

Research on the Formation Mechanism of New Quality Productivity from the Perspective of Context: a Longitudinal Case Study Based on XAG Company

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ABSTRACT

Promoting the development of emerging technologies by contexts has become an important part of China's industrial policy. Research on the formation mechanism of new quality productivity is of great significance for the application of emerging technologies. Based on the pioneering innovation of XAG company in agricultural plant protection UAV, the exploratory case study was carried out, and the formation mechanism of new productivity with the logic of "Contexts discovery of emerging technologies - Adaptation of emerging technologies to contexts - Iteration of major functions of emerging technologies - Iteration of secondary functions of emerging technologies - Ecological development of emerging technologies" was summarized. The research finds that the promotion and application of emerging technologies depend on finding appropriate contexts for them, and emerging technologies have competitive advantages in these contexts; The prerequisite for the application of emerging technologies in the scene is that its main functions can meet the needs of the scene and are constantly upgraded, and then its secondary functions are upgraded, and finally the ecological application of emerging technologies is realized. The research provides a theoretical basis and practical reference for the research and development of emerging technologies for the scene.

KEYWORDS

Contexts; Emerging Technologies; New Quality Productivity

1. INTRODUCTION

Promoting the development of new productive forces by contexts has become an important part of China's industrial policy. In November 2025, the State Council of China issued the programmatic document "Implementation Opinions on accelerating scene cultivation and opening up to promote large-scale application of new contexts". This marks the beginning of China's systematic use of contexts as a starting point to promote the application of emerging technologies and industrial development.

At the same time, it should be noted that application contexts driven innovation is a new model of China's science and technology policy, and its internal mechanism needs to be further studied in order to better guide the development of emerging industries. For example, how to find suitable application contexts for emerging technologies? How do emerging technologies evolve in the contexts? These issues are crucial for the application of emerging technologies in contexts. In order to answer the above questions, this paper uses the vertical single case method to explore the evolution path of emerging technologies in the scene.

2. LITERATURE REVIEW

2.1. Contexts Driven Innovation

The scene originally comes from the dramatic performance, which refers to the scene presented by the film and drama actors in the form of dialogue, action performance and other forms through the combination of stage lighting and sound effects. It is the information and feeling that the film and drama want to convey to the audience. Subsequently, this concept was introduced into sociology, communication and urban research [1-2].

At present, although there are some differences in the definition of contexts driven innovation in academia, there is a core consensus, that is, to solve the pain points of users or industries [3]. Kenny et al. [4] introduced the concept of scene into the field of management and defined it as "the specific situation in customers' lives and the demand or emotional response it triggered". On this basis, crantj [5] put forward the concept of scene driven, which is interpreted as "the process in which individuals play their subjective initiative in the scene and trigger changes in the environment or themselves".

Scholars have paid attention to the great impact of new technologies and new contexts on industrial development. Christensen's research is the most typical. Christensen found that although emerging technologies are inferior to existing technologies in some performance parameters, they form "disruptive innovation" by developing application contexts of emerging technologies and applying them to new contexts. For example, the size of hard disk is becoming smaller and smaller, opening up new application contexts such as microcomputer and personal computer, and changing the pattern of hard disk market [6]. Subsequently, more and more scholars noticed that some new products have new application contexts; These contexts are different from existing products. This has an important impact on the development of industry and market competition [7-8]. For example, the impact of social e-commerce on traditional e-commerce [9], the impact of Uber on taxi industry [10], and the impact of airbnb on traditional hotel industry [11].

2.2. Research on the Formation Mechanism of New Productivity

New quality productivity is an advanced form of productivity. It gives priority to innovation and gets rid of the traditional mode of economic growth and the path of productivity development [12]. The new quality productivity reflects the advanced productivity, with innovation as the symbol and high quality as the core. The essence of new productivity depends on innovation. This involves technological progress and comprehensive changes in production paradigm, industrial structure and development concept [13]. In terms of research on new productivity and specific industries, existing research shows that AI can significantly promote the development of new productivity [14].

A comprehensive review of the current research shows that although the relationship between contexts and innovation has been initially revealed, as well as some laws of new qualitative productivity, the research on the formation mechanism of new qualitative productivity in a contexts is still blank in the current research. In view of this, this paper uses the research method of vertical single case to discuss this problem.

