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## **To PR or To Ward? Notes on the Political Consequences of Electoral Systems in Namibia**

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Namibian legislators are currently debating the merits of two types of electoral systems, namely proportional representation (PR or List) and plurality (FPTP or Ward). Their ultimate objective is to decide which of these two systems is the most appropriate for future local authority elections. This paper reviews some of the key arguments in the debate by highlighting the political consequences of the two systems. Data from four (regional and national) elections (1992-1999) is used to compare the consequences of the two types of electoral systems with regard to four issues: multipartism, disproportionality, inclusiveness and interaction. In all four instances, the empirical evidence suggests that PR systems perform better than FPTP systems. Based on these empirical indicators, this paper argues that the PR system should be retained because it is generally good for democracy and not necessarily for the reasons presented by those currently debating the issue.

### **1. Introduction**

Electoral systems are important because they are the mechanisms that convert votes into seats. The manner in which electoral systems convert votes into seats have political consequences, and these need to be taken into account when a final decision is made on which type of electoral system is to be used. Yet, at the same time, one has to come to terms with the fact that there is no perfect electoral system. Thus, whatever system is selected will have shortcomings and these will have to be accepted by all political actors for the electoral system to have any legitimacy.

Namibian legislators are currently debating whether future local authority elections should be conducted by means of a proportional representation (PR or List) or plurality (first-past-the-post or ward) electoral system. In the debate, SWAPO Party and the Monitor Action Group (MAG) have argued for the PR system whilst the remaining opposition parties expressed preference for the ward or plurality system. Those opposing the PR proposal argue that PR systems cause too much distance between representatives and voters because the basis of representation is a party list and not a clearly defined geographical constituency.<sup>1</sup> In introducing the amendment bill, the Deputy Minister of Regional, Local Government and Housing, Prof. Gerhard Töttemeyer defended the PR system on four grounds: 1) Namibian voters' familiarity with the system; 2) PR elections are less expensive than FPTP elections; 3) PR's ability to overcome the lingering spatial effects of Apartheid and racial segregation; and 4) PR's ability to facilitate gender quotas and bring about increased numbers of female representatives. This paper reviews some of these arguments and

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raises some new issues not covered in this debate. Finally, it goes beyond the scope of the current political debate thus by introducing a number of empirical indexes by which the political consequences of the two types of electoral systems can (and should) be assessed.

## 2. Some General Propositions

It has become common to classify the electoral systems into three broad typologies: proportional, majoritarian/plurality, and mixed.<sup>2</sup> Electoral systems of the *proportional* kind (PR) are also commonly referred to as 'List' systems since they all use lists of candidates to solicit support from voters. These lists can be closed or open<sup>3</sup>. PR systems convert votes into seats in a proportional manner – i.e. any party can expect an overall proportion of seats that is equal to, or almost equal to, its overall proportion of votes. Thus for example, if any party receives 34% of all votes cast, under a PR arrangement, that party can expect to obtain approximately 34% of all seats.<sup>4</sup> Thus under PR:

$S_i \approx V_i$  (where  $S_i$  is the seat share of the  $i$ -th party and  $V_i$  is the vote share of the  $i$ -th party).

Electoral systems of the *majoritarian/plurality* kind appoints one winner from a number of candidates on the basis of who gets the most votes. If the system is majoritarian, then the winner must obtain at least 50%+1 votes, and if the system is plurality, the winner must simply have more votes than any other contestant, but not necessarily an outright majority of all votes (50%+1). This is why plurality systems are often referred to as first-past-the-post (FPTP) or winner-takes-all systems. Under FPTP, the voting locale (country, region, city or town) is subdivided into constituencies or voting districts, or in the Namibian context, wards. Parties or voters nominate one candidate to contest the elections on behalf of that party or group of voter for that ward. The winning candidate is the one who receives most votes and outscores each of his or her opponents individually but not necessarily collectively. Thus under FPTP with four parties or candidates ( $a$ ,  $b$ ,  $c$  and  $d$ ) competing,  $a$  is declared winner if:

$$V_a > V_b$$

$V_a > V_c$  (Where  $V$  is the vote share of each individual party or candidate).

$$V_a > V_d$$

But this does not mean that  $a$  is the largest party overall. Hence:

$V_a \not\geq (V_b + V_c + V_d)$  (Where  $V$  is the vote share of each individual party or candidate).

