Mechanisms of Value Co-creation between Enterprises and Users in the Lean Startup Process

—An Exploratory Single Case Study Based on Interaction Perspective

Jingwei Zhang　Xiaoyuan Tian　Zhouli He

(School of Economics and Management, Yanshan University, Research Center for Innovation and Entrepreneurship, Yanshan University)

Abstract:

Purpose: Lean startup, which emphasises agile response to changes in market demand and continues to create value for customers, is an emerging topic with both theoretical frontiers and practical value. Although existing studies mention that lean startup is a continuous iterative process, and that there are value co-creation behaviors between enterprises and users in the lean startup process, there is a lack of in-depth exploration of the evolution of behaviors in different segments or stages, especially the mechanism of how enterprises and users interact to achieve value co-creation in the evolution of lean startup stages. In view of this, this paper, based on the interaction perspective, examines the differences in the interactive behaviors and the evolution of the interactive relationship between enterprises and users in different segments or stages of the lean startup process, and reveals the mechanism of the process of co-creation of value between enterprises and users in the evolution of the stages of the continuous iteration of lean startup in a more complete way.

Design/methodology/approach: This paper adopts an exploratory single-case study approach, with LePur' as the object of study, and the interaction between the enterprise and its users as the theoretical perspective, and analyses the case information using structured data analysis methods.

Findings: The case analysis reveals the following findings: firstly, the value co-creation between the enterprise and the user in the lean startup process goes through three stages: enterprise-led, enterprise-user collaborative, and user-led. In each stage, value co-creation is realized through value identification, value creation, and value iteration across the concepts, development-product-measurement-data, and cognition phases; secondly, the co-creation model between users and enterprises evolves from passive participatory co-creation to active experiential co-creation to innovation-driven co-creation, with the degree of users' participation increasing and their dominant position rising; thirdly, the interactive relationship between the enterprise and the user is fundamentally changed during the evolution of the phase: the role of the enterprise is gradually changed from an information seeker to a solution provider, and the role of the user is gradually changed from a source of information to a product innovator; the interactive relationship in the enterprise-led phase is manifested in the process of enterprise-driven initiative, and the user's passive participation in the feedback process, in the user-driven stage, the interactive relationship is a process in which users' creativity is stimulated and the enterprise responds passively.

Originality/value: This paper mainly makes the following theoretical contributions: firstly, this study applies the theory of

value co-creation to the lean startup context, and constructs a mechanism model of value co-creation between the enterprise and the user in the evolution of lean startup stages, which makes up for the lack of research in the existing literature on the co-creation of value in lean startup; secondly, this paper examines the process of lean startup from the interaction perspective, and provides a theoretical explanation of the differentiated interaction mode between enterprises and users in the evolution of lean startup stages as well as their evolutionary characteristics, which enriches and deepens the interaction research under the evolution of lean startup context; thirdly, this paper elaborates and deepens the lean startup process, and enhances the understanding of the logic of lean startup process in the academic community.

Implications/research limitations/suggestions for future research: From a practical point of view, this paper can provide useful inspiration for new startups adopting the Lean Startup methodology to carry out value co-creation with users. However, there are still some limitations in this paper: first, this paper mainly explores the mechanism of value co-creation between startups and users, and does not consider the role of other stakeholders in value co-creation during the lean startup process; future research needs to focus on the value co-creation of more ecological partners during the lean startup process; second, this paper adopts a single-case study to explore the mechanism of value co-creation in the evolution process of lean startup stages, and future research is necessary to test and expand the conclusions of this paper using multiple cases from different industries.

