

Abstract of Doctoral Thesis

Exploratory research on collaboration - Approach to individual, organization and strategy -

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The importance of innovation is growing but, the efficiency of research and development is declining. Japan's innovation system will change from its principle of self-sufficiency of leading companies to a network type depending upon external cooperation. In that also, the key of the entire system is said to be the role of research and development of small and medium-sized enterprises.

In such, companies of collaboration creating new innovation are becoming an effective strategy however, as for studies on prior collaboration, the accumulation of the research is poor because of data limitations for the collaborations of small and medium-sized enterprises, due to focused interest on major companies.

In addition, on the analysis level of collaboration, it is mostly analysis at the industrial and enterprise level, it is difficult to say there is enough research regarding organizations that make up the company and individuals. Also, there is usefulness in performing an international comparison but, the comparative studies are poor because there is an insufficient response to the flow of open innovation from Japanese companies; it is said to be relatively negative and passive when compared to collaborations in other countries.

From recognition of these problems, in this study, we have carried out empirical studies of technological collaborations at each level: individual, enterprise, and national. Together with the results of the analysis of individual researchers and quantitatively discussing collaboration bringing diversity of research at the individual level, I discussed the conditions of project management that bring about such diversity. Next, on the research at the enterprising level, factors that affect the results of the technical collaboration of Japan's small and medium-sized enterprises, given the core technological level is affected as a strategic factor, it has been shown that organizational factors, the full-time degree of research and development organizational structures and adequacy of education, affect the results of collaboration. In addition, from the comparative analysis on the national level between Japan and Korea, compared to Jap

an, South Korea has a higher percentage of participation of small and medium-sized enterprises toward collaboration, also, it was indicated that, in South Korea, the degree of penetration of the vision as a strategic factor is emphasized as well as the adequacy of education as an organizational factor affect the results of the collaboration. In conjunction, the mechanisms of collaboration were discussed from a qualitative analysis conducted by interview surveys.