

Financing Innovation: Differences across National Innovation Systems

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Abstract : Innovation is an increasingly important antecedent to firm competitiveness and growth. Successful innovation, however, requires a significant financial commitment and the means of financing accessible to the firm may affect its ability to innovate. The access to equity financing such as venture capital has been connected to innovativeness for young firms. For established enterprises, debt financing of innovation may be a more realistic option. Continuous innovation and growth would otherwise require a constant increase of equity. We, therefore, investigate the relation between debt financing and innovation for large firms and hypothesize that those firms that carry more debt will be more innovative. The need for debt financing of innovation may be reduced for very profitable firms, which can finance innovation with cash flow. We thus hypothesize a moderating effect of profitability on the relationship between debt financing and innovation. We carry out an empirical investigation using a longitudinal data set including 167 large European firms over five years, resulting in 835 firm years. We apply generalized least squares (GLS) regression with fixed firm effects to control for firm heterogeneity. The findings support our hypotheses and we conclude that access to debt finding is an important antecedent of innovation, with profitability as a moderating factor. The results do however differ across national innovation systems and we find a strong relationship for British, Dutch, French, and Italian firms but not for German and Spanish entities. We discuss differences in the national systems of innovation and financing which contextualize the variations in the findings and thus make a nuanced contribution to the research in innovation financing. The cross-country differences calls for differentiated advice to managers, institutions, and researchers depending on the national context.

Keywords : innovation, R&D, national innovation systems, financing

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