Key Words: lean startup; stage evolution; value co-creation; interactive relationship; interactive behavior

Digital Effectuation: The Multi-dimensional Construction, Measurement and Verification the Impact on Entrepreneurial Performance

Jie Yang[1] Tao Wang[1,2]

(1. School of Management and Economics, Beijing Institute of Technology;

2. Yangtze Delta Region Academy of Beijing Institute of Technology)

Abstract:

Purpose: Effectuation acts as a heuristic logic for the thinking and further decision-making process of entrepreneurs at uncertain backgrounds. This logic light a brand new perspective for the research on entrepreneurial decision. Previous research about effectuation mainly focused on the traditional entrepreneurial contexts. Parallel to the development of effectuation theory, the rapid development of the digital economy over the past few years has gradually reshaped the global economic system. The rapid development and widespread application of emerging technologies such as social media, big data, cloud and artificial intelligence have brought new opportunities and challenges to entrepreneurial activities, profoundly changing the entrepreneurial environment and the way entrepreneurs make decisions. The rise of digital entrepreneurship has promoted the expansion of effectuation theory through situational transformation, while the research on effectuation in digital entrepreneurial situation has just started. The connotation, structure and scale of such effectuation cannot be effectively introduced to the digital entrepreneurial contexts directly. Accordingly, academia believes a shift is required in the decision-making logic of entrepreneurs. The idea of digital effectuation is further proposed to fit the digital entrepreneurial contexts. Nevertheless, the lack of explicit conceptual identification and reliable scale led to the scarceness of the related quantitative research.

Methodology: Firstly, we conducted semi-structured interviews with 22 entrepreneurs on the basis of literature dialogue, and constructed the multi-dimensional model of digital effectuation using the grounded theory method. Then, according to the coding results and related literature, the initial items are obtained, and through exploratory and confirmatory factor analysis, the second-order four-dimensional digital effectuation scale with 20 items is established. Finally, the scale of digital effectuation with credibility and reliability was compiled.

Findings: Firstly, we refine and define the concept connotation of digital effectuation. Secondly, we use grounded theory to construct a multi-dimensional conceptual model of digital effectuation, including digital means, digital solutions, digital experiments and digital partners. Then, according to the coding results and related literature, the initial items are obtained, and through exploratory and confirmatory factor analysis, the second-order four-dimensional digital effectuation scale with 20 items is established. Finally, the positive effect of entrepreneurs' digital effectuation on the entrepreneurial performance of new ventures and the partial intermediary role played by digital entrepreneurial opportunity identification and digital entrepreneurial resource acquisition is proved based on the theory of elements of entrepreneurship.

Originality: On the one hand, an explanation of the concept of digital effectuation in terms of digital entrepreneurship context and effectuation theory is more relevant to the understanding of the entrepreneur's digital effectuation. In this study, the understanding of digital effectuation in the context of digital entrepreneurship not only makes up for the lack of situational attention in the existing research on effectuation theory, but also finds that entrepreneurs can establish digital alliances with various subjects in the context of digital entrepreneurship in a zero-distance interaction way to achieve integration and symbiosis. On the other hand, the digital effectuation scale with reliability and validity is developed and tested for the first time, which provides a clear structure and operable tool for the further advancement of subsequent empirical research. In addition, through the empirical test of the mediating role of digital entrepreneurial opportunity identification and digital entrepreneurial resource acquisition in entrepreneurs' digital effectuation and entrepreneurial performance, the formation mechanism of digital entrepreneurial opportunity identification and digital entrepreneurial resource acquisition is revealed from a new perspective, which provides a priori reference value for future exploration of the mechanism of digital effectuation.

Implications: On the one hand, the digital entrepreneurship context requires entrepreneurs to introduce a more compatible decision-making logic to effectively deal with the uncertain environment and seize digital opportunities. On the other hand, the digital effectuation broadens the space and way for entrepreneurs to acquire resources, utilize means and create opportunities. In the context of digital entrepreneurship, entrepreneurs implementing digital effectuation can establish partnerships with diversified digital subjects, dynamically interact across spatial barriers, and obtain external scarce resources to reduce the risks of digital entrepreneurship.

