Abstract

Since the fall of the Berlin Wall in 1989, International Co-Invention – characterized by patent applications where at least one of the co-inventor is foreign – has boomed in Central and Eastern Europe (CEE). A relevant number of these patents can be linked to different forms of collaboration with the R&D labs of multinational corporations. We see this as part of a new international division of labor, where incremental innovation, measured by the number of patent applications at the European Patent Office (EPO) or at the US Patent and Trademark Office (USPTO), is sharply rising in few low-wage countries besides CEE, such as China and India. We explain this phenomenon for CEE, building on the concept of “idea gap” elaborated by Romer (1993). In fact, we argue that under the influence of the Soviet Union, regional inventors in Central and Eastern European countries were highly skilled and educated, but severely constrained in their access to the knowledge developed in the West. Hence, large western multinational enterprises, which have been investing heavily in the region since the fall of the Iron Curtain, worked as conduits by hiring regional inventors at relatively low wages to match knowledge and skills from the East with the complementary intellectual and financial assets in the West. According to our view, FDI helped Central and Eastern European economies to narrow the “idea gap” that was gnawing regional inventors in the early 1990s and gave the start to international co-invention.

In this paper, we show that in CEE internationally co-invented patents receive a higher number of citations than those indigenously created and thus are of better quality, even at the most stringent level of confidence, both for data from the EPO and from the USPTO. We also
build an econometric model to test whether FDI Stocks in CEE might cause, or at least be strongly correlated with, the boom in international co-invention observed in CEE since the mid-1990s. Our results show that there is a positive and very statistically significant correlation between the boom of internationally co-invented patents and the sharp rise of Foreign Direct Investments, while R&D Expenditure and Industrial Output seem to have much more explanatory power in predicting the total count of patents attributed to Central and Eastern European inventors.