germany has single member constituencies.

Table 1 sets out the results of the election, indicating the extent of the overhang. To be represented in the Bundestag, a party must either gain 5% of the party vote or obtain three seats.¹

Party	Constituency seats	Party votes	Party vote share	Available seats	Overhang
CDU	185	12447656	28.2	168	17
SPD	59	9539381	21.6	129	0
AfD	3	5878115	13.3	80	0
FDP	0	4999449	11.3	68	0
Die Linke	5	4297270	9.7	58	0
Gruene	1	4158400	9.4	56	0
CSU	46	2869688	6.5	39	7
Subtotal	299	44189959	100.0	598	
Other parties	0	2325533			
Total	299	46515492			

Table 1 shows that the CDU and CSU had overhangs. The German solution to this problem (not available in South Africa without a constitutional change) is to enlarge the size of the Bundestag by adding candidates from party lists so as to restore proportionality. The 2017 results required the enlargement of the Bundestag to 709 members, with only the CSU receiving no additional seats.

Why did this happen? The main reason is that both the CDU and the CSU won many constituency seats by pluralities which were not majorities. This was particularly true for the CDU in eastern states² and for the CSU almost everywhere in Bavaria, the state in which the CSU exists. Constituency wins on the first vote piled up faster than party votes on the second.

The German Federal Returning Officer has reported that 27.3% of voters split their vote in the 2017 election, more than ever before. Vote splitting was used less often by those who cast their second vote for the CDU, CSU and SPD. It was least frequent among those who voted for the CSU: 87.3 % of them cast their first vote for the CSU candidate,

1. Candidates from parties winning one or two constituency seats enter the Bundestag and the total number of seats divided among the remaining parties is adjusted accordingly. This circumstance did not arise in the 2017 election.

2. German states correspond to South African provinces

too. FDP voters were those who split their vote most often. 56.4 % of them cast their first vote for the constituency candidate of a different party, most often the CDU candidate (33.8 %).³

Again, why did this happen? One might construct a theoretical argument as follows. Refer to the voters who vote for the same party in both votes “consistents” and people who split their vote as “splitters”.

Why might a voter be a consistent?

1. Strong party identification: A predominantly ideological orientation.
2. The party one supports has a good chance of winning in one’s constituency.
3. The lack of an alternative party which one might support in a constituency vote.
4. The anticipated closeness of the vote in one’s constituency: The more unbalanced the contest, the less attractive is splitting, other things equal.

Why might a voter be a splitter?

1. A pragmatist rather than an ideologue. Greater fluidity in the party political configuration may encourage pragmatic behaviour.
2. The party one supports has a poor chance of winning in one’s constituency.
3. The presence of an alternative which one might support in a constituency vote.
4. The anticipated closeness of the vote in one’s constituency: The closer the contest, the more attractive is splitting, other things equal.
5. The presence of a particularly attractive candidate in a constituency, even though a member of another party.

The observed pattern in Germany is consistent with this framework and shows the following:

1. Most voters in Germany continue to have strong party identification.
2. Increased split voting is correlated with greater party fluidity (the decline of the SPD, the rise of the AfD and the Greens, and the fluctuating fortunes of the liberal FDP).
3. Voters supporting the bigger parties split their votes less.
4. For the AfD, Die Linke and the Greens, there are no clear alternative parties.
5. For the FDP, the CDU/CSU (and, probably, the SPD to a lesser extent) are reasonably close alternatives.

It has also been found in Germany that there are sociological factors influencing vote splitting. A recent study, based on the 2013 election, has found that well educated are more likely to make strategic choices than the poorly educated if they have little information about politics. However, if poorly educated and low-income voters have a medium-high or high level of political knowledge, they are as likely as rich and well-educated citizens to vote for two different parties.⁴

A final reflection is that Germany might have less of an overhang problem if it had multiple member constituencies. A multiple member constituency system allows more parties into constituency seats than a single member system, displacing some of the large party constituency members (with a corresponding increase in party list seats).