Key Words: digital effectuation; effectuation theory; digital entrepreneurship; scale development; entrepreneurial performance

The Impact of Corporate Digital Transformation on Debt Financing Costs: A Perspective Based on the Tripartite Risk Theory Model

Xin Liu Lili Dang Xiaoman Guo

(Hebei University of Technology, School of Economics and Management)

Abstract:

Purpose: In the era of the digital economy, investigating the impact of digital transformation on the cost of debt financing holds significant practical importance in alleviating the issue of "expensive financing" faced by enterprises in China. While some studies have made preliminary explorations into the relationship between corporate digital transformation and debt financing costs, they have failed to deduce the underlying deep-seated patterns connecting the two. This may lead to an overly fragmented and surface-level understanding of the pathways through which digital transformation affects debt financing costs. The purpose of this study is to extract the determining principles of debt financing cost from the essence of risk and delve into the impact pathway of digital transformation on corporate debt financing costs by constructing a theoretical model.

Method: Based on the theory of information asymmetry, principal-agent theory, and signal theory, this paper constructed a ternary risk theory model and selected data from publicly disclosed and manually collated information of A-share listed companies in China from 2007 to 2020. The general fixed-effects model and mediation models were used to empirically test the relationship and mechanism between corporate digital transformation and the cost of debt financing. Furthermore, this paper conducted a series of endogeneity and robustness tests using various methods such as instrumental variable estimation, propensity score matching, difference-in-differences, Heckman two-step, and restricted sample range to ensure the validity of the findings.

Findings: The results indicated that: ①Digital transformation could significantly reduce the cost of debt financing for enterprises, and this conclusion was supported by a series of endogeneity and robustness tests. ②Mechanism test results showed that corporate digital transformation reduced information risk, agency risk, and operational risk through three pathways: improving the quality of accounting information, enhancing corporate governance level, and increasing expected corporate earnings. Consequently, the cost of debt financing for enterprises was significantly reduced. ③Heterogeneity test results demonstrated that the reduction effect of digital transformation on the cost of debt financing was more significant in economically developed regions, areas with lower marketization levels, non-state-owned enterprises, non-high-tech enterprises, and enterprises with better financial conditions.

Value: Firstly, this paper establishes a connection between corporate digital transformation and the cost of debt financing, analyzes the impact of digital transformation on corporate accounting information processing, corporate governance, and financial processes, and analyzes and tests the impact pathway of digital transformation on debt decision-making, providing theoretical support for enterprises on how to effectively utilize digital transformation to alleviate the problem of high financing costs. Secondly, this research breaks through the limitations of conventional starting from phenomena and, starting from the nature of the cost of debt fi-

nancing—risk premium, integrates the theory of information asymmetry, principal-agent theory, and signal theory into a ternary risk theory model to analyze the mechanism of the impact of debt financing costs. Moreover, it incorporates corporate digital transformation into this theoretical framework to explore its impact on the cost of debt financing. The construction of the ternary risk theory model provides an important analytical tool and theoretical framework for analyzing the influencing factors and mechanisms of corporate debt financing costs. Thirdly, this study empirically verifies that corporate digital transformation reduces enterprise information risk, agency risk, and operational risk by enhancing "accounting information quality", "corporate governance level", and "expected corporate earnings". As a result, it significantly lowers the cost of debt financing, to some extent opening the "black box" of the impact of digital transformation on the cost of debt financing. It has certain reference significance for future research on the pathway mechanism between corporate digital transformation and corporate financial issues.

Implications/limitations/suggestions for future research: The research findings of this paper affirmed the positive influence of corporate digital transformation on the cost of debt financing. This contributes to the formulation of targeted policies by the government to promote digital transformation and stimulate intrinsic motivation within enterprises to undertake digital transformation, thereby enhancing entrepreneurs' awareness and determination in embracing digitalization. However, there are limitations to this study, which provide insights for future research. Firstly, although this study employed a broad statistical indicator by constructing a keyword library related to digital transformation and analyzing word frequency in publicly available annual reports to measure the extent of digital transformation, further refinement is necessary. Secondly, it should be noted that this study's sample only covers listed companies in China. However, small and medium-sized enterprises (SMEs) have a more urgent need to reduce debt financing costs, and they face greater challenges in undertaking digital transformation. Therefore, whether digital transformation can achieve the same positive effects for SMEs as it does for listed companies is one of the future research directions. Lastly, this study primarily explored the potential pathways through which digital transformation affects the reduction of debt financing costs, including information risk, agency risk, and operational risk. However, the boundary conditions of the impact of digital transformation on debt financing costs remain unexplored. Future research should aim to comprehensively investigate this aspect.

