Tim Phillips [00:00:00]:

Today on VoxTalks Economics what's happened to potential growth and what can we do about it? Welcome to VoxTalks Economics from the Centre for Economic Policy Research. My name's Tim Phillips. Every week we bring you the best new research in economics. So remember, subscribe and follow on Instagram as well. You'll find us at VoxTalks Economics. Growth in potential output drives development. It drives poverty reduction as well. And if this growth falters, it's a problem that affects all of us.

Tim Phillips [00:00:44]:

A group of economists from the IMF and the World Bank as well have written two CEPR discussion papers that analyse recent trends in potential output growth, make projections for the next decade, and suggest ways that we might be able to boost it. Sinem Kilic Celik of the IMF is one of the authors. She joins me now. Sinem. Welcome to VoxTalks Economics.

Sinem Kilic Celik [00:01:07]:

Hello Tim.

Tim Phillips [00:01:08]:

Let's do definitions. How do we define potential growth as opposed to the sort of growth figures that we always see reported in GDP?

Sinem Kilic Celik [00:01:17]:

We can define a potential growth as sustainable long term output growth. So potential growth is the rate of increase of potential output as we define as the level of output if an economy would sustain a full capacity utilization and full employment. There are different definitions that emphasize different things. For example, based on Okun's Law and Phillips curves, potential growth is the rate of growth which does not put pressure on inflation. So different methodologies sometimes put emphasis on different definitions, like that. For example, the multivariate filter methodology puts emphasis on the inflation pressures, while the production function approach that we also use focuses more on the growth of output at full capacity utilization, where the factors of productions are allocated to their most productive uses.

Tim Phillips [00:02:00]:

So in effect, it's the best we can get.

Sinem Kilic Celik [00:02:04]:

Exactly.

Tim Phillips [00:02:05]:

Why is this potential growth important for development?

Sinem Kilic Celik [00:02:09]:

It is a critical driver of a range of development outcomes like sustained improvement in living standards and poverty reduction. As I said, it is a sustainable long term growth of a country. So higher the potential growth, the higher the wealthy increase in the long term. So people cannot get out of poverty. With this, the governments will have more resources to help people, especially poorer and less fortunate people.

Tim Phillips [00:02:34]:

By definition, we can't see it, we can't observe it, we can't just simply go and measure it. So how do we estimate it?

Sinem Kilic Celik [00:02:42]:

That's the difficulty of potential growth and actually studying potential growth. Right. So usually we have the most traditional method was like using univariate filters, which was statistical methods to understand what might be the trend is going to be for the growth. But over time we develop methodologies like multivariate filters and production function approaches. With the multivariate filters, for example, we put more usage on the indicators like inflation, unemployment rates, commodity prices, sometimes financial variables that we did in this study. Or we use a production function approach that we identify the components, each component of the output growth like employment, labor force participation, what we call the potential labor or TFP and capital stock. So we use these methodologies, but in this particular study, different than the traditional approaches for the production function approach, we did not filter the TFP growth and employment to get the so called potential TFP or potential employment. What we did was using a panel regression of their long term determinants. For example, for the potential TFP growth it is the estimate of the predicted value of a panel regression of five year averages of trend TFP growth on some long term determinants of productivity that we think it is. Like productivity catch up that we estimated with per capita income relative to the advanced economy average or investment growth or working age population to see the dynamics of the country to have more productive usage. For the labor force participation rates, we are using age and gender specific labor force participation rates and we do regressions on their policy outcomes, the cohort characteristics, business cycles and country effects. So in general, the potential employment is the population weighted average of labor force participation rates across age, the five year age groups and the gender specific labor force participation rate from these regressions

Tim Phillips [00:04:44]:

Your database reports, I think, nine measures of potential growth. So it's responsible for compiling this. And over which period have you compiled the data?

Sinem Kilic Celik [00:04:57]:

This was a long term project at the World Bank and while I was working there, which started as a publication as one of the chapters in January 2018 Global Economic Prospects. So it is a product of World Bank. It includes a publicly available data set of different potential growth estimates. So five of them are univariate filters, one from multivariate filter, one from production function approach and one using the five year hat growth forecast from WEO. We also analyze and reported in our papers the five year hat of growth forecast from Consensus Economics, but it is not included in the data set due to licensing issues. But it is available for the period of 1981 to 2021 and the analysis is mainly uses production function approach for the period of 2000 to 2021.

Tim Phillips [00:05:43]:

And do these estimates tend to concur? Are you getting similar numbers?

Sinem Kilic Celik [00:05:47]:

The estimated potential growth rates resulting from using these different methodologies are different in their levels, but they point to a similar trend across time. They have some interesting features like potential growth estimated from the forecast was the highest among the nine measures in more than half of the country year pairs. On the other hand, univariate filter based estimates have the least persistence, especially in advanced economies. These findings are intuitively appealing as filter based estimates are designed to capture time serious variation, whereas others rely on more persistent drivers of potential growth like the one from the production function approach. If we look at how they track the actual growth, the estimates from the filters have the highest correlation coefficient across these estimates, followed by the estimates based on the multivariate filter. And as expected, given its construction from slow moving variables, the production function approach deviates more from actual growth with a correlation of less than half with the actual growth. And the correlation is even lower for the forecast based measures of potential growth, which tend to change all event forecasters modify their views about long term growth drivers.

