

OVERALL COMMENTS AND OUR RESPONSE

This referee raises several concerns with our paper: (a) The paper does not provide a dynamic assessment of the impact of process of decentralization; (b) The constructed indices do not have significant impact on key macro variables such as growth; (c) The constructed indices are not useful as each country situation requires indepth analysis and countries cannot be compared based on aggregate indexes. Overall the referee does not see much merit in work that focuses on developing indicators for comparative analysis.

We take strong exception to the referee's comments. The most significant contribution of this paper is to develop indicators that capture institutional dimensions of the impact of decentralization using a standardized framework for comparative analysis. The indicators so developed provide "an assessment of the silent revolution of the last three decades" as it has impacted local government organization and finance and provide a capsule viewpoint as to how close is the government to its people after the implementaion of these reforms. Such a view is useful absolutely as well as relatively and the paper provides this view. A closer look at the world map using these indexes points to potential hot spots for internal strife. This is borne out by recent political events. The indicators therefore take a first important step in better understanding of state of fiscal , political and administrative decentralization in almost all countries of the world. Previous work on this subject mainly treated subnational governments in aggregate – which is far cry from the understanding one gains by examining in depth governments that are closer to people.

Whether or not these indicators have impact on macro variables is a separate question and in no way can be an indicator of the validity of these indexes. Of course a better understanding of each country situation requires an indepth analysis of the country itself but this in no way undermines the utility of indicators that are needed to do intetnational comparative analysis. In fact our indicators build upon mutitude of individual country case studies to develop underlying country specific data using a common methodology.

*Overall our paper takes an important **first step** for a better understanding of the governmental structures and for their implications in moving decision making closer to the people. Much further work lies ahead in overcoming the limitations of this work as highlighted by the paper itself.*

In the following we deal with specific points raised by the referee.

SPECIFIC COMMENTS AND RESPONSES

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I. Significance of overall contribution.

This paper is long on ambition but short on accomplishment.

We strongly diasgree as the paper delivers on what it promises. We developed indicators which capture the overall impact of decentralization reforms of past several decades and are useful in identifying countries with fiscal systems open to citizens dissatisfaction and therefore ripe for internal

strife. Of course, decentralization is complex interdisciplinary subject. Even its measurement is inadequate. One cannot hope to answer all questions about decentralization in one paper. This does not mean, however, that papers, which do not answer all questions, should be all discarded. Critique of the Referee is akin to criticizing an effective medicine, because it does not yield an eternal life. We believe our paper takes a significant first step in studying decentralization.

For instance, it claims in the abstract “This paper is intended to provide an assessment of the silent revolution (decentralization reform) of the last three decades...”.

This ambition falls short of accomplishment in that there is no dynamic assessment of how the process of decentralization has affected other things as it has taken place.

There is an assessment of sorts in the last section of the paper, but almost all of the space in the paper is devoted to the construction of a wide variety of indexes of local government decentralization.

Indeed, our data is cross-sectional, but even that took a lot of effort to form, and more than 30 pages to describe. We provide a snapshot of decentralization three decades after the decentralization reform took off, but we never claim that it is dynamic assessment. In fact, one of the goals of the paper is induce research on changes in decentralization over time.

In the last section of the paper the assessment of sorts is provided through correlations via cross country regressions between the log of three of their indexes and six dependent variables, controlling for a number of other ones.

Five of the six dependent variables, their three indexes and all control variables are measured as of 2005. Some would be skeptical of the ability of these results correlating variables at one point in time to provide an assessment of a process over time.

Last paragraph seems to be the critique of the whole field of cross-sectional econometrics. In fact it is a critique of all econometrics, because by the same token, one could argue that if we analyze time series from year X to year Y, then it tells nothing about the relationship before year X and after year Y.

Talking about our paper, we provide evidence that countries with lower decentralization have higher level of corruption, and lower level of human development. If there is nothing extremely special about year 2005, and we believe there is nothing, then the relationship is likely to hold in the other years too. This is the usual assumption of all cross-sectional econometric studies.

Even if one granted the possibility some of the choices of control variables are peculiar. The authors include among the control variables log of GDP and log of population separately as well as log of GDP per capita. The last variable is just the difference between the previous two. A more sensible approach econometrically would be to test if the coefficients are the same between the first two and just include the difference if they are not or simply to just include the first two.

Thank you, one of the three variables indeed seems redundant in the regressions. We will correct this in the revised version. Exclusion of one of the variables does not, however, lead to significant changes in coefficients on our decentralization variables, so our main results do not change.

The one exception to variables measured as of 2005 is real GDP per capita growth, which is measured for the period 2000-2010. While the coefficients for their three decentralization indexes are positive, none are significantly different from 0 even at the 10% level. This suggests the conclusion that their three somewhat laboriously constructed aggregate indexes of decentralization do not seem to have much of an impact on growth. Thus, the silent revolution of decentralization is not helpful for development, measured as growth of GDP per capita over the period 2000-2010, in a statistically discernible way.