Key Words: enterprise digital transformation; debt financing costs; information risk; agency risk; operating risk

Whether Power and Wealth Should be "Released" or "Retained"?

The Paternal Entanglement in Innovation of Family Firms under the Context of Succession

Jiong Wu　Junyao Huang

(Glorious Sun School of Business and Management, Donghua University)

Abstract: The inheritance of family firms is a distinctive process of socialization, wherein founders must navigate the delicate balance between ensuring intergenerational control and preserving family ownership, while also taking into account the divergent emotional orientations. In this context, the founders may present diversified role characteristics, which are positive, negative or both. The multiple motivations behind this complexity have a profound impact on the development direction and long-term stability of the family firms. However, current research on this phenomenon is not comprehensive enough, as it primarily focuses on descriptive or unidimensional analyses and fails to fully explore the underlying factors and multi-dimensional trade-offs behind behavior, leading to controversy surrounding the role of founders in family firm succession innovation. This has led to ongoing controversies regarding the role of founders in the inheritance and innovation of family firms. Addressing the limitations of existing theories, this article focuses on the interplay between power structures, wealth management, and decision-making behaviors within family firms. It attempts to construct a comprehensive analytical framework that encompasses two key dimensions: "explicit care based on resource granting" and "implicit control based on behavioral inhibition", from a dual perspective of paternalism. This framework aims to deepen our understanding of the internal mechanisms of the paradoxical effects and emotional dilemmas faced by founders during the process of business inheritance.

This study employs a sample of A-share listed family firms that have undergone intergenerational inheritance from 2007 to 2019. Utilizing stepwise regression and the Bootstrap method, it aims to investigate the mediating and moderating effects of intergenerational transmission of power and wealth on enterprise innovation. Furthermore, it examines the moderating mediating effects and the actual situation of succession power operation. The findings reveal that founders, influenced by intergenerational care, allow successors autonomy while still exerting control over their actions. Specifically, the delegation of founders' ownership positively promotes enterprise innovation through financial flexibility, while the transfer of control rights negatively moderates the relationship between financial flexibility and family firm innovation. The incomplete transition of power greatly limits the autonomy of successors in management decision-making, and the residual control rights beyond formal power are the key factors that dominate the development direction and innovation choices of the enterprise.

There are two main theoretical contributions in this paper. On the one hand, from the perspective of the founder's emotional psychology, it empirically analyzes the resource management model of power-wealth interaction in the context of family firm succession innovation, clarifying the complex logic of paternal love entanglements. This is aimed at enriching the understanding of the

founder's role and highlighting the socio-economic value of paternalism in the Chinese context. On the other hand, it systematically interprets the essential attributes of residual control rights, emphasizing their crucial role in the process of family business succession. By comparing the power utility differences between the two inheriting parties, this paper reveals the possible contradictions in business decision-making in the symbolic decentralization activities of the founder, so as to provide effective guidance and reference for the smooth transition of the succession period of the family firm and the successful succession of the new leader.

This study provides some implications for the cross-generational growth and smooth transition of family firms. Firstly, founders need to gradually and completely delegate authority, consciously regulating the synchronization of the inheritance process to ensure a smooth power transition, avoiding power vacuums or confusion. Secondly, the successor should quickly take over the leadership position, enhancing their entrepreneurial capabilities through systematic learning and practice, and formulating strategies that adapt to market changes and business development. While maintaining the normal operation of the enterprise, they should actively seek new opportunities for transformation and development, truly reassuring the founder. Thirdly, for the intergenerational interaction of family enterprises, the inheritors should adjust their roles according to the actual situation, give full play to the intergenerational compensation effect, and reduce the possible value loss in the transition stage. By establishing effective communication and collaboration mechanisms, the optimal allocation of core resources can be promoted, thereby stimulating internal innovation potential within the organization.

