Coalitions in Multiparty System
Empirical Reflection of the Indonesian Regional Elections

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Abstract
A lot of changing in recent Indonesian political dynamics with eventual fact shows how political recruitment for legislative and executive chairs in national as well as regional levels in direct voting systems have brought the patterns of coalitions among political parties into interesting focus of observation. We evaluate the Regional Elections data held since June 2005 to September 2008 as election matrix. The matrix is then transformed into the ultrametric space yielding the hierarchical trees based on proximity on inter-party coalition. We represent the distance of coalitions among political parties based on the activity in regional elections and contrasting the findings with some nation-wide facts of the respective properties. The observations draws how Indonesian voters are failed to be segregated into any extreme political and ideological streams but the combinations among the existing and widely-recognized ones.

Keywords: political party, coalition, ultrametric space, Indonesia, regional election.
1. Introduction
Most Indonesian political dynamics tends to have no strong determinants one another. As it has been discussed in [5], strong political parties in Indonesia fall into the combination of political streams of nationalist or secular, modernist (moslem), traditionalists. Most of political parties present themselves as the mixtures between those, even from the very beginning in the history of the republic [1, 2]. This is the source of the uniqueness of Indonesian political characteristics relative to other modern and democratic countries. While there have been some observable political streams robust in national elections [6], a comprehensive view to some aspects related to the political policies from every party would bring us to the mixtures among the political streams emanated from policies and actions of each party. Somehow, this is even more apparent in the era of “direct election”, where political recruitment is held by citizen votes for candidates for the chairs of legislatures or executives separately.

Since 2004, Indonesia has faced a major changes in the way the political system runs. For the first time in the electoral history, the political recruitment is held by direct votes of the people to candidates (be it for legislative and executive posts). Here, beside voting for the preferred political parties, citizens also decide ones sit in the executive power, be it nationally and regionally, without any direct interventions from legislative institution. This mechanism is laid upon expectation of public participation and the sovereignty of the citizens over political power. However, this electoral system does not omit the role of the political parties for their positions in the process choosing the candidates to be voted for. Formally, the regulations stated that the candidates must be delivered by political parties or coalitions among them with some terms. For instance, in regional level, the candidates should be brought by political parties (or coalitions) of which total seats in the legislative institution (Dewan Perwakilan Rakyat Daerah, DPRD) not lesser than 15% or more than 15% accumulation of votes in the election for legislative body in the respective region[1]. This regulations have allowed only few political parties to deliver candidates for the regional executive chair, thus coalitions among them has become the usual practice for bringing in candidates. Somehow, this coalitions could also be used as a way to gather wider support outside each party to win the election.

The voters’ preferences on a political party and their evaluation on the existing candidates has made inter-party coalitions become a very interesting case for comprehensive observation in Indonesian Regional Election. Non-linearity between the result of the legislative and executive election exists. For instance, the result of National Election 2004 with accumulation more than 50% National Coalition winning the legislative votes does not guarantee the total winning of the candidates brought by their coalitions. This phenomena is also reflected in the Regional Election since domination of legislative chairs in district level is always bringing the winning in the local voting [8].

This paper reports an observation on the affinity for coalitions among political parties that does not have clear patterns from the proximity of political platforms or the consistency of the coalitions in the national level with those in district ones. We observe the data of more than 300 Regional Elections since June 2005 to September 2008. We incorporate methodology frequently used in statistical physics by mapping the regional coalition facts to the ultrametric tree.