Applications of these insights to the South African circumstances

The analysis of the German elections suggests that attention be paid to the following:

1. The extent to which we are likely to have non-majoritarian pluralities in a single member constituency system.
2. The closeness of contests in a single member constituency system.
3. The incentives for split voting in South Africa.

The first two issues will be explored in a quantitative model, presented below. On split voting for the National Assembly, we have no historical data to guide us. There is some local government evidence for split voting, set out in Annexure 1 to this document. The study suggests that at least 5-6% of voters in the 2016 local government election split their votes. This is not necessarily a guide to what would happen in national elections, but it gives an indication of the willingness to split.

Any further discussion is conjecture, guided by the German experience. Table 2 sets out a possible situation among the five parties with the largest number of seats in parliament.

Table 2		
Party	Incentive to split	Comments
ANC	Weak	Largest party
DA	Weak	Second largest party
EFF	Variable	The split would probably be most in favour of the ANC, but it would depend on political alliances, and also on the gap between the ANC and EFF in constituencies. The smaller the gap, the less the incentive to split
IFP	Weak	No obvious alternative
VF+	Strong	The split would probably be most in favour of the DA, with possible localised support of the ACDP

3. See German Federal Returning Officer, 2017 Bundestag Election: more vote splitting than ever, Press release 02/18, 26 January 2018, available at 2017 Bundestag Election: more vote splitting than ever - The Federal Returning Officer (bundeswahlleiter.de)

4. See Consequences of Electoral System Change (a project funded by the Austrian Science Fund and the Deutsche Forschungsgemeinschaft), Does Ticket Splitting Empower White, Old, Well-educated, Rich Men? Evidence from Germany, available at Ticket Splitting - Evidence from Germany - Consequences of Electoral System Change - Research Project (jimdofree.com)

Annexure 2 compares the outcomes based on the 2014 election for single member and multiple member constituencies.

The overhang-split vote (OSV) model

The OSV model has the following features:

1. It constructs an imaginary country which is partly calibrated using data from the South African 2019 election. It can, however, be used to investigate very different patterns of political support. The user can specify any distribution of party votes.
2. In the model, there are five parties and four independents contesting an election. There is one big party, two medium size ones, and two small ones. The parties and independents have different concentrations of support. In some cases, the support is concentrated in a few constituencies, in others, the support is spread out more evenly across most constituencies.
3. There are 400 seats in Parliament.
4. The model user can specify the number of single member constituencies in increments of five, from five to 395. Multiple member constituencies are constructed by aggregating single member constituencies five at a time, so there can be between one and 79 constituencies each returning five constituency MPs.
5. Each single member, and therefore each multiple member, constituency in the model has the same number of voters.
6. The model works as follows:
 - It divides South Africa up into 200 constituencies, with local governments/metros as the starting points. Local governments with few voters in the 2019 elections are amalgamated and local governments with many voters are split in such a way as to yield constituencies with as close to equal numbers of voters as possible.
 - The proportion of voters in each constituency voting for each party can then be calculated. Independents are assumed to have the same distribution as four small parties. Independents are assumed to appear on the ballot in constituencies where they have the most support and on the second (party) ballot, so they can pick up support across the country.
 - This is the starting point for transforming these proportions into variables that are distributed according to a multivariate normal distribution. Samples are then drawn from this distribution and transformed back to proportions of voters in new, hypothetical constituencies.
 - Once one has the distribution of voters by constituency, it is straightforward to calculate the aggregate votes by party. The procedure for working out party representation in single member constituencies is equally simple: The party which gets the plurality in a constituency wins the seat. It is more complex in multiple member constituencies and the assumption to facilitate calculation (though it is not the recommendation of the HSF for implementation) is a closed party list system operated as the national system operates at present.
 - Technical details are provided in Annexure 3, for the purposes of transparency. They will only be transparent to those who have some knowledge of mathematics.

