

The Growth Effects of R&D Spending in the EU: A Meta-Analysis

Overall this is a good and informative paper on R&D spending on a country level. The literature review cites the most important work and the meta-analysis seems well done. Here are some remarks to improve the paper:

- In your literature review you prominently stress the crowding-out or crowding-in effects between public and private R&D. In your dataset you do however not measure private and public R&D. Thus, the theory respectively your explanation does not fit your data.
- Furthermore, if we accept the paradigm that institutional, path-dependent, historical effects are very difficult to describe and measure and we – therefore – can only compare two countries with each other (and are not in the position to identify the underlying causes for country-differences in more detail), I would nevertheless expect a much deeper discussion about the combination of underlying effects. In short: your story about possible differences between the EU-15 and the US is not very convincing.
- The negative effect in your meta-regression on the EU-15 could be driven by publication effects which are typically larger in the US-literature. I would therefore strongly recommend controlling for publication biases and also for impact factor of the journals in which the studies have been published.
- You only rely on meta-regressions having the t-value as the dependent variable. Why do you not work with std. effect sizes? It slightly changes the results and is of much more interest than t-values.
- A problem in your regressions and by interpreting the results may be the fact that your reference group of main interest is the “US”, i.e. one country. The effect of interest may be therefore driven randomly (this is the reason why your theoretical explanation is that important), for example by the fact that the US was a lead country in many innovations and invention during industrialization up to the 1950s. Such path-dependency may also explain why R&D spending is more effective. But it tells us a different story: It happened in the past and has nothing to do with current policies/regulations/mechanisms.
- I would trust in your results much more if you could offer some underlying mechanism explaining the main effect that you obtain, for example by combing your meta-analysis with the amount of private and public R&D within the countries and within each year. If you do add some interesting moderators in your dataset you could measure which interactions explain your country-effect. Furthermore, it may be interesting to add interactions with time to analyze whether the “US effect” really increases over time or is at least stable.