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1 As regulated by the Law 32/2004 verse 59. In advance, the Constitutional Court in their judicial review on the Law 32/2004 permitting the non-partisan candidates to be voted for with some requirements in the regional election.
2. The Model
Consider we have \( N \times M \) matrix, \( C \), where \( n \) is the number of political parties in the regional elections as well as the national/general one, where

\[
c_{ij} = \begin{cases} 
1, & \text{join } j\text{-th coalition} \\
0, & \text{otherwise} 
\end{cases}
\]

where \( i = \{1, 2, \ldots, N\} \), with \( N \) the number of the existing political parties supported \( j\)-th candidate, and \( M \) is the number of candidates ever join the regional election in any levels, be it eventually won or lose. Thus the number of participation in \( j\)-th coalition can be calculated as,

\[
r_j = \sum_i c_{ij}
\]

and \( r_{ij} = 1 \) where the candidate is supported by only one party. Here we can have a smaller dimension matrix of \( n \times l \) of \( W \subset C \), where \( l \ll m \).

![Figure 1 The rate of the winning election of each party and the one forming coalitions.](image)

However, not all parties in any regional levels of legislature may support a candidate solely for some regulations related to their respective share in the house of representatives\(^2\). It is worth to note that the coalitions are not based solely upon the requirement pointed out by the regulations. For smaller political parties, coalitions is an obvious solution in order to participate in the elections. Yet, bigger parties could also take advantage from the coalitions since it would somehow wider probability of winning by gaining more percentage in the voting. This brings two constraints in the horizon of bigger political parties in forming coalition: to widen the probability of winning by forming coalitions or to stay put to the political platform by standing alone and delivering candidate by themselves.

The varsities possible formations of coalitions in the Regional Election make it difficult to visualize the probabilistic mapping in our general observation. However, from the data of Regional Elections and the coalition among political parties in each event we could calculate the possibility index of success winning the voting in general. Here, we use some variables on each political party, the rate of winning when joining the election,

\(^2\) The reference for deliverance of candidates in Regional Election 2009-2009 is the tally of legislative national election 2004. Here seven largest parties are Partai Golkar (21,58%, PDI Perjuangan (18,53%), Partai Kebangkitan Bangsa (10,57%), Partai Persatuan Pembangunan (8,15%), Partai Demokrat (7.45%), Partai Keadilan Sejahtera (7.34%), Partai Amanat Nasional (6,44%).
In matrix, participating in the coalition for Regional Elections relative to the number of elections in which they participate in coalition. Thus, for larger political parties e.g.: Golkar and PDIP, this is a kind of symptoms of inability to keep up in their respective political basis, or this may also came from the more critical (or even negative) views of voters to the delivered candidates. Interestingly, this facts in some ways are also reflected by mediocre parties or those with lower gain in National Election 2004.

The roles of both variables are presented in figure 1, for the period of 2004-2009 in Indonesian regional elections, both to elect the governors and regents. From the figure it is apparent that the winning index of PKS in Regional Elections is somehow higher than much larger political parties, Golkar and PDIP. This fact is also shown by smaller political parties like PBB, of which high competitiveness even relative to the four larger political parties in national votes, i.e.: PKB, PPP, PD, and PAN. Furthermore, the higher success in coalition or almost similar to the winning counts in Regional Election in general shows un-competitiveness (or inability, by law) to stand alone delivering candidates in the Regional Election relative to the number of elections in which they participate in coalition. Thus, for larger political parties e.g.: Golkar and PDIP, this is a kind of symptoms of inability to keep up in their respective political basis, or this may also came from the more critical (or even negative) views of voters to the delivered candidates. Interestingly, this facts in some ways are also reflected by mediocre parties or those with lower gain in National Election 2004.

In general, the phenomena of PKS in their gains in Regional Elections shows two things. First, the loyal voters with positive correlations when they choose the candidates for legislatures as well as executive office. Second, the success of PKS is also sourced from their intelligent to form coalition in very strategic decisions.

However, for other smaller political parties, the higher winning index in the Regional Elections is affected strongly by their participation in the coalition for the Regional Elections. This makes sense for it is almost impossible for them to bring their own candidates without coalition.