Overhang analysis

The model can now be run with alternative assumptions along two dimensions:

1. Differing distributions of votes across parties. These vary from a distribution which makes one party massively dominant, to a distribution where the inequality in support among the three top parties is much lower. Five distributions are considered, labelled A to E, where A is the most unequal distribution and E is the most equal. The shares of votes going to the two smallest parties and the independents are constant throughout.
2. Differing numbers of constituency seats: 320, 285, 265, 250, 220, 200.

Each combination from 1 and 2 is considered a scenario, so there are $5 \times 6 = 30$ scenarios. A spreadsheet with all of them has been compiled but will not be circulated.

Each scenario is colour coded as follows:

- RED** – There is an overhang for at least one party either in the single member constituency or multiple member constituency
- YELLOW** – There is no overhang, but there is the risk of at least one in the neighbourhood of model assumptions. The criterion for this is that the MPs from party lists is less than 10% of all MPs from that party.
- GREEN** – There is no overhang, and no party has fewer than 10% of its seats filled from its party list.

Figure 1 sets out the colour codings for each scenario:

Figure 1 – Summary

Scenario	A	B	C	D	E
Seats					
320	Close to overhang	Close to overhang	Close to overhang	Close to overhang	Close to overhang
285	Close to overhang	Close to overhang	No overhang	No overhang	No overhang
265	No overhang	No overhang	No overhang	No overhang	No overhang
250	No overhang	No overhang	No overhang	No overhang	No overhang
220	No overhang	No overhang	No overhang	No overhang	No overhang
200	No overhang	No overhang	No overhang	No overhang	No overhang

Overhang ■

Close to overhang ■

No overhang ■

The model yields no overhangs, but outcomes close to overhangs for all the 320 constituency seat scenarios and the two most unequally distributed vote outcomes for the 285 seat scenarios. All scenarios with 265 or fewer constituency seats have no overhangs or close to overhangs.

The difference between the single member constituency system and the multi-member system is that smaller parties are more likely to gain constituency seats.

Split voting

The model is elaborated to provide insight into split voting in the following ways:

1. It is first assumed that split voting is random, in the sense that the total votes by party/independent from the first (constituency) vote are equal to the total votes by party/independent from the second (party) vote. A percentage drawn from a normal distribution is added to the party vote to get the constituency vote. The normal distribution has a mean of zero, and a standard deviation of 4 for parties and 15 for independents. The adjustment may be positive or negative and the assumptions means that in 95% of constituencies, the constituency vote will be between 8% lower and 8% higher than the party vote for parties and between 30% lower and 30% higher for independents. Run on these assumptions, the model shows that the effect on outcomes will be minimal and the summary chart with this kind of split voting is exactly the same as the model without split voting.
2. But the discussion of the German 2017 election and the application of its finding to South Africa indicates that split voting is not likely to be random. This outcome is not fully modelled, but two indicators are calculated which bear on what might happen in a single member constituency system.

The first is a calculation of the percentages of constituencies, by party, which are won on the basis of a plurality but not a majority. As the analysis of the German 2017 election argued, the higher this percentage, the greater the chance of an overhang.

The second is a calculation of which constituencies are closely contested. The criterion for close contestation is a difference of less than a user specified percentage between party votes for the leading party and for the runner up. In the results below, this has been chosen to be 10%. Biased as well as random splitting can increase the gap between the no splitting and splitting outcomes.

These calculations are done only for the five parties, and not for the four independents.

Some illustrative results are set out in Table 3. Table 3 is based on 265 constituencies in all cases, with random splitting.

