A new economic crystal ball for EM gazers

Hugo Cox Dec 23 12:42 Comments

How to predict future growth in emerging markets (EM)? This is a million dollar question for investors and policymakers. Dozens of crystal-ball indices have sprung up but most of them are pretty poor when it comes to making predictions.

So the latest measure, assembled by a group at Boston's MIT and dubbed 'economic complexity', is of interest. It looks beyond the traditional measure of 'economic diversity', which has proved useful to economists because countries that export a diverse range of products tend to be better equipped to ride the roller coaster of global demand than those that produce just a few.

The new measure devised by the MIT team also considers the rarity of exported products, judged by the number of other countries that also export them. Including this factor alongside diversity of exports, the measure predicts that countries that export a wider variety of goods that are in relatively scarce supply stand to outperform those countries that export a narrow repertoire of goods in competition with other entrenched producers.

Cesar Hidalgo, Director of the Macro Connections group at The MIT Media Lab, has tested the predictive power of 'economic complexity' measure.

He looked at the difference between GDP and economic complexity in 1985 across a hundred or so economies. According to the theory, a big difference meant subsequent GDP should be higher – in order to close the gap. Sure enough, the actual annualised GDP between 1985 and 2000 was pretty close to that predicted by the relationship between GDP and economic complexity in 1985 (see clustering around the diagonal line, below).

Many of the outliers, notes Hidalgo, are countries that faced big political political instabilities in that time, including Iran, Iraq and Liberia.

Hidalgo believes economic complexity could be a valuable resource for investors and policy makers because it is better at predicting future growth than the current favoured indices, notably the Global Competitiveness Index, published annually by the World Economic Forum.

"The global competitiveness index is a very poor predictor of long term GDP per capita growth, compared to economic complexity, but it makes the headlines of all newspapers business section every year," Hidalgo says.

To see the difference between economic diversity and complexity, compare Singapore, Pakistan and Chile. They were equally diversified – ie they had the same total number of different exported products – in the year 2000 (see chart below) – but their per capita GDP differed significantly (x axis).

Source: MIT Media Lab

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This, says Hidalgo, is because their economies differed significantly, both in terms of complexity and the scarcity/ubiquity of other countries exporting the same products.

For Pakistan , roughly 80 per cent their trade was in a small number of ubiquitously available products – cotton garments and other yarns and fabrics fashioned from cotton. Meanwhile, the other countries that exported those products were, like Pakistan, reliant on a small number of products for export. Chile did a little better: despite 40 per cent of total trade being in copper, the rest of the economy was quite diverse – fish, grapes, wood and pulp – but these products tend to be produced by other countries that score low on diversity. Singapore, on the other hand, exported products that are relatively scarce – microchips, computer parts, lubricating oils –and were also exported by countries with a diverse range of exports.

Why is 'economic complexity' useful at predicting future GDP? The MIT's three measures are useful in different ways.

Firstly, diversifying an economy is a useful way towards economic growth, since it protects you from swings in demand and sudden price changes in key exports (see Russia's current dire straits in the face of record low oil prices).

Secondly, producing rare products puts you on the right side of the supply-demand balance both now and in the future. Today you grow wealthy from exporting a lot of products for which there is significant demand and limited supply. Tomorrow you can follow changes in demand: the skilled engineers churning out airliners today can easily re-configure themselves to build the shuttles that will ferry tomorrow's space vacationers, for example.

Finally there is an iterative element to the MIT measure: the shared diversity of the products you export. If you're exporting products that are also exported by countries that are diverse exporters or export more rare products than common ones, the argument goes, then you're better set than if your products are exported by countries that export few products and export more common ones than rare

ones.

But don't start using the MIT measure, for next year's stock market returns, warns Hidalgo. "Because of the long term predictability of the measure (complexity is a fundamental), I would advice against using 2012 metrics to predict growth in 2013 or 2014."

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