We disagree with the statement of the Referee that “decentralization is not helpful for development”. First, development is not only measured by GDP per capita growth. That is why we report regression results with other dependent variables. Decentralization is positively correlated with human development index, and negatively correlated with corruption, controlling for a number of factors, including GDP per capita. Why does the Referee think that these variables do not tell us anything about development? Second, even with GDP growth our point estimates are all positive. The t-statistic for log Government Closeness Index is 1.61, so the coefficient is statistically significant at 5.6% in one-sided test, or 11.2% in two-sided test. 11.2% is not that far from 10%, and given that we have small number of observations (N=143), and potentially large measurement error (yes, we admit that our index is not perfect) this significance level could be considered enough to say that decentralization is indeed positively correlated with growth. The correlations with integrity and HDI are definitely stronger though.

A similar lack of statistically discernible effects arises with respect to government employment, procedures to start business, and procedures to enforce contracts. Statistically discernible correlations arise only with respect to perceptions of corruption as measured by TI and the UN’s human development Index.

The coefficients on government employment, procedures to start business and procedures to enforce contracts are indeed statistically insignificant even at relatively high levels. However, our point here is that decentralized countries do not seem to have bigger governments or more “red tape” as some theories of decentralization claim. At the same time, decentralized countries seem to be less corrupted, offer more possibilities for human development, and (perhaps) grow faster.

Thus for 4 of their 6 dependent variables one can argue that their three decentralization indexes have no statistically discernible impact on the variable.

Yet based on these results the authors conclude”... that one could have predicted well in advance with a fair degree of accuracy countries that were ripe for popular people revolt such as the one experienced through the Arab Spring...”!

The last point to note on Section with the regressions. Our main goal in this project is to provide thorough measurement of decentralization, consequently most of the paper is about the measurement. We believe that the novel approach to measuring decentralization has a merit in itself, regardless of the results of regressions. Nevertheless, we have ran a couple of regressions to (1) show that decentralization matters - it is clear for corruption and human development, but less clear for growth, and (2) show that it matters how to measure decentralization - regression results with log GCI differ a lot from those with LG expenditure decentralization. This is just a basic demonstration. More serious statistical analysis - including testing for various specifications and using various statistical methods - is left for further research. An example of such research based on our data is Ivanyna and Shah (2011).

II. Is the Analysis correct?

Many if not most of the considerations mentioned by the authors in the process of constructing each of the indexes are sensible and consistent with the literature. Unfortunately at the end of the day each of the indexes have serious problems in measuring the concept they are after very accurately for a variety of reasons beyond the control of the authors. Adding them up or putting them together does not necessarily reduce the problem or improve accuracy.

For instance, what do we mean by local government varies across countries even formally, let alone informally. The authors note issues relevant to this problem but it is not clear that their indexes address these issues in meaningful ways. For example, they construct an index to calculate the average population of a LG administrative unit that corrects for the fact that there are different tiers of local government. The end result is that their index will generate higher average population values for LG units if a country has more tiers. It does so other things equal, which they would want, but even if they are not equal, which they would not want. Among the things that are not equal and they would not want is the lack of consistency in definitions of tiers by countries, which are accepted by data gathering agencies as they note.

The definitions of local government can sometimes be inconsistent across countries, but the definition of a tier is clearer. For example, if a country consists of cantons, which in turn consist of municipalities, then it is clear that cantons constitute one tier of government, and municipalities constitute another one. It is less clear though whether cantons are part of local government or state government. As noted in the paper, we follow the definitions of IMF GFS, and we generally accept the government structure that the countries self-report to the GFS. Since countries treat GFS definitions in different ways we try to correct for this (as noted by Referee). We do not see, however, how this inconsistency of definitions undermines our adjustment procedure.

Informal issues are even more difficult. For example, in India a village level type of local government has existed for many years (Panchayati Raj) but its efficacy has varied enormously despite many attempts to devolve some power to it. So much so that there have been two commissions and a constitutional amendment trying to empower these local government units with limited success. These institutions now even have a ministry at the union or central level although their website has no records! It is not clear if these units are considered at all when they include India in the indexes they construct. Even if they are included-- are they included in all of the indexes? It is hard to believe that there are data on them for all the concepts identified by the authors.

If one wanted to compare India and China with their indexes, for example, one would want to know if the above somewhat informal and very local government units with a parallel structure to the more formal ones were or were not included in each of their indexes for India.

Each one of the issues that arise for anyone index and anyone country are worthy of being addressed individually, which would convert the paper into a monograph. Unfortunately without doing so there are many questions unanswered about the indexes. These questions leave at least this reader somewhat uncertain about what the indexes measure.

The informal institutions were not included in the analysis, unless they were reported to GFS. As noted by the Referee the only way to include them is to address them individually in each country, which is infeasible within one paper, and even if included makes a cross-country comparison much harder. While we do admit, that informal institutions may play a large role in the governance of some countries, current state of research on even formal government institutions leaves a lot of questions open. For example, most of the empirical literature on decentralization up to date uses subnational expenditures or some ad-hoc measures. We provide a new alternative - a comprehensive index, which accounts for many dimensions of decentralization and is available for a wide range of countries. Criticizing paper on the grounds that there are still areas in research on decentralization, that are not covered by this paper, seems unfair.