3. RESEARCH DESIGN

3.1. Research Methods

The main reasons for choosing the exploratory single case study method in this paper are as follows: First, to explore the evolution path of emerging technologies in the scene, its essence is to study the implementation process and mechanism. As a comprehensive research strategy, exploratory case study is very suitable for exploring the "why" and "how" behind the phenomenon. Secondly, this

paper focuses on the evolution law of emerging technologies in the scene, which has the characteristics of dynamic evolution, and the single case study method is more suitable for in-depth analysis of the process and change mechanism combined with the key events in the time series [15].

3.2. Research Case

Following the principles of theoretical sampling, inspiration and typicality of case selection, this paper selects Guangzhou XAG Technology Co., Ltd. (hereinafter referred to as "XAG"), the leader and advocate of contexts based innovation, as the case sample, and specifically analyzes the innovation process of its UAV technology in the contexts of agricultural plant protection. The reasons are as follows: first, the case object needs to fully reflect the concept and relationship of the research problem, and the innovation process of XAG UAV technology in the agricultural plant protection scene has the characteristics of scene oriented and emerging technology, which is consistent with the research goal of this paper. Secondly, the technology of XAG UAV is highly enlightening from R&D to application, which can provide enlightenment for the technology exploration of other enterprises.

3.3. Data Collection and Processing

The reliability and validity of the study can be improved by integrating data from multiple sources and conducting triangular verification on the content of the case study [15]. This study collected a wide range of second-hand data from heterogeneous sources as case data, and collected the content and content of social media and online video as supplements, and conducted interviews with R&D personnel and consumers in the industry. By collecting data from multiple sources and conducting triangular validation, the data quality is ensured to ensure the reliability and validity of the study. The data sources and information of this paper are shown in Table 1.

Table 1. Data Sources Channels and Information

Data Sources	Data
Enterprise sources	The website, BiliBili website account, microblog account and wechat official account of XAG company, mainly including the development history of the enterprise, product introduction, etc
Industry sources	UAV network (www.youuav.com) and other industry websites for professional data, product evaluation and industry observation of UAVs and intelligent equipment; Enterprise information websites such as enterprise search and Tianyan search; Patent information websites such as the State Intellectual Property Office; UAV related content of husniff.com, zhihu.com and other websites
Journal literature and Monographs	About 120 Chinese and English literatures and 10 UAV monographs
Source of key figures	Published articles, reports, audio and video interviews, etc. of the founders and senior managers of the company who contributed to the case sample

3.4. Data Analysis

In the data analysis stage, first of all, this paper determines the main enterprises and their products in the industry based on the industry source data, company source data, shopping platform and social platform source data, and then extracts the relevant and valuable information from the research content based on the main contexts of technology application in the industry. At the same time, through the verification of multiple researchers and with the help of the time axis, this paper analyzes and summarizes the constituent elements of the case sample, the characteristics of enterprise innovation activities, the influential events, participants' actions, environment, organization and other factors, forming a preliminary evidence chain. Secondly, the evidence chain is further supplemented

and improved from data sources such as journal literature and monographs, UAV professional works, shopping platforms and social platforms, and sources of key figures. Finally, based on the theoretical background, the case analysis model is constructed and the data is matched to further modify and improve the theoretical model. After reaching the theoretical saturation point, the research conclusion with universality and high reliability is obtained.

4. CASE ANALYSIS

4.1. UAV Technology Exploration Period (2007-2012)

On April 1st, 2007, Pengbin, the founder of XAG, set up the xaircraft team, the predecessor of XAG, in Guangzhou, and began the exploration of civil UAV and robot technology.

From 2009 to 2010, xaircraft team focused on multi rotor UAV technology, launched x450 and x650 UAV platforms for model aircraft enthusiasts and aerial photography users, and accumulated experience in aircraft design and control algorithm development.

In 2011-2012, Geely launched the revolutionary superx flight control system and x650pro series of unmanned aerial vehicles, which are both stable, easy to use and cost-effective, making it possible for the large-scale application of civil unmanned aerial vehicles.

It can be seen that at this stage, XAG UAV products are mainly for groups such as aircraft model enthusiasts and aerial photography users, and there is no clear application contexts for the products. The evolution path of XAG UAV technology is to improve the stability and ease of use of products, and continuously reduce costs. Users of its products need to have a high professional level. After purchasing the product, the user needs to carry out some assembly and debugging work by himself before using the UAV product.