Scenario	Per cent of constituencies with a plurality which is not a majority					Per cent constituencies closely contested
	Party 1	Party 2	Party 3	Party 4	Party 5	
Most unequal distribution of party support	4%	2%	25%	22%		5%
Intermediate case	4%	8%	13%	22%	100%	6%
Most equal distribution of party support	9%	16%	22%	0%		6%

The percentage of constituencies with a plurality which is not a majority rises for Party 1, the biggest party. On the basis of the assumptions chosen, the same is true for the second biggest party, Party 2. In the case of Parties 3 and 4, the percentages bounce about because the numbers of constituencies won by these parties are small. Party 5 did not win any constituencies under the first and third constituencies. The percentage of constituencies that are closely contested rises very little as equality of political support increases.

The key point is that the percentages in Table 3 are very much lower than what one would find in Germany were the calculations done there. That suggests both that the risk of overhang is much lower in South Africa than in Germany and that biased split voting is not likely to increase the discrepancy in results between the split and no split cases.

The results cited throughout this addendum indicate that the probability of overhang would be very low up to the 265 constituency seat level. So a 2:1 ratio of constituency MPs to party list MPs seems safe enough. The risk of overhang would be greater if a 290:110 ratio were used, as suggested in the main report and in Annexure 4. That risk would probably remain at quite a low level in the short run, but should the configuration of party support change substantially over the longer run, the risk of overhang would rise.

Since the point of changing the electoral system is to increase the accountability of MPs, the number of constituency seats should be pushed to the maximum safe level.

A summary of the differences between a single member and a multiple member constituency system

If an MMP system is decided upon, the next most important question is whether constituencies should be single member or multiple member. At various points in the main report and in this addendum, observations have been made about the implications of the choice. This section pulls together a number of issues and reports on differences.

Table 4		
Consideration	Single member constituencies	Multiple member constituencies
Constitutional compliance	Yes	Yes
Overhang	Possible	Possible
Maximum number of constituency seats with low risk of overhang	266	266
Voters having at least one MP of their party in their constituency	76%. The percentage of small party supporters having an MP of their party in their constituency would be very low	90%. The percentage of small party supporters having an MP of their party in their constituency would be somewhat higher
Complexity of constituency vote for voters	Straightforward	More complex, depending on the system chosen
Implications of failing to return an existing constituency MP who stands again at the next election	Replacement of the person implies change in party control in the constituency	Replacement of the person does not necessarily imply change in party control in the constituency
Length of the constituency ballot paper	Not longer, and often shorter, than the length of the form used in elections since 1994	Could become very lengthy
Average constituency size	About 20% smaller than the average local municipality	Three to seven times larger

The choice will depend on the weights given to the various considerations.

ANNEXURE 1 – SPLITTING THE VOTE: THE 2016 LOCAL GOVERNMENT ELECTION

The election for district councils is not considered in this section.

Voters in local government elections are given two ballot papers: One to elect a ward councillor (the 'ward vote') and the other to indicate support of a party within the municipality the 'PR vote'). The party to which the ward councillor belongs need not be the same as that indicated on the party ballot paper, creating the possibility of a split vote.

Using the results of the 2016 local government election, one can answer two questions:

1. What was the extent and nature of vote splitting in that election? In order to get a precise answer to that question, one would need individual voting returns which could never become available given the confidentiality of voting. The next best thing is to use the results of the election at the smallest units at which they are available: individual voting districts. Considering difference in party outcomes at this level will lead to estimation of a lower bound on vote splitting. Some individual voters may have split their votes in such a way that the splits are not identifiable from voting district data.

The steps in the estimation procedure are as follows:

- (a) Estimate the minimum number of voters who were issued with ballot papers at each voting station. This is the maximum of valid votes plus spoilt votes for wards (A) and valid voters plus spoilt PR votes for parties (B).
- (b) Usually there is a discrepancy between A and B. When there is, add a number of blank votes to either the ward or party votes, so as to make the totals equal. Why there is a discrepancy is not clear. A blank paper placed in a ballot box should count as a spoilt vote, so either there are discrepancies in counting votes or (as should not happen) voting papers are not placed in boxes. But one has to impute blank votes in order to keep the accounting straight.
- (c) Add up total votes by party, adding spoilt and blank votes as categories, for ward and PR votes separately.
- (d) The lower bound estimate of split votes can be calculated from both the ward and the PR sides as shown in the following example.

