ABSTRACT: There is an extensive empirical literature on economic inequality, yet few studies examine its political underpinnings. This paper contributes to the nascent literature in this area by developing and analyzing new measures of political inequality. It draws on a comprehensive provincial-level dataset on local government leadership in the Philippines, and it develops a political inequality index based on the concentration of elective positions among political dynasties. It empirically examines the possible links across economic inequality, political inequality and development outcomes across 84 Philippine provinces. This study finds that economic inequality displays a nonlinear relationship with indicators of human development—there is a positive correlation at lower levels of human development, and a negative correlation at higher levels. On the other hand, unlike economic inequality, political inequality seems to be associated with weaker development outcomes, regardless of the level of human development the province is in. This finding emphasizes how future research on political inequality could yield new insights into the persistence and depth of poverty, human development and other forms of inequality.

Keywords: Political dynasties, inequality, human development

JEL Classification: D70, I39, O53, P16

PRELIMINARY DRAFT / NOT FOR QUOTATION
1. INTRODUCTION

Inequality has become a key research area in recent years, fueled in part by the growing concern over persistent economic divides within and across countries, industrialized and developing alike. BREXIT, the 99% movement following the global economic crisis, growing anti-immigrant sentiment notably in advanced economies, and the rise of populism and economic protectionism in various parts of the world are only some of the recent phenomena that appear to be linked in some way to inequality.

Some of the main branches of economic inquiry have tried to examine some of its root causes, as well as its possible consequences, notably in terms of future growth and development. Advances in research—often spurred by innovations in measurement and theory—have also guided new thinking here.¹ For instance, whereas inequality was seen as an unavoidable ingredient of growth in the earlier stages of international economic reforms (Krueger, 2002; Feldstein, 1999), more recent thinking emphasize instead its detrimental effects on long run growth and development (Ostry et al, 2014; Stiglitz, 2012). This literature has capitalized on advances in measurement, allowing empirical analyses of economic inequality (and more recently human development and other forms of inequality) both across and within countries.

There appears to be an emerging consensus that the drivers of economic and other forms of inequality are multi-dimensional and context specific, including factors such as advances in technology in industrialized countries (in part eroding the economic gains of less skilled labor), as well as chronic lack of access to education, health and social protection by large groups of the population in many developing countries (in turn leaving them marginalized even as urban centers of growth produce a rapidly growing middle class in these countries) (Dabla-Norris et al, 2015; Jomo and Baudot, 2007; Milanovic, 2007).

Nevertheless, a disproportionate focus on economic drivers (and consequences) of inequality appears to have downplayed other important dimensions of this phenomenon. Fortunately, other fields have begun to deepen our understanding of this phenomenon. There has been growing interest in the conceptualization and measurement of political inequality, with direct

---

¹ Sen (1997) acknowledges two main branches of work here, spanning objective measures of inequality (typically anchored on some statistical measure of divergence of income) as well as normative notions of social welfare that place some value on a lower degree of inequality given a certain level of income.
consequences on our understanding of economic and other forms of inequality and their possible causes and consequences.

Political inequality refers to the “structured differences in the distribution and acquisition of political resources” among citizens (Dubrow, 2007:4); and political resources are a “dimension of social stratification including the ability to influence both governance processes and public policy” (ibid: 3). In principle, citizens have equal opportunities to engage in political life, vote in free and fair elections, understand and engage the workings of the political system, and shape the public policy agenda in democratic settings. Yet in practice, citizens’ relative capabilities to engage in political life and discourse, and their relative influence on policymaking could be disproportionately skewed in favor of certain groups, notably relatively wealthier groups (Dahl, 2006).

The wealthy can exercise disproportionate influence on policymaking by dominating media and political parties, by being able to afford more sustained engagement in political life (as candidates for office or as voters with particularistic agendas) and by being able to gain access to enough information and knowledge from which to base their political engagement, all relatively more effective compared to the average citizen (Rueschemeyer, 2004; Scholzman and Verba, 2012; Toka and Popescu, 2007).

