October 12, 2009 conference call with Enrique

Attending: Elana, Sohair, April, Libby, Bill, Kirsten

Innovation index: best way to get actual construction would be to talk to Carol

Enrique

Biggest challenge when applying the model: coverage, what data we’re using, the unit of analysis. The main objective was to try to model and understand the main factors of growth, whether putting things together or isolating was better, but the question was very general. What is the role of infrastructure, what’s the role of human capital and innovation, etc. Were constrained by data because they wanted to create a general model and maximize coverage, and include all regions. If we have access to better data, we might want to ask ourselves different questions to go into more detail.

What would he have done if he’d had all the data he’d wanted?

Is there data about policy intervention to test? Enrique would be interested in that.

Bill

General idea is to use data in the US to extend the study to the US case in a little more detail. The general goal is to construct the model for the US case and take advantage of information they have available that may not have been available to Enrique because of the number of countries. Goal is not to measure impact of interventions, though that’s a logical extension.

GPD/GDP – it’s a typo

Dependent variable is annual average growth rate, geometric growth rate, but can also use log difference.

Left secondary out as a control, just looking at both extremes. Only primary is low skilled, while lots of tertiary is high skilled. Implications of secondary are not that clear. Also, primary, secondary, and tertiary might be correlated.

Primary attainment—stock of population that has just primary education, divided by the working age population. Percentage of working age population that has just primary. A high ratio would mean that among working age population you have a high share that is low-skilled. Can also take ratio of labor force.

For human capital if we get data with flows (enrollment rates) we can include that in the model. He would lag it by one year.

Why not years of education? It can be tricky because you have different systems. They used ISCD. International student classification something. Let someone else do the standardization. Could use number of years because there’s less state to state variation, but Bill says that there might be more than we think.

Let’s just let someone else do the work.

Also interesting: quality of human capital, standardized testing. PISA study, some sort of indicator that tells us about the quality of human capital. NCLB?

Youth unemployment: negative sign, so the higher the employment rate of youth the lower the growth. It’s capturing output potential. If you have a low employment rate you have a lot of room for improvement and ability to mobilize labor force and generate growth. But if you’re close to your PPF there’s little room left to put more people into your labor force.

Measured growth of employment rate, and that comes out positive.

Female employment rate measures whether your labor markets are efficient—if they’re filled to capacity, using women and young people.

Youth unemployment in OECD is a big problem, the transition from school to work. Goes up to age 25.

Log of agglomeration activity

Reason they chose FIRE—a lot of the metro areas are service providers. Used financial intermediation as a proxy, could have been better. Multiplied that by all people working in that sector, to measure size of agglomeration. How specialized you are, plus how many people you have. Could be improved, was just a way to measure agglomeration.

Compute index of specialization—below or above 1. If you’re above 1 you’re specialized in that sector.

Can send us index for specialization. Total number of people working a sector in relation to all industries. Compare that ratio to overall ratio you’re trying to benchmark. (Below one or above one.) Multiple that number by total number of people working in financial sector.

Book: “How Regions Grow: Trends and Analysis” – he’ll send us the electronic version.

Innovation stuff

Will send us a paper that captures how to model innovation. Linear view—you invest in science and technology, R&D, public or private, and out of that you can obtain more patents. But everybody knows that innovation isn’t linear. Good literature about regional innovation systems that measures what are the conditions for innovation to create knowledge and spillover and spread to other sectors and parts of the economy. Has to do more with networks in a given space, and capacity to absorb and adapt to innovation.

Note of caution about compasses and indicators: they’re highly sensitive to weighting. Make sure we do it in a sound way.

Bill: there are severe limitations to simple patent counting.

Enrique will send us paper about pre-conditions for innovation. We can look at ICT infrastructure in the US—indicator of broadband, speed of internet, etc. two step regression. Something affects innovation, which in turn affects growth. There are several ways to model it. They just threw the indicators into the model but not much came out, so they tried to use the knowledge production function to show what affects patents.

What is meant by convergence?

There’s a literature on convergence, going back to the idea of the solo growth model that tells you if you’re far away from steady state you will convergence in long run. Basically tells us that your initial GDP per capita has an affect on your growth. If you’re far from everyone else, you have more possibilities of catching up.

If you’re far from your PPF, you might want to first focus on infrastructure and human capital before you invest in innovative activity. Innovation shifts PPF outwards. But if you’re far away in the first place it might not do you good. You want to prioritize what you want to first invest in.

Agglomeration forces: pooled labor market, back and forth linkages. Which variables did he use to capture labor market pooling? Didn’t really use anything?

Forces of attraction and forces of repulsion. If you reach a point where you have an oversupply of labor, diseconomies of scale, congestion, large cities start to lose out. If we can think of ways of how to model this, we’ll be doing a better job.

Will send us a link about agglomeration economies. We can think of other indicators and send him an email about what he thinks.

Controlling for population growth? Is that captured somewhere?

Some thought that the variation was too small unless there’s a region of immigrants. We can put it in if we want.

It was a Herfindahl index.

He’ll send us lots of stuff!