Suppose we have three parties A, B and C and the voting pattern is as shown:

Party	Ward votes	PR votes	Total	Minimum Ward vote split	Minimum Party vote split
A	55	57	112	0	2
B	28	31	59	0	3
C	9	4	13	5	0
Spoilt	6	8	14	0	2
Subtotal	98	100			
Blank	2	0	2	2	0
Minimum voters	100	100	200	7	7

Note that the split pattern differs from which side one starts, but the total splits must be identical. In this case, seven voters are estimated to have split their vote.

It is also of interest to distinguish between the three largest parties (ANC, DA and EFF) and the plethora of smaller, often regional, parties contesting local government elections. Applying the method above, and aggregating to the national level, the lower bound estimate of split votes as a percentage of total voters is as follows:

Split type	PR votes	Ward votes
Cross-party: Big 3	2.78	1.61
Cross-party: Other	1.79	3.29
Party-blank	0.66	0.56
Party-spoilt	0.49	0.27
All	5.72	5.72

One may additionally calculate the percentage of voters who vote for any of the Big 3 party candidates on the ward ballot and vote differently on the party ballot (including spoilt and blank votes) and the corresponding percentage of voters who vote for small parties on the ward ballot.

	Big 3	Small parties
Split votes	1.86%	28.64%
Total votes	13 199 603	1 757 440


These results indicate that political party affiliation is consistent for the big three parties, but that voters supporting candidates for small parties on the ward ballot may often decide not to vote on the PR ballot, or to vote for one of the big three parties on that ballot. The extent of split voting will then depend on the number of, and support for, small parties.

2. What would have the outcome of the 2016 local government election have been if, in accordance with the German and New Zealand systems, the total number of councillors by municipality had been determined by the party vote alone, rather than by the sum of the ward and party votes?


The outcome would have been little different. There would have been no change at all in the distribution of seats by party in 136 out of 212 local and metro municipalities, and a change of only one seat between parties in 63 municipalities, a change of two seats between parties in 11 municipalities and a change of three seats in 2 municipalities.

In party political terms, the Big 3 parties represented in Parliament would have sustained a small loss across all municipalities, the smaller parties represented in Parliament would have gained, and local parties not represented in Parliament would have lost.

Party	Change in seats	All local government seats (existing system)	Per cent change
REPRESENTED IN PARLIAMENT			
Big 3	-30	7704	-0.4%
Small parties	35	706	5.0%
NOT REPRESENTED IN PARLIAMENT			
Parties	-5	208	-2.4%
Independents	0	27	0.0%



ANNEXURE 2 – SINGLE AND MULTIMEMBER CONSTITUENCIES OUTCOME BASED ON THE 2014 ELECTION RESULTS



The two systems

The first system (the “LG system”) works in the same way as local government elections, with the country divided into 200 constituencies. Each party would be entitled to enter one candidate in a constituency on the constituency ballot paper. Each party would be represented on the party ballot paper.

The second system (the “MS system”) is a modification of the majority recommendation in the Slabbert report. The country is divided into constituencies containing between three and seven individually elected MPs, entered on the individual candidate ballot paper, of which voters would select one. Each party could enter candidates up to the number of individually elected MPs assigned to particular constituencies.

The party composition of individually elected MPs would not necessarily meet the proportionality requirement of the Constitution. In order to meet the requirement, political parties would need to assemble party lists, as they do at present. In local government elections, the number of people elected from party lists by party is the difference between the total number of representatives of that party, as required by proportionality and the number of individually elected members elected on the FPP system.

