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THE IMPACT OF THE FINANCIAL STRUCTURE AND LIQUIDITY OF THE COMPANY ON ITS R&D INTENSITY

Abstract:

It is a widely agreed that business research and development (R&D) projects are distinct from other types of company's investments. Output of R&D activity is highly uncertain, unique and not repeatable. Specificity of R&D projects makes a profound impact on motives of undertaking research activities. Scientific research on R&D determinants can be divided into two streams. The first one investigates macroeconomic determinants, which are usually observed at the level of a country or region and for this reason are crucial in explaining international differences in the level of business R&D intensity. The second strand of research is related to microeconomic drivers of R&D engagement and are observed at the entity level.

Building on the existing literature on business R&D determinants, we argue that specificity of R&D projects increases information asymmetry and for this reason, external capital providers are not willing to provide financing for innovations. First, we hypothesize that higher debt-to-equity ratio mitigates R&D intensity. The second hypothesis assumes that highly liquid companies are more prone to R&D activity.

The empirical analysis is based on panel of publicly traded US firms from 2008 to 2017. The initial sample consists of 13 788 firm-year observations derived from yearly financial statements prepared under US GAAP of 9 411 listed companies. However, due to the lack of data and after deleting companies from financial sector, we end up with the final sample of 3 400 firm-year observations of 584 companies. Using panel regression with robust standard errors, we provide empirical evidence supporting our hypotheses.

We add contribution to the existing literature by providing empirical evidence that financial barriers to R&D activity are still important even for large stock listed companies in developed countries like USA.

Keywords:

R&D, financial structure, liquidity, R&D determinants, financial reporting

JEL Classification: G30, O32, M49