

Association for Information Systems

AIS Electronic Library (AISeL)

WHICEB 2021 Proceedings

Wuhan International Conference on e-Business

Summer 5-28-2021

E-commerce Platform Resources, Sequences of Digital Strategic Actions and Competitive Advantage: An Empirical Study from Online Tourism Industry

Lewei Hu

School of Business, Jiangnan University; Institute of Intelligent Decision-making, Jiangnan University,
pedagogical@foxmail.com

Jing Zhao

Research Center for Digital Business Management, School of Economics and Management, China University of Geosciences

Yi Jiang

Research Center for Digital Business Management, School of Economics and Management, China University of Geosciences

Follow this and additional works at: <https://aisel.aisnet.org/whiceb2021>

Recommended Citation

Hu, Lewei; Zhao, Jing; and Jiang, Yi, "E-commerce Platform Resources, Sequences of Digital Strategic Actions and Competitive Advantage: An Empirical Study from Online Tourism Industry" (2021). *WHICEB 2021 Proceedings*. 20.

<https://aisel.aisnet.org/whiceb2021/20>

This material is brought to you by the Wuhan International Conference on e-Business at AIS Electronic Library (AISeL). It has been accepted for inclusion in WHICEB 2021 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Full Research Paper

E-commerce Platform Resources, Sequences of Digital Strategic Actions and Competitive Advantage: An Empirical Study from Online Tourism Industry

Lewei Hu^{1,2*}, Jing Zhao³, Yi Jiang³

¹School of Business, Jiangnan University

²Institute of Intelligent Decision-making, Jiangnan University

³Research Center for Digital Business Management, School of Economics and Management, China University of Geosciences

Abstract: This study examines the effects of digital strategic actions sequences on business value in long-term competitive dynamics. Based on the competitive dynamics theory and configurational perspective, we first use fuzzy-set qualitative comparative analysis to analyze the news data of Chinese online tourism industry, and find out the corresponding configurations of digital strategic actions. Then, we use panel regression to explore the relationship between the unpredictability and complexity of digital strategic actions sequences and competitive performance in the continuous competitive interaction, and find the inverted U-shaped relationship between them. Finally, we discuss implications for theory and practice.

Keywords: Business Value of IT, Competitive Dynamics, Sequences of Digital Strategic Actions, Complexity, Unpredictability.

1. INTRODUCTION

Facing with the current fierce competition, e-commerce platform needs to continuously initiate *digital strategic actions (DSAs)* to provide differentiated products and services for creating and accumulating competitive advantages. However, the application of digital technology has increased the intensity of confrontation among e-commerce platforms, which creates more uncertainty for platform managers^[1]. The similarity of the resources owned by e-commerce platforms causes competitors to imitate and respond quickly. Thus, it is difficult for a single competitive action to win the competitive advantage for e-commerce platform. Our motivation is to explore the value creation of e-commerce platform from a perspective of actions sequences in competitive dynamics^[2]. Specifically, this study focuses on the impact of dynamic characteristics (including unpredictability and complexity) of the DSAs sequences on the advantage of e-commerce platform^[3, 4].

2. METHODS

Based on the paradigm of empirical research, our study has extracted data from news as the basis of constructing variables, and then established econometric model, and verified hypotheses. Specifically, first of all, the configurations of the DSAs are obtained based on structure content analysis and fuzzy-set qualitative comparative analysis^[5]. Then, the dynamic characteristics of the DSAs sequences are analyzed by using Markov chain and Shannon index. Finally, the feasibly generalized least squares (FGLS) is used to explore the rules of sequences of the DSAs to create business value.

* Corresponding author. Email: pedagogical@foxmail.com, pedagogical@jhun.edu.cn

3. RESULTS

With the FGLS analysis, our research has testified econometric model. Table 1 summarizes the regression results of FGLS estimation method testing hypotheses. In the table, UEAS and CPAS represent the unpredictability and complexity of the DSAs sequence respectively. As a dependent variable, PVCR represents competitive performance, which is calculated on the basis of page views.

Table 1. Regression results

	Dependent variable: PVCR							
	Linear model		Quadratic model					
UEAS	0.011***	(0.001)	0.040***	(0.002)				
UEAS ²			-0.035***	(0.001)				
CPAS		0.016***	(0.001)	0.011***	(0.002)			
CPAS ²				-0.009***	(0.002)			
FA	-0.001	(0.001)	-0.000	(0.001)	0.000	(0.001)	-0.000	(0.001)
Intercept	0.031	(0.040)	0.012	(0.043)	0.019	(0.037)	0.046	(0.054)
Wald Chi2	101.19***		241.39***		945.24***		55.82***	

Notes: ***, **, and * denote statistical significance at 1 percent, 5 percent, and 10 percent, respectively. Standard deviation in brackets.

The empirical results support our two hypotheses, that are, the unpredictability and complexity of the DSAs sequences initiated by the e-commerce platform will exhibit an inverted U-shaped relationship with the competitive performance.

4. CONTRIBUTIONS

This research has several contributes to research on the business value of IT. Firstly, in view of the characteristics of the complex interaction of digital technologies and partner resources in e-commerce platform, this study explores the relationship between the dynamic combinations of two types of resources and different types of the DSAs based on the configurational approach, and clarifies that in competitive dynamics, the value of e-commerce platform comes from the dynamic combinations of advantage resources. Secondly, our study found the inverted u-shaped relationship between the dynamic characteristics of the DSAs sequences and the competitive performance of e-commerce platforms and revealed the non-linear change trend of business value caused by the continuous competitive dynamics among e-commerce platforms. Thirdly, Managers of e-commerce platforms should understand that when orchestrating and formulating DSAs sequences, they cannot blindly pursue their suddenness and complexity at the cost of exceeding their control and management capabilities.

REFERENCES

- [1] Mithas, S., A. Tafti, and W. Mitchell, How a Firm's Competitive Environment and Digital Strategic Posture Influence Digital Business Strategy. *Mis Quarterly*, 2013. 37(2): p. 511-536.
- [2] Ndofor, H.A., D.G. Sirmon, and X.M. He, Firm Resources, Competitive Actions and Performance: Investigating a Mediated Model with Evidence from the IN-VITRO Diagnostics Industry. *Strategic Management Journal*, 2011. 32(6): p. 640-657.
- [3] Connelly, B.L., et al., Competitive Repertoire Complexity: Governance Antecedents and Performance Outcomes. *Strategic Management Journal*, 2017. 38(5): p. 1151-1173.
- [4] Rindova, V., W.J. Ferrier, and R. Wiltbank, Value from Gestalt: How Sequences of Competitive Actions Create Advantage for Firms in Nascent Markets. *Strategic Management Journal*, 2010. 31(13): p. 1474-1497.
- [5] Campbell, J.T., D.G. Sirmon, and M. Schijven, Fuzzy Logic and the Market: A Configurational Approach to Investor Perceptions of Acquisition Announcements. *Academy of Management Journal*, 2016. 59(1): p. 163-187.