Artificial Intelligence and the Clustering of Human Capital: The Risks for Europe

By Björn Brey, University of Oxford (Nuffield College) & ECARES (ULB) and Erik van der Marel, ECIPE & ECARES (ULB) & College of Europe

Brussels, 6 December 2023 - Much of Europe’s future economic growth is likely to come from AI and its adoption by European firms, which is projected to shoot up the region’s productivity trend.

However, Europe, already grappling with sluggish productivity growth, faces a difficult task in creating this AI-generated growth to work, a new ECIPE report finds, because of its lack and inequality of human capital in the region.

First, Europe faces an exodus of AI-related human capital. Human capital for AI is leaving the continent and the EU experiences a net outflow when it comes to the skills required to make AI work. This is a major concern.

Second, the spread of both human capital and AI is very uneven within Europe, with some in the West spearheading whilst others in the East are trailing. This uneven clustering of human capital is very persistent over time and those that lag in human capital now will weigh down Europe’s ability in generating AI-related growth in the future.

Catching up with the needed human capital for AI is therefore crucial: those regions in Europe that successfully have invested in human capital in the past explain more than one-third of AI adoption by their firms a decade later. This pattern is driven by the most human capital-intense firms as they explain more than 50 percent of Europe’s observed AI adoption.

Now the EU’s regulations for AI are likely to come to an end this year, it’s time for European policy makers to focus on Europe’s dire need for more AI human capital. If lagging regions don’t invest, they will weigh down Europe’s ability to generate AI-related growth in the future. This will likely have long-lasting effects for Europe as a whole.