

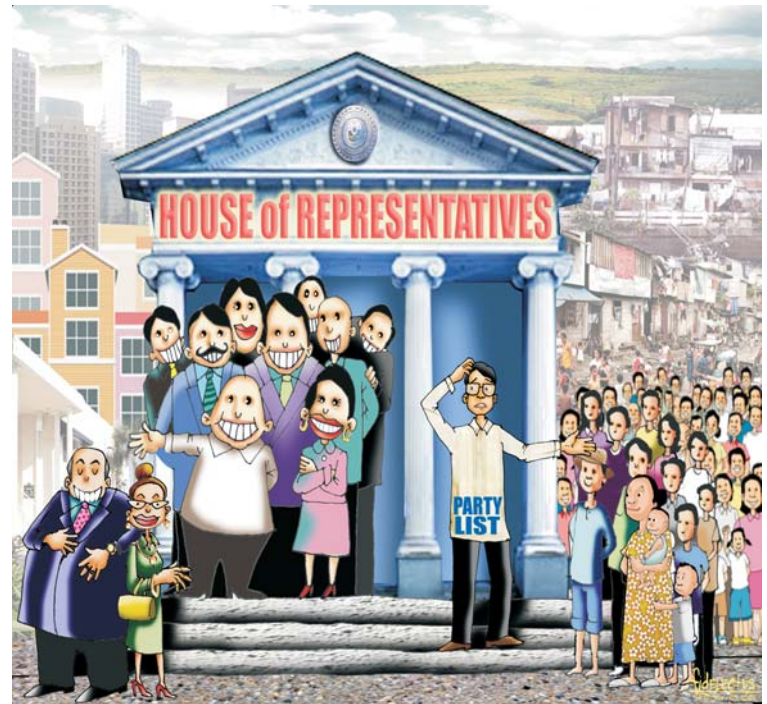
The Panganiban Formula Contradicts the Principle of Proportional Representation

By the Policy Study, Publication and Advocacy (PSPA) Program
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The Supreme Court, in its latest resolution promulgated on March 15, 2006 in *Partido ng Manggawa (PM) and Butil Farmers Party (BUTIL) versus COMELEC, et al* (G.R. No. 164702), denied the petitioners of additional seats in the House of Representatives. It also emphasized its formula laid down in *Ang Bagong Bayani-OFW vs. COMELEC, et al* (G.R. No. 147589) and in *Bayan Muna vs COMELEC, et al* (G.R. No. 147613) for computing the additional seats of the parties who reached the required two percent mark other than the first party.

The Supreme Court formula which we call as the Panganiban method allocates one seat to the party-list participant that receives 2% or more of the total party-list votes. The first party is the party-list group with the largest votes of all the party-list groups. It is awarded 1 additional seat if it has at least 4% of the total party-list votes but less than 6%, or it is awarded 2 more seats if it has at least 6% of the total party-list votes.

For example, if we consider the April Survey of Social Weather Station (SWS) for the 2007 Party-List Election, only 13 out of 93 party-list participants has at least 2% of the total party-list votes. Hence only these 13 parties shall be allocated 1 seat each. Of the ten parties, BAYAN MUNA is the first party with 10.4% of the total party-list votes. This figure translates to 2 more seats for BAYAN MUNA. Hence, BAYAN MUNA shall be awarded a total of 3 seats. See Table 1 for the complete list of the 13 winning parties.



A party-list group that reached the two-percent mark shall be awarded additional seats by computing the integer part of the quotient

$$\frac{\text{no. of votes of concerned party} \quad \text{no. of additional seats of first party}}{\text{no. of votes of the first party}}$$

which is equivalent to the following quotient

$$\frac{\% \text{ of votes of concerned party} \quad \text{no. of additional seats of first party}}{\% \text{ of votes of the first party}}$$

For example, in the April Survey of Pulse Asia, BAYAN MUNA with 10.4% of the total party-list votes is the first party with 2 additional seats.

Thus, AKBAYAN with 9.8% of the total party-list votes shall be awarded 1 more seat since the integer part of the quotient below is 1.