Economic inequality could therefore be linked to political inequality in important ways. Solt (2008), for example, argues that poverty and economic inequality implies lower political engagement for the vast majority, except for the relatively wealthy in society. This situation in turn feeds greater political inequality. Beaumont (2011) notes how disparate access to education could exacerbate early political advantages, creating a stratifying effect on young people’s access to political resources. Moreover, gender aspects and institutional design could also exacerbate political inequality (Griffin, 2006; Hughes, 2008).

Put simply, economic and other forms of inequality are also often the result of political decisions, and these could therefore be addressed, in principle, by political action and policy reform. Nevertheless, if public policymaking and over-all governance processes are biased in favor

---

2 Incidentally, research on the persistence and electoral success of members of political dynasties acknowledge the advantages of political scions who grow up with relatively more extensive political networks due to early exposure to political life, and perhaps also some training by their elders. They are also automatically privy to relatively more information compared to the average and unconnected youth leader. See among others Dal bo et al (2009), Mendoza et al (2011;2016) and Querrubin (2016).
of the wealthy and more politically connected, then it is possible that economic inequality merely mirrors deeper political inequality. Ascertaining this link is the subject of nascent empirical research that hinges on effectively measuring political inequality.

This paper contributes to this emerging strand of literature by proposing a unique measure of political inequality that focuses on the concentration of political power in the hands of a few politicians, notably those that belong to powerful political families. Using a unique provincial-level dataset on local government leadership in the Philippines, this study develops a political inequality index based on concentration of elective positions among political dynasties (i.e. members of a political clan occupying elective positions across time and across political levels in the local government). This measure is then used to test initial hypotheses on the possible links with other socio-economic and inequality indicators across Philippine provinces.

Our initial findings suggest that political inequality, much like economic inequality, displays a nonlinear relationship with indicators of human development. This coheres with interpretations in the literature that initial inequality is not necessarily problematic for growth and development. However, when inequality hits a certain threshold, the forces exacerbating inequality could also be limiting the relative political voice and economic participation of a large section of the population, resulting in weaker development outcomes. Further exploring the empirical linkage between political and economic inequality is an interesting area for expanded study.

2. DATA
Dahl (2006:78) acknowledges the difficulty of measuring political (in)equality in the context of the United States in this way:

“Achieving truly well-grounded judgments about the future of political equality in the United States probably exceeds our capacities. One reason is that, unlike wealth and income, or even health, longevity, and many other possible ends, to estimate gains and losses in political equality we lack cardinal measures that would allow us to say, for example, that ‘political equality is twice as great in country X as in country Y.’ At best we must rely on ordinal measures based on judgments about ‘more,’ ‘less,’ ‘about the same,’ and the like. Sometimes we can also arrive at solid qualitative

---

3 In this paper we will use the Gini coefficient at the Philippine province level as a proxy for economic inequality. Given our focus on the broad term, we will use “economic inequality” unless otherwise referring to the proxy variable we turn to in our empirical analysis.
judgments that are themselves based on quantitative indicators, as with changes that occurred when groups previously excluded, such as workers, women, and African Americans, gained the franchise and other important political rights.”

Other scholars suggest rough approximations such as participation rates in politics and politically relevant associations, disaggregated by parameters such as class, race or ethnicity, and gender. Or perhaps the alternative measures to look at, include the results of political participation, such as poverty incidence, measures of social exclusion, and divergence in education quality (Rueschemeyer, 2004).

More recently, Acemoglu et al (2007) leveraged their analysis of political inequality by turning to measures of concentration of political power. Turning to data on municipal Mayors in Cundinamarca, Colombia, during the period from 1875 to 1895, these authors developed an index of political concentration reflecting the extent to which political office holding was monopolized by certain individuals or families. They then assessed how this measure compared to the inequality in landholding (i.e. land gini) in the same region. De facto, they analyzed how political and economic inequality could be empirically related.