Through the research and development of a variety of products, XAG has accumulated technology, but has not yet found a sustainable scene and core track. With the continuous maturity of UAV parts technology and the increasingly fierce competition in the UAV parts market, Peng bin tried to apply UAVs to scientific research, power inspection, logistics, search and rescue and other contexts.

4.2. Technology Adaptation and Iteration under the Focus of Agricultural Context (2013-2018)

4.2.1. Strategic Transformation and First Generation Product Verification

In September, 2013, Pengbin, founder of XAG technology, led the feasibility test of UAV technology in the field of pesticide spraying, marking a key turning point for the company from a consumer aircraft model to industrial application exploration. In 2014, the xaircraft team officially changed its name to "Guangzhou XAG Technology Co., Ltd." and established the strategic direction of focusing on the R&D and manufacturing of agricultural UAVs. In April, 2015, XAG launched the first generation of plant protection UAV system - P20. The maximum takeoff weight of the product is 27kg, which is the first truly intelligent plant protection UAV in China. The technical features of P20 are highly scene specific. Its core function design is based on the plant protection needs of field crops (such as rice and wheat), and establishes the early technical paradigm of plant protection UAV:

- (1) Fully autonomous flight operations: support route planning, one button takeoff and automatic execution. This mode discards the dependence on the manual remote control of the flying hand, significantly reduces the operation threshold, and enables non professional users to get started quickly.
- (2) Precision spraying technology: the intelligent centrifugal atomizing nozzle and peristaltic pump system are used to realize the independent control of flow rate and atomization effect, ensure the uniformity of spraying, and effectively reduce pesticide waste.

(3) High efficiency operation capacity: the daily operation area of a single machine can reach about 400 mu, which greatly improves the timeliness and automation level of plant protection operation.

(4) Modular design concept: plug in medicine box and intelligent battery are introduced to support rapid replacement, which greatly enhances the continuous operation ability and maintainability of the equipment.

(5) Intelligent ground station management: equipped with A1 ground station, it has the functions of automatic route planning and real-time status broadcasting (covering parameters such as voltage, dosage and speed), and supports the cluster operation mode of "one control and multiple computers".

4.2.2. Improvement of Navigation Accuracy and Operation Stability

After the establishment of agricultural plant protection as the core contexts, the technological evolution path of XAG showed a continuous pursuit of operational accuracy and environmental adaptability. In 2016, the second generation P20 was released, introducing RTK (real time kinematic) dual antenna directional technology, which significantly enhanced the anti-magnetic interference ability and ensured the stable operation of UAV in the complex farmland electromagnetic environment. At the same time, the upgraded flight control system supports the "one control multiple computers" mode, further releasing human efficiency. The application scope of the product has also been expanded from field crops to cash crops such as cotton and Lycium barbarum.

In 2017, Geely launched P20 2017 equipped with superx2 RTK flight control system and GNSS RTK module. This version realizes centimeter level positioning, and integrates variable spraying system, which can dynamically adjust the dosage according to the prescription map. This technological breakthrough enables the UAV to adapt to the complex environment with obvious fertility differences in tea gardens, orchards and other plots, marking the leap from "uniform spraying" to "accurate variable operation".

4.2.3. Environmental Perception and Complex Terrain Adaptation

2018 is the key node to solve "Scene adaptability" in the evolution of polar flight technology. For hilly, sloping and other undulating terrain, the P20 2018 model has added the functions of ultrasonic height determination and ground simulating flight, which solves the problem of traditional machinery operating in mountainous areas, and has been successfully applied in mountainous tea plantations in Yunnan, Guizhou and other places. At the same time, the product supports AI prescription map import, and realizes intelligent spraying based on data decision-making.

The P30 2018 released in the same year made a breakthrough in durability and maintenance, realizing the waterproof (IP67 level) design of the whole machine for the first time. It can be washed directly after operation, effectively resisting pesticide corrosion and reducing maintenance costs. In addition, by introducing RTK centimeter level navigation and superx2 flight control system, XAG has completely solved the pain points of the industry - "flying accurately" and "not blowing up", and established the standard form of fully autonomous flight operation.

4.2.4. Summary of Stage Technology Evolution Characteristics

Looking at the technological development path from 2013 to 2018, XAG technology shows the following three significant evolutionary characteristics:

(1) The degree of intelligence continues to deepen: through the introduction of vision module, millimeter wave radar and AI prescription map technology, UAV gradually has the ability of obstacle avoidance, terrain following and autonomous decision-making, greatly reducing the dependence on manual intervention.

