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### 自由論題　E 会場　午後

**Corporate Governance, Relational Banking and R&D Investment : Evidence from Japanese large firms in the 1980s and 1990s**

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Entering into 1990s, physical investment of Japanese firms dramatically decreased while their R&D investment still kept almost the same level as the 1980s in terms of R&D intensity. On the other hand, it became clear that the institutional characteristics of Japanese firms have begun to change. The main bank relationship has been weakening under the drastic change of corporate finance due to the liberalization on the capital market. The cross shareholding has been relaxing under the low stock price after the bubble collapse.

Then, what is the effect of these changing institutional factors on firms' investment behavior? The purpose of this paper is to solve this problem through estimating R&D-and physical investment function in the 1980s and 1990s, explicitly focusing on the governance structure and capital composition of Japanese firm.

The investment function estimated here is standard one with cash flow and default risk. Our estimation sample are composed of 353 firms, of which sales are over 5 billion yen in 1990, and they belong to the following industries of highest R&D expenditures : textile, pulp and paper, ceramic, iron and steel, and four machine industries.

First concern of this estimation is the cash flow constraint on investment. Although previous literatures have regarded the cash flow as a proxy of asymmetric information since Fazzari, Hubbard and Pertersen (1988), we also regard the cash flow as a proxy of managerial moral hazard, following the idea of free cash flow raised by Jensen (1986). That is : matured firms regardless of having no project with positive net present value would tend to invest more when they have enough cash flow, while faster-growing younger firms that faces asymmetric information problem tend to be constrained by cash flow. Standing on this hypothesis, we divided sample firms into matured firms and faster-growing younger firms by sales growth rate. Then we test 1) whether the effect of cash flow constraint on physical-and R&D investment is significantly differed between younger and matured firms, and 2) whether governance structure (main bank relationship and cross shaleholding, presence of portfolio investor and block-shareholder) oould mitigate or exacerbate this cash flow constraint on investment.

Second concern is the effect of default risk on R&D and physical investment. The idea behind this is that high leverage may decrease investment level through either increasing agency cost or decreasing marginal efficiency of investment perceived by top managers due to bankruptcy cost. Following this idea, we test 1) whether R&D investment would be much more constrained by default risk than physical investment, and if so, 2) whether the risk-sharing device such as main bank relationship and networks could mitigate the effect of default risk on physical and R&D investment.

Fazzri, Steven, R. Glenn Hubbard, and Bruce Petersen, "Financing Constraints and Corporate Investment," *Brookings Papers on Economic Activity* (1988), 141 - 95.
Jensen, Michael, "Agency Cost of Free Cash Flow, Corporate Finance and Takeovers". **American Economic Review** (1986), LXXVI, 323 - 29.