Both PR and FPTP have political consequences.<sup>5</sup> Perhaps the most obvious difference between the two systems is the principle of proportionality: PR systems produce proportional results (seats) whereas FPTP does not. This has the following political consequences:

- FPTP systems can manufacture electoral majorities; PR systems cannot.<sup>6</sup> This means that under FPTP systems, any party can become a ruling party without necessarily obtaining an outright majority of votes (50%+1). Conversely, parties with the combined majority of votes (50%+1) can be excluded from legislative positions altogether, or be under-represented in the legislative body, because they did not obtain sufficient individual votes to secure a plurality overall.



- FPTP systems distort overall proportionality and as a result, large or important segments of the citizenry can be excluded from the legislative process.<sup>7</sup> A party's legislative strength (seats) is thus not necessarily an accurate indicator of its electoral strength (votes).
- FPTP systems have high thresholds that generally prevent smaller parties from gaining legislative representation. Over time, these smaller parties might disappear altogether; either because their supporters get tired of supporting losing parties (wasting their votes); or because these smaller parties get absorbed by larger parties to increase their chances for legislative success. FPTP systems are generally associated with a party system consisting of two (more or less equally large) parties, and PR with party systems consisting of three or more parties of which a number might be quite small.<sup>8</sup> In more technical terms, FPTP systems are associated with less fragmented party systems, and PR with more fragmented party systems.
- PR systems generally produce, for the reasons discussed above, more inclusive legislative bodies as it contains both big and small parties. FPTP produce more exclusive legislatures that generally consist only of the big parties.
- PR systems are more sympathetic to political minorities than FPTP systems. Because lists are used and because these lists can be manipulated to include minority interests (for example by providing for gender, race, religious or ethnic quotas), minority candidates stand a better chance to be elected to legislative positions. Also, because PR systems are generally more sensitive to small parties, minority groups with their own small party will have a better chance to obtain legislative representation than when a FPTP system is used.
- Because PR systems use lists and often large multi-member voting districts and FPTP systems use smaller single-member districts and individually nominated candidates that have to reside within their voting districts, FPTP systems are associated with issue-based politics and closer voter-representative interaction. PR systems on the other hand, tend to reproduce and maintain the prevailing socio-political cleavages (be they ethnic, religious, racial or class) in the society, especially if these serve as the basis for party formation. As such, PR systems are not regarded as conducive for issue-based politics.

In addition to these political consequences, a number of additional factors might be considered important when debating the merits of PR and FPTP systems. These include:

- Because FPTP systems use clearly demarcated voting wards, they can be prone to the unwanted practice of gerrymandering.<sup>9</sup> This practise of manipulating ward boundaries to secure electoral victory is not possible under PR systems, which makes use of multi-member districts.
- The administration of FPTP elections can be more cumbersome and costly because among other things they require multiple registration rolls (one for each voting ward) whereas PR would require only one for each town, village or city.
- PR systems generally encourage a much broader view of politics and development because representatives are not drawn from specific geographical wards. As such, they discourage pork-barrelling as strategy for re-election.<sup>10</sup>
- Because PR systems are based on party representation and FPTP systems are based on individual representation, parties can become omnipresent and omnipotent under PR systems.
- Because PR systems require candidates to be nominated by means of (closed) lists, there is little if any room for (independent) individual candidates. PR systems, hence, require and promote a higher degree of institutionalisation of the party system.