Tim Phillips [00:07:03]:

Now, you mentioned the trends. I've got to ask what is the trend in potential growth? And is this trend a global trend or is it for some countries more than others?

Sinem Kilic Celik [00:07:13]:

The average global potential growth that we estimated has fallen to 2.6% a year over 2011 to 21, from actually 3.5% a year during 2000 to 2010. And the weakening of this potential growth was internationally widespread. So during 2011 to 21, potential growth was below its 2000 to 2010 average in 96% of advanced economies and a little bit lower, 57% for emerging markets and developing economies. And economies with potential growth below its 2000 to 2010 average accounted for about 80% of global GDP. So this is widespread. And also the finding of this decline in potential growth is robust with respect to the measures that we use for nine measures. The magnitude of the slowdown, of course, differs across measures. And what we see is that when we look at all these nine measures, global potential growth slowed by 0.9 to one percentage point a year from its average in 2000 to 2010 to 2.5 to 2.9% a year in 2011 to 21.

Tim Phillips [00:08:25]:

This is a pretty serious piece of information, but I guess what we can say about it is during this period we have the residual effects of the global financial crisis, long lasting effects. We've also had the COVID pandemic. How much of that decline is due to those two huge events?

Sinem Kilic Celik [00:08:45]:

Both of these periods include crisis. From 2000 to 2010, we have the global financial crisis. And from 2011 to 2021, we have the COVID. With these, we can't tell the difference. But what we did was we looked at those periods focusing on these two periods and what we see that the global potential growth slowed by 1.2 and 1.3 percentage point from two years before the global recessions of 2009 and 2020. So 1.2 for the GFC and 1.3 for the COVID. So both global recessions resulted in a slowdown in potential growth. But how they recover from it was different. For the 2009 global financial crisis, it is followed by a decade of investment weakness and reduced productivity growth. But in contrast, in the 2021 global recession, because of the COVID it was followed by a swiftest first year output rebound of global recession over the past eight decades, actually. So it was accompanied by a strong growth in investment, especially in advanced economies, and a productivity rebound. However, the impact of this initial rebound in potential growth is likely be weak because of the persistent headwinds faced by the fundamental drivers of potential growth.

Tim Phillips [00:10:08]:

You also looked at individual country based recessions, I think, as well as these global recessions. How important were they in comparison to these big global events?

Sinem Kilic Celik [00:10:19]:

Yes, we looked at the scarring effect, what we call after recession on the potential output growth. So what we see was even five years after the recessions, potential growth has been 1.4 percentage points lower than if a recession had not occurred. And these coefficients, these estimates are significantly negative for the first five years after recession. So it is large, it is significant.

In July 2023, we asked Philippe Aghion, is green growth possible? Listen to our episode to find out what his research tells us about the future of economic development.

Tim Phillips [00:11:16]:

In the second paper you look more towards the future and what we can do about this problem because I think we can all agree it's an extremely serious problem. First of all, you're looking out ten years. How do you project your estimates of potential growth ten years into the future?

Sinem Kilic Celik [00:11:33]:

We project the potential growth using the production function approach methodology. We are using the advantage of this approach since we have all the impacts of all the long term determinants of components of the production function, like labor force participation rates. So since we have all the impacts from, for example, education, life expectancy for adults, race for women in the labor force participation rates, we assume some trends on these indicators that we can calculate the labor force participation rates, the predicted and the projected ones. The similar thing for the TFB, potential TFB, we assume, for example, for the investment growth, we are using the consensus forecast investment expectations and then we estimate the capital stock using the perpetual inventory methodology using that, but also it is also in our TFB regression. So we can use these assumptions or indicators to measure the future potential growth.

Tim Phillips [00:12:32]:

Is this trend going to continue then, Sinem? Is it still going to be a global trend?

Sinem Kilic Celik [00:12:36]:

Without any unexpected favorable or adverse developments, like if we don't have a significant productivity breakthrough or a natural disaster related to climate change, we expect the global potential growth in 2022 to 30. That the period that we measure is to weaken by 0.4 percentage point a year relative to the previous decade, and it's going to be 2.2% a year.

Tim Phillips [00:13:05]:

Are there particular countries that are going to suffer the most?

Sinem Kilic Celik [00:13:09]:

One of the big emerging countries, China's, potential growth is expected to slow to just under 5% per year on average in the next decade, which is well below the average during the last two decades, which was in excess of 7% and within the range of recent long term growth forecasts. Because of the policies that in China continue to shift growth away from investment to consumption, which might be for good reasons. Especially in the Euro area, Euro and Central Asia, demographic trends and expected further decline in investment growth are projected to shave off like 0.6 percentage point a year from potential growth between the last decade and the next decade that we will look into.

