Debt, Ownership Structure, and R&D Investment

Yasuhiro Arikawa, Takuya Kawanishi, and Hideaki Miyajima
Waseda University

Summary

In Japan the importance of R&D investment has increased since the middle of 1980s. At the same time, significant changes have occurred in corporate finance and corporate governance. First, since the latter half of the 80s, the pattern of corporate finance has shifted from bank borrowing to corporate bond. Moreover, firms have rapidly reduced debt outstanding since the bank crisis in the late 90s. Second, the ownership structure has shifted from insider oriented such as cross-shareholding to outsider oriented such as shareholding by institutional investors. This paper studies how these changes in corporate finance and corporate governance affect R&D investment. We estimate R&D investment function of Japanese firms to study the effects of these changes.

First of all, unlike the US case where young firms accounted for the large part of R&D spending since the middle of the 90s, in Japan mature firms have played important roles in R&D investment in the late 1990s and 2000s. The number of young firms has increased, but their R&D spending share is still very low.

Among mature firms, R&D investments of the very large firms are not constrained to their cash flow. These mature firms are likely to have various financing methods. On the other hand, smaller mature firms exhibit cash flow sensitivity to their R&D expenditures.

When a firm is highly leveraged, increase in debt in the previous period reduces current R&D spending for Japanese firms. This relationship can be observed not only among medium size mature firms, but also among very large mature firms.

Regarding the effects of outsider ownership such as foreign and institutional investor shareholdings, we do not find myopic behavior of these investors, but they mitigate financial constraints of medium size firms.