- Since PR systems promote multipartism and fragmentation of the party system, it is often associated with fragmented or coalition governments. Coalition governments can be unstable especially if it consists of parties that are more or less equal in size. Alternatively coalitions can inflate the importance of small parties if these have coalition or blackmail potential. A further criticism of coalition governments is that they are the products of elite preferences and manipulations and not necessarily a reflection of voters' preferences. As such coalitions do not have clear mandates.

### 3. Testing the Propositions

The political consequences of electoral systems are often reproduced in debates without submitting them to empirical testing in local contexts. There is a certain amount of danger in taking important decisions without sufficient knowledge of the local context. Thus, in this section, these general propositions about the political consequences of the two types of electoral systems will be applied to elections in Namibia, to assess their validity for the current debate.

Data for the empirical tests are drawn from four Namibian elections held under two different types of electoral systems: the 1992 and 1998 Regional Councils Elections (FPTP); and the 1994 and 1999 National Assembly Elections (PR). The prevailing trends once identified, will then be related to the debate as to whether PR or FPTP is the more appropriate system for local authority elections. The assessment will be based on 3 broad indicators: 1) multipartism; 2) disproportionality; and 3) inclusiveness.

#### **Multipartism**

Multipartism, or the degree to which the party system is fragmented, is usually measured at two levels: the electoral and the legislative. At the electoral level, votes are used as the basis of calculation whilst at the legislative level it is seats. Three measures are used to measure the effective number of electoral (using votes) or legislative parties (using seats) in any particular party system: the Taagepera and Shugart's effective number of parties index ( $N$ ); the Herfindahl-Hirschmann concentration index ( $HH$ ) and Rae's index of fragmentation ( $F$ ) (see Taagepera and Shugart 1989:77-91; Lijphart 1995:67-72; Rae 1971).<sup>11</sup> The formulae by which each of the three indexes is calculated are included in Appendix 1 (1.1). The results of the indexes are contained in Table 1.

**Table 1: Party fragmentation in Namibia 1992-1999**

<i>Election</i>	$N_s$	$N_v$	$HH_s$	$HH_v$	$F_s$	$F_v$	<i>Number of parties contesting</i>
1992 RC	1.50	1.86	0.74	0.60	0.26	0.40	6
1994 NA	1.71	2.02	0.59	0.57	0.41	0.43	8
1998 RC	1.37	1.82	0.77	0.57	0.23	0.43	4
1999 NA	1.67	2.13	0.60	0.56	0.40	0.44	8
Average RC (1992/1998)	1.44	1.84	0.75	0.59	0.25	0.41	5
Average NA (1994/1999)	1.69	2.10	0.57	0.57	0.41	0.43	8

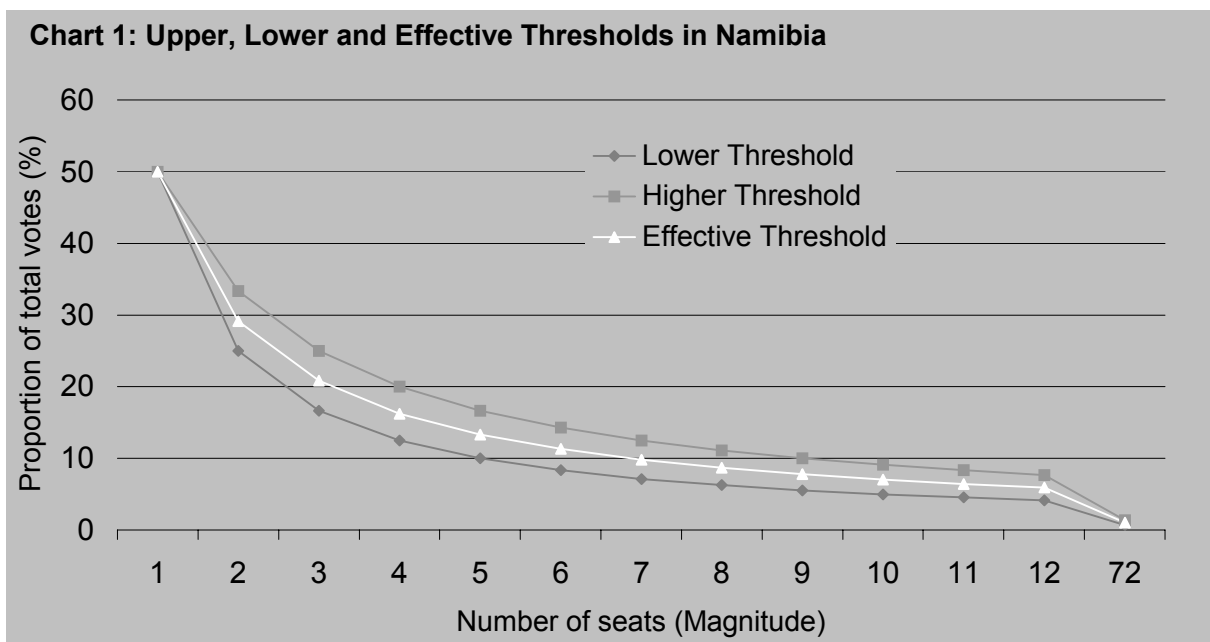
Note: Numbers are rounded off to two decimal places.



