STEG-PEDL Virtual Course on 'Private Enterprises, Productivity and Economic Growth'

Session 5: Friday 6th March 2026

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Presentation Slides

Video

To ask questions (after the live lecture has ended) and join in with the discussion offline you will need to create an account with Piazza and join the PEDL/STEG Firms Course. This can be done by following this link:
https://piazza.com/growth_research_platform/spring2026/stegpedlfirmscourse

Q: Government intervention could be good solution only for rich countries?

A: Korea was not not high income when it implemented industrial policy in the 1970s. So that is at least one example.

Nor was China. Of course, China also had famously catastrophic industrial policy, 35 years earlier.

Q: But this is correct if the economy is closed, right? so how should we think about these two centrality measures if country is open?

A: I believe that Ernest is offering this as a simple example of a vertical structure within a closed economy. But the same basic structure can be extended to encompass more horizontal linkages and international linkages.

The corresponding metrics of centrality will become more complex, but there are still ways to construct the centrality measure.

As Ernest is now discussing, you could think of trade as another sector...

Q: How can you recover sectoral TFP from data?

A: Sectoral TFP is constructed by writing down a gross output production function, measuring real inputs and real outputs (one needs price indexes for both inputs and outputs), and payment shares for inputs and factors. These data are available for a large set of countries at the Groningen Growth Centre

In many cases, especially with goods, it's possible to compare output quantities with input quantities. This becomes much more complicated, of course, with services, where quantities are more difficult to observe. (How do you quantify the number of units of outputs of legal services, or financial services?) But even here, there are conventions and approaches that are used in the literature.

Q: I still don't understand the intuition behind why "distortion centrality" can serve as a statistic for the social value of government intervention..

A: The point is that government should be targeting the sectors where distortions have the largest impact when they are magnified and fed through the network.

There is relatively low payoff to fixing a distortion in a badly distorted sector that has little interaction with the rest of the economy. Similarly, there is a low payoff to fixing a tiny distortion in a sector, even if that sector has a lot of links to other sectors.

The intuition is difficult because you have to think about the network structure... distortion centrality is the overall wedge that would show up in a single sector model, but it doesn't map to a direct sectoral wedge... instead in takes into account all the various distortions in the network and all the linkages in the network, and complicated circulation of inputs.

Q: Where is firm level innovation (product, process, etc.) data is available for Asian countries?

A: For some countries, people use patent data. For others, they use employment data at the firm level, focusing on the number of employees identified as engineers or researchers.

Q: By any chance, do you happen to have a graph of actual vs optimal R&D allocation for Malawi and the indicators of which sectors should be invested in in Malawi? This would be interesting for Malawi's perspective, but also as a contrast to the more 'developed' industrial country economies you've used as examples.

A: Maybe a question for Ernest about the lowest income countries, in general... I doubt that he will have anything specific here for Malawi.

Q: What do you mean by innovation networks in your paper?

A: This is the network of innovation/learning spillovers across sectors.

If you have questions for the coming Q&A, please submit them as a reply to this message.

Q1: How applicable are these findings to commodity-dependent developing countries, where industrial policy in manufacturing faces stiff competition from established producers like China? Are there alternative sectors or strategies these countries should target instead?

Q2: In your first paper, how could we think about business service in the context of your model??

Q3: How capital stock can be calculated?

Q4: What about firm level productivity data?