

論文 / 著書情報
Article / Book Information

題目(和文)	エージェントベース・シミュレーションを用いた買収後統合の組織行動に関する研究
Title(English)	Study on Organizational Behaviors of Post-acquisition Integration Using Agent-Based Simulation
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Category(English)	Doctoral Thesis
種別(和文)	論文要旨
Type(English)	Summary

論文要旨

THESIS SUMMARY

専攻 :	知能システム科学	専攻
Department of		
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申請学位 (専攻分野) :	博士	(工学)
Academic Degree Requested	Doctor of	
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要旨 (英文 800 語程度)
Thesis Summary (approx.800 English Words)

Mergers and acquisitions (M&A) are popular means for the development of modern corporations. However, there is a high rate of failure after M&A. Post-merger/post-acquisition integration was found to have great effects on the success of the M&A, and hence, there is a growing interest in the post-merger/post-acquisition integration in the literature. Nonetheless, most of the studies are empirical works applying case study, meta-analysis, and/or other methodologies. Theoretical research on post-acquisition integration is quite few.

The behavioral theory of the firm conceptualizes large firms as unions of bounded rational individuals who are conducting decision-making. It can help researchers to model the large firms from both the internal structures and external environment. Besides, agent-based modeling and simulation (ABM & ABS) is an effective tool to model and simulate the actions and interactions of the individuals in an organization. Thus, it can help researchers to observe how agents affect the system and explore the explanatory insight of the collective behaviors of the individuals.

This thesis studies the post-acquisition integration from the perspective of the behavioral theory of the firm by using agent-based modeling and simulation. Specifically, it focuses on two topics: 1) Human integration strategies during the post-acquisition integration phase; 2) Knowledge learning during the post-acquisition integration phase. It consists of five chapters which are shown as follows.

Chapter 1 - Introduction. This chapter presents an overview of this thesis by introducing the motivations, objectives, challenges, and the contributions of this research, in addition to the structure of this thesis.

Chapter 2 - Backgrounds. This chapter presents several concepts and the related works in the fields that are relevant to this research, in order to give readers explicit views of each problem. Specifically, certain basic concepts of M&A are introduced firstly, following by the related works of post-acquisition integration. Then, the related studies of the behavioral theory of the firm and NK model are reviewed.

Chapter 3 - Human integration strategies during the post-acquisition integration phase. This chapter contains four sections: overview, model description, simulations and results, and summary. This chapter focuses on the internal features of the system including personnel allocation strategies and vertical decision-making structures of the organization after M&A. Particularly, the post-acquisition integration is modeled from the aspects of strategy and structure based on the NK model, and a three-level hierarchical decision-making process is proposed to simulate the companies' search process. Then, the organization's behaviors and the personnel

allocation strategies are discussed according to the experimental results.

According to the simulation result, information feedback manners of managers, employees' communication frequency, and personnel allocation methods are found to be influential to the organization's search performance. Managers' feedback manner has a dominant effect on the organizational performance in the post-acquisition integration stage. Excessive feedback from managers may make the company quickly be trapped in the local optima, and thus prevent the company from achieving high performance. In the absence of managers' feedback, the effects of low-level employees' communication behaviors become evident. Frequent communications may do harm to the search performance. Regarding the personnel allocation, assigning the core employees who take charge of important tasks in the target company to the central department in the acquiring company could help the organization get high performance during the post-acquisition integration.

Chapter 4 - Knowledge learning during the post-acquisition integration phase. This chapter focuses on the interactions between the organization and the external environment. It also contains four sections that are the same as Chapter 3, but the agents are modeled at the company level rather than the individual level in this chapter. Considering the bounded rationality, the companies are assumed to have limited knowledge about each other, and hence about the new environment after the acquisition. The new environment is modeled based on NK landscapes. Then, the incomplete knowledge of both companies are defined, and a coupled learning model with a collaborative search process is proposed. Finally, the learning and search behaviors of the organization during the post-acquisition integration are discussed according to the experimental results.

According to the simulation result, companies' initial knowledge and perception about each other and the unknown environment is quite influential for the organization's learning and search performance. Correct knowledge and perception help the organization achieving high performance after M&A, whereas incorrect knowledge and perception lead to a performance that even worse than the case of no perception. The sensitivity of the performance feedback in updating companies' perception during the learning process could have an opposite impact on the organization's learning performance when companies have different initial perceptions. A high sensitivity of feedback may weaken the impact of the initial perceptions, whereas lower sensitivity could reinforce the impact of the initial perceptions. Besides, frequent learning can accelerate learning progress and intensify the learning efficiency. In addition, organization's exploration in both the learning and search process is found to be helpful to the organization's performance even with an incorrect perception of the environment. Therefore, the organization can obtain a high performance by exploring to complement the effect resulted from the lack of knowledge in the post-acquisition integration stage.

Chapter 5 - Conclusions. This chapter summarizes the key points of this research and gives some propositions for the future improvements.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

Note：Thesis Summary should be submitted in either a copy of 2000 Japanese Characters and 300 Words (English) or 1copy of 800 Words (English).

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