Table 1. Simulation of the Panganiban Formula on the April Survey of Pulse-Asia for the 2007 Party-List Election

	Winning Party-list Participants	% Share of Votes	Guaranteed Seat	Additional Seats	Total Seats
1	<i>BAYAN MUNA</i>	10.40%	1	2	3
2	<i>AKBAYAN</i>	9.80%	1	1	2
3	<i>AHON</i>	5.80%	1	1	2
4	<i>AANGAT TAYO</i>	5.60%	1	1	2
5	<i>A TEACHER</i>	5.00%	1	0	1
6	<i>BUHAY</i>	4.10%	1	0	1
7	<i>ALMANA</i>	3.60%	1	0	1
8	<i>AGAP</i>	3.30%	1	0	1
9	<i>ANAKPAWIS</i>	3.20%	1	0	1
10	<i>ABAKADA</i>	2.90%	1	0	1
11	<i>GABRIELA</i>	2.70%	1	0	1
12	<i>ALIF</i>	2.60%	1	0	1
13	<i>ALAGAD</i>	2.00%	1	0	1
	TOTAL		13	5	18

$$\frac{\% \text{ of votes of AKBAYAN} \quad \text{add'l seats of BAYANMUNA}}{\% \text{ of votes of BAYANMUNA}} \quad \frac{9.8\% \quad 2}{10.4\%} \quad 1.884615$$

AHON and AANGAT TAYO with 5.8% and 5.6% of the total party-list votes, respectively, shall also be awarded 1 seat each.

However, A TEACHER with 5.0% of the total party-list votes shall not be awarded additional seat since the integer part of the quotient below is 0.

$$\frac{\% \text{ of votes of A TEACHER} \quad \text{add'l seats of BAYANMUNA}}{\% \text{ of votes of BAYANMUNA}} \quad \frac{5.0\% \quad 2}{10.4\%} \quad 0.961538$$

The computation of the other 8 party-list group produces no additional seat. See Table 1 for the distribution of additional seats and the total number of seats of each party-list group.

The 1987 Philippine Constitution mandates that 20% of the total number of members of the House of Representatives must come from the party-list. This means that out 5 representatives, 1 comes from the party-list and 4 from the congressional districts. Hence, the total number of party-list seats is $\frac{1}{4}$ of the total number of congressional districts. Since there are 220 congressional districts in the 2007 synchronized national and local elections, the total number of party-list seats is $\frac{220}{4} = 55$.

The Panganiban Formula only allocates 13 seats to the party-list participants if we consider the result of the April Pulse-Asia survey for the party-list. This means that 13 out of 58 seats or 22.4138% of the total number of party-list seats are filled up only. In the April Pulse Asia Survey, it is estimated that 64% or approximately 28,800,000 voters voted for the party-list. Since $13/55 = 22.4138\%$ of the total seats are filled up, it follows that approximately 22,344,828 voters are not represented in the House of Representatives.

The Philippine Party-List System Act (R.A. 7941) declares that the State shall promote proportional representation in the election of representatives in the House of Representatives through the party-list system.

What is the reason of the inability of the Panganiban Formula to distribute the entire number of available of party-list seats? Does the Panganiban Formula contradict the proportionality principle?

The principle of proportional representation in the party-list system asserts that the share of seats of a party-list group must be equal to the share of votes of the party-list group. This principle can be expressed mathematically as

$$\% \text{ share of seats} = \% \text{ share of votes}$$

Therefore, by the principle of proportional representation the ideal no. of seats = (%share of votes) x (total no. of party-list seats).