They found initial positive correlations between the land gini and stronger development outcomes (i.e. higher levels of primary and secondary school enrollment). On the other hand, they also uncovered negative correlations between political inequality (i.e. concentration of political office holding among certain individuals and families) and schooling outcomes.

While they did not establish causality, they nevertheless noted that these correlations may help dispel previously held notions that land inequality (a common measure of economic inequality) may not necessarily be linked to poor development outcomes. In fact, these authors hypothesize that powerful and rich landowners may have provided checks against anti-developmental tendencies of politicians. On the other hand, where politicians virtually monopolized the political landscape (as measured by the political concentration variable), the subsequent development outcomes were unambiguously poorer.

Recent empirical research on political dynasties in the Philippines shed further light on political inequality. Using public finance data from 2001-2010, Atkinson, Hicken and Ravanilla (2015) empirically analyzed Philippine legislators’ allocations of post-typhoon reconstruction funds to municipal mayors. Rather than poverty or demand for relief, clan ties appeared to be the
key variable influencing the flow of reconstruction funds channeled by legislators to municipalities.

Clan influence on public finance allocations could further exacerbate their hold on political power—and more family members occupying elective positions with influence over public finance simply reinforces how entrenched they have become. As regards the relationship between political dynasties and poverty in Philippine provinces, Mendoza et al. (2016) developed one of the most comprehensive datasets on political clans, allowing them to empirically examine this using data from 2001 to 2013. They found empirical evidence that more political dynasties in Philippine provinces is associated with deeper poverty incidence—an empirical relationship that is larger especially among provinces that are farther from Manila, the country’s economic and political center.

Drawing on the work by Acemoglu and colleagues, and building on seminal empirical literature on the development consequences of political dynasties in government (e.g. Querrubin, 2016; Mendoza et al, 2016; Atkinson, Hicken and Ravanilla, 2015), this study develops several unique measures of political inequality:

1. Dynastic share: Share of political dynasties among elective officials in local government for a Philippine province;
2. Fat dynasty share: Share of the largest political clan among local government positions, as measured by the number of elective officials in local government for a Philippine province belonging to the same family;
3. Political gini: Gini coefficient drawing on the distribution of elective positions across non-dynastic politicians (1 position each); dynastic politicians (counting family members in elective office in the last political cycle and in the present one).

3. EMPIRICAL ANALYSIS

3.1. Measures of Political Inequality

As discussed in the previous section, the study develops and empirically analyzes several possible measures of political inequality. The first measure is the share of dynastic politicians among the
A dynastic politician is identified as an elected official who has immediate relatives that were elected either in the current or past elections. As defined in previous research, a family identification approach is used to ascertain kinship relations. Essentially, last names are first matched; and then these linkages are reviewed to clarify actual family links. The procedure is the standard approach in the literature. Dynastic share as an indicator is capable of representing inequality in the concentration of political power since dominance of dynastic politicians could in turn prohibit the entrance of non-dynastic but deserving political leaders.

However, some limitations of this method are noteworthy. First, the formula may not cover kinship relations that can extend beyond consanguinity such as relations that are associated with an extended family setup. Second, the approach does not yet consider how some political clans have successfully fielded national and other-provincial candidates, further emphasizing their political clout and success. For these reasons, our estimate is likely a lower bound of the true possible political inequality in the country.

On the other hand, the share of the largest dynastic clan in the provincial government describes inequality based on the possible dominance of one specific ruling clan. This indicator places the focus on the possible effect of one major clan. This is a relevant indicator in the Philippines because certain political clans have expanded dramatically during the period of our study.

To help illustrate, one political family, the Ecleos, in one of the poorest provinces of the Philippines, Dinagat Islands, includes a Governor (the family matriarch), a Vice Governor (one son of the Governor), three Mayors (all children of the Governor), plus additional relatives occupying one Vice Mayoral seat, one seat in the Provincial Board, and 2 seats in the City Council.