(2) The application contexts extends from point to surface: the technical iteration promotes the extension of the application boundary from flat farmland to hills, mountains, orchards, tea gardens and other complex terrain, and realizes the deep coverage of diversified agricultural contexts.

(3) The formation of new quality productivity driven by the scene: the product design closely focuses on the physical characteristics of the agricultural scene (such as high humidity, corrosion, topographic relief), and specifically develops the functions of the whole machine, such as waterproof and ground flight, which reflects the strong problem orientation and technical practicability.

The development of XAG at this stage has proved that the formation of new productivity in a certain application contexts depends on entrepreneurs' ability to find suitable application contexts for emerging technologies, and carry out technology research and development according to the characteristics of the contexts, so as to develop emerging technologies suitable for the contexts, thus forming new productivity.

4.3. Ecological Evolution of Technology for Agricultural Contexts (2019 to Present)

Since 2019, the technology evolution logic of XAG technology has shifted from a single hardware iteration to the ecological construction of agricultural robots based on "air ground cooperation". The core feature of this stage is to break the functional boundary of a single device and build an unmanned intelligent agriculture solution covering the whole process of "farming, planting, management and harvesting" by integrating sky and ground intelligent equipment.

4.3.1. Horizontal Expansion of Technical Architecture

This stage marks the strategic transformation of the company from "agricultural UAV manufacturer" to "agricultural technology company". In 2019, with the launch of the jettsee intelligent seeding system, the plant protection UAV officially evolved into an "agricultural UAV" with seeding function, and the application contexts extended from a single plant protection to sowing and fertilizing. At the same time, the company released agricultural unmanned vehicle R80, agricultural machinery self driving instrument apcl and farm Internet of things products, initially established the cooperative operation system of ground and air equipment, and realized the leap from a single flight platform to a diversified agricultural robot matrix.

4.3.2. Intelligent Upgrading of Perception and Decision System

The focus of technology has shifted to improve the system's independent decision-making ability and data closed-loop. XAG technology has transformed the AI prescription map technology from concept to practical application, and integrated many technologies such as ruitu, Rui spray and Rui seeding, realizing accurate variable operation based on crop growth analysis. In addition, by launching the R series agricultural unmanned vehicle platform and m2000/m500 remote sensing unmanned aerial vehicle, the data acquisition and execution network of "air to ground coordination" has been further improved, and the refinement level of farm management has been significantly improved.

4.3.3. Full Link Unmanned Ecological Closed Loop

The recent evolution path focuses on building the whole process intelligent ecology of farm "water, fertilizer and medicine" management. XAG has successively launched more efficient agricultural UAVs (such as P150 pro/p60 Pro), APC series agricultural machinery self driving instrument and intelligent water and fertilizer management system. In particular, the release of the new R series agricultural unmanned vehicle platform in 2025 has further widened the application boundary of agricultural robots in complex terrain. Through the deep integration of "XAG cloud" and AI technology, the company successfully digitized the farmland, realized the whole process of unmanned closed-loop operation from sowing, management to harvesting, and completed the qualitative change from "flying sprayer" to a comprehensive intelligent agricultural solution provider.

Summing up the technology research and development of XAG at this stage, we can see that the technology development of XAG is ecological and intelligent. Specifically, XAG has introduced a number of technologies, such as unmanned vehicles, which cooperate with the original unmanned

aerial vehicle technology to form an ecological development of technology; Artificial intelligence and other technologies are introduced to improve the intelligent level of the whole system.

5. RESEARCH CONCLUSION AND ENLIGHTENMENT

5.1. Research Conclusions

Taking the pioneering innovation of Guangzhou XAG Technology Co., Ltd. (XAG) in the field of agricultural plant protection as a case, this study explores the dynamic evolution path of emerging technologies in specific application contexts. Based on the longitudinal single case analysis, this study found that the application and diffusion of emerging technologies (represented by UAV Technology) in agricultural contexts followed a clear and scene centered evolution path. The path can be divided into four progressive stages:

5.1.1. Context Discovery of Emerging Technologies

In the early stage of technology development, enterprises are usually in the stage of general technology exploration and multi contexts trial and error. XAG's early technology accumulation for aerial model and aerial photography users laid the foundation for its subsequent focus on agricultural contexts. In 2013, XAG tried to apply UAV technology to pesticide spraying, marking the preliminary discovery of a potential and high-value business contexts. The key at this stage is to identify specific contexts in which technical advantages can be closely combined with market demand from a large number of potential applications.