Certainly, there are certain limitations in this study, such as the relatively small sample size and the lack of explicit elaboration on how founders balance the emotional needs under different paternalistic logics and shape the ultimate strategic choices of their enterprises. Future research could utilize more extensive sample data to verify the universality of the model and consider employing more refined indicators or methods such as questionnaire surveys and in-depth interviews to specifically explore the complex emotional expressions of founders that both support and restrict.

Key Words: intergenerational transmission; family firm innovation; paternalism; resource allocation

Synchronization of Institutional Development and Regional Entrepreneurial Activities

Zijie Song Lewei Huang Hang Zhu

(School of Business, Sun Yat-sen University)

Abstract: This article scrutinizes how entrepreneurial activities across Chinese provinces are influenced by the *synchronization of institutional development*, which is defined as the differential speed of reform across various institutional components. Building on the seminal research of Shi and colleagues (2017), scholars have unpacked the critical role of synchronization of institutional development in shaping commercial activities. Specifically, the unsynchronization of institutional development has been proven to pose significant challenges and uncertainties for market entities, resulting in increased transaction costs and operating costs.

Despite substantial progress, existing research has predominantly focused on the negative consequences of unsynchronized institutional development, overlooking its potential positive outcomes. Scholarly works on institutional theory has indicated that the incompatibility between logics can facilitate organizations to gain from institutional arbitrage across diverse institutional elements. Considering the importance of identifying and developing new opportunities and business modes for entrepreneurial activities, this study attempts to introduce the perspective of institutional arbitrage to examine the opportunity creation effect of unsynchronization of institutional development and explore how the dynamic, lopsided change of institutional components links to the establishment of start-ups.

We posit that unsynchronization of institutional development may influence entrepreneurial activities via the cost effect and the opportunity creation effect. First, unsynchronized institutional development would intensify conflicts among sub-dimensions of the institution, which may result in a decrease in start-up establishment. Second, unsynchronized institutional development may also create opportunities for institutional arbitrage, thus attracting entrepreneurs to engage in entrepreneurship to gain benefits. This is because unsynchronized institutional development would lead to an unequal distribution of resources across domains governed by different institutional logics, which could provide entrepreneurs with an opportunity to fulfill the unmet market needs. Such two contrasting effects would give rise to a U-shaped relationship between the degree of synchronization of institutional development and regional entrepreneurship activities. We also hypothesize that less uncertainty avoidance and more future orientation could mitigate the influence of unsynchronized institutional development.

To investigate the relationship between synchronization of institutional development and regional entrepreneurial activities, we employ an extensive dataset covering entrepreneurial activities across 280 Chinese cities from 2004 to 2019. We capture the entrepreneurial activities by collecting the business registration information from the National Enterprise Credit Information Publicity System. To measure the degree of synchronization of institutional development across Chinese provinces, we use entropy formula based on the Marketization Index provided by the Chinese National Economic Research Institute. Region-level variables are mainly drawn from the Urban Statistical Yearbook and the National Statistical Yearbook. We use the ordinary least squares regressions to test our hypotheses. The empirical results robustly support our predictions.

This study contributes to existing research at the nexus of institution and entrepreneurship. First, we add to this stream of research by elucidating the overlooked positive outcome of unsynchronized institutional development in shaping commercial activities, enabling a more comprehensive understanding of synchronization of institutional development. Second, despite current studies emphasizing the institutional antecedents of entrepreneurship, scant attention has been directed toward the unbalance nature of institutional change and how these structural dynamics link to the establishment of domestic start-ups. The current article addresses this crucial knowledge gap and aligns with persistent calls to examine entrepreneurship in rapidly changing environments, particularly in developing economies. Third, we also investigate the entrepreneurial consequences by considering the interactions between informal institutions, including uncertainty avoidance and future orientation, and synchronization institutional development. These findings enhance our understanding of how the influence of formal institutions varies across diverse cultural contexts.