The Slabbert report found that it would be sufficient to elect 100 members of Parliament from party lists, with the other 300 elected from the individual vote. The MS system is based on two party list candidates multiplied by the number of constituencies. Thus, if there were 55 constituencies, 110 MPs would be chosen from party lists and 290 would be chosen on the basis of individual votes.

To ensure that individually elected MPs are rooted in their communities, candidates for individual election must be usually resident in the constituencies in which they stand.

Both systems would yield the same number of seats by party in the National Assembly as the current electoral system.

A novel aspect of both systems presented here is that both the individual MPs and the party list MPs are assigned to constituencies. Why would one want to do this? The party list MPs would not depend on the votes cast in the constituencies to which they are assigned, but the assignation increases the probability that voters would have at least one MP in their constituencies who belong to the party they support.

The algorithms for assigning party list MPs are described below.

Demarcation

Demarcation of constituencies would be a task for the Independent Electoral Commission with the assistance of the Municipal Demarcation Board. The analysis here divides the country into constituencies using a Geographical Information System and information from the 2016 Community Survey and the 2014 list of registered voters by ward in the metropolitan areas. Specifically:

1. The population of voting age (18 and above) is tabulated for each local and metropolitan municipality.
2. Metropolitan municipalities are further divided into wards. Since the Community Survey does not report ward populations, registered voters by ward are used to subdivide the voting age population within each metro.
3. Each constituency is a consolidated block. In the LG system, the population of voting age is as close to constant across constituencies as possible. In the MS system, the population of voting age divided by the number of individually elected MPs is as close to constant as possible.
4. In the LG system, constituencies outside the metros are composed of one or more municipalities. Constituencies within the metros are aggregates of wards. 88 constituencies are located in metros and 112 constituencies outside the metros.
5. In the MS system, constituencies outside the metros are district municipalities, except where (a) the voting age population is too small to support three individually elected MPs, in which case district municipalities are combined or (b) the voting age population is too large to support seven individually elected MPs, in which case district municipalities are subdivided. In the metros, constituencies are aggregations of wards. The three smallest metros each contain one constituency, Ekurhleni, Ethekwini and Tshwane have three constituencies each, Cape Town four and Johannesburg five, making 21 metro constituencies in all. There are 34 constituencies outside the metros, making a total of 55 constituencies throughout the country.

Algorithms for assignation of party list MPs to constituencies

Party list candidates can be assigned to constituencies in the following way:

1. The results of both votes cast are aggregated by party, and the total number of MPs by party calculated in the same way as at present.
2. The number of party list candidates becoming MPs is the difference between the total and individually elected MPs in each party. In each party, constituencies are ranked by the extent of support for the party. In any party, the first rank would be assigned to the constituency where the party has the greatest number of votes, the second rank to the constituency with the second highest number of votes for the party, and so on. This support can be measured by the total number of votes, or the number of votes on the party list ballot.
3. The general principle would be to assign party list candidates from particular parties to constituencies in which these parties have the greatest support. Then party list candidates from each party would be chosen if their rank was less than or equal to the number of party list candidates to which that party is entitled.
4. But a problem remains. Simply allocating party list MPs if their rank is not greater than the number of seats to be filled will not guarantee that each constituency will have one party list MP in the case of the LG system or two party list MPs in the case of the MS system. A further procedure is required.
5. Start with the party with the lowest support and allocate seats by rank. Then do the same for the second smallest party, again allocate seats by rank, but skip constituencies if the requisite number of party list MPs have already been filled. Proceed in this way for the third smallest party and continue up to and including the second largest party. Then fill the gaps by allocating party list candidates from the largest party.

