

The Dynamic Interaction of Coopetition Strategy, Co-Innovation and Organizational Agility: Building the Core Competency of Chinese Semiconductor SMEs

Yi Wang

Wuhu Institute of Technology; UCSI Graduate Business School, China
1002266713@ucsiuniversity.edu.my

WeiLee Lim

UCSI Graduate Business School, Malaysia
evalim@ucsiuniversity.edu.my

Garry Wei-Han Tan

UCSI Graduate Business School, Malaysia
GarryTan@ucsiuniversity.edu.my

Keng-Boon Ooi

UCSI Graduate Business School, Malaysia
ooikb@ucsiuniversity.edu.my

Abstract

Chinese semiconductor SMEs are facing severe challenges due to limited resources and technological embargoes against the backdrop of intensifying global technological competition and uncertainty in the external environment. In this context, how to utilize big data analysis capabilities to cope with these challenges has become an urgent issue. This study constructs a theoretical model based on open innovation theory and dynamic capability theory, and verifies the relevant hypotheses through structural equation modeling. The study targets senior managers of Chinese semiconductor SMEs and empirically analyzes them based on questionnaire data using SPSS and PLS tools. The results show that big data analytics capability significantly enhances the core competency of the firms through the mediating variables of co-innovation and organizational agility. In addition, environmental uncertainty showed a significant positive moderating effect on the relationship between big data analytics capabilities and organizational agility. This study expands the scope of application of the theory of open innovation and dynamic capabilities, and provides theoretical support and practical references for semiconductor SMEs and other technology-intensive industries to cope with technological embargoes and external challenges

Keywords: Coopetition Strategy, Co-Innovation, Organizational Agility, Core Competency, Environmental Uncertainty