Lecture 2: Macroeconomic Data

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Ákos Valentinyi

Presentation Slides

Video

Q: Just to be clear and precise, do we include payments to labour and capital in firm's value added? So, If Y = rK + wL + cM + Profits, VA = Y - cM. Is this correct?

A: Yes, this is correct.

Q: What is the rationale for the decreasing GDP for African countries?

A: I am not sure to what aspect of the presentation you are referring. Akos has been presenting changes in time relative to the US, so any country that shows a decline does not necessarily have decreasing GDP, but only relative to the US. Some African countries (Botswana, and to lesser extent Mali, and Ethiopia) had converged, while others had grown less than the US (e.g. Malawi, Madagascar, Chad, Cote d'Ivoire)

Q: Why do we need sectoral PPPs? What do we lose when using the country-level price indices? My guess is that we expect consumption baskets to systematically differ within sectors and countries, but I'm not sure my intuition is right.

A: The goal is to look at value-added per worker by sector, and variation in this across sectors. Differences in productivity typically imply differences in prices. We therefore want to account for both output and input prices, which vary across sector and countries.

Q: Did theses 84 countries have LFSs on the three years for the calculating sectoral employment for productivity or is it based on imputation based on surveys in other years (as the ILO does)?

A: I am not sure what the underlying data are for each country. For the US, and the KLEMS database which breaks out types of labour, GGDC combines both census data with an LFS (the CPS) for between census data.

The particular years, however, are chosen because of the availability of ICP benchmark data, not labour force data. As that is the innovation in these data.

Lastly, documentation for these data is here: https://steg.cepr.org/publications/tradability-and-sectoral-productivity-differences-across-countries

When questions (like yours) are not included in the documentation they are very receptive to answering via email.

Q: Any reason as to why the intercept of the red line is at 1/64?

A: It's the 45 degree line. It is 1/64 on each axis if you look closely.

Q: The value added per worker in vertical axis represent the sectoral value-added (e.g., of agriculture, manufacturing), right?

> A: Yes, it is sectoral value added on the y-axis, and aggregate value-added per worker on the x-axis.

Q: How reliable is this VA sectoral data? Argentina is surprisingly too close to the frontier in these tables.

> A: In my experience they are quite reliable in their construction. Groningen (GGDC) is quite careful. There are times when the underlying data is limited and occasional oddities arise, but they are rare. Argentina's high productivity in agriculture is not surprising to me, but its overall high productivity is surprising. I wonder if it is an oddity of 2017.

Q: What does NIPA GDP stand for?

> A: National Income and Product Accounts, Gross Domestic Product"

Q: From the "Basic Concepts", I understand that Productivity is measured as VA, which is gross output minus value of intermediate inputs. However, in the model, productivity is refer as factor A - which is not the input-output difference. My confusion arises from here. So we associate productivity as A but we measure it using value added?

> A: There is a challenge in mapping from data to production function. The production function only has labour and capital as inputs, not intermediates. It is therefore a model of the production of value added rather than gross output. So, you need to measure value added when going to the sectoral data. You don't just want to measure gross output and ignore that fact that the value of gross output is higher in some sectors simply because those sectors are downstream, for example.
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> A great paper that shows this clearly is Akos' paper: Herrendorf, Rogerson, and Valentinyi (American Economic Review, 2013)"
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> If you used gross output without accounting for inputs, you would measure that downstream sectors are more productive because you didn't account for the fact that their inputs cost much more.

Q: I'm sorry I'm still very confused, could you clarify the link between productivity and value added as put in Slide 8 please?

> A: See slides 12-15. What's on the y-axis is PPP value added per worker (relative to the US). That's productivity

Q: Can these models apply as well to a developing sub-Saharan country like Uganda?

> A: Yes, indeed, Uganda is one of the countries in the data.