Key Words: synchronization of institutional development; dynamic institution-based view; multi-dimensional perspective of institution; regional entrepreneurial activities

Corporate Responsible Innovation: A Literature Review and Future Directions

Lu Jiang[1] Xurui Sun[2] Chao Lu[2,3] Xiaoyu Yu[2,3] Ke Rong[4]

(1. School of Economics and Management, Tongji University;

2. School of Management, Shanghai University;

3. Shanghai Center for Enterprise Innovation and High-quality Development;

4. School of Social Sciences, Tsinghua University)

Abstract:

Responsible innovation (RI) originated in the early 21st century. The concept emphasizes on the responsibility of scientific and technological innovation from the perspective of national strategies and macro policies in Europe and the United States. RI is an innovative activity established through the participation of more stakeholders and the establishment of responsive institutions, guiding innovation towards ethical acceptability and socially desirable and socially acceptable ends, in order to achieve the maximum public value. In recent years, it has gradually extended to innovation practices, becoming a critical choice for the deeply implement of innovation-driven development strategy. However, due to the inherent uncertainty of innovation and the prolonged lag in the results it brings, coupled with a lack of awareness among some enterprises about innovation responsibility, the recognition and acceptance of RI by enterprises remain relatively low. As key actors in technological innovation, enterprises naturally play a central role in implementing RI. Exploring RI in enterprises is crucial for advancing research and practices related to RI, yet the RI research focusing on enterprises is still at its early stage, lacking of a systematic review.

In this study we hence conducted a bibliometric analysis, an emergent word analysis and cluster analysis of RI papers from the WOS and CSSCI databases to explain the performance of corporate responsible innovation (CRI) . The academic research on CRI is found to mainly cover four aspects: progress in practice, conceptual content, antecedent research, and consequence research. Therefore, we elaborated on the current implementation status of CRI, examined the concepts and measurements of CRI, analyzed CRI's antecedent from the perspectives of driving, obstacle and situational factors, as well as CRI's consequence from the dimensions of positive, negative and uncertain impacts. Research has found that the level of RI implementation in enterprises is challenging to discern and objectively evaluate, and the methods employed by enterprises in carrying out RI have not been systematically practiced and discussed, which are significant reasons for the slow progress of the RI paradigm at the enterprise level. There is an urgent need to explore the connotation of CRI and develop measurement scales to promote theoretical exploration at the enterprise level. Regarding antecedent research, there is a lack of quantitative exploration of the driving and obstacle factors of enterprises implementing RI, and systematic studies on situational factors are also lacking. In terms of consequence research, existing studies have not thoroughly discussed the effectiveness of enterprises implementing RI, significantly impacting the widespread application of the RI paradigm at the enterprise level.

Therefore, the current focus in academic efforts is on how to deepen the concept of RI from a theoretical and conceptual framework to guide enterprise innovation practices. Based on the aforementioned literature analysis, we put forward three future directions as deepening the connotation and scale development, driving factors, and influence mechanism. ①Deepening the connotation and developing measurement scales of CRI, using a framework of "one subject, one element, four objectives". The scale development should consider industry characteristics, institutional environments, enterprise life cycles and other representative situations, and may involve external evaluation or a combination of external evaluation and self-evaluation to reduce subjectivity. ②In terms of driving factors, a framework of driving factors for CRI is proposed, with RI motivation as the core triggering variable, and two internal factors within an organization—elements and systems of RI, as well as three external factors outside an organization—market pressure, policy pressure, and normative pressure. ③Regarding influence mechanism, exploring the positive effects of CRI on production operations and high-quality development. It suggests delving into the mechanisms of RI in different industries, types of enterprises, and enterprise life cycles to make the research results more applicable to the practice of CRI. In summary, this study contributes to the CRI research by understanding its current status and development trend, which can be beneficial for enterprises to recognize and actively promote their RI practices.

Key Words: corporate responsible innovation; driving factors; influence mechanism