This point is complex. An example may make it clearer. Suppose we had a country with 5 multi member constituencies (with two party list MPs per constituency) and the outcome in terms of seats was as follows:

Party	Proportion representation requirement (A)	Individually elected MPs(B)	Party list MPs (A minus B)
A	20	17	3
B	10	8	2
C	6	3	3
D	4	2	2
Total	40	30	10

Suppose further that there are 800 votes per constituency, 4000 in all and suppose they are distributed across constituencies as follows:

Constituency	Party A	Party B	Party C	Party D	Total
Votes					
1	100	350	250	100	800
2	440	200	100	60	800
3	550	150	60	40	800
4	390	250	40	120	800
5	520	50	150	80	800
Total	2000	1000	600	400	4 000
Party list seats					
1			1	1	2
2		1	1		2
3	2				2
4		1		1	2
5	1		1		2
Total	3	2	3	2	10

Then the party list will be as shown. Start with Party D, the smallest party. They need 2 party list candidates, and these are assigned to constituencies 1 and 4. Then go to Party C and assign party list members to constituencies 1, 5 and 2. Note that in the case of constituency 1, the assignation of party list MPs is complete and no members from bigger parties can be assigned. This affects the handling of Party B. Although party B has the most votes in constituency 1, it cannot have a party list MP in that constituency, so its party list members are assigned to constituencies 4 and 2. Allocations for the party with most support (A) are made to ensure that each constituency has two party list MPs assigned to it.

- Some voters will not have an MP from the party they support in their constituencies. Voters supporting a party gaining no seats will fall into this category, as will voters in constituencies where the party they support gain few votes.

Implications for voters

- The LG system entails no more difficulty for voters than they experience in local government elections.
- In the case of the MS system, a decision would have to be made about how votes are to be cast. A menu of options is presented in the main report. Constituency ballot papers would have to be very long, since parties may elect to field more than one candidate in a constituency.

Implications for parties

In the case of the LG system, parties would each put up a single candidate in the constituencies they wish to contest.

In the case of the MS system, parties would have to make an assessment of how many candidates they wish to put up in each constituency, based on their expectation of voter support. Depending on the voting system chosen, misjudgments may have consequences for constituency candidates. Under some systems, putting up too few candidates risks winning seats with unnecessarily large majorities. Put up too many risks losing seats to other parties. Misjudgment would have, at worst, a limited effect. It would affect the balance between constituency and party list MPs within a party, but not aggregate party representation in the National Assembly.

Implications for candidates

Both systems would create incentives for candidates for individual election to achieve name recognition and a solid record in their constituencies. Once elected, they would need to report back to their supporters and to work to further their interests. Parish pump politics would become more salient, a necessary and not undesirable consequence of a constituency system.

One possibility is to put limits on the length of time MPs can serve as party list MPs. Party list MPs who wish to continue after the expiry of their term would then have to compete to become individually elected candidates.

Each MP, individually elected or party list, should be entitled to a constituency office, located at a place of their choice within their constituencies. The Independent Electoral Commission publishes election results by municipal ward (and, indeed by voting station) and individually elected MPs would be well advised to consider these results in order to locate their offices in the places where they have the greatest support.

What would the systems have produced given the pattern of voting in the 2014 national election?

One may use the results of the 2014 national election to gain a sense of how the two systems would perform. The fact that there was only a single party list ballot in that election does not permit assessment of the extent to which votes would be split between parties in the two vote system.

- The LG system

The distribution of seats would have been as follows:

Party	Individually elected	Party list	Total	Percentage of voters with an MP of their party in their constituency
ACDP		3	3	5.4
AIC		3	3	5.5
ANC	158	91	249	90.3
APC		1	1	6.3
AGANG		2	2	6.1
COPE		3	3	11.4
DA	40	49	89	68.4
EFF		25	25	27.4
INKATHA	2	8	10	46.2
NFP		6	6	29.7
PAC		1	1	2.6
UDM		4	4	35.9
VF+		4	4	12.7
Total	200	200	400	76.1

Only three parties would have had individually elected MPs: The ANC, DA and Inkatha, and only the ANC would have had more individually elected than party list MPs. The table also displays the percentage of voters with an MP of their party (either individually elected or party list) in their constituency. Two factors influence the distribution of these percentages: The extent of party support in the country as a whole, and the degree of geographical concentration of this support. A small party with a widely dispersed pattern of support will have a low percentage. By contrast, the supporters of the two largest parties – the ANC and the DA – have the highest percentages.

