

# STRATEGIC MANAGEMENT OF CO-OPETITION IN MOBILE HANDSET PRODUCT DEVELOPMENT

Hee Kyung Na

The objective of this dissertation is to seek the answers to the mechanism of effective co-opetition. Drawing on a series of explorative case studies, I iteratively ask the following research questions in the dissertation: *how firms effectively and efficiently utilize co-opetition? What kinds of mechanisms exist behind successful co-opetition strategies?* Since firms create and sustain competitive advantage in various interactions with other firms and entities, it became imperative for firms to have a strategic mindset to manage competition and cooperation at the same time. Although management literature started to pay attention to the significance of co-opetitive perspective, our knowledge is still scant to grasp the whole picture of co-opetitive activities of firms.

Under this environment, this research envisages a variety of issues on co-opetition. In reality, co-opetition exists in multiple scope and levels. By observing co-opetitive interactions in the mobile handset industry, the first three chapters of the research explore specific sub-issues that were considered critical in the Japanese, Chinese, and Korean mobile handset industry. In the later part of the analysis, I trace longitudinal evolution of the firms in the three nations and try to find what kind of factor affected their heterogeneous co-opetitive patterns. A series of studies focusing on different facets of co-opetition helps advance our understanding on the inquiry of this dissertation.

In the first part of the analysis (Chapter 3), the study examined co-opetition in sub-ecosystems. In Japan, two Japanese sub-ecosystems (NTTdocomo and KDDIau) fiercely competed to perform product development more efficiently and effectively by using a shared platform. In the study, I compared product development strategy and performance between them. The analysis uncovered that (1) *the role of a hub to collect and disseminate knowledge necessary for its niches' product development* and (2) *the design of a platform to encompass most resource and time consuming part of product development* were significant factors that enabled ecosystem member firms (niches) to attain higher development performance. By indirectly cooperating under the orchestration of the hub, the niches were able to compete more effectively with the increased product variety as a sub-ecosystem level.

Next (Chapter 4), the study focused on co-opetition of individual firms headquartered in emerging country. In this part of analysis, two high-performing handset firms (ZTE and Huawei) in China were examined. As shown earlier, they were able to create and maintain superiority over other Chinese firms and foreign incumbents by *participating in cost-reducing cooperation with other Chinese rivals and transferring cost-based superiority generated by the cooperation with them to foreign emerging markets from relatively early phase of business expansion* than other Chinese peers. By *moving venue of focal competition to foreign emerging markets that possessed similar market and customer demands*, these two firms were able to leverage the cooperative benefits of home country and outcompete foreign incumbents from advanced countries.

The study shows that along with the cost-based advantage of the emerging market, the Chinese high-performers exploited knowledge and resources accumulated from upstream business. It was identified that the two firms (Huawei and ZTE) had transferred and shared the knowledge between upstream (equipment) and downstream (handset) businesses and tried to maximize the effectiveness of resource investment by creating synergy between the two closely related businesses. An interesting observation is that they did not originally have a clear strategic intention to launch downstream business to do so. This shows that a better co-opetitive strategy can be formulated in an emergent manner in the course of business operations.

In Chapter 5, the study puts its lens on co-opetition of intrafirm organizations. A Korean high-performer Mobillion (pseudonym) offered an intriguing case to explore this issue. By creating two similarly sized R&D organizations in headquarter, Mobillion facilitated them to simultaneously compete and cooperate. In order to support smooth collaboration between the competing organizations, *Mobillion embedded a virtual cooperative routine* in the platform building and debugging phase of *product development process that both organizations had to follow*. By making them collaborate in the most resource consuming phase of the development, the two R&D organizations could economize on resource investment to develop overlapping parts of the product in each organization and instead focus on their efforts to differentiate their products from each other. As a result, Mobillion was able to maximize benefits of cooperation and make its organizations efficiently compete based on the increased product development efficiency.

Lastly, the study zooms out the focus of analysis and explores industrial evolution in a broader and longitudinal purview. In the mobile handset industry, firms in the three nations have shown heterogeneous patterns of co-opetition. In Chapter 6, the study tried to unveil what has affected firms' competitive and cooperative behavior and how the heterogeneity has generated different competitive outcomes in the domestic and international markets. The in-depth case study identified that *firms born in different nations possessed heterogeneous*

*ecosystem architecture and it resulted in divergent gap of value creation and capture of firms.* By closely observing the ecosystems in the three nations in this manner, the study identified *multiple types of ecosystem architecture (integral, quasi-integral, modular ecosystem architecture).* And it was also identified that, according to architectural characteristics of nations, firms have competed and cooperated heterogeneously.

As examined so far, considering competition and cooperation at the same time is essential for firms in a variety of circumstances. In the pursuit of exploring mechanisms of effective co-opetition strategy, the findings of this dissertation advance and deepen our understanding on under what environment and conditions firms can utilize co-opetition more effectively and efficiently. Yet, although I tried to address broader scope of co-opetitive issues in this research, the findings of this research have to be further examined and compared in other industrial and national context in order to know which part and to what extent the findings can be applicable to heterogeneous circumstances.