論文の内容の要旨

論文題目　**The Integrated Effect of Team Capital and Ambidexterity on Team Performance**

～　***A Case of Korean Civil Engineering Consultancies***　～

（チームの業績に影響を与える人的資源と両面性の統合効果
～　韓国建設コンサルタント業を題材として ～）

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This research introduces an integrated model incorporating the two most profound and competing management theories used today: the Resource Based View and the Dynamic Capability View. The objective of this study is to verify that the integrated model as a combination of both theories is more effective in both predicting and obtaining competitive advantage/performance than focusing on one theory alone. That is to say, any organization or team can achieve higher performance when it possesses competitive resources relative to the competition as well as the capability or work routine to effectively and efficiently utilize those resources. The Resource Based View focuses on the possession of rare and non-substitutable resources as the key to sustained competitiveness. Whereas, the Dynamic Capability View (particularly ambidexterity) states that the inimitable work practices and processes to exploit existing resources and explore new capabilities is the key to competitive advantage, especially in the fast and ever-changing competitive environment. In the integrated model, as predicted by the Resource Based View, the combination of team possessed resources can directly affect the team's performance, but on the other hand, the team's ability to combine, exploit, and adjust/modify the team possessed resources via unique routines, or ambidexterity, can act as a mediator in obtaining higher team performance. As such, this research looks at the direct influences of both team possessed capitals (resources) and the team's ambidexterity on team's performance, and also verifies the hypothesis that the team's ambidexterity mediates the influence of team possessed capitals on team performance. In the hopes to empirically verify the hypothesis, a survey is conducted on eleven civil engineering consultancies in Korea, including 119 teams and 1,102 respondents on the team-level (team-level assessment). Team capital is broken into three separate categories to represent the resources: human capital, structural capital, and social capital. Ambidexterity is divided into two categories: exploitive and explorative capabilities. Finally, team performance is divided into domestic and overseas performance. In addition to the overseas and domestic performance, constructs that reflect the engineering team's innovative and efficiency performances are also used to see any associations with the corresponding team's explorative and exploitive capabilities. The result is consistent with the hypothesis that both team capitals and team ambidexterity directly affects, or is positively associated to team performance. In addition, the second hypothesis has been verified showing that team capitals (resources), mediated by team ambidexterity, positively affect team performance. In depth discussions based on the empirical results takes place to deduce practical and theoretical implications of the study results. Human capital as the sum of the team's engineers' experience and technical proficiency seems to be positively associated to the team's performance except for teams in the water resources field. Additionally, the team's structural capital as the degree of individual empowerment shows strong correlations to the resulting level of the team's ambidexterity. In support of the theoretical claims that exploration is relevant in terms of innovativeness or effectiveness whereas exploitation is relevant to efficiency also has been verified using innovative performance measures and efficiency performance measures in the engineering team. The latent factor representing exploration returns a higher regression coefficient when modeled to the dependent variable using turnkey project performance and exploitation returned a slightly higher regression coefficient against efficiency performance taken as the per engineer task (or work load) capacity in addition to the number of simultaneous projects being implemented. Larger teams, teams with 25 or more engineers, are measured higher in terms of exploration and ambidexterity compared to small teams, taken as teams with 10 or less engineers. Many implications can be made, but larger pools of human capital seems to be more effective in terms of both human capital and social capital as the level of collaboration and exchange of information towards generating innovative solutions. In addition, among sub-constructs of exploration and exploitation, the utilization and research in previous/similar project knowledge seems to be most relevant to the civil engineering team's context of exploration and exploitation.

All variables relating to the engineering team's performance shows a uniform tendency to be stronger in domestic performance rather than that in overseas performance. Some practical implications from the numeric and interview data, in addition to an example case study are formulated. First, on the planning efforts of the team, the separation of engineers based on explorative and exploitive efforts seems to be ineffective (structural ambidexterity) as well as too costly in practice. Also, team members should work in close proximity and follow through different phases of the project to retain project-specific knowledge, especially the rich experience and accumulation of wisdom coming from explorative and exploitive measures taken throughout the entire project duration. The last suggestion is one that seems difficult in practice due to the nature of the engineering consulting industry. It is most definitely cost effective to put in and pull out key engineers onto different projects because human capital is the sole and largest expense when looking from the consultancy's viewpoint. Second, senior management should make it a point to establish a process or target for developing solutions (exploration) as well as a review process for evaluating those solutions in the project setting. In the example case of the Sutong Bridge Project, an expert panel and the engineering team together established 10 engineering challenges that needed to be overcome. The establishment of clear project objectives and goals, along with the organizational support to allow the engineering team to address those objectives is what made the exploration and exploitation resulting in a combination of temporal and contextual ambidexterity on the engineering team's part possible.

Lastly, consultancy level top management may want to encourage or even evaluate individual engineers in terms of social or professional activeness. As the most effective source for practicing and gaining social capital, the activities in publishing and presenting papers in professional conferences seemed vital according to many interviews. Accumulated project knowledge should be managed comprehensively for easy access for the engineers. For instance, digital formats of project documents can be managed via a web-based knowledge silo or kept in a centralized library. The results obtained in this research clearly indicate that such project-specific knowledge acts as building blocks for the engineers in tackling new problems in whatever project currently in which the engineers are engaged. As for 30% of the consultancy's work, turnkey projects should be assessed and planned in a different fashion than how they are currently being practiced. When formulating turnkey teams, the consultancy might consider suggesting a dedicated team as well as a collection of teams when it comes to implementing the process or target for solutions and evaluating solutions. This seems to be promising in terms of promotion of exploration and exploitation.