In order to see the general patterns of all formed coalitions, we calculate the distances among political parties based on their historical roles in the period of our observation. Since variable \( c_{ij} \in \{0, 1\} \), then we can calculate the distances between a political party to another,

\[
\delta_{ab} = 1 - \frac{\left| \bigcup_j c_{aj} \cup \bigcup_j c_{bj} \right|}{M}
\]  

By transforming the space in which the distances among political parties are laid upon into the ultrametric space [3, 4, 6], of which the shortest spanning tree, we could visualize the distance matrix, \( \delta \in D \) as shown in figure 2 and 3.
3. Discussions and Model Implementation

The visualization presents the global patterns of the coalitions formed by the political parties as grown bottom up, be it in the voting game in regency levels as well as provincial levels. Apparently, remembering little knowledge of the background of all political parties, we could draw intuitively some interesting facts. Patterns of coalitions are highly shown by the big three parties (PPP, GOLKAR, and PDIP). These parties are representing the three parties of political simplification based on political streams inherited in the dictatorship New Order Era (< year 1998). It is interesting to see that after almost ten years from the fall of the totalitarian regime, the three parties are still emerged as strong political forces. This fact may not be apparent in national view, however, the facts that in remote areas far from the capitol where local bureaucracies and social leaders are still held by those from these parties, emerges the frequent coalitions formed by the threes. The similar characters as those with long-time political experiences among the three, might be the political facts yielding this pattern. Roughly speaking, we can say there is almost no exclusive determinant of ideological and political streams in local although it is rather clearer in the national level.

![Patterns of Formed Coalitions in Regional Election 2004-2009](image)

Yet, in the other hand, this might also tempt us to speculate the existence of political pragmatism among local political elites. As it has been shown in [6], the PDIP, as major nationalist political stream, are more affine to PKB, the Islamic based traditionalist party, relative to Golkar, the dominant party in the previous totalitarian regime. This facts related to the local political elites have also shown that when it has been almost 10 years after the fall of totalitarian New Order regime in the country, the three are still persistent to be the real and major political power over people, regionally speaking. This brings us to some remarks about the friendliness among local political elites who are still dominant in the parties as senior figures, as well as the ineffective actions to mobilize the mass by their own in local levels, when we point out to the pragmatism for power among local political elites.
This can be contrasted to the other four strong but new political forces (shown with the pink lines in the figure) which also are clustered close enough with the big three, i.e.: PKS, PAN, PKB, and PD, yet a little bit further with the PPP. The first four political parties with medium but significant political strengths (three out of four bring Islamic religious views as flag). A fact that is similar to the phenomena in the 2004 presidential election where no candidate was delivered exclusively by the coalition among political parties with nationalist platform or those solely from Islamic religious views.

The other four political parties are new and close enough forming coalitions with the other biggest political strengths, but not that close. In the figure, we could obviously see that the parties represented with the green lines are among those less frequent forming coalitions with the other strongest parties. Even though there are conjectures on how the new emerging political forces are stronger from time to time in nation-scale, the political transformation is relatively slower in the regional voting games.

![Figure 3 Successful coalitions in Regional Election 2004-2009](image)

Interesting facts can also be drawn by observing the hierarchical structure of the pattern of coalitions as we transform the eq. (5) to the matrix referred to the successful coalitions, as presented in figure 3. There are some rapid changes between the hierarchical trees of the formed coalitions and those of the successful ones. As shown in the figure by the red lines, we could see that PKS, one of new emerging party with strong Islamic political influence, are highly clustered to the big two parties of GOLKAR and PDIP; both are secular nationalist. Obviously, this fact cannot be separated with the loyal voters of PKS and tendencies of their local political elite to form pragmatic coalitions locally.

It is also interesting to observe that among the strong forces, the ongoing nation-wide ruling party, PD, are the least forming winning coalitions in regional elections. This seems paradoxical with the fact that PD is the ruling party nationally. It seems that to PD, the pattern of mobilization nationally
and locally is very different. This apparently accentuates the fact the strong figure of President Susilo Bambang Yudhoyono in national view but lack support of local political figures, be it in legislative or executive chairpersons. In figure 3, it is also obvious that voters evaluate PD as the ‘middle-stream’ political strength of which not fit at all forming coalition with other parties within the secular nationalist cluster.