---

4 The local government positions in each province varies due to the different land sizes, populations and political assignments in each province. The positions encoded in our dataset includes: Governor, Vice Governor, Mayor, Vice Mayor, Provincial Board Member, Councilor (for Cities) and Congressional Representative.
5 As noted by earlier scholarship on Philippine dynasties, a pseudo-randomization of last name assignments in the Philippines (due to Spanish-era edict that sought to assign mostly Christian last names to the population) also helps to minimize the likelihood that two politicians possess the same last name but are actually not relatives. It also helps to minimize possible errors, that most established politicians and political clans in the country will likely try to oppose and discourage candidates who possess the same last name but are unrelated, from running for office. Hence it is more likely that within a Philippine province, Filipinos with the same last name are actually related (e.g. Mendoza et al, 2012; 2016; Querrubin, 2016).
6 See also the study of political dynasties in Japan by Asako et al (2015), in the United States by Dal bo, Dal bo and Snyder (2009) and in the Philippines by Querrubin (2016).
Altogether, this one family occupies only 12% of the total positions in this province; but they occupied virtually all the top elective positions.

Figures 1, 2 and 3 provide illustrations of the local government leadership data available for three Philippine provinces, Dinagat Islands, Maguindanao and Masbate.

The third indicator is the political gini, which describes the extent of inequality of the distribution of political power among the elected officials. It adds to the existing measures by designing and constructing the “political gini” as an indicator of inequality in political power among elective officials. The Gini coefficient is a powerful statistical measure of inequality of a distribution, which is oftentimes used to describe income and economic inequality. It is calculated as the ratio of the area above the ‘Lorenz curve’ of the distribution and the area under the line of the uniform distribution. ‘Lorenz curve’ is derived from plotting the cumulative percentage of people against the cumulative share of income earned. The same concept is applied to the distribution of political power to come up with a proxy measure of political inequality.

Dynastic and Non-Dynastic Elected Officials (2016)

Province of Dinagat Islands

Figure 1. Local Government Leadership in the Philippine Province of Dinagat Islands

Source: Authors’ calculations based on data developed by Mendoza et al (2012;2016).
Figure 2. Local Government Leadership in the Philippine Province of Masbate
Source: Authors’ calculations based on data developed by Mendoza et al (2012;2016).

Figure 3. Local Government Leadership in the Philippine Province of Maguindanao
Source: Authors’ calculations based on data developed by Mendoza et al (2012;2016).
The concentration of political power for an elected position is measured by counting the number of immediate relatives in the past or present election cycle. For instance, a dynastic politician with two relatives in the current election term and one relative in the past has a corresponding political power of 6.7

3.2. Links between Political Inequality and Economic Outcomes

We begin by analyzing the initial crossplots showing the possible relationship between economic inequality, proxied by income inequality (i.e. Gini coefficient calculated at the Philippine province level) and the human development index (HDI) of Philippine provinces8 in 2006 and 2009. (See Figures 4 and 5.)9

---

7 6 = 2 (number of relatives in the current administration) + 3 (number of relative in the previous election term) + 1 (corresponds to the politician’s position)

8 The Philippines has a total of 81 provinces at present, however only 79 provinces were included in the analysis due to data unavailability in the two newest provinces, Dinagat Islands and Davao Occidental

9 In order to avoid confusion we will use the term “economic inequality” in our analysis even as we utilized the Gini coefficient (income inequality) as its proxy indicator. Excluded in the 81 provinces are the newest provinces: Dinagat Islands and Davao Occidental due to data unavailability.
To better illustrate our point, we apply a different color (red) on the inequality indicators beyond a certain threshold level of human development. From that vantage point, both plots reveal a possible inverted U-shaped association among the indicators. As economic inequality increases at lower stages of human development, the relationship is positive. On the other hand, past a certain threshold of human development, decreasing economic inequality is associated with increasing human development.

This pattern appears to validate much earlier thinking on inequality. Kuznets (1955), for example, argued that as countries develop, inequality first increases then eventually decreases after a certain level of development is achieved. Mixed empirical evidence of this conjecture has been investigated by various research in the past. The underlying reasons for such behavior has been intensively explored. Kuznets himself hypothesized that the structural pattern was because of a dual economy characterized by a switch from agricultural to industrial sector (Kuznets, 1955; Kakwani et al, 2000).