2. The MS system

Under the MS system, the results would have been as follows:

Party	Individually elected	Party list	Total	Percentage of voters with an MP of their party in their constituency
ACDP		3	3	15.3
AIC		3	3	13.3
ANC	201	48	249	100.0
APC		1	1	6.6
AGANG		2	2	13.6
COPE		3	3	23.2
DA	67	22	89	90.5
EFF	15	10	25	51.1
INKATHA	5	5	10	67.2
NFP	1	5	6	60.0
PAC		1	1	6.4
UDM	1	3	4	54.0
VF+		4	4	17.7
Total	290	110	400	90.0

In this case, six parties would have had constituency representatives.

Conclusions

1. Under the MS system, well over half of MPs will be elected by their voters in their constituencies. Nearly all voters will have at least one MP of the party they support in their constituencies. The system is in line with recommendation 6.8 in the Report of the High Level Panel on the Assessment of Key Legislation and the Acceleration of Fundamental Change:

The Panel recommends that Parliament should amend the Electoral Act to provide for an electoral system that makes Members of Parliament accountable to defined constituencies on a proportional representation and constituency system for national elections.

By contrast, under the LG system, half of MPs will be constituency MPs and half party list MPs. Fewer voters will have a constituency MP from their party.

2. Both systems encourage the creation of a record of public service in the constituency which an aspirant MP would seek to represent. Each directly represented MP would be able to open a constituency office in a place of his or her choice in order to both report back and carry out constituency work.
3. Both systems would diffuse the system of candidate choice. Parties would decide on their list of individually elected candidates at the constituency level, and parties would be well advised to select popular candidates. Central party lists would be shorter, and would have to be compiled taking constituencies into account.
4. Making the representation of parties proportional to the votes on the party ballot only would create a cleaner distinction of intentions than the current local government election system, which bases party representation on the sum of ward and party list votes. In the first ballot, voters would be choosing the individual they wish to elect to the National Assembly. In the second ballot, voters would be choosing the representation of parties in the National Assembly. Evidence from the 2016 local government election suggests that the result would not be a lot different (see Annexure 1), while voters would have a clearer understanding of the implications of their choices.



ANNEXURE 3 – TECHNICAL DETAILS OF THE OVS MODEL

Basics

One starts with the proportion p of voters in a particular constituency. p belongs to the closed interval $[0,1]$. It is inconvenient to work with the two endpoints 0 and 1, so ten votes are given to each party or independent that gained zero votes in the constituency.

It is also inconvenient to work with a subset of the real line, so the logit function is used as the first transformation to yield $g = \ln(p/(1-p))$. The logit function maps the open interval $(0,1)$ into \mathbb{R} , the real number line.

The distributions of g by party across all constituencies can be investigated and it turns out that a number of them are skew. So g has to be further transformed to remove the skewness, since normal distributions are not skew. This takes the form of $b = \ln(\pm \exp(g) - k)$, where the sign on the exponential and k are chosen to remove the skewness. In some cases, deviation of kurtosis from normality remains. This is not connected for.

A vector of means of b by party and a covariance matrix of b 's across parties can be calculated. This fully specifies the multivariate normal distribution from which samples for the new hypothetical constituencies can be drawn. The new b 's are then transformed back into g 's. One then chooses party multipliers m , such that when the $m.g$'s are transformed back into p 's (which are finally normalized to add to 1), the distribution of party votes corresponds to a specified distribution.

It is the covariance matrix which gives a South African flavour to the model. A similarly calculated matrix for Germany would look different.

Split vote add-ons

These are described in the main text of the addendum.