All indicators in Table 1 show that the Namibian party system(s) is characterised by a single-dominant party, and a number of very small parties. As such, the party system is a concentrated or unfragmented party system. At best, it has around two effective electoral parties ( $N_v \geq 1.8$ ;  $HH_v \geq 0.5$ ;  $F_v \leq 0.45$ ) and around one-and-a-half effective legislative parties ( $N_s \approx 1.5$   $HH_s \geq 0.5$ ;  $F_s \leq 0.5$ ) for all elections and for electoral systems used. Therefore, the evidence suggests that Namibia's concentrated party systems are less (if at all) the product of the *mechanical effects*<sup>12</sup> of the electoral system, and more the outcome of how voters coordinate their votes.

This does not suggest that the type of electoral system used is completely unimportant, however. If we compare the indicators for the two Regional Council elections (FPTP) with those for the two National Assembly elections (PR) some important differences become clear.

Firstly, PR elections have almost twice as many competing parties, than FPTP elections. This is partly due to the fact that smaller parties have a better chance of winning seats under PR even if it is only a single seat.<sup>13</sup> This is mainly because of the lower effective thresholds under multi-member PR. Chart 1 shows that any change in the number of seats to which members must be elected (sometimes called the magnitude or  $M$ ) will lower the proportion of votes required to win a single seat.<sup>14</sup> Under the current dispensation, any party will have to obtain at least 50% of all votes cast in any regional constituency with 1 seat; 7.8% in a local authority area with 9 seats; and 1.03% in the National Assembly with 72 seats.



*PR is thus better for overall electoral contestation than FPTP. PR is also more sympathetic to small parties because it has multi-member districts with higher magnitudes that cause lower thresholds.*

Secondly, the party system under PR is slightly less concentrated (or alternatively, slightly more fragmented) than under FPTP. This is reflected by all indicators and for both the electoral and the legislative level. Therefore, *PR is better for multipartism (as reflected by the degree of concentration or fragmentation in the party system) than FPTP.*



Thirdly, due to the higher level of contestation and the higher degree of party system fragmentation *PR is also better for small parties than FPTP.*

### ***Disproportionality***

Indexes of disproportionality are calculated from the differences between votes and seats. Three indexes are commonly used: Rae's Index of disproportionality (*I*); Loosemore-Hanby's measure of disproportionality (*D*) and Gallagher's Least Squares Index (*Lsq*) (see Taagepera and Shugart 1989; Lijphart 1995; Rae 1971). They are calculated by formulae in Appendix 1 (1.2). The results of these indexes are contained in Table 2.

