Regions and Development Clubs: A structural perspective from economic geography

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Sir Peter Hall

- This talk is dedicated to Sir Peter Hall (1932-2014), who was one of my professors at Berkeley. Peter was an inspiration for many of us who have since devoted our careers to understanding regional economic development

Development

- Widespread agreement that development is a multi-faceted process, that brings improvement in (*inter alia*): personal income; wealth; health; education; personal choice; freedom from arbitrary power; economic mobility; geographical mobility; security; ability to plan one’s life; ability to develop personal capacities.

Recent add-ons to definition of development

- Inter-temporal/generational issues: "sustainability." (what undesirable environmental, social, economic outcomes do we think we can prevent happening tomorrow?). But: what are current economic, political or conflict costs today of doing so?
- Today's hidden costs: negative externalities that are not currently correctly priced into GDP

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A cacophony of indicators

- To respond to these debates, what should research on development use as its dependent variable(s)?
  - Standard debate: Growth (population, output); or quality of growth (income and wealth or something else)?
  - Human welfare: UN Human Dev’t Index (HDI)?
  - Environment: Sustainability Dev’t Index (SDI); Environmental Sustainability Index (ESI)?
  - Alternative GDP measures: e.g. GPI, backed up by the CWI (Comprehensive Wealth Index) or Inclusive Wealth Index (IWI) – externality and intergenerational accounting, based on some version of Stiglitz-Fitoussi

The indicators explosion: human development and economics

- One problem with using HDI, SDI, ESI, IWI, or CWI is that it limits the degrees of freedom in our field. If everyone just chooses the dependent variable they prefer, how can research accumulate more reliable results that “talk to one another?”
- In any event: the HDI has a correlation of….0.95 to GDP per capita! So such things as health, education levels, rule of law and infrastructure are already captured just by using GDP per capita or PCPI (per capita personal income)

PCPI is the best indicator of development

- So my proposal is that we use per capita personal income, adjusted for cost of living, as the dependent variable in analyzing regional economic development. Real PCPI (RPCPI) or, closely related, real per capita GDP.
- Ideally adjusted by the improved GDP or income accounting methods I just mentioned
- These indicators get us almost all of the human development measures, political development measures, and environmental quality aspects. They are reasonably reliable and parsimonious and we can eliminate a lot of the cacophony in the field by using them.
- Places (regions, nations, etc) can thus be said to develop when they improve their RPCPI or their RGDPPC.

Growth does not proxy development

- RPCPI and RGDP/PC are indicators that strongly emphasize the *quality of development* and proxy for many of its qualities, as we have seen
- So what about population and output growth?
- Mere growth is a bad indicator of development. It has a complex and uneven relationship to development, sometimes negative and sometimes positive, but not consistent.
- If we want study growth, that is fine as a separate problem. But comparative studies of development shouldn’t use it as a dependent variable.

How should we represent change in development?

- One of the deep issues for regional development analysis is how the overall system of territories (countries, regions) evolves. The main way this is captures is: what are the forces for convergence and/or divergence of economic development?
- I believe that economic development has forces for both: *convergence* through trade and factor mobility; *divergence* through agglomeration economies, specialization, and the uneven landscape of innovation (disruption).
- The two are in tension with one another. This is a double problem: how to do causal analysis; and how to model the dependent variable, development, in a way that doesn't impose a mis-leading view of reality on the numbers.
- A lot of mainstream urban economics concentrates solely on proving the existence of inter-regional convergence ("mean reversion"). Any deviations from it are dealt with through a hunt for its statistical manifestation in the form of mean-reversion. The econometrics frequently have serious flaws due to the a priori commitment to this outcome.
- But lots of empirical studies of the other side (declining regions, star cities, resilient or non-resilient regions) are too ad hoc – they don't systematize these divergence forces and bring them into contact with convergence forces
- So we have lots of different narratives in the regional development literature

A better way: development clubs

- International development theory has a better idea than most regional science and urban economics does about the process of development
- Concretely, it argues that are development “clubs” – numerous conditions that co-vary and hence stick together for different classes of economies
- Importantly, change between clubs (regions or countries moving up or down) is not smooth and continuous. Moreover, regions/countries move up selectively, many stagnate, some fall down.
- So this gives us a set of issues to investigate in regional development research