5.1.2. Adaptation of Emerging Technologies to Contexts

After the core contexts is determined, the primary task of technology evolution is "main function adaptation". In 2014, the company changed its name and focused on agricultural UAVs. In 2015, the company launched the first generation of plant protection UAV P20. Its fully autonomous flight, precise pesticide application, efficient operation and other core function design directly pointed to the core pain points of "low efficiency, labor shortage, inaccurate pesticide application" in the agricultural plant protection scene, and established the preliminary technical paradigm under the scene. This verifies that the prerequisite for the successful application of the technology in the scene is that its main functions must first meet the basic requirements of the scene.

5.1.3. Iteration of Main Functions of Emerging Technologies

After the initial adaptation, the technology continues to deepen and improve the accuracy around the needs of the scene. From 2016 to 2018, XAG continuously optimized the operation stability, accuracy, adaptability and durability of UAV in complex farmland environment by introducing technologies and designs such as RTK centimeter navigation, superx2 flight control, variable spraying, ground simulation flight, AI prescription map, and whole machine waterproof. The technical evolution at this stage shows a strong "problem oriented" feature, that is, to carry out targeted technical upgrading for the specific problems encountered in agricultural plant protection operations (such as terrain fluctuations, signal interference, crop differences, and equipment corrosion), so that the main function is becoming more and more perfect and powerful.

5.1.4. Iteration and Ecological Construction of Emerging Technology Sub Functions

After the main functions become mature, the technology evolution expands in two directions. The first is horizontal function expansion, that is, to develop complementary technologies and products around the same core contexts. Since 2019, XAG has launched intelligent seeding system, agricultural unmanned vehicle, agricultural machinery self driving instrument, farm Internet of things equipment, etc., expanding from a single "plant protection tool" to an agricultural robot matrix covering "cultivation management and collection". The second is vertical system integration, which is to build a data-driven intelligent decision-making and management closed loop. Through the integration of

remote sensing, execution and decision-making units through the "XAGyun" platform and AI technology, the whole process of unmanned intelligent agriculture solution from perception, analysis to execution is realized. This indicates that technology has evolved from the iteration of a single product to a technology ecosystem centered on the core contexts, with complementary functions and data collaboration.

To sum up, the core conclusion of this study is that the successful application and evolution of emerging technologies in the scene is a gradual process from "scene recognition" to "function adaptation", and then to "function deepening" and "system expansion". Its evolution path follows the logic line of "Scene discovery → main function adaptation → main function iteration → sub function iteration and ecology". Among them, the main function to meet the core needs of the scene is a prerequisite, while the ecological technology is the advanced form to maximize the value of the scene and build a sustainable competitive advantage.

5.2. Theoretical Contributions

This research has made the following contributions to the theory of contexts driven innovation and technology evolution.

(1) A contexts Oriented emerging technology evolution path model is proposed. The existing research on technology evolution (such as technology trajectory, path dependence, A-U model) mostly starts from the perspective of technology internal logic or industrial competition, and relatively lacks the dynamic process description from the perspective of "technology contexts" adaptation and co evolution. The five stage evolution path model constructed in this study clearly reveals the whole process of how emerging technologies can be explored, rooted, deepened and finally systematized in a specific application contexts, making up for the deficiencies of existing theories in the micro process mechanism.

(2) Deepen the understanding of the "Scene driven innovation" mechanism. Existing studies have emphasized the importance of contexts to innovation, but the specific driving mechanism, especially how technology responds to and integrates into the micro process of contexts, is not fully described. Through detailed case evidence, this study shows that the contexts not only provides the direction of innovation and demand pull, but also continuously and progressively shapes the functional iteration and architecture evolution of technology through its specific physical constraints (such as terrain), operation requirements (such as accuracy and efficiency) and environmental characteristics (such as corrosiveness). This reveals that contexts driven is a continuous and interactive "shaping" process, rather than a one-time demand input.