**Table 2: Disproportionality in Namibia (1992-1999)**

<i>Election</i>	<i>D</i>	<i>I</i>	<i>Lsq</i>	<i>Manufactured Majorities</i>	<i>Uncontested Constituencies</i>
1992 RC	13.92	8.65	13.01	14	12
1994 NA	1.64	0.41	0.98	0	0
1998 RC	11.93	8.27	11.19	10	21
1999 NA	1.19	0.30	0.69	0	0
Average RC	12.53	8.20	11.74	12	16.5
Average NA	1.42	0.36	0.84	0	0

Table 2 shows that FPTP systems are substantially more disproportional than PR systems. This is not entirely unexpected since FPTP is not designed to reduce or limit disproportionality. However, these indexes show that with FPTP some parties are over-represented (i.e. larger proportion seats than proportion votes) whilst others are under-represented (i.e. smaller proportion seats than proportion votes). Given the fact that FPTP employs higher thresholds, it is almost certain that larger parties will be over-represented and smaller parties under-represented.

Table 2 also displays two additional dimensions of the mechanical effects of FPTP: it converts a simple plurality of votes into an absolute majority of seats (in more technical terms this is referred to as 'manufactured majorities') and uncontested constituencies. Firstly, over two elections, the FPTP system used for regional elections manufactured 24 majorities (i.e. award the only seat to parties that had only a plurality of votes). In 1992, the winning party did not have a majority of votes (50%+1) in 14 constituencies, and in 1998 this was the case in 10 constituencies. This means that in a significant number of constituencies the majority of voters were not represented at all. Secondly, Table 2 also shows that the number of uncontested constituencies almost doubled from 12 to 21 from 1992 to 1998. This is a measure of the *psychological effect* of FPTP systems.<sup>15</sup> This occurs when smaller parties decide not to field candidates in constituencies where they have little or no support and, hence, no chance of winning. Where these perceptions persist (and the data in Table 2 suggests that it does in Namibia), smaller parties retract into their areas of support and as a result, they lose their national profile.

Ultimately, Table 2 shows that *FPTP systems have much more mechanical effects than PR systems* (as measured by indexes of disproportionality and manufactured majorities). *FPTP systems also have a psychological effect* (as measured by the number of uncontested constituencies) *that further impacts on the development of multipartism.* This is further proof of the trends displayed in Table 1. In the Namibian context as discussed here, PR is better for multipartism than FPTP because it has less mechanical and psychological effects. As such, smaller parties will benefit more from PR than FPTP.





## Inclusiveness

PR systems are generally regarded as more inclusive than FPTP systems for two reasons: 1) it is more sympathetic towards small parties and those that support them; and 2) it allows for quotas to be used to bolster minority representation.

The previous two sections in this paper provided sufficient evidence that small parties benefit more from PR than from FPTP. The benefits for small parties stem from two features: 1) the lower effective thresholds associated with multi-member PR constituencies; and 2) the use of a largest remainder. Where the small parties are exclusive parties (e.g. ethnic, racial, religious or class parties) one of the consequences of PR will be that these exclusive groups will gain representation (in the form of one or more seats). As a result the systems will be more inclusive, and exclusive minorities will have a stake in the system. The presence of Monitor Action Group (MAG) in the Namibian National Assembly is a clear case in point.

**Table 3: Average Female Representative Seats by Type of Electoral System and Human Development and Level of Democracy**

	Type of Electoral system	Average Number of Female Seats in Legislature (as % of total seats)
<i>Level Of Human Development<sup>a</sup></i>		
<b>Low</b>	Plurality/Majoritarian	9.25
	Semi-Proportional	8.00
	Proportional	12.91
<b>Medium</b>	Plurality/Majoritarian	10.39
	Semi-Proportional	7.49
	Proportional	11.61
<b>High</b>	Plurality/Majoritarian	15.04
	Semi-Proportional	9.10
	Proportional	20.59
<i>Level of Democracy<sup>b</sup></i>		
<b>Not free</b>	Plurality/Majoritarian	9.58
	Semi-Proportional	8.63
	Proportional	10.48
<b>Partially free</b>	Plurality/Majoritarian	8.74
	Semi-Proportional	6.59
	Proportional	11.18
<b>Free</b>	Plurality/Majoritarian	14.89
	Semi-Proportional	10.47
	Proportional	18.64

<sup>a</sup> Based on the HDI categories (UNDP)

<sup>b</sup> Based on the Freedom House Classification Index

Source: IPPR 'Women and Politics in a Global Context' Data set.