Standard definitions of the clubs

- The clubs in international development that we commonly use are: very low income ($0-2000 PCPI); low income (2-8K); middle-income (8-20); high income (20+ or so) – these are for countries, but perhaps would be useful for regions.
- In what sense are these clubs? Seems that a lot of concrete dimensions of development are highly interdependent: science and tech, skills, health, infrastructure, fixed capital endowments, institutions/rule of law, specialization.
- Thus, at different PCPI levels (clubs), not only does development advance through different tasks, but the probabilities of advancing change.
- Summarizing conventional wisdom: initial “takeoffs” out of the low-income club are selective, but can be done without massive domestic investment in HDI-type measures, but do require factor-mobilizing policies (labor, infrastructure, trade, some rule of law). However, once regions or countries hit middle-income status, there is the famous “middle income trap.” Getting the right mix of further changes , those that allow the economy to move up the ladder of specializations, are harder and more expensive in domestic investment terms. Only a few countries have made it from middle to high income in the last century. Finally, if a country or region does make it to the high-income group, in the last century it has been unknown for such a country to fall out of that group, though it might change position significantly within it.

Clubs of regions and cities

- Club behavior also exists *within countries,* where there are clubs of city-regions
- The issues of take off are similar for cities and regions; middle-income traps exist for some regions, but in some countries there is enough factor mobility and strong institutions that they are less severe than for middle-income traps of whole countries (and more redistribution); issues for high-income cities and regions are similar to countries: how to stay at the top of the heap through innovation?

Example: the USA

- High PCPI city-regions have a greater probability of falling out of the top club than do whole countries (Syracuse, Detroit, etc)
- There can be rather big movement *within* the top club (LA ↓, Boston/Washington ↑).
- There is lots of movement into the top (Houston, Dallas, Atlanta)
- There are lots of middle-income trap cities (Phoenix, Las Vegas)

- So the descriptive statistics for development of cities and city-regions should be, like their international counterparts, looking for non-smooth, threshold-based, selective processes, with all this turbulence.

But development isn’t just income, is it?

- I’ve argued that the dependent variable that proxies for “development” should be RPCPI or RGDPPC.
- Lots of current literature is trying to add to this some kind of notion about “inclusive” or “just” development

Gini coefficients and development

- There is no really consistent correlation of gini coefficients of income and GDPPC.
- At international scale, if we take high GDPPC countries, we find ginis on "market income" (before redistribution) from about 0.28 to about 0.45, and yet their HDIs have variation that's a tiny fraction of that
- So adding income distribution doesn't proxy these other things either
- What it does seem to proxy, within the high-income countries, are different social policies and labor market rules – which Amartya Sen would call "alternative social welfare functions" but some others would call different balances of power in different societies.
- Concretely, for high income places, we cannot use some kind of simple inverse relationship or tradeoff between the two to define development clubs (this would require us to say, for example, that the UK is or the US is less developed than Denmark, if we did a composite transitive indicator with per capita income and ginis trading off somehow).
- Something more complex is going on

Mean and median?

- What we really want to measure is something about the welfare of the broad mass of people in an economy
- This can be captured by the relationship between mean and median and what % of the population is in some broad range around the median + how much of the population is above some absolute level of GDPPC
- My guess is that it would get us the same development clubs as we conventionally have now, with even low-gini (0.30) Scandinavian high GDPPC countries being in the same development clubs as the high-gini (0.41) high GDPPC countries such as the USA, UK etc.
- So it wouldn’t change our starting points very much

Change : dynamics

- Thinking in terms of GDPPC or PCPI and median income is a useful starting point for large-scale assessment of development change
- Think about four cases:
  - Mean and median both rise (win win)
  - Mean rises, median falls or stagnates (inequality-increasing growth)
  - Mean falls, median rises (radical redistribution)
  - Mean stagnates, mean rises (moderate redistribution)
- A map of countries and regions in these terms would be most interesting
- And if done from the starting clubs, we would start to see how the world is changing – what are the patterns over many countries and regions? Are there any places that, as a result of these changes, jump into higher clubs, fall into lower ones, or significantly change position within their club or in the quality of their growth?

Development as “inclusive”

- A further step is to assess what these changes might mean for the population
- Realistically, “development” should mean that “a lot” of the population enjoys rising real income
- Realistically, there might be a lower tail that doesn’t – at least in the short run
- We need to find a threshold for defining “a lot”
- To do this, we need to probe the data (the shapes of the distributions in relation to changes in the mean), over a wide set of development clubs, and see where the break points between “a lot” and “not enough” widely spread improvement lie -- I do not think we can do this a priori because I suspect the break points are different for different clubs:

