（続紙 １ ）

京都大学	博士 （ 経済 学)	氏名	稲田 　昂弘
論文題目	An Empirical Examination of Platform Development Process and Governance Practices: Longitudinal Case Study and Agent-Based Simulation		

（論文内容の要旨）

This thesis expands prior research on platform development which has traditionally focused its analysis on already established and successful platforms. It focuses on early -stage platforms and argues that platforms are not established with a blueprint. Hence, the thesis suggests that the process of identifying and exploiting opportunities for entrepreneurs is not linear and involves learning under uncertainty and trial and error.

After reviewing past research on the topic in Chapter 2, Chapter 3 closely follows a startup company that provides a platform to connect manga artists with readers and companies. It observes the process of identifying the market side to focus on the early stages of the platform development process. This chapter argues that the platform development process can be likened to climbing a mountain that has two sides: demand and supply. In particular, the order in which entrepreneurs take their growth steps, or how they climb the mountain, allows platform startups to establish a unique position and thus gain a competitive advantage.

Chapter 4 focuses on peer-to-peer (P2P) platforms where individuals conduct transactions. Using agent-based simulation (ABS), it examines the impact of varying levels of participation constraints and the timing of changing constraints on three outcomes: quantity, quality, and diversity of participants under various governance scenarios: open, closed, and dynamic. The chapter argues that the number of participating agents (quantity) in the open case, the average utility and score (quality) in the closed case, and the variability of the score (diversity of participants) in the dynamic case were the largest. This result implies that the timing of changing constraints is a useful direction for platform governance research, as past research mostly focused on the level of participation constraints, such as open versus closed. Thus, the chapter provides a new direction for governance research in P2P transaction platforms.

Chapter 5 analyzes two contrasting cases in which a less open company (Note) enters the blogging platform and wins the competition against an existing, more open company (Hatena Blog). The chapter shows that P2P transaction platform entrants can gain a competitive advantage by using multiple openness strategies depending on the user base, rather than applying a single openness strategy to all users. The significant contribution of this chapter is the detailed elucidation of the relationship between environmental change, platform openness strategies, and competitive advantage, using a combination of case studies and ABS.

Finally, Chapter 6 concludes the thesis with a summary of the whole thesis, its implications and limitations. This chapter also argues for future research directions regarding the generalization of its findings to different industries and extending the use of models (especially the ABS model) employed in the thesis.

（論文審査の結果の要旨）

This dissertation contributes to the literature on platform business as follows. First, while past research has tended to downplay the importance of firms' attempts to strategically manipulate network effects (because they are generally assumed to be exogenous and constant within an industry), this thesis addresses this gap by investigating the early stages of the platform development process. Previous research assumed that the platform would be developed according to a given blueprint based on a retrospective view. In contrast, by using a new methodology of longitudinal case studies based on real-time, multi-wave interviews, this thesis examines the dynamics of the platform evolution process, which is not addressed in the previous literature. Consequently, a new concept of "mountain climbing" of platform development was proposed. This new analytical perspective of the opportunity identification process in the platform business differs from that of the conventional pipeline business (i.e., ocean exploration) and contributes to new research directions. In particular, the order in which the growth steps are taken, i.e., how the mountain is climbed, will lead platform startups to build a unique position and thus gain a competitive advantage. Analyzing established or nascent platform companies from the perspective of how they climb the mountain will add to further understanding of the platform development process.

Furthermore, while prior research has focused on the openness of platforms and accumulated conceptual arguments based mainly on case studies, it has not empirically analyzed the impact on complementors' decisions and the performance of platform companies. To address this limitation, this thesis uses agent-based simulation (ABS) to replicate various openness strategies of platform companies and clarifies the impact on their participants. It shows the effectiveness of dynamic governance, which changes openness flexibly by observing the trends of participants, as opposed to static governance where platform companies maintain a certain level of openness that previous research has assumed. It also clarifies the mechanism by which latecomers succeed in entering the market by adopting a multiple openness strategy that considers the heterogeneity of platform participants and uses different openness for users with different attributes.

In summary, this dissertation clarifies the dynamics of platform companies' growth by using novel methods: longitudinal case study and ABS. It goes beyond the question of "how to attract participants" in previous studies to answer the unanswered questions of "how to identify participants to attract" and "how to manage participants once attracted" from the perspective of entrepreneurial strategies.

This thesis shows the candidate's extensive knowledge on the field of entrepreneurship and platform business studies. It is written and presented in a clear and systematic manner. While the thesis has certain limitations (that the candidate also admits and refers to), it serves as a valuable reference for future research. Following the oral examination held on January 24, 2022, the thesis examination committee therefore concludes that the candidate has passed all of the requirements for the PhD degree in Economics.

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