Another dimension of inclusiveness that has featured quite prominently in the current debate is that of greater women's representation. Elsewhere I have dealt with the complexities of this issue in more detail (see Keulder 2002) and there is no need to repeat those arguments here. Suffice to

say that it is true that PR systems have on average more female representatives in national legislative positions than FPTP.<sup>16</sup> International statistics to this effect are contained in Table 3.

Table 3 shows that PR systems have, on average, higher proportions of female seats in national legislatures than FPTP systems, but that the difference between the two is subject to the level of development and the level of democracy. Firstly, countries with high levels of human development have more women in national legislatures irrespective of the type of electoral system than countries with low or medium levels of human development. Secondly, democracies have more female legislators than non-democracies or quasi-democracies irrespective of the electoral system used. Thirdly, FPTP systems with high levels of human development have more female legislators than PR systems or semi-PR systems with low or medium levels of human development. Fourthly, democracies with FPTP systems have more female legislators than quasi-democracies or non-democracies with PR.

This suggests that more than just the electoral system has to be taken into account when explaining the number of women in legislative positions. The overall difference between PR systems and FPTP systems is not very large: it is on average only 5%. Thus, having PR is **NOT** enough – quotas are needed, and also the data suggests, are increased levels of human development and substantive democracy. Although it is certainly easier to design and implement quotas under a PR system, there is no reason to believe that it cannot be done under FPTP. The debate thus should be less about the electoral system and more about gender quotas.

### **Interaction**

Those who favour FPTP often argue that its main benefit over PR is the ‘closeness’ between citizen and representative brought about by the fact that representatives are appointed from clearly defined geographical constituencies and not from some predetermined party list. In fact, more often than not, representatives are required by law to reside within the constituency that he or she represents. This direct link between the constituencies and those that represent them provides for better quality representation, more frequent contact and more citizen control over their representative. To test whether or not this argument hold true for Namibia, public opinion data from two exit poll surveys<sup>17</sup> is presented in Table 4 and Table 5.

**Table 4: Institutions staying in touch with ordinary citizens – Voters (%)**

	Approve		Disapprove	
	1998	1999	1998	1999
Local Authorities	46.6	61.3	26.0	19.4
Regional Councils	47.9	64.4	21.7	16.5
National Assembly	49.2	66.6	19.9	17.4

Source: Keulder (1999;2000)

Table 4 shows that voters generally approved of the contact initiated by their representatives, irrespective of the electoral systems used. Thus there is no significant difference in the approval rates for those elected by FPTP (Regional Councils) and those elected by means of PR (National Assembly and Local Authority). At all three levels the contact is good and it has improved from one election to the next. Thus it is hard to find any evidence that the FPTP system in Namibia would provide better contact between voters and representatives.





Table 5 presents data on voters' confidence in their candidates for the same two elections. If the argument about superior 'closeness' under FPTP is true, then one would expect voters under this system to be more confident in their candidates because they have nominated them and because they would know them well from sharing the same residential location.

**Table 5: Confidence in candidates – Voters (%)**

<b>2. Confidence in candidates</b>		
	<i>Confident</i>	<i>Not Confident</i>
Regional Council Elections 1998	77.2	9.2
National Assembly Elections 1999	79.4	7.6

Source: Keulder (1999; 2000)

Here, too, the evidence speaks against the argument in favour of FPTP in Namibia. Voters during the 1999 National Assembly elections were as confident about their candidates being the 'right ones' than the voters during the 1998 Regional Council elections. Thus it seems that, in Namibia, confidence in candidates is not the product of the type of electoral system used, or even the 'closeness' between voters and representatives; it is more likely to be the by-product of confidence in the party that these candidates represent and this speaks in favour of PR.