Different clubs, different inclusion/development processes

- 1. THE CASE OF HIGH INCOME COUNTRIES/REGIONS: Wealthy countries with low inequality (less than 0.25 is an empty set. Just above that. Development could be considered to occur if RPCPI rises even if the gini were also rising, probably reflecting widespread welfare gains but different structures of distribution. I don't think Sweden has "de-developed" in recent years by having its gini rise from 0.25 to 0.31). It is likely that modest growth of PCPI in such countries with a modest rise in gini would still benefit "a lot" of the population and could therefore be considered inclusive development.
- The case of the USA as a high inequality wealthy country. The USA has a gini of 0.41. There is a poverty and inequality problem. The median income has stagnated in the 21st century. Can "development" be said to be occurring? Following Piketty, it would seem that a high-inequality wealthy country needs rather high growth in the mean in order to lift the median, or it needs redistribution to improve the median and spread the benefits of growth. So the conditions for inclusive development are more restrictive.

Different clubs, different inclusion/development processes

- 2. VERY LOW INCOME COUNTRIES/REGIONS: At the other end of the scale, very low or low-income countries: would merely lowering the Gini without rising RGDPPC constitute development? Unlikely, although it would depend on whether the measures that lower Gini are not only humanitarian but also improve, with a lag, *the long-run* GDPPC potential of the country. In other words, redistribution measures that also improve skills and labor market participation and hence economy wide performance in generation t+1.
- 3. How about middle-income countries with very high Ginis, such as much of Latin America or India?. Above some very high level of Gini (0.55), we should only consider "development" to occur if increases in RGDPPC or RPCPI are accompanied by no further increases in Gini. Stated differently, it's probable that modest increases in PCPI will not benefit enough of the population if they also push the gini up even more. On the other hand, there might be some rate of PCPI growth that would have positive effects on a wide swath of the population – this needs to be determined empirically as a definition of what "development" means for this club

More clubs

- 4. CHINA. China has a gini of 0.47. Therefore, we can say, based on experience of Latin America or India, that as its mean income rises, it may experience some further inequality and still be said to be developing. Given that there are 700 million very low income people in China, it is likely to experience more inequality before it can experience less. Given the extreme split between urban-China and the rest, we should probably model it as two countries for the time being, where additional growth in the already-developed part should hold the line on inequality, whereas major inequality increases are anticipated in the other parts as they urbanize.

- 5. Very high income places with very high ginis: e.g. oil-rich monarchies. They are in the high GDPPC club, but the typical other structures of highly developed economies are not in place (science and tech, rule of law, education, specialization and so on). The “resource curse.” So we could imagine that they would be more developed with a lower gini, if income redistribution is used to effect long-term structural change in their economies.

From description to causal analysis

- Causal analysis at a large scale would be a big challenge
- But starting with clubs and a stripped-down typology of change gives the field a much cleaner dependent variable (the combinations of “development”, in terms of mean-median-benefits of growth that we have identified)
- This would be more interesting than the existing growth determinant literature. Because it would first differentiate development clubs and their possible development (inclusion) pathways.

Cities and regions and Ginis

- City-regions within countries have lower dispersion of ginis than do countries because of strong “national effects.”
- In USA at the present time, they range from 0.4009 (Ogden, Utah) to Bridgeport (the NYC “stockbroker belt: 0.5403). Most medium-sized US metros are about 0.42-44) and the bigger ones in the 0.46-0.48 range). San Francisco and Los Angeles and New York are about 0.50.
- Glaeser, Resseger and Tobio (2008) show that inequality is positively related, in the US, to density and PCPI. Not surprising, in a Schumpeterian, innovation-driven growth process, that cities with high-wage agglomerations are (a) big and (b) more unequal.
- But the bottom line is that they have higher RPCPIs than other cities, so the indicator of development I am proposing holds up.

Causal analysis

- As I noted, cities and regions belong to different clubs – high, medium, low, and with the same dilemmas as countries – we could potentially deal with regions in the way I've just suggested for countries (different types of pathways/combinations of mean, median etc).
- By classifying large samples of cities/regions this way, we could do better causal analysis
- A combination of external forces – the evolution of the spatial economy and its allocation of different activities to different types of places
- And internal forces – how the factor endowments, policies, formal and informal institutions of regions encounter these structural opportunities and select regions into different clubs, move them upward or downward

A way forward?

To summarize my argument:

The many insights of our field could become more systematic and more powerful if we:

- clean up our dependent variable;
- Develop more parsimonious descriptions of change;
- In turn leading to more systematic harvest of insights into causes;
- Where the causes would be (1) the system-wide forces of the spatial economy in interaction with (2) the local forces of factors, policies and institutions.

- Thank you for your attention.