4. Concluding Remarks & Further Works
The paper alternatively shows the hierarchical structure of Indonesian political parties based on the coalition formations in the ultrametric space. From the visualization of the proximal distances as represented by the matrix of coalition in the Regional Elections, it has become clear to us reading the global as well as local properties of the formed coalitions based on voters’ evaluation.

In general, it is obvious that the map of political coalitions in the Regional Elections within the period 2004-2008 are not correlated at all to the existing and widely recognized ideological and political streams. Somehow, this reflects that ideological categorization when observing political parties is not important at all among the Indonesian voters. View from the top brings us to the fact that rationality of Indonesian voters does not governed by the political ideological streams, for citizens votes for most candidates supported by the combination of political streams.

Nonetheless, the pattern of competition and coalition among political parties, whatever it patterns out means nothing for the goal of any democratic events is not solely the successful political recruitment. Moreover, the recruitment of political leaders through elections is challenged by the ability of the chosen ones for betterment and social welfare. Thus, the constraint of political events are not simply implying the civil sovereignty literally, but more substantial issues related to the emerging local and national government in effective representation system for public aspiration that is apparent in the hierarchical levels of the bureaucracy. This is important for two facts presented by the paper. First, it is apparent that the unique public political preferences which is fail to be segregated by political and ideological platforms, and second, the search for better and more democratic as well as clear reflection to empirical facts of Indonesian civil society. The latter is however, shown by the frequent changes in the political systems related to elections and voting systems in the past five years (be it by the amendment of the constitution, judicial reviews or any regulatory channels).

For this purpose, a challenge for further work may come to evaluate in a deeper detail of the political recruitment in Indonesia in Indonesian political system, by empirically adhering the coalition patterns altogether with correlations of elections in different political levels, from regency, provincial, to the national scope.
Works Cited


APPENDIX
The abbreviations of the Political Parties

1. PNI: Indonesian National Party (Partai Nasional Indonesia)
2. PBSD: Social Democratic Workers Party (Partai Buruh Sosial Demorat)
3. PBB: Crescent Star Party (Partai Bulan Bintang)
4. PM: Marhaenism Party (Partai Marhaen)
5. PPP: United Development Party (Partai Persatuan Pembangunan)
6. PPDK: United Democratic Nationhood Party (Partai Persatuan Demokrasi Kebangsaan)
7. PPIB: New Indonesia Association Party (Partai Perhimpunan Indonesia Baru)
8. PNBK: Freedom Bull National Party (Partai Nasional Banteng Kemerdekaan)
9. PD: Democratic Party (Partai Demokrat)
10. PKPI: Indonesian Justice and Unity Party (Partai Keadilan dan Persatuan Indonesia)
11. PPDI: Indonesian Democratic Vanguard Party (Partai Penegak Demokrasi Indonesia)
12. PPNU: United of Nahdlatul Ummah is not yet sedang mengikuti (Partai Persatuan Nahdlatul Ummah)
13. PAN: National Mandate Party (Partai Amanat Nasional)
14. PKPB: Concern for the Nation Functional Party (Partai Karya Peduli Bangsa)
15. PKB: National Awakening Party (Partai Kebangkitan Bangsa)
16. PKS: Prosperous Justice Party (Partai Keadilan Sejahtera)
17. PBR: Reform Star Party (Partai Bintang Reformasi)
18. PDIP: Indonesian Democratic Party-Struggle (Partai Demokrasi Indonesia Perjuangan)
19. PDS: Prosperous Peace Party (Partai Damai Sejahtera)
20. GOLKAR : (Partai Golongan Karya; Party of Functional Groups)
22. PSI: Indonesian League Party (Partai Sarikat Indonesia)
23. PPDI: Indonesian United Regional Party (Partai Persatuan Daerah Indonesia)
24. Pelopor: Vanguard Party (Partai Pelopor)