#### **4. Conclusions**

This paper identified and presented empirical evidence on four aspects of the debate on which electoral system is most appropriate for future local authority elections in Namibia. Although it is important that electoral systems are debated, the final decision should take into account the political consequences of each of the two proposed types, and legislators should agree on the criteria of evaluation so that when a specific electoral system is accepted or rejected there is broad agreement as to why it was accepted or rejected. This is the only way that any future electoral system will be considered legitimate.

Unfortunately, the debate thus far has shown little appreciation for the real political consequences of the two types of electoral systems. This might be due to the somewhat technical nature by which these are determined but this paper should make these issues more accessible. Evidence presented here, shows that on all four issues presented, PR outscores FPTP. PR will be better for local authority elections for the following reasons:

- It is better for multipartism because it favours small parties by converting votes into seats in a manner that is proportional.
- It has less mechanical effects than FPTP; it does not manufacture majorities and it does not produce uncontested constituencies. In fact, it encourages smaller parties to participate.
- Although PR is not sufficient to ensure more female legislatures, it is easier to use gender quotas with PR than with FPTP.
- In Namibia, FPTP has performed no better than PR as far as closeness between voters and representatives is concerned. In fact, the electoral system has little if anything to do with feelings of closeness.

As to why PR should be retained, the first issues should be sufficient to convince opposition parties that they have most to lose, should a FPTP system be adopted. Their preference for this



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system is thus perplexing at best. As to the arguments presented by the ruling party in favour of PR, the less salient issues such as costs, familiarity and gender should not be the core arguments. At the local level, FPTP is not going to be that much more expensive than PR and the value extending democracy should not be measured in monetary terms only. Voters' familiarity with political institutions (such as the electoral system) should also not be used as criteria for whether or not reform is necessary; the greater public good should. Voters will adapt and re-familiarise them with a new system irrespective of which one it is. This paper presents evidence that it is not so much the electoral system as the use of quotas that is the key determinant for increasing the number of women in legislative positions. To argue the value of electoral systems on the basis of increased women representation only, is both misleading and reductionistic. It is misleading because it ignores that main issue, quotas, and it is reductionistic because it ignores other important political consequences. Gender quotas can be used with any electoral system, but FPTP has some undesirable political consequences for the deepening of democracy in Namibia. It is because of these consequences that PR should be retained and used for future elections.

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#### NOTES:

<sup>1</sup> See for example Tsudao Gurirab (MP-CoD) as quoted in Die Republikein 05/11/2002.

<sup>2</sup> I shall not address the mixed systems here since it is excluded from the current Namibian debate.

<sup>3</sup> Lists are closed when the political parties compile the lists prior to the election and voters have no say on the individual candidates that are included or omitted or the order in which they appear. Votes are cast for the entire list and voters can only reject the entire list (by not voting for that party) or approve the entire list (by voting for that party). Lists are open when voters can decide who gets on the lists and in what order candidates appear.

<sup>4</sup> Even under PR systems, some small degree of disproportionality is possible especially when 'largest remainders' are used.

<sup>5</sup> This is derived from the general literature on electoral systems (see Rae 1971, Lijphart 1995 Taagepera and Shugart 1989)

<sup>6</sup> A manufactured majority occurs when the winning party has less votes than the combined total of its opponents. In such cases, the winning party will have less than 50% of the total votes. Despite this, the winning party is awarded all seats in that constituency. For this to happen at least three parties or candidates must contest the seat and constituencies must be single-member constituencies.

<sup>7</sup> Since the 'winner takes all seats' losers (and those that they represent) receive no seats at all. Thus, even though the losers combined might be the numerical majority in the ward, they will still be the legislative minority.