Tim Phillips [00:13:57]:

We're talking so far about this in terms of those aggregates as countries, but countries are made up of individuals. Can we interpret this as a cumulative impact on individuals rather than on economies?

Sinem Kilic Celik [00:14:12]:

Yes. So economies' potential GDP growth actually set boundaries on key policies affecting development. So with low long term growth there is less hope for the individuals to get out of poverty for example, or considering public spending, it will be limited, there will be less resources to help the vulnerable groups like children, women, disabled, especially in the crisis times like an economical recession or natural disaster.

Tim Phillips [00:14:42]:

Let's think about the policies that might help in that case. Looking at investment to raise potential growth, which sectors should investment be targeting? And I guess also where's that investment going to come from? You already mentioned the economic headwinds we're going to be facing.

Sinem Kilic Celik [00:15:00]:

One of the big problems that we face globally is climate change. So I think the investment pushed towards to better adapt and better mitigate climate change is important. So we looked at this and we realized that there is a need to raise infrastructure investment by 1.1 to 3.5% of GDP per year just to meet flood protection goals and climate goals in the area of renewable power generation. So this is the one area that we need to focus on. So investment but investment for climate change is key. So where is it going to come from? Of course with the

rapid increase in public debt in general over the past decades it constrained the fiscal space in most emerging markets and developing economies. But still there generally remains scope to shift government expenditures toward productive growth promoting public investment and away from less productive spending such as subsidies. In many emerging market and developing economies, government revenue ratios relative to GDP remain low indicating that they could be raised including by expanding tax bases and improving the quality of tax administration. So we can have these resources and then direct them to productive investment.

Tim Phillips [00:16:19]:

One of the big successes of development in the last well, half century I guess now, has been the impact on education and health. Are there policies that would be effective in those areas for raising potential growth?

Sinem Kilic Celik [00:16:34]:

Yes, actually it proved to be very important during COVID too that these policies and when the school closures are affected us and will be affected the potential growth for future. So this indicates that we have a scope to better improve education, for example. So we know that even though the secondary school enrollment rates, for example in average emerging markets and development economies are near advanced economy levels but tertiary enrollment rates and secondary and tertiary completion rates on average less than two thirds of advanced economy averages. So we can expand access to education in emerging markets and developing economies but we also need to pay attention to quality of the education, which is critical to improve education outcomes. At the national level, it is important to improve teacher training, increase teacher accountability, enhance teachers' performance incentives. For health, we know that in countries with higher per capita incomes, comprehensive provision of healthcare services have been followed by better health outcomes. So programs, which are carefully targeted at local health service providers or groups of patients, have generated considerable improvements in healthcare services and outcomes. To give an example from Rwanda, for example, performance based incentive payments help significantly improve health indicators for children.

Tim Phillips [00:18:00]:

This paper also highlights the need for institutional reforms, regulatory reforms to improve business climate. It makes sense, but we know that these reforms, they're really difficult to do, and they can often be quite slow. Can they have an effect on potential growth in the next decade?

Sinem Kilic Celik [00:18:20]:

We did a local projection methodology and we estimated the impact of major sustained institutional reform advances and setbacks on growth of TFP and investment in emerging

markets and developing economies. These sustained advances are defined as increases in the unweighted average of four indicators from international country risk guide, like Bureaucracy, Quality Law and Order, Corruption and Investment profile, provided that this increase is not unwanted for at least three consecutive years. So what we see from these estimates is that reform advances are associated with significant and in some cases lasting increases in the growth of TFP and investment. So TFP was on average about 1.9% above the baseline two years after reform advances. And for investment, the investment strengthened over time. Four years after reform advances, the investment was on average 16% to 17% above the baseline.

Tim Phillips [00:19:22]:

Now, I jokingly refer to potential growth as the best we can hope for. And your research clearly shows that there is a downward trend in potential growth. If these policies that you've outlined are executed well, what's the upside?

Sinem Kilic Celik [00:19:38]:

There are a lot of things we can do to reverse this downward trend. For example, including policies to enhance physical and human capital accumulation, encourage labor force participation, especially for women and older adults, and we can improve the efficiency of public spending, as we talked briefly. And we can invest especially to mitigate and adapt to climate change. So these policies at the end can lift the potential growth by 0.7 percentage point a year over the next decade, both globally and for emerging markets and developing economies. So this would offset the 0.4 percentage point decline in global potential growth and most of the 1% point slowdown projected for emerging markets and developing economies.

Tim Phillips [00:20:27]:

Let's hope policymakers are listening. Sinem, thank you very much for that.

Sinem Kilic Celik [00:20:32]:

Thank you, Tim.

Tim Phillips [00:20:41]:

The two papers are called Potential Growth: A Global Database. Authors Sinem Kilic Celik, Ayhan Kose, Franziska Ohnsorge and Franz Ulrich Ruch. It is discussion paper 18061. Potential Growth Prospects: Risks, Rewards and Policies. Sinem, Ayhan and Franziska were the authors of that one. It is discussion paper 18062 at CEPR.

[Voiceover] [00:21:14]:

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