For a slightly more formal treatment, we turn to a quadratic regression framework to empirically examine the possible inflection point, i.e. the peak of economic inequality after which the relationship with human development changes in sign. Table 1 below shows that, indeed, an
HDI cut-off of around 0.55-0.57 separates the two main groups of Philippine provinces. The “low” human development group shows a positive correlation between political inequality and human development. A “high” human development group shows how this correlation turns negative.

We do not infer causality in this analysis, but the possible explanations are intriguing. One is that economic inequality is not necessarily detrimental to human development, notably in low development areas, so long as it does not become “excessive”. That inflection point of economic inequality could be in the range from 0.45 to 0.47.

| Table 1. Quadratic Regression Estimates of Economic Inequality in 2006 and 2009 |
|--------------------------------------------------|--------------------------------------------------|
| Constant | -0.0296*** (0.3251) | -0.0633*** (0.1018) |
| HDI | 1.7995*** (0.3095) | 1.8198*** (0.3819) |
| HDI^2 | -1.6329*** (0.3095) | -1.5992*** (0.3532) |

HDI cutoff point | 0.5510 | 0.5689 |

Source: Authors’ calculations.
Notes: ***Significant at $\alpha = 1\%$, ** Significant at $\alpha = 5\%$, * Significant at $\alpha = 10\%$. Numbers enclosed in parentheses are standard errors.

Based on the designated cut-off points, associations were examined within each developmental phase to further explore underlying mechanisms by which economic outcomes and inequality indicators are anchored. Consistent with theory, economic inequality has a positive association with the human development index in provinces belonging to lower developmental phase. As the development progresses, the associations shift to the opposite direction (Table 2).

| Table 2. Correlation Coefficients, Economic Inequality and Human Development Index |
|---------------------------------------------------|---------------------------------------------------|
| Income Gini (2006) | 0.5839 | -0.5674 |
| Income Gini (2009) | | 0.5868 | -0.23969 |

Source: Authors’ calculations.

As noted earlier, Acemoglu and Robinson (2002) argued that political factors and institutional transformation are critical in better understanding these shifting patterns of inequality. Along with powerful changes in the economic landscape, the political and institutional underpinning of growth and development could also be shifting. Here we turn to our novel
indicators of political inequality to examine these patterns. Is there also an inflection point where inequality is at maximum, possibly dividing the developmental phase into two: the segment where inequality has a crucial role in the development; and the portion where inequality declines as development progresses?

An assessment of the relationships between political inequality indicators and socio-economic outcomes, reveals a very different pattern from the previous ones. Political inequality indicators appear to be generally negatively correlated with human development, except for the indicator focusing on the largest dynastic clan. These results seem to suggest that political inequality could be generally detrimental to development, in both low and high human development jurisdictions.

| Table 3. Correlation Coefficients, Political Inequality and Human Development Index |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                 | Lower HDI                       | Higher HDI                      | Lower HDI                       | Higher HDI                      |
| Political Gini (2007)           | -0.1199                         | -0.1271                         | -0.1454                         | -0.2085                         |
| Dynasty Share (2007)            | -0.3360                         | -0.0142                         | -0.2198                         | -0.1031                         |
| Largest Dynasty clan share (2007) | -0.3267                         | 0.1462                          | -0.1697                         | 0.3650                          |

Source: Authors’ calculations.

Only the political inequality indicator based on the largest dynastic clan share behaves differently. While association is negative in the first phase of development, relationship with human development index tends to be positive at higher level of development. (See Figures 6 and 7 below). It is possible that large political clans in power could govern with impunity, particularly in areas with very low human development. An extensive political science literature characterizes these areas in the Philippines as rife with warlordism (Hutchcroft and Rocamora, 2000; Sidel, 1997), patron-client relationships (McCoy, 1994; Simbulan, 1965; Teehankee, 2001;2007), oligarchic rule (Simbulan, 2005) and underdeveloped institutions and dependency (Manacsa and Tan, 2005; Mendoza et al, 2012; 2016).