The difference between the ideal number of seats based on the principle of proportional representation and the actual number of seats based on the seat allocation method used is called as the seat allocation error and is computed as follows:

$$\text{Seat allocation error} = (\text{ideal no. of seats}) - (\text{actual no. of seats allocated})$$

Or

$$\text{Error} = (\% \text{ share of votes}) \times (\text{total no. of party-list seats}) - (\text{actual no. of seats allocated})$$

The error of the Panganiban Formula on ANAKPAWIS is
Seat Allocation Error = $(3.2\%)(55) - 1 = 0.760$

The error of the Panganiban Formula on AKSA is
Seat Allocation Error = $(1.9\%)(55) - 0 = 1.045$

The total error of the Panganiban Formula on the party-list groups is 17. Thus, $55 - 17 = 38$ which is the actual number of seats filled up by the Panganiban Formula.

Let the positive value of the seat allocation error be called the absolute error. The error of the Panganiban Formula is not significant if the absolute error is less than 1 since it does not make sense to allocate a fraction of a seat. Hence, we say that the Panganiban Formula affirms the principle of proportional representation on ANAKPAWIS since the absolute error is less than 1.

If the absolute error is greater than or equal to one, then the absolute error is significant. For example, the absolute error of the Panganiban Formula on AKSA is significant since the Formula denied AKSA with at least one seat. Therefore, we can say that the given seat allocation method contradicts the principle of proportional representation if the absolute error of the formula is greater than or equal to 1 seat. Otherwise, if the absolute error is less than 1, then the seat allocation method affirms the principle of proportional representation.

We call the integer part of the absolute error as the degree of negation of the formula on a given party-list group.

For example in the April SWS survey, BAYAN MUNA has 10.4% of the total party-list votes but was given 3 seats only. The seat allocation error of the Panganiban Formula on BAYAN MUNA is

$$\text{Error of Panganiban Formula} = (10.4\%)(55) - 3 = 2.720$$

Thus the degree of negation of the Panganiban Formula on BAYAN MUNA is equal to 2 seats. The degree of negation of the Panganiban Formula is significant on 6 other parties. See Table 2.

	Party-List Group	% Votes	Seats	Error	Negation
1	<i>BAYAN MUNA</i>	10.40%	3	2.720	2
2	<i>AKBAYAN</i>	9.80%	2	3.390	3
3	<i>AHON</i>	5.80%	2	1.190	1
4	<i>AANGAT TAYO</i>	5.60%	2	1.080	1
5	<i>A TEACHER</i>	5.00%	1	1.750	1
6	<i>BUHAY</i>	4.10%	1	1.255	1
7	<i>AKSA</i>	1.90%	0	1.045	1
	Total				10

1. The negation on BAYAN MUNA is due to the imposition of the 3-seat cap.
2. The negation on AKBAYAN, AHON, AANGAT TAYO, A TEACHER and BUHAY is due to the “first party rule”.
3. The negation on AKSA is due to the use of 2% as the winning minimum threshold.

Hence, the Panganiban Formula contradicts the principle of proportional representation with degree of negation equals to 10 seats. This means that about $\frac{10}{55} \frac{28,800,000}{3,792,896}$

voters were denied representation in the House of Representatives because of the contradiction of the Panganiban Formula on the principle of proportional representation.

We conclude by stating the following theorem.

Theorem

Suppose that the seat allocation method used in a given party-list election is the Panganiban Formula and let the quotient

$\frac{1}{\text{total no. of party - list seats}}$ be called a simple quota.

Then the Panganiban Formula negates the principle of proportional representation on a party-list group if the total number of party-list seats is greater than 50 and

1. if the percent share of votes of the party-list group is greater than or equal to the simple quota but is less than 2% of the total votes;
2. if the percent share of votes of the concerned party-list group is at least twice as large as the simple quota but is less than one-half of the percent share of votes of the first party.
3. if the percent share of votes of the concerned party-list group is at least three times as large the simple quota but is less than the percent share of votes of the first party.
4. if the percent share of votes of the concerned party-list group is at least four times as large as the simple quota.

For the proof of this theorem please see my article “On the Negation of the Party-List System Act on the Principle of Proportional Representation” in the book “Oligarchic Politics: Elections and the Party-List System in the Philippines” to be launched by the Center of People Empowerment in Governance (CenPEG) on May 8, 2007 or visit my web page in <http://www.math.admu.edu.ph/~fpmuga>.

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