Spatial Economics Research Centre

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Agglomeration Economies

[Posted by Prof Henry G. Overman]

I've been reading some of the recent material from the Foresight project on cities. In particular, I've been looking at the interesting piece by Ron Martin Ben Gardiner and Peter Tyler on the long run economic growth performance of UK cities.

While there's much of interest in this paper, there are also a few things that puzzle me - and this blog is about one of them. Specifically, I'm puzzled by the suggestion that ("the New Neoclassical") Urban Economics predicts a positive link between size and economic *growth*. Or, as the paper puts it: "It i often argued that larger cities confer greater economies of agglomeration and increasing returns effects, and that, holding other things constant, these effects make for faster growth: in other words, that city size, agglomeration and growth form a process of circular and cumulative causation."

To my mind, this 'prediction' is muddling growth and levels. There is a large body of theoretical and empirical literature that suggests that, everything el equal, productivity will be higher in larger cities. It's also true that this literature supports the idea that initial shocks might be magnified by cumulative causation as the urban system adjusts to the shock. So, for example, a city experiencing a positive productivity shock might see a long run effect that i larger than the initial shock (as it attracts more workers and firms). This cumulative causation would, however, run its course once the city had adjustec In the real world, this could show up as faster 'growth' over a number of years for a city experiencing a positive (productivity) shock.

However, when we switch to long run growth - i.e. to truly dynamic processes that may take place over decades - the link to size is much weaker both theoretically and empirically. Indeed, while some theoretical papers suggest a positive link, there's a growing empirical literature that suggests there ma be no relationship. In particular, starting with a paper by Xavier Gabaix in the Quarterly Journal of Economics there's been considerable interest in whether Gibrat's law - which says that there is no link between city size and growth - explains the tendency of city systems to follow Zipf's law (a powe law that links the relative size of cities). In an early empirical contribution to this literature, myself and Yannis Ioannides provided evidence to suggest th cities in the US system do indeed follow Gibrat's law. More recently, I've done work with Sabine D'Costa which suggests that for the UK there is very lit evidence of any link from city size to wage *growth* (even thought there is a strong link for wage levels).

In short, the idea that there is no link between city *growth* and city size is a fairly mainstream 'neoclassical' position - and one that would reflect my own reading of the empirical literature (and indeed some of my own empirical work). So it's surprising to see the lack of a link between size and long run growth presented as somehow presenting a challenge to urban economists like myself.

Part of the muddle here, I suspect, comes in the translation to policy discussions where there has been a tendency to conflate growth and levels effect I've personally tried to avoid doing this in my policy orientated writings. For example, our work for the Manchester Independent Economic Review was concerned with the productivity advantage that Manchester had relative to the wider region - but this was a statement about levels *not* growth rates. Bu it's an easy slip to make when discussing complex issues but trying to use non-technical language.

All of this also raises the much more important question of the implications for urban policy. At any point in time, the urban system is likely to have som large cities that are doing well and some that are doing badly (both in terms of growth and levels). The same is true for small and medium size cities. This reminds us that basing policy on size, per-se, isn't very sensible unless size correlates with some other important considerations e.g. governanc This is why, for example, some of us pushed very hard to have the second round of English city deals focus on some of the smaller cities that were fas growing rather than just focusing on the (next ten) biggest cities.

But neither does the lack of a link suggest that we should completely ignore the issue of size. If, for example, the government wants to have a northern city to act as a counterbalance to London then it may make sense to focus investment in a place (e.g. Manchester) that is relatively large and has relatively high productivity. The hope would then be that agglomeration economies might generate a cumulative causation process that helped further t positive impact of that investment. Whether this would happen in practice depends on the extent to which policy can generate productivity increases, whether congestion costs increase quickly or slowly, etc. If it was successful, the effects would show up as faster growth for Manchester in the short to medium run, but (as the data make clear) not necessarily in the long run.

So the link between size, productivity and growth does matter for policy, even if - as seems likely - there is not a strong link between city size and long run growth.

Posted by Prof Henry G. Overman on Friday, October 03, 2014

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