<sup>8</sup> This is the so-called Duverger's Law. This 'law' was first introduced by Maurice Duverger in 1954 in his now classic work on political parties. It states that: 1) plurality rule (i.e. FPTP) tends to reduce the number of parties to regardless of the number of issue dimensions; 2) PR rules tend not to reduce the number of parties, if the number of issue dimensions favours the existence of many parties (see Taagepera and Shugart 1989; Riker 1982; Cox 1997) for some discussions and reformulations of Duverger's work.

<sup>9</sup> The concept 'gerrymandering' has its origins in the United States of America. In 1812 the then governor of Massachusetts, Elbridge Gerry signed a bill that allowed for constituency boundaries to be manipulated to ensure electoral victory for his party. This oddly shaped constituency quickly became known as 'Gerry's salamander', which in turn inspired the notion of gerrymandering. This practice only became illegal in the USA in 1985.

<sup>10</sup> 'Pork-barreling' is yet another USA inspired notion and refers to the practise of local representatives inserting home-constituency projects with no real national value into national budgets with the sole purpose to enhance his or her chances of re-election.

<sup>11</sup>  $HH$  ranges from 0 to 1 where 1 represents no fragmentation and 0 complete fragmentation.  $F$  also ranges from 0 to 1 but in the opposite direction from  $HH$ . Here 1 represents complete fragmentation and 0 no fragmentation or complete concentration.  $N$  provides an estimate of the number of parties of equal size in a system.

<sup>12</sup> The mechanical effects of electoral systems refer to the outcomes (e.g. disproportionality) of the electoral formula when votes are converted into seats.

<sup>13</sup> Another possible explanation is that more parties are likely to contest national than regional elections, simply because with the former the stakes are much higher.

<sup>14</sup> For a more detailed discussion on the impact of magnitude and effects of thresholds overall, see Lijphart (1995).

<sup>15</sup> It was Maurice Duverger that first pointed to the psychological effects of plurality systems. In short it refers to changes in voters' behaviour due to the fact that small parties have no chance of representation under plurality systems. These voters have two options: either they switch their vote to a larger party, or they abstain from voting to avoid wasting their votes.



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<sup>16</sup> Female seats in sub-national legislatures might be different. Currently there is no comparable international data available for these level(s) of representation.

<sup>17</sup> See Keulder (1999) and (2000). These exit polls were conducted during the 1998 regional council elections and the 1999 national assembly elections.

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## Appendix 1:

### 1.1 The effective number of parties and party system fragmentation

*For electoral parties:*

$$N_v = 1 / \sum V_i^2 \text{ (Where } V_i \text{ is the vote share of the } i\text{-th party).}$$

$$F_v = 1 - \sum V_i^2 \text{ (Where } V_i \text{ is the vote share of the } i\text{-th party).}$$

$$HH_v = \sum V_i^2 \text{ (Where } V_i \text{ is the vote share of the } i\text{-th party).}$$

*For legislative parties:*

$$N_s = 1 / \sum S_i^2 \text{ (Where } S_i \text{ is the seat share of the } i\text{-th party).}$$

$$F_s = 1 - \sum S_i^2 \text{ (Where } S_i \text{ is the seat share of the } i\text{-th party).}$$

$$HH_s = \sum S_i^2 \text{ (Where } S_i \text{ is the seat share of the } i\text{-th party).}$$

### 1.2 Disproportionality

$I = \frac{1}{n} \sum |v_i - s_i|$  (Where  $V_i$  is the vote share of the  $i$ -th party;  $S_i$  the seat share of the  $i$ -th party and  $n$  the total number of parties).

$D = \frac{1}{2} \sum |v_i - s_i|$  (Where  $V_i$  is the vote share of the  $i$ -th party and  $S_i$  the seat share of the  $i$ -th party)

$Lsq = \sqrt{\frac{1}{2} \sum (v_i - s_i)^2}$  (Where  $V_i$  is the vote share of the  $i$ -th party and  $S_i$  the seat share of the  $i$ -th party)

