## Spillovers from intangible capital and productivity growth in the EU and the US

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The global productivity slowdown has generated renewed interest in policies that might boost economic growth. One area of interest is spillovers from public sector investment. The public sector is a major investor in intangible assets, especially human and scientific knowledge capital via its public investments in education and R&D. The public sector also is a major investor in tangible assets such as transportation and telecommunications infrastructures. Investments in these assets, both tangible and intangible, are believed to exert positive macroeconomic effects in the long run. Regarding intangibles, the analysis of public sector spillovers in OECD countries typically looks (in isolation) at R&D and education. More broadly, the literature on spillovers is traditionally focused on the effects of R&D on productivity showing that the positive effects of R&D largely pertains to R&D that is privately performed (yet possibly publicly funded) (see Hall, Mairesse, and Mohnen (2009) and Eberhardt, Helmers, and Strauss (2013) for reviews). Recent work (Corrado, Haskel, Jona-Lasinio (2017)) found evidence of business sector productivity spillovers from intangible capital in a growth accounting dataset covering growth in 10 major European economies from 1998 to 2007. The findings were robust to whether R&D was included or excluded in intangibles and thus consistent with an underlying mechanism producing a growth dividend to private investment in nonR&D intangibles. This paper revisit and extend these findings looking at spillovers from public and business investments, tangible and intangible and develops a sources of growth analysis for the total economy with a complete accounting for intangible capital inputs. We exploit a cross-country-sectoral growth accounting database developed merging data from EUKLEMS, INTAN Invest, SPINTAN and National Accounts. Database includes data for 15 EU countries and the United States from 1995 through 2015.

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