(3) It connects the evolution of technological function and ecosystem theory. The research points out that the maturity of emerging technologies in the scene is not only reflected in the improvement of core product functions, but also reflected in its evolution from a single product to a complementary product portfolio, and then to a data and intelligent driven ecosystem. This provides a micro explanation based on the perspective of technology evolution to understand the strategic evolution of technology enterprises from providing products to providing solutions, and then to building platform ecology, and enriches the application of technology ecology theory in specific industrial contexts.

(4) It provides empirical support for contexts driven innovations in the Chinese contexts. Taking the leading enterprises in China's agricultural UAV industry as a case, this study responds to the current policy practice of promoting the development of new quality productivity through contexts cultivation in China. The research conclusion shows that the rapid iteration and industrialization of emerging technologies can be effectively driven by consciously discovering, cultivating and opening typical contexts, which provides a theoretical basis and path reference for relevant policy-making and enterprise practice.

5.3. Deficiencies and Prospects

This paper uses the method of longitudinal single case study, which can analyze the phenomenon in depth, but the universality of the conclusion still needs to be verified by more cases. UAV technology belongs to the field of intelligent equipment, and its technology scene interaction logic may have its particularity. Future research can be extended to biomedicine, new materials, artificial intelligence software and other technical fields to test the applicability and boundary conditions of this evolution path model under different technical attributes and industrial contexts.

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REFERENCES

- [1] Wang Yongjie, Liu Haibo, He Limin. Evolution of concept of scene and its application in transformation of scientific and technological achievements [J]. *Science and Technology Management Research*, 2021, 41(15): 35-41.
- [2] Li Mengwei, Xu Feng, Gao Fang. Definition and development of artificial intelligence application contexts [J]. *Forum on Science and Technology in China*, 2021(06): 171-179.
- [3] Ravi S. Sharma, Yi Yang. A hybrid scenario planning methodology for interactive digital media [J]. *Long Range Planning*, 2015, 48(6):412-429.
- [4] Kenny D, Marshall J F. Contextual marketing: The real business of the Internet. *Harvard Business Review*, 2000, 78(6):119-25.
- [5] Crant J. Michael. Proactive behavior in organizations [J]. *Journal of Management*, 2000, 26(3): 435-462.
- [6] Christensen Clayton M. *The Innovator's Dilemma: When new technologies Cause Great Firm to Fail* [M]. Boston: Harvard Business Review Press,1997.
- [7] Zhang Wenyao, Zhang Wei, Wang Chenxiao, et al.What drives continuance intention of disruptive technological innovation? The case of e-business microcredit in China [J]. *Technology Analysis and Strategic Management*, 2021(3):1-14.
- [8] Amir Bahman Radnejad, Harrie Vredenburg. Disruptive technological process innovation in a process-oriented industry: A case study [J]. *Journal of Engineering and Technology Management*, 2019, 53:63-79.
- [9] Chen Honghua, Zang Shuwei, Chen Jin, He Wentian, Chieh Hang Chang. Looking for meaningful disruptive innovation: counterattack from Pinduoduo [J]. *Asian Journal of Technology Innovation*, 2020, 30(1): 23-44.
- [10] Eitan Muller. Delimiting disruption: Why Uber is disruptive, but Airbnb is not? [J]. *International Journal of Research in Marketing*, 2020, 37(1): 43-55.
- [11] Angelo Presenza, Umberto Panniello, Antonio Messeni Petruzzelli. Tourism multi-sided platforms and the social innovation trajectory: The case of Airbnb [J]. *Creativity and Innovation Management*, 30(1): 47-62.
- [12] Fusheng Xie, Nan Jiang, Xiaolu Kuang. Towards an accurate understanding of new quality productive forces [J]. *Economic and Political Studies*, 2025, 13(1): 1-15.
- [13] Siqi Li, Yangkai Jin. Does ESG performance promote 'New Quality Productive Forces' in China? From efficiency-driven and innovation-driven perspectives [J]. *Applied Economics*, 2025: 1-21.
- [14] He Yuanlang, Yuan Jianhong. Artificial Intelligence Development and the Enhancement of New Quality Productive Forces: The Theoretical Mechanism and an Empirical Test [J]. *Science & Technology Progress and Policy*, 2025, 42(11): 1-11.
- [15] Kathleen M. Eisenhardt, Melissa E. Graebner. Theory building from cases: opportunities and challenges [J]. *Academy of Management Journal*, 2007, 50(1): 25-32.