However, where the relationship turns to a positive correlation, we might be able to draw insights from the case of Cundinamarca, Colombia. It is possible that in Philippine provinces with much higher human development, a sufficient number of stakeholders are able to check the large dynasties so that their role remains developmental, on balance. As noted by Acemoglu et al (2007),
landowners may have provided a powerful counter-weight against politicians. And only in areas where politicians dominated the political landscape were development results unambiguously weaker.

Figure 6. Largest Dynastic Clan Share (2007) Plotted Against Human Development Index (HDI, 2006), Philippine Provinces

Figure 7. Largest Dynastic Clan Share (2007) Plotted Against Human Development Index (HDI, 2009), Philippine Provinces
An analysis of the correlation between political and economic inequality further uncovers relatively robust negative associations. See Table 4 below. This result bucks the naïve view that political and economic inequality necessarily go hand-in-hand (i.e. higher economic inequality is accompanied by higher political inequality).

The generally negative correlation between the two seems to cohere with the findings of Acemoglu, et al. (2007). They argued that these dynamics are most commonly observed in jurisdictions with relatively weak institutions. Land and business interests—as signaled by some degree of economic inequality—may be seen to be a useful counterbalance against anti-developmental tendencies of politicians enjoying near monopoly of political power.

<table>
<thead>
<tr>
<th>Table 4. Correlation Coefficients, Income and Political Inequality</th>
</tr>
</thead>
<tbody>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>Political Gini (2007)</td>
</tr>
<tr>
<td>Dynasty Share (2007)</td>
</tr>
<tr>
<td>Largest Dynastic Clan Share (2007)</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations.

4. CONCLUSION
This study contributes to the inequality literature by developing and analyzing new measures of political inequality. Its main contribution lies in the development of a political inequality index, using data on political clans in the Philippines occupying elective positions across time and across political levels in each Philippine province. This study tests initial hypotheses on the possible links across economic inequality, political inequality and development outcomes across 79 Philippine provinces.

The foregoing analysis reveals that economic inequality displays a nonlinear relationship with indicators of human development. This coheres with earlier literature suggesting that initial inequality is not necessarily problematic for growth and development. It is excessive inequality at much higher levels of development that might constrain further growth. On the other hand, we also find evidence that political inequality is generally negatively linked to human development outcomes. Unlike economic inequality, the concentration of political power in the hands of a few
seems to be associated with weaker development outcomes, regardless of the level of human
development the province is in.

This finding emphasizes how future research on political inequality could provide
important information on the persistence and depth of other forms of poverty, human development
and other forms of inequality. Perhaps a more multi-disciplinary understanding how inequality
evolves—tying together economics, politics and other lenses—could help inform policymakers on
how best to address this.

5. REFERENCES
Development Economics 6(2): 183-203.
Acemoglu, Daron et al. 2007. “Economic and political inequality in development: The case of
Cundinamarca, Colombia.” National Bureau of Economic Research (NBER) Working
Downloaded 21 May 2017].
Connections on Disaster Response in the Philippines.” Building Inclusive Democracies in
ASEAN, edited by Ronald U. Mendoza, Edsel L. Beja, Jr., Julio C. Teehankee, Antonio G.
M. La Viña, and Maria Fe Villamejor-Mendoza. Mandaluyong City, Philippines: Anvil
Publishing, Inc.
Balisacan, Arsenio and Nobuhiko Fuwa. 2004. “Changes in Spatial Income Inequality in the
[https://www.wider.unu.edu/publication/changes-spatial-income-inequality-philippines;
Downloaded 21 May 2017].
Dabla-Norris, Era et al. 2015. “Causes and consequences of income inequality: A global
perspective.” International Monetary Fund Staff Discussion Note. Washington, D.C.
[https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Causes-
and-Consequences-of-Income-Inequality-A-Global-Perspective-42986; Downloaded 21 May 2017].


