



## Increase of Romanian workers in Italy around 2007

We want to study if the entry of Romania in the European Union in 2007 had an impact on the increase of Romanian workers in Italy.

Let's start by having a look at the data we have about the Romanian workers in the 2000 – 2010 period.



As we can clearly see by looking at the time series, there is an evident increase in the number of workers between 2006 and 2008. That clearly suggests that the cause of this increase may be the entry of Romania in the European Union which took place in 2007.

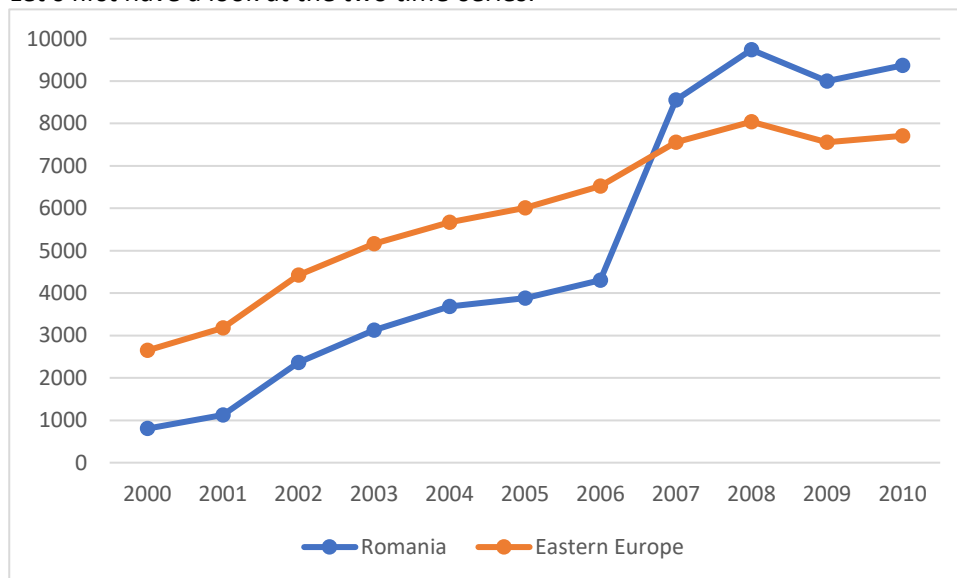
Unfortunately, just by looking at this time series we do not have enough evidence to conclude that that was the reason of the increase, since we don't know if the increase could have happened anyway.

In other words, we need to build a counterfactual to estimate what may have happened there had been no join by Romania.

To estimate the counterfactual, we need to try to find a control group. We can use the data about the other Eastern European workers, that we may assume would behave similarly to Romanians.



Let's first have a look at the two time-series.



Even comparing the two series, the increase in Romanian workers seems to be steeper than the Eastern Europe one.

But to properly build the counterfactual and see what part of the increase can be imputed to the European Union join, we need to apply the diff-in-diff method.

To work out the counterfactual for Romania, we need to stick to the assumption that Romania may have behaved similarly to the rest of Eastern Europe.

Said counterfactual can be estimated by subtracting the Eastern European workers in 2008 from the Eastern European workers in 2006, then adding that difference to the Romanian workers in 2006:  
 $8401 - 6521 + 4304 = 5824$ .

We are now able to estimate that, had there been no entrance by Romania, the number of workers in 2008 should have been 5824. But as we saw from our data, the actual number was 9740.

Applying the diff-in-diff method, we obtain  $(9740 - 4304) - (8041 - 6521) = 3916$ , or the 67% on the counterfactual previously calculated.

We can then conclude that a relevant part in the increase of Romanian workers was due to the entry of Romania in the European Union.

2006		2008		Counterfactual	DID	% on counterfactual
Romania	Eastern Europe	Romania	Eastern Europe			
4304